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Forensic Investigation of the Ellaville Weigh Station UTW Pavements

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EXECUTIVE SUMMARY

Ultra-thin whitetopping (UTW) is a recently developed technique for asphalt pavement rehabilitation. Essentially, the UTW technique involves placing a very thin concrete overlay (2 to 4 in., typically) on existing asphalt pavements. Experimental UTW pavements have been constructed in many states, including Colorado, Georgia, Iowa, Kansas, Kentucky, Minnesota, Missouri, New Jersey, North Carolina, Pennsylvania and Tennessee. Preliminary evaluations of these recently constructed UTW projects have shown that UTW is a viable rehabilitation method for asphalt pavements.

To evaluate the applicability of UTW in Florida, the Florida Department of Transportation (FDOT) constructed a UTW test pavement at the Ellaville weigh station along I-10 in North Florida in 1997. This UTW pavement consisted of 6 test sections with varying panel dimensions and slab thickness. The performance of these test sections, however, was less than ideal, with the observation of some early cracking on the concrete surface. These pavement sections are scheduled for rehabilitation in 2002. This study was conducted to determine the causes of the problems of these UTW sections, so that lessons could be learned from this experimental project, the use of UTW under Florida's conditions can be adequately assessed, and UTW technology may be properly applied in the future.

This investigation was performed through a literature and document review, field evaluation, laboratory testing, and a design assessment. From the field evaluation, specific observations on the performance of the six test sections are as follows:

1. Test Sections S1W, the entrance section, and S6E, the leave section, were the two worst performing sections. Both sections were designed to be 3 in. (75 mm) thick with a panel dimension of 4 ft by 4 ft (1.2 m by 1.2 m). Section S1W had 66% of cracked panels and S6E had 58% cracked panels. Majority of the panels were shattered into five or more pieces, and were concentrated either in the beginning or end of the test sections. Also, a dramatic increase in the amount of cracked panels was observed when compared to the surveys conducted in July 1999.
2. Section S2W (which was the second section and adjacent to the entrance section S1W) also showed poor performance, with about 30% of shattered slabs. Similarly, cracked panels were concentrated either in the beginning or end of the test section. This section of UTW pavement had a design thickness of 4 in. (100 mm) and a slab dimension of 5 ¼ ft by 5 ¼ ft (1.6 m by 1.6 m).
3. Sections S3W, S4E, and S5E (which were the third through fifth sections and away from the entrance and the leave sections) showed relatively better performance with some cracked panels in the beginning and the end of the test sections. Sections S3W and S4E had a design concrete thickness of 4 in. (100 mm) and a slab dimension of 4 ft by 4 ft (1.2 m by 1.2 m), while Section S5E had a concrete thickness of 4 in. (100 mm) and a slab dimension of 5 ¼ ft by 5 ¼ ft (1.6 m by 1.6 m).

From the results of the ground penetration radar tests and cores taken from the test sections, great variation of asphalt layer thickness was observed. Asphalt layer thickness as measured from the cores varied from 1.0 in. to 4.1 in.

In general, excellent bonding between the asphalt and the concrete layers were observed. Except for those samples with already separated layers when the cores were obtained, the interface shear strength between concrete and asphalt layers was very strong, generally exceeding 200 psi (1.38 MPa). The average interface shear strength was 306 psi (2.11 MPa). These values are considerably higher than the shear strength of about 100 psi (0.69 MPa) generally observed from other UTW projects.

All of the UTW test sections were found to be inadequately designed for the traffic at the Ellaville Weigh Station. Using the modified ACPA UTW design equations to assess the adequacy of these UTW designs, it was found that the expected life of all of these UTW sections was only 4 to 5 years. This inadequacy was made even worse by the lack of control of the asphalt layer thickness. When an asphalt thickness of 1 in. was used in the analyses, the expected life of four of the test sections was less than one year, while the expected life of the other two was less than four years.

Generally, more distresses were observed at both transition areas next to the asphalt pavement. Thicker UTW sections should have been used in these transition areas.

Finally, the intent of UTW technique is to provide durable wearing surface for normal traffic loads on residential and collect streets, low-volume roads, street intersections, general aviation airports, and parking areas. For weigh stations subjected to frequent applications of heavy truck traffic, the UTW technique is probably not an appropriate rehabilitation alternative. From the experience gained during the last decade throughout the country, the UTW technique can be and has been successfully implemented for asphalt pavement rehabilitation. However, careful planning, pre-construction asphalt pavement evaluation, adequate design, and proper construction quality control need to be followed in order to build UTW pavements with successful performance.

Chapter 1

Introduction and Background

Ultra-thin whitetopping (UTW) is a recently developed technique for asphalt pavement rehabilitation. Essentially, the UTW technique involves placing a very thin concrete overlay (2 to 4 in., typically) on existing asphalt pavements. Unlike the conventional whitetopping, the UTW technique recognizes that certain bonding strength exists between the concrete overlay and the existing asphalt layer.^(1,2,3) The UTW pavements, therefore, behave as a composite pavement. Normally, very short joint spacing, between 2 and 6 ft, depending on slab thickness, has been used for UTW pavements. The existence of interface bonding and the use of the short joint spacing minimize slab bending, potential for shrinkage cracking, and slab curling and warping, and therefore reduce the required slab overlay thickness. UTW pavements are typically applied to city streets, intersections, ramps, etc. Experimental UTW pavements have been constructed in many states, including Colorado, Georgia, Iowa, Kansas, Kentucky, Minnesota, Missouri, New Jersey, North Carolina, Pennsylvania and Tennessee. Preliminary evaluations of these recently constructed UTW projects have shown that UTW is a viable rehabilitation method for asphalt pavements.

In the late 1990s, encouraged by the promising performance of UTW pavements observed in other states, the Florida Department of Transportation (Florida DOT) started testing UTW pavements to evaluate the adequacy of using this technique as a rehabilitation alternative for deteriorated asphalt pavements. In 1996, the Florida DOT constructed three UTW test tracks behind the State Materials Office.⁽⁴⁾ Design variables studied in this project included three concrete overlay thickness (2, 3, and 4 in.), four joint spacing (panel sizes of 3-ft by 3-ft, 4-ft by 4-ft, 6-ft by 6-ft, and 12-ft by 12-ft), and three asphalt surface preparation (broom cleaning, milling, and applying a layer of asphalt). Except for the control sections, all test tracks used fiber-reinforced concrete. After being subjected to over 60,000 18-kip ESALs within a period of 18 months, all test tracks have shown very good performance with very little signs of distresses, with the exception of the test section that had 2-in.-thick concrete overlay with a 12-ft by 12-ft panel size. This section has cracked into four approximately equal-sized panels.

Following the study on the three test tracks, the Florida DOT decided to construct another experimental UTW test section to further evaluate its applicability in Florida.⁽⁵⁾ The UTW test pavement, constructed in 1997, was located at the Ellaville weigh station along I-10 in North Florida. This UTW pavement consisted of 6 test sections with varying panel dimensions and slab thicknesses; polypropylene fibers were used in the concrete for 3 of the 6 test sections. The designation of the 6 UTW test sections and their designs are shown in Table 1.1 and the general layout of the six test sections is presented in Figure 1.1. The fiber content was specified as 3 lb per cubic yard of concrete. It was indicated to the project team that concrete transition slabs were constructed between the test sections. All asphalt surfaces were milled prior to concrete placement. It has been reported that excessive asphalt was removed in some areas resulting in remaining asphalt of only about 1 in. thickness. To facilitate the drainage of the pavements, a free draining material (draincrete) was used under these transition slabs. Cracking developed on the transition slabs soon after the weigh station was open to traffic in December 1997. Consequently, all the transition slabs were removed and replaced with full depth concrete in May 1998.

Table 1.1. Design of UTW Test Sections at Ellaville Weigh Station

Section No.	Thickness, in.	Dimension	Fiber
S1W	3	4-ft X 4-ft	Polypropylene
S2W	4	5.25-ft X 5.25-ft	Polypropylene
S3W	4	4-ft X 4-ft	Polypropylene
S4E	4	4-ft X 4-ft	None
S5E	4	5.25-ft X 5.25-ft	None
S6E	3	4-ft X 4-ft	None

The performance of these test sections, however, was less than ideal, with the observation of some early cracking on the concrete surface. These pavement sections are scheduled for rehabilitation in 2002. There was a need to do a comprehensive investigation on the causes of the problems of these UTW sections, so that lessons could be learned from this experimental project, the use of UTW under Florida's conditions can be adequately assessed, and UTW technology may be properly applied in the future.

The primary objective of the research project reported here was to identify the possible causes of the UTW deterioration through a comprehensive evaluation. The results of this project are expected to provide a better understanding of the UTW field behavior and an assessment of the applicability of UTW under Florida's conditions.

This report documents all activities taken place in this project, including a literature review, field evaluation, laboratory testing, and performance and design evaluation of the UTW test sections. This final report consists of the following six chapters:

- Chapter 1. Introduction and Background
- Chapter 2. Literature Review
- Chapter 3. Field Evaluation of the Ellaville Weigh Station UTW Test Sections
- Chapter 4. Laboratory Testing
- Chapter 5. UTW Test Section Performance and Design Evaluation
- Chapter 6. Summary and Conclusions

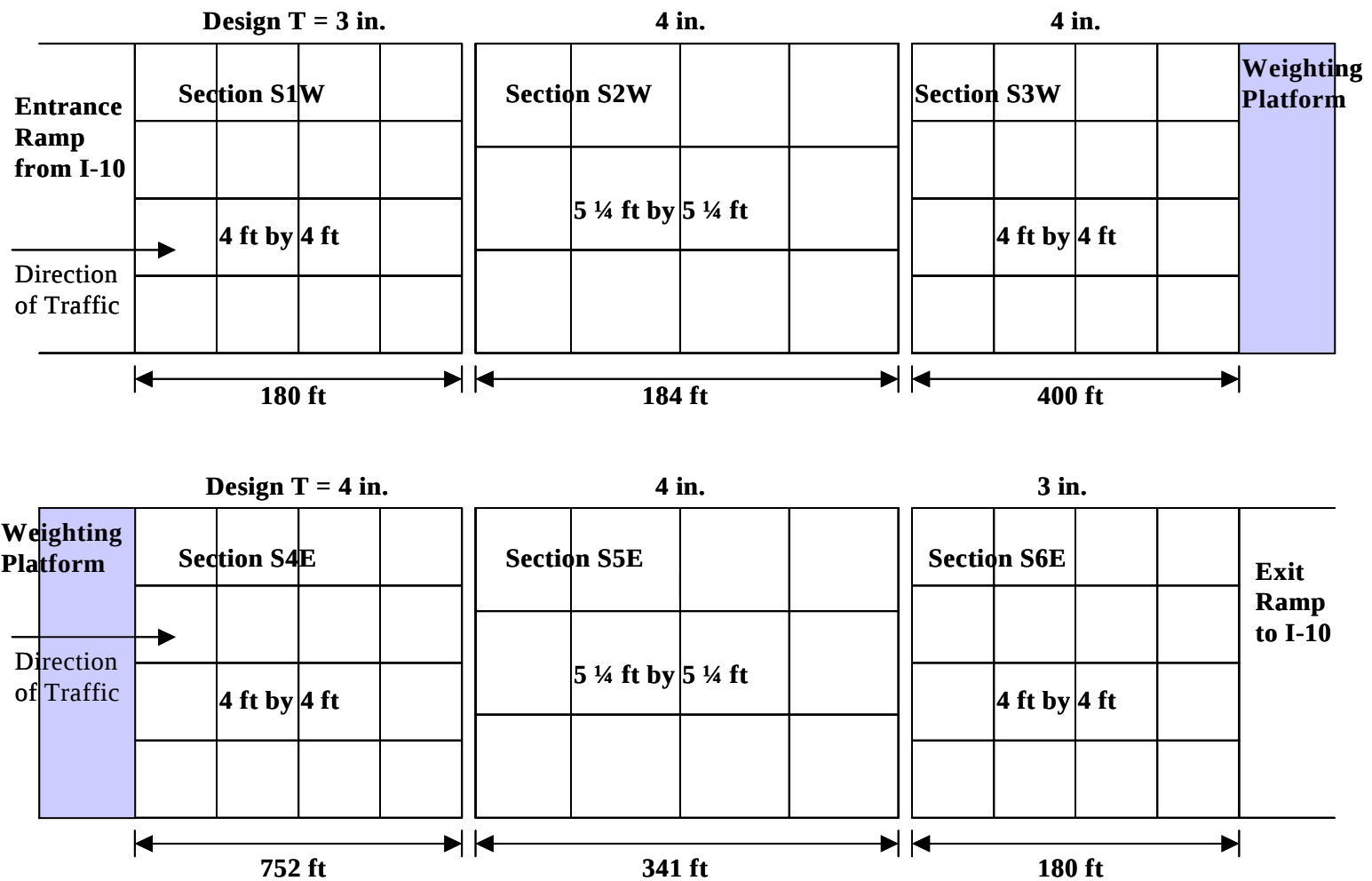


Figure 1.1 Design Layout of the Ellaville Weigh Station UTW Test Sections

Chapter 2

Literature Review

2.1 Background

The concept of resurfacing existing asphalt pavement using Portland cement concrete (whitetopping) is not new. In fact, the first reported use of whitetopping dates back to 1918.⁽⁶⁾ However, this technology has improved over the years as the concrete paving technology has improved. Plain concrete, reinforced concrete and fibrous (fiber reinforced) concrete have been used to resurface flexible pavements.^(6,7) In the 1940's and 1950's, plain concrete was mainly used at civil and military airports. Concrete thickness used in these projects ranged from 8 to 18 in. (200 to 460 mm). Since 1960, plain concrete has been extensively used to resurface existing highway pavements in states such as California, Utah, and Iowa. Concrete thicknesses of these resurfacing projects ranged from 7 to 10 in. (175-250 mm). Continuously reinforced concrete and fiber-reinforced concrete were also used on a limited number of projects. NCHRP synthesis 204 listed 189 whitetopping projects constructed in the United States between 1918 and 1992. This list included streets, highways, and airfield projects.

There are several advantages of using whitetopping for rehabilitating asphalt pavements. Whitetopping provides long-term benefits to the traveling public, and to roadway or airport agencies. Concrete durability and long-term performance characteristics decrease the maintenance required and life cycle costs of pavements. As a result, concrete surfaces significantly reduce traffic delays associated with the frequent maintenance of asphalt pavements. In addition, when concrete surfaces are used, skid resistance and safety are substantially improved, especially under wet conditions. These advantages promote and contribute to the use of concrete pavements over asphalt surfaces.

2.2 Ultra-Thin Whitetopping

The term, "ultra-thin whitetopping" or UTW, refers to the resurfacing of existing asphalt pavements with thin concrete overlays 4 in. (100 mm) or less in thickness. The term, "whitetopping," is clearly an indication of the lighter color of concrete compared to asphalt surface. The development of UTW technique started in the early 1990's. Experimental test sections have been built and research efforts have been expended in the last decade to evaluate the applicability of the UTW as a pavement rehabilitation alternative.

Primary evaluations of UTW projects constructed recently have indicated outstanding performance. This brought UTW to the attention of many highway agencies for evaluation and consideration as an alternative resurfacing technique. Over 200 UTW pavements were constructed during the 1990's. One major advantage of UTW, in addition to the benefits of conventional whitetopping mentioned above, is the substantial reduction in thickness. This mitigates the problem of increased elevation influencing bridge clearance and transitions onto shoulders. Another advantage is a reduced construction time resulting from the incorporation of fast-track technology.

The first UTW experimental project was constructed on an access road to a waste disposal landfill in Louisville, Kentucky, in September 1991^(8,9,10). The Louisville, Kentucky UTW performed well and carried more traffic than anticipated. Following the promising results of the Louisville experiment, many states, including Colorado, Georgia, Iowa, Kansas, Kentucky, Minnesota, Missouri, New Jersey, North Carolina, Pennsylvania and Tennessee, have experimented with UTW for asphalt pavement rehabilitation.

2.3 Concrete Materials and Mixture Proportions

The concrete mix for a particular UTW project is often selected based on requirements for opening to traffic. A normal mix design includes cement, coarse and fine aggregates, air-entraining agent, admixtures, and a lower water-cement ratio. Fibers have been used in many UTW projects; however, the effects of fiber have not been well documented. Compared to aggregate used for thicker concrete pavements, the top-size of coarse aggregate for UTW is reduced. Materials and mix proportions selected for the first experimental project in Louisville, Kentucky are shown in Table 2.1.

Table 2.1. Concrete Mix Proportions Used in Louisville Experimental Project (10)

Constituents	Quantity
Cement (ASTM C 150 Type I)	800 lb/cy
Coarse Aggregate	1800 lb/cy
Fine Aggregate	1150 lb/cy
Water	260 lb/cy
Polypropylene Fibers	3 lb/cy
High Range Water Reducer	14 oz/100 lb cement

The concrete mixture was designed to provide relatively high strength at early ages (3500 psi 24.2 MPa at 36 hours). A low water-to-cement ratio (0.33) was selected to achieve higher strength and reduce drying shrinkage. Polypropylene fibers were used to enhance the flexural strength, increase impact and freeze-thaw resistance, and further reduce drying and plastic shrinkage cracking.

Similar mix proportions were used in the Tennessee⁽¹¹⁾ and Georgia⁽¹²⁾ projects. In the Leawood, Kansas site, the mixture proportions were slightly different; cement content was less (611 lb/yd³), but a setting-accelerating admixture was used.⁽¹³⁾ Compressive strength of 3000 psi (20.7 MPa) at 24 hours was achieved. Three pounds of polypropylene fibers were also used in this mixture. The mix design used in the Kansas UTW project is presented in Table 2.2.

Table 2.2. Concrete Mix Proportions Used in Leawood, Kansas (13)

Constituents	Quantity
Cement (ASTM C 150 Type I)	611 lb/cy
Coarse Aggregate SSD (Crushed Limestone)	1730 lb/cy
Fine Aggregate SSD (Natural Sand)	1345 lb/cy
Total Water	225 lb/cy
Pave Air	5 oz/cy
Pozzutec	65 oz/cy
Rheobuild	43 oz/cy

2.4 Construction Procedures

UTW pavements are constructed with slipform or fixed form pavers in essentially the same way as conventional concrete pavements, with some special provisions. The construction procedures consist of the following steps: preparing asphalt surface, placing the concrete, finishing, surface texturing, curing, and sawing the joints.

Asphalt pavement surface preparation prior to concrete placement is a very important procedure to achieve better bond and good performance of UTW. Milling, followed by cleaning with compressed air to remove all laitance, dust, grit and all foreign materials, is the best way to prepare the asphalt surface. It is recommended that an adequate asphalt thickness of a minimum of 3 in. (75 mm) after milling, be used, if possible.⁽¹⁾

Concrete used in UTW can be produced at a ready-mix plant and delivered to the site by ready-mix trucks. Normal slipform pavers can be used to spread, screed, and consolidate the concrete in an efficient manner. After the surface is finished and textured, a curing compound is immediately sprayed on the entire surface to achieve adequate curing. The curing compound is generally applied at a rate twice the normal application rate for thicker concrete pavements because thin concrete slabs can lose water rapidly.⁽³⁾ Joint sawing must be performed as soon as surface conditions permit, or when the concrete is able to support the equipment and the operator. Usually joints are not sealed because joint openings are generally narrow due to the short joint spacing.

2.5 UTW Design Considerations

Slab thickness

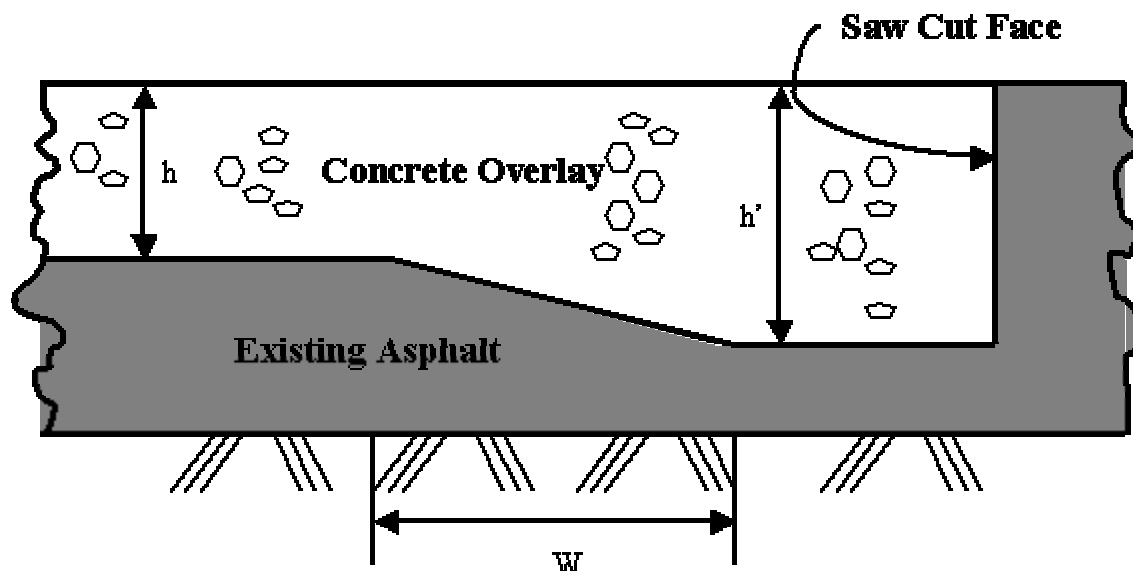
A major benefit of UTW is the reduction in concrete thickness. As defined above, the recommended thickness for ultra-thin whitetopping is not more than 4 in. (100 mm). For most of the experimental projects, thickness ranges from 2 in. (50 mm) to 4 in. (100 mm). The reduction

in thickness is justified by the use of high quality concrete with relatively high compressive and flexural strength, closely-spaced joints, and good bonding between UTW and the existing asphalt base.

Joint design

Spacing between joints is an important factor controlling the performance of UTW. In the Louisville experimental project, 6-ft transverse and longitudinal joint spacings (6-ft panels) were compared with 2-ft panels. Although the 6-ft panels exhibited cracking, no signs of distress were observed on the 2-ft panels. This performance was attributed to the smaller panels (2-ft) transferring the load completely to the flexible base and the concrete being mostly under compression. Comparatively, when larger panels are used, some of the load is absorbed by slab bending. The contribution of the existing asphalt is based on the assumption that the overlay is bonded to the flexible base. The American Concrete Pavement Association (ACPA) has recommended that joint spacing be about 12 to 15 times of the slab thickness. For example, spacing for UTW of 2 in. (50 mm) of thickness should be between 2 and 3 ft (0.6 and 0.9 m). Spacing at a Georgia site was 2-ft (0.6 m) and in Kansas 3-ft (0.9 m) in one section, and 4-ft (1.2 m) in the other.

It is not practical to install dowel bars, tie bars, or keyway in UTW pavements because of the very thin slabs. Field evaluation has indicated that load transfer provided by aggregate interlock is generally high because of the short joint spacing and the support provided by the asphalt layer. For UTW pavements, field performance demonstrated the need for thicker slabs at the transition areas between the UTW and the asphalt roadways. Figure 2.1 shows transition details for UTW pavements, as recommended by ACPA.⁽³⁾



W = approx. 6 ft (2 m) extend over several slabs if necessary

$h' = h + 3$ in. (75 mm), minimum of 6 in. (150 mm)

Figure 2.1 Transition Between UTW and Adjoining Asphalt Pavement (3)

Interface Bonding Strength

Bond between UTW and existing asphalt pavement is a key factor controlling the performance of the UTW composite pavement. The existence of bond strength not only significantly reduces the stresses in the concrete section, but also allows the section to perform and be analyzed as a composite section. A wide range of bond strength (shear strength between the two layers) was measured at some of the experimental sites; from the average strength of 50 psi (0.34 MPa) measured at the Swedish site to the over 200 psi (1.38 MPa) measured at some Florida UTW test sections. Bond strength can be improved by milling the old asphalt pavement; the roughness in the surface and the exposed aggregates lock the layers together and increase the bond.

2.6 Design Procedure of UTW Pavements

Because of the thin slabs, the Portland Cement Association's (PCA) thickness design procedure⁽¹⁴⁾ does not completely apply to UTW. Furthermore, the AASHTO thickness design method⁽¹⁵⁾ does not account for the bond between the two layers. As the development of the UTW technique continued, it became apparent that a design procedure for selecting the optimum UTW thickness and joint spacing subjected to anticipated traffic and environmental loading was needed.

In 1994 the PCA sponsored a comprehensive research effort aimed at developing a mechanistic based design procedure for UTW.^(1,2) The PCA's UTW pavement design procedure was developed in 1997. Work conducted in developing the design procedure included a thorough literature review of past and current work; condition surveys of UTW sites in Georgia and Tennessee; instrumentation and load testing of several test sections; development of a 3-dimensional finite element model for UTW analysis; and development of a design procedure and construction guidelines.

Development of this design procedure included the following elements:

1. Verification of the 3-dimensional finite element model. Before using any newly developed theoretical model, it is essential to verify or calibrate the model with field measurements. Strain (stress) data collected from the Spirit of St. Louis Airport UTW test sections were used to calibrate and verify the three-dimensional model that was developed in this study and was used as an analytical tool to analyze the UTW pavement behavior and to develop the design procedure. To calibrate and verify the model, stresses were computed under each loading and temperature condition, and were compared with the load testing results obtained from the test pavements.
2. Identification of degree of bonding existed in the field. It has been established from the results of field testing that UTW pavements behaved as partially bonded composite pavements. Using field data and the 3-D model, an effort was made to quantify the additional structural capacity (or load carrying capacity) that could be offered by the asphalt layer to the UTW pavements.

3. Correlation between stresses calculated from ILSL2 and the 3-dimensional model. Since many computer runs would be required to develop the design guidelines, the use of the 3-dimensional model was not feasible due to the time needed for each run. Instead, correlations were developed between stresses computed by these two models, and were used in the development of the design guidelines.
4. Development of design guidelines. Processes involved in the development of the UTW design guidelines are the following:
 - Stresses induced by loads and temperature were separately computed for fully bonded UTW pavements using the 2-dimensional model, ILSL2. A wide range of pavement parameters and material properties were covered.
 - The 2-D model stresses were converted to 3-D model stresses using the conversion equations derived in the previous step.
 - The converted 3-D model stresses were increased by 36% to account for the partially bonded condition, as observed in the field testing.
 - Equations were developed to correlate the converted and adjusted stresses to different pavement parameters. Stresses and strains were then calculated for typical parameters for UTW pavements under different loading and temperature conditions, and were tabulated.
 - UTW pavement thickness design was accomplished by limiting both the concrete and asphalt strains within safe limits under anticipated traffic and environmental loadings in the pavement's design life.

2.7 Performance of UTW Projects

As mentioned above, most of the experimental sites have performed very satisfactorily. At the Louisville site, two overlay thicknesses were evaluated (2 and 3.5 in.), and joint spacings of 6 ft and 2 ft. were used. UTW test sections with 2-ft joint spacing showed much less cracking than those 6-ft joint spacing for 2-in. thick slabs.

Evaluations in Georgia, conducted two years after construction, indicated good performance.⁽¹⁶⁾ The UTW test sections were located in a truck weigh station on I-85. The test sections had a design UTW thickness of 2-½ in. (64 mm) and the existing asphalt thickness was about 11 in. (279 mm). It was reported that the test sections had been subjected to 351,000 18-kip (80-kN) Equivalent Single Axle Loads (ESAL) in two years. Only 2% of the slabs had cracks for the test sections with fiber reinforced concrete and 5% of slabs had cracks for the non-fiber sections. A design evaluation using the PCA's design procedure also indicated that the UTW test sections were designed adequately.

A wealth of information on the behavior of UTW was generated from the Tennessee experience.⁽¹⁶⁾ After the first experimental project was constructed in Nashville in May of 1992, six more sites were built in Maryville, Chattanooga, McMinnville and Athens. Cracks observed on the first site (Nashville) were mainly attributed to the asphalt base. It was observed that during milling, asphalt was completely removed and the concrete overlay was supported by a cobblestone base. A design evaluation also indicated that the test section was severely under-designed.

A UTW pavement project was constructed at the Spirit of St. Louis Airport to carry light-load aircraft (gross weight of 12,500 lb or 5,670 kg) traffic in 1995. The design thickness of the UTW pavements was 3 ½ in. (89 mm) with a joint spacing of 50 in. (1.3 m). The existing asphalt pavement was milled before concrete placement to create a rough surface. The asphalt thickness after milling was about 3.1 in. (79 mm). A visual condition survey of the UTW pavements was performed on July 2001.⁽¹⁷⁾ It was observed that, after over six years of service, the UTW pavements performed extremely well, with very little distresses observed on the entire site. Out of the more than 7,200 panels, only 18 panels (0.25%) have exhibited distresses, with majority of them in the form of corner cracking.

The Iowa and Minnesota Departments of Transportation (DOT) have also been actively involved in the UTW technique development and evaluation. In 1994, Iowa constructed 7.2 miles (11.6 km) of UTW pavements on a segment of Highway 21.^(18,19) The research was designed to evaluate the long-term performance of UTW pavements and their applicability in Iowa. Four major variables were included for evaluation, resulting in a total of 41 test sections. The four variables were overlay thickness, joint spacing, the use of fiber, and the asphalt surface preparation. The pavements were subjected to an estimated Average Daily Traffic (ADT) of 1,350 (or 40 ESAL's per day). Through continuous monitoring of the test sections, after seven years in service, the test sections have performed well and have exhibited minimal distresses.

In October 1997, the Minnesota DOT constructed several thin and ultra-thin whitetopping pavements on I-94 at the Minnesota Road Research (Mn/Road).⁽²⁰⁾ The existing asphalt pavement was in fairly good condition, with minor cracking and rutting. The asphalt pavements were milled to the depth of the overlay thickness to maintain the original pavement surface elevation. The UTW test sections had two different thicknesses, 3 in. and 4 in. (75 mm and 100 mm), with two different joint patterns, 4 ft by 4 ft and 5 ft by 6 ft (1.2 m by 1.2 m and 1.5 m by 1.8 m). After 3½ years and over 4.7 million ESALs, cracking (transverse and corner cracking) was observed in the UTW test sections. The majority of the cracking was in the truck lane. It was indicated in the research study that most of the corner cracking occurred along the inside longitudinal joint due to its location directly in the inside wheel path. Transverse cracking often occurred in the outside wheel path near a transverse joint. This indicated that using a joint layout that keeps the longitudinal joints outside the wheel paths could improve UTW pavement performance.

Chapter 3

Field Evaluation of the Ellaville Weigh Station UTW Test Sections

3.1 Introduction

The primary purposes of the field evaluation were to observe the actual conditions of the UTW test sections, measure the slab thickness, measure slab temperature data, and obtain other pertinent information that would be used in the UTW pavement evaluation. Since many activities would occur at the site and many personnel would be at the site, coordination would be very important for a successful field evaluation. To ensure a smooth operation, a project-planning meeting was held on May 24, 2001 at the Florida DOT's New Pavement Evaluation Conference Room in Gainesville. The attendees at the meeting included:

Dr. Bouzid Choubane, Florida Department of Transportation
Mr. Michael Bergin, Florida Department of Transportation
Mr. Tom Byron, Florida Department of Transportation
Mr. Tim Ruelke, Florida Department of Transportation
Mr. Emmanuel Uwaibi, Florida Department of Transportation
Dr. Mang Tia, University of Florida
Dr. Chung Wu, Construction Technology Laboratories, Inc.

The objective of the overall project was discussed, followed by discussions on specific requirements for field evaluation and laboratory testing. It was estimated that the field evaluation would require a two-day closure of the weigh station. The field evaluation consisted of the following activities:

- Condition survey, including visual distress survey, fault measurement, and photo recording.
- Slab and air temperature measurements.
- Falling weight deflectometer (FWD) testing.
- Pavement coring.
- Ground Penetrating Radar (GPR) testing for layer thickness determination.

Field evaluation was conducted on July 24 and 25, 2001, and a meeting was held on July 23, 2001 to go over the evaluation. In the meeting, it was decided that, to take advantage of the longer daylight, the field evaluation would start at 7:00 A.M. for both days. Field evaluation activities included a thorough pavement distress survey, GPR testing, temperature measurements, pavement coring, and FWD testing. It was raining heavily on the first day of evaluation and field evaluation and observations were not started until about 9:00 A.M. (even though it kept raining the entire day) and stopped at 4:00 P.M. Field evaluation was resumed at 8:00 A.M. the second day. The entire operation was completed at about 5:00 P.M. on July 25, 2001. The field evaluation activities and data obtained are described in the following sections.

3.2 Distress Survey

A thorough distress survey was conducted on the first day of the field evaluation. The distress survey included a detailed distress mapping, joint and crack fault measurements, and taking photos. Since the construction of the UTW test sections, the test sections have been surveyed several times, with the last time on July 1999. Distress maps from the 1999 condition survey were available and were used for recording the distresses of the test sections in this project. This enabled the evaluation of the distress progress of the UTW test sections since the last survey about two years ago. The complete UTW distress map is included in Appendix A of the report. For recording purpose, all panels were labeled using a code consisting a character (either A, B, C or D) followed by a number. The numbering scheme is shown in Figure 3.1.

Faulting across joints and cracks were also measured for all the six test sections using a Florida DOT digital fault meter (Figure 3.2). In general, faulting measurements were taken at three different locations, at middle of transverse joints, close to corner, and across cracks. The measured data are presented in Table 3.1. Observations of the performance of each of the six test sections are presented in the following sections.

Section S1W

This is the section located at the entrance of the weigh station from I-10. The concrete overlay had a design thickness of 3 in. (75 mm) with slab dimensions of 4 ft by 4 ft (1.2 m by 1.2 m). This section of the UTW pavement had the worst performance of the six test sections, with many shattered slabs. Figure 3.3 shows a general view of this section and a close-up of Panels B2 and C2 is depicted in Figure 3.4. Discussions of the observations and pavement performance are presented as follows:

- Cracking of panels was observed on about 66% of the panels, with majority of the panels shattered into five or more pieces (Figure 3.5). This represented a dramatic increase in cracked slabs when compared to the survey results of July 1999, with about 20% of the total slabs showing cracks.
- A large portion of the panels towards the end of the section was patched with asphalt (Figure 3.6).
- Horizontal displacements, as large as 1 ½ in., were observed for a few panels that resulted in wide joint width (Figure 3.7).
- Most of the panels without distresses were located in the middle of the test section.
- From the faulting measurements, it is observed that faulting across joints were generally very small for slabs in good condition (without cracks). A faulting of 0.24 in. (6 mm) was measured across a crack on Panel C43.

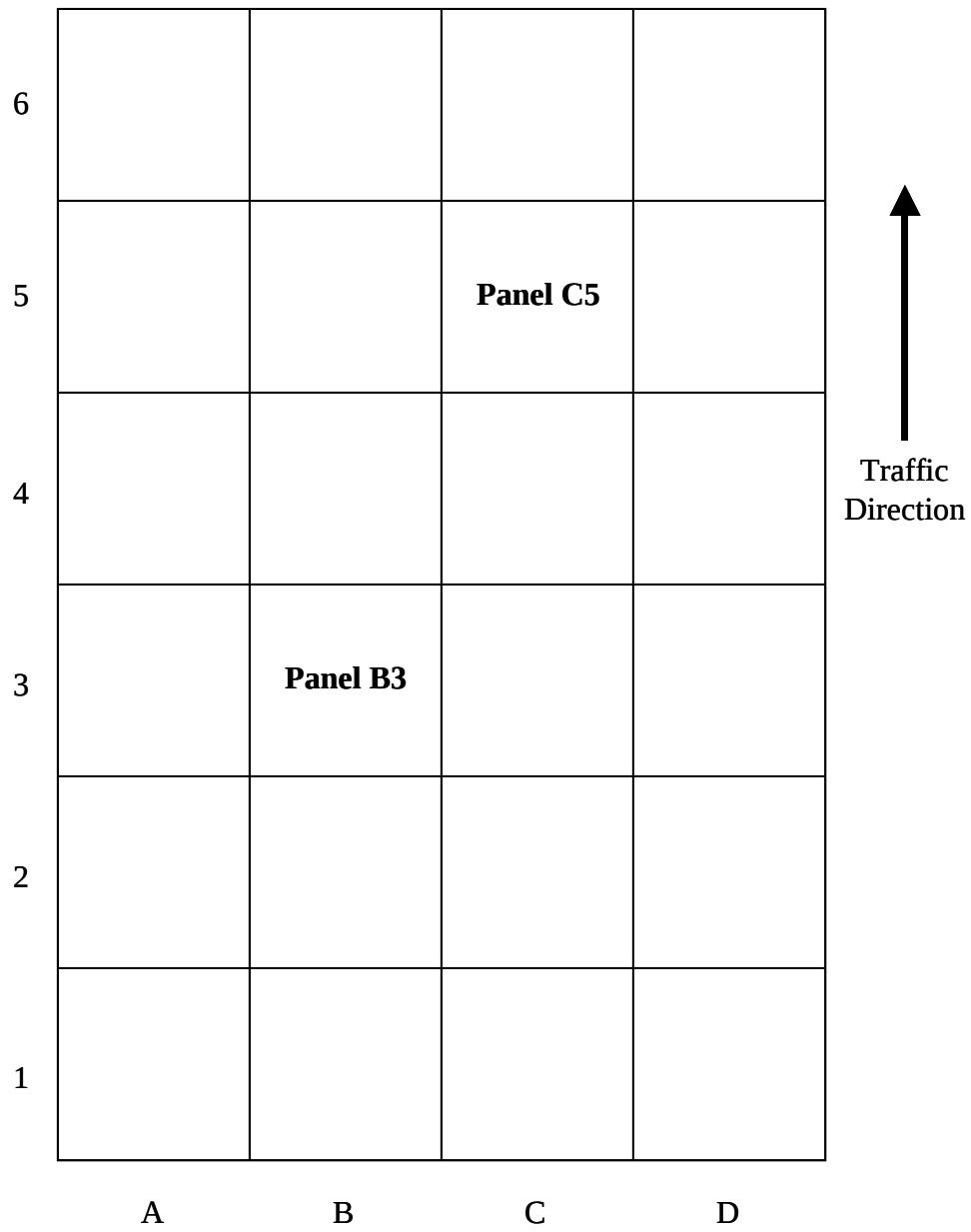


Figure 3.1 Numbering Scheme of the Section Panels



Figure 3.2 Measuring Faulting Across a Joint

Table 3.1. Faulting Measurements at the UTW Pavements

Section ID	Slab ID	Location	Faulting, in.
S1W	A2	Corner	0.00
	A3	Mid Joint	0.00
	A3	Corner	0.00
	A15	Mid Joint	0.00
	A15	Corner	0.00
	A22	Mid Joint	0.00
	D22	Corner	0.00
	D23	Mid Joint	0.04
	D23	Corner	0.04
	B25	Mid Joint	0.00
	C43	Crack	0.24
	C43	Mid Joint	0.08
S2W	C7	Mid Joint	0.04
	C7	Corner	0.00
	A14	Mid Joint	0.04
	A14	Corner	0.04
	B18	Mid Joint	0.04
	B18	Corner	0.00
	B21	Corner	0.00
	C21	Mid Joint	0.04
	C21	Corner	0.08
	C27	Corner	0.00
	B28	Corner	0.20
	D33	Crack	0.43
	Transition	Mid Joint	0.28
	Transition	Corner	0.08
S3W	C1	Crack	0.08
	C8	Corner	0.08
	A12	Mid Joint	0.00
	A12	Corner	0.00
	C17	Mid Joint	0.00
	C17	Corner	0.00
	C22	Mid Joint	0.00
	C22	Corner	0.00
	B27	Mid Joint	0.04
	B27	Corner	0.00
	C33	Mid Joint	0.04
	C33	Corner	0.00
	A38	Mid Joint	0.04
	A38	Corner	0.00
	C72	Corner	0.04
	D72	Crack	0.16
	A18	Corner	0.00

Table 3.1. Faulting Measurements at the UTW Pavements (continued)

Section ID	Slab ID	Location	Faulting, in.
S4E	B12	Corner	0.00
	B13	Mid Joint	0.04
	B13	Corner	0.00
	B23	Corner	0.00
	B24	Mid Joint	0.04
	B24	Corner	0.08
	B33	Corner	0.00
	B34	Mid Joint	0.00
	B34	Corner	0.00
	D44	Corner	0.00
	D45	Mid Joint	0.00
	D45	Corner	0.00
	C53	Corner	0.04
	C54	Mid Joint	0.04
	C54	Corner	0.00
	A64	Corner	0.00
	A65	Mid Joint	0.00
	A65	Corner	0.00
	B75	Corner	0.00
	B76	Mid Joint	0.00
	B76	Corner	0.04
	D85	Corner	0.00
	D86	Mid Joint	0.00
	D86	Corner	0.00
S5E	B22	Corner	0.04
	B23	Mid Joint	0.00
	B23	Corner	0.00
	B30	Corner	0.00
	B31	Mid Joint	0.00
	B31	Corner	0.00
	C37	Mid Joint	0.00
	C37	Corner	0.04
	B44	Mid Joint	0.04
	B44	Corner	0.00
S6E	B2	Crack	0.04
	D2	Mid Joint	0.00
	D2	Corner	0.04
	D7	Mid Joint	0.00
	D7	Corner	0.00



Figure 3.3 General View of Test Section S1W



Figure 3.4 Close-up of Panels B2 and C2 of Test Section S1W



Figure 3.5 Shattered Panels, C15 of Test Section S1W



Figure 3.6 Asphalt Patch, B31 and C31 of Test Section S1W



(a) Panels C9 and D9



(b) Panels B11 and C11

Figure 3.7 Horizontal Slab Displacements, Section S1W

- Past evaluation on UTW pavement field performance has discovered that the transition areas of the UTW slabs between the asphalt and the UTW pavements were susceptible to cracking. A higher UTW thickness has been suggested by ACPA in constructing the UTW pavements.⁽³⁾ Therefore, it is our opinion that it would be prudent to design Section S1W, the entrance section of the UTW pavements with thicker, not thinner, slabs.

Section S2W

Section S2W is the second section located right after (east side of) Section S1W. The concrete overlay had a design thickness of 4 in. (100 mm) with slab dimensions of 5 ¼ ft by 5 ¼ ft (1.6 m by 1.6 m). Though not as bad as Section S1W, this section also has significant amount of cracked slabs at the beginning and the end of the test section. Figure 3.8 shows a general view of this section and a close-up of Panel A22 is depicted in Figure 3.9. Discussions of the observations and pavement performance are presented as follows:

- Cracking of panels and asphalt patches were observed on about 30% of the panels, with many of the panels shattered into several pieces (Figure 3.10).
- The cracked panels were about 12% of the total UTW panels in the July 1999 survey. Again, a substantial increase in cracked slabs was observed between the 1999 survey and the current evaluation.
- The cracking was observed to concentrate in the beginning and the end of the test section, consistent with past experience.
- For panels without distresses, faulting across joints was generally very small. A faulting of 0.43 in. (11 mm) was measured across a crack on Panel D33.

Section S3W

The concrete overlay for Test Section S3W had a design thickness of 4 in. (100 mm) with slab dimensions of 4 ft by 4 ft (1.2 m by 1.2 m). This section showed good performance with few cracked slabs. Figure 3.11 shows a general view of this section and a close-up of Panels B15 and C15 is depicted in Figure 3.12. Discussions of the observations and pavement performance are presented as follows:

- Distresses were observed on 9% of the panels for Section S3W. The major forms of distresses were cracking (corner cracking and shattered slabs) and asphalt patch.
- In the July 1999 survey, the distressed slabs were about 3% of the total slabs.
- The cracking occurred at panels concentrated in the beginning of the test section (see Figure 3.13).
- Asphalt patching was located at the end of the section on one stretch of panels only (Panels B, Figure 3.14). UTW panels in adjacent areas (Panels A, C, etc.) were still in good condition.
- Again, joints of un-cracked panels had very low faulting.



Figure 3.8 General View of Test Section S2W



Figure 3.9 Close-up of Panel A22 of Test Section S2W



Figure 3.10 Cracked UTW Panels at the End of Section S2W



Figure 3.11 General View of Test Section S3W



Figure 3.12 Close-up of Panels B15 and C15 of Test Section S3W



Figure 3.13 Shattered Slabs at the Beginning of Section S3W



Figure 3.14 AC Patch on Panels B at the end of Section S3W



Figure 3.15 General View of Test Section S4E

Section S4E

This is the first section after the weighting platform (east side of the platform). The UTW pavements in front of the platform are not part of the six test sections and are not included in this study. The concrete overlay for Test Section S4E had a design thickness of 4 in. (100 mm) with slab dimensions of 4 ft by 4 ft (1.2 m by 1.2 m). This section showed good performance with few cracked slabs. Figure 3.15 shows a general view of this section and a close-up of Panels B15 and C15 is depicted in Figure 3.16. Discussions of the observations and pavement performance are presented as follows:

- Distresses were observed on 6% of the panels for Section S4E. Most of the distresses developed within the past two years (after the July 1999 survey).
- The distressed panels were concentrated at the beginning and end of the test section.
- Asphalt panels were observed at the beginning of the test section (Figure 3.17).
- Cracked and shattered slabs were noted at the end of the test section (Figure 3.18).
- Faulting was minimal for panels without distresses.

Section S5E

The concrete overlay for Test Section S5E had a design thickness of 4 in. (100 mm) with slab dimensions of 5 ¼ ft by 5 ¼ ft (1.6 m by 1.6 m). This section showed good performance with few cracked slabs. Figure 3.19 shows a general view of this section and a close-up of Panels B15 and C15 is depicted in Figure 3.20. Discussions of the observations and pavement performance are presented as follows:

- Distresses were observed on 5% of the panels for Section S4E. All of the distresses developed within the past two years (after the July 1999 survey).
- The distressed panels were concentrated at the end of the test section (Figure 3.21), except one panel at the very beginning of the test section
- The distresses are all in the form of corner cracking.
- Faulting was minimal for panels without distresses.

Section S6E

This section is located at the end of the weigh station before exiting to I-10. The concrete overlay for Test Section S6E had a design thickness of 3 in. (75 mm) with slab dimensions of 4 ft by 4 ft (1.2 m by 1.2 m). This section had very poor performance with numerous shattered panels and asphalt patches. Figure 3.22 shows a general view of this section (the beginning of the test section). Discussions of the observations and pavement performance are presented as follows:

- 58% of the UTW panels for Section S6E were either shattered or patched with asphalt.
- In the July 1999 survey, the distressed slabs were about 39% of the total slabs.
- The shattered slabs were all located at the beginning of the test section (Figure 3.23), while the AC patches were all at the end of the test section (Figure 3.24).
- Faulting was minimal for panels without distresses.



Figure 3.16 Close-up of Panel C36 of Test Section S4E



Figure 3.17 AC Patches and Cracked Panels at the Beginning of Section S4E



Figure 3.18 Shattered Panels at the End of Section S4E



Figure 3.19 General View of Test Section S5E



Figure 3.20 Close-up of Panel B30 of Test Section S5E



Figure 3.21 Cracked Panels at the End of Section S5E



Figure 3.22 General View of Test Section S6E at the Beginning



Figure 3.23 Shattered at the Beginning of Section S6E



Figure 3.24 Asphalt Patch at the End of Section S6E

Summary and Discussions

From the distress survey, it is interesting to note that significantly different performances were observed for the six test sections. While Sections S3W, S4E, and S5E had good performance with minimum distresses, Section S2W had poor performance with a fair amount of cracked panels. The two outside test sections, S1W and S6E had very poor performance, with large portion of shattered slabs and asphalt patches. Also, for all test sections, the distresses were all located at the beginning and the end of the sections. A summary of the field evaluation and discussion are presented next:

- The two test sections that had very poor performance, S1W and S6E, both were designed to be 3 in. (75 mm) thick, while all others had a design thickness of 4 in. (100 mm). As past experience have demonstrated that the UTW panels at the beginning or the end of the pavements (traffic entering or leaving the UTW) were the most susceptible to cracking. This problem is probably due to the existence of free joints (or edge) between the asphalt and the concrete, so that traffic loads would induce higher stresses in the concrete. This problem is also aggravated by the braking of the trucks at the entrance and the acceleration of the trucks at the exit, which would induce higher shear stresses in the pavement. As described in Section 2.5 of the report, a thickened edge has been recommended in UTW pavement construction. For the Ellaville Weigh Station, it would have been prudent to design Test Sections S1W and S6E with thicker, not thinner, concrete overlays.
- Joint spacing is also an important design consideration when designing and constructing UTW pavements. The larger slab sizes of Test Section S2W may have contributed to panel cracking of the test section.
- Consistent with past experience, for all six test sections, most of the cracking and patching were in the areas at the beginning and the end of the sections. In the original construction, transition concrete slabs were built between the test sections. To facilitate the subsurface drainage, a free draining material (draincrete) was used as the foundation. It was reported, however, soon after opening to traffic, all transition slabs started to crack, which also affected the adjacent UTW pavements. Consequently, all transition slabs, along with the free-draining base, were removed and replaced with full-depth concrete. There was no load transfer between the transition slabs and the adjacent UTW panels. Thus, using thickened UTW panels at the transition zone would have been more desirable.
- Two other observations are also worth noting: the rapid development of cracking and the large amount of shattered slabs. The adequate performance of UTW pavements is largely dependent on the assumption that sufficient interface bond exists between the concrete and the asphalt layers. If so, the existing asphalt pavement would provide structural capacity to the pavement structure, and the UTW pavements would act as composite systems. Once the first cracks occurred, the additional traffic (especially the heavy truck traffic at the weigh station) would break the interface bond and the composite action would be lost. Carrying the heavy trucks, concrete slabs with a thickness of 3 or 4 in. would not survive. The deterioration of the UTW panels also influenced adjacent pavements by creating free joint conditions, resulting in similar situations as in the transition areas.

- For all the panels that were still in good condition, faulting across joints was minimal for all six test sections, even the two poorly performing sections. This is not surprising because of the small joint spacing and the strong support provided by the asphalt pavement. However, once the panels started cracking, the faulting increased dramatically.
- Another factor that might have affected the UTW pavement performance was the quality of construction, especially the milling of the asphalt surface. The lack of quality control in milling operation has been documented, and was validated in this project. As will be further discussed in a later section, the variation of the asphalt layer thickness was very large.

3.3 Slab and Air Temperature Measurements

In the field evaluation, two sets of thermocouples were installed, one for the 3-in. (75-mm) thick sections and the other for the 4-in. (100-mm) thick sections. The thermocouples were installed in Sections S1W and S2W. For each set, three thermocouples were installed, at the bottom, the mid-depth and the surface of the UTW slab. Holes were drilled into the concrete to appropriate depths and thermocouples were installed and protected (Figures 3.25 and 3.26). A box was set up on the side of the pavements to house the temperature recording devices (Figure 3.27). The measured temperature data also included air temperature and temperature inside the box.

Temperature was recorded continuously every 15 minutes from July 26 to August 23, 2001, from October 8 to October 15, 2001, from November 3 to November 10, 2001, and from December 6 to December 13, 2001. The complete temperature data are included in Appendix B of the report. Summary statistics of the temperature data for each month is presented in Table 3.2. In this table, the average slab temperature was the mean value of the temperatures measured at the slab top, middle and bottom. The temperature gradient was the difference of the top temperature and bottom temperature divided by the slab thickness. The temperature data will be used for pavement evaluation later in this report.

Table 3.2 Summary Statistics of Temperature Data by Month

Month	Air Temperature, °F			Average Slab Temperature, °F			Temperature Gradient, °F/in.	
	Maximum	Minimum	Average	Maximum	Minimum	Average	Maximum	Minimum
July	111.9	68.7	82.4	112.8	80.9	92.3	3.7	-1.8
August	118.9	67.7	80.9	115.1	76.0	91.2	4.4	-2.1
October	103.9	52.8	73.6	93.1	65.3	78.1	3.0	-2.1
November	104.0	37.3	60.9	81.9	55.4	66.6	3.0	-2.1
December	95.3	55.9	69.2	82.7	64.7	71.8	2.2	-1.6



Figure 3.25 Drilling Holes for Thermocouple Installation



Figure 3.26 Protection of Installed Thermocouples

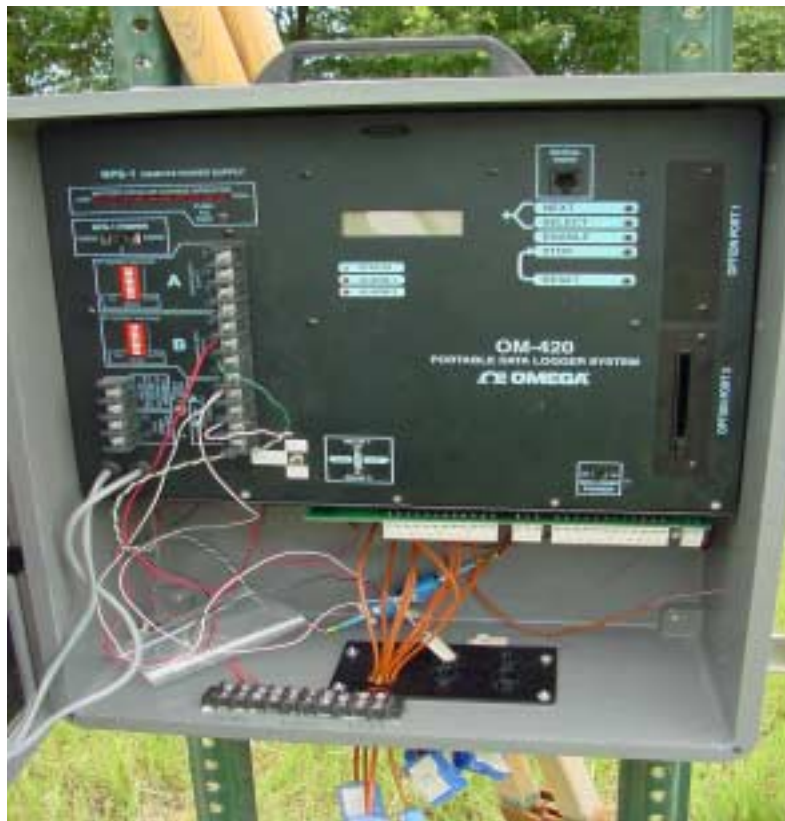


Figure 3.27 Housing of the Temperature Measuring Devices

3.4 FWD Testing

FWD tests were conducted at various locations for all six test sections using the Dynatest Model 8000 FWD (Figure 3.28). Referring to Figure 3. 29, testing was performed at four different locations on each UTW panel, slab center (I), transverse joint center (J), edge (E), and slab corner (C). At each test location, three load levels, 6 kip, 9 kip, and 11 kip (27 kN, 40 kN, and 49 kN), were targeted. Two sets of tests were performed. The first set was conducted on the first day of field evaluation, from 9:30 A.M. to 2:10 P.M. As described earlier, weather was rainy and with ambient temperature staying constant at about 74 °F (23.3 °C) throughout the FWD testing. The slab temperature at the surface was also a constant of about 78 °F (25.6 °C). Since it was raining heavily, and the air temperature stayed constant the entire testing period, it was assumed that the temperature differential in the UTW concrete would be minimum.

The second set of FWD tests was performed in the afternoon of the second day, from 12:50 P.M. to 2:40 P.M. Temperature was considerably warmer, with air temperature reaching 100 °F (37.8 °C) and slab temperature reaching 113 °F (45.0 °C) at the start of the tests. Temperature gradient in the UTW panel ranged from about 2.5 to 3.5 °F/in. (4.2 to 5.8 °C/mm). The two-set testing was intended to evaluate UTW pavement behavior under different temperature conditions. However, large inconsistencies of the deflection data were observed for the test conducted during the second day and the data were not used in this project. The major problems were the higher deflections under interior loading as compared with those under corner loading. Also the shapes of many deflection basins were not reasonable. It was suspected that the designations of the test locations might be in error.

Deflection data obtained during the first day of testing were used to study the UTW pavement behavior under field conditions and to estimate the pavement foundation support (k) provided by the subbase and subgrade layers. The complete deflection data are included in Appendix C of the report.

Typical deflection basins for loads applied at the four locations are presented in Figures 3.30 through 3.33. The locations of the joints are also shown in these figures. From these figures, two distinct deflection basin shapes were observed. The deflection basin under slab center loading is similar to that under edge loading and the deflection basin under joint loading is similar to that under corner loading. It is apparent that the presence of a joint (the discontinuity between slabs) affected the deflection basin shapes when the loads were applied close to the joint (joint and corner loading). However, under center and edge loading when the joint was 2 ft from the loading center, the discontinuity did not seem to affect the deflection basin.

For conventional concrete pavements with longer joint spacing, slab may curl when subjected to temperature differential in the slab. When temperature differential in the slab is sufficiently large, the slab may be separated from its foundation, and voids may exist between the concrete slab and the foundation. The stresses caused by traffic loads under this condition will be higher compared to those induced under fully supported condition. However, for UTW pavements, because of the very short joint spacing, slab curling caused by temperature differential has been shown to be minimal and can be ignored in design. This observation is further substantiated in

this study. With the three load levels used in conducting the FWD tests, the linearity of the load-deflection characteristics were examined. As shown in a typical load-deflection plot in Figure 3.34, linear load-deflection relationship is present indicating that the UTW slab and the asphalt layer are fully supported by the foundation.

Referring to Figure 3.29, the FWD tests were performed at four different locations on each UTW panel, slab center, joint (transverse joint), edge (longitudinal joint), and slab corner. In this study, an evaluation was made to compare the maximum deflections (measured under the loading plate) induced by FWD load at these four locations. The normalized maximum deflections (to the three targeted load levels) for all the test panels are shown in Table 3.3.

Using the maximum deflections under the slab center loading as the basis, paired-t tests were conducted to evaluate if the maximum deflections under the joint, edge, and corner loadings were different from those caused by slab center loading. Results of the paired-t tests indicated that, at 95% confidence level, (1) there is no difference between the measured maximum deflections under the joint loading and those under the center loading; (2) there is no difference between the measured maximum deflections under the edge loading and those under the center loading; and (3) the maximum deflections caused by corner loading are higher than those caused by center loading.

Again, for conventional concrete pavements with longer spacing that will likely be subjected to slab curling, the edge and joint deflections are generally higher than the center load-induced deflections. However, for UTW pavements, because of the much shorter spacing and the strong support provided by the continuous asphalt pavement, no appreciable differences were observed among the maximum deflections caused by FWD loads at various locations, except the corner loading condition. This observation is consistent with findings obtained from earlier studies, and need to be considered when considering design of UTW pavements.

Evaluation of Load Transfer Efficiency (LTE), computed from the FWD deflection data was also performed. For joint and corner loading conditions, the FWD load was applied at one side of the joint and the deflections were measured at both sides of the joint. The LTE was defined as the deflections measured at the unloaded slab divided by those measured at the loaded slab (other side of the joints) expressed in percentage, as shown in Figure 3.35. LTE data for all panels tested are presented in Table 3.4. In this table, the LTE data computed using deflections induced by the joint loading and the corner loading are listed separately. From a paired-t test, it was concluded that, at 95% confidence level, no difference existed between the LTE under joint loading and those under corner loading. Therefore, the combined data were used to compute the average LTE for each test section, also shown in Table 3.4. The Average section LTE ranged from 77% for Section S3W to 50% for Section S5E. These values are considered low, especially for UTW pavements that usually possess relatively high LTE.



Figure 3.28 FWD Testing

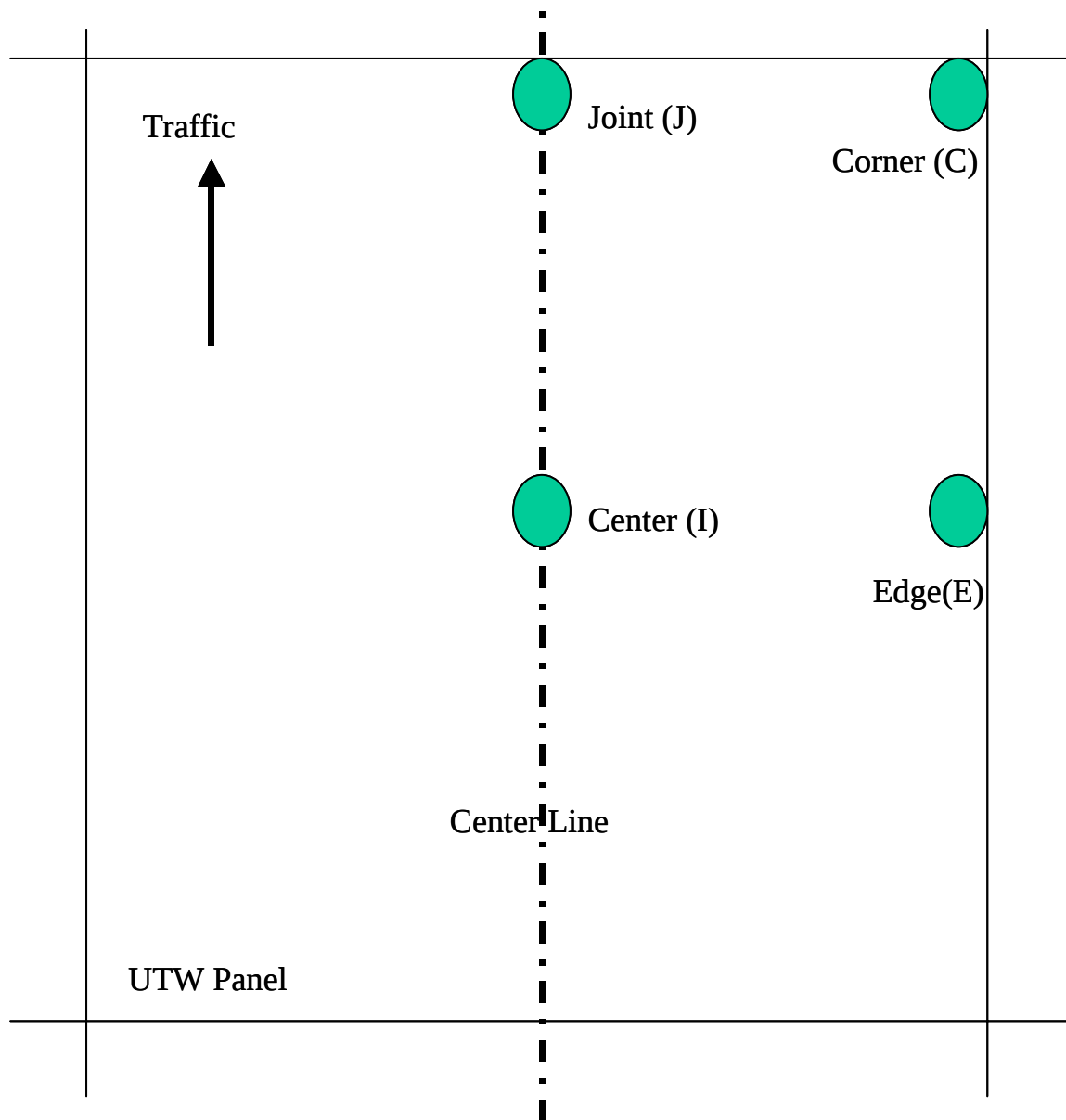


Figure 3.29 Typical FWD Testing Plan

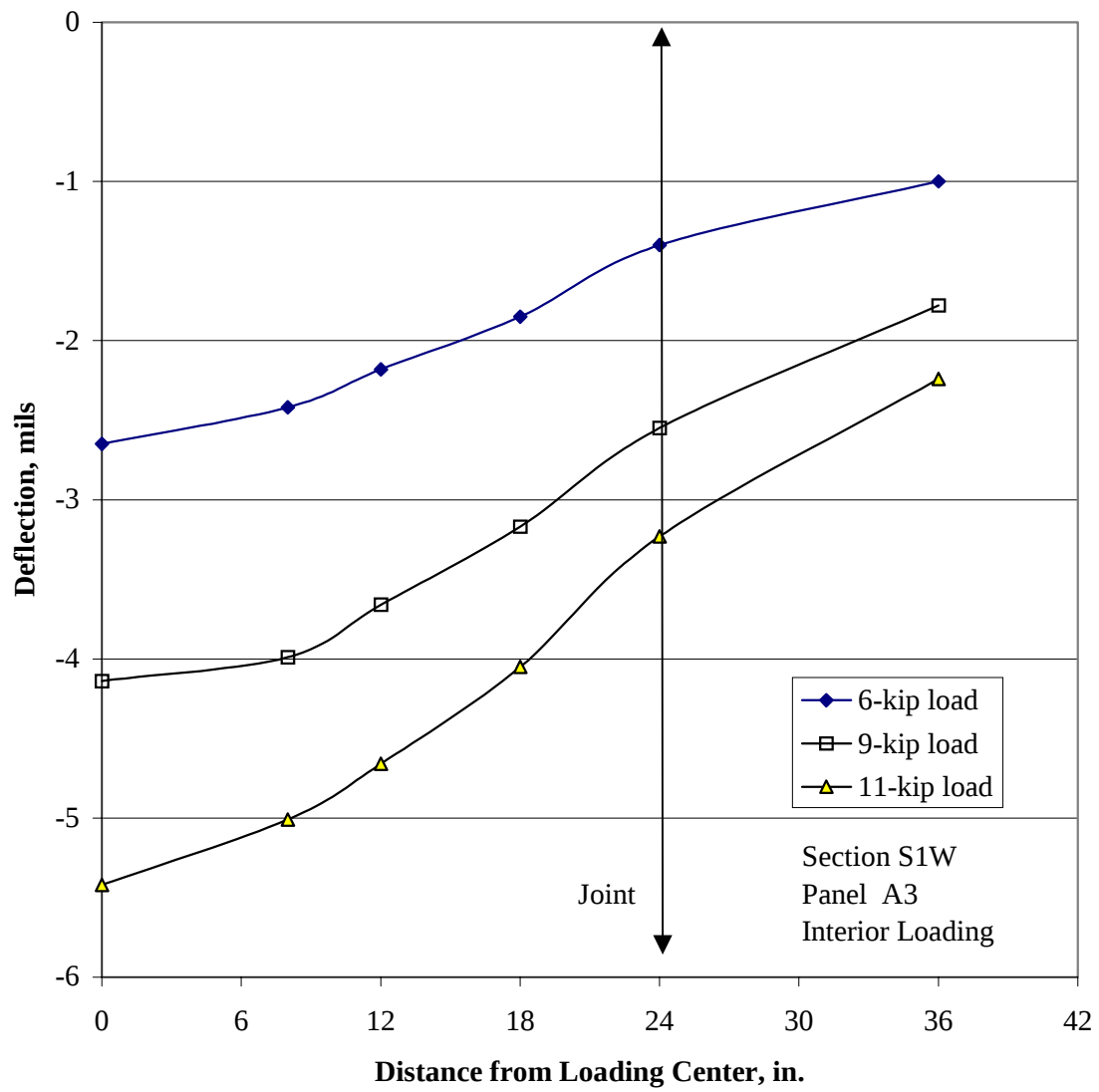


Figure 3.30 A Typical Deflection Basin Caused by Slab Center Loading

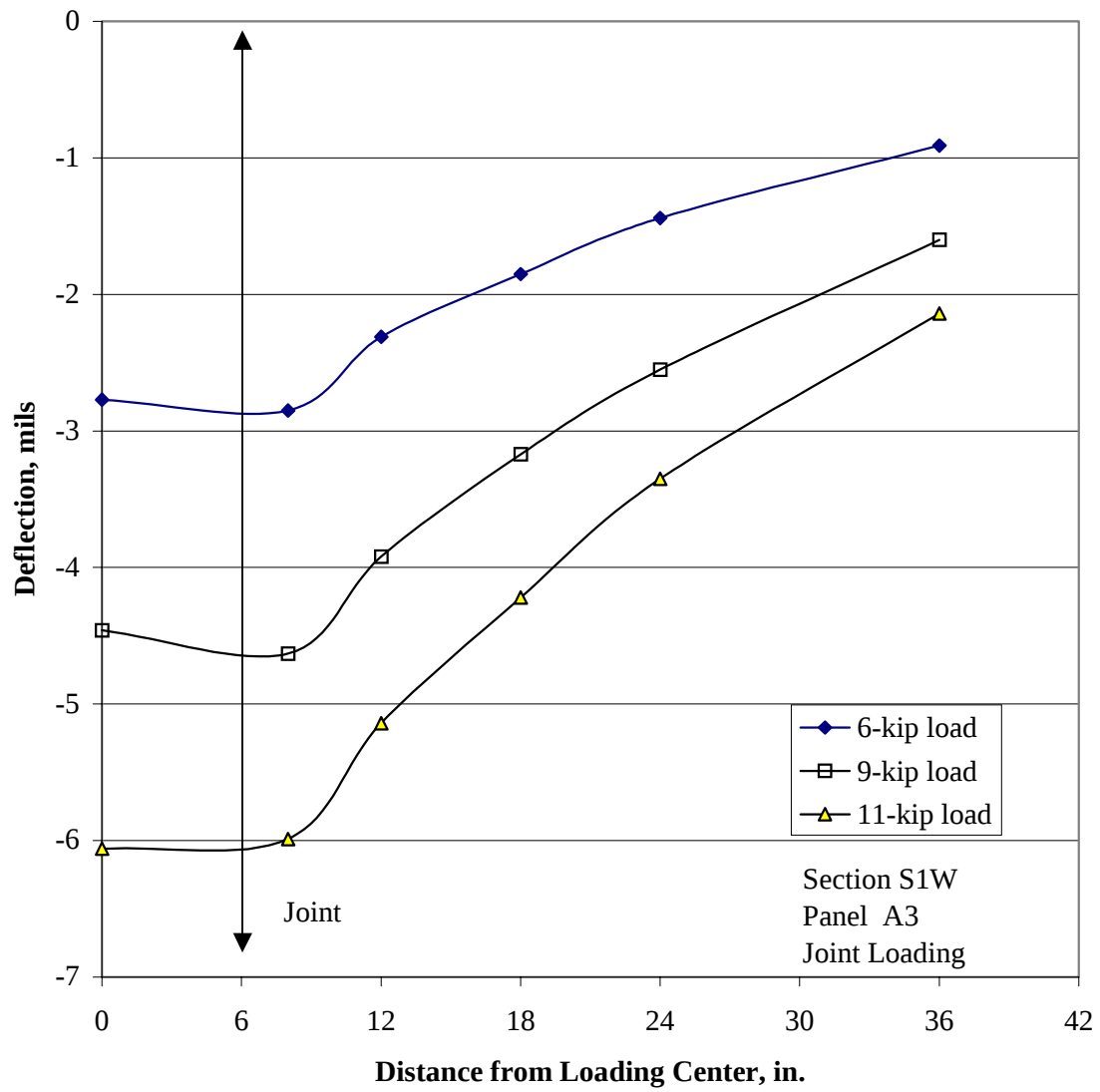


Figure 3.31 A Typical Deflection Basin Caused by Joint Loading

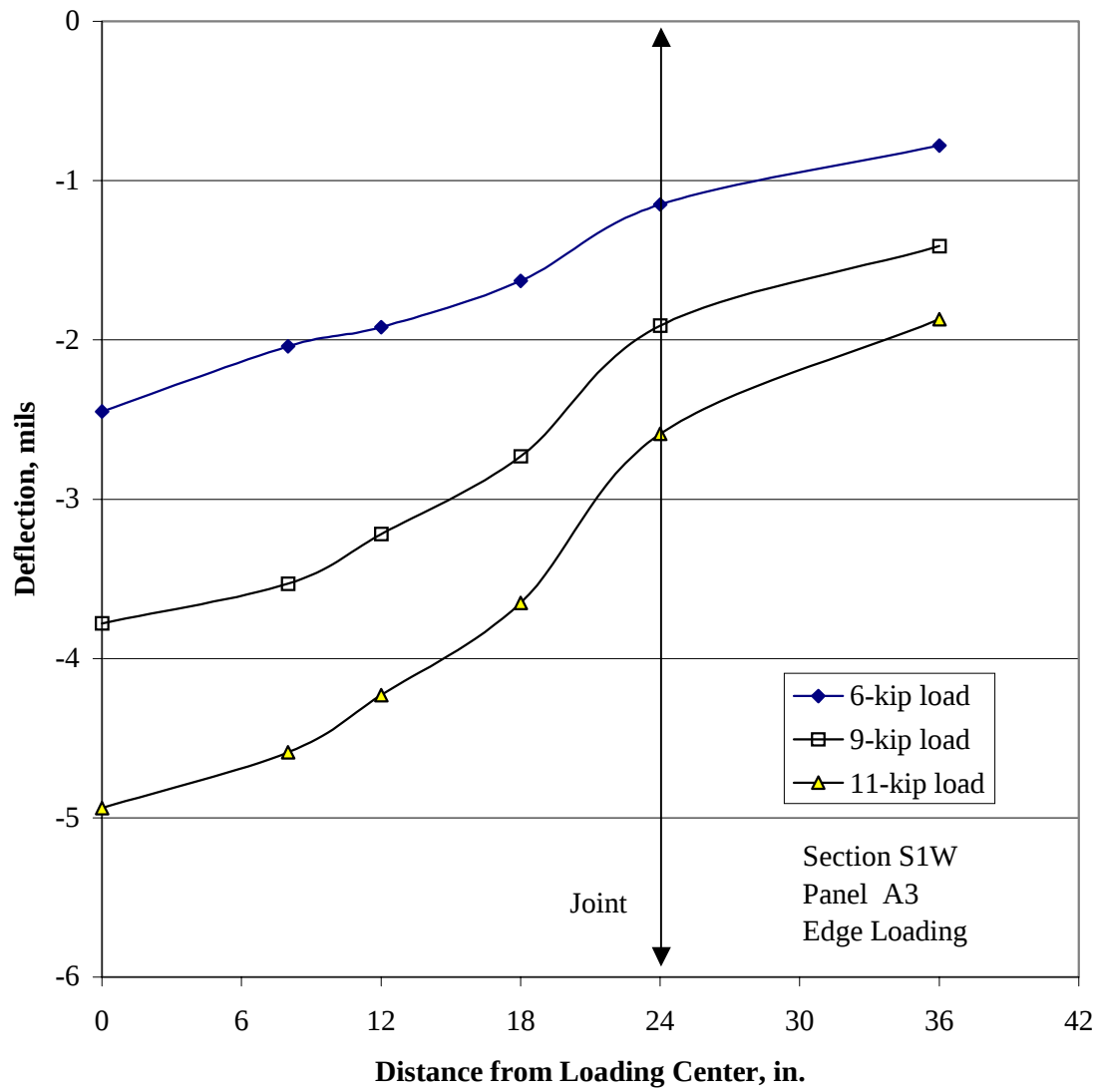


Figure 3.32 A Typical Deflection Basin Caused by Edge Loading

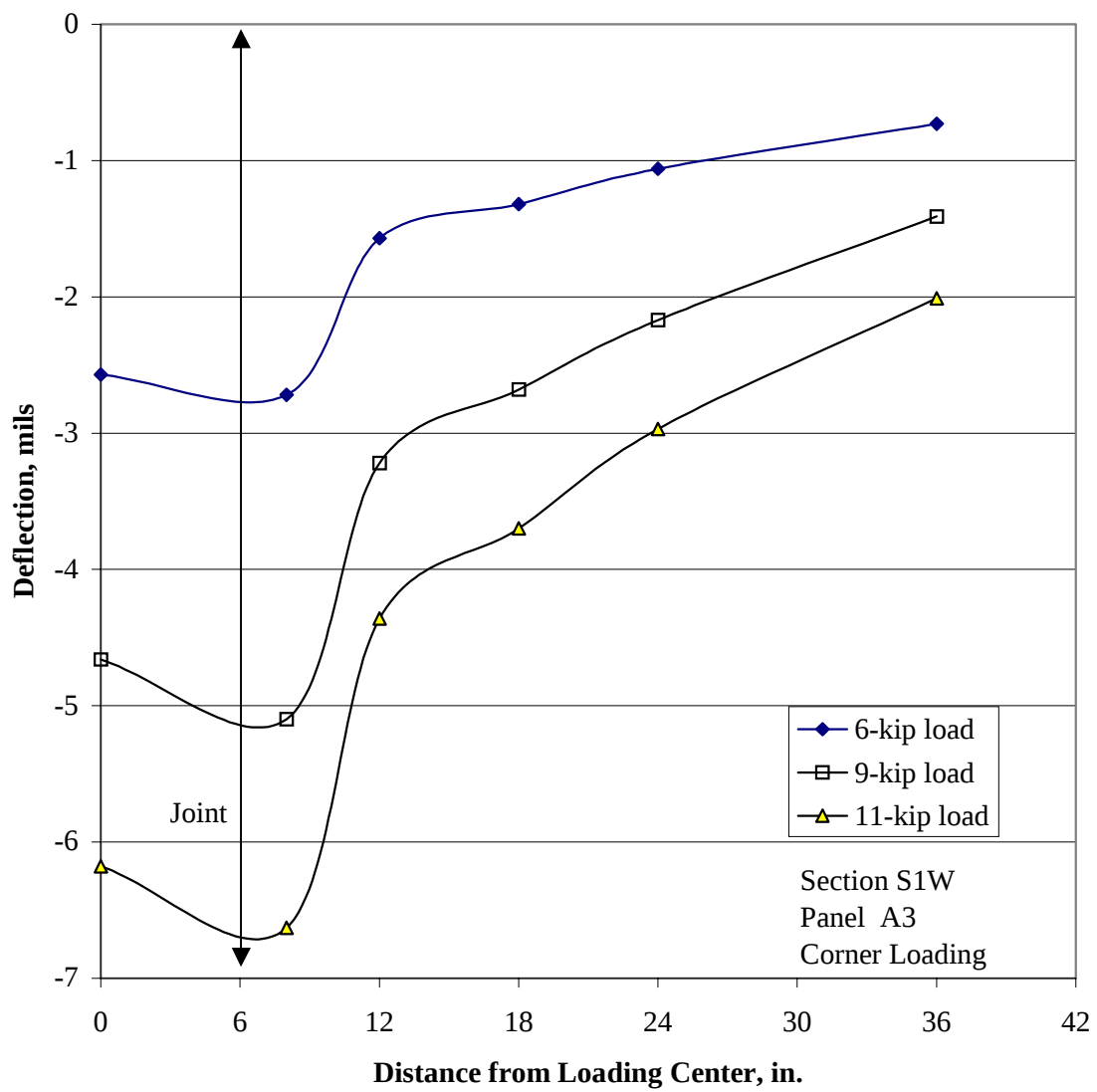


Figure 3.33 A Typical Deflection Basin Caused by Corner Loading

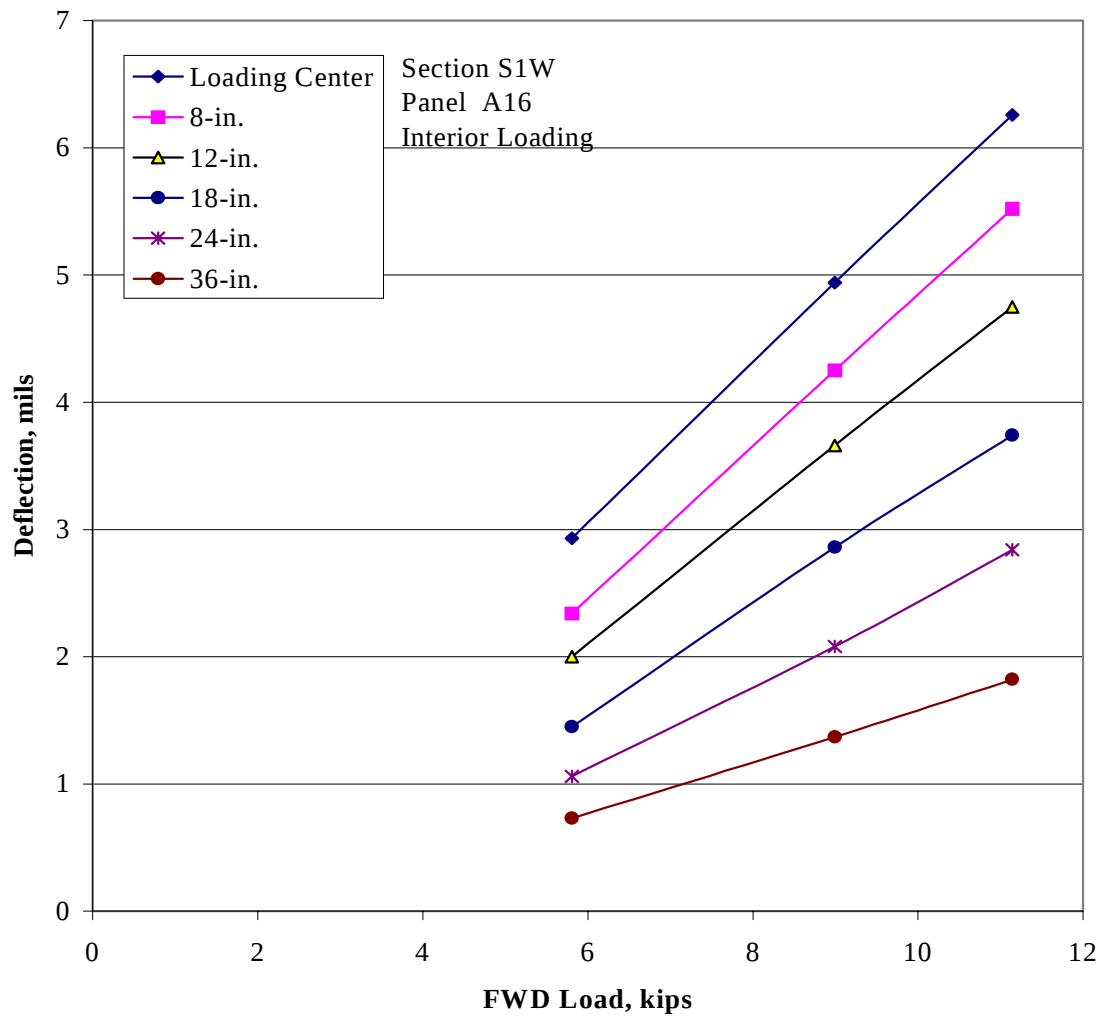


Figure 3.34 A Typical Load-Deflection Plot

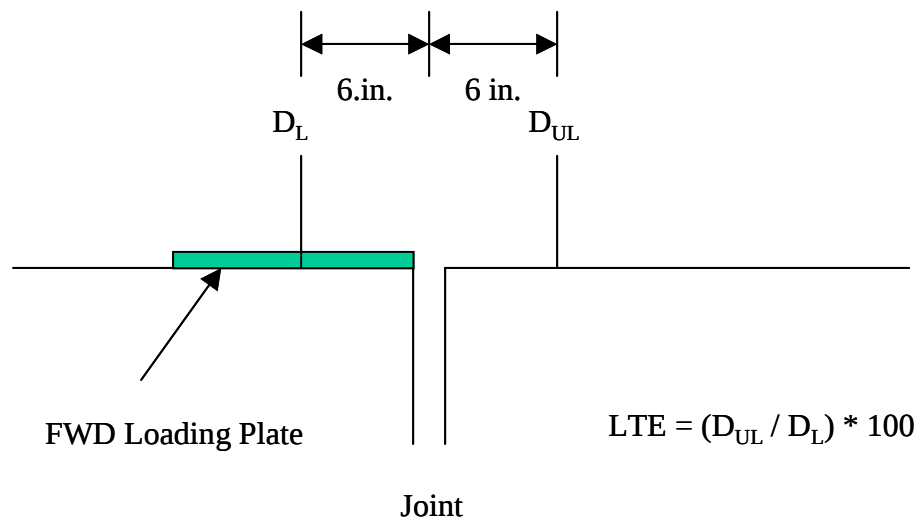


Figure 3.35 Definition of Load Transfer Efficiency (LTE)

Table 3.3 Normalized Maximum FWD Deflections

Section No.	Panel No.	Load, kips	Normalized Maximum Deflection, mils, Under			
			Center Loading	Joint Loading	Edge Loading	Corner Loading
S1W	A3	6	2.54	2.69	2.36	2.65
		9	4.15	4.48	3.78	4.70
		11	5.37	6.00	4.91	6.12
	A16	6	3.03	2.98	3.31	3.01
		9	4.94	5.20	5.67	5.42
		11	6.18	6.40	7.12	7.12
	D23	6	2.89	2.83	1.76	3.16
		9	4.69	4.80	4.63	5.56
		11	5.86	6.17	7.15	7.08
S2W	B6	6	3.19	4.18	3.13	3.69
		9	5.09	6.56	5.05	6.30
		11	6.08	8.03	6.37	8.03
	A13	6	2.89	2.76	2.79	2.67
		9	4.59	4.77	4.77	4.59
		11	5.77	6.13	5.83	5.72
	B17	6	2.65	3.47	3.10	3.39
		9	4.21	5.35	5.67	5.73
		11	5.17	7.00	6.89	7.40
	B20	6	2.71	3.79	2.95	3.56
		9	4.38	5.84	4.96	5.99
		11	5.52	6.96	6.33	7.51
	C27	6	3.63	3.53	2.89	3.06
		9	5.41	5.97	5.12	5.37
		11	6.63	7.40	7.04	6.98
S3W	A12	6	1.97	2.36	2.23	2.12
		9	3.90	4.18	4.05	4.01
		11	4.87	5.06	5.11	5.38
	C16	6	2.18	2.46	2.91	2.82
		9	3.93	4.23	4.92	4.97
		11	5.08	5.49	6.09	6.43
	B21	6	2.14	2.34	1.70	1.94
		9	3.79	4.12	3.76	4.06
		11	4.99	5.33	5.45	5.39
	A26	6	2.50	2.56	2.30	2.49
		9	4.53	4.80	4.44	4.62
		11	5.90	6.29	5.84	5.96
	D32	6	2.00	2.42	2.70	2.70
		9	3.76	4.19	4.44	4.63
		11	4.85	5.28	5.51	6.13
	B37	6	2.24	1.82	2.16	1.89
		9	3.72	3.38	3.78	3.42
		11	4.76	4.52	4.81	4.50

Table 3.3 Normalized Maximum FWD Deflections (continued)

Section No.	Panel No.	Load, kips	Normalized Maximum Deflection, mils, Under			
			Center Loading	Joint Loading	Edge Loading	Corner Loading
S4E	B14	6	1.88	1.83	2.08	2.65
		9	3.23	3.67	3.69	4.46
		11	4.41	4.89	4.78	5.61
	B25	6	2.08	4.62	3.64	8.70
		9	3.79	7.92	6.22	13.01
		11	5.21	9.89	7.92	15.89
	B35	6	2.87	3.46	2.86	3.41
		9	4.84	6.21	5.12	6.23
		11	6.35	8.23	6.58	8.11
	D46	6	2.07	2.26	3.51	3.56
		9	3.92	4.14	3.19	5.23
		11	5.19	5.53	7.30	6.28
	C55	6	2.34	2.54	2.43	3.08
		9	4.23	4.80	4.61	5.33
		11	5.77	6.10	6.42	6.83
	A66	6	2.63	2.98	2.57	2.76
		9	4.71	5.12	4.82	5.14
		11	6.29	6.38	6.22	6.77
	B77	6	1.71	2.06	2.19	1.99
		9	3.48	3.55	3.68	3.59
		11	4.59	4.69	4.80	4.75
	D87	6	2.35	2.67	3.37	3.01
		9	4.34	4.51	6.08	5.55
		11	5.64	5.83	7.85	7.19
S5E	B6	6	2.84	3.44	2.96	7.17
		9	4.92	5.81	5.46	11.38
		11	6.62	7.36	7.14	13.84
	C15	6	4.62	3.38	2.36	1.92
		9	6.59	5.38	5.13	4.91
		11	7.67	6.78	7.76	6.91
	B23	6	4.05	2.78	2.48	2.45
		9	6.27	4.88	5.01	4.43
		11	7.49	6.29	5.81	5.50
	B31	6	5.25	3.33	2.43	3.04
		9	7.34	5.93	4.87	5.69
		11	8.87	7.76	6.24	6.97
	C38	6	4.70	3.33	2.43	3.69
		9	7.20	5.45	7.27	9.90
		11	8.51	6.90	8.58	13.35
	B45	6	4.55	3.40	3.08	3.11
		9	7.18	5.79	5.13	5.32
		11	8.94	7.04	6.54	6.56
S6E	D3	6	4.25	3.71	3.09	4.21
		9	6.89	7.21	7.02	8.57
		11	8.77	8.72	9.13	8.62
	D8	6	3.74	3.17	4.04	2.94
		9	5.99	5.39	6.04	5.22
		11	7.49	6.86	7.47	7.05

Table 3.4 Summary of LTE Computed from FWD Deflections

Section No.	Panel No.	LTE, %, Under		Average LTE, %
		Joint Loading	Corner Loading	
S1W	A3	85	67	71
	A16	72	66	
	D23	68	69	
S2W	B6	45	48	60
	A13	76	75	
	B17	57	53	
	B20	51	51	
	C27	67	81	
S3W	A11	79	79	77
	C16	75	78	
	B21	74	78	
	A26	79	80	
	D32	77	79	
	B37	73	72	
S4E	B14	76	59	64
	B25	24	14	
	B35	56	58	
	D46	76	70	
	C55	76	73	
	A66	63	70	
	B77	77	77	
	D87	78	75	
S5E	B6	39	15	52
	C15	66	77	
	B23	59	56	
	B31	73	49	
	C38	59	48	
	B45	40	48	
S6E	D3	69	67	67
	D8	64	71	

FWD deflections under slab center loading were used to back-calculate the modulus of subgrade reaction (k value) for the UTW pavements, using a back-calculation procedure (computer program NUSB1) developed at the University of Singapore.⁽²¹⁾ This procedure can be used for concrete pavements with two layers on a dense liquid foundation. The two layers are represented by an equivalent single slab layer based on the principle of equivalent flexural rigidity. The k-value of the system can then be estimated using a close-form solution. The estimated k-values for the test panels and the section average k-values, along with their associated statistics are listed in Table 3.5. The average section k-values ranged from 682 pci to 974 pci (185 to 264 MPa/m). The estimated k-values showed some variations, with coefficients of variation ranging from 13 to 26%. Since the original asphalt pavement was constructed on a very strong limerock subbase (11 in. thick), these k-values are considered reasonable. The average section k-values were used for UTW pavement design evaluation.

3.5 Pavement Coring

Ten 4-in. (100-mm) diameter cores were obtained from each test section except Test Section S1W, where eleven cores were taken, resulting in a total of 61 cores. The cores were taken in pairs from adjacent panels, with one from a good panel and the other from a deteriorated panel, whenever possible. The cores were wrapped in plastic bags (Figure 3.36) and shipped to Florida DOT laboratory. Laboratory test were conducted on the cores to determine layer thicknesses, interface shear strength, and concrete and asphalt material properties. The thickness measured from the cores was used to calibrate the GPR data, which are described later in this report.

3.6 GPR Testing

Originally, GPR testing was to be conducted during the field testing by CTL personnel. However, while the CTL engineer was on site with the GPR equipment, the tests were not conducted because of heavy rain during the first day of the testing. Instead, GPR tests were performed in February 2002 by Florida DOT personnel. The data were then provided to CTL for evaluation. Ideally, the trace of the GPR would pass the locations of coring so the thickness of the cores could be used for calibration of the GPR data. This was not possible since the GPR tests were conducted without closing the weigh station. The data were analyzed and layer thickness was estimated, as shown in Figure 3.37. Since the data were not calibrated by the core thicknesses, and the distance marking was not clear enough for accurate identification of actual test location, this graph represents estimates of the thicknesses and the locations.

The GPR data for Section S1W were not clear and could not be used in the analysis. From this figure, it is apparent that both the concrete and asphalt layer thicknesses varied widely, indicating the lack of close thickness control during construction. The concrete slab thickness varied from about 3.5 in. (89 mm) to over 5 in. (127 mm), while the asphalt thickness ranged between about 1.2 in. (30 mm) and 3 in. (76 mm). The large variations in the layer thickness may explain the differences in performance of the six test sections.

Table 3.5 k Values Back-Calculated from FWD Deflection Data

Test Section	Panel	Back-Calculated k, pci	Average Section k, pci	Standard Deviation, pci	Coefficient of Variation, %
S1W	A3	483	694	183	26
	A16	801			
	D23	798			
S2W	B6	616	682	94	14
	A13	670			
	B17	608			
	B20	673			
	C27	840			
S3W	A12	829	974	220	23
	C16	993			
	B21	1101			
	A26	726			
	D32	861			
	B37	1335			
S4E	B14	1000	927	140	15
	B25	740			
	B35	925			
	D46	1064			
	C55	1002			
	A66	815			
	B77	1108			
	D87	761			
S5E	B6	872	712	96	13
	C15	735			
	B23	673			
	B31	675			
	C38	584			
	B45	732			
S6E	D3	634	714	113	16
	D8	794			



Figure 3.36 Cores Obtained from the UTW Test Sections

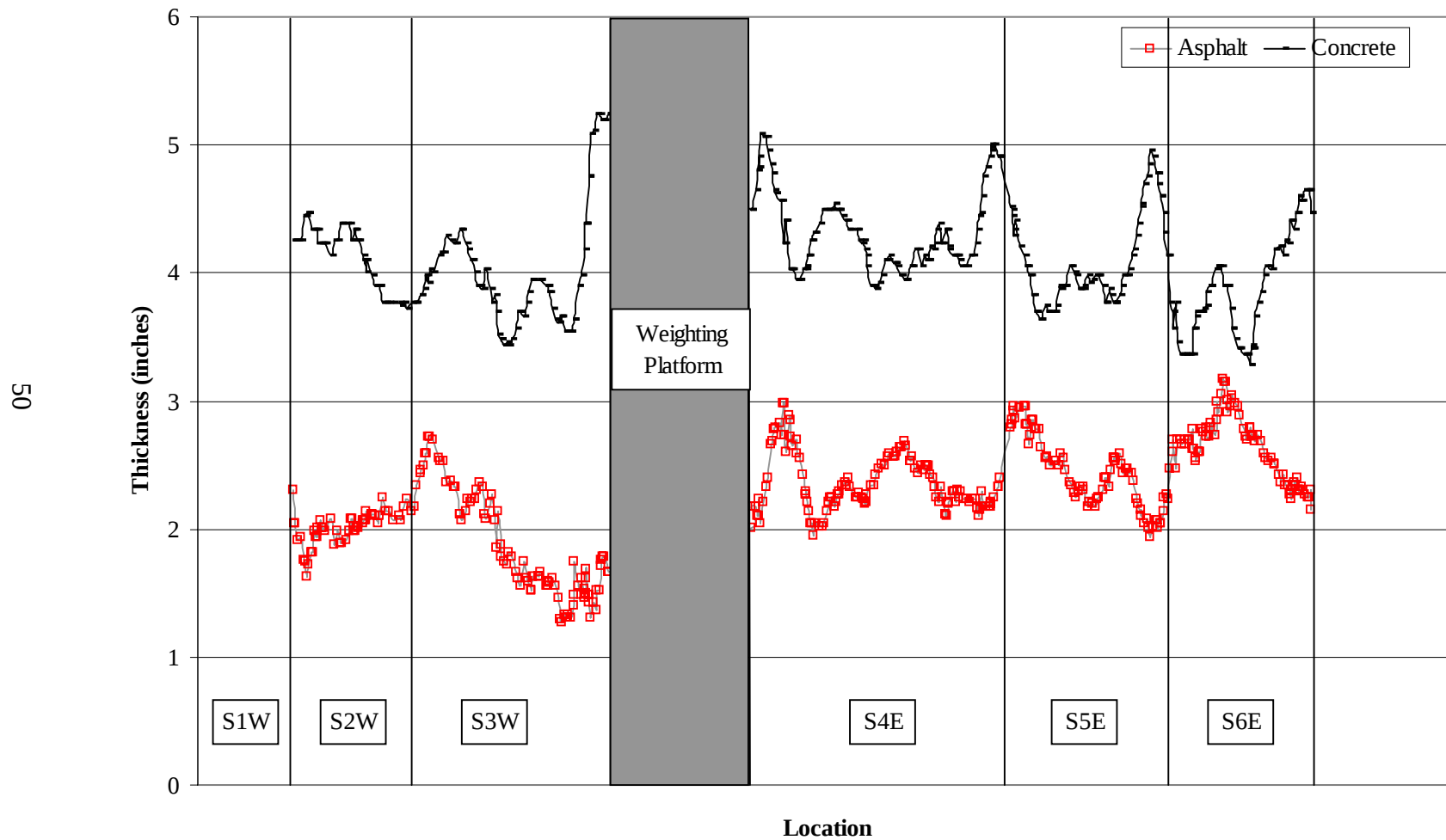


Figure 3.37 Estimated Concrete and Asphalt Layer Thickness from GPR Data

Chapter 4

Laboratory Testing

4.1 Introduction

Sixty-one 4-in. (100-mm) cores were obtained from the six test sections. Cores were shipped to Florida DOT laboratory and the University of Florida laboratory for testing. The laboratory tests conducted included:

- Layer thickness measurement
- Interface shear strength test
- Concrete splitting tensile strength test
- Concrete compressive strength test
- Concrete modulus of elasticity test
- Asphalt resilient modulus test
- Asphalt indirect tensile strength test

The test results were used to characterize pavement parameters and materials, and to evaluate pavement performance and design.

4.2 Layer Thickness Measurement and Interface Shear Strength Test

Except for Section S1W, where 11 cores were obtained, ten cores were taken from each section. The ten cores were taken in five pairs, whenever possible. For each pair, one core was taken from a good slab and the other from a cracked slab. The layer thickness determination and the interface shear strength test were conducted in the Florida DOT laboratory. The interface shear strength test was performed following the Iowa DOT procedure (Test Method Iowa 406 C). This test method consists of applying a continuous load to the vertical diametric plane of the test specimen along the bonded interface between the overlay concrete and existing asphalt. The load is applied until a shear failure occurs at the bonded interface. The bond shear strength is calculated by dividing the maximum load attained during the test by the cross-sectional area of the test specimen. The test setup and the test are shown in Figures 4.1 and 4.2, respectively. A typical core sample after the test is shown in Figure 4.3. All cores tested were separated along the concrete-asphalt interface.

The measured layer thicknesses and interface shear strength are listed in Table 4.1. As shown in the table, about half of the cores from the two poor-performing test sections, S1W and S6E, were separated while taken from the pavement. The cores from these two sections were taken from the vicinity of the badly cracked or patched areas. Summary statistics of the layer thickness and the shear strength are presented in Table 4.2. It is evident that, while the overall thickness (combined concrete and asphalt thickness) is varied within a relatively small range, the individual layers had bigger ranges of thickness, especially the asphalt layer thickness. For the asphalt layer, the thickness varied from 1.2 in. to 3.6 in. (30 mm to 91 mm) for Test Section S2W, and from 1.0 in. to 3.1 in. (25 mm to 79 mm) for Test Section S3W. The coefficient of variation of the measured asphalt layer thickness for all test sections is 31%.



Figure 4.1 Interface Shear Strength Test Setup



Figure 4.2 Interface Shear Strength Test



Figure 4.3 A Typical Core After Test

Table 4.1 Layer Thicknesses and Interface Shear Strength

Core #	Overall Length, in.	Layer Thickness, in.		Interface Shear Strength, psi	Remarks
		Concrete	Asphalt		
S1W-C9	7.6	4.1	3.5	Separated	Separated @ joint, concrete cracked
S1W-D9	7.2	4.2	3.0	Separated	Separated 1/4" into asphalt, visible dirt
S1W-B10	7.7	3.6	4.1	Separated	Separated 1/2" into asphalt, visible dirt
S1W-D13	6.5	3.9	2.6	Separated	OK
S1W-A14	7.7	4.0	3.7	Separated	Separated 1/4" into asphalt
S1W-C19	6.5	4.0	2.5	Separated	Separated @ joint, visible dirt
S1W-A20	7.1	4.4	2.7	139	OK
S1W-B22	7.3	3.8	3.5	304	OK
S1W-C22	7.0	3.8	3.2	329	OK
S1W-B44	6.3	2.7	3.6	287	OK
S1W-D44	6.9	3.8	3.1	209	OK
S2W-A5	6.3	4.2	2.1	Separated	Separated @ joint, visible dirt
S2W-C5	5.9	4.6	1.3	318	OK
S2W-A9	7.0	4.6	2.4	414	OK
S2W-B9	6.4	5.1	1.3	302	OK
S2W-B12	6.0	4.7	1.3	281	OK
S2W-C12	5.7	4.5	1.2	772	Sheared 2/3 of concrete
S2W-A19	7.4	5.2	2.2	321	OK
S2W-C19	6.3	4.8	1.5	381	OK
S2W-A30	7.8	4.2	3.6	361	OK
S2W-B30	6.6	4.3	2.3	Separated	Separated @ joint, visible dirt
S3W-C3	5.8	4.6	1.2	Separated	Separated @ joint
S3W-D3	5.8	4.8	1.0	152	OK
S3W-A9	7.8	4.8	3.0	36	OK
S3W-C9	7.0	5.0	2.0	109	OK
S3W-A19	7.4	4.5	2.9	188	OK
S3W-D19	6.9	5.2	1.7	240	OK
S3W-B49	7.0	3.9	3.1	396	OK
S3W-D49	5.3	3.9	1.4	272	OK
S3W-B59	6.3	4.4	1.9	284	OK
S3W-C59	5.6	4.5	1.1	326	OK

Table 4.1 Layer Thicknesses and Interface Shear Strength (continued)

Core #	Overall Length, in.	Layer Thickness, in.		Interface Shear Strength, psi	Remarks
		Concrete	Asphalt		
S4E-A12	8.0	5.7	2.3	265	OK
S4E-D12	7.5	4.3	3.2	Separated	Separated 1/4" into asphalt, visible dirt
S4E-A27	7.0	3.5	3.5	297	OK
S4E-D27	6.4	3.7	2.7	138	OK
S4E-A42	5.5	3.6	1.9	91	OK
S4E-D42	6.4	4.5	1.9	367	OK
S4E-A57	5.9	4.0	1.9	338	OK
S4E-D57	6.4	4.0	2.4	493	OK
S4E-A72	6.1	4.0	2.1	372	OK
S4E-D72	6.8	3.7	3.1	507	OK
S5E-A1	7.0	4.2	3.8	143	OK
S5E-C1	6.6	4.0	2.6	451	OK
S5E-A10	7.7	4.9	2.8	Separated	Separated 1/4" into asphalt, visible dirt
S5E-C10	6.4	3.5	2.9	329	OK
S5E-A17	7.3	4.5	2.8	222	Visible dirt
S5E-C17	7.0	4.2	2.8	403	OK
S5E-B21	7.1	4.4	2.7	226	Asphalt cracked
S5E-C21	7.6	4.8	2.8	427	OK
S5E-A33	7.2	3.6	3.6	451	OK
S5E-C33	6.5	3.6	2.9	303	OK
S6E-C2	6.3	3.9	2.4	251	Lifts of asphalt separated, visible dirt
S6E-C4	6.8	3.8	3.0	354	OK
S6E-A11	7.5	3.8	3.7	332	OK
S6E-C11	7.2	3.6	3.6	418	OK
S6E-A16	7.5	3.9	3.6	302	OK
S6E-A21	7.0	4.0	3.0	Separated	Separated just into asphalt, visible dirt
S6E-D21	7.6	4.8	2.8	196	OK
S6E-D24	7.5	4.1	3.4	Separated	Separated just into asphalt, visible dirt
S6E-D28	7.0	3.3	3.7	Separated	Separated just into asphalt, visible dirt
S6E-D30	6.8	3.2	3.6	Separated	Separated just into asphalt, visible dirt

Table 4.2 Summary Statistics of Layer Thickness and Shear Strength

Section No.	Statistic Parameters	Thickness, in.			Interface Shear Strength, psi
		Overall	Concrete	Asphalt	
S1W	Maximum	7.7	4.4	4.1	329
	Minimum	6.3	2.7	2.5	139
	Average	7.1	3.8	3.2	254
	Standard Devia.	0.5	0.4	0.5	78
	CV, %	7	11	16	31
S2W	Maximum	7.8	5.2	3.6	772
	Minimum	5.7	4.2	1.2	281
	Average	6.5	4.6	1.9	394
	Standard Devia.	0.7	0.3	0.8	159
	CV, %	10	7	39	40
S3W	Maximum	7.8	5.2	3.1	396
	Minimum	5.3	3.9	1.0	36
	Average	6.5	4.6	1.9	223
	Standard Devia.	0.8	0.4	0.8	112
	CV, %	13	9	42	50
S4E	Maximum	8.0	5.7	3.5	507
	Minimum	5.5	3.5	1.9	91
	Average	6.6	4.1	2.5	319
	Standard Devia.	0.7	0.6	0.6	141
	CV, %	11	16	24	44
S5E	Maximum	7.7	4.9	3.8	451
	Minimum	6.4	3.5	2.6	143
	Average	7.0	4.2	3.0	328
	Standard Devia.	0.4	0.5	0.4	113
	CV, %	6	12	13	34
S6E	Maximum	7.6	4.8	3.7	418
	Minimum	6.3	3.2	2.4	196
	Average	7.1	3.8	3.3	309
	Standard Devia.	0.4	0.4	0.5	78
	CV, %	6	12	14	25
All Sections	Maximum	8.0	5.7	4.1	772
	Minimum	5.3	2.7	1.0	36
	Average	6.8	4.2	2.6	306
	Standard Devia.	0.7	0.6	0.8	128
	CV, %	10	13	31	42

The lack of asphalt thickness control in the milling process has been documented to be the cause of the problem. It has been demonstrated from past experience that existing asphalt pavement with adequate thickness and structural capacity is essential for successful UTW performance. It is therefore reasonable to infer that the lack of adequate asphalt layer thickness under the UTW slabs is one of the possible causes for premature cracking of the Ellaville Weigh Station UTW test sections. Refer to Figure 3.37 for the layer thickness profile of the test sections.

All core samples, except those separated during coring, had very strong interface shear strength, with majority of the cores having shear strength of over 200 psi (1.38 MPa). The average interface shear strengths are 254 psi, 394 psi, 223 psi, 319 psi, 328 psi, and 309 psi (1.75, 2.72, 1.54, 2.20, 2.26, and 2.13 MPa) for the six test sections. The overall average interface shear strength is 306 psi (2.11 MPa). However, the variations of the shear strength within each test section are high, as evidenced by the high coefficients of variation, ranging from 25% to 50%.

4.3 Concrete Material Tests

After the shear strength test, the concrete core samples were subjected to tests to determine their modulus of elasticity, compressive strength, and splitting tensile strength, and the test results are presented in Table 4.3. Strength was higher when compared with normal paving concrete.

Table 4.3 Concrete Material Properties

Section No.	Core No.	Concrete Strength, psi		Modulus of Elasticity, psi
		Split Tensile	Compressive	
S1W	S1W-A14	---	7,360	5,907,000
	S1W-A20	---	8,510	---
	S1W-B10	783	---	---
	S1W-B22	562	---	---
	S1W-B44	583	---	---
	S1W-C9	---	---	---
	S1W-C19	639	---	---
	S1W-C22	601	---	---
	S1W-D9	788	---	---
	S1W-D13	581	---	---
	S1W-D44	538	---	---
	Average	634	7,935	5,907,000
S2W	S2W-A5	468		
	S2W-A9	457		
	S2W-A19	---	7,330	4,841,000
	S2W-A30	558		
	S2W-B9	---	7,490	
	S2W-B12	429		
	S2W-B30	584		
	S2W-C5	423		
	S2W-C12	339		
	S2W-C19	364		
	Average	453	7,410	4,841,000

Table 4.3 Concrete Material Properties (continued)

Section No.	Core No.	Concrete Strength, psi		Modulus of Elasticity, psi
		Split Tensile	Compressive	
S3W	S3W-A9	440		
	S3W-A19	499		
	S3W-B49	511		
	S3W-B59	566		
	S3W-C3	424		
	S3W-C9	---	6,820	
	S3W-C59	392		
	S3W-D3	445		
	S3W-D19	---	7,430	4,467,000
	S3W-D49	401		
	Average	460	7,125	4,467,000
S4E	S4E-A12	---	9,060	6,230,000
	S4E-A27	456		
	S4E-A42	448		
	S4E-A57	520		
	S4E-A72	477		
	S4E-D12	---	7,200	
	S4E-D27	426		
	S4E-D42	378		
	S4E-D57	510		
	S4E-D72	571		
	Average	473	8,130	6,230,000
S5E	S5E-A1	434		
	S5E-A10	---	9,270	6,554,000
	S5E-A17	---	8,970	
	S5E-A33	517		
	S5E-B21	485		
	S5E-C1	522		
	S5E-C10	567		
	S5E-C17	539		
	S5E-C21	618		
	S5E-C33	571		
	Average	532	9,120	6,554,000
S6E	S6E-A11	540		
	S6E-A16	405		
	S6E-A21	425		
	S6E-C2	492		
	S6E-C4	480		
	S6E-C11	487		
	S6E-D21	---	9,510	
	S6E-D24	---	10,270	7,331,000
	S6E-D28	501		
	S6E-D30	472		
	Average	475	9,890	7,331,000

4.4 Asphalt Material Tests

After the interface shear strength test, asphalt samples were tested for indirect tensile strength, bulk specific gravity, resilient modulus, and Poison's ratio. The resilient modulus and Poison's ratio were determined at two temperatures, 41 °F and 77 °F (5 °F and 25 °C). The asphalt material properties are presented in Table 4.4, and were used to model the asphalt pavement for UTW test section evaluation. The evaluation is presented in the next section.

Table 4.4 Asphalt Material Properties

Core No.	Layer	Thickness, in.	Bulk Specific Gravity	Indirect Tensile Strength, psi, at		Poisson's Ratio	Instantaneous				Total			
							Resilient Modulus, psi, at		Poisson's Ratio at		Resilient Modulus, psi, at		Poisson's Ratio at	
				41 °F	77 °F		41 °F	77 °F	41 °F	77 °F	41 °F	77 °F	41 °F	77 °F
S1W-A19	B	1.39	2.31	274		0.28	1,370,606	820,913	0.19	0.08	1,299,538	732,440	0.17	0.06
S1W-B21	B	1.289	2.32		180	0.20	1,238,622	905,035	0.18	0.12	1,183,508	826,715	0.18	0.12
S1W-C21	B	1.326	2.29		187	0.23	2,873,197	1,211,065	0.54	0.22	2,861,594	1,132,744	0.52	0.22
S1W-A13	T	1.421	2.28				1,057,325	626,563	0.23	0.17	993,508	548,243	0.24	0.18
S1W-B43	T	1.434	2.37	511		0.45	2,248,084	1,372,057	0.03	0.45	1,914,498	1,215,416	0.04	0.45
S1W-C8	T	1.56	2.33		215	5.46	1,544,652	922,440	0.47	2.57	1,437,324	4,020,445	0.48	2.61
S1W-D12	T	1.198	2.3		122	0.46	1,274,881	849,921	0.04	0.59	1,092,134	803,509	0.06	0.58
S2W-A10	B	1.362	2.27	206		1.20	1,599,766	860,074	1.04	0.40	2,554,114	852,822	1.01	0.39
S2W-A31	B	1.586	2.29		183	0.05	1,830,376	1,047,172	0.41	0.01	1,762,208	733,891	0.41	0.01
S2W-A31	T	1.056	2.33	238		1.36	2,017,474	890,531	0.60	0.49	2,162,512	799,158	0.61	0.51
S3W-A10	B	1.412	2.32	406		0.49	1,778,162	1,827,475	0.15	0.25	1,689,689	1,721,597	0.14	0.27
S3W-A20	B	1.409	2.32		157	0.48	2,464,191	1,414,118	1.93	0.63	1,518,545	1,482,285	1.35	0.65
S3W-B50	T	0.623	2.38	482		0.83	2,641,137	2,327,855	0.30	0.52	2,464,191	2,103,047	0.29	0.51
S3W-B60	T	0.819	2.35		133	0.87	1,039,920	847,020	0.89	0.38	1,289,385	680,227	0.71	0.30
S4E-A10	B	1.432	2.33	287		0.71	1,489,537	1,068,928	0.32	0.27	1,424,270	958,699	0.32	0.26
S4E-D10	B	1.465	2.31	344		0.46	1,991,368	3,279,302	0.08	0.97	1,920,299	5,042,961	0.07	1.00
S4E-D70	B	1.129	2.33		158	0.79	1,998,620	2,338,008	0.54	1.02	1,985,566	3,797,087	0.54	0.95
S4E-A25	T	1.331	2.34		276	2.97	2,143,657	2,045,032	0.53	0.63	2,108,848	2,017,474	0.54	0.71
S4E-A70	T	1.084	2.33	274		0.74	2,177,016	1,274,881	0.39	0.58	2,076,940	1,258,927	0.40	0.59
S4E-D55	T	1.107	2.37	173		0.29	3,029,838	1,396,713	0.48	0.14	2,877,548	1,228,469	0.49	0.16
S5E-A32	B	1.39	2.31	321		0.69	2,501,900	1,084,882	0.47	0.28	2,349,611	1,035,569	0.45	0.27
S5E-C16	B	0.912	2.27	191		0.00	1,200,912	1,261,828	0.03	-0.04	958,699	658,471	0.03	-0.03
S5E-C20	B	1.08	2.27		117	0.26	2,262,588	1,071,829	0.45	0.23	1,939,154	964,501	0.38	0.21
S5E-A32	T	1.248	2.37	392		0.48	2,385,870	1,319,843	0.26	0.80	2,349,611	1,612,819	0.28	0.80
S5E-C16	T	0.93	2.28	499		0.33	2,371,366	1,092,134	0.14	0.11	2,303,199	965,951	0.14	0.11
S5E-C20	T	0.981	2.27		213	0.44	2,142,207	1,289,385	0.26	0.54	2,059,535	1,215,416	0.27	0.55
S5E-C32	T	1.359	2.3	473		0.34	2,922,510	1,403,965	0.26	0.32	2,778,922	1,332,896	0.24	0.39
S6E-29D	B	1.309	2.31		206	0.43	1,965,261	1,344,499	0.16	0.42	1,910,147	1,267,629	0.17	0.44
S6E-C3	B	1.212	2.29				1,280,683	690,379	0.34	0.19	1,216,866	625,112	0.33	0.21
S6E-D27	B	1.448	2.31	344		0.47	1,544,652	1,158,851	0.28	0.09	1,501,140	1,068,928	0.27	0.10
S6E-10C	T	1.498	2.33		313	0.08	2,504,801	984,806	0.01	0.45	1,930,452	891,982	0.02	0.45
S6E-A15	T	1.312	2.34		187	0.29	1,138,546	648,319	0.25	0.17	1,051,523	554,044	0.24	0.16
Average			2.32	338	189	0.74	1,938,429	1,271,119	0.38	0.44	1,842,659	1,379,671	0.36	0.44

Chapter 5

UTW Test Section Performance and Design Evaluation

5.1 Introduction

Significantly different levels of performance were observed for the six test sections from the field evaluation, as described in Chapter 3. While Test Sections S1W and S6E had very poor performance, Sections S3W, S4E, and S5E showed decent performance with limited number of cracks. Consistent with past experience, most cracking occurred either in the beginning or the end of the test sections. Section S1W is located at the entrance of the station and Section S6E is located at the exit side of the station. As suggested by ACPA, thickened sections (with a minimum thickness of 6 in. or 152 mm) should be used at these locations.

From field evaluation and laboratory testing, the concrete and asphalt were of very good quality, and the pavement system was supported by strong foundation, with an average back-calculated k-value of 815 pci (221 MPa/m). Generally, for the UTW panels without cracking, high interface shear strength was observed. The average interface shear strength was 306 psi (2.11 MPa), with most of them exceeding 200 psi (1.34 MPa). As mentioned previously, the large variations in actual layer thicknesses might have contributed to the variable performances of the test sections. The adequacy of the UTW pavement design was evaluated and is presented in this chapter. The ACPA's UTW design procedure was used in this evaluation. The adequacy of the original pavement design as well as the as-built pavements were assessed.

5.2 Temperature Data Analysis

In UTW pavement design, in addition to the load-induced stresses and strains, temperature-induced stresses in concrete slabs and strains in asphalt also need to be taken into consideration. During field evaluation, thermocouples were installed to measure UTW concrete slab temperatures and air temperature. Slab temperatures were measured at the top, the mid-depth and the bottom of the concrete slab. Temperature was recorded continuously every 15 minutes from July 26 to August 23, 2001, from October 8 to October 15, 2001, from November 3 to November 10, 2001, and from December 6 to December 13, 2001. A summary of the temperature data analysis is presented in Section 3.3 of this report.

In this analysis, it was decided to separate each year into two groups, with Group 1 comprising the period from April to September and Group 2 representing the period from October to March. From Table 3.2, it was decided to use the July data as typical Group 1 temperature condition, and to use November data for Group 2. Using the measured temperature data at the top and the bottom of the concrete slab, temperature gradient in the concrete slabs were computed. Typical daily temperature gradient variations for July and November are shown in Figures 5.1 and 5.2, respectively. From these two figures, each day was separated into six segments for Group 1 (as represented by July data) and eight segments for Group 2 (as represented by November data). Each segment was assigned a temperature gradient in the concrete slab as derived from these two figures. Table 5.1 presents the daily segments with their associated temperature gradients. As will be described in the next section, these segments will be used to group traffic data and will be used to compute temperature-induced stresses and strains.

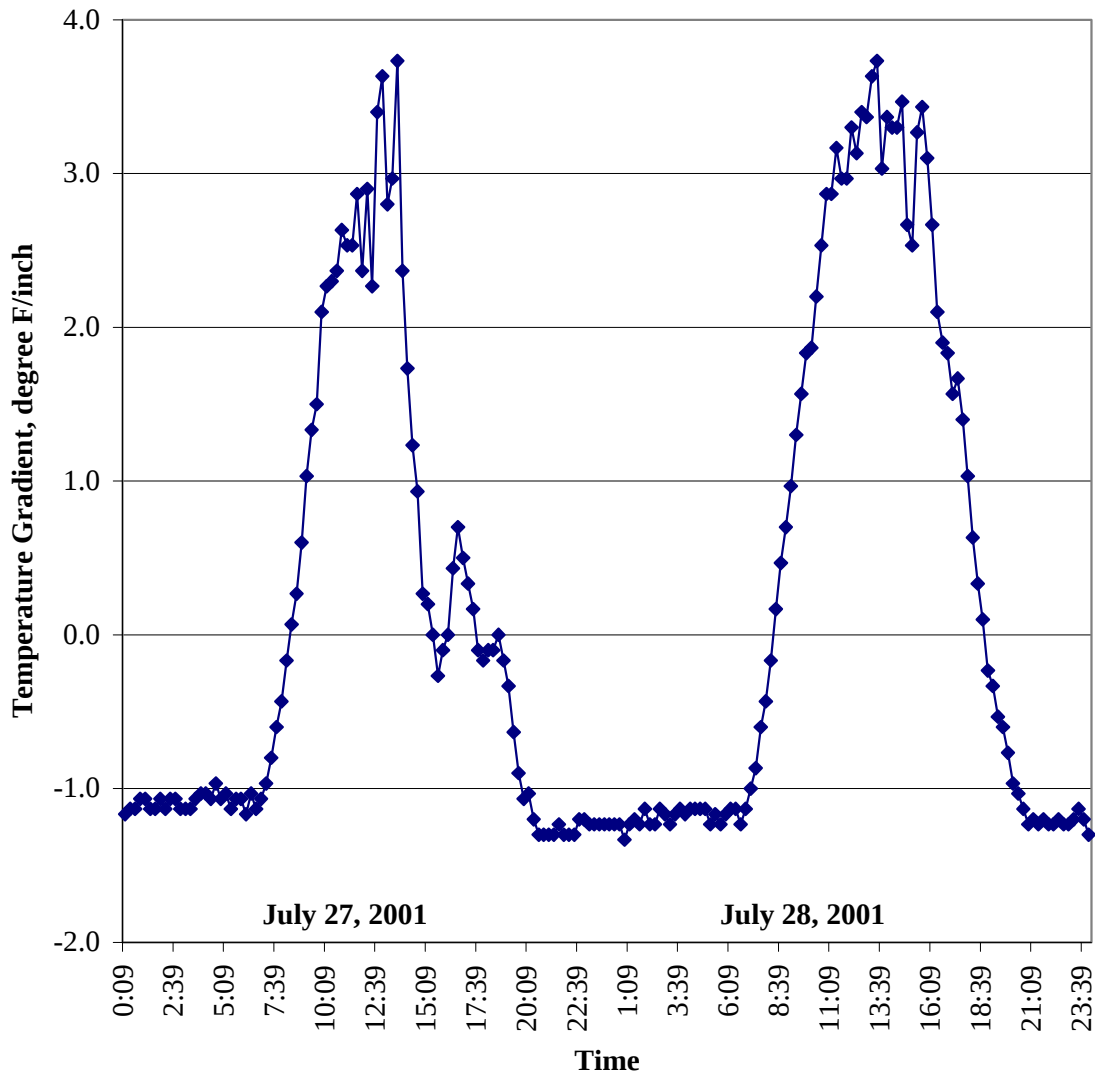


Figure 5.1 Typical Daily Temperature Gradient Variation for Group 1

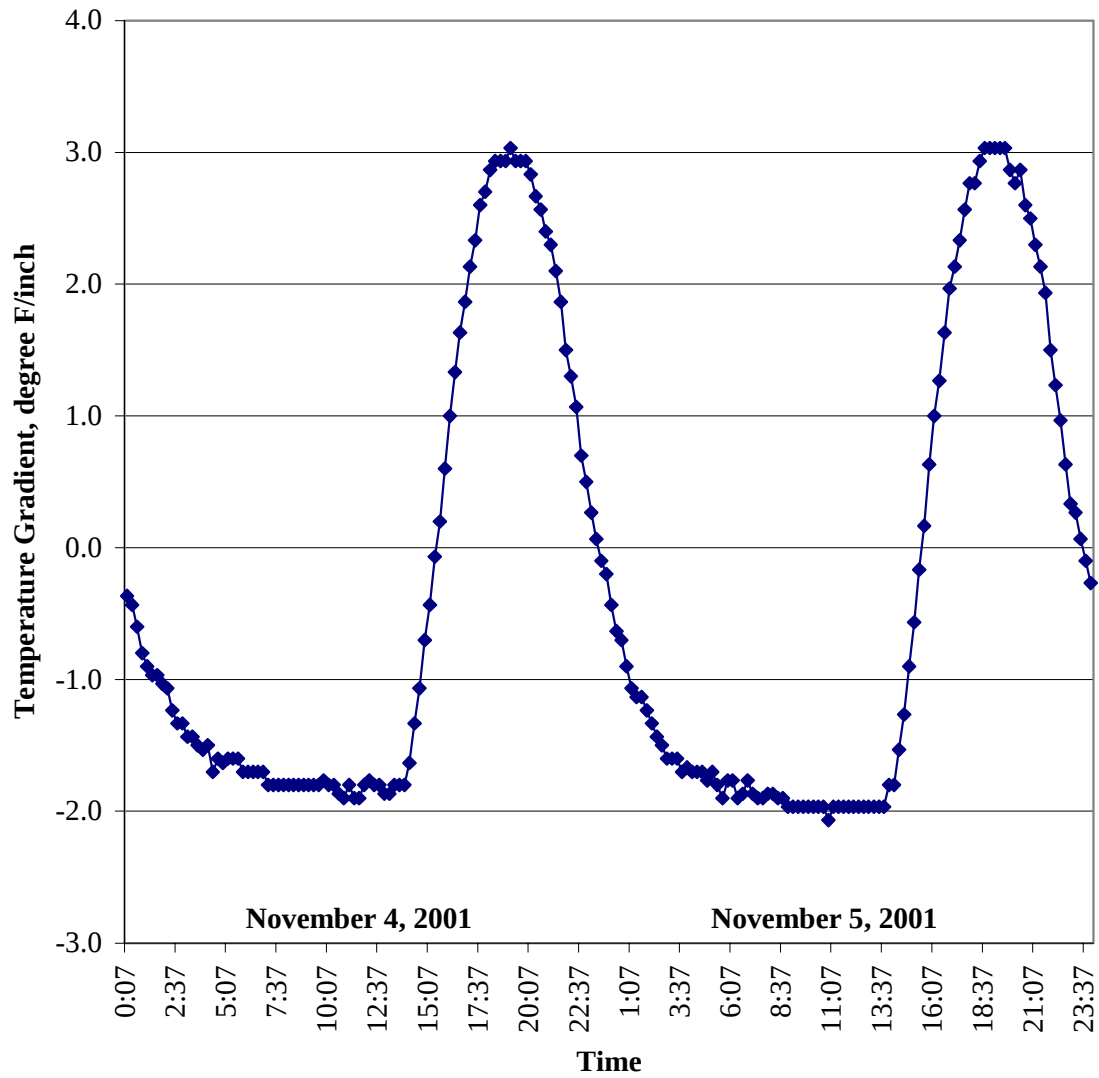


Figure 5.2 Typical Daily Temperature Gradient Variation for Group 2

Table 5.1 Representative Daily Temperature Gradient Variation

Group 1 (April to September)					Group 2 (October to March)				
Segment No.	Time Period		Duration, hours	Temperature Gradient, °F/in.	Segment No.	Time Period		Duration, hours	Temperature Gradient, °F/in.
	from	to				from	to		
A	8:00pm	7:30am	11.5	-1.2	A	5:00am	2:00pm	9.0	-1.8
B	7:30am 6:30pm	8:30am 8:00pm	2.5	-0.5	B	2:30am 2:00pm	5:00am 2:30pm	3.0	-1.6
C	8:30am 6:00pm	9:30am 6:30pm	1.5	0.5	C	12:30am 2:30pm	2:30am 3:00pm	2.5	-1.0
D	9:30am 4:30pm	10:30am 6:00pm	2.5	1.5	D	11:00pm 3:00pm	12:30am 3:30pm	2.0	-0.2
E	10:30am 4:00pm	12:00pm 4:30pm	2.0	2.5	E	10:30pm 3:30pm	11:00pm 4:30pm	1.5	0.6
F	12:00pm	4:00pm	4.0	3.2	F	9:30pm 4:30pm	10:30pm 5:00pm	1.5	1.4
					G	8:30pm 5:00pm	9:30pm 5:30pm	1.5	2.2
					H	5:30pm	8:30pm	3.0	2.8

5.3 Traffic Data Analysis

Truck traffic data were obtained from the Florida DOT. The data included actual truck count at the Ellaville weigh station and axle load distribution for the year of 1999 from a near-by station (Station 9901). The actual truck count data are presented in Table 5.2. A few observations were made from the truck count data and from the axle load distribution data. As shown in Figure 5.3, the trucks are evenly distributed over the twelve months for each of the three years. Also, the truck traffic remained fairly constant over the three-year period.

From the distribution of axle load, the percentage of occurrence for each representative axle weight were computed and plotted in Figures 5.4 and 5.5 for the single axle load and the tandem axle load, respectively. The percentage distributions of axle load for the annual traffic and for each of the twelve months are presented. It can be observed from these two figures that, for both single and tandem axle loads, the percentage distribution remained fairly constant through the entire year, with no significant deviations among the different months. The single axle loads had a narrower distribution compared with the distribution of tandem axle loads. About 50% of the single axles had weights between 10,000 and 12,000 lb (44 and 53 kN), and about 25% of the tandem axles had weights between 30,000 and 34,000 lb (133 and 151 kN).

Table 5.2 Ellaville Weigh Station Truck Count

Month	Truck Count		Month	Truck Count	
	Eastbound	Westbound		Eastbound	Westbound
January-98	43,562	18,194	January-00	39,666	39,108
February-98	26,123	40,830	February-00	39,020	39,804
March-98	42,853	45,960	March-00	43,270	41,226
April-98	43,079	41,234	April-00	36,271	37,180
May-98	14,746	44,670	May-00	37,153	40,727
June-98	27,574	45,380	June-00	37,100	36,348
July-98	40,878	38,697	July-00	35,964	33,033
August-98	39,868	42,263	August-00	34,846	40,051
September-98	33,710	37,400	September-00	30,583	31,536
October-98	38,781	41,449	October-00	37,383	36,701
November-98	33,780	31,001	November-00	29,089	27,149
December-98	30,386	34,848	December-00	32,751	31,159
January-99	40,866	31,412	January-01	33,447	36,304
February-99	29,647	33,008	February-01	33,382	34,593
March-99	39,221	40,818	March-01	33,911	33,808
April-99	34,482	41,705	April-01	28,339	31,964
May-99	38,616	43,257	May-01	40,423	39,965
June-99	42,053	42,411			
July-99	38,329	38,988			
August-99	44,982	41,150			
September-99	41,741	37,016			
October-99	41,163	41,659			
November-99	33,901	33,879			
December-99	38,932	35,284			

Notes: The test sections are located at the eastbound weigh station.

The weigh station opened to traffic on December of 1997.

The weigh station was closed for repair during May and June of 1998.

The truck count and the axle load distribution data were used to estimate the design traffic for the UTW pavement design evaluation. Typically, UTW pavements were designed for a service life of 12 years. Since the Ellaville weigh station UTW test sections have been in service for about three and a half years at the time of this evaluation, the design was also assessed for the traffic loads up to that time. The 12-year traffic axle load distribution was estimated by assuming that the traffic for the 12-year period remains the same and is the same as the average traffic in the first three years. From the data, both the actual traffic axle load distribution up to the time of evaluation and the estimated 12-year traffic distribution were determined and are shown in Table 5.3.

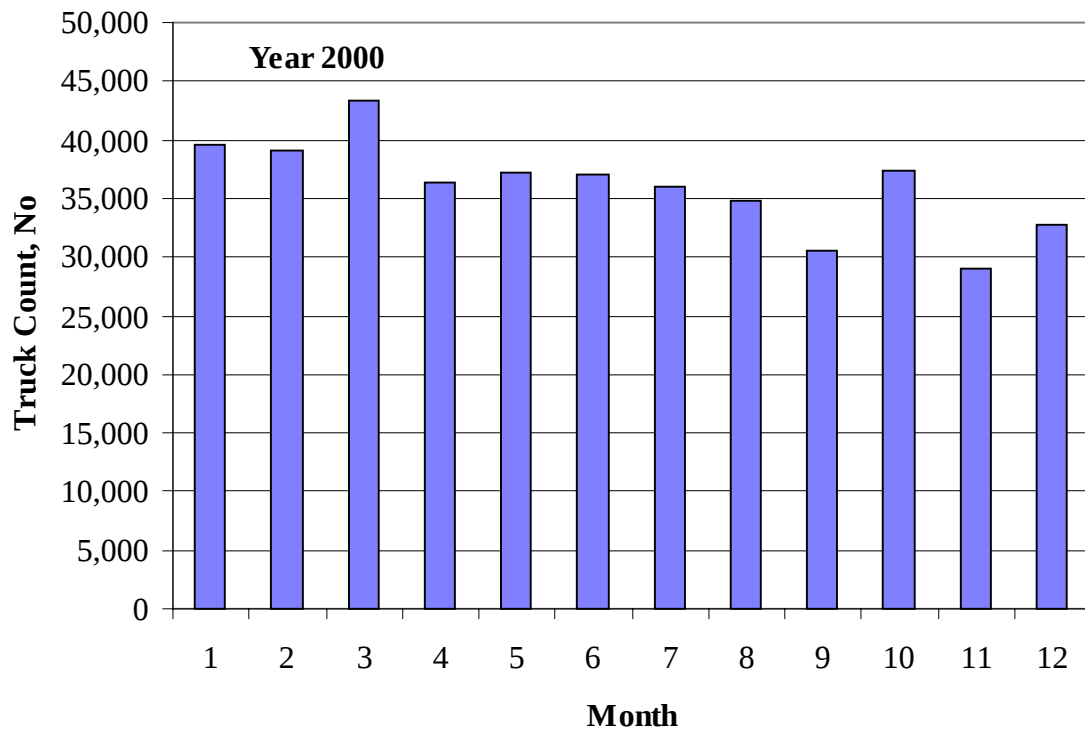
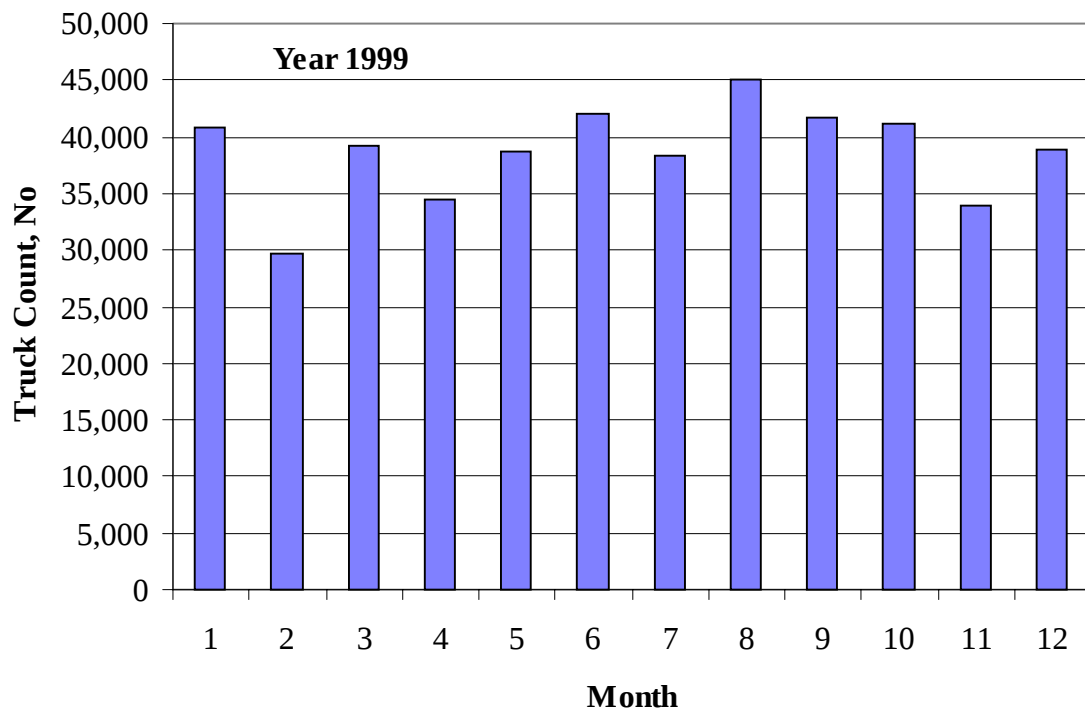


Figure 5.3 Truck Distribution over 12 months

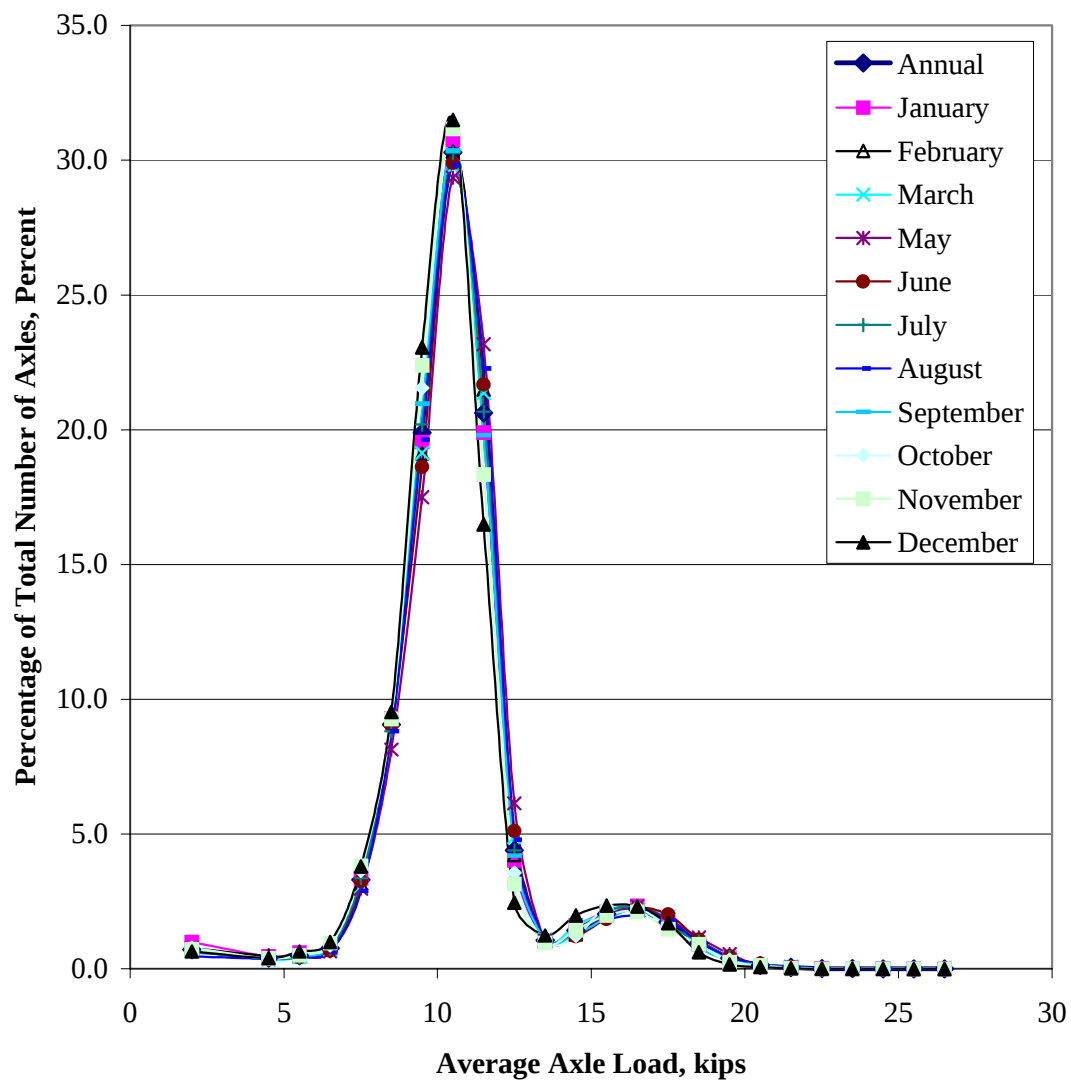


Figure 5.4 Percentage Distribution of Single Axle load

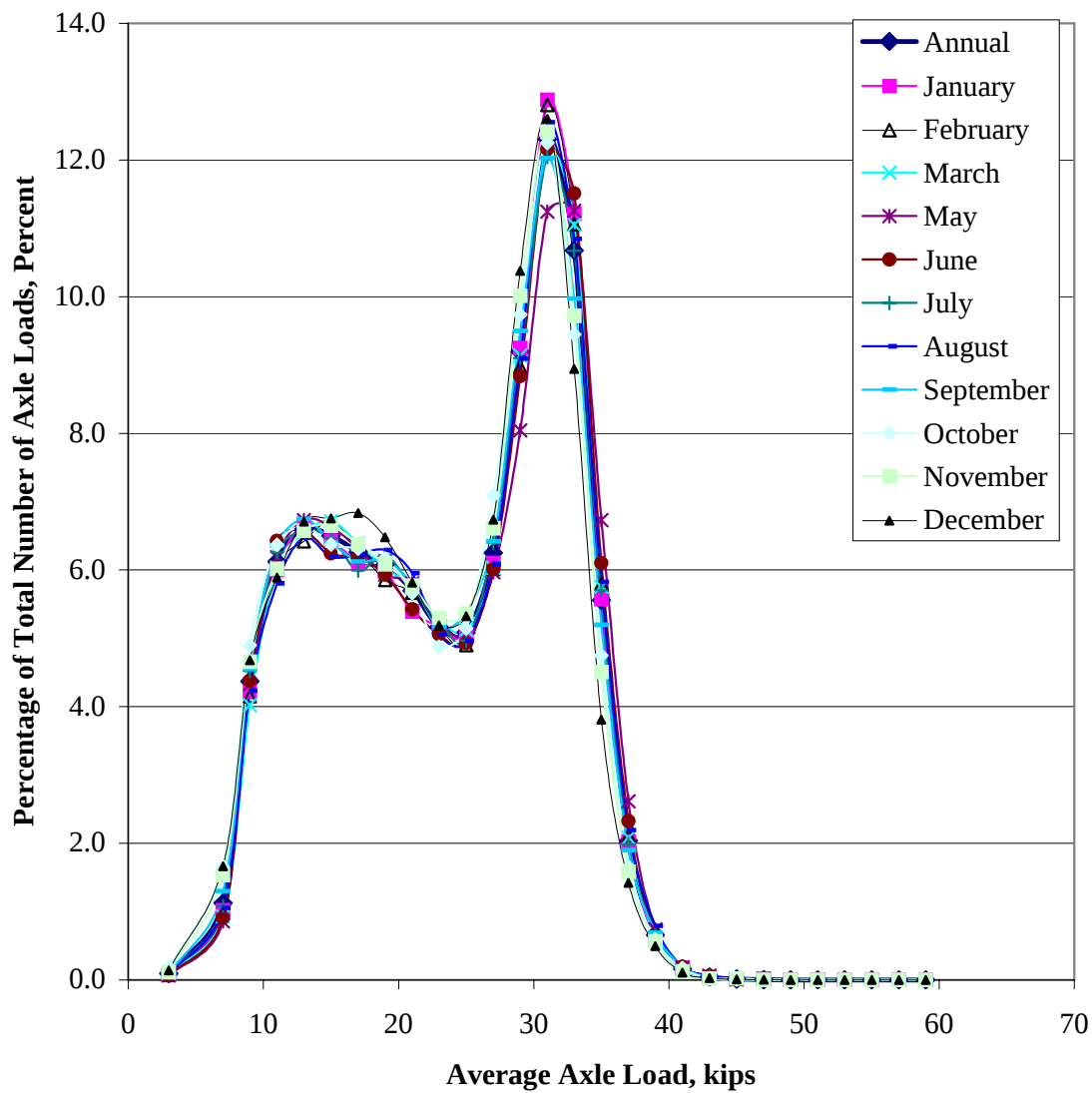


Figure 5.5 Percentage Distribution of Tandem Axle load

Table 5.3 Design Traffic Loads

Single Axle			Tandem Axle		
Representative Axle Weight, lb	Actual Repetitions at Evaluation	Expected Repetitions at 12-year	Representative Axle Weight, lb	Actual Repetitions at Evaluation	Expected Repetitions at 12-year
2,000	3,516	12,323	3,000	986	3,455
4,000	3,815	13,369	8,000	58,918	206,487
6,000	8,332	29,199	12,000	136,373	477,939
8,000	81,401	285,282	16,000	136,890	479,750
10,000	330,418	1,157,994	20,000	126,293	442,610
12,000	164,727	577,306	24,000	109,912	385,200
14,000	16,366	57,358	28,000	165,674	580,626
16,000	28,092	98,452	32,000	246,490	863,857
18,000	17,723	62,114	36,000	81,452	285,458
20,000	3,456	12,113	40,000	8,804	30,854
22,000	416	1,457	44,000	609	2,133
24,000	86	302	48,000	74	260
26,000	15	52	52,000	9	31
28,000	0	0	56,000	0	0
			60,000	3	10

5.4 Material Properties and Design Parameters

Material properties and design parameters were derived from the original design documents and from field evaluation and laboratory testing conducted in this study. The following are the input data used in the UTW pavement design evaluation:

- Concrete modulus of elasticity of 5,888,000 psi (40.6 GPa).
- Concrete modulus of rupture of 720 psi (5.0 MPa).
- Concrete coefficient of thermal expansion of 5.6×10^{-6} in./in./°F (10.1 mm/mm/°C).
- Asphalt layer thickness of 2.6 in. (66 mm).
- Asphalt resilient modulus of 1,271,000 psi (8.8 GPa).
- Modulus of subgrade reaction (k) of 815 pci (221 MPa/m).

The k values were back-calculated from the FWD deflection data and the concrete coefficient of thermal expansion was obtained from a study conducted in Florida on the influences of different types of aggregates on concrete thermal properties.⁽²²⁾ Please note that no test was performed to determine the concrete modulus of rupture in this study. Rather, it was estimated from the measured splitting tensile strengths of the concrete cores using the following equation:

$$MR = 1.02 * (ST + 200)$$

(from Reference 23)

where MR = concrete modulus of rupture in psi

ST = concrete splitting tensile strength in psi

5.5 UTW Pavement Design Evaluation

Referring to Table 1.1, the original UTW pavement design at the Ellaville Weigh Station included three different thickness and joint spacing combinations. Evaluation was made to the three different design combinations. As described in previous sections, each year was separated into two groups with different temperature conditions. The period from April to September is designated as Group 1, while Group 2 consists of the remaining six months of the year. In Group 1 months, each day was divided into six time segments with each segment having a particular temperature gradient in the concrete slabs. Similarly for Group 2 months, each day was divided into eight time segments (see Table 5.1). Further, the design axle loads were assumed to be evenly distributed throughout the day.

As mentioned earlier, the ACPA's UTW pavement design procedure was used in this study for design assessment. However, some modifications were required. In developing the ACPA UTW design procedure, laboratory testing on cores showed that the interface shear strength was generally in the range of 100 psi (0.69 MPa). The computed stresses and strains from the theoretical programs were adjusted according to the field data. The interface shear strength between the concrete and asphalt layers for the Ellaville test sections was generally greater than 200 psi (1.38 MPa). Under the same loading and temperature conditions, stresses and strains would be smaller for the Ellaville UTW test sections. Therefore, the design equations used in the ACPA UTW design procedure were modified to account for the higher interface shear strength, and the modified design equations were used in the evaluation of the test sections.

With the design parameters, material properties, temperature conditions, and design traffic established, the modified ACPA UTW design equations were used to assess the adequacy of the three designs used in the Ellaville Weigh Station UTW test sections. In the evaluation, the stresses and strains caused by the truckloads and the temperatures were computed separately. The sum of the load- and temperature-induced stresses and strains were then used, in conjunction with the concrete and asphalt fatigue equations, to predict the expected service life for the three designs. Table 5.4 is a summary of the evaluation. It can be observed from this table that none of the three section designs would last for 12 years. At the time of evaluation, the life consumed for the three section designs are 63%, 58%, and 77%.

The UTW design equations and the design procedures used are described in Appendix D. Appendix D also shows the calculations for three of the cases analyzed in this study.

Table 5.4 Results of the UTW Pavement Design Evaluation

Thickness, in.	Dimension, ft X ft	Service Life Consumed at		Expected Service Life, year
		12-year	Evaluation	
3	4 X 4	Would Fail	63%	5
4	4 X 4	Would Fail	58%	5
4	5 1/4 X 5 1/4	Would Fail	77%	4

Even though the section designs would not last for 12 years, it should not be expected to fail at the time when the evaluation was performed. The earlier than expected occurrences of pavement distresses is the result of lack of thickness control in the asphalt milling operation, which resulted in large variations of the remaining asphalt layer thickness.

Analysis using the same procedure was performed to determine the expected service life of these three UTW pavements if the asphalt thickness was only 1 inch. Table 5.5 shows the results of such an analysis. The first design (with a concrete thickness of 3 in. and slab dimension of 4 ft X 4 ft) and the third design (with a concrete thickness of 4 in. and slab dimension of 5 ¼ ft X 5 ¼ ft) would fail in 1 year, while the second design (with a concrete thickness of 4 in. and slab dimension of 4 ft X 4 ft) would fail in 4 years.

Table 5.5 Expected Service Life of UTW Designs with Asphalt Thickness of 1 inch

Thickness, in.	Dimension, ft X ft	Expected Service Life, year
3	4 X 4	Would fail in one year
4	4 X 4	4
4	5 1/4 X 5 1/4	Would fail in one year

It is also worth noting that, as field experiences have demonstrated, the UTW sections located at the asphalt-concrete transition areas are more susceptible to slab cracking, probably because of the lack of support (load transfer) from adjacent concrete slabs. Thickened sections have been recommended by ACPA. This practice was not incorporated in the Ellaville Weigh Station UTW test sections. The entrance test section (Section S1W) and the leave section (Section S6E) had the worst performance.

It is also important to note that the essential requirement for ensuring good UTW pavement performance is the presence of strong bond between the concrete and asphalt layers. The UTW test sections had very strong bond when the sections were in good condition (no cracking). However, once cracking occurs, the applications of heavy trucks destroy the interface bond quickly. Without the bonding, the deterioration of the thin UTW slabs would progress in a much-accelerated rate, as evidenced by the very high deterioration rate of Test Sections S1W and S6E. Also, because of the broken panels, the adjacent panels would lose support and a free edge condition would occur. This situation would make the adjacent panels more susceptible to cracking.

Chapter 6

Summary and Conclusions

It has been over a decade since the development of the UTW technique for asphalt pavement rehabilitation. Over 200 UTW pavements were constructed in the last decade, with many of them showing good performance. In some states, such as in Kansas, the use of UTW for intersection repair has become a standard practice. In 1997, Florida DOT constructed six UTW test sections at the Ellaville Weigh Station. However, the performance of these test sections was less than ideal, with the observation of some early cracking on the concrete surface. The primary objective of this project was to identify the possible causes of the UTW deterioration. The results of this project would also provide a better understanding of the UTW field behavior and an assessment of the applicability of UTW under Florida's conditions.

These objectives were accomplished through a comprehensive evaluation, including a literature and document review, field evaluation, laboratory testing, and a design assessment. From the evaluation, significantly different levels of performance were observed. While some sections showed very poor performance with large amount of shattered panels, others had good performance with few distresses. Specific observations and conclusions derived from this evaluation are listed as following:

1. Test Sections S1W, the entrance section, and S6E, the leave section, were the two worst performing sections. Both sections were designed to be 3-in. (75-mm) thick with a panel dimension of 4-ft by 4 ft (1.2-m by 1.2-m). Section S1W had 66% of cracked panels and S6E had 58% cracked panels. Majority of the panels were shattered into five or more pieces, and were concentrated either in the beginning or end of the test sections. Also, a dramatic increase in the amount of cracked panels was observed when compared to the surveys conducted in July 1999.
2. Though not as badly deteriorated as Sections S1W and S6E, Section S2W also showed poor performance, with about 30% of shattered slabs. Again, cracked panels were concentrated either in the beginning or end of the test section. This section of UTW pavements had a design thickness of 4 in. (100 mm) and a slab dimension of 5 ¼ ft by 5 ¼ ft (1.6 m by 1.6 m).
3. Sections S3W, S4E, and S5E showed good performance with some cracked panels in the beginning and the end of the test sections.
4. Except for those samples with already separated layers when obtaining the cores, the interface shear strength between concrete and asphalt layers was very strong, generally exceeding 200 psi (1.38 MPa). The average interface shear strength was 306 psi (2.11 MPa). These values are considerably higher than the shear strength of about 100 psi (0.69 MPa) generally observed from other UTW projects.
5. Unlike conventional concrete pavements, no differences were observed between maximum deflections caused by FWD loads applied at the joints and slab center.
6. Using modified ACPA UTW design equations, the adequacy of the three UTW designs were assessed. From this assessment, it was determined that none of the three designs would last for the assumed design life of 12 years. Further, all three section designs would have expected service life of only about five years.

7. The primary causes of the premature cracking, the extensiveness and severity of the cracking, and the rapid progress of the cracking are due to the following:
- The combination of inadequate design and the lack of control on layer thickness during construction, which resulted in large variations in PCC and AC layer thickness. Milled asphalt as thin as about 1 in. (25 mm) was observed.
 - The transition zones. Generally, more distresses were observed at both transition areas next to the asphalt pavement. Thicker UTW sections should have been used in these transition areas.
 - The loss of bond. The successful performance of UTW pavements is largely dependent on the existence and maintaining of sufficient interface bond between the concrete and asphalt layers. Once cracking occurs, the frequent applications of heavy truck loads on the thin concrete slabs would break the bond rapidly and accelerate the deterioration of the UTW pavements. Also, panels in the vicinity of the broken panels would lose support (load transfer) normally provided by adjacent panels and are more susceptible to cracking. The rapid loss of bond might have caused the rapid progress of the cracking and the large percentage of shattered slabs.

Finally, the intent of UTW technique is to provide durable wearing surface for normal traffic loads on residential and collect streets, low-volume roads, street intersections, general aviation airports, and parking areas. For weigh stations subjected to frequent applications of heavy truck traffic, the UTW technique is probably not an appropriate rehabilitation alternative. From experiences obtained during the last decade throughout the country, the UTW technique can be and has been successfully implemented for asphalt pavement rehabilitation. However, careful planning, pre-construction asphalt pavement evaluation, adequate design process, and proper construction quality control need to be followed in order to build UTW pavements with successful performance.

References

1. Wu, C.L., Tarr, S.M. Refai, T.M., Nagi, M.N., and Sheehan, M.J., "Development of Ultra-thin Whitetopping Design Procedure," Report Prepared by Construction Technology Laboratories for the Portland Cement Association (PCA Serial No. 2124), January 1997.
2. Mack, J.W., Wu, C.L., Tarr, S.M., and Refai, T.M., "Model Development and Interim Design Procedure Guidelines for Ultra-thin Whitetopping Pavements," *Proceedings of the Sixth International Purdue Conference on Concrete Pavement -- Design and Materials for High Performance*, Vol. 1, Indianapolis, Indiana, November, 1997, pp. 231-256.
3. "Whitetopping – State of the Practice," Engineering Bulletin, EB210P, American Concrete Pavement Association, Skokie, Illinois, 1998.
4. Armaghani, J.M., and Tu, D, "Performance of Ultra-Thin Whitetopping in Florida," *Proceedings of the sixth International Purdue Conference on Concrete Pavement -- Design and Materials for High Performance*, Vol. 2, Indianapolis, Indiana, November, 1997, pp. 189-206.
5. Armaghani, J.M., and Tu, D, "Rehabilitation of Ellaville Weigh Station with Ultra-Thin Whitetopping," Paper Presented at the 1999 Transportation Research Board Annual Meeting, Washington, D.C., January 1999.
6. Hutchinson, R.L., "Resurfacing with Portland Cement Concrete," Synthesis of Highway Practice, NCHRP 99, Transportation Research Board, Washington, DC, 1982.
7. McGhee, Kenneth, H., "Portland Cement Concrete Resurfacing," Synthesis of Highway Practice, NCHRP 204, Transportation Research Board, Washington, DC, 1994.
8. Cole, L.W., and Mohsen, J.P., "Ultra-Thin Concrete Overlays on Asphalt." Paper prepared for presentation at the 1993 TAC Annual Conference, Ottawa, Ontario, Canada.
9. Brown, D., "Ultra-Thin Whitetopping Emerges as Rehab Technique," *Transportation Builder*, V7, No. 1, Jan. 1995, pp 37-41.
10. Risser, R.J., LaHue, S.P., Voigt, G.F., and Mack, J., "Ultra-Thin Concrete Overlays on Existing Asphalt Pavement," 5th International Conference on Concrete Pavement Design and Rehabilitation, Vol. 2, April 1993, Purdue University, Lafayette, IN., pp. 247-254.
11. Speakman, J., and Scott III, H., "Ultra-Thin, Fiber-Reinforced Concrete Overlays for Urban Intersections," TRR 1532, Advancements in Concrete Materials Technology, Transportation Research Board, Washington, DC, 1996, pp.15-20.
12. Cown, R.M., "Experimental Concrete Inlay on Existing Asphalt Pavement," Georgia Department of Transportation, Office of Materials and Research, Concrete Branch, Forest Park, Georgia, 1993.
13. Dumitru, N. I., Hossain, M., and Wojakowski, J., "Construction and Performance of Ultra-Thin Whitetopping in Kansas," Paper Presented at the 81st Transportation Research Board Annual Meeting, Washington, DC, January 2002.
14. "Thickness Design for Concrete Highway and Street Pavements," Publication No. EB109.01P, Portland Cement Association, Skokie, IL 1984.
15. *Guide for Design of Pavement Structures*, American Association of State Highway and Transportation Officials, Washington, DC, 1993.
16. Wu, C.L., Tayabji, S.D., Sheehan, M.J., and Sherwood, J., "Performance and Repair of UTW Pavements," *Proceedings of the Seventh International Conference on Concrete Pavements*, Vol. 2, Orlando, Florida, September, 2001, pp. 839-856.

17. Wu, C.L., and Sheehan, M.J., *Testing and Performance Evaluation of UTW Pavements at the Spirit of St. Louis Airport*, Paper Presented at the 81st Transportation Research Board Annual Meeting, Washington, DC, January 2002.
18. Cable, J.K., Grove, J.D., and Heyer, M., "Ultrathin Pavements Making the Grade," *Proceedings of the Sixth International Purdue Conference on Concrete Pavement -- Design and Materials for High Performance*, Vol. 2, Indianapolis, Indiana, November, 1997, pp.245-266.
19. Cable, J.K. and Ciha, T., "The Ultrathin Whitetopping Option," *Proceedings of the Seventh International Conference on Concrete Pavements*, Vol. 2, Orlando, Florida, September, 2001, pp.969-975.
20. Vandebossche, J.M. and Fagerness, A.J., "Performance and Repair of Ultra-Thin Whitetopping: The Minnesota Experience," Paper Presented at the 81st Transportation Research Board Annual Meeting, Washington, DC, January 2002.
21. Li, Shuo, Fwa, T.F., and Tan, K.H., "Parameters Back-Calculation for Concrete Pavement with Two Slab Layer," *Journal of Transportation Engineering*, Vol. 124, No. 6, November/December 1998, American Society of Civil Engineers (ASCE), Virginia, pp. 567-572.
22. Tia, M., Bloomquist, D., Alungbe, G. D., and Richardson, D., "Coefficient of Thermal Expansion of Concrete Used in Florida," Final Report, Report No. FL/DOT/SMO/89/362, Gainesville, Florida, August 1989.
23. Rice, J., "Referee Testing of Hardened Portland Cement Concrete Pavement," Engineering Brief No. 34, Federal Aviation Administration, US Department of Transportation, March 18, 1986.

APPENDIX A

U.F. Project No: 49104504831-12

Contract No: BC-354

RPWO#: 43

Forensic Investigation of the Ellaville Weigh Station UTW Pavements

Mang Tia
Chung-Lung Wu
Wasantha Kumara

June 2002



Department of Civil & Coastal Engineering
College of Engineering
UNIVERSITY OF FLORIDA
Gainesville, FL
&
Construction Technology Laboratories, Inc.
Columbia, MD

(Appendix A contains hand-written condition surveys of the Ellaville Weigh Station UTW Pavements.)

APPENDIX B, C,&D

U.F. Project No: 49104504831-12

Contract No: BC-354

RPWO#: 43

Forensic Investigation of the Ellaville Weigh Station UTW Pavements

Mang Tia
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Gainesville, FL
&
Construction Technology Laboratories, Inc.
Columbia, MD

APPENDIX B

TEMPERATURE DATA

FILE NAME: ELLA ALL

START 26-Jul-01 4:24:18 PM
LOGGING @
LAST SAMPLE 23-Aug-01 03:28:02 PM
@
SAMPLE RATE: 15 minutes

ACTIVE CHANNELS:		3A	3B	3C	3D	4A	4B	4C	4D
MODULE TYPE:		Thermocouple	Thermocouple	Thermocouple	Thermocouple	Thermocouple	Thermocouple	Thermocouple	Thermocouple
UNITS:		Degrees (F)	Degrees (F)	Degrees (F)	Degrees (F)	Degrees (F)	Degrees (F)	Degrees (F)	Degrees (F)
COMMON NAME:		Sec. 1 - Top	Sec. 1 - Cen	Sec. 1 - Bot	Ambient Temp	Sec. 2 - Top	Sec. 2 - Cen	Sec. 2 - Bot	Equip Temp
26-Jul-01	04:24:18 PM	94.5	93.2	91.9	89.0	94.4	92.6	93.1	91.0
	04:39:18 PM	96.1	95.3	92.2	100.8	95.7	94.7	98.3	96.5
	04:54:18 PM	98.7	97.4	92.7	102.3	96.9	95.8	104.3	100.5
	05:09:18 PM	97.9	97.3	93.7	97.6	97.4	96.6	104.1	102.3
	05:24:18 PM	99.2	98.4	94.0	104.2	98.7	97.2	105.9	103.6
	05:39:18 PM	99.6	99.1	94.6	97.5	99.8	98.0	106.0	105.2
	05:54:18 PM	99.7	99.2	95.0	95.5	100.0	98.5	105.2	105.4
	06:09:18 PM	97.2	97.4	95.3	91.7	98.2	98.0	98.2	103.1
	06:24:18 PM	97.3	97.3	95.2	91.8	97.9	97.9	97.7	101.8
	06:39:18 PM	96.3	96.3	95.3	92.4	96.6	97.1	95.1	100.5
	06:54:18 PM	95.8	95.8	95.2	92.1	96.3	96.5	90.8	98.1
	07:09:18 PM	94.4	94.9	94.9	84.4	95.7	95.9	87.6	95.4
	07:24:18 PM	93.5	94.1	94.8	83.5	94.5	95.5	86.2	92.9
	07:39:18 PM	93.3	93.6	94.4	82.5	93.5	94.5	84.9	91.2
	07:54:18 PM	92.8	93.1	94.1	80.9	93.0	94.0	83.4	89.4
	08:09:18 PM	92.4	92.6	93.9	80.0	92.3	93.6	81.6	87.6
	08:24:18 PM	91.5	92.1	93.6	78.3	91.7	92.9	79.7	85.7
	08:39:18 PM	90.3	90.8	93.1	77.6	89.7	92.0	78.7	84.0
	08:54:18 PM	90.0	90.6	92.6	77.1	90.0	91.5	77.7	82.4
	09:09:18 PM	89.2	90.0	92.3	77.0	89.0	91.1	77.3	81.2
	09:24:18 PM	88.6	89.1	91.8	77.5	88.2	90.3	77.3	80.4
	09:39:18 PM	88.3	88.8	91.5	77.2	88.0	89.9	77.1	79.7
	09:54:18 PM	87.9	88.5	91.1	77.1	87.5	89.6	77.1	79.2
	10:09:18 PM	87.7	88.3	90.9	77.7	87.3	89.2	77.2	78.7
	10:24:18 PM	87.5	88.1	90.4	76.4	87.2	88.8	77.1	78.4
	10:39:18 PM	87.0	87.6	90.2	75.4	86.7	88.8	76.6	78.1
	10:54:18 PM	86.5	87.0	89.9	75.1	86.2	88.2	76.2	77.6
	11:09:18 PM	86.0	86.5	89.4	75.1	85.7	87.7	75.7	77.0
	11:24:18 PM	85.5	86.1	89.2	75.2	85.2	87.3	76.1	76.6
	11:39:18 PM	85.4	85.9	88.8	75.3	85.2	87.2	75.8	76.3
	11:54:18 PM	85.1	85.6	88.5	75.3	84.8	86.9	75.7	76.0

27-Jul-01	12:09:18 AM	84.8	85.4	88.3	76.1	84.4	86.5	75.8	76.0
	12:24:18 AM	84.5	85.0	87.9	76.0	84.3	86.2	76.0	76.0
	12:39:18 AM	84.1	84.7	87.5	75.9	84.0	85.8	76.2	75.9
	12:54:18 AM	84.3	84.8	87.5	74.5	84.2	85.8	75.8	75.8
	01:09:18 AM	84.1	84.4	87.3	74.6	83.7	85.5	75.3	75.6
	01:24:18 AM	83.6	84.1	87.0	74.3	83.4	85.3	75.1	75.3
	01:39:18 AM	83.3	83.8	86.7	74.0	83.1	85.2	74.8	74.8
	01:54:18 AM	83.3	83.9	86.5	73.8	82.9	84.9	74.5	74.5
	02:09:18 AM	82.8	83.3	86.2	74.0	82.6	84.7	74.3	74.5
	02:24:18 AM	82.8	83.4	86.0	73.3	82.4	84.5	74.3	74.0
	02:39:18 AM	82.6	83.2	85.8	73.4	82.3	84.3	74.4	74.1
	02:54:18 AM	82.2	83.0	85.6	72.9	82.0	84.1	74.4	73.9
	03:09:18 AM	82.0	82.5	85.4	73.8	81.8	83.7	74.5	73.7
	03:24:18 AM	81.9	82.4	85.3	74.2	81.8	83.7	74.8	73.7
	03:39:18 AM	81.9	82.5	85.1	73.7	81.6	83.4	76.1	73.7
	03:54:18 AM	81.7	82.2	84.8	73.7	81.6	83.2	75.8	73.7
	04:09:18 AM	81.7	82.2	84.8	74.0	81.3	83.2	75.6	73.7
	04:24:18 AM	81.4	81.9	84.6	74.0	81.4	83.0	75.6	73.8
	04:39:18 AM	81.4	81.9	84.3	73.7	81.1	82.9	75.3	73.7
	04:54:18 AM	81.1	81.6	84.3	73.9	81.0	82.6	75.2	73.7
	05:09:18 AM	81.0	81.5	84.1	73.5	80.6	82.5	74.9	73.6
	05:24:18 AM	80.6	81.1	84.0	73.1	80.3	82.3	74.8	73.5
	05:39:18 AM	80.4	81.0	83.6	73.0	80.3	82.2	74.3	73.3
	05:54:18 AM	80.2	80.8	83.4	72.3	80.1	81.9	73.8	73.0
	06:09:18 AM	80.0	80.6	83.5	71.8	79.9	81.7	73.3	72.6
	06:24:18 AM	80.1	80.6	83.2	72.6	79.6	81.5	73.4	72.6
	06:39:18 AM	79.7	80.2	83.1	72.8	79.6	81.4	73.3	72.5
	06:54:18 AM	79.7	80.2	82.9	72.8	79.6	81.2	73.6	72.6
	07:09:18 AM	80.0	80.5	82.9	76.0	80.0	81.0	75.3	73.2
	07:24:18 AM	80.2	80.4	82.6	76.7	80.4	81.2	79.4	75.7
	07:39:18 AM	80.7	80.9	82.5	80.2	81.1	81.3	83.9	78.5
	07:54:18 AM	81.1	81.1	82.4	82.1	82.1	81.6	113.4	81.3
	08:09:18 AM	82.0	82.0	82.5	84.6	83.7	82.4	117.4	84.4
	08:24:18 AM	82.9	82.7	82.7	85.8	85.1	83.3	117.9	87.5
	08:39:18 AM	83.8	83.3	83.0	85.9	86.0	84.1	117.7	89.6
	08:54:18 AM	85.1	84.3	83.3	88.0	87.8	85.0	130.0	92.0
	09:09:18 AM	87.0	85.7	83.9	93.6	90.4	86.5	135.3	94.6
	09:24:18 AM	88.4	87.1	84.4	91.5	91.6	87.4	118.4	97.2
	09:39:18 AM	89.8	88.3	85.3	93.2	93.4	88.8	127.3	99.6
	09:54:18 AM	92.4	90.6	86.1	89.8	96.6	90.7	130.1	101.3
	10:09:18 AM	93.8	92.0	87.0	95.6	98.3	92.4	130.0	102.7
	10:24:18 AM	95.1	93.2	88.2	96.6	99.7	94.0	129.9	103.3
	10:39:18 AM	96.3	94.4	89.2	97.0	101.5	95.3	131.6	103.8
	10:54:18 AM	97.8	96.0	89.9	96.5	103.0	96.6	131.6	104.3
	11:09:18 AM	98.3	96.5	90.7	94.4	103.1	97.7	129.7	104.7
	11:24:18 AM	99.4	97.5	91.8	99.9	104.0	98.6	129.8	104.5

11:39:18 AM	101.3	99.2	92.7	94.0	107.2	100.5	131.6	105.4
11:54:18 AM	100.7	99.1	93.6	95.7	105.6	100.7	130.6	104.8
12:09:18 PM	103.0	100.9	94.3	95.9	108.2	102.1	132.7	105.7
12:24:18 PM	101.7	100.7	94.9	96.0	106.7	102.4	130.7	105.2
12:39:18 PM	105.8	103.7	95.6	98.7	111.3	104.2	141.4	107.5
12:54:18 PM	107.6	105.3	96.7	103.7	113.1	105.9	140.4	109.3
01:09:18 PM	106.1	104.5	97.7	101.7	111.0	106.7	135.9	109.0
01:24:18 PM	107.4	105.8	98.5	95.6	111.7	107.4	139.3	110.2
01:39:18 PM	110.3	108.2	99.1	99.6	115.8	108.9	114.8	112.0
01:54:18 PM	106.9	106.1	99.8	91.7	111.8	108.7	139.2	111.0
02:09:18 PM	105.6	105.1	100.4	89.9	110.6	108.3	111.9	108.3
02:24:18 PM	104.3	103.7	100.6	90.6	108.2	107.2	122.1	105.6
02:39:18 PM	103.2	102.7	100.4	87.0	106.5	106.0	128.8	103.2
02:54:18 PM	101.1	101.1	100.3	85.8	104.3	104.6	119.6	99.5
03:09:18 PM	100.6	100.6	100.0	88.2	103.6	103.9	120.4	97.7
03:24:18 PM	99.6	99.6	99.6	83.8	102.4	103.1	118.9	95.9
03:39:18 PM	98.3	98.6	99.1	82.0	100.9	102.2	121.5	94.0
03:54:18 PM	98.6	98.6	98.9	85.5	101.3	101.5	121.1	93.3
04:09:18 PM	98.6	98.6	98.6	87.8	100.9	101.2	122.8	93.0
04:24:18 PM	99.5	99.0	98.2	94.8	102.1	101.3	126.1	94.6
04:39:18 PM	99.9	99.6	97.8	92.0	102.6	101.6	132.4	96.7
04:54:18 PM	99.5	99.3	98.0	89.6	101.9	101.6	131.9	97.2
05:09:18 PM	99.0	99.0	98.0	86.7	100.9	101.2	130.0	96.3
05:24:18 PM	98.5	98.5	98.0	85.6	100.2	100.7	128.0	95.0
05:39:18 PM	97.6	97.6	97.9	85.0	99.2	100.2	126.0	93.8
05:54:18 PM	97.1	97.4	97.6	85.3	98.8	99.6	125.2	92.6
06:09:18 PM	96.8	97.1	97.1	88.4	98.8	99.3	125.1	92.6
06:24:18 PM	96.7	96.7	97.0	87.3	98.4	98.9	126.3	92.5
06:39:18 PM	96.7	96.7	96.7	86.1	98.4	98.6	125.5	92.2
06:54:18 PM	95.9	96.2	96.4	84.1	97.6	98.4	125.3	91.7
07:09:18 PM	95.2	95.7	96.2	82.0	97.1	97.9	119.8	90.4
07:24:18 PM	94.3	94.9	96.2	80.6	96.1	97.4	122.0	88.8
07:39:18 PM	93.1	93.9	95.8	78.6	94.7	96.8	120.2	86.7
07:54:18 PM	92.3	93.1	95.5	77.5	93.6	95.9	117.1	84.8
08:09:18 PM	91.7	92.5	94.8	76.4	92.7	95.0	116.7	83.1
08:24:18 PM	90.9	91.6	94.5	75.5	91.6	94.2	115.6	81.5
08:39:18 PM	90.1	90.9	94.0	75.6	90.5	93.4	115.6	79.9
08:54:18 PM	89.6	90.4	93.5	74.5	90.1	92.7	115.9	78.7
09:09:18 PM	89.0	89.8	92.9	73.9	89.3	92.2	117.9	77.6
09:24:18 PM	88.6	89.3	92.5	73.7	89.0	91.6	113.5	77.0
09:39:18 PM	88.5	89.3	92.2	73.1	88.7	91.2	114.7	76.4
09:54:18 PM	87.7	88.5	91.6	73.6	87.9	90.7	114.0	75.6
10:09:18 PM	87.3	88.1	91.2	73.0	87.5	90.1	114.1	75.0
10:24:18 PM	87.0	87.8	90.9	73.0	87.3	89.7	114.7	74.6
10:39:18 PM	86.9	87.6	90.5	72.6	87.0	89.3	115.1	74.2
10:54:18 PM	86.6	87.1	90.2	72.8	86.5	89.1	115.1	73.9

28-Jul-01	11:09:18 PM	86.3	86.8	90.0	73.3	86.3	88.6	115.4	73.8
	11:24:18 PM	85.9	86.7	89.6	72.6	86.2	88.2	115.0	73.9
	11:39:18 PM	85.7	86.5	89.4	72.5	85.7	88.1	115.9	73.7
	11:54:18 PM	85.3	86.1	89.0	73.1	85.3	87.7	115.2	73.6
	12:09:18 AM	85.1	85.9	88.8	71.9	85.1	87.5	115.1	73.4
	12:24:18 AM	84.8	85.6	88.5	72.6	84.6	87.2	117.8	73.1
	12:39:18 AM	84.6	85.4	88.3	71.6	84.3	86.7	117.8	72.6
	12:54:18 AM	84.0	84.8	88.0	71.0	83.8	86.4	113.5	72.3
	01:09:18 AM	83.9	84.7	87.6	70.7	83.7	86.0	112.4	71.9
	01:24:18 AM	83.9	84.4	87.5	70.6	83.6	85.9	111.0	71.5
	01:39:18 AM	83.5	84.3	87.2	70.5	83.3	85.6	106.4	71.2
	01:54:18 AM	83.5	84.1	86.9	70.3	83.3	85.3	104.1	70.9
	02:09:18 AM	83.0	83.8	86.7	70.5	83.1	85.1	104.7	70.8
	02:24:18 AM	82.8	83.6	86.5	70.4	82.6	84.7	95.6	70.9
	02:39:18 AM	82.7	83.5	86.1	70.2	82.5	84.6	100.3	70.4
	02:54:18 AM	82.5	83.3	86.0	70.6	82.3	84.4	101.2	70.3
	03:09:18 AM	82.2	83.0	85.9	70.8	81.8	84.2	102.7	70.6
	03:24:18 AM	82.1	82.9	85.6	69.9	82.0	84.1	101.6	70.5
	03:39:18 AM	82.0	82.8	85.4	69.8	81.9	83.7	100.9	70.3
	03:54:18 AM	81.6	82.4	85.1	70.0	81.5	83.5	100.8	70.2
	04:09:18 AM	81.5	82.3	84.9	69.6	81.1	83.2	101.4	70.1
	04:24:18 AM	81.4	81.9	84.8	69.4	81.0	83.1	101.3	69.7
	04:39:18 AM	81.1	81.9	84.5	70.2	80.7	82.8	101.3	69.9
	04:54:18 AM	80.8	81.6	84.2	69.9	80.4	82.5	102.3	69.9
	05:09:18 AM	80.5	81.3	84.2	69.9	80.1	82.2	101.3	69.9
	05:24:18 AM	80.5	81.3	84.0	69.9	80.1	82.2	100.8	69.9
	05:39:18 AM	80.2	81.0	83.9	69.5	79.8	81.9	100.0	69.8
	05:54:18 AM	80.1	80.9	83.6	69.5	79.7	81.8	100.6	69.7
	06:09:18 AM	80.0	80.8	83.4	69.4	79.6	81.7	98.5	69.4
	06:24:18 AM	79.9	80.7	83.3	68.7	79.5	81.5	98.6	69.2
	06:39:18 AM	79.5	80.3	83.2	69.4	79.1	81.2	100.3	69.4
	06:54:18 AM	79.5	80.3	82.9	69.6	79.1	80.9	102.3	69.4
	07:09:18 AM	79.7	80.3	82.7	72.0	79.2	81.0	104.4	69.7
	07:24:18 AM	80.2	80.7	82.8	74.8	80.2	81.0	109.8	72.1
	07:39:18 AM	80.6	80.8	82.4	74.5	81.0	81.3	112.8	75.0
	07:54:18 AM	81.4	81.4	82.7	78.4	82.0	81.7	115.5	77.2
	08:09:18 AM	82.3	82.0	82.8	80.5	83.4	82.3	119.6	80.7
	08:24:18 AM	83.5	83.0	83.0	89.3	85.4	83.3	94.2	84.9
	08:39:18 AM	84.5	83.7	83.1	86.6	86.8	84.2	95.9	88.1
	08:54:18 AM	85.8	84.7	83.7	87.9	88.5	85.4	96.7	90.8
	09:09:18 AM	87.2	85.9	84.3	89.9	90.0	86.4	98.3	93.4
	09:24:18 AM	88.9	87.1	85.0	88.1	91.9	87.5	100.1	95.5
	09:39:18 AM	90.4	88.8	85.7	88.1	93.7	89.1	99.9	97.6
	09:54:18 AM	91.7	90.1	86.2	88.3	95.2	90.5	100.1	99.3
	10:09:18 AM	92.7	90.8	87.1	90.6	96.3	91.4	100.2	99.6
	10:24:18 AM	94.4	92.3	87.8	91.8	98.2	92.8	101.3	101.0

10:39:18 AM	96.5	94.1	88.9	93.1	100.3	94.1	100.8	101.9
10:54:18 AM	98.2	95.9	89.6	99.8	102.5	95.8	99.9	102.7
11:09:18 AM	99.5	97.4	90.9	94.6	103.6	97.4	99.7	103.6
11:24:18 AM	101.3	99.2	91.8	93.2	105.5	99.3	100.6	104.7
11:39:18 AM	102.1	99.8	93.2	94.0	106.2	100.3	100.0	104.1
11:54:18 AM	103.3	101.2	94.4	94.2	107.1	101.4	99.9	104.0
12:09:18 PM	105.4	102.8	95.5	90.7	109.2	102.8	99.9	104.1
12:24:18 PM	106.1	104.0	96.7	95.1	109.9	104.0	99.4	103.5
12:39:18 PM	107.9	105.5	97.7	95.4	111.3	105.2	101.3	103.6
12:54:18 PM	108.7	106.6	98.6	98.6	112.0	106.4	102.3	104.3
01:09:18 PM	110.3	108.0	99.4	101.7	114.0	107.6	103.8	105.0
01:24:18 PM	111.6	109.2	100.4	93.1	115.0	109.1	104.5	106.1
01:39:18 PM	110.6	109.0	101.5	99.9	113.7	109.2	103.5	105.3
01:54:18 PM	112.2	110.4	102.1	94.2	114.9	110.0	105.7	106.7
02:09:18 PM	112.9	110.8	103.0	101.4	116.2	110.7	107.1	107.1
02:24:18 PM	113.5	111.4	103.6	100.0	116.7	111.6	107.8	107.8
02:39:18 PM	114.8	112.7	104.4	97.9	117.6	112.6	110.8	109.5
02:54:18 PM	113.3	112.0	105.3	108.9	115.8	112.3	147.0	108.7
03:09:18 PM	113.2	112.1	105.6	111.9	115.7	112.6	110.3	108.8
03:24:18 PM	115.7	113.9	105.9	111.1	118.8	113.7	155.6	111.5
03:39:18 PM	116.4	114.6	106.1	99.1	120.0	114.4	168.4	113.7
03:54:18 PM	116.4	114.9	107.1	108.2	119.6	115.0	168.5	114.5
04:09:18 PM	115.7	114.5	107.7	108.8	119.2	115.1	169.1	114.3
04:24:18 PM	114.1	113.3	107.8	91.1	115.6	114.6	115.4	113.3
04:39:18 PM	114.0	112.9	108.3	98.9	114.7	113.5	107.3	111.2
04:54:18 PM	113.6	112.8	108.1	98.2	115.3	113.5	108.7	111.2
05:09:18 PM	112.7	112.1	108.0	98.9	114.4	112.9	107.5	110.6
05:24:18 PM	113.0	112.4	108.0	101.0	114.3	112.8	108.7	110.7
05:39:18 PM	112.1	111.6	107.9	100.6	113.7	112.4	107.3	110.6
05:54:18 PM	110.9	110.7	107.8	96.3	112.2	111.7	103.5	109.2
06:09:18 PM	109.4	109.4	107.5	96.3	110.3	110.8	99.5	106.7
06:24:18 PM	108.1	108.4	107.1	90.8	109.1	109.9	97.5	104.7
06:39:18 PM	106.9	107.2	106.6	88.6	107.4	108.6	94.0	102.0
06:54:18 PM	105.4	105.9	106.1	85.7	105.2	107.5	90.5	99.0
07:09:18 PM	104.3	104.8	105.3	84.9	104.3	106.6	88.5	96.6
07:24:18 PM	103.2	104.0	104.8	83.3	103.3	105.6	87.0	94.3
07:39:18 PM	102.3	103.1	104.1	82.1	101.8	104.6	85.3	92.0
07:54:18 PM	101.1	102.1	103.4	81.3	100.7	103.5	83.6	89.8
08:09:18 PM	100.1	101.1	103.0	80.4	99.5	102.3	81.9	88.1
08:24:18 PM	99.0	100.1	102.1	79.0	98.2	101.5	80.5	86.3
08:39:18 PM	97.9	99.0	101.3	78.7	97.0	100.3	79.6	84.6
08:54:18 PM	97.2	98.5	100.9	78.3	96.3	99.7	78.7	83.1
09:09:18 PM	96.5	97.8	100.1	77.5	95.4	98.8	78.3	81.9
09:24:18 PM	95.9	97.0	99.6	77.5	94.9	98.2	77.7	81.1
09:39:18 PM	95.5	96.5	99.1	76.8	94.2	97.3	77.3	80.2
09:54:18 PM	94.9	96.0	98.6	77.8	93.8	96.9	77.2	79.5

29-Jul-01	10:09:18 PM	94.3	95.4	98.0	76.9	93.3	96.4	77.2	79.0
	10:24:18 PM	93.8	94.8	97.4	76.6	92.8	95.9	76.7	78.5
	10:39:18 PM	93.3	94.4	97.0	76.7	92.4	95.2	76.5	78.3
	10:54:18 PM	92.9	93.9	96.6	77.6	91.7	94.8	76.6	78.0
	11:09:18 PM	92.6	93.6	96.2	76.8	91.5	94.3	76.7	77.7
	11:24:18 PM	92.3	93.1	95.7	77.8	91.0	93.8	76.7	77.4
	11:39:18 PM	91.9	92.9	95.5	76.3	90.6	93.7	76.8	77.3
	11:54:18 PM	91.1	92.1	95.0	77.1	89.6	93.0	77.4	77.4
	12:09:18 AM	90.7	92.0	94.6	78.1	89.6	92.7	77.6	77.3
	12:24:18 AM	90.7	91.8	94.4	76.7	89.8	92.4	77.3	77.3
	12:39:18 AM	90.5	91.6	93.9	76.0	89.3	92.2	76.5	77.1
	12:54:18 AM	90.3	91.0	93.7	75.7	89.0	91.8	76.2	76.8
	01:09:18 AM	90.0	90.8	93.4	75.5	88.7	91.6	75.7	76.5
	01:24:18 AM	89.5	90.5	93.2	75.5	88.3	91.1	75.8	76.3
	01:39:18 AM	89.2	90.3	92.7	75.2	88.5	91.1	75.5	76.3
	01:54:18 AM	88.9	90.0	92.6	74.9	88.2	90.7	75.1	75.9
	02:09:18 AM	88.7	89.7	92.1	74.9	87.9	90.5	74.9	75.7
	02:24:18 AM	88.4	89.4	91.8	74.9	87.4	90.0	74.9	75.5
	02:39:18 AM	88.0	89.1	91.5	74.8	87.1	89.7	74.8	75.1
	02:54:18 AM	87.9	88.9	91.3	74.1	87.2	89.7	74.6	75.2
	03:09:18 AM	87.7	88.5	91.1	74.5	86.7	89.3	74.5	75.0
	03:24:18 AM	87.5	88.3	90.7	74.6	86.6	89.2	74.4	74.9
	03:39:18 AM	87.4	88.2	90.5	73.9	86.4	89.0	74.1	74.7
	03:54:18 AM	86.9	88.0	90.4	74.0	86.2	88.6	74.0	74.5
	04:09:18 AM	86.7	87.5	90.1	73.8	85.8	88.3	73.7	74.3
	04:24:18 AM	86.5	87.3	89.9	73.8	85.5	88.1	73.5	74.0
	04:39:18 AM	86.1	87.1	89.5	73.7	85.1	87.7	73.3	73.9
	04:54:18 AM	85.9	86.7	89.3	73.2	85.0	87.6	73.5	73.7
	05:09:18 AM	85.5	86.6	89.2	73.1	84.8	87.2	73.3	73.6
	05:24:18 AM	85.5	86.6	88.9	73.9	84.8	87.2	73.6	73.6
	05:39:18 AM	85.3	86.1	88.7	73.6	84.4	87.0	73.7	73.7
	05:54:18 AM	85.3	86.1	88.5	74.0	84.5	86.8	74.0	73.8
	06:09:18 AM	85.2	86.0	88.4	73.8	84.3	86.6	74.1	73.9
	06:24:18 AM	84.9	86.0	88.1	73.8	84.1	86.4	73.9	73.9
	06:39:18 AM	85.0	85.8	87.9	73.9	84.1	86.2	74.2	73.9
	06:54:18 AM	84.9	85.6	87.8	74.0	84.3	86.3	74.3	74.1
	07:09:18 AM	84.8	85.5	87.6	74.2	84.2	86.3	74.8	74.3
	07:24:18 AM	85.0	85.6	87.4	74.4	84.5	86.3	75.1	74.5
	07:39:18 AM	85.4	85.6	87.5	75.8	85.1	86.2	76.5	75.5
	07:54:18 AM	85.9	85.9	87.5	75.6	86.2	86.2	81.0	77.8
	08:09:18 AM	86.2	86.4	87.2	80.4	87.4	86.6	84.0	80.1
	08:24:18 AM	87.5	87.0	87.5	84.6	89.4	87.3	90.2	83.9
	08:39:18 AM	87.8	87.5	87.5	83.0	89.2	87.9	90.0	86.1
	08:54:18 AM	89.5	88.5	88.2	91.4	92.0	88.9	94.6	88.9
	09:09:18 AM	90.3	89.3	88.5	83.7	92.5	89.7	93.6	91.3
	09:24:18 AM	90.5	89.7	88.9	86.0	92.9	90.3	91.1	91.3

09:39:18 AM	92.6	91.0	89.7	88.4	95.5	91.7	93.0	92.7
09:54:18 AM	94.3	92.7	90.1	86.9	97.8	92.9	96.0	95.0
10:09:18 AM	94.2	93.2	90.3	85.3	96.3	93.4	95.8	96.3
10:24:18 AM	96.2	94.6	91.2	98.8	99.8	94.4	98.3	97.3
10:39:18 AM	97.9	95.8	91.9	95.3	101.3	95.9	99.8	99.8
10:54:18 AM	99.1	97.0	92.6	102.2	102.3	97.2	100.3	101.3
11:09:18 AM	102.1	99.5	93.7	95.3	106.7	99.0	102.1	102.9
11:24:18 AM	101.4	99.6	94.4	88.8	104.0	100.1	99.8	103.7
11:39:18 AM	100.9	99.3	95.4	94.8	103.3	100.0	98.9	102.8
11:54:18 AM	104.5	101.9	95.8	93.5	108.7	101.5	102.0	104.6
12:09:18 PM	105.8	103.5	97.2	100.4	110.6	103.1	101.9	104.4
12:24:18 PM	107.5	104.9	98.1	100.7	111.9	104.8	104.5	106.1
12:39:18 PM	109.9	107.1	99.0	94.5	114.3	106.4	107.9	108.2
12:54:18 PM	107.8	105.7	100.3	96.1	111.4	106.3	102.2	106.1
01:09:18 PM	110.5	107.9	100.9	103.5	114.4	107.5	105.7	107.2
01:24:18 PM	109.9	108.1	101.6	95.1	112.6	108.5	106.5	108.3
01:39:18 PM	108.8	107.2	102.3	97.6	112.1	108.0	103.6	106.5
01:54:18 PM	112.3	109.7	102.7	108.9	116.4	109.3	111.1	108.5
02:09:18 PM	110.0	109.0	103.3	94.4	111.7	109.4	107.1	108.9
02:24:18 PM	104.9	105.6	103.6	90.5	104.7	107.3	100.4	106.3
02:39:18 PM	102.4	103.7	102.9	74.9	100.4	105.6	134.8	104.8
02:54:18 PM	97.9	98.9	101.8	85.0	97.9	101.5	96.6	98.4
03:09:18 PM	99.5	99.8	100.9	96.1	99.8	101.3	100.8	99.0
03:24:18 PM	97.3	98.3	100.2	91.0	96.6	100.2	97.1	98.2
03:39:18 PM	100.0	99.5	99.7	103.4	100.2	100.0	107.2	100.2
03:54:18 PM	99.8	99.6	99.3	90.1	98.8	99.8	102.1	101.1
04:09:18 PM	99.6	99.3	99.3	91.4	97.7	98.9	100.0	100.7
04:24:18 PM	100.4	99.6	99.1	90.7	99.3	99.0	101.1	101.1
04:39:18 PM	99.6	99.0	99.3	91.4	99.0	99.3	99.0	100.3
04:54:18 PM	103.0	101.2	99.1	106.7	104.6	100.5	107.9	103.5
05:09:18 PM	102.9	101.9	99.0	93.8	103.8	101.5	107.4	105.6
05:24:18 PM	102.1	101.6	99.5	97.1	102.5	101.7	105.0	105.8
05:39:18 PM	103.8	103.0	99.6	96.4	104.5	102.5	108.1	107.6
05:54:18 PM	101.0	100.8	100.0	91.6	101.7	102.0	100.7	105.3
06:09:18 PM	101.8	101.2	99.9	104.1	103.0	102.0	102.5	105.3
06:24:18 PM	101.9	101.4	99.8	101.4	103.6	102.3	104.1	106.4
06:39:18 PM	101.3	101.0	100.0	103.6	102.4	102.2	102.7	106.3
06:54:18 PM	99.6	99.8	100.1	88.0	99.9	101.4	95.2	103.2
07:09:18 PM	98.0	98.8	99.8	85.9	98.4	100.2	91.4	99.4
07:24:18 PM	98.1	98.4	99.4	87.9	98.7	100.2	90.1	97.1
07:39:18 PM	97.0	97.8	99.1	85.2	97.3	99.4	89.0	95.2
07:54:18 PM	96.2	97.0	98.8	82.8	96.3	98.6	96.8	92.9
08:09:18 PM	94.9	96.0	98.3	81.2	94.6	97.5	98.0	90.5
08:24:18 PM	94.3	95.3	97.6	80.0	93.7	96.8	83.4	88.3
08:39:18 PM	93.5	94.5	97.1	79.5	92.7	96.1	81.0	86.5
08:54:18 PM	92.4	93.7	96.6	79.8	92.0	95.1	81.1	84.8

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09:09:18 PM	92.1	93.1	96.0	78.6	91.6	94.7	80.6	83.5
09:24:18 PM	91.6	93.0	95.6	77.9	91.2	94.0	80.5	82.6
09:39:18 PM	91.0	92.3	95.2	77.3	90.6	93.5	78.7	81.5
09:54:18 PM	90.9	91.9	94.8	77.4	90.3	93.1	78.3	80.6
10:09:18 PM	90.3	91.3	94.2	77.0	89.5	92.6	77.8	79.9
10:24:18 PM	89.9	90.9	93.8	77.2	88.9	92.0	78.8	79.3
10:39:18 PM	89.8	90.9	93.5	76.9	89.2	91.7	103.0	78.7
10:54:18 PM	89.3	90.3	93.2	76.6	88.7	91.5	84.2	78.2
11:09:18 PM	88.8	90.1	93.0	76.4	87.9	91.0	83.8	77.8
11:24:18 PM	88.4	89.7	92.5	76.5	87.5	90.6	83.4	77.4
11:39:18 PM	88.2	89.3	92.1	75.8	87.7	90.3	82.7	77.2
11:54:18 PM	87.8	89.1	91.8	75.7	87.0	89.9	82.6	76.9
12:09:18 AM	87.7	89.0	91.6	75.6	86.9	89.8	82.3	76.5
12:24:18 AM	87.4	88.4	91.3	75.2	86.6	89.5	81.1	76.2
12:39:18 AM	87.1	88.1	91.0	75.2	86.3	89.2	82.2	75.9
12:54:18 AM	86.8	87.9	90.7	75.2	86.3	88.9	81.1	75.9
01:09:18 AM	86.6	87.6	90.5	75.2	85.8	88.7	90.5	75.7
01:24:18 AM	86.6	87.7	90.0	74.7	86.2	88.5	87.7	75.5
01:39:18 AM	86.4	87.4	89.8	74.7	85.4	88.0	90.6	75.0
01:54:18 AM	85.7	87.0	89.6	74.3	85.0	87.8	111.4	75.1
02:09:18 AM	85.8	86.8	89.4	74.4	85.0	87.9	132.2	74.8
02:24:18 AM	85.8	86.6	89.2	74.2	85.1	87.7	131.0	74.7
02:39:18 AM	85.4	86.4	89.0	73.7	84.7	87.3	128.2	74.5
02:54:18 AM	84.9	86.0	88.9	73.5	84.3	87.1	82.2	74.3
03:09:18 AM	84.6	85.6	88.5	74.2	83.9	86.7	83.4	74.2
03:24:18 AM	84.2	85.5	88.1	73.9	83.8	86.4	84.1	74.1
03:39:18 AM	84.1	85.4	88.0	73.5	83.7	86.2	84.4	74.0
03:54:18 AM	83.9	85.2	87.8	73.3	83.5	86.1	84.0	73.8
04:09:18 AM	83.8	84.8	87.4	73.4	83.1	85.7	80.0	73.7
04:24:18 AM	83.7	84.7	87.3	73.3	83.0	85.6	87.4	73.6
04:39:18 AM	83.5	84.6	87.2	73.5	82.9	85.5	82.6	73.5
04:54:18 AM	83.2	84.2	86.8	72.8	82.5	85.1	74.4	73.3
05:09:18 AM	83.1	84.1	86.8	72.5	82.4	85.0	74.3	73.3
05:24:18 AM	83.0	84.0	86.7	72.9	82.3	84.9	74.0	73.2
05:39:18 AM	82.6	83.7	86.3	72.8	81.9	84.5	73.8	73.0
05:54:18 AM	82.5	83.5	86.2	72.7	82.1	84.4	73.7	72.9
06:09:18 AM	82.4	83.4	86.1	72.6	81.7	84.3	73.6	72.8
06:24:18 AM	82.2	83.3	85.7	72.4	81.6	84.2	73.5	72.7
06:39:18 AM	82.2	83.0	85.6	72.6	81.5	83.9	73.7	72.6
06:54:18 AM	82.0	83.0	85.4	72.7	81.4	83.7	74.1	72.8
07:09:18 AM	82.0	82.8	85.2	73.8	81.7	83.6	74.9	73.1
07:24:18 AM	82.1	82.9	85.0	76.0	82.6	83.6	78.1	75.0
07:39:18 AM	82.5	82.8	84.9	76.9	83.1	83.6	81.8	77.0
07:54:18 AM	82.7	83.2	85.1	79.8	83.7	83.7	84.8	79.5
08:09:18 AM	83.8	83.5	85.1	82.7	85.3	84.2	88.1	82.1
08:24:18 AM	84.7	84.2	85.3	82.9	86.7	85.2	91.4	85.2

30-Jul-01	08:39:18 AM	85.7	84.9	85.7	84.9	88.3	86.0	92.4	87.3
	08:54:18 AM	86.6	85.6	86.1	88.7	89.6	87.0	91.7	88.8
	09:09:18 AM	87.9	86.4	86.4	84.5	91.1	88.0	91.9	90.0
	09:24:18 AM	89.0	87.2	86.9	88.2	92.3	88.9	92.0	91.0
	09:39:18 AM	89.7	88.1	87.6	87.3	92.6	89.8	91.8	91.6
	09:54:18 AM	91.0	89.1	88.1	89.1	94.9	90.8	92.1	92.1
	10:09:18 AM	92.5	90.1	88.8	89.6	96.5	92.1	93.6	93.1
	10:24:18 AM	93.0	91.1	89.3	86.9	96.9	93.0	93.0	93.5
	10:39:18 AM	94.6	92.0	89.9	89.9	99.6	94.2	94.5	94.2
	10:54:18 AM	96.3	93.4	90.5	95.7	100.8	95.1	96.7	95.9
	11:09:18 AM	97.7	95.4	91.5	88.6	102.5	96.6	97.4	97.6
	11:24:18 AM	98.1	96.0	92.4	91.3	102.1	97.7	97.7	98.5
	11:39:18 AM	98.0	96.2	93.1	88.3	101.7	98.1	96.3	98.1
	11:54:18 AM	101.1	98.5	94.0	100.1	106.5	99.6	99.4	99.4
	12:09:18 PM	102.8	99.9	94.9	100.7	108.6	101.2	101.7	100.7
	12:24:18 PM	101.3	99.7	95.5	90.0	104.9	101.6	99.8	100.8
	12:39:18 PM	102.8	100.4	96.5	98.3	107.5	102.1	98.8	99.8
	12:54:18 PM	105.4	102.5	97.0	95.5	110.9	103.8	103.8	102.2
	01:40:22 PM	104.3	103.5	100.4	86.2	104.9	105.6	98.7	96.4
	01:55:22 PM	100.8	100.8	99.2	92.7	100.3	102.6	97.9	97.2
	02:10:22 PM	102.4	101.1	98.8	95.9	107.1	102.2	97.8	99.9
	02:25:22 PM	103.0	102.0	99.1	109.5	105.6	103.3	97.9	101.5
	02:40:22 PM	107.6	104.8	99.0	115.1	112.9	105.2	97.8	105.7
	02:55:22 PM	110.5	107.4	100.4	120.3	115.1	107.2	98.5	107.7
	03:10:22 PM	110.5	107.9	101.4	113.0	114.5	108.4	99.2	109.5
	03:25:22 PM	108.8	107.3	102.3	105.4	112.2	108.6	99.9	108.9
	03:40:22 PM	112.0	109.2	102.7	132.5	117.4	109.8	100.3	112.0
	03:55:22 PM	112.9	110.4	103.3	121.9	118.9	111.3	101.0	114.8
	04:10:22 PM	111.2	109.4	104.2	107.6	114.7	111.6	101.9	114.2
	04:25:22 PM	108.7	108.4	105.1	93.0	110.9	110.9	103.3	109.7
	04:40:22 PM	106.5	106.5	105.0	96.1	108.4	109.4	103.8	105.0
	04:55:22 PM	106.4	106.1	104.6	98.8	108.4	108.4	103.5	103.5
	05:10:22 PM	105.1	105.1	104.3	91.0	105.7	107.5	103.4	100.3
	05:25:22 PM	103.4	103.9	103.9	89.0	104.1	106.4	103.6	97.7
	05:40:22 PM	101.9	102.7	103.2	86.7	102.7	105.3	103.5	95.0
	05:55:22 PM	101.0	101.8	102.6	86.6	101.6	104.4	103.2	92.9
	06:10:22 PM	100.2	101.2	102.0	85.0	100.4	103.3	102.5	91.4
	06:25:22 PM	99.4	100.2	101.3	82.9	99.6	102.4	102.2	89.8
	06:40:22 PM	96.5	98.9	101.0	79.4	95.9	101.0	101.8	87.9
	06:55:22 PM	94.6	96.9	100.0	78.7	93.6	99.2	101.3	85.5
	07:10:22 PM	93.8	95.9	99.0	78.0	92.4	97.8	100.6	83.8
	07:25:22 PM	93.6	95.4	98.3	77.8	92.0	97.2	100.0	82.4
	07:40:22 PM	92.7	94.5	97.6	76.9	91.2	96.4	99.5	81.6
	07:55:22 PM	92.2	93.8	96.9	77.1	90.8	95.4	98.8	80.6
	08:10:22 PM	91.1	93.2	96.0	76.5	89.8	94.7	98.3	79.9
	08:25:22 PM	90.3	92.4	95.5	75.5	88.5	93.7	97.8	79.1

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08:40:22 PM	89.8	91.9	95.0	75.5	88.5	93.2	97.3	78.4
08:55:22 PM	89.9	91.5	94.6	75.6	88.9	92.8	96.7	77.7
09:10:22 PM	89.9	91.2	94.0	75.6	88.7	92.6	96.2	77.5
09:25:22 PM	89.7	91.0	93.6	75.7	88.6	92.2	95.8	77.1
09:40:22 PM	89.4	90.7	93.3	75.7	88.6	91.9	95.6	77.1
09:55:22 PM	89.2	90.5	92.8	75.7	88.2	91.5	95.1	76.7
10:10:22 PM	88.9	90.2	92.6	75.2	87.9	91.3	94.6	76.4
10:25:22 PM	88.6	90.0	92.3	75.2	87.6	90.8	94.4	76.2
10:40:22 PM	88.4	89.4	92.1	74.6	87.4	90.5	94.1	75.9
10:55:22 PM	88.1	89.2	91.8	74.7	87.2	90.3	93.6	75.7
11:10:22 PM	87.7	89.0	91.4	75.3	87.0	90.1	93.7	75.8
11:25:22 PM	87.5	88.6	91.2	74.8	86.6	89.7	93.3	75.7
11:40:22 PM	87.2	88.5	90.8	74.7	86.5	89.6	93.0	75.5
11:55:22 PM	86.8	88.1	90.5	74.9	86.2	89.3	92.9	75.5
12:10:22 AM	86.7	88.0	90.4	74.3	86.0	89.1	92.5	75.3
12:25:22 AM	86.5	87.5	90.1	74.3	85.6	88.7	92.3	75.1
12:40:22 AM	86.4	87.4	89.8	73.9	85.4	88.6	92.2	75.0
12:55:22 AM	86.0	87.3	89.6	74.6	85.1	88.2	91.8	74.9
01:10:22 AM	85.9	87.0	89.3	74.0	85.0	87.9	91.5	74.8
01:25:22 AM	85.5	86.6	89.2	74.4	84.6	87.8	91.4	74.7
01:40:22 AM	85.5	86.5	88.9	74.4	84.6	87.4	91.1	74.7
01:55:22 AM	85.4	86.4	88.8	74.2	84.5	87.3	90.9	74.5
02:10:22 AM	85.0	86.3	88.7	73.9	84.4	87.2	90.8	74.4
02:25:22 AM	84.9	86.0	88.4	73.8	84.1	86.9	90.6	74.4
02:40:22 AM	84.7	85.7	88.1	73.8	84.1	86.6	90.3	74.4
02:55:22 AM	84.7	85.7	87.8	73.8	84.0	86.6	90.0	74.4
03:10:22 AM	84.7	85.4	87.8	74.1	83.8	86.4	90.0	74.4
03:25:22 AM	84.7	85.4	87.5	74.1	83.8	86.4	89.8	74.4
03:40:22 AM	84.4	85.2	87.6	74.3	83.8	86.2	89.5	74.4
03:55:22 AM	84.2	85.2	87.3	74.1	83.6	86.0	89.3	74.5
04:10:22 AM	84.2	85.0	87.1	73.9	83.4	86.0	89.3	74.5
04:25:22 AM	83.9	84.9	87.0	74.1	83.3	85.9	89.0	74.4
04:40:22 AM	83.8	84.6	87.0	74.0	82.9	85.5	88.9	74.3
04:55:22 AM	83.5	84.6	86.7	74.0	82.9	85.5	88.7	74.3
05:10:22 AM	83.6	84.4	86.5	74.6	82.7	85.3	88.7	74.4
05:25:22 AM	83.3	84.4	86.5	74.6	82.7	85.1	88.5	74.4
05:40:22 AM	83.4	84.2	86.3	74.7	82.9	84.9	88.3	74.5
05:55:22 AM	83.3	84.1	86.2	74.6	82.8	84.8	88.2	74.7
06:10:22 AM	83.2	84.0	86.1	75.2	82.9	85.0	88.1	74.8
06:25:22 AM	83.3	84.1	86.0	75.7	82.8	84.9	88.0	74.9
06:40:22 AM	83.2	84.0	85.8	75.2	82.9	84.8	87.6	75.1
06:55:22 AM	83.1	83.9	85.7	75.7	82.8	84.6	87.7	75.2
07:10:22 AM	83.2	83.7	85.6	75.5	82.7	84.7	87.6	75.3
07:25:22 AM	83.2	83.7	85.6	76.3	82.5	84.5	87.4	75.7
07:40:22 AM	83.3	83.8	85.6	76.6	82.6	84.4	87.3	76.0
07:55:22 AM	83.6	84.2	85.5	79.4	83.0	84.1	86.9	76.7

08:10:22 AM	84.1	84.3	85.6	80.4	83.9	84.4	86.7	78.1
08:25:22 AM	84.7	84.7	85.7	82.3	84.7	85.0	86.8	79.3
08:40:22 AM	85.2	85.2	85.7	86.3	85.7	85.5	86.8	81.3
08:55:22 AM	86.3	85.7	86.0	83.4	87.0	86.2	87.0	83.1
09:10:22 AM	86.4	86.1	86.4	87.7	87.0	86.8	87.3	83.6
09:25:22 AM	86.9	86.6	86.6	85.6	88.0	87.2	87.4	84.8
09:40:22 AM	87.2	86.9	86.9	85.6	88.1	87.6	87.8	84.7
09:55:22 AM	87.5	87.2	87.2	86.7	88.3	88.1	87.8	84.7
10:10:22 AM	87.7	87.5	87.5	85.9	88.6	88.4	88.1	85.0
10:25:22 AM	88.2	87.7	87.7	87.2	89.6	88.6	88.3	85.5
10:40:22 AM	89.0	88.2	88.0	86.4	90.1	89.1	88.3	86.0
10:55:22 AM	89.2	88.7	88.2	89.0	90.7	89.4	88.6	86.5
11:10:22 AM	91.8	89.7	88.7	94.7	95.1	90.4	88.6	89.1
11:25:22 AM	94.0	91.7	89.3	102.1	98.0	92.5	88.9	92.0
11:40:22 AM	95.3	93.2	90.3	98.6	98.5	94.1	89.7	93.3
11:55:22 AM	97.3	94.7	91.0	96.3	100.9	95.5	90.0	95.7
12:10:22 PM	98.3	95.7	92.0	99.8	101.8	96.4	90.7	96.4
12:25:22 PM	99.6	97.2	92.8	96.2	103.7	97.8	91.6	97.3
12:40:22 PM	98.5	97.5	93.5	95.1	100.3	98.3	92.1	97.0
12:55:22 PM	98.5	97.5	94.3	94.1	101.1	98.5	93.1	96.5
01:10:22 PM	98.2	97.5	94.6	94.1	100.2	98.4	93.5	96.6
01:25:22 PM	97.3	97.0	94.7	91.0	98.6	98.1	93.7	96.1
01:40:22 PM	96.6	96.4	95.0	94.8	97.8	97.6	94.2	94.7
01:55:22 PM	96.0	96.0	95.0	88.1	96.9	97.4	94.3	94.5
02:10:22 PM	90.7	93.0	94.6	77.4	90.7	95.6	94.8	89.9
02:25:22 PM	89.0	90.9	93.5	76.6	89.5	93.4	94.6	86.6
02:40:22 PM	88.2	89.7	92.6	77.6	88.3	91.9	94.0	84.9
02:55:22 PM	87.6	89.2	91.6	79.2	88.3	90.9	93.2	83.8
03:10:22 PM	86.9	88.5	91.1	80.5	87.2	90.1	92.7	83.8
03:25:22 PM	87.0	88.4	90.5	78.3	87.4	89.8	92.1	83.5
03:40:22 PM	86.8	87.8	90.0	79.4	87.3	89.3	91.9	82.8
03:55:22 PM	87.6	88.1	89.7	90.2	88.6	89.1	91.4	83.6
04:10:22 PM	91.4	90.3	89.8	110.1	93.0	90.4	90.7	88.3
04:25:22 PM	95.3	92.5	90.4	122.9	95.8	92.1	90.6	92.7
04:40:22 PM	95.8	93.9	91.3	115.2	97.2	93.9	91.3	94.6
04:55:22 PM	97.8	96.0	92.3	121.0	101.5	95.9	91.7	96.9
05:10:22 PM	99.0	97.1	93.2	128.0	103.2	97.3	92.4	98.3
05:25:22 PM	98.4	97.1	94.0	114.0	100.1	97.8	92.9	97.8
05:40:22 PM	97.9	97.1	94.5	105.5	100.7	98.1	93.7	97.9
05:55:22 PM	96.4	95.9	94.6	107.3	98.3	97.5	94.2	96.5
06:10:22 PM	96.9	96.1	94.5	121.9	99.2	97.4	94.3	97.2
06:25:22 PM	95.6	95.3	94.8	96.6	96.9	97.1	94.6	96.1
06:40:22 PM	95.7	95.2	94.7	123.6	97.4	96.9	94.8	96.1
06:55:22 PM	94.7	94.7	94.7	89.5	96.4	96.7	95.1	94.3
07:10:22 PM	93.2	93.7	94.5	83.4	93.4	95.7	95.2	91.3
07:25:22 PM	91.6	92.6	94.2	78.4	91.4	94.7	95.0	88.5

01-Aug-01	07:40:22 PM	91.2	92.3	93.8	80.1	91.1	93.7	94.7	85.9
	07:55:22 PM	90.5	91.5	93.3	78.0	90.3	93.2	94.5	84.1
	08:10:22 PM	89.6	90.9	93.0	77.4	89.0	92.4	94.2	82.5
	08:25:22 PM	89.1	90.4	92.5	75.3	88.2	91.6	93.7	80.9
	08:40:22 PM	88.2	89.5	91.9	74.2	87.5	90.9	93.4	79.7
	08:55:22 PM	87.5	88.8	91.4	74.8	86.5	90.2	93.0	78.4
	09:10:22 PM	87.0	88.3	90.9	75.4	86.2	89.5	92.6	77.6
	09:25:22 PM	86.5	87.8	90.4	73.8	85.7	89.1	92.2	76.9
	09:40:22 PM	86.2	87.5	90.2	75.4	85.8	88.6	91.7	76.4
	09:55:22 PM	86.5	87.3	89.6	75.1	86.2	88.8	91.6	76.8
	10:10:22 PM	86.0	87.1	89.4	75.2	85.3	88.1	91.2	76.4
	10:25:22 PM	85.6	86.6	89.2	74.4	84.5	87.9	91.0	75.9
	10:40:22 PM	84.8	86.1	88.8	74.8	84.3	87.7	91.0	75.7
	10:55:22 PM	84.4	85.7	88.6	74.1	83.9	87.2	90.6	75.2
	11:10:22 PM	84.3	85.6	88.2	73.4	83.6	86.9	90.3	74.9
	11:25:22 PM	84.0	85.3	88.0	73.7	83.3	86.4	90.0	74.7
	11:40:22 PM	83.5	84.8	87.5	74.2	82.9	86.2	89.9	74.5
	11:55:22 PM	83.4	84.7	87.3	73.5	83.0	85.8	89.4	74.3
	12:10:22 AM	83.2	84.5	87.1	74.2	82.5	85.7	89.3	74.2
	12:25:22 AM	83.1	84.4	86.8	73.6	82.5	85.3	89.0	74.1
	12:40:22 AM	82.7	84.1	86.4	73.7	82.1	85.0	88.9	74.0
	12:55:22 AM	82.7	83.7	86.4	73.9	81.9	85.0	88.6	74.0
	01:10:22 AM	82.4	83.5	86.1	73.7	81.9	84.7	88.4	74.0
	01:25:22 AM	82.1	83.4	85.8	73.9	81.6	84.4	88.1	74.0
	01:40:22 AM	82.1	83.2	85.5	73.6	81.5	84.1	88.0	73.9
	01:55:22 AM	82.0	83.1	85.4	73.5	81.4	84.1	87.7	73.9
	02:10:22 AM	81.7	83.0	85.4	73.2	81.1	84.0	87.4	73.8
	02:25:22 AM	81.4	82.7	85.1	73.7	80.9	83.7	87.4	73.8
	02:40:22 AM	81.1	82.5	84.8	73.7	80.6	83.5	87.1	73.8
	02:55:22 AM	81.1	82.2	84.6	74.0	80.6	83.2	86.9	73.8
	03:10:22 AM	80.9	82.2	84.6	74.0	80.3	83.2	86.8	73.8
	03:25:22 AM	80.8	81.8	84.2	73.1	80.2	82.8	86.5	73.7
	03:40:22 AM	80.6	81.7	84.1	72.9	80.1	82.7	86.3	73.5
	03:55:22 AM	80.5	81.6	83.9	72.8	79.9	82.5	86.2	73.4
	04:10:22 AM	80.3	81.4	83.8	72.9	79.8	82.4	86.0	73.2
	04:25:22 AM	80.3	81.4	83.7	73.1	80.0	82.3	86.0	73.2
	04:40:22 AM	80.4	81.2	83.6	72.7	79.8	82.2	85.8	73.3
	04:55:22 AM	80.1	81.1	83.5	72.4	79.8	82.1	85.5	73.2
	05:10:22 AM	80.0	81.0	83.1	72.5	79.4	82.0	85.4	73.1
	05:25:22 AM	79.8	80.9	83.2	72.1	79.2	81.8	85.5	72.9
	05:40:22 AM	79.6	80.7	83.1	72.5	79.3	81.7	85.3	72.8
	05:55:22 AM	79.6	80.6	82.7	72.1	79.2	81.6	85.0	72.7
	06:10:22 AM	79.5	80.5	82.7	71.8	79.1	81.5	84.9	72.6
	06:25:22 AM	79.3	80.4	82.5	72.4	79.0	81.4	84.8	72.5
	06:40:22 AM	79.4	80.4	82.5	72.7	79.1	81.2	84.6	72.5
	06:55:22 AM	79.4	80.2	82.3	72.5	78.9	81.2	84.6	72.6

07:10:22 AM	79.5	80.3	82.4	72.8	78.9	81.0	84.4	72.6
07:25:22 AM	79.2	80.0	82.1	73.4	79.0	81.1	84.2	72.9
07:40:22 AM	79.2	80.0	81.8	74.4	78.9	80.2	83.4	75.5
07:55:22 AM	79.6	80.2	81.7	75.6	80.0	80.5	83.4	78.4
08:10:22 AM	79.9	80.2	81.8	77.3	81.0	81.0	83.3	81.3
08:25:22 AM	80.5	80.5	81.5	77.5	82.1	81.6	83.4	83.4
08:40:22 AM	81.7	81.2	82.0	79.6	83.3	82.3	83.6	85.2
08:55:22 AM	82.1	81.9	82.4	81.1	83.3	83.1	84.4	84.1
09:10:22 AM	82.5	82.0	82.8	82.0	84.2	83.4	84.2	83.9
09:25:22 AM	83.5	82.7	82.9	84.0	85.5	83.9	84.4	85.2
09:40:22 AM	83.7	83.2	83.2	81.4	85.4	84.6	84.6	85.4
09:55:22 AM	84.9	83.6	83.8	83.0	87.7	85.1	84.8	86.1
10:10:22 AM	86.7	84.8	84.0	88.5	89.6	86.2	84.9	88.8
10:25:22 AM	88.2	86.1	84.7	94.2	92.3	87.6	85.3	90.0
10:40:22 AM	89.2	86.9	85.3	92.1	93.1	88.9	85.8	91.3
10:55:22 AM	91.6	88.4	86.3	96.0	96.5	90.6	86.4	92.9
11:10:22 AM	92.0	89.4	87.0	96.8	96.0	91.4	86.7	93.2
11:25:22 AM	92.3	90.2	87.8	97.8	96.3	92.1	87.5	93.7
11:40:22 AM	93.3	91.4	88.5	92.2	96.9	93.5	88.1	94.3
11:55:22 AM	96.6	92.9	89.5	103.1	102.8	95.1	88.3	95.8
12:10:22 PM	99.0	95.4	90.6	93.3	105.4	97.4	89.4	96.9
12:25:22 PM	100.0	97.1	91.9	101.3	105.8	98.6	90.1	97.1
12:40:22 PM	100.7	98.1	92.9	100.7	106.4	99.8	91.0	97.4
12:55:22 PM	98.8	97.5	93.8	91.2	102.1	100.1	92.1	96.5
01:10:22 PM	99.2	97.7	94.5	102.1	105.0	100.1	93.2	95.8
01:25:22 PM	101.6	99.3	94.8	99.0	107.7	101.5	93.3	96.9
01:40:22 PM	100.6	99.3	95.6	101.9	104.7	101.9	94.2	96.5
01:55:22 PM	103.0	101.1	96.2	94.1	107.9	103.0	94.5	97.3
02:10:22 PM	104.2	101.9	97.2	104.0	109.5	103.9	95.2	97.3
02:25:22 PM	105.4	103.3	97.9	102.8	110.7	105.3	95.8	98.7
02:40:22 PM	104.6	103.3	98.7	92.6	107.4	105.8	96.6	98.2
02:55:22 PM	98.6	100.7	99.4	82.6	99.1	104.2	98.1	94.2
03:10:22 PM	92.7	96.7	98.5	75.8	92.9	100.4	98.3	88.8
03:25:22 PM	91.5	93.8	97.0	80.6	92.0	96.9	97.7	86.0
03:40:22 PM	91.5	93.1	95.7	82.8	93.1	95.4	96.7	86.1
03:55:22 PM	92.7	93.5	94.8	95.8	94.5	95.6	95.8	88.6
04:10:22 PM	91.4	93.2	94.2	83.4	91.9	95.5	95.5	89.6
04:25:22 PM	90.4	92.0	94.1	84.9	90.2	94.3	95.3	88.1
04:40:22 PM	90.5	91.8	93.6	86.8	90.4	93.0	95.1	87.6
04:55:22 PM	90.9	91.6	93.2	86.1	89.8	92.6	94.7	87.2
05:10:22 PM	91.0	91.5	93.1	86.0	90.1	92.2	94.0	86.8
05:25:22 PM	91.0	91.5	92.8	85.7	90.4	92.5	93.8	86.6
05:40:22 PM	90.6	91.1	92.7	86.1	90.6	92.4	93.7	86.2
05:55:22 PM	91.0	91.2	92.3	85.4	91.3	92.3	93.4	86.4
06:10:22 PM	90.5	91.1	92.1	84.5	91.0	92.2	93.3	86.3
06:25:22 PM	89.9	90.7	92.0	83.1	90.2	92.3	93.1	85.3

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06:40:22 PM	89.1	90.2	92.0	82.0	89.3	91.9	93.2	84.4
06:55:22 PM	88.3	89.4	91.5	81.0	88.5	91.4	92.9	83.6
07:10:22 PM	87.6	88.9	91.3	79.4	87.9	90.7	92.8	82.4
07:25:22 PM	87.0	88.3	90.9	78.0	86.7	90.1	92.7	81.3
07:40:22 PM	84.9	87.3	90.2	74.6	84.7	89.1	92.2	79.7
07:55:22 PM	84.2	86.3	89.7	74.4	83.6	88.0	91.9	78.4
08:10:22 PM	83.7	85.8	89.2	74.4	83.4	87.3	91.2	77.4
08:25:22 PM	83.4	85.3	88.4	74.1	83.0	86.6	90.7	76.7
08:40:22 PM	83.0	84.8	88.0	73.7	82.6	86.0	90.4	76.0
08:55:22 PM	82.6	84.4	87.6	73.3	82.5	85.6	90.0	75.7
09:10:22 PM	81.9	83.8	87.2	72.9	81.9	85.3	89.7	75.3
09:25:22 PM	81.5	83.3	86.7	73.0	81.2	84.6	89.3	74.9
09:40:22 PM	80.8	82.9	86.3	72.6	80.6	84.2	88.9	74.5
09:55:22 PM	80.8	82.6	86.1	72.5	80.5	83.7	88.3	74.3
10:10:22 PM	80.7	82.3	85.5	72.5	80.0	83.4	88.1	74.0
10:25:22 PM	80.7	82.3	85.2	72.5	79.8	82.9	87.8	73.7
10:40:22 PM	80.4	82.0	84.9	72.2	79.5	82.6	87.3	73.5
10:55:22 PM	80.2	81.8	84.7	72.2	79.3	82.4	87.1	73.2
11:10:22 PM	79.9	81.5	84.4	71.9	79.0	82.1	86.8	72.9
11:25:22 PM	79.9	81.5	84.2	71.4	79.0	81.9	86.5	72.7
11:40:22 PM	80.0	81.3	84.2	71.5	78.8	81.9	86.3	72.5
11:55:22 PM	79.7	81.1	83.7	71.5	78.6	81.7	85.9	72.3
12:10:22 AM	79.9	80.9	83.6	71.1	78.9	81.5	85.7	72.1
12:25:22 AM	79.5	80.8	83.4	71.2	78.6	81.4	85.6	72.0
12:40:22 AM	79.4	80.7	83.3	70.9	78.4	81.3	85.5	71.9
12:55:22 AM	79.2	80.5	83.2	70.9	78.0	81.1	85.3	71.7
01:10:22 AM	79.0	80.3	83.0	70.8	77.9	81.0	85.2	71.6
01:25:22 AM	78.9	80.2	82.9	71.2	78.3	80.9	84.8	71.5
01:40:22 AM	78.9	80.0	82.6	71.2	78.1	80.7	84.6	71.5
01:55:22 AM	78.7	80.1	82.4	71.6	78.2	80.8	84.5	71.6
02:10:22 AM	78.8	79.9	82.2	71.1	78.0	80.6	84.3	71.7
02:25:22 AM	78.5	79.8	82.2	70.8	77.6	80.5	84.2	71.6
02:40:22 AM	78.3	79.6	82.0	70.6	77.7	80.3	84.0	71.4
02:55:22 AM	78.2	79.5	81.9	70.5	77.5	80.2	84.1	71.2
03:10:22 AM	78.2	79.3	81.6	70.5	77.3	80.0	83.9	71.0
03:25:22 AM	78.0	79.4	81.5	70.1	77.2	79.8	83.7	70.9
03:40:22 AM	77.9	79.0	81.3	70.5	77.1	79.7	83.6	70.7
03:55:22 AM	77.6	78.9	81.3	71.0	77.0	79.4	83.3	70.7
04:10:22 AM	77.8	78.8	81.2	71.1	77.2	79.3	83.2	70.9
04:25:22 AM	77.7	78.7	81.1	71.3	77.2	79.5	83.2	71.1
04:40:22 AM	77.9	78.9	81.0	71.0	77.3	79.4	82.8	71.3
04:55:22 AM	77.6	78.7	80.8	71.0	77.1	79.5	82.9	71.3
05:10:22 AM	77.6	78.7	80.8	70.7	77.3	79.4	82.8	71.3
05:25:22 AM	77.5	78.6	80.7	70.6	77.0	79.3	82.7	71.2
05:40:22 AM	77.5	78.5	80.7	70.8	76.9	79.2	82.6	71.1
05:55:22 AM	77.4	78.5	80.6	71.0	76.8	79.2	82.6	71.0

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06:10:22 AM	77.0	78.3	80.4	70.1	76.4	79.0	82.4	70.9
06:25:22 AM	76.8	77.9	80.3	70.2	76.2	78.6	82.2	70.7
06:40:22 AM	76.7	77.8	80.2	70.3	76.1	78.5	82.1	70.6
06:55:22 AM	76.7	77.7	79.8	70.5	76.1	78.4	82.1	70.6
07:10:22 AM	76.7	77.4	79.8	70.5	75.8	78.2	81.8	70.6
07:25:22 AM	76.6	77.4	79.8	71.3	76.2	78.1	81.7	71.2
07:40:22 AM	76.7	77.5	79.6	72.5	76.4	78.2	81.6	72.9
07:55:22 AM	77.0	77.5	79.3	73.5	77.3	78.1	81.2	75.2
08:10:22 AM	77.5	77.8	79.4	74.6	78.5	78.5	81.1	77.7
08:25:22 AM	78.2	78.2	79.5	75.3	79.0	78.8	80.9	79.3
08:40:22 AM	78.3	78.3	79.4	78.3	79.7	79.2	81.0	81.8
08:55:22 AM	79.2	78.9	80.0	82.1	80.7	79.9	81.2	84.4
09:10:22 AM	79.7	79.2	79.7	83.1	81.7	80.2	81.5	86.7
09:25:22 AM	81.4	80.3	80.3	84.0	84.5	81.7	81.9	87.9
09:40:22 AM	83.5	81.6	81.1	86.4	86.8	82.9	82.1	89.1
09:55:22 AM	84.8	82.9	81.9	89.0	88.5	84.1	82.5	90.1
10:10:22 AM	86.4	84.0	82.7	88.2	90.1	85.4	83.0	91.1
10:25:22 AM	87.0	84.9	83.3	91.2	90.7	86.1	83.2	92.3
10:40:22 AM	88.5	86.1	84.3	89.8	92.5	87.6	84.0	92.5
10:55:22 AM	90.4	87.5	85.1	90.9	94.7	89.0	84.6	92.6
11:10:22 AM	92.3	88.9	86.0	94.9	96.8	90.4	85.2	93.2
11:25:22 AM	93.0	90.4	86.7	90.9	97.4	92.2	86.3	94.0
11:40:22 AM	94.8	91.6	87.7	95.8	99.9	93.4	86.9	94.5
11:55:22 AM	96.1	93.3	88.5	96.1	101.2	94.6	87.3	94.8
12:10:22 PM	97.3	94.4	89.7	97.1	102.7	96.0	88.0	95.2
12:25:22 PM	97.9	95.5	90.6	91.3	103.2	97.1	88.8	95.5
12:40:22 PM	99.7	96.9	91.4	99.7	105.9	98.2	89.4	96.2
12:55:22 PM	99.1	97.0	92.6	95.2	104.7	99.1	90.8	96.5
01:10:22 PM	101.3	98.7	93.2	98.7	106.9	100.2	91.2	97.9
01:25:22 PM	100.6	98.8	94.1	103.8	105.8	100.6	92.1	97.8
01:40:22 PM	99.2	98.2	94.8	94.3	102.9	100.8	93.1	96.5
02:01:14 PM	101.2	98.6	93.9	101.5	107.5	100.3	92.6	99.6
02:16:14 PM	101.6	99.8	95.1	98.8	105.9	102.3	93.8	101.3
02:31:14 PM	102.5	100.7	96.2	95.2	106.2	102.9	94.7	100.6
02:46:14 PM	104.1	102.0	97.0	96.5	109.3	103.7	95.2	100.6
03:01:14 PM	101.6	100.8	98.0	104.7	104.8	103.0	96.1	98.2
03:16:14 PM	97.6	99.4	97.9	83.6	98.5	102.6	96.9	95.6
03:31:14 PM	96.6	97.6	97.6	95.5	97.6	100.4	96.8	94.2
03:46:14 PM	98.2	97.7	96.9	105.5	99.2	99.4	96.6	95.3
04:01:14 PM	96.4	97.5	96.7	88.0	95.8	99.2	96.6	94.8
04:16:14 PM	96.6	96.6	96.6	94.3	97.5	98.3	96.5	93.9
04:31:14 PM	95.4	96.2	96.2	82.2	95.3	97.9	96.3	92.2
04:46:14 PM	94.1	95.1	95.9	81.9	94.2	97.0	96.2	89.3
05:01:14 PM	92.8	94.1	95.4	80.4	92.6	96.0	96.0	87.2
05:16:14 PM	85.6	89.6	94.1	73.4	84.7	92.2	95.6	83.1
05:31:14 PM	82.4	86.7	92.7	72.3	79.5	88.4	94.9	80.1

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05:46:14 PM	82.0	85.2	91.0	72.5	81.2	86.5	93.7	78.1
06:01:14 PM	82.7	85.1	89.8	72.9	82.6	86.3	92.7	77.4
06:16:14 PM	83.0	85.1	89.0	73.4	82.8	85.9	91.4	76.8
06:31:14 PM	83.1	84.9	88.4	75.4	82.3	85.7	90.6	76.6
06:46:14 PM	83.0	84.5	88.0	74.5	82.3	85.4	90.1	76.6
07:01:14 PM	82.6	84.5	87.7	74.4	82.3	85.2	89.6	76.6
07:16:14 PM	82.8	84.1	87.3	75.1	82.3	84.9	89.3	76.5
07:31:14 PM	82.4	84.0	86.9	74.7	82.2	84.8	88.9	76.4
07:46:14 PM	82.0	83.6	86.7	74.6	82.1	84.7	88.8	76.6
08:01:14 PM	81.8	83.4	86.3	74.6	81.6	84.2	88.4	76.4
08:16:14 PM	81.7	83.0	85.9	73.5	81.5	84.1	88.0	76.0
08:31:14 PM	81.5	82.8	85.7	73.0	81.3	83.9	87.8	75.3
08:46:14 PM	81.2	82.5	85.4	72.4	80.7	83.5	87.7	74.6
09:01:14 PM	81.0	82.3	85.2	73.0	80.2	83.1	87.3	74.5
09:16:14 PM	81.0	82.3	84.9	72.5	80.2	82.8	87.0	74.2
09:31:14 PM	80.6	82.0	84.6	72.7	79.9	82.8	86.7	73.9
09:46:14 PM	80.3	81.7	84.6	72.4	79.3	82.5	86.4	73.6
10:01:14 PM	80.3	81.6	84.2	72.3	79.3	82.1	86.3	73.2
10:16:14 PM	80.0	81.4	84.0	72.6	79.1	82.0	85.9	73.1
10:31:14 PM	80.0	81.1	83.7	72.6	79.4	81.7	85.9	73.1
10:46:14 PM	80.2	81.3	83.7	72.8	79.6	81.7	85.6	73.1
11:01:14 PM	80.0	81.1	83.5	72.6	79.4	81.7	85.4	73.1
11:16:14 PM	80.0	81.0	83.4	72.5	79.1	81.7	85.3	73.1
11:31:14 PM	79.8	80.9	83.2	71.8	78.9	81.5	85.2	72.9
11:46:14 PM	79.3	80.6	83.0	71.3	78.4	81.2	84.9	72.6
12:01:14 AM	78.9	80.2	82.9	70.7	77.7	80.8	84.7	72.2
12:16:14 AM	78.8	80.1	82.7	70.8	77.5	80.6	84.5	71.5
12:31:14 AM	78.3	79.6	82.3	70.3	77.3	80.5	84.4	71.3
12:46:14 AM	78.2	79.5	82.2	69.7	76.9	80.1	84.2	70.9
01:01:14 AM	77.8	79.1	81.8	69.5	76.8	79.7	83.8	70.2
01:16:14 AM	77.5	78.8	81.7	69.0	76.5	79.4	83.8	70.2
01:31:14 AM	77.4	78.8	81.4	68.9	76.5	79.4	83.5	69.9
01:46:14 AM	77.2	78.5	81.2	69.0	76.3	79.2	83.3	69.7
02:01:14 AM	77.3	78.3	81.0	68.5	76.0	78.9	83.1	69.5
02:16:14 AM	77.1	78.4	80.8	68.5	76.1	78.7	82.9	69.3
02:31:14 AM	76.8	77.9	80.5	68.8	75.6	78.5	82.7	69.1
02:46:14 AM	76.4	77.8	80.4	68.4	75.5	78.4	82.5	68.9
03:01:14 AM	76.3	77.6	80.3	67.8	75.4	78.3	82.4	68.8
03:16:14 AM	76.2	77.3	80.2	67.9	75.0	77.9	82.3	68.7
03:31:14 AM	76.0	77.4	79.8	67.8	75.1	78.0	82.2	68.5
03:46:14 AM	75.9	77.0	79.6	67.9	74.8	77.7	81.8	68.5
04:01:14 AM	75.7	77.0	79.6	67.9	74.8	77.7	81.8	68.5
04:16:14 AM	75.6	76.9	79.3	68.1	74.7	77.3	81.5	68.4
04:31:14 AM	75.5	76.6	79.2	67.8	74.4	77.2	81.4	68.3
04:46:14 AM	75.2	76.5	78.9	68.0	74.3	77.2	81.4	68.3
05:01:14 AM	75.1	76.5	78.8	67.7	74.2	77.1	81.0	68.2

05:16:14 AM	75.1	76.4	78.8	67.9	74.5	76.8	81.0	68.1
05:31:14 AM	75.1	76.2	78.6	68.2	74.6	76.9	80.8	68.3
05:46:14 AM	75.1	76.2	78.6	67.9	74.3	76.7	80.6	68.3
06:01:14 AM	75.2	76.3	78.4	68.0	74.4	76.7	80.6	68.3
06:16:14 AM	74.9	76.0	78.4	67.7	74.0	76.7	80.6	68.3
06:31:14 AM	74.8	75.9	78.3	67.9	74.0	76.6	80.2	68.2
06:46:14 AM	74.8	75.8	78.2	68.1	74.2	76.5	80.2	68.1
07:01:14 AM	74.8	75.9	78.0	68.1	73.9	76.6	80.2	68.1
07:16:14 AM	74.7	75.8	77.9	68.8	74.4	76.3	79.9	68.4
07:31:14 AM	74.7	75.8	77.6	68.8	74.3	76.4	79.8	69.3
07:46:14 AM	75.0	75.8	77.6	69.7	74.9	76.4	79.6	70.1
08:01:14 AM	75.6	75.9	77.8	73.2	76.0	76.5	79.4	73.6
08:16:14 AM	76.0	76.3	77.9	71.5	76.0	77.1	79.7	74.5
08:31:14 AM	76.3	76.6	78.2	72.8	76.8	77.3	79.9	74.9
08:46:14 AM	77.1	76.9	78.2	77.7	77.8	77.5	79.4	77.8
09:01:14 AM	78.2	77.4	78.2	81.1	79.9	78.4	79.4	82.5
09:16:14 AM	79.3	78.3	78.5	82.5	81.5	79.1	79.7	85.4
09:31:14 AM	80.7	79.3	79.3	82.8	83.4	80.5	80.3	87.3
09:46:14 AM	82.0	80.5	79.9	84.7	84.9	81.8	80.8	88.8
10:01:14 AM	83.8	81.7	80.7	86.7	87.6	83.1	81.3	90.2
10:16:14 AM	85.4	83.0	81.4	88.5	89.1	84.4	81.8	90.9
10:31:14 AM	87.1	84.2	82.3	88.4	91.0	85.8	82.5	92.1
10:46:14 AM	88.5	85.6	83.2	88.8	92.5	87.6	83.2	93.0
11:01:14 AM	90.1	87.0	84.3	88.8	94.3	88.9	83.7	93.8
11:16:14 AM	91.4	88.0	85.3	94.0	96.4	90.2	84.5	94.8
11:31:14 AM	91.5	89.1	86.2	98.3	94.8	90.9	84.9	94.2
11:46:14 AM	93.2	90.0	87.1	92.9	97.5	92.4	85.9	95.5
12:01:14 PM	93.3	90.7	87.5	92.8	96.6	92.7	86.2	95.3
12:16:14 PM	95.3	91.9	88.7	98.2	100.5	93.8	86.8	95.4
12:31:14 PM	93.4	92.3	89.2	90.8	95.9	94.1	87.6	94.9
12:46:14 PM	96.7	93.9	89.9	100.4	102.4	95.0	88.0	95.8
01:01:14 PM	96.5	94.7	90.2	90.5	100.1	96.2	88.7	96.5
01:16:14 PM	95.3	94.0	91.1	95.6	98.5	96.0	89.8	95.2
01:31:14 PM	92.3	92.9	91.3	80.2	93.3	95.1	90.1	93.5
01:46:14 PM	90.7	91.5	91.2	80.4	91.5	93.8	90.7	91.7
02:01:14 PM	89.3	90.1	90.6	82.4	90.0	92.4	90.8	90.0
02:16:14 PM	88.1	89.2	90.0	79.1	88.8	91.2	90.4	88.6
02:31:14 PM	87.7	88.4	89.5	82.1	88.7	90.3	90.3	87.7
02:46:14 PM	88.0	88.5	89.3	87.2	89.5	90.0	89.8	87.7
03:01:14 PM	88.9	88.9	88.9	92.6	90.5	90.5	89.4	88.9
03:16:14 PM	90.9	90.1	89.0	103.9	92.0	91.3	89.2	91.5
03:31:14 PM	90.9	90.1	89.1	87.8	91.2	91.5	89.4	92.5
03:46:14 PM	89.2	89.5	89.5	81.3	88.4	91.0	90.0	90.2
04:01:14 PM	88.6	89.1	89.7	82.8	88.4	90.4	90.2	88.4
04:16:14 PM	88.5	88.8	89.3	81.1	88.4	90.0	90.0	87.1
04:31:14 PM	87.6	88.1	89.2	82.1	87.6	89.4	89.7	86.3

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04:46:14 PM	87.5	88.1	88.9	83.6	87.9	89.2	89.4	85.8
05:01:14 PM	87.8	87.8	88.6	86.7	88.3	89.1	89.3	86.0
05:16:14 PM	87.9	87.9	88.4	85.5	88.5	89.1	89.1	86.2
05:31:14 PM	88.2	88.2	88.4	94.7	89.4	89.1	89.1	86.3
05:46:14 PM	90.0	89.2	88.4	89.2	92.0	90.4	89.1	88.8
06:01:14 PM	89.9	89.4	88.9	91.3	91.7	90.7	89.1	88.8
06:16:14 PM	89.8	89.6	89.0	86.7	91.0	91.0	89.4	88.9
06:31:14 PM	89.1	89.4	89.4	84.6	90.1	90.8	89.8	88.0
06:46:14 PM	88.5	89.0	89.3	83.2	89.2	90.5	89.7	86.6
07:01:14 PM	88.2	88.4	89.2	83.2	88.4	89.9	89.7	85.8
07:16:14 PM	87.6	88.1	88.9	82.8	88.3	89.6	89.9	84.9
07:31:14 PM	87.4	88.0	89.0	82.4	88.1	89.4	89.7	84.2
07:46:14 PM	87.0	87.8	88.6	81.2	87.7	89.0	89.6	83.6
08:01:14 PM	86.7	87.5	88.5	79.0	86.9	88.7	89.5	82.7
08:16:14 PM	86.0	86.8	88.4	77.5	85.9	88.2	89.5	81.5
08:31:14 PM	85.6	86.4	88.0	76.4	85.4	87.8	89.1	80.2
08:46:14 PM	85.1	86.2	87.8	76.4	84.7	87.3	88.9	79.2
09:01:14 PM	84.9	85.9	87.5	76.1	84.5	86.8	88.7	78.5
09:16:14 PM	84.4	85.5	87.3	76.0	84.1	86.4	88.5	77.8
09:31:14 PM	84.2	85.3	86.8	76.0	84.2	86.5	88.6	77.6
09:46:14 PM	84.0	84.7	86.6	75.2	83.4	85.7	88.1	76.9
10:01:14 PM	83.5	84.6	86.4	74.0	83.2	85.8	88.1	76.4
10:16:14 PM	83.0	84.1	86.2	73.2	82.7	85.3	87.9	75.6
10:31:14 PM	82.7	83.7	85.8	73.4	82.3	84.9	87.5	75.0
10:46:14 PM	82.4	83.5	85.6	73.1	81.9	84.5	87.4	74.6
11:01:14 PM	82.0	83.3	85.1	72.4	81.4	84.3	87.1	74.1
11:16:14 PM	81.6	82.9	85.0	72.8	81.4	84.0	86.8	73.8
11:31:14 PM	81.5	82.6	84.7	72.2	81.1	83.7	86.5	73.5
11:46:14 PM	81.0	82.3	84.5	72.8	80.6	83.2	86.3	73.5
12:01:14 AM	80.8	82.1	84.2	72.3	80.4	83.0	86.1	73.3
12:16:14 AM	80.5	81.9	84.0	72.6	80.1	82.7	85.9	73.1
12:31:14 AM	80.3	81.6	83.8	71.8	79.9	82.5	85.6	72.8
12:46:14 AM	80.2	81.3	83.4	71.7	79.8	82.4	85.5	72.5
01:01:14 AM	80.0	81.1	83.2	71.0	79.6	81.9	85.3	72.2
01:16:14 AM	79.7	80.7	83.1	70.6	79.2	81.8	85.0	71.6
01:31:14 AM	79.4	80.7	82.8	70.9	78.9	81.5	84.9	71.3
01:46:14 AM	79.2	80.5	82.6	69.9	78.8	81.4	84.7	71.1
02:01:14 AM	79.1	80.1	82.5	69.8	78.6	81.0	84.4	70.7
02:16:14 AM	79.2	80.2	82.1	70.4	78.5	80.8	84.2	70.6
02:31:14 AM	79.0	80.0	81.9	69.9	78.3	80.6	84.0	70.4
02:46:14 AM	78.6	79.9	81.7	69.8	77.9	80.5	83.9	70.5
03:01:14 AM	78.4	79.5	81.6	69.6	77.7	80.4	83.7	70.4
03:16:14 AM	78.3	79.3	81.4	69.5	77.6	80.0	83.4	70.3
03:31:14 AM	78.1	79.2	81.3	69.9	77.5	79.8	83.2	70.1
03:46:14 AM	77.7	79.1	81.2	70.6	77.3	79.7	83.1	70.0
04:01:14 AM	77.7	78.8	80.9	70.0	77.4	79.5	82.9	70.0

04:16:14 AM	77.9	78.7	80.8	70.7	77.6	79.5	82.9	70.3
04:31:14 AM	77.9	79.0	80.8	70.5	77.6	79.4	82.6	70.5
04:46:14 AM	78.0	78.8	80.7	70.9	77.8	79.6	82.5	70.7
05:01:14 AM	78.0	78.8	80.6	71.1	78.0	79.6	82.4	70.9
05:16:14 AM	78.2	79.0	80.6	71.3	77.9	79.5	82.4	71.1
05:31:14 AM	78.1	78.9	80.5	71.2	78.1	79.7	82.3	71.3
05:46:14 AM	78.2	78.7	80.6	71.3	78.2	79.7	82.3	71.3
06:01:14 AM	78.0	78.8	80.4	71.1	78.2	79.8	82.1	71.4
06:16:14 AM	78.0	78.8	80.4	71.1	78.3	79.6	82.2	71.5
06:31:14 AM	78.1	78.9	80.5	71.2	78.0	79.6	82.2	71.5
06:46:14 AM	78.1	78.9	80.5	71.2	78.1	79.7	82.0	71.5
07:01:14 AM	78.1	78.9	80.2	71.2	78.1	79.7	82.0	71.5
07:16:14 AM	78.2	78.7	80.3	71.3	78.1	79.7	82.0	71.5
07:31:14 AM	77.9	78.7	80.3	71.5	78.2	79.7	81.8	71.6
07:46:14 AM	78.0	78.8	80.1	71.6	78.2	79.5	81.9	71.7
08:01:14 AM	78.1	78.7	80.3	72.3	78.4	79.7	81.8	71.8
08:16:14 AM	78.2	78.8	80.1	72.9	78.8	79.8	81.7	72.2
08:31:14 AM	78.4	79.0	80.3	72.9	78.8	79.8	81.7	72.8
08:46:14 AM	78.7	79.2	80.3	73.6	79.3	79.8	81.7	73.3
09:01:14 AM	79.3	79.3	80.3	75.6	80.2	80.2	81.8	73.9
09:16:14 AM	80.0	79.8	80.3	77.4	81.0	80.5	81.6	75.3
09:31:14 AM	80.4	80.1	80.4	77.4	82.0	81.0	81.7	76.5
09:46:14 AM	81.1	80.6	80.9	80.6	83.3	81.7	82.0	77.3
10:01:14 AM	82.4	81.4	81.1	84.8	85.1	82.5	81.9	80.1
10:16:14 AM	83.8	81.9	81.1	90.6	87.6	83.4	81.8	83.4
10:31:14 AM	86.8	83.6	82.0	93.9	91.8	85.1	82.2	86.6
10:46:14 AM	87.5	84.6	82.5	94.9	91.2	86.3	82.6	89.4
11:01:14 AM	89.2	85.5	83.6	101.4	94.8	87.6	83.4	91.5
11:16:14 AM	90.4	87.2	84.3	94.6	95.6	89.4	84.2	93.8
11:31:14 AM	91.9	88.5	85.3	94.3	96.9	90.9	85.0	95.3
11:46:14 AM	94.2	90.5	86.3	96.0	99.8	92.6	85.6	96.4
12:01:14 PM	94.8	91.1	87.4	93.5	101.1	93.4	86.4	97.3
12:16:14 PM	95.0	92.1	88.1	91.6	98.9	94.5	86.8	98.2
12:31:14 PM	96.4	93.0	89.0	96.9	102.7	95.2	87.7	98.1
12:46:14 PM	98.6	95.2	89.9	99.1	105.5	97.0	88.4	99.3
01:01:14 PM	100.4	97.0	90.7	96.2	107.3	98.6	89.1	100.4
01:16:14 PM	102.0	98.3	91.8	102.0	108.4	99.9	89.9	101.5
01:31:14 PM	103.2	99.8	93.0	105.8	110.6	101.4	90.6	102.7
01:46:14 PM	103.4	100.5	94.0	98.4	109.3	102.7	91.6	103.2
02:01:14 PM	103.8	101.4	94.9	97.8	109.5	103.4	92.6	103.7
02:16:14 PM	105.0	102.2	95.6	101.4	111.1	103.9	93.4	104.2
02:31:14 PM	103.2	101.4	96.2	110.5	108.0	103.7	94.2	102.9
02:46:14 PM	106.2	103.1	96.9	102.9	112.8	104.9	94.9	103.6
03:01:14 PM	107.5	104.1	97.8	116.2	114.4	106.0	95.5	104.7
03:16:14 PM	105.7	103.9	98.4	105.7	111.0	106.4	96.1	104.6
03:31:14 PM	105.6	103.7	99.3	106.1	110.2	105.9	96.9	103.6

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03:46:14 PM	106.8	104.5	99.2	119.2	112.5	106.4	97.1	104.6
04:01:14 PM	107.3	105.3	99.5	101.9	112.4	107.3	97.6	105.5
04:16:14 PM	107.4	105.6	100.6	116.2	112.4	107.5	98.3	105.2
04:31:14 PM	110.0	107.1	101.1	127.6	116.1	108.5	98.5	107.0
04:46:14 PM	110.5	107.9	101.7	106.6	116.3	109.4	98.9	107.9
05:01:14 PM	110.8	108.4	102.2	129.7	116.1	110.0	99.5	109.2
05:16:14 PM	109.2	107.9	102.7	101.7	112.9	110.1	100.1	108.6
05:31:14 PM	109.0	107.4	103.0	125.9	114.1	109.5	100.8	107.7
05:46:14 PM	107.7	107.0	102.8	99.4	110.5	109.2	101.0	106.9
06:01:14 PM	106.0	105.4	103.1	90.3	107.1	108.1	101.7	103.8
06:16:14 PM	104.2	104.2	102.9	89.3	105.3	106.6	101.7	99.9
06:31:14 PM	102.8	103.1	102.6	88.4	103.4	105.2	101.6	96.9
06:46:14 PM	101.8	102.1	101.8	87.9	102.8	104.3	101.5	95.3
07:01:14 PM	101.3	101.5	101.3	86.6	101.5	103.3	101.2	93.5
07:16:14 PM	100.5	100.7	101.0	86.0	100.5	102.3	100.8	92.0
07:31:14 PM	99.2	100.0	100.3	84.0	99.4	101.4	100.4	90.6
07:46:14 PM	98.3	99.1	99.6	83.6	98.6	100.6	100.1	89.3
08:01:14 PM	97.5	98.5	99.3	80.9	97.4	99.9	99.7	87.6
08:16:14 PM	96.7	97.7	98.8	79.8	96.3	99.2	99.2	86.2
08:31:14 PM	95.6	96.9	97.9	79.0	95.1	98.2	98.7	84.8
08:46:14 PM	95.1	96.1	97.7	78.5	94.4	97.5	98.3	83.5
09:01:14 PM	94.4	95.7	97.0	77.3	93.4	96.7	97.8	82.2
09:16:14 PM	93.4	94.7	96.5	76.8	92.7	95.8	97.4	81.0
09:31:14 PM	92.7	94.2	96.1	77.6	92.0	95.1	96.9	80.1
09:46:14 PM	92.3	93.6	95.4	77.0	91.2	94.6	96.4	79.5
10:01:14 PM	91.9	93.2	95.0	76.0	90.8	93.9	96.0	78.9
10:16:14 PM	91.1	92.7	94.5	75.8	90.2	93.5	95.6	78.2
10:31:14 PM	90.8	92.1	94.2	74.9	89.8	92.9	95.2	77.6
10:46:14 PM	90.4	91.7	93.5	74.8	89.4	92.5	95.1	77.2
11:01:14 PM	89.7	91.0	93.1	75.4	88.5	91.9	94.5	76.8
11:16:14 PM	89.0	90.6	92.7	75.6	88.0	91.6	94.4	76.8
11:31:14 PM	88.4	90.0	92.4	75.2	87.4	90.8	93.6	76.2
11:46:14 PM	87.9	89.5	91.9	75.2	86.9	90.3	93.4	76.0
12:01:14 AM	87.5	89.1	91.5	74.8	86.8	89.9	93.0	75.9
12:16:14 AM	87.3	88.9	91.0	74.3	86.6	89.9	92.8	75.9
12:31:14 AM	87.2	88.5	90.6	74.3	86.5	89.6	92.4	75.5
12:46:14 AM	86.9	88.2	90.3	73.9	86.2	89.3	92.1	75.2
01:01:14 AM	86.7	88.0	90.1	74.6	86.1	88.9	92.0	75.1
01:16:14 AM	86.7	87.7	89.8	74.5	86.0	88.6	91.7	75.1
01:31:14 AM	86.3	87.6	89.7	73.8	85.6	88.5	91.3	74.9
01:46:14 AM	86.2	87.2	89.3	74.0	85.5	88.1	91.2	74.8
02:01:14 AM	86.1	87.1	89.0	73.6	85.2	88.0	90.9	74.7
02:16:14 AM	85.7	87.0	88.9	74.1	84.8	87.6	90.7	74.6
02:31:14 AM	85.3	86.6	88.5	73.4	84.7	87.3	90.4	74.5
02:46:14 AM	85.3	86.3	88.4	73.1	84.6	87.2	90.0	74.4
03:01:14 AM	85.0	86.1	88.2	73.4	84.1	87.0	89.8	74.2

03:16:14 AM	84.7	86.0	87.8	73.5	83.8	86.6	89.7	74.1
03:31:14 AM	84.3	85.6	87.8	73.2	83.5	86.3	89.5	74.1
03:46:14 AM	84.2	85.3	87.4	73.6	83.3	86.2	89.3	73.9
04:01:14 AM	84.1	85.2	87.3	73.2	83.2	85.8	88.9	73.8
04:16:14 AM	84.1	85.2	87.0	73.2	83.5	85.8	88.9	73.8
04:31:14 AM	83.8	84.8	86.9	73.4	83.0	85.6	88.7	73.8
04:46:14 AM	83.6	84.7	86.5	74.4	83.1	85.4	88.3	73.9
05:01:14 AM	83.5	84.6	86.4	73.7	82.9	85.3	88.1	74.0
05:16:14 AM	83.5	84.6	86.4	73.5	83.2	85.3	88.1	74.0
05:31:14 AM	83.3	84.3	86.2	73.7	82.7	85.1	87.9	74.1
05:46:14 AM	83.3	84.4	86.0	74.1	82.8	84.9	87.7	74.2
06:01:14 AM	83.2	84.3	85.8	74.5	82.7	84.7	87.6	74.3
06:16:14 AM	82.8	83.8	85.7	74.3	82.5	84.6	87.4	74.4
06:31:14 AM	82.8	83.8	85.7	74.0	82.5	84.6	87.4	74.4
06:46:14 AM	82.8	83.8	85.4	74.0	82.2	84.3	87.2	74.4
07:01:14 AM	82.5	83.6	85.4	74.6	82.2	84.3	87.2	74.4
07:16:14 AM	82.5	83.5	85.1	75.3	82.2	84.0	86.9	74.6
07:31:14 AM	82.7	83.5	85.0	76.3	82.5	84.1	86.7	75.2
07:46:14 AM	82.8	83.4	84.9	76.5	82.7	84.2	86.6	75.6
08:01:14 AM	83.1	83.6	84.9	77.5	82.9	84.2	86.6	76.1
08:16:14 AM	83.1	83.7	85.0	78.4	83.6	84.3	86.4	76.8
08:31:14 AM	83.4	83.7	85.0	78.1	83.3	84.3	86.4	77.3
08:46:14 AM	84.0	84.0	85.0	81.6	84.4	84.7	86.5	78.2
09:01:14 AM	84.6	84.4	85.2	83.6	85.2	84.6	85.9	79.2
09:16:14 AM	85.2	84.9	85.2	84.7	86.3	85.3	86.1	80.9
09:31:14 AM	85.8	85.2	85.5	84.2	86.7	85.4	86.2	81.8
09:46:14 AM	86.2	85.6	85.6	84.3	87.4	86.1	86.4	83.2
10:01:14 AM	86.6	86.1	86.1	86.6	87.4	86.4	86.4	84.0
10:16:14 AM	86.8	86.2	86.0	82.8	87.8	86.8	86.8	84.4
10:31:14 AM	86.7	86.4	86.4	83.0	87.5	87.0	87.0	84.1
10:46:14 AM	86.9	86.6	86.6	84.8	87.7	86.9	86.9	84.0
11:01:14 AM	87.3	86.7	86.7	86.5	88.1	87.1	87.1	84.5
11:16:14 AM	87.5	87.0	86.7	83.3	88.6	87.3	87.1	85.0
11:31:14 AM	87.5	87.2	86.9	85.9	88.6	87.5	87.3	85.2
11:46:14 AM	88.0	87.2	87.0	85.4	88.7	87.7	87.4	86.1
12:01:14 PM	89.0	87.9	87.4	93.7	91.0	88.1	87.4	86.8
12:16:14 PM	89.7	88.3	87.3	92.3	91.9	89.0	87.5	89.0
12:31:14 PM	90.4	88.8	87.8	94.6	92.4	89.5	87.7	90.3
12:46:14 PM	90.4	89.4	88.1	85.4	92.2	90.1	88.0	90.6
01:01:14 PM	90.0	89.5	88.7	85.0	91.1	90.3	88.8	89.0
01:16:14 PM	90.2	89.6	88.9	85.2	90.9	90.2	88.9	88.4
01:31:14 PM	90.2	89.7	88.9	87.3	91.4	90.1	88.8	88.3
01:46:14 PM	90.7	89.9	89.1	87.5	92.4	90.3	89.1	88.5
02:01:14 PM	91.6	90.3	89.2	88.1	92.9	90.8	89.0	88.7
02:16:14 PM	91.6	90.5	89.5	86.9	93.2	91.1	89.3	89.0
02:31:14 PM	90.3	90.3	89.5	80.8	90.0	91.0	89.4	88.7

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02:46:14 PM	85.9	87.8	89.1	72.4	86.1	89.5	89.7	84.0
03:01:14 PM	84.8	86.3	88.7	73.9	85.1	87.9	89.5	81.4
03:16:14 PM	84.1	85.6	88.0	73.4	83.7	86.8	89.1	79.5
03:31:14 PM	83.5	84.8	87.5	74.5	83.3	85.9	88.8	78.6
03:46:14 PM	83.9	84.7	87.1	78.1	83.8	85.7	88.2	79.1
04:01:14 PM	84.0	84.8	86.6	80.3	83.9	85.5	87.8	80.3
04:16:14 PM	84.7	84.9	86.5	82.5	84.8	85.5	87.4	81.6
04:31:14 PM	84.9	84.9	86.0	80.4	85.1	85.9	87.2	83.0
04:46:14 PM	84.6	85.2	86.0	83.3	84.6	85.9	87.2	84.1
05:01:14 PM	85.2	85.4	86.2	81.5	84.2	85.8	87.1	84.2
05:16:14 PM	85.2	85.4	86.5	83.6	83.8	85.4	87.2	83.6
05:31:14 PM	84.8	85.3	86.3	81.9	83.4	85.2	87.3	83.4
05:46:14 PM	84.5	85.0	86.3	79.5	83.0	85.1	87.1	82.4
06:01:14 PM	84.3	84.8	86.4	79.8	83.0	84.8	86.9	81.7
06:16:14 PM	84.9	84.9	86.0	82.3	83.8	84.8	86.9	81.9
06:31:14 PM	84.2	84.8	86.1	78.7	83.0	84.8	86.7	81.5
06:46:14 PM	84.0	84.8	86.1	78.9	83.2	84.8	86.6	80.8
07:01:14 PM	83.6	84.4	86.0	77.5	82.8	84.6	86.4	80.2
07:16:14 PM	82.6	84.0	85.8	75.2	81.7	84.6	86.7	79.4
07:31:14 PM	81.9	83.2	85.6	74.7	80.9	84.1	86.7	78.3
07:46:14 PM	80.7	82.5	84.9	73.8	80.3	83.4	86.5	77.4
08:01:14 PM	80.3	81.9	84.6	73.4	79.9	82.5	86.2	76.5
08:16:14 PM	79.8	81.4	84.1	73.2	79.1	82.0	85.7	75.7
08:31:14 PM	79.1	80.7	83.6	72.7	78.2	81.4	85.5	75.1
08:46:14 PM	79.1	80.5	83.4	72.5	78.6	80.9	85.1	74.6
09:01:14 PM	78.4	80.0	82.9	72.3	77.9	80.7	84.6	74.2
09:16:14 PM	78.2	79.8	82.5	71.8	77.7	80.3	84.5	73.8
09:31:14 PM	77.9	79.5	82.1	72.0	77.4	80.0	84.2	73.5
09:46:14 PM	77.6	79.2	81.8	71.7	77.1	79.8	83.9	73.2
10:01:14 PM	77.3	78.8	81.8	71.4	76.8	79.4	83.6	72.9
10:16:14 PM	77.2	78.5	81.4	71.3	76.8	79.1	83.3	72.6
10:31:14 PM	77.2	78.5	81.2	71.4	76.8	79.1	83.1	72.3
10:46:14 PM	77.0	78.3	81.0	71.1	76.6	78.9	82.8	72.1
11:01:14 PM	76.8	78.1	80.7	71.2	76.4	78.8	82.7	72.2
11:16:14 PM	76.6	78.0	80.6	71.0	76.3	78.4	82.5	72.1
11:31:14 PM	76.3	77.6	80.2	70.9	76.2	78.2	82.2	71.9
11:46:14 PM	76.4	77.4	80.1	71.0	76.0	78.1	82.0	71.8
12:01:14 AM	76.0	77.3	80.0	70.7	75.7	78.0	81.9	71.5
12:16:14 AM	75.8	77.2	79.6	70.8	75.5	77.9	81.5	71.6
12:31:14 AM	75.8	77.1	79.5	70.7	75.4	77.5	81.4	71.5
12:46:14 AM	75.9	77.0	79.4	70.6	75.3	77.4	81.3	71.4
01:01:14 AM	75.8	76.9	79.2	70.5	75.4	77.5	81.2	71.0
01:16:14 AM	75.9	77.0	79.1	70.6	75.4	77.2	80.9	71.2
01:31:14 AM	75.9	77.0	79.1	70.9	75.3	77.2	80.8	71.1
01:46:14 AM	75.9	77.0	78.9	70.9	75.4	77.2	80.6	71.2
02:01:14 AM	75.9	77.0	78.9	70.9	75.4	77.2	80.6	71.2

06-Aug-01	02:16:14 AM	75.9	76.7	78.9	70.9	75.4	77.2	80.4	71.2
	02:31:14 AM	75.9	76.7	78.9	70.9	75.4	77.2	80.4	71.2
	02:46:14 AM	75.9	76.7	78.9	70.6	75.6	77.2	80.4	71.2
	03:01:14 AM	75.9	76.7	78.8	70.6	75.3	77.2	80.3	71.1
	03:16:14 AM	75.9	76.7	78.5	70.6	75.3	77.1	80.2	71.1
	03:31:14 AM	75.8	76.6	78.5	70.5	75.5	77.1	80.0	71.1
	03:46:14 AM	75.8	76.6	78.5	70.8	75.5	77.1	80.0	71.1
	04:01:14 AM	75.9	76.7	78.5	70.8	75.3	77.2	80.0	71.1
	04:16:14 AM	75.9	76.7	78.5	70.8	75.6	77.2	79.8	71.2
	04:31:14 AM	75.7	76.5	78.3	70.9	75.4	77.0	79.9	71.2
	04:46:14 AM	75.5	76.5	78.4	71.0	75.2	77.0	79.9	71.2
	05:01:14 AM	75.5	76.3	78.2	71.0	75.2	76.8	79.7	71.3
	05:16:14 AM	75.5	76.6	78.2	71.0	75.0	76.9	79.8	71.4
	05:31:14 AM	75.5	76.3	78.2	70.7	75.0	76.9	79.8	71.4
	05:46:14 AM	75.5	76.3	78.2	70.7	75.0	76.8	79.7	71.3
	06:01:14 AM	75.5	76.3	78.1	70.7	75.0	76.8	79.4	71.3
	06:16:14 AM	75.5	76.3	77.9	71.0	75.2	76.8	79.4	71.2
	06:31:14 AM	75.5	76.3	77.9	71.0	75.2	76.8	79.4	71.2
	06:46:14 AM	75.5	76.3	77.9	71.0	75.2	76.6	79.2	71.3
	07:01:14 AM	75.5	76.1	77.9	71.0	75.3	76.6	79.2	71.4
	07:16:14 AM	75.3	76.1	77.7	71.3	75.1	76.7	79.1	71.5
	07:31:14 AM	75.5	76.3	77.9	71.5	75.3	76.6	79.3	71.7
	07:46:14 AM	75.7	76.3	77.9	72.0	75.5	76.6	79.2	71.8
	08:01:14 AM	75.8	76.3	77.9	72.8	75.9	76.6	79.0	72.2
	08:16:14 AM	76.2	76.5	77.8	73.3	76.1	76.9	79.2	72.7
	08:31:14 AM	76.4	76.7	77.7	73.7	76.3	77.1	79.2	73.2
	08:46:14 AM	76.7	76.9	78.0	74.6	76.6	77.4	79.2	73.7
	09:01:14 AM	77.3	77.0	77.8	76.8	77.5	77.5	79.1	74.4
	09:16:14 AM	77.7	77.4	78.0	78.0	78.2	78.0	79.3	75.6
	09:31:14 AM	78.1	77.5	78.1	77.8	78.7	78.4	79.5	76.9
	09:46:14 AM	78.5	78.0	78.2	78.2	79.6	79.1	79.6	77.5
	10:01:14 AM	79.0	78.5	78.7	78.5	80.0	79.3	79.8	78.2
	10:16:14 AM	79.6	78.8	78.8	79.8	80.9	79.8	79.8	78.8
	10:31:14 AM	80.0	79.3	79.0	81.4	81.4	80.1	80.1	79.6
	10:46:14 AM	80.6	79.6	79.3	82.0	82.2	80.6	80.1	80.6
	11:17:15 AM	82.4	81.1	80.3	79.7	84.6	82.0	81.0	81.2
	11:32:15 AM	83.4	82.0	80.7	85.2	85.8	82.6	81.1	82.6
	11:47:15 AM	84.0	82.5	80.9	86.1	86.8	83.4	81.3	83.6
	12:02:15 PM	84.7	83.1	81.5	88.6	88.0	84.1	81.5	84.9
	12:17:15 PM	85.4	83.8	81.7	89.4	88.8	84.9	81.7	85.9
	12:32:15 PM	86.6	85.0	82.4	90.0	90.3	85.9	82.5	87.2
	12:47:15 PM	88.1	86.2	82.8	90.2	92.5	87.1	82.9	88.4
	01:02:15 PM	89.0	87.2	83.5	90.3	93.7	88.2	83.3	89.5
	01:17:15 PM	90.4	88.3	84.3	94.3	94.3	89.1	83.7	90.9
	01:32:15 PM	91.6	89.3	85.1	95.1	96.1	90.2	84.2	92.3
	01:47:15 PM	92.6	90.3	85.8	96.3	97.6	91.4	84.9	93.5

07-Aug-01	02:02:15 PM	94.3	91.7	86.6	96.6	97.9	92.3	85.5	94.6
	02:17:15 PM	94.8	92.2	87.5	98.5	99.0	93.3	86.3	95.4
	02:32:15 PM	95.8	93.2	88.2	98.4	99.2	94.0	87.0	96.1
	02:47:15 PM	94.2	92.9	88.7	93.4	97.1	94.3	87.3	95.8
	03:02:15 PM	94.5	92.9	89.2	92.6	96.2	93.9	87.9	95.4
	03:17:15 PM	94.6	93.0	89.6	94.1	96.2	93.9	88.5	94.7
	03:32:15 PM	94.7	93.1	89.9	94.4	96.2	93.9	89.0	94.2
	03:47:15 PM	94.0	92.7	90.0	88.5	96.3	93.7	89.1	94.2
	04:02:15 PM	92.9	92.1	90.3	87.4	94.8	93.5	89.4	93.5
	04:17:15 PM	91.7	91.5	90.2	84.9	93.6	93.6	90.0	92.6
	04:32:15 PM	91.8	91.3	90.5	87.8	93.7	92.9	90.0	92.1
	04:47:15 PM	89.7	90.4	89.9	75.3	88.1	92.2	90.1	90.4
	05:02:15 PM	85.9	87.7	89.8	77.1	85.4	89.6	90.3	86.2
	05:17:15 PM	85.6	86.9	89.0	77.9	85.7	88.3	89.8	84.1
	05:32:15 PM	85.2	86.2	88.3	78.6	85.5	87.5	89.1	83.1
	05:47:15 PM	85.2	86.0	87.9	80.2	85.5	87.0	88.6	82.6
	06:02:15 PM	85.2	85.7	87.3	81.0	85.3	86.9	88.2	82.7
	06:17:15 PM	85.2	85.7	87.1	80.7	85.5	86.5	87.8	82.9
	06:32:15 PM	84.8	85.4	86.4	80.6	85.5	86.5	87.8	83.1
	06:47:15 PM	85.1	85.4	86.5	80.6	85.3	86.3	87.3	83.2
	07:02:15 PM	84.8	85.3	86.3	80.5	85.1	86.2	87.2	83.0
	07:17:15 PM	84.4	84.9	86.0	80.5	84.6	85.9	87.2	82.8
	07:32:15 PM	84.1	84.6	86.0	79.9	84.2	85.5	87.1	82.4
	07:47:15 PM	83.9	84.5	85.8	79.4	83.8	85.3	86.9	81.9
	08:02:15 PM	83.7	84.5	85.5	78.6	83.2	85.0	86.5	81.3
	08:17:15 PM	83.3	84.1	85.4	78.8	82.8	84.3	86.4	80.7
	08:32:15 PM	82.9	83.7	85.3	78.4	82.5	84.0	86.1	80.1
	08:47:15 PM	82.8	83.6	84.9	78.0	82.3	83.9	86.0	79.7
	09:02:15 PM	82.5	83.3	84.6	77.5	82.4	83.9	86.0	79.5
	09:17:15 PM	82.4	83.2	84.5	77.1	82.2	83.8	85.9	79.1
	09:32:15 PM	82.3	82.8	84.4	76.4	82.1	83.6	85.7	78.4
	09:47:15 PM	82.0	82.8	84.1	76.4	81.8	83.3	85.4	77.8
	10:02:15 PM	81.8	82.6	84.2	75.7	81.6	83.1	85.2	77.7
	10:17:15 PM	81.6	82.4	84.0	75.8	81.2	83.0	85.1	77.3
	10:32:15 PM	81.4	82.2	83.8	76.1	81.0	82.8	84.9	77.0
	10:47:15 PM	81.1	81.9	83.5	75.8	80.8	82.6	84.7	76.8
	11:02:15 PM	80.9	81.7	83.3	75.6	80.6	82.4	84.5	76.6
	11:17:15 PM	80.8	81.6	83.1	75.5	80.4	82.2	84.3	76.5
	11:32:15 PM	80.7	81.3	82.9	74.9	80.4	81.9	84.3	76.2
	11:47:15 PM	80.6	81.4	82.9	75.0	80.2	82.0	84.1	76.0
	12:02:15 AM	80.4	80.9	82.8	75.1	80.1	81.6	84.0	75.9
	12:17:15 AM	80.2	80.8	82.6	75.2	79.9	81.5	83.8	75.7
	12:32:15 AM	79.9	80.7	82.3	75.1	79.6	81.4	83.5	75.7
	12:47:15 AM	79.7	80.5	82.1	74.9	79.6	81.2	83.5	75.4

01:02:15 AM	79.8	80.3	81.9	74.7	79.5	81.1	83.4	75.3
01:17:15 AM	79.5	80.3	81.8	74.2	79.4	80.9	83.3	75.2
01:32:15 AM	79.6	80.1	81.7	74.0	79.3	80.8	83.2	75.1
01:47:15 AM	79.4	80.2	81.6	73.9	79.4	80.7	83.0	74.9
02:02:15 AM	79.5	80.1	81.6	73.7	79.2	80.8	82.8	74.7
02:17:15 AM	79.2	80.0	81.6	74.4	78.9	80.5	82.8	74.7
02:32:15 AM	79.0	79.8	81.4	74.8	79.0	80.5	82.6	74.8
02:47:15 AM	79.0	79.8	81.4	74.8	79.0	80.3	82.4	74.8
03:02:15 AM	79.0	79.6	81.1	74.2	79.0	80.3	82.4	74.8
03:17:15 AM	79.0	79.5	81.1	74.5	78.7	80.3	82.4	74.8
03:32:15 AM	79.0	79.6	80.9	74.8	78.8	80.1	82.4	74.8
03:47:15 AM	78.8	79.3	80.9	74.8	78.6	80.1	82.2	74.9
04:02:15 AM	78.9	79.4	80.7	74.3	78.6	79.9	82.3	74.9
04:17:15 AM	78.5	79.3	80.7	74.3	78.3	79.9	82.2	74.9
04:32:15 AM	78.4	79.2	80.6	73.6	78.1	79.7	82.1	74.7
04:47:15 AM	78.5	79.0	80.6	73.4	78.1	79.7	82.0	74.2
05:02:15 AM	78.4	78.9	80.5	74.1	78.1	79.6	82.0	74.4
05:17:15 AM	78.3	78.8	80.4	73.5	78.0	79.5	81.9	74.3
05:32:15 AM	77.9	78.7	80.3	73.9	77.9	79.2	81.8	74.2
05:47:15 AM	77.8	78.6	80.2	73.9	77.8	79.1	81.5	74.2
06:02:15 AM	77.9	78.4	80.0	73.7	77.9	79.2	81.5	74.2
06:17:15 AM	77.8	78.4	80.0	73.6	77.8	79.1	81.5	74.2
06:32:15 AM	77.8	78.3	79.9	73.5	77.7	79.0	81.4	74.1
06:47:15 AM	78.0	78.5	79.8	73.2	77.7	79.0	81.3	74.0
07:02:15 AM	77.7	78.3	79.8	73.7	77.7	79.0	81.1	74.1
07:17:15 AM	78.0	78.3	79.6	74.1	77.8	79.1	81.2	74.1
07:32:15 AM	77.9	78.4	79.8	74.2	77.9	78.9	81.0	74.2
07:47:15 AM	78.0	78.3	79.6	74.6	78.0	79.1	81.1	74.3
08:02:15 AM	78.2	78.5	79.5	75.0	78.2	79.0	81.1	74.6
08:17:15 AM	78.3	78.3	79.3	75.3	78.6	79.2	81.0	75.0
08:32:15 AM	78.4	78.4	79.5	75.5	78.8	79.4	80.9	75.4
08:47:15 AM	78.7	78.7	79.5	76.9	79.5	79.7	81.0	76.1
09:02:15 AM	79.2	78.9	79.4	78.4	80.0	80.0	81.0	76.8
09:17:15 AM	79.5	79.2	79.7	78.4	80.8	80.3	81.1	77.7
09:32:15 AM	80.2	79.7	80.0	82.6	81.6	80.6	81.1	79.0
09:47:15 AM	81.0	80.2	80.2	84.4	82.4	80.8	81.1	80.0
10:02:15 AM	81.3	80.6	80.3	85.6	82.9	81.3	81.0	81.3
10:17:15 AM	82.4	81.4	80.6	89.5	84.5	82.2	81.4	82.9
10:32:15 AM	84.8	82.4	81.1	94.5	88.0	83.3	81.5	85.9
10:47:15 AM	86.8	83.9	81.7	95.9	90.8	85.1	81.7	89.0
11:02:15 AM	89.9	85.2	82.0	90.7	95.9	86.8	82.1	92.8
11:17:15 AM	93.4	88.1	83.6	99.9	99.8	89.5	83.0	96.5
11:32:15 AM	94.9	89.9	84.9	105.1	101.2	91.9	84.1	98.9
11:47:15 AM	96.2	92.0	86.0	89.4	102.1	93.9	85.0	99.8

12:02:15 PM	97.7	93.8	87.7	99.0	103.5	95.0	85.9	99.7
12:17:15 PM	97.3	94.2	88.6	90.7	102.1	96.0	86.9	99.8
12:32:15 PM	98.8	95.4	89.6	99.3	104.3	96.6	87.8	100.4
12:47:15 PM	100.3	96.4	90.4	104.0	106.1	97.6	88.3	102.0
01:02:15 PM	101.7	97.7	91.4	104.8	106.8	99.1	89.3	102.9
01:17:15 PM	103.1	98.9	92.4	108.8	109.6	100.7	90.1	104.3
01:32:15 PM	104.2	100.3	93.2	107.6	110.1	102.0	90.9	105.6
01:47:15 PM	105.7	101.5	94.5	117.3	113.0	103.0	91.7	106.8
02:02:15 PM	107.4	103.0	95.2	95.2	114.6	104.9	92.5	108.2
02:17:15 PM	107.8	103.9	96.3	103.1	113.6	106.0	93.6	107.3
02:32:15 PM	109.4	105.3	97.7	117.7	116.2	106.8	94.5	107.3
02:47:15 PM	110.5	106.7	98.3	119.5	117.6	108.4	95.3	109.2
03:02:15 PM	112.5	108.4	99.5	117.1	119.5	109.8	96.0	110.1
03:17:15 PM	113.3	109.2	100.6	116.1	120.4	111.0	96.9	111.3
03:32:15 PM	113.6	109.7	101.2	102.5	120.5	112.2	98.1	111.9
03:47:15 PM	113.0	109.9	102.9	122.8	118.7	112.3	99.0	110.3
04:02:15 PM	113.6	110.7	102.9	104.5	119.1	112.5	99.7	111.5
04:17:15 PM	113.4	110.3	103.8	118.5	118.9	112.3	100.5	111.3
04:32:15 PM	111.8	109.7	104.2	102.2	116.6	112.0	101.3	109.2
04:47:15 PM	111.0	109.2	104.3	101.9	115.5	111.5	101.5	107.9
05:02:15 PM	111.4	109.3	104.1	122.4	115.4	111.1	101.7	108.3
05:17:15 PM	110.5	108.9	104.2	95.9	114.1	110.8	102.1	107.5
05:32:15 PM	107.5	107.3	104.7	89.5	109.6	110.1	102.7	103.2
05:47:15 PM	99.5	103.1	103.7	77.3	95.3	106.9	102.8	96.9
06:02:15 PM	93.4	97.6	102.1	75.4	92.1	101.6	102.9	91.0
06:17:15 PM	90.1	94.3	100.0	75.0	89.1	97.4	101.7	86.2
06:32:15 PM	89.3	92.7	98.2	75.3	88.9	95.1	100.0	83.4
06:47:15 PM	89.4	91.7	96.4	75.9	88.9	93.5	97.9	81.9
07:02:15 PM	88.3	91.0	95.4	76.2	87.4	92.3	96.4	80.9
07:17:15 PM	87.8	90.1	94.3	76.6	86.7	91.2	95.3	80.2
07:32:15 PM	87.2	89.3	93.2	76.3	86.2	90.3	94.7	79.7
07:47:15 PM	86.4	88.5	92.4	76.1	85.6	89.7	94.1	79.1
08:02:15 PM	86.1	88.2	91.9	76.6	85.1	89.2	93.6	78.6
08:17:15 PM	85.3	87.4	91.1	75.8	84.4	88.5	92.9	78.1
08:32:15 PM	85.0	86.8	90.8	75.4	83.0	88.2	93.4	77.8
08:47:15 PM	84.7	86.5	89.9	75.4	82.5	87.4	92.6	77.0
09:02:15 PM	84.2	85.8	89.5	75.5	82.3	87.0	92.2	76.8
09:17:15 PM	84.6	86.0	88.9	74.3	82.8	86.7	91.9	76.8
09:32:15 PM	84.2	85.5	88.7	74.9	82.1	86.2	91.4	76.3
09:47:15 PM	83.6	85.2	88.3	74.6	81.5	85.7	90.8	76.0
10:02:15 PM	83.5	84.8	88.0	73.4	81.4	85.5	90.5	75.6
10:17:15 PM	83.7	84.7	87.6	74.1	81.4	85.3	89.9	75.4
10:32:15 PM	82.9	84.3	87.2	74.5	80.9	85.1	89.8	75.2
10:47:15 PM	82.7	84.1	87.0	74.3	81.0	84.7	89.3	75.0

08-Aug-01	11:02:15 PM	82.5	83.8	86.7	73.2	80.7	84.6	89.1	74.7
	11:17:15 PM	82.4	83.7	86.4	73.1	80.7	84.4	88.8	74.4
	11:32:15 PM	82.0	83.3	86.2	73.2	80.5	84.2	88.6	74.2
	11:47:15 PM	82.0	83.1	85.7	73.0	80.6	84.0	88.4	74.0
	12:02:15 AM	81.9	83.2	85.6	73.4	80.5	83.9	88.0	73.9
	12:17:15 AM	81.6	83.0	85.3	73.9	80.3	83.7	87.8	74.0
	12:32:15 AM	81.4	82.7	85.3	73.4	80.3	83.4	87.5	74.0
	12:47:15 AM	81.3	82.6	85.0	73.0	80.2	83.3	87.4	73.9
	01:02:15 AM	81.4	82.5	84.9	73.5	80.0	83.2	87.1	73.8
	01:17:15 AM	81.1	82.2	84.6	72.9	79.8	82.9	86.8	73.8
	01:32:15 AM	81.0	82.0	84.4	72.7	79.6	82.7	86.6	73.6
	01:47:15 AM	80.8	81.9	84.2	72.8	79.7	82.5	86.4	73.4
	02:02:15 AM	80.6	81.7	84.1	71.9	79.5	82.3	86.2	73.2
	02:17:15 AM	80.4	81.5	83.9	71.9	79.3	82.1	86.0	73.0
	02:32:15 AM	80.3	81.3	83.7	72.3	79.1	82.0	85.9	72.8
	02:47:15 AM	80.2	81.2	83.6	71.9	78.7	81.9	85.8	72.7
	03:02:15 AM	79.7	81.0	83.4	71.8	78.6	81.7	85.6	72.5
	03:17:15 AM	79.6	80.7	83.0	71.6	78.5	81.3	85.5	72.4
	03:32:15 AM	79.5	80.6	83.0	72.1	78.1	81.3	85.2	72.4
	03:47:15 AM	79.2	80.5	82.6	71.5	78.1	81.2	85.1	72.3
	04:02:15 AM	79.1	80.1	82.5	71.4	78.0	80.8	84.7	72.2
	04:17:15 AM	79.0	80.0	82.4	71.0	78.1	80.7	84.6	72.1
	04:32:15 AM	78.9	79.9	82.3	71.1	78.0	80.6	84.5	71.9
	04:47:15 AM	78.8	79.8	82.0	71.6	77.9	80.5	84.4	71.9
	05:02:15 AM	78.8	79.8	82.0	71.6	77.7	80.3	84.2	71.9
	05:17:15 AM	78.7	79.5	81.9	71.3	77.6	80.2	84.1	71.8
	05:32:15 AM	78.4	79.5	81.6	71.5	77.6	80.2	83.8	71.8
	05:47:15 AM	78.4	79.4	81.5	71.4	77.2	80.1	83.8	71.7
	06:02:15 AM	78.3	79.1	81.2	71.1	77.2	80.0	83.7	71.7
	06:17:15 AM	78.0	79.0	81.1	70.5	77.1	79.7	83.6	71.6
	06:32:15 AM	77.8	78.9	81.0	70.9	76.9	79.6	83.5	71.4
	06:47:15 AM	77.7	78.8	80.9	70.3	76.8	79.4	83.1	71.3
	07:02:15 AM	77.6	78.4	80.8	71.0	76.8	79.4	83.1	71.3
	07:17:15 AM	77.6	78.4	80.5	71.7	77.0	79.1	82.3	71.5
	07:32:15 AM	77.7	78.5	80.4	74.0	77.7	79.0	82.1	73.2
	07:47:15 AM	77.3	78.1	79.7	74.2	77.9	79.0	81.8	75.8
	08:02:15 AM	77.9	78.2	79.8	75.3	78.6	79.1	81.7	78.1
	08:17:15 AM	78.6	78.6	79.7	78.1	79.6	79.3	81.4	80.9
	08:32:15 AM	79.6	79.0	79.8	78.0	81.4	80.1	81.7	83.5
	08:47:15 AM	80.7	79.6	80.2	79.6	83.5	80.9	81.9	85.6
	09:02:15 AM	82.1	80.5	80.5	80.3	85.0	82.1	82.4	86.8
	09:17:15 AM	83.3	81.4	81.2	82.0	86.6	83.2	82.7	88.4
	09:32:15 AM	84.6	82.5	81.7	87.3	88.2	84.0	83.0	90.0
	09:47:15 AM	86.0	83.6	82.0	83.8	89.7	85.1	83.2	92.3

10:02:15 AM	86.1	84.5	82.9	86.8	90.3	86.1	83.8	93.4
10:17:15 AM	87.9	85.5	83.6	86.0	91.9	87.2	84.9	93.5
10:32:15 AM	90.0	87.1	84.5	88.2	94.4	88.5	85.1	94.2
10:47:15 AM	90.7	88.1	85.2	91.0	94.5	89.9	85.5	94.8
11:02:15 AM	92.3	89.4	86.2	93.3	96.3	90.9	86.2	94.5
11:17:15 AM	93.1	90.5	86.8	92.9	97.2	92.0	86.5	94.6
11:32:15 AM	93.2	91.1	87.4	87.9	96.0	92.6	87.1	95.4
11:47:15 AM	94.7	92.0	88.1	86.5	98.0	93.8	87.6	95.9
12:02:15 PM	97.5	94.1	89.1	94.3	102.2	95.3	88.3	96.6
12:17:15 PM	98.5	95.4	89.6	92.5	103.4	97.2	88.9	98.5
12:32:15 PM	99.4	96.3	90.5	90.7	104.9	98.5	89.7	100.3
12:47:15 PM	102.1	98.2	91.9	95.6	108.8	99.8	90.5	101.1
01:02:15 PM	101.0	98.6	92.8	90.2	105.1	100.8	91.5	101.0
01:17:15 PM	103.6	99.9	93.9	101.2	110.2	101.6	92.0	101.8
01:32:15 PM	104.0	100.6	94.6	99.1	110.3	102.7	92.9	102.2
01:47:15 PM	107.0	103.1	95.5	109.3	114.1	104.7	93.6	105.2
02:02:15 PM	109.0	104.8	96.5	114.4	115.9	106.5	94.2	107.3
02:17:15 PM	110.2	106.3	97.4	113.5	115.7	108.3	95.2	108.5
02:32:15 PM	110.7	107.1	98.7	111.5	116.8	109.0	96.4	109.0
02:47:15 PM	112.1	108.2	99.9	112.6	118.5	110.2	97.4	109.9
03:02:15 PM	111.7	108.6	101.1	116.1	117.4	110.3	98.3	108.3
03:17:15 PM	111.2	108.6	101.3	95.3	115.3	110.7	98.9	108.1
03:32:15 PM	112.9	109.6	102.0	112.4	118.6	111.2	99.7	109.4
03:47:15 PM	113.2	110.4	102.6	99.7	118.1	112.0	100.2	109.7
04:02:15 PM	108.8	108.0	103.6	94.7	111.2	110.4	101.2	105.6
04:17:15 PM	110.1	108.0	103.8	117.8	114.2	109.6	101.7	105.5
04:32:15 PM	111.3	108.8	103.3	122.6	116.0	110.2	101.5	107.4
04:47:15 PM	112.4	109.8	103.3	126.5	117.0	111.2	101.4	109.4
05:02:15 PM	112.8	110.5	104.0	114.4	116.7	111.8	102.1	110.1
05:17:15 PM	111.2	109.7	104.8	107.6	114.3	111.5	102.8	108.4
05:32:15 PM	108.9	108.4	105.2	108.9	109.6	110.1	103.4	103.2
05:47:15 PM	109.7	108.4	104.8	115.4	111.5	109.4	103.0	102.8
06:02:15 PM	109.4	108.3	104.5	108.1	111.0	109.2	103.0	103.0
06:17:15 PM	108.8	108.0	104.6	117.0	110.0	108.9	103.1	102.8
06:32:15 PM	108.1	107.3	104.2	117.1	109.7	108.2	103.1	102.8
06:47:15 PM	107.4	106.9	104.1	115.7	108.7	108.0	103.1	102.6
07:02:15 PM	106.2	106.2	104.3	90.7	106.8	107.3	103.2	99.8
07:17:15 PM	104.1	104.7	104.1	85.8	104.5	106.3	103.4	96.2
07:32:15 PM	102.2	103.2	103.5	83.8	102.5	105.1	103.3	93.3
07:47:15 PM	100.8	102.1	102.8	81.8	100.3	103.6	102.9	90.5
08:02:15 PM	99.6	100.9	102.0	80.4	99.7	102.5	102.0	88.6
08:17:15 PM	98.8	100.1	101.4	79.9	98.4	101.5	101.5	86.5
08:32:15 PM	97.7	99.0	100.5	78.4	96.9	100.2	101.0	84.7
08:47:15 PM	96.7	98.3	99.9	78.3	96.3	99.4	100.5	83.7

09-Aug-01	09:02:15 PM	96.0	97.3	99.1	78.1	95.2	98.5	100.1	82.5
	09:17:15 PM	95.1	96.6	98.5	77.2	94.1	97.7	99.5	81.4
	09:32:15 PM	94.6	95.9	97.9	76.6	93.9	97.0	98.8	80.4
	09:47:15 PM	93.9	95.2	97.3	77.0	92.7	96.1	98.4	79.5
	10:02:15 PM	93.4	94.7	96.7	75.2	92.5	95.6	97.9	78.8
	10:17:15 PM	92.9	94.2	96.3	75.8	91.8	94.9	97.5	78.1
	10:32:15 PM	92.3	93.6	95.7	75.9	91.6	94.4	97.0	77.5
	10:47:15 PM	91.6	93.2	95.3	76.6	90.7	93.8	96.4	77.4
	11:02:15 PM	91.0	92.6	94.6	76.5	89.9	93.2	96.1	77.1
	11:17:15 PM	90.3	91.9	94.3	76.4	89.5	92.6	95.7	76.8
	11:32:15 PM	90.2	91.5	93.9	74.1	89.4	92.2	95.3	76.4
	11:47:15 PM	89.8	91.1	93.5	73.9	88.7	91.8	94.9	75.9
	12:02:15 AM	89.3	90.9	93.0	74.0	88.5	91.4	94.5	75.5
	12:17:15 AM	88.9	90.4	92.5	74.1	87.8	90.9	94.0	75.0
	12:32:15 AM	88.5	89.8	92.2	73.2	88.0	90.8	93.9	75.0
	12:47:15 AM	88.5	89.8	91.9	73.2	88.0	90.5	93.6	74.7
	01:02:15 AM	88.5	89.5	91.6	72.6	87.7	90.3	93.4	74.4
	01:17:15 AM	87.9	89.2	91.3	72.5	86.9	90.0	93.1	74.1
	01:32:15 AM	87.1	88.7	91.1	72.8	86.4	89.5	92.8	73.9
	01:47:15 AM	86.9	88.2	90.6	73.1	85.9	89.0	92.4	73.6
	02:02:15 AM	86.5	87.8	90.1	72.7	85.5	88.6	92.0	73.5
	02:17:15 AM	86.0	87.6	89.9	72.0	85.3	88.2	91.8	73.3
	02:32:15 AM	85.9	87.2	89.6	72.7	84.9	87.8	91.4	73.2
	02:47:15 AM	85.5	86.8	89.2	72.0	84.6	87.4	91.0	73.1
	03:02:15 AM	85.1	86.6	88.7	71.8	84.4	87.2	90.9	72.9
	03:17:15 AM	84.7	86.3	88.6	72.2	84.0	86.9	90.5	72.8
	03:32:15 AM	84.5	85.8	88.2	72.6	83.6	86.5	90.3	72.6
	03:47:15 AM	84.1	85.7	88.1	72.2	83.2	86.3	89.9	72.5
	04:02:15 AM	84.0	85.3	87.7	71.8	83.1	86.0	89.6	72.4
	04:17:15 AM	83.8	85.1	87.4	72.4	82.9	85.8	89.4	72.4
	04:32:15 AM	83.4	84.8	87.1	72.3	82.6	85.4	89.1	72.4
	04:47:15 AM	83.1	84.7	86.8	70.9	82.4	85.3	88.9	72.2
	05:02:15 AM	82.9	84.4	86.5	70.9	82.2	85.0	88.6	71.9
	05:17:15 AM	82.8	84.1	86.4	71.3	82.0	84.6	88.3	71.8
	05:32:15 AM	82.5	83.8	86.2	71.6	81.8	84.4	88.1	71.9
	05:47:15 AM	82.4	83.7	85.9	71.3	81.5	84.1	88.0	71.8
	06:02:15 AM	82.1	83.4	85.8	71.2	81.5	84.1	87.7	71.8
	06:17:15 AM	82.1	83.2	85.5	71.2	81.2	83.8	87.4	71.8
	06:32:15 AM	81.8	83.1	85.2	70.9	80.9	83.5	87.2	71.8
	06:47:15 AM	81.4	82.8	85.1	71.1	80.8	83.4	87.0	71.6
	07:02:15 AM	81.3	82.7	85.0	71.0	80.7	83.3	86.9	71.5
	07:17:15 AM	81.2	82.5	84.6	71.6	80.6	83.0	86.6	71.7
	07:32:15 AM	81.3	82.4	84.5	73.6	81.0	82.6	86.2	73.5
	07:47:15 AM	81.2	82.0	84.1	74.6	81.4	82.5	85.8	76.2

09-Aug-01	08:02:15 AM	81.3	81.9	83.7	77.6	82.2	82.5	85.3	78.6
	08:17:15 AM	82.2	82.2	83.8	76.7	83.5	83.0	85.3	80.9
	08:32:15 AM	83.3	83.0	84.3	78.8	84.7	83.7	85.8	82.6
	08:47:15 AM	84.4	83.7	84.4	79.4	86.1	84.5	85.8	84.2
	09:02:15 AM	85.5	84.4	84.7	82.3	87.4	85.0	86.1	86.1
	09:17:15 AM	86.9	85.3	85.3	82.9	89.2	86.0	86.6	87.6
	09:32:15 AM	87.5	85.9	85.4	83.5	90.3	86.9	86.9	89.0
	09:47:15 AM	89.2	87.1	86.0	84.7	92.2	88.0	87.0	90.1
	10:02:15 AM	90.4	88.3	86.8	90.4	93.3	89.2	87.4	91.3
	10:17:15 AM	92.5	89.6	87.5	90.1	95.4	90.2	87.4	92.6
	10:32:15 AM	94.3	90.9	88.3	87.5	97.4	91.7	88.1	93.5
	10:47:15 AM	96.6	92.7	89.3	95.0	100.4	93.2	88.3	95.5
	11:02:15 AM	97.6	94.2	90.2	95.5	101.5	94.6	88.9	96.7
	11:17:15 AM	98.9	95.5	91.3	89.7	102.4	96.0	89.8	96.7
	11:32:15 AM	100.3	97.1	92.2	90.8	104.0	97.1	90.4	97.1
	11:47:15 AM	102.6	99.0	93.5	94.3	106.7	98.7	91.0	97.7
	12:02:15 PM	104.1	100.5	94.5	102.8	108.3	100.1	91.9	98.3
	12:17:15 PM	105.8	101.9	95.6	98.5	110.5	101.5	92.5	99.5
	12:32:15 PM	107.3	103.4	96.9	103.6	111.9	103.0	93.5	100.2
	12:47:15 PM	108.1	104.4	97.7	94.3	112.7	104.5	94.3	101.0
	01:02:15 PM	110.2	106.1	98.8	105.8	115.1	105.7	95.1	101.6
	01:17:15 PM	112.0	107.6	99.5	100.0	117.5	107.3	95.8	102.4
	01:32:15 PM	111.5	108.1	100.9	95.4	115.6	108.5	96.9	102.8
	01:47:15 PM	111.7	108.6	101.9	106.1	115.9	108.6	97.8	102.4
	02:02:15 PM	113.6	109.8	102.2	97.8	118.1	110.0	98.4	104.3
	02:17:15 PM	112.8	110.2	103.4	114.0	116.9	110.3	99.3	103.7
	02:32:15 PM	114.9	111.3	104.1	109.8	119.9	111.3	99.8	105.7
	02:47:15 PM	116.5	112.6	104.6	105.4	121.3	112.5	100.5	107.4
	03:02:15 PM	116.6	113.5	105.7	118.9	121.2	113.6	101.1	107.8
	03:17:15 PM	117.4	114.0	106.2	117.6	122.2	114.4	101.9	109.5
	03:32:15 PM	119.2	115.6	107.3	107.0	123.3	115.5	102.7	110.4
	03:57:58 PM	118.8	116.5	110.0	92.8	120.6	117.3	106.4	101.2
	04:12:58 PM	116.0	114.2	109.3	95.5	119.3	115.5	105.3	104.5
	04:27:58 PM	116.3	114.3	108.8	95.8	119.6	115.0	105.3	106.6
	04:42:58 PM	115.9	114.4	108.4	88.3	118.1	115.0	105.4	107.4
	04:57:58 PM	115.4	113.8	108.9	95.4	118.5	114.7	105.8	107.6
	05:12:58 PM	114.6	113.6	109.4	93.3	117.0	114.5	106.3	106.3
	05:27:58 PM	113.6	112.8	109.0	88.0	115.2	114.2	106.5	105.7
	05:42:58 PM	114.0	112.9	109.3	94.2	116.3	113.5	106.6	105.3
	05:57:58 PM	113.9	112.9	109.0	89.4	116.3	113.5	106.6	105.1
	06:12:58 PM	111.8	111.5	109.0	91.7	113.1	112.6	106.7	103.2
	06:27:58 PM	111.1	110.9	108.6	92.1	112.4	111.9	106.5	103.2
	06:42:58 PM	109.0	109.6	108.0	87.3	109.5	111.0	106.4	101.3
	06:57:58 PM	108.7	108.7	108.0	88.4	109.7	110.0	106.4	99.5

	07:12:58 PM	107.2	107.8	107.5	85.8	107.3	109.3	106.5	97.6
	07:27:58 PM	106.0	106.8	106.8	85.3	106.0	108.0	106.0	94.9
	07:42:58 PM	105.1	105.9	106.2	83.9	104.6	106.8	105.6	92.7
	07:57:58 PM	103.4	104.7	105.5	82.9	102.5	105.6	105.1	90.4
	08:12:58 PM	102.4	103.7	105.0	81.9	101.1	104.5	104.7	88.5
	08:27:58 PM	101.0	102.6	104.1	80.8	100.0	103.4	104.1	86.6
	08:42:58 PM	100.0	101.5	103.4	80.3	98.6	102.2	103.5	85.2
	08:57:58 PM	99.1	100.6	102.7	79.9	97.8	101.4	103.2	83.8
	09:12:58 PM	98.1	99.9	102.0	79.5	96.9	100.5	102.5	82.6
	09:27:58 PM	97.6	99.2	101.2	79.2	96.4	99.7	101.8	81.6
	09:42:58 PM	96.9	98.5	100.5	78.7	95.5	98.8	101.4	80.7
	09:57:58 PM	96.3	97.9	100.0	78.4	95.0	98.1	100.7	80.0
	10:12:58 PM	95.9	97.5	99.3	78.3	94.5	97.6	100.4	79.7
	10:27:58 PM	95.4	97.0	99.0	78.0	94.0	97.1	99.9	79.2
	10:42:58 PM	95.2	96.5	98.4	77.9	93.6	96.7	99.5	78.8
	10:57:58 PM	94.5	96.1	97.9	77.7	93.2	96.0	99.1	78.4
	11:12:58 PM	94.1	95.4	97.5	77.5	92.5	95.6	98.4	78.0
	11:27:58 PM	93.2	95.0	97.1	76.9	91.6	95.0	98.1	77.6
	11:42:58 PM	92.6	94.4	96.5	77.0	91.3	94.4	97.8	77.3
	11:57:58 PM	92.2	93.8	96.2	76.7	90.7	93.8	97.4	76.9
10-Aug-01	12:12:58 AM	91.7	93.2	95.6	76.6	90.2	93.3	96.9	76.6
	12:27:58 AM	91.1	92.7	95.1	76.4	89.7	93.0	96.4	76.4
	12:42:58 AM	90.9	92.5	94.8	76.1	89.4	92.5	96.1	76.1
	12:57:58 AM	90.4	92.0	94.3	75.9	89.2	92.3	95.9	76.2
	01:12:58 AM	89.9	91.5	93.8	75.9	88.7	91.5	95.4	75.7
	01:27:58 AM	89.7	91.0	93.6	75.7	88.6	91.4	95.3	75.8
	01:42:58 AM	89.3	90.8	93.2	75.8	88.1	91.2	94.8	75.6
	01:57:58 AM	88.9	90.4	92.8	75.4	87.9	90.8	94.6	75.4
	02:12:58 AM	88.4	90.0	92.4	75.5	87.3	90.1	94.0	75.0
	02:27:58 AM	88.3	89.9	92.2	75.1	86.9	89.7	93.6	74.9
	02:42:58 AM	87.9	89.5	91.9	75.0	87.0	89.8	93.7	75.0
	02:57:58 AM	87.8	89.1	91.4	74.8	86.6	89.4	93.3	74.8
	03:12:58 AM	87.6	89.0	91.3	74.4	86.5	89.3	92.9	74.7
	03:27:58 AM	87.3	88.6	90.9	74.8	86.1	88.9	92.8	74.6
	03:42:58 AM	86.9	88.2	90.6	74.5	86.0	88.6	92.5	74.5
	03:57:58 AM	86.5	88.1	90.5	74.1	85.6	88.2	92.1	74.4
	04:12:58 AM	86.4	87.7	90.1	74.2	85.5	88.1	92.0	74.3
	04:27:58 AM	86.3	87.6	90.0	74.1	85.1	87.7	91.6	74.2
	04:42:58 AM	86.0	87.3	89.6	73.8	84.8	87.7	91.5	74.1
	04:57:58 AM	85.9	87.2	89.5	73.9	84.7	87.3	91.2	74.0
	05:12:58 AM	85.5	86.8	89.2	73.8	84.3	87.2	91.1	73.9
	05:27:58 AM	85.4	86.7	88.8	73.4	84.2	86.8	90.7	73.8
	05:42:58 AM	85.0	86.4	88.7	73.7	84.2	86.7	90.4	73.7
	05:57:58 AM	84.7	86.0	88.3	73.3	83.8	86.4	90.3	73.6

	06:12:58 AM	84.6	85.9	88.2	73.4	83.7	86.3	90.2	73.5
	06:27:58 AM	84.5	85.5	87.9	73.4	83.4	85.9	89.8	73.4
	06:42:58 AM	84.2	85.5	87.6	73.6	83.4	85.7	89.6	73.4
	06:57:58 AM	83.9	85.2	87.6	73.6	83.1	85.7	89.3	73.4
	07:12:58 AM	84.0	85.0	87.4	73.9	82.9	85.5	89.1	73.5
	07:27:58 AM	83.8	84.8	87.2	74.5	83.3	85.4	89.0	73.9
	07:42:58 AM	84.1	84.9	87.0	75.7	83.5	85.0	88.7	74.6
	07:57:58 AM	84.1	84.9	87.0	77.5	83.7	85.0	88.4	75.9
	08:12:58 AM	84.8	85.0	86.9	77.6	84.7	85.0	88.1	78.4
	08:27:58 AM	85.0	85.3	86.8	80.8	85.7	85.5	88.0	80.5
	08:42:58 AM	85.9	85.7	87.0	82.5	87.2	85.9	87.9	83.8
	08:57:58 AM	86.8	86.0	86.8	85.2	89.1	86.8	88.1	87.0
	09:12:58 AM	88.2	86.9	87.2	82.4	91.2	87.6	88.1	90.5
	09:27:58 AM	89.5	87.7	87.7	86.6	92.8	88.9	88.4	93.0
	09:42:58 AM	91.2	88.8	88.3	86.7	94.5	89.8	88.5	95.0
	09:57:58 AM	92.8	90.2	89.1	89.4	95.4	91.0	89.2	96.9
	10:12:58 AM	94.8	91.4	89.8	91.4	97.9	92.5	89.6	97.6
	10:27:58 AM	96.4	92.7	90.9	92.2	99.8	93.9	90.3	98.8
	10:42:58 AM	98.3	93.9	91.5	92.3	102.4	95.2	90.5	100.3
	10:57:58 AM	99.8	95.4	92.2	93.3	103.8	96.8	91.1	101.5
	11:12:58 AM	101.5	96.8	93.7	95.5	105.7	98.2	92.0	101.8
	11:27:58 AM	103.7	99.0	94.5	93.5	108.3	99.9	92.7	102.7
	11:42:58 AM	104.5	100.0	95.1	93.2	108.7	101.2	93.3	103.8
	11:57:58 AM	104.4	101.0	96.3	92.4	107.9	101.8	94.1	102.3
	12:12:58 PM	104.4	102.0	97.1	98.4	107.6	102.5	94.8	103.3
	12:27:58 PM	107.9	104.3	97.8	96.5	112.3	103.9	95.1	105.7
	12:42:58 PM	107.8	104.7	99.0	97.4	111.5	104.6	95.9	105.9
	12:57:58 PM	109.0	105.8	99.6	99.3	113.9	106.0	96.7	107.5
	01:12:58 PM	110.1	107.0	100.5	95.2	114.4	107.3	97.2	108.5
	01:27:58 PM	112.4	108.8	101.5	96.5	117.1	108.9	98.1	109.2
	01:42:58 PM	115.0	110.8	102.5	99.7	120.1	110.5	99.0	111.3
	01:57:58 PM	114.0	111.1	103.3	93.1	116.8	111.5	99.7	110.7
	02:12:58 PM	114.2	111.1	104.3	91.7	118.0	111.4	100.9	109.8
	02:27:58 PM	114.1	111.0	105.0	98.0	118.1	111.5	101.5	107.2
	02:42:58 PM	114.0	111.4	105.7	93.2	116.7	112.4	102.4	105.5
	02:57:58 PM	115.5	112.4	106.4	102.0	119.5	112.6	102.7	105.7
	03:12:58 PM	116.4	113.3	106.8	99.0	120.2	113.6	103.1	108.0
	03:27:58 PM	117.9	114.8	107.6	102.6	122.2	114.6	103.6	110.5
	03:42:58 PM	117.9	115.0	108.1	103.4	121.2	115.4	104.2	111.3
	03:57:58 PM	116.0	114.4	108.7	89.6	115.4	114.8	104.9	108.5
	04:12:58 PM	115.1	113.6	109.4	97.2	115.3	113.2	105.6	105.3
	04:27:58 PM	111.4	111.4	108.8	87.1	109.8	111.9	105.5	102.7
	04:42:58 PM	107.7	109.3	108.2	84.1	105.6	109.6	105.6	99.1
	04:57:58 PM	104.6	106.6	107.2	82.8	102.5	107.1	105.3	96.6

	05:12:58 PM	93.8	99.8	105.3	75.5	88.8	103.3	105.3	89.9
	05:27:58 PM	88.5	94.6	102.6	73.9	85.8	97.4	104.1	85.3
	05:42:58 PM	86.2	91.5	100.1	73.2	82.6	94.0	102.2	81.0
	05:57:58 PM	84.0	89.0	97.7	72.3	81.7	91.1	99.6	78.8
	06:12:58 PM	84.9	88.4	95.7	71.9	83.5	89.5	97.2	77.2
	06:27:58 PM	85.7	88.6	94.4	71.4	84.2	88.9	95.6	76.4
	06:42:58 PM	85.9	88.5	93.7	71.8	84.0	88.4	94.9	75.9
	06:57:58 PM	85.8	88.1	92.9	72.3	84.3	88.2	94.9	75.7
	07:12:58 PM	86.0	88.1	92.3	73.2	84.3	88.2	94.2	75.5
	07:27:58 PM	85.3	87.6	91.8	73.3	84.0	87.9	93.8	75.4
	07:42:58 PM	84.9	87.0	91.2	72.7	83.8	87.7	93.3	75.1
	07:57:58 PM	84.5	86.6	90.8	72.6	83.1	87.3	92.9	74.7
	08:12:58 PM	84.2	86.1	90.3	72.3	82.9	87.0	92.5	74.2
	08:27:58 PM	83.5	85.6	90.0	72.1	82.1	86.5	92.2	73.7
	08:42:58 PM	83.3	85.4	89.3	71.8	81.9	85.8	91.5	73.5
	08:57:58 PM	83.4	85.2	88.9	72.0	81.5	85.4	91.1	73.1
	09:12:58 PM	83.3	84.9	88.5	71.9	81.5	85.1	90.8	72.8
	09:27:58 PM	83.0	84.8	88.3	71.9	81.5	85.1	90.5	72.6
	09:42:58 PM	83.0	84.6	88.0	71.9	81.5	84.9	90.1	72.4
	09:57:58 PM	82.8	84.4	87.8	71.7	81.4	84.8	89.7	72.2
	10:12:58 PM	82.7	84.3	87.5	71.8	81.3	84.7	89.6	72.1
	10:27:58 PM	82.3	83.9	87.3	71.7	80.9	84.5	89.2	72.0
	10:42:58 PM	82.2	83.8	87.0	71.6	81.1	84.4	88.8	71.9
	10:57:58 PM	82.1	83.7	86.8	71.8	80.9	84.1	88.7	71.8
	11:12:58 PM	81.9	83.5	86.7	71.6	80.8	83.9	88.6	71.6
	11:27:58 PM	81.9	83.2	86.3	71.8	80.7	83.8	88.2	71.5
	11:42:58 PM	81.6	83.2	86.1	71.5	80.4	83.6	88.0	71.5
	11:57:58 PM	81.5	83.1	86.0	71.5	80.4	83.6	87.7	71.5
11-Aug-01	12:12:58 AM	81.5	82.8	85.7	71.4	80.1	83.5	87.7	71.5
	12:27:58 AM	81.2	82.8	85.4	71.7	80.1	83.2	87.4	71.4
	12:42:58 AM	81.2	82.8	85.4	71.7	80.4	83.2	87.1	71.5
	12:57:58 AM	81.2	82.5	85.1	71.3	80.0	82.9	87.0	71.4
	01:12:58 AM	81.1	82.4	85.0	71.3	80.2	82.8	87.0	71.3
	01:27:58 AM	81.0	82.3	85.0	71.5	79.9	82.8	86.7	71.2
	01:42:58 AM	80.8	82.1	84.8	71.3	80.0	82.6	86.5	71.3
	01:57:58 AM	80.8	82.1	84.5	71.3	80.0	82.6	86.5	71.3
	02:12:58 AM	80.8	82.1	84.5	71.2	79.6	82.5	86.1	71.2
	02:27:58 AM	80.5	81.8	84.1	71.4	79.6	82.2	86.1	71.2
	02:42:58 AM	80.2	81.5	84.1	71.4	79.3	82.2	85.9	71.2
	02:57:58 AM	80.4	81.5	83.9	71.1	79.3	81.9	85.8	71.2
	03:12:58 AM	80.4	81.4	83.8	71.3	79.5	81.9	85.5	71.1
	03:27:58 AM	80.1	81.2	83.8	71.1	79.2	81.6	85.5	71.1
	03:42:58 AM	79.8	81.1	83.5	71.0	79.0	81.6	85.2	71.1
	03:57:58 AM	79.8	81.1	83.5	71.0	78.9	81.5	85.2	71.0

	04:12:58 AM	79.8	80.8	83.2	71.0	78.9	81.5	84.9	71.0
	04:27:58 AM	79.5	80.8	83.2	71.0	78.7	81.3	84.9	71.0
	04:42:58 AM	79.2	80.5	82.9	71.0	78.4	81.0	84.6	71.0
	04:57:58 AM	79.2	80.3	82.9	71.0	78.4	81.0	84.7	71.0
	05:12:58 AM	79.1	80.2	82.6	70.6	78.6	80.9	84.5	70.9
	05:27:58 AM	79.0	80.1	82.5	70.5	78.2	80.8	84.4	70.8
	05:42:58 AM	78.9	80.0	82.3	70.4	78.3	80.6	84.3	70.7
	05:57:58 AM	78.8	79.9	82.3	70.3	78.0	80.6	84.0	70.6
	06:12:58 AM	78.7	79.8	82.1	70.2	78.1	80.4	84.1	70.5
	06:27:58 AM	78.5	79.6	82.0	70.0	77.9	80.2	83.9	70.3
	06:42:58 AM	78.2	79.5	81.9	70.2	77.6	80.2	83.8	70.2
	06:57:58 AM	78.1	79.2	81.8	70.2	77.5	79.9	83.5	70.2
	07:12:58 AM	78.3	79.3	81.7	70.6	78.0	79.8	83.4	70.3
	07:27:58 AM	78.2	79.3	81.6	72.4	77.8	79.9	83.3	71.2
	07:42:58 AM	78.8	79.4	81.5	73.0	78.9	79.9	83.3	73.1
	07:57:58 AM	79.2	79.5	81.6	75.2	79.5	80.0	83.2	74.8
	08:12:58 AM	79.8	80.0	81.6	76.3	80.4	80.1	83.0	77.7
	08:27:58 AM	80.6	80.3	81.4	79.8	82.5	80.9	82.7	81.2
	08:42:58 AM	82.0	80.9	81.7	82.3	84.2	81.6	83.1	84.2
	08:57:58 AM	83.1	81.8	82.1	84.7	85.8	82.7	83.5	87.1
	09:12:58 AM	84.4	82.5	82.5	89.4	87.4	83.7	83.5	89.4
	09:27:58 AM	85.8	83.6	83.4	89.2	89.3	84.9	83.8	91.9
	09:42:58 AM	87.8	84.9	83.8	88.3	91.2	86.1	84.2	94.1
	09:57:58 AM	89.6	86.4	84.5	92.7	93.8	87.4	84.7	96.4
	10:12:58 AM	92.1	87.9	85.5	94.0	96.7	89.2	85.6	98.8
	10:27:58 AM	92.8	89.2	86.5	93.9	97.2	90.7	86.3	99.2
	10:42:58 AM	94.9	90.7	87.6	94.7	100.9	92.4	87.0	100.7
	10:57:58 AM	94.6	92.0	88.5	87.7	98.0	93.4	87.7	100.3
	11:12:58 AM	93.8	91.7	89.1	87.8	97.1	93.7	88.3	99.1
	11:27:58 AM	97.3	93.6	89.9	95.2	102.5	94.8	88.8	100.7
	11:42:58 AM	100.6	96.6	90.6	93.2	107.6	97.3	89.3	102.4
	11:57:58 AM	102.4	98.5	91.7	90.4	108.6	99.4	90.1	104.3
	12:12:58 PM	102.0	98.6	92.9	89.2	106.7	100.0	91.0	103.9
	12:27:58 PM	102.2	99.0	93.5	88.3	106.2	100.8	91.8	104.2
	12:42:58 PM	102.9	99.8	94.5	94.8	107.7	101.5	92.5	104.6
	12:57:58 PM	106.0	101.9	95.3	92.4	112.2	103.0	93.2	106.6
	01:12:58 PM	106.2	102.6	96.3	97.4	112.0	103.9	94.1	106.9
	01:27:58 PM	102.2	101.1	96.7	78.1	102.3	103.3	94.6	103.9
	01:42:58 PM	94.5	97.1	97.9	75.4	95.1	100.0	96.7	94.6
	01:57:58 PM	92.6	94.4	96.5	76.2	93.9	97.0	96.2	90.0
	02:12:58 PM	91.5	93.1	95.2	76.7	92.2	95.3	95.5	87.5
	02:27:58 PM	90.3	91.9	94.3	77.4	90.5	93.6	94.7	85.8
	02:42:58 PM	89.0	90.8	93.2	77.4	89.2	92.6	94.1	84.5
	02:57:58 PM	88.4	90.0	92.4	76.8	88.9	91.7	93.5	83.7

	03:12:58 PM	88.7	89.7	91.8	80.5	89.4	90.9	93.0	83.9
	03:27:58 PM	88.8	89.6	91.2	81.7	88.9	90.7	92.5	84.5
	03:42:58 PM	89.8	89.8	90.9	83.7	89.6	90.4	91.9	85.4
	03:57:58 PM	90.3	90.1	90.8	84.3	90.2	90.2	91.8	86.6
	04:12:58 PM	90.8	90.5	90.8	82.9	90.1	90.6	91.4	87.3
	04:27:58 PM	91.0	90.4	91.0	83.9	91.0	90.7	91.5	87.3
	04:42:58 PM	94.7	91.8	91.0	87.9	96.5	92.1	91.1	90.8
	04:57:58 PM	93.0	92.2	91.4	81.9	93.0	93.0	91.4	90.6
	05:12:58 PM	92.6	92.1	91.8	83.4	93.1	93.1	91.9	90.0
	05:27:58 PM	92.0	91.8	92.0	81.7	92.2	92.7	91.9	89.6
	05:42:58 PM	91.7	91.7	91.9	81.9	92.3	92.6	92.1	89.0
	05:57:58 PM	91.4	91.4	91.7	81.4	92.1	92.3	92.1	88.7
	06:12:58 PM	92.0	91.5	91.7	82.0	92.7	92.4	91.9	88.8
	06:27:58 PM	91.6	91.3	91.6	81.8	92.3	92.3	92.0	88.7
	06:42:58 PM	90.9	90.9	91.7	81.9	91.6	92.1	92.1	87.7
	06:57:58 PM	90.7	91.0	91.5	81.5	91.6	91.9	91.9	87.5
	07:12:58 PM	90.6	90.9	91.4	80.6	91.2	91.7	91.7	86.8
	07:27:58 PM	90.4	90.6	91.4	80.9	90.7	91.5	91.8	86.1
	07:42:58 PM	89.7	90.3	91.1	79.7	89.7	91.2	91.7	85.2
	07:57:58 PM	89.3	89.9	90.9	79.0	89.2	90.7	91.8	84.0
	08:12:58 PM	88.5	89.3	90.9	77.9	88.3	90.4	91.4	82.8
	08:27:58 PM	88.0	88.8	90.4	77.4	87.5	89.8	91.4	81.5
	08:42:58 PM	87.3	88.4	90.2	76.8	87.1	89.2	91.0	80.4
	08:57:58 PM	87.1	88.2	89.7	77.3	86.7	88.7	90.8	79.4
	09:12:58 PM	86.6	87.6	89.5	76.0	86.2	88.3	90.6	78.6
	09:27:58 PM	86.3	87.4	89.2	75.8	85.7	88.1	90.4	78.2
	09:42:58 PM	85.7	87.0	88.9	76.7	85.1	87.5	90.1	77.6
	09:57:58 PM	85.7	86.7	88.6	76.7	84.9	87.2	89.8	77.1
	10:12:58 PM	85.2	86.3	88.4	75.2	84.7	86.8	89.4	76.6
	10:27:58 PM	85.0	86.1	88.2	75.2	84.8	86.9	89.5	76.5
	10:42:58 PM	84.6	85.9	87.8	75.1	83.9	86.2	89.1	75.8
	10:57:58 PM	84.5	85.6	87.4	75.0	83.8	86.1	89.0	75.7
	11:12:58 PM	83.9	85.2	87.1	74.7	83.6	85.9	88.8	75.5
	11:27:58 PM	83.7	85.0	87.1	75.2	83.3	85.6	88.5	75.2
	11:42:58 PM	83.7	84.8	86.9	74.4	83.1	85.4	88.3	75.0
	11:57:58 PM	83.5	84.6	86.7	74.0	82.8	85.2	88.0	74.7
12-Aug-01	12:12:58 AM	83.2	84.3	86.4	73.7	82.8	84.9	88.0	74.4
	12:27:58 AM	83.0	84.0	86.2	73.7	82.3	84.7	87.8	74.2
	12:42:58 AM	82.7	83.8	85.9	73.5	82.1	84.4	87.5	74.0
	12:57:58 AM	82.5	83.6	85.7	73.2	82.1	84.2	87.3	73.8
	01:12:58 AM	82.5	83.6	85.4	73.3	81.9	84.0	87.1	73.5
	01:27:58 AM	82.3	83.4	85.2	72.8	81.7	83.7	86.9	73.3
	01:42:58 AM	81.9	82.9	85.1	72.9	81.2	83.6	86.7	73.1
	01:57:58 AM	81.7	82.8	84.9	72.7	81.1	83.2	86.6	73.0

	02:12:58 AM	81.6	82.7	84.8	72.9	81.0	83.1	86.5	72.9
	02:27:58 AM	81.3	82.4	84.5	73.4	80.7	82.8	86.2	72.9
	02:42:58 AM	81.1	82.4	84.2	72.6	80.7	82.8	85.9	72.9
	02:57:58 AM	81.1	82.1	84.3	72.6	80.5	82.6	86.0	72.7
	03:12:58 AM	81.0	82.0	84.1	72.7	80.3	82.4	85.8	72.5
	03:27:58 AM	80.8	81.8	83.9	72.8	80.2	82.0	85.4	72.6
	03:42:58 AM	80.4	81.5	83.6	72.7	79.9	82.0	85.3	72.5
	03:57:58 AM	80.3	81.4	83.5	72.1	80.0	81.8	85.2	72.4
	04:12:58 AM	80.3	81.3	83.4	72.8	79.7	81.8	85.1	72.3
	04:27:58 AM	80.3	81.1	83.2	72.9	79.8	81.6	85.0	72.4
	04:42:58 AM	80.0	81.1	82.9	73.4	79.8	81.6	84.7	72.7
	04:57:58 AM	80.1	81.2	83.0	72.7	79.8	81.7	84.5	72.8
	05:12:58 AM	80.2	80.9	82.8	73.0	79.9	81.5	84.6	72.8
	05:27:58 AM	79.9	80.9	82.8	73.2	79.6	81.4	84.5	72.8
	05:42:58 AM	80.1	80.9	82.8	72.7	79.6	81.4	84.3	72.8
	05:57:58 AM	79.8	80.6	82.7	73.2	79.3	81.1	84.2	72.7
	06:12:58 AM	79.8	80.6	82.4	72.9	79.2	81.0	84.2	72.7
	06:27:58 AM	79.4	80.5	82.3	72.2	79.1	80.9	84.1	72.6
	06:42:58 AM	79.3	80.3	82.2	72.1	79.0	80.8	83.9	72.4
	06:57:58 AM	79.1	79.9	82.1	72.0	78.9	80.7	83.8	72.3
	07:12:58 AM	79.1	79.9	82.0	71.9	78.7	80.6	83.7	72.2
	07:27:58 AM	79.0	79.8	81.9	73.2	79.0	80.3	83.5	72.5
	07:42:58 AM	79.3	79.9	81.7	77.2	79.8	80.4	83.5	73.8
	07:57:58 AM	79.9	80.2	82.0	76.4	80.5	80.3	83.1	77.4
	08:12:58 AM	80.1	80.1	81.5	77.8	81.4	80.4	82.7	80.4
	08:27:58 AM	81.1	80.6	81.7	81.1	83.3	81.2	83.1	83.3
	08:42:58 AM	82.0	81.0	81.8	84.1	84.7	82.1	83.1	86.8
	08:57:58 AM	83.4	81.8	82.1	82.8	86.2	82.8	83.1	89.8
	09:12:58 AM	85.6	83.2	82.7	84.8	88.9	84.2	83.7	92.3
	09:27:58 AM	86.8	84.1	83.3	86.5	90.7	85.3	84.0	94.4
	09:42:58 AM	88.4	85.2	83.9	87.6	92.5	86.8	84.2	95.9
	09:57:58 AM	89.9	86.7	84.6	92.0	94.7	88.5	84.9	97.0
	10:12:58 AM	91.8	88.1	85.7	89.9	96.5	89.8	85.6	98.1
	10:27:58 AM	93.2	89.5	86.6	93.7	98.3	91.3	86.1	99.3
	10:42:58 AM	95.6	91.1	87.4	96.1	100.8	92.8	86.8	100.8
	10:57:58 AM	96.5	92.3	88.4	94.2	101.6	94.4	87.4	101.6
	11:12:58 AM	97.2	93.5	89.3	93.8	102.7	95.5	88.2	101.9
	11:27:58 AM	99.2	95.6	90.3	89.5	104.4	97.0	89.0	102.6
	11:42:58 AM	102.2	97.7	91.4	94.9	108.1	98.6	89.6	103.8
	11:57:58 AM	103.3	98.9	92.3	96.3	109.4	100.2	90.4	104.6
	12:12:58 PM	104.6	100.4	93.3	97.0	110.2	101.8	91.2	105.1
	12:27:58 PM	104.6	100.9	94.4	98.8	111.1	102.6	92.1	104.7
	12:42:58 PM	107.0	102.9	95.3	93.7	113.0	104.3	93.0	105.3
	12:57:58 PM	106.7	103.3	96.2	96.0	113.0	105.4	93.8	104.9

	01:12:58 PM	109.6	105.4	97.3	94.5	116.8	107.1	94.5	105.6
	01:27:58 PM	111.0	106.9	98.3	94.6	117.5	108.4	95.6	106.6
	01:42:58 PM	110.4	107.0	99.4	99.4	116.6	108.8	96.4	105.4
	01:57:58 PM	109.7	107.2	100.4	95.4	115.3	109.2	97.2	104.9
	02:12:58 PM	110.6	107.8	100.7	92.6	116.0	110.2	97.9	104.8
	02:27:58 PM	113.0	109.1	101.6	96.6	118.6	110.7	98.7	106.6
	02:42:58 PM	113.1	110.0	102.0	90.7	118.7	112.1	99.3	106.5
	02:57:58 PM	112.3	109.7	103.3	94.1	116.7	111.9	100.4	105.0
	03:12:58 PM	111.6	109.8	103.6	89.7	114.9	111.6	100.9	104.7
	03:27:58 PM	111.9	109.6	104.4	98.4	115.7	111.1	101.4	103.7
	03:42:58 PM	113.6	110.8	104.3	95.2	116.1	111.8	101.8	104.9
	03:57:58 PM	112.7	110.7	104.7	93.2	114.2	111.7	102.2	104.3
	04:12:58 PM	111.0	109.7	105.3	94.4	113.6	111.0	102.6	102.6
	04:27:58 PM	110.5	109.2	105.0	93.0	111.8	110.3	102.6	102.6
	04:42:58 PM	109.3	108.5	104.9	88.7	110.4	109.7	102.8	101.7
	04:57:58 PM	106.9	106.9	104.9	84.4	107.5	108.5	103.1	98.5
	05:12:58 PM	105.1	105.4	104.6	83.1	105.7	107.5	103.4	95.5
	05:27:58 PM	105.8	105.0	104.2	89.0	108.0	106.8	103.2	95.2
	05:42:58 PM	105.8	105.1	103.5	87.3	108.0	106.7	102.6	96.2
	05:57:58 PM	105.2	105.0	103.4	88.0	106.9	106.4	102.5	96.1
	06:12:58 PM	105.1	104.8	103.2	91.8	106.5	106.0	102.4	96.3
	06:27:58 PM	104.5	104.3	103.0	92.8	106.2	105.7	102.3	96.7
	06:42:58 PM	104.2	103.9	102.6	87.1	105.6	105.4	102.0	97.2
	06:57:58 PM	103.9	103.9	102.6	84.7	105.0	105.0	102.2	95.8
	07:12:58 PM	103.1	103.1	102.6	84.0	103.7	104.5	102.2	93.5
	07:27:58 PM	101.3	102.1	102.1	82.9	101.5	103.3	102.0	91.4
	07:42:58 PM	99.9	100.9	101.7	81.2	99.6	102.2	101.7	89.3
	07:57:58 PM	98.7	100.0	101.0	80.0	98.1	100.9	101.2	87.3
	08:12:58 PM	97.8	99.1	100.4	78.9	97.2	100.0	100.8	85.3
	08:27:58 PM	97.1	98.4	99.7	78.4	96.2	99.2	100.3	84.0
	08:42:58 PM	95.9	97.4	99.3	77.4	94.9	98.2	99.8	82.4
	08:57:58 PM	95.0	96.6	98.7	76.8	94.1	97.4	99.5	81.1
	09:12:58 PM	94.6	95.9	98.0	76.7	93.7	96.8	98.9	80.0
	09:27:58 PM	93.9	95.4	97.3	76.5	92.8	96.2	98.2	79.1
	09:42:58 PM	93.0	94.8	96.9	76.1	92.0	95.4	98.0	78.3
	09:57:58 PM	92.6	94.2	96.2	76.0	91.3	94.7	97.5	77.8
	10:12:58 PM	91.9	93.5	95.8	75.3	91.0	94.1	96.9	77.2
	10:27:58 PM	91.8	93.2	95.2	75.0	90.7	93.6	96.7	76.7
	10:42:58 PM	91.3	92.6	94.7	74.7	90.2	93.1	96.2	76.2
	10:57:58 PM	90.5	92.1	94.5	74.4	89.5	92.6	95.7	75.7
	11:12:58 PM	89.8	91.6	94.0	74.2	89.0	92.3	95.4	75.4
	11:27:58 PM	89.4	90.9	93.5	73.8	88.6	91.7	95.0	75.0
	11:42:58 PM	89.1	90.7	93.0	73.7	88.3	91.4	94.8	74.8
	11:57:58 PM	88.8	90.4	92.8	74.6	88.1	90.9	94.3	74.5

13-Aug-01	12:12:58 AM	88.4	89.9	92.3	73.8	87.6	90.7	94.1	74.3
	12:27:58 AM	88.1	89.7	92.1	72.8	87.4	90.3	93.6	74.1
	12:42:58 AM	87.7	89.3	91.7	72.4	86.7	89.8	93.4	73.7
	12:57:58 AM	87.4	89.0	91.4	72.3	86.7	89.5	93.1	73.3
	01:12:58 AM	87.0	88.6	90.9	73.2	85.8	88.9	92.8	73.3
	01:27:58 AM	86.4	88.0	90.6	71.9	85.5	88.6	92.5	72.9
	01:42:58 AM	86.2	87.8	90.4	73.0	85.3	88.4	92.0	72.8
	01:57:58 AM	85.8	87.4	90.0	71.5	85.1	88.0	91.9	72.6
	02:12:58 AM	85.5	87.1	89.7	71.4	84.5	87.6	91.5	72.2
	02:27:58 AM	85.2	86.8	89.4	71.4	84.2	87.4	91.2	71.9
	02:42:58 AM	84.9	86.5	88.9	70.9	84.0	86.8	90.9	71.7
	02:57:58 AM	84.4	86.0	88.6	71.2	83.5	86.6	90.5	71.5
	03:12:58 AM	84.2	85.8	88.4	71.2	83.3	86.2	90.3	71.5
	03:27:58 AM	84.1	85.6	88.0	71.1	83.1	86.0	90.1	71.3
	03:42:58 AM	83.8	85.1	87.7	71.9	82.7	85.5	89.7	71.4
	03:57:58 AM	83.5	84.8	87.4	71.6	82.6	85.5	89.3	71.3
	04:12:58 AM	83.1	84.7	87.3	71.7	82.3	85.1	89.3	71.3
	04:27:58 AM	83.0	84.3	87.0	70.3	82.2	85.0	88.9	71.2
	04:42:58 AM	82.7	84.3	86.6	70.5	81.7	84.6	88.7	70.7
	04:57:58 AM	82.8	84.1	86.2	71.1	81.6	84.2	88.3	70.6
	05:12:58 AM	82.2	83.8	85.9	71.6	81.4	84.0	88.1	70.6
	05:27:58 AM	82.0	83.3	85.7	71.1	81.2	83.8	87.9	70.7
	05:42:58 AM	81.9	83.2	85.6	70.2	80.9	83.5	87.7	70.5
	05:57:58 AM	81.7	83.0	85.4	69.8	80.5	83.4	87.6	70.3
	06:12:58 AM	81.3	82.9	85.3	70.2	80.7	83.0	87.2	70.2
	06:27:58 AM	81.1	82.5	84.8	69.2	80.3	82.9	87.0	70.0
	06:42:58 AM	81.1	82.4	84.8	69.7	80.2	82.5	86.7	70.0
	06:57:58 AM	80.9	82.2	84.6	70.6	80.1	82.4	86.6	70.1
	07:12:58 AM	81.1	82.1	84.2	71.2	80.2	82.3	86.2	70.3
	07:27:58 AM	80.9	81.9	84.3	74.3	80.5	82.4	86.3	71.1
	07:42:58 AM	81.1	81.9	84.2	76.3	81.2	82.3	86.2	73.6
	07:57:58 AM	81.4	81.9	83.8	76.9	81.8	82.1	85.5	76.1
	08:12:58 AM	82.0	82.0	83.9	79.1	82.6	82.4	85.5	79.5
	08:27:58 AM	82.8	82.6	83.9	83.6	84.5	82.9	85.5	82.7
	08:42:58 AM	83.6	83.1	84.1	82.3	85.7	83.9	85.7	85.7
	08:57:58 AM	84.0	83.5	84.3	85.4	86.1	84.3	85.9	88.5
	09:12:58 AM	86.1	84.3	84.5	85.9	89.2	85.1	85.9	91.3
	09:27:58 AM	88.0	85.9	85.4	88.0	91.1	86.4	86.1	93.9
	09:42:58 AM	89.9	87.0	86.0	88.4	93.6	87.7	86.4	96.2
	09:57:58 AM	91.9	88.5	86.9	90.6	95.9	89.2	86.9	98.3
	10:12:58 AM	94.0	90.3	87.7	91.4	98.2	90.7	87.6	100.3
	10:27:58 AM	94.5	91.9	88.5	91.4	98.8	92.3	87.9	101.1
	10:42:58 AM	97.1	93.7	89.5	95.5	102.0	94.0	88.6	103.1
	10:57:58 AM	97.8	94.9	90.4	88.8	101.8	95.6	89.4	103.1

	11:12:58 AM	98.6	95.7	91.3	88.1	103.0	96.0	90.3	103.0
	11:27:58 AM	100.4	97.0	92.3	91.8	104.7	97.0	90.8	102.7
	11:42:58 AM	101.8	98.7	92.9	87.9	105.6	99.0	91.2	103.1
	11:57:58 AM	101.7	98.5	93.8	97.2	106.0	99.0	92.1	102.4
	12:12:58 PM	102.7	99.8	94.3	89.6	106.0	100.7	92.7	103.7
	12:27:58 PM	105.8	101.9	95.6	96.9	110.4	101.9	93.4	104.7
	12:42:58 PM	106.7	103.1	96.6	94.5	111.3	103.4	94.1	103.9
	12:57:58 PM	108.5	104.6	97.6	96.5	113.1	104.7	94.9	105.7
	01:12:58 PM	111.0	106.6	98.5	93.5	115.8	106.4	95.3	106.9
	01:27:58 PM	111.5	107.6	99.6	93.5	115.5	107.6	96.3	107.1
	01:42:58 PM	113.1	109.0	100.7	96.2	118.1	108.7	97.2	107.7
	01:57:58 PM	114.8	110.4	101.5	96.1	119.6	110.2	98.1	108.9
	02:12:58 PM	115.5	111.4	102.8	96.8	120.0	111.4	98.9	109.6
	02:27:58 PM	114.0	110.9	103.6	95.0	118.0	111.4	99.9	108.1
	02:42:58 PM	115.7	112.1	104.8	95.1	119.6	112.2	100.7	107.6
	02:57:58 PM	116.9	113.3	105.5	98.2	120.9	113.3	101.3	108.8
	03:12:58 PM	118.1	114.5	106.5	103.6	121.8	114.2	102.2	110.2
	03:27:58 PM	118.0	114.9	107.2	100.7	122.4	115.3	102.8	111.2
	03:42:58 PM	117.3	114.8	108.0	98.9	120.2	115.4	103.6	110.3
	03:57:58 PM	117.5	114.9	108.2	95.4	120.5	115.7	104.5	110.9
	04:12:58 PM	117.8	115.2	108.8	103.3	121.0	115.6	104.9	111.3
	04:27:58 PM	118.3	115.8	109.1	97.8	121.6	116.3	105.6	112.2
	04:42:58 PM	117.8	115.8	109.6	99.4	120.6	116.3	105.9	111.8
	04:57:58 PM	117.9	115.8	109.9	99.7	119.9	116.1	106.4	111.5
	05:12:58 PM	117.0	115.2	109.5	98.8	118.8	116.0	106.8	111.4
	05:27:58 PM	116.4	114.9	110.0	94.6	118.9	115.6	107.2	110.7
	05:42:58 PM	116.4	115.1	110.2	91.9	118.6	115.5	107.4	109.4
	05:57:58 PM	115.5	114.4	110.3	94.4	117.5	115.0	107.4	107.1
	06:12:58 PM	114.8	113.8	110.2	93.5	116.0	114.5	107.6	105.6
	06:27:58 PM	113.3	112.8	109.9	96.1	114.2	113.5	107.4	104.0
	06:42:58 PM	112.4	112.1	109.8	88.4	113.2	112.7	107.3	103.0
	06:57:58 PM	110.9	110.9	109.1	86.1	111.4	111.9	107.3	100.4
	07:12:58 PM	109.7	109.9	109.2	85.3	109.3	111.0	107.5	97.7
	07:27:58 PM	107.5	108.5	108.5	84.2	106.6	109.4	107.1	95.0
	07:42:58 PM	105.6	107.1	107.6	82.2	104.9	108.0	106.7	92.6
	07:57:58 PM	104.0	105.6	106.6	80.6	102.8	106.7	106.2	90.0
	08:12:58 PM	103.0	104.6	105.9	79.9	101.7	105.3	105.8	87.8
	08:27:58 PM	101.7	103.5	105.0	79.1	100.1	104.2	105.0	85.6
	08:42:58 PM	100.6	102.4	104.2	78.0	99.2	103.0	104.5	83.9
	08:57:58 PM	99.6	101.4	103.5	77.8	98.3	102.1	103.9	82.8
	09:12:58 PM	98.5	100.5	102.6	77.4	97.2	101.1	103.1	81.4
	09:27:58 PM	97.5	99.6	101.9	76.7	96.0	100.1	102.4	80.2
	09:42:58 PM	97.0	98.8	101.1	76.5	95.4	99.2	102.1	79.3
	09:57:58 PM	96.1	98.0	100.6	76.4	94.6	98.5	101.5	78.8

	10:12:58 PM	95.7	97.5	99.8	76.4	94.1	97.7	100.8	78.0
	10:27:58 PM	95.3	96.9	99.2	75.5	93.8	97.1	100.2	77.4
	10:42:58 PM	95.0	96.5	98.6	75.5	93.5	96.6	99.7	76.9
	10:57:58 PM	94.5	96.0	98.4	74.9	93.1	96.2	99.2	76.4
	11:12:58 PM	93.6	95.5	97.8	74.6	92.0	95.6	98.9	75.9
	11:27:58 PM	92.9	94.7	97.1	74.4	91.3	95.0	98.3	75.5
	11:42:58 PM	92.3	94.1	96.7	74.6	91.0	94.6	98.2	75.3
	11:57:58 PM	91.7	93.5	96.1	74.3	90.6	94.0	97.8	75.0
14-Aug-01	12:12:58 AM	91.1	92.9	95.6	74.0	90.1	93.4	97.3	74.7
	12:27:58 AM	90.8	92.6	95.2	73.6	89.5	93.1	97.0	74.4
	12:42:58 AM	90.3	92.1	94.7	73.6	89.3	92.6	96.5	74.2
	12:57:58 AM	90.0	91.6	94.5	73.1	88.8	92.1	96.3	73.9
	01:12:58 AM	89.5	91.4	94.0	73.7	88.3	91.7	95.8	73.7
	01:27:58 AM	89.1	91.0	93.6	74.1	87.9	91.3	95.4	73.6
	01:42:58 AM	89.0	90.6	93.2	72.9	87.8	90.9	95.0	73.4
	01:57:58 AM	88.5	90.1	93.0	73.2	87.3	90.7	94.5	73.2
	02:12:58 AM	88.3	89.9	92.5	72.5	87.1	90.2	94.3	73.0
	02:27:58 AM	87.8	89.4	92.3	72.2	86.9	90.0	93.8	72.8
	02:42:58 AM	87.7	89.2	91.9	72.9	86.4	89.5	93.7	72.6
	02:57:58 AM	87.3	88.9	91.5	72.2	86.1	89.2	93.3	72.5
	03:12:58 AM	87.1	88.7	91.1	72.6	85.7	88.8	92.9	72.4
	03:27:58 AM	86.7	88.3	90.7	71.6	85.5	88.6	92.5	72.2
	03:42:58 AM	86.3	87.9	90.5	71.4	85.1	88.2	92.3	72.0
	03:57:58 AM	86.1	87.7	90.0	71.3	84.9	87.7	91.9	71.8
	04:12:58 AM	85.8	87.1	90.0	71.5	84.5	87.6	91.7	71.4
	04:27:58 AM	85.2	86.7	89.6	72.2	84.0	87.1	91.5	71.5
	04:42:58 AM	84.8	86.4	89.3	71.1	84.0	86.8	91.2	71.4
	04:57:58 AM	84.7	86.2	88.9	70.6	83.5	86.6	91.0	71.1
	05:12:58 AM	84.4	85.9	88.6	70.0	83.4	86.2	90.6	70.8
	05:27:58 AM	84.1	85.6	88.3	69.7	83.1	85.9	90.3	70.5
	05:42:58 AM	83.7	85.3	87.9	71.0	82.6	85.7	90.1	70.6
	05:57:58 AM	83.7	85.0	87.9	71.0	82.5	85.4	89.8	70.5
	06:12:58 AM	83.4	84.9	87.6	69.6	82.2	85.0	89.4	70.4
	06:27:58 AM	83.1	84.7	87.3	69.8	81.9	85.0	89.4	70.1
	06:42:58 AM	82.7	84.3	86.9	68.9	81.8	84.6	89.0	70.0
	06:57:58 AM	82.7	84.0	86.9	69.4	81.4	84.3	88.7	69.6
	07:12:58 AM	82.3	83.9	86.5	69.6	81.4	84.2	88.7	69.6
	07:27:58 AM	82.4	83.7	86.3	72.3	81.7	83.8	88.2	70.4
	07:42:58 AM	82.6	83.7	86.3	74.2	82.2	83.7	87.9	73.0
	07:57:58 AM	82.6	83.4	86.0	77.3	82.7	83.5	87.6	75.6
	08:12:58 AM	83.2	83.8	85.9	80.6	83.8	83.8	87.5	79.2
	08:27:58 AM	84.3	84.3	86.1	81.6	85.6	84.3	87.5	82.5
	08:42:58 AM	85.1	84.3	85.6	81.4	87.3	85.2	87.3	85.5
	08:57:58 AM	86.5	85.7	86.5	82.3	88.7	86.4	87.7	86.1

	09:12:58 AM	87.9	86.3	86.9	85.3	90.1	87.5	88.0	86.7
	09:27:58 AM	89.5	87.3	87.3	87.6	91.6	88.0	88.3	89.3
	09:42:58 AM	90.8	88.4	87.6	88.7	93.7	89.3	88.5	91.9
	09:57:58 AM	92.8	89.6	88.6	93.6	95.8	90.4	88.6	95.0
	10:12:58 AM	94.7	91.0	89.2	91.6	98.2	92.0	88.9	97.4
	10:27:58 AM	96.0	92.4	90.3	96.0	99.5	93.6	89.7	97.5
	10:42:58 AM	98.0	93.8	90.9	91.7	102.1	94.9	90.3	100.1
	10:57:58 AM	99.8	95.7	92.0	92.8	103.9	96.4	91.0	101.8
	11:12:58 AM	102.2	97.5	93.0	95.9	106.0	98.3	91.6	103.2
	11:27:58 AM	102.0	98.4	93.9	90.2	106.1	99.4	92.5	103.8
	11:42:58 AM	102.8	99.4	95.0	97.1	106.2	100.3	93.1	102.9
	11:57:58 AM	106.3	102.4	95.9	98.5	110.8	101.9	93.6	106.0
	12:12:58 PM	104.6	102.5	96.5	81.7	106.3	103.2	94.5	106.3
	12:27:58 PM	103.2	101.3	97.7	96.6	104.5	102.0	95.3	104.5
	12:42:58 PM	105.0	102.4	97.9	95.3	107.7	102.3	95.9	105.1
	12:57:58 PM	107.4	104.0	98.5	94.6	111.0	103.9	96.1	105.7
	01:12:58 PM	108.9	105.5	99.3	97.2	112.3	105.5	96.7	106.5
	01:27:58 PM	111.1	107.2	100.2	97.6	114.0	106.9	97.4	106.9
	01:42:58 PM	113.3	109.4	101.4	97.2	114.7	108.1	98.1	106.6
	01:57:58 PM	112.8	109.7	102.2	95.4	114.0	108.9	98.6	106.6
	02:12:58 PM	114.5	110.9	103.1	98.7	117.8	110.2	99.4	108.6
	02:27:58 PM	115.9	112.0	104.0	94.6	118.2	111.4	100.1	109.8
	02:42:58 PM	113.6	111.6	104.8	89.9	114.7	111.4	101.0	108.6
	02:57:58 PM	111.7	110.7	105.7	88.5	111.7	110.7	102.0	105.1
	03:12:58 PM	108.6	108.3	105.7	84.2	107.8	108.8	102.4	100.9
	03:27:58 PM	105.7	106.5	105.7	81.3	104.9	107.2	103.1	95.4
	03:42:58 PM	103.2	104.5	105.0	79.8	101.9	105.2	102.9	91.0
	03:57:58 PM	98.8	101.9	103.5	76.6	97.4	103.0	102.5	88.1
	04:12:58 PM	96.4	99.5	102.1	76.6	95.3	100.5	101.8	85.5
	04:27:58 PM	94.9	97.5	100.6	77.2	94.0	98.7	101.0	83.9
	04:42:58 PM	93.5	96.1	99.3	76.9	93.2	97.3	100.1	83.0
	04:57:58 PM	93.0	95.0	98.2	78.7	92.5	96.1	99.4	82.4
	05:12:58 PM	93.0	94.5	97.4	81.9	93.0	95.3	98.4	82.8
	05:27:58 PM	94.1	94.6	96.7	83.6	94.2	95.2	97.8	84.6
	05:42:58 PM	95.1	95.1	96.2	85.2	95.2	95.7	97.2	86.4
	05:57:58 PM	95.5	95.5	96.3	83.2	95.4	96.4	96.9	87.9
	06:12:58 PM	94.5	95.3	96.3	81.0	94.1	96.1	96.9	87.3
	06:27:58 PM	91.7	94.1	95.9	75.9	90.5	95.2	97.0	85.1
	06:42:58 PM	89.1	91.5	95.4	75.6	88.9	93.6	96.4	82.4
	06:57:58 PM	88.3	90.4	94.3	75.3	88.0	91.9	95.0	80.5
	07:12:58 PM	87.9	89.7	93.4	76.0	87.5	90.9	94.2	79.7
	07:27:58 PM	88.0	89.5	92.9	76.3	87.3	90.2	94.0	79.8
	07:42:58 PM	88.1	89.4	92.5	77.5	87.3	89.9	93.8	79.7
	07:57:58 PM	86.9	88.8	92.2	76.6	86.2	89.5	93.4	79.4

	08:12:58 PM	86.4	88.2	91.6	76.0	85.5	88.9	93.3	78.8
	08:27:58 PM	85.8	87.7	91.1	76.3	85.0	88.1	92.8	78.2
	08:42:58 PM	85.5	87.1	90.8	75.7	84.4	87.8	92.2	77.6
	08:57:58 PM	84.7	86.5	90.2	75.4	83.9	87.2	91.9	77.1
	09:12:58 PM	84.2	86.1	89.8	75.2	83.4	86.6	91.5	76.6
	09:27:58 PM	83.8	85.7	89.4	75.1	83.1	86.2	91.1	76.3
	09:42:58 PM	83.9	85.5	88.9	74.9	82.9	85.8	90.7	75.9
	09:57:58 PM	84.1	85.4	88.5	74.8	82.9	85.5	90.4	75.5
	10:12:58 PM	83.8	85.4	88.3	74.8	82.1	85.2	89.8	75.3
	10:27:58 PM	83.6	85.1	88.0	74.5	82.1	84.7	89.6	75.0
	10:42:58 PM	83.4	84.7	87.8	74.6	82.2	84.8	89.7	75.2
	10:57:58 PM	83.2	84.6	87.5	74.2	82.1	84.4	89.1	74.7
	11:12:58 PM	83.1	84.7	87.3	74.6	82.2	84.8	89.2	74.9
	11:27:58 PM	83.6	84.6	87.2	74.5	82.7	84.7	88.9	74.8
	11:42:58 PM	83.6	84.6	87.0	74.8	82.5	84.8	88.7	74.9
	11:57:58 PM	83.5	84.6	87.0	74.5	82.7	84.8	88.4	74.8
15-Aug-01	12:12:58 AM	83.2	84.5	86.9	74.4	82.3	84.6	88.3	74.7
	12:27:58 AM	82.8	84.1	86.8	74.3	81.9	84.3	88.2	74.6
	12:42:58 AM	82.7	83.8	86.4	74.2	81.9	84.2	88.1	74.5
	12:57:58 AM	82.4	83.7	86.4	74.4	81.6	84.2	87.8	74.5
	01:12:58 AM	82.4	83.5	86.1	74.5	81.6	83.9	87.8	74.5
	01:27:58 AM	82.4	83.5	85.8	74.5	81.6	83.9	87.6	74.5
	01:42:58 AM	82.4	83.4	85.8	74.7	81.5	83.6	87.5	74.4
	01:57:58 AM	82.1	83.2	85.5	74.7	81.6	83.6	87.3	74.5
	02:12:58 AM	81.9	83.0	85.6	74.5	81.1	83.2	86.8	74.3
	02:27:58 AM	81.9	83.0	85.3	74.7	81.3	83.4	87.1	74.5
	02:42:58 AM	82.0	83.1	85.2	74.8	81.5	83.3	86.9	74.7
	02:57:58 AM	81.8	82.8	85.2	74.6	81.3	83.3	86.7	74.7
	03:12:58 AM	81.7	82.8	85.2	74.3	81.2	83.3	86.7	74.7
	03:27:58 AM	81.6	82.6	85.0	73.9	81.0	83.1	86.7	74.4
	03:42:58 AM	81.4	82.4	84.8	73.7	80.8	82.9	86.5	74.3
	03:57:58 AM	81.2	82.5	84.7	73.5	80.6	83.0	86.4	74.1
	04:12:58 AM	81.1	82.2	84.5	73.7	80.5	82.6	86.2	74.0
	04:27:58 AM	81.0	82.1	84.2	73.6	80.5	82.6	85.9	73.9
	04:42:58 AM	80.9	82.0	84.1	73.5	80.6	82.5	85.8	73.8
	04:57:58 AM	80.9	82.0	84.1	74.3	80.4	82.5	85.6	73.8
	05:12:58 AM	80.8	81.8	83.9	73.9	80.5	82.3	85.7	73.9
	05:27:58 AM	80.9	82.0	83.8	74.3	80.6	82.4	85.6	74.1
	05:42:58 AM	81.0	81.8	83.9	74.4	80.5	82.3	85.4	74.2
	05:57:58 AM	80.8	81.9	83.7	74.5	80.5	82.4	85.5	74.3
	06:12:58 AM	80.9	81.7	83.8	74.5	80.5	82.1	85.2	74.3
	06:27:58 AM	80.6	81.7	83.8	74.5	80.3	82.1	85.3	74.3
	06:42:58 AM	80.7	81.4	83.6	74.3	80.4	82.2	85.1	74.4
	06:57:58 AM	80.4	81.4	83.5	74.0	80.1	82.2	85.0	74.3

	07:12:58 AM	80.4	81.4	83.3	74.6	80.4	82.0	85.1	74.4
	07:27:58 AM	80.6	81.4	83.2	74.7	80.6	81.9	85.0	74.6
	07:42:58 AM	80.9	81.4	83.3	75.3	81.0	82.0	84.9	74.9
	07:57:58 AM	81.0	81.6	83.1	76.3	81.1	82.1	84.7	75.3
	08:12:58 AM	81.3	81.5	83.4	79.2	81.5	82.1	84.4	76.3
	08:27:58 AM	82.0	82.0	83.3	78.2	82.3	82.3	84.4	77.6
	08:42:58 AM	82.3	82.3	83.6	77.5	82.8	82.8	84.6	78.1
	08:57:58 AM	83.1	82.6	83.7	79.2	84.4	83.4	84.7	78.7
	09:12:58 AM	83.2	83.2	83.7	78.1	84.1	83.9	84.7	79.2
	09:27:58 AM	83.7	83.4	84.0	79.0	84.7	84.2	84.7	80.0
	09:42:58 AM	84.2	83.7	84.2	79.7	85.5	84.4	84.9	80.8
	09:57:58 AM	85.2	84.4	84.6	79.3	86.4	85.1	85.4	82.0
	10:12:58 AM	85.3	84.8	84.8	80.0	87.0	85.7	85.7	82.3
	10:27:58 AM	85.7	85.2	85.2	80.7	87.0	86.0	85.7	82.4
	10:42:58 AM	86.9	85.8	85.6	81.6	88.7	86.6	85.8	83.0
	10:57:58 AM	87.2	86.2	85.6	81.9	89.2	87.1	86.0	83.7
	11:12:58 AM	88.7	86.8	86.1	86.3	91.5	87.8	86.3	85.2
	11:27:58 AM	89.8	88.0	86.6	84.5	92.5	89.4	86.8	86.5
	11:42:58 AM	92.4	89.3	87.2	86.9	96.1	90.4	87.1	88.1
	11:57:58 AM	95.0	91.0	88.2	89.7	99.4	92.4	87.8	89.8
	12:12:58 PM	97.6	93.1	89.2	90.2	102.1	94.6	88.4	91.8
	12:27:58 PM	98.9	94.8	90.6	91.9	103.2	96.3	89.3	92.9
	12:42:58 PM	100.7	96.8	91.6	91.1	105.0	97.8	89.8	94.2
	12:57:58 PM	101.8	98.1	92.6	90.8	106.9	99.2	90.7	95.3
	01:12:58 PM	103.8	99.9	93.6	90.2	108.4	101.0	91.5	97.2
	01:27:58 PM	103.8	100.7	94.7	90.5	108.7	102.3	92.5	97.2
	01:42:58 PM	105.9	102.6	96.0	92.6	110.6	103.5	93.7	98.3
	01:57:58 PM	106.8	103.4	97.2	91.4	111.1	104.7	94.5	98.8
	02:12:58 PM	108.4	104.8	98.0	94.3	113.5	105.9	95.4	99.7
	02:27:58 PM	109.1	105.7	99.0	94.2	113.7	106.8	96.3	100.4
	02:42:58 PM	110.2	106.9	99.8	96.7	114.9	108.0	97.0	101.6
	02:57:58 PM	109.4	107.1	100.9	90.9	113.2	108.9	98.1	101.7
	03:12:58 PM	110.5	107.9	101.6	96.7	114.8	109.2	99.0	101.0
	03:27:58 PM	111.4	108.8	102.3	96.3	115.5	109.9	99.4	102.5
	03:42:58 PM	110.9	108.9	102.9	95.3	114.3	110.2	100.3	102.1
	03:57:58 PM	111.9	109.3	103.4	97.1	115.4	110.8	100.9	102.2
	04:12:58 PM	112.4	110.0	104.1	97.8	116.3	111.5	101.5	102.5
	04:27:58 PM	112.9	110.6	104.9	100.2	116.8	111.8	102.1	102.8
	04:42:58 PM	113.5	111.5	105.0	98.7	116.8	112.2	102.5	104.6
	04:57:58 PM	112.2	110.9	105.2	96.6	114.6	112.3	103.1	104.7
	05:12:58 PM	110.5	109.8	105.9	96.5	113.1	111.8	103.6	102.8
	05:27:58 PM	108.9	108.6	105.8	90.1	110.4	110.9	104.0	101.2
	05:42:58 PM	107.4	107.4	105.6	90.7	108.9	109.7	104.1	99.2
	05:57:58 PM	106.6	106.6	105.3	93.8	108.2	108.7	104.4	97.7

	06:12:58 PM	105.5	105.8	105.0	95.4	107.0	107.7	104.2	96.2
	06:27:58 PM	104.8	105.0	104.2	88.5	106.0	107.0	103.7	96.0
	06:42:58 PM	104.7	104.7	103.9	89.6	106.4	106.4	103.6	95.9
	06:57:58 PM	104.6	104.6	103.6	89.4	105.9	106.2	103.4	95.1
	07:12:58 PM	103.9	104.2	103.4	87.9	104.4	105.7	103.1	93.9
	07:27:58 PM	102.3	103.1	103.1	87.6	102.7	104.5	103.0	92.4
	07:42:58 PM	101.1	102.2	102.4	86.2	101.6	103.6	102.6	91.0
	07:57:58 PM	100.0	101.3	102.0	84.5	100.1	102.7	102.4	89.6
	08:12:58 PM	99.0	100.3	101.6	83.3	98.9	101.7	101.9	88.0
	08:27:58 PM	97.9	99.4	101.0	82.4	97.7	100.8	101.6	86.6
	08:42:58 PM	97.0	98.6	100.2	82.1	97.0	99.8	101.1	85.3
	08:57:58 PM	96.5	97.8	99.6	82.3	96.0	99.1	100.7	84.4
	09:12:58 PM	95.9	97.2	99.1	81.7	95.7	98.6	100.1	83.8
	09:27:58 PM	95.4	96.7	98.5	81.2	95.3	97.9	99.7	83.1
	09:42:58 PM	94.8	96.3	98.2	80.8	94.4	97.2	99.3	82.5
	09:57:58 PM	94.2	95.7	97.6	81.3	93.6	96.7	98.8	81.9
	10:12:58 PM	93.5	95.1	97.2	82.2	93.3	96.2	98.2	81.7
	10:27:58 PM	93.2	94.5	96.6	81.6	92.8	95.7	98.0	81.7
	10:42:58 PM	92.7	94.3	96.1	81.7	92.1	95.2	97.5	81.5
	10:57:58 PM	92.1	93.7	95.8	80.5	91.8	94.6	97.2	81.1
	11:12:58 PM	91.7	93.3	95.4	80.1	91.3	94.2	96.8	80.7
	11:27:58 PM	91.4	93.0	95.1	77.7	90.9	93.8	96.6	80.0
	11:42:58 PM	91.1	92.4	94.7	79.2	90.4	93.2	96.3	79.4
	11:57:58 PM	90.5	92.0	94.1	78.6	90.0	92.9	95.7	79.1
16-Aug-01	12:12:58 AM	90.3	91.8	93.9	76.5	89.8	92.4	95.5	78.6
	12:27:58 AM	90.0	91.3	93.4	77.6	89.3	92.1	95.2	78.1
	12:42:58 AM	89.4	91.0	93.1	78.3	89.0	91.6	94.9	77.8
	12:57:58 AM	89.1	90.4	92.8	77.3	88.5	91.3	94.4	77.5
	01:12:58 AM	88.8	90.1	92.4	77.1	88.1	90.9	94.3	77.1
	01:27:58 AM	88.6	89.9	92.0	76.5	87.7	90.6	93.6	76.8
	01:42:58 AM	88.3	89.6	91.9	76.4	87.3	90.2	93.5	76.4
	01:57:58 AM	87.7	89.3	91.4	76.1	87.1	89.7	93.3	76.1
	02:12:58 AM	87.4	88.7	91.1	75.5	86.5	89.4	93.0	75.8
	02:27:58 AM	87.1	88.5	90.8	75.5	86.2	89.1	92.7	75.5
	02:42:58 AM	86.8	88.1	90.5	75.2	85.9	88.8	92.4	75.2
	02:57:58 AM	86.6	87.9	90.3	73.9	85.9	88.8	92.1	75.2
	03:12:58 AM	86.1	87.4	90.0	74.7	85.4	88.0	91.7	74.7
	03:27:58 AM	85.9	87.2	89.6	74.5	85.2	88.1	91.7	74.8
	03:42:58 AM	85.4	87.0	89.4	74.1	85.1	87.9	91.5	74.6
	03:57:58 AM	85.3	86.6	89.2	74.1	84.6	87.5	91.1	74.4
	04:12:58 AM	84.9	86.5	88.8	74.0	84.5	87.1	91.0	74.3
	04:27:58 AM	84.8	86.1	88.5	73.7	84.4	87.0	90.6	74.2
	04:42:58 AM	84.7	86.0	88.1	74.4	84.4	86.7	90.3	74.2
	04:57:58 AM	84.5	85.8	88.2	74.2	84.2	86.5	90.2	74.3

	05:12:58 AM	84.6	85.6	88.0	73.7	83.9	86.5	89.9	74.3
	05:27:58 AM	84.2	85.5	87.9	73.6	83.8	86.1	89.7	74.1
	05:42:58 AM	84.1	85.4	87.5	73.5	83.5	86.0	89.7	74.0
	05:57:58 AM	84.0	85.1	87.4	73.7	83.7	86.0	89.4	74.0
	06:12:58 AM	83.7	85.1	87.2	73.7	83.4	85.7	89.4	74.0
	06:27:58 AM	83.7	84.8	87.2	73.4	83.4	85.7	89.1	74.0
	06:42:58 AM	83.5	84.8	86.9	73.7	83.2	85.5	88.9	74.0
	06:57:58 AM	83.5	84.6	86.7	74.0	83.3	85.3	88.7	74.1
	07:12:58 AM	83.3	84.4	86.5	73.5	83.0	85.3	88.4	74.1
	07:27:58 AM	83.5	84.5	86.4	73.7	83.1	85.2	88.3	74.2
	07:42:58 AM	83.4	84.5	86.3	73.9	83.1	85.1	88.3	74.4
	07:57:58 AM	83.4	84.4	86.3	74.7	83.6	85.2	88.0	74.7
	08:12:58 AM	83.9	84.4	86.3	74.4	84.1	85.2	87.8	75.2
	08:27:58 AM	84.1	84.6	86.2	75.1	84.4	85.4	87.7	76.0
	08:42:58 AM	84.7	85.0	86.3	75.4	84.8	85.6	87.6	76.7
	08:57:58 AM	85.2	85.2	86.5	76.2	85.3	85.8	87.6	77.4
	09:12:58 AM	85.6	85.6	86.6	77.9	85.9	86.1	87.7	78.3
	09:27:58 AM	86.5	86.2	86.7	79.9	87.3	86.5	87.6	79.5
	09:42:58 AM	87.1	86.8	87.1	79.2	87.9	87.1	87.7	80.9
	09:57:58 AM	87.8	87.3	87.3	81.2	89.0	88.0	88.0	82.5
	10:12:58 AM	90.0	88.2	87.6	88.2	91.9	88.8	88.0	84.9
	10:27:58 AM	91.5	89.4	88.3	87.5	93.6	90.3	88.5	87.4
	10:42:58 AM	93.5	90.4	88.8	88.3	95.8	91.4	89.1	90.1
	10:57:58 AM	95.7	92.1	89.7	89.7	98.9	93.2	89.6	92.9
	11:12:58 AM	96.0	93.1	90.5	86.8	97.9	94.3	89.9	93.6
	11:27:58 AM	98.1	94.7	91.8	93.1	100.7	95.8	90.6	95.0
	11:42:58 AM	99.6	96.2	92.6	90.2	102.8	97.1	91.2	96.1
	11:57:58 AM	101.2	97.8	93.6	91.8	104.0	98.9	91.9	97.4
	12:12:58 PM	103.8	99.4	94.7	95.0	107.4	100.5	92.7	98.7
	12:27:58 PM	104.8	102.2	95.9	93.8	108.1	102.0	93.5	100.2
	12:42:58 PM	106.5	103.4	97.1	94.5	109.2	103.6	94.3	100.8
	12:57:58 PM	107.6	104.8	98.3	95.9	110.8	105.0	95.2	101.4
	01:12:58 PM	108.2	105.3	99.1	94.3	111.1	105.7	96.2	102.1
	01:27:58 PM	109.8	106.7	100.2	97.6	114.4	106.3	96.8	103.7
	01:42:58 PM	109.8	107.2	100.7	96.3	112.8	107.8	97.5	104.7
	01:57:58 PM	109.8	107.5	101.5	92.9	112.4	108.1	98.6	104.8
	02:12:58 PM	110.1	107.5	102.3	95.8	113.2	108.1	99.1	104.0
	02:27:58 PM	111.5	108.9	102.7	97.5	114.4	109.6	99.8	105.2
	02:42:58 PM	112.5	110.2	103.7	98.3	115.6	110.5	100.5	105.9
	02:57:58 PM	110.9	109.6	104.1	92.9	112.6	110.6	101.4	104.4
	03:12:58 PM	112.3	110.0	104.8	98.8	115.6	110.5	101.8	105.4
	03:27:58 PM	111.8	110.2	105.0	92.8	113.1	111.1	102.1	105.5
	03:42:58 PM	111.7	110.4	105.5	98.7	113.6	111.0	102.6	105.2
	03:57:58 PM	112.8	111.0	105.8	101.1	114.8	111.5	103.1	105.6

	04:12:58 PM	114.3	112.0	106.5	97.9	117.2	112.4	103.5	106.6
	04:27:58 PM	115.0	112.6	106.7	99.1	117.7	112.9	104.0	107.6
	04:42:58 PM	113.8	112.6	107.4	99.1	116.2	113.2	104.5	107.3
	04:57:58 PM	112.5	111.8	107.6	91.1	113.8	112.8	104.9	105.9
	05:12:58 PM	111.0	110.8	107.7	96.2	111.7	111.7	105.4	103.3
	05:27:58 PM	113.0	111.5	107.4	91.2	114.1	111.6	105.2	104.2
	05:42:58 PM	112.8	111.5	107.3	88.8	114.2	111.7	105.3	103.3
	05:57:58 PM	110.8	110.3	107.5	87.8	110.7	111.0	105.4	100.8
	06:12:58 PM	110.1	109.8	107.5	87.9	109.8	110.3	105.7	98.2
	06:27:58 PM	108.6	108.6	107.0	87.9	108.1	109.1	105.5	96.6
	06:42:58 PM	106.7	107.3	106.5	86.1	106.8	108.0	105.2	95.2
	06:57:58 PM	105.7	106.2	106.0	84.0	105.4	107.2	105.2	93.6
	07:12:58 PM	104.1	105.1	105.7	82.6	102.9	106.0	105.0	91.6
	07:27:58 PM	102.7	104.0	104.8	81.7	101.6	104.9	104.6	89.7
	07:42:58 PM	101.0	102.8	104.1	80.8	100.1	103.7	104.2	88.0
	07:57:58 PM	100.0	101.8	103.4	79.5	99.1	102.4	103.7	86.2
	08:12:58 PM	99.4	100.9	102.5	79.4	98.3	101.7	103.2	84.6
	08:27:58 PM	98.6	100.2	102.0	79.1	97.4	100.7	102.7	83.4
	08:42:58 PM	97.9	99.5	101.3	78.2	96.7	100.1	102.1	82.2
	08:57:58 PM	97.2	98.7	100.8	78.0	96.0	99.4	101.7	81.3
	09:12:58 PM	96.7	98.0	100.1	77.5	95.4	98.7	101.0	80.4
	09:27:58 PM	96.2	97.5	99.6	77.5	94.9	98.0	100.6	79.6
	09:42:58 PM	95.8	97.1	99.0	77.1	94.6	97.4	100.3	79.3
	09:57:58 PM	94.8	96.6	98.7	77.4	93.6	96.9	99.7	78.8
	10:12:58 PM	94.3	95.8	98.2	77.4	92.9	96.2	99.3	78.3
	10:27:58 PM	93.6	95.2	97.5	76.5	92.3	95.7	99.0	78.0
	10:42:58 PM	93.1	94.6	97.0	77.3	91.8	95.1	98.5	77.8
	10:57:58 PM	92.6	94.2	96.5	76.5	91.4	94.8	98.1	77.6
	11:12:58 PM	92.3	93.9	96.2	76.2	91.0	94.3	97.7	77.2
	11:27:58 PM	92.0	93.3	95.7	77.0	90.5	93.9	97.2	77.0
	11:42:58 PM	91.7	93.0	95.3	76.4	90.4	93.5	96.9	76.9
	11:57:58 PM	91.7	92.8	94.8	76.2	90.8	93.1	96.2	76.7
17-Aug-01	12:12:58 AM	91.2	92.5	94.6	76.2	90.0	92.8	95.9	76.4
	12:27:58 AM	90.7	92.0	94.4	75.4	89.5	92.3	95.6	76.2
	12:42:58 AM	90.1	91.7	94.0	75.3	88.9	92.0	95.3	75.9
	12:57:58 AM	89.6	91.1	93.5	75.1	88.6	91.5	95.3	75.6
	01:12:58 AM	89.4	91.0	93.3	75.4	88.2	91.0	94.7	75.4
	01:27:58 AM	89.1	90.6	93.0	75.3	87.9	90.7	94.3	75.4
	01:42:58 AM	88.7	90.2	92.6	75.5	87.8	90.6	94.3	75.5
	01:57:58 AM	88.6	89.9	92.3	75.7	87.5	90.3	93.7	75.2
	02:12:58 AM	88.1	89.7	92.1	76.0	87.3	90.1	93.7	75.5
	02:27:58 AM	87.9	89.4	91.5	75.7	86.8	89.7	93.3	75.3
	02:42:58 AM	87.6	89.2	91.3	76.0	86.8	89.6	93.2	75.5
	02:57:58 AM	87.5	88.9	91.2	74.9	86.7	89.0	92.6	75.2

	03:12:58 AM	87.2	88.5	90.9	75.9	86.2	88.8	92.4	75.2
	03:27:58 AM	87.0	88.3	90.6	75.8	86.2	88.8	92.4	75.5
	03:42:58 AM	86.7	88.0	90.4	75.3	85.6	88.2	92.1	75.2
	03:57:58 AM	86.6	87.9	90.0	75.3	85.5	88.1	92.0	75.1
	04:12:58 AM	86.3	87.6	89.9	74.9	85.6	88.2	91.8	75.2
	04:27:58 AM	86.1	87.5	89.6	74.2	85.5	87.8	91.5	75.1
	04:42:58 AM	86.0	87.3	89.4	74.3	85.1	87.7	91.3	74.9
	04:57:58 AM	85.7	87.1	89.2	73.8	85.1	87.4	91.0	74.6
	05:12:58 AM	85.3	86.6	89.0	74.2	84.7	87.3	90.9	74.5
	05:27:58 AM	85.2	86.5	88.9	73.8	84.6	87.2	90.8	74.4
	05:42:58 AM	85.3	86.4	88.7	73.9	84.7	87.0	90.6	74.2
	05:57:58 AM	85.0	86.3	88.4	73.9	84.4	86.7	90.3	74.2
	06:12:58 AM	84.9	86.0	88.3	74.1	84.3	86.6	90.0	74.1
	06:27:58 AM	84.7	86.0	88.1	74.1	84.0	86.4	90.0	74.1
	06:42:58 AM	84.4	85.7	87.8	74.1	83.8	86.1	89.7	74.1
	06:57:58 AM	84.4	85.4	87.5	74.1	83.8	85.9	89.5	74.1
	07:12:58 AM	84.1	85.4	87.5	74.1	83.8	85.8	89.2	74.1
	07:27:58 AM	84.1	85.2	87.3	75.4	83.9	85.5	89.1	74.5
	07:42:58 AM	84.2	85.0	87.4	78.4	84.2	85.3	88.6	76.1
	07:57:58 AM	84.6	85.2	87.3	79.1	84.9	85.4	88.5	78.4
	08:12:58 AM	85.1	85.3	87.2	80.8	85.9	85.7	88.3	81.0
	08:27:58 AM	85.9	85.9	87.2	82.2	87.6	86.0	88.4	83.7
	08:42:58 AM	86.8	86.2	87.3	84.4	88.9	86.8	88.4	85.0
	08:57:58 AM	87.7	86.7	87.5	84.6	90.2	87.9	88.6	86.8
	09:12:58 AM	88.5	87.7	87.9	86.6	89.8	88.5	89.0	87.4
	09:27:58 AM	89.6	88.3	88.6	87.2	92.0	89.1	89.1	89.1
	09:42:58 AM	91.2	88.8	88.3	89.1	94.1	90.2	89.2	91.3
	09:57:58 AM	93.3	90.4	89.1	88.8	96.2	91.6	89.5	93.1
	10:12:58 AM	94.7	91.5	89.7	90.2	98.4	93.0	89.9	95.0
	10:27:58 AM	96.7	93.0	90.4	92.7	101.1	94.4	90.2	98.0
	10:42:58 AM	99.1	95.2	92.0	95.7	103.1	96.2	91.0	99.0
	10:57:58 AM	98.2	96.1	92.4	94.2	100.8	97.2	91.7	99.5
	11:12:58 AM	99.1	97.3	93.1	87.8	101.7	97.9	92.2	100.2
	11:27:58 AM	100.8	97.9	94.0	94.5	104.4	98.5	93.0	99.7
	11:42:58 AM	101.2	99.1	94.7	90.8	104.2	99.8	93.4	100.3
	11:57:58 AM	99.8	98.5	95.4	93.8	102.1	99.6	94.1	99.3
	12:12:58 PM	103.9	101.1	95.8	94.8	107.1	100.9	94.2	101.2
	12:27:58 PM	106.9	103.6	97.1	98.4	111.5	103.3	94.8	104.9
	12:42:58 PM	108.3	104.9	98.1	97.8	112.2	105.0	95.5	105.8
	12:57:58 PM	107.2	105.1	99.4	89.9	109.4	105.8	96.8	103.5
	01:12:58 PM	106.4	104.6	100.1	90.4	108.3	105.2	97.5	102.9
	01:27:58 PM	109.7	106.6	100.4	92.0	113.9	106.5	97.8	105.7
	01:42:58 PM	108.5	106.4	101.2	98.8	111.5	106.9	98.4	105.1
	01:57:58 PM	110.6	107.5	101.6	95.8	115.0	107.9	98.9	107.1

	02:12:58 PM	113.3	109.4	102.2	99.0	118.8	109.7	99.5	110.2
	02:27:58 PM	115.4	111.3	103.3	101.7	120.6	111.7	100.5	111.0
	02:42:58 PM	114.1	111.8	104.5	94.6	117.4	112.3	101.3	110.3
	02:57:58 PM	113.5	111.1	105.4	102.3	116.7	111.8	102.4	108.5
	03:12:58 PM	111.8	110.5	105.6	93.6	113.6	111.5	102.8	107.2
	03:27:58 PM	110.1	109.3	106.2	94.5	111.6	110.6	103.5	104.2
	03:42:58 PM	110.5	109.2	106.1	104.3	113.0	109.9	103.5	104.8
	03:57:58 PM	112.8	110.4	105.5	98.2	116.1	110.7	103.3	107.7
	04:12:58 PM	115.0	112.2	106.2	102.8	118.6	112.2	103.5	111.2
	04:27:58 PM	116.1	113.6	106.6	105.5	119.8	113.5	103.8	113.3
	04:42:58 PM	114.1	112.5	107.1	93.7	116.5	113.7	104.8	112.2
	04:57:58 PM	111.2	111.0	107.8	89.5	112.7	112.4	105.6	108.6
	05:12:58 PM	109.4	109.7	107.9	87.5	109.6	110.9	105.8	104.3
	05:27:58 PM	107.3	107.8	107.3	84.5	107.2	109.5	105.9	99.2
	05:42:58 PM	105.9	106.7	106.7	83.9	106.1	108.1	105.8	96.1
	05:57:58 PM	104.5	105.5	105.8	84.3	104.7	106.7	105.2	93.6
	06:12:58 PM	104.0	104.7	105.2	84.8	103.5	105.8	104.8	92.2
	06:27:58 PM	103.0	103.7	104.5	84.1	102.4	104.7	104.2	90.5
	06:42:58 PM	102.0	103.0	103.8	83.3	101.6	103.9	103.9	89.8
	06:57:58 PM	101.3	102.4	103.4	82.4	100.8	103.1	103.4	88.7
	07:12:58 PM	100.5	101.5	102.8	82.4	100.1	102.4	102.9	87.7
	07:27:58 PM	99.7	100.7	102.3	81.8	99.0	101.6	102.6	86.6
	07:42:58 PM	98.8	100.1	101.7	82.0	98.2	100.8	102.1	86.1
	07:57:58 PM	98.2	99.5	101.0	81.1	97.7	100.2	101.5	85.0
	08:12:58 PM	97.5	98.8	100.6	80.6	96.9	99.5	101.3	84.0
	08:27:58 PM	96.8	98.3	100.2	79.9	96.1	98.9	100.9	83.1
	08:42:58 PM	96.2	97.5	99.6	79.7	95.5	98.3	100.4	82.6
	08:57:58 PM	96.0	97.3	99.1	80.2	95.0	97.9	100.2	82.1
	09:12:58 PM	95.5	96.8	98.6	80.0	94.6	97.1	99.4	81.6
	09:27:58 PM	94.8	96.1	98.2	79.8	94.0	96.8	99.1	81.3
	09:42:58 PM	94.4	95.7	97.7	79.4	93.6	96.2	98.8	80.9
	09:57:58 PM	94.0	95.3	97.4	79.2	93.1	95.7	98.5	80.4
	10:12:58 PM	93.5	94.8	96.9	79.0	92.8	95.4	98.2	80.1
	10:27:58 PM	93.2	94.5	96.6	78.1	92.4	95.0	97.8	79.7
	10:42:58 PM	92.7	94.0	96.1	77.9	91.7	94.6	97.4	79.3
	10:57:58 PM	92.4	93.7	95.7	77.9	91.4	94.2	97.0	78.9
	11:12:58 PM	92.2	93.3	95.4	77.5	91.0	93.6	96.9	78.5
	11:27:58 PM	91.7	93.0	95.1	78.0	90.7	93.3	96.4	78.2
	11:42:58 PM	91.4	92.7	94.8	77.2	90.2	93.0	96.1	78.0
	11:57:58 PM	91.1	92.4	94.5	76.9	90.1	92.7	95.8	77.6
18-Aug-01	12:12:58 AM	90.8	92.1	94.2	76.3	89.8	92.3	95.4	77.3
	12:27:58 AM	90.5	91.5	93.9	77.0	89.3	91.9	95.2	77.1
	12:42:58 AM	90.1	91.4	93.5	77.4	89.2	91.5	94.9	76.9
	12:57:58 AM	89.9	90.9	93.3	76.2	89.0	91.3	94.6	76.7

	01:12:58 AM	89.4	90.7	92.8	77.3	88.3	90.9	94.2	76.6
	01:27:58 AM	89.4	90.4	92.8	76.2	88.4	90.8	94.1	76.4
	01:42:58 AM	89.1	90.1	92.5	75.4	87.9	90.5	93.9	76.2
	01:57:58 AM	88.8	89.8	92.2	75.3	87.6	90.2	93.5	75.9
	02:12:58 AM	88.6	89.6	91.7	75.1	87.3	89.9	93.3	75.6
	02:27:58 AM	88.3	89.4	91.5	75.1	87.1	89.5	93.1	75.4
	02:42:58 AM	87.9	89.3	91.4	75.8	86.8	89.4	92.7	75.3
	02:57:58 AM	87.7	89.0	91.1	75.8	86.5	88.8	92.5	75.3
	03:12:58 AM	87.6	88.7	90.8	75.5	86.5	88.8	92.2	75.3
	03:27:58 AM	87.3	88.3	90.4	75.1	86.2	88.5	91.9	75.2
	03:42:58 AM	86.9	88.2	90.3	75.5	86.3	88.7	92.0	75.4
	03:57:58 AM	86.9	87.9	90.0	75.0	85.9	88.3	91.9	75.2
	04:12:58 AM	86.7	87.8	89.9	75.1	85.6	87.9	91.5	74.9
	04:27:58 AM	86.4	87.5	89.6	74.8	85.6	87.9	91.5	75.1
	04:42:58 AM	86.1	87.4	89.5	74.7	85.2	87.8	91.2	75.1
	04:57:58 AM	86.0	87.0	89.1	74.1	84.9	87.2	90.8	74.7
	05:12:58 AM	85.6	86.9	89.0	75.0	85.0	87.3	90.9	74.8
	05:27:58 AM	85.5	86.6	89.0	75.2	84.7	87.0	90.7	74.8
	05:42:58 AM	85.3	86.6	88.7	74.7	84.7	86.8	90.4	74.8
	05:57:58 AM	85.2	86.3	88.4	74.6	84.6	86.7	90.3	74.7
	06:12:58 AM	85.1	86.1	88.2	73.9	84.4	86.5	90.1	74.5
	06:27:58 AM	84.9	86.0	88.1	73.8	84.0	86.1	89.7	74.1
	06:42:58 AM	84.8	85.8	87.9	74.2	83.9	86.2	89.9	74.2
	06:57:58 AM	84.6	85.6	87.7	74.5	84.0	86.0	89.7	74.3
	07:12:58 AM	84.4	85.5	87.6	74.9	83.9	86.0	89.4	74.5
	07:27:58 AM	84.4	85.2	87.3	75.7	83.9	85.7	89.1	74.8
	07:42:58 AM	84.7	85.3	87.4	78.9	84.7	85.8	89.1	76.1
	07:57:58 AM	85.1	85.6	87.5	77.9	84.8	85.9	88.7	77.3
	08:12:58 AM	85.8	85.8	87.4	83.7	87.0	85.7	88.5	80.2
	08:27:58 AM	86.4	85.9	87.2	83.0	88.7	86.6	88.4	83.7
	08:42:58 AM	87.5	86.8	87.3	85.2	90.6	87.5	88.5	87.0
	08:57:58 AM	88.8	87.5	87.7	87.2	92.0	88.4	88.7	90.2
	09:12:58 AM	90.3	88.4	88.2	86.3	93.9	89.5	89.0	92.1
	09:27:58 AM	91.8	89.7	88.7	90.8	95.8	90.9	89.4	93.2
	09:42:58 AM	94.2	91.1	89.5	94.7	96.3	91.6	89.5	95.7
	09:57:58 AM	95.2	92.0	89.6	90.2	98.6	92.9	90.1	98.1
	10:12:58 AM	95.8	93.1	90.8	95.2	97.6	94.0	90.6	98.1
	10:27:58 AM	96.8	94.2	91.8	97.4	99.2	94.8	91.2	98.7
	10:42:58 AM	98.8	95.6	92.5	101.1	101.9	95.7	91.3	100.6
	10:57:58 AM	98.5	96.4	92.8	96.2	100.4	96.7	91.8	101.1
	11:12:58 AM	102.4	98.8	94.1	100.3	105.4	98.5	92.5	103.4
	11:27:58 AM	104.6	101.0	95.0	96.3	108.2	100.2	93.0	105.4
	11:42:58 AM	104.6	101.7	95.7	96.2	107.9	101.5	93.7	105.8
	11:57:58 AM	106.6	103.0	96.9	98.5	110.7	102.5	94.3	107.7

	12:12:58 PM	105.1	102.5	97.5	95.4	108.1	102.9	95.2	106.8
	12:27:58 PM	105.3	102.7	97.8	89.6	107.8	103.5	96.0	106.1
	12:42:58 PM	97.6	99.5	97.9	76.7	97.0	101.4	96.7	100.1
	12:57:58 PM	93.8	95.8	97.7	77.9	94.3	98.6	97.6	94.3
	01:12:58 PM	92.8	94.1	96.8	80.4	93.9	96.5	97.0	89.5
	01:27:58 PM	96.8	95.2	96.0	82.6	99.3	97.0	96.2	90.3
	01:42:58 PM	99.0	96.9	95.8	90.1	100.6	98.3	95.8	93.4
	01:57:58 PM	102.2	98.6	96.2	92.3	102.0	98.9	95.6	96.4
	02:12:58 PM	104.3	101.7	96.8	88.9	103.7	100.4	95.8	99.6
	02:27:58 PM	101.4	100.6	97.7	86.7	100.6	100.3	96.5	98.5
	02:42:58 PM	100.0	99.4	98.1	86.3	99.5	99.8	96.9	96.7
	02:57:58 PM	99.3	98.8	98.3	90.9	99.9	99.4	97.3	95.7
	03:12:58 PM	103.9	101.3	98.2	99.0	106.7	100.8	97.0	99.5
	03:27:58 PM	102.9	101.6	98.2	89.3	103.2	101.9	97.0	100.1
	03:42:58 PM	101.8	101.0	98.9	89.8	101.3	101.3	97.5	98.5
	03:57:58 PM	101.4	100.4	99.1	92.0	102.1	100.8	97.7	98.2
	04:12:58 PM	103.6	101.6	99.2	97.4	106.7	101.9	97.8	100.9
	04:27:58 PM	104.7	102.6	99.2	97.4	108.3	103.4	98.0	102.4
	04:42:58 PM	105.5	103.4	99.8	96.6	108.6	104.5	98.3	105.0
	04:57:58 PM	106.3	104.2	100.3	100.3	109.4	105.3	98.6	107.1
	05:12:58 PM	104.9	103.9	100.8	92.4	106.8	105.3	99.4	106.3
	05:27:58 PM	103.7	103.2	100.9	95.4	106.0	104.5	99.6	106.8
	05:42:58 PM	106.3	104.7	101.1	94.0	109.2	105.3	99.9	106.9
	05:57:58 PM	106.5	105.0	101.6	93.0	108.4	106.1	100.4	105.3
	06:12:58 PM	105.9	104.9	102.3	92.8	106.3	105.6	100.7	103.0
	06:27:58 PM	105.2	104.4	102.1	94.8	105.6	105.1	100.7	101.7
	06:42:58 PM	103.7	103.5	101.9	90.1	104.5	104.5	101.0	101.2
	06:57:58 PM	102.6	102.6	102.1	87.1	102.6	103.9	101.1	98.8
	07:12:58 PM	100.8	101.6	101.9	84.8	100.6	102.6	101.1	95.7
	07:27:58 PM	99.7	100.8	101.3	84.0	99.2	101.8	101.3	93.3
	07:42:58 PM	98.9	99.9	100.9	82.8	97.8	100.6	100.9	90.8
	07:57:58 PM	97.9	98.9	100.2	82.1	97.2	99.8	100.3	88.9
	08:12:58 PM	97.0	98.3	99.9	81.5	95.9	98.7	100.0	87.1
	08:27:58 PM	96.0	97.3	99.1	80.7	95.2	98.0	99.6	85.9
	08:42:58 PM	95.1	96.6	98.7	80.3	94.4	97.3	99.1	84.6
	08:57:58 PM	94.5	95.8	98.1	79.7	93.9	96.7	98.8	83.5
	09:12:58 PM	93.7	95.3	97.6	78.9	93.2	96.0	98.3	82.5
	09:27:58 PM	93.2	94.5	96.9	78.7	92.7	95.6	97.9	81.6
	09:42:58 PM	92.8	94.1	96.5	79.4	92.1	94.9	97.5	80.9
	09:57:58 PM	92.2	93.5	96.1	78.8	91.5	94.4	96.9	80.4
	10:12:58 PM	91.6	92.9	95.5	79.5	91.3	93.9	96.7	80.1
	10:27:58 PM	91.4	92.7	95.0	78.7	91.2	93.5	96.3	80.0
	10:42:58 PM	91.3	92.6	94.7	77.9	90.8	93.4	96.0	79.6
	10:57:58 PM	90.4	92.2	94.6	78.5	89.7	92.8	95.8	79.2

	11:12:58 PM	89.5	91.3	94.2	76.6	88.9	92.6	95.6	78.5
	11:27:58 PM	89.1	90.9	93.8	75.6	88.7	92.1	95.2	77.8
	11:42:58 PM	89.0	90.5	93.4	74.7	88.9	91.7	94.8	76.9
	11:57:58 PM	88.8	90.4	93.0	74.8	88.4	91.3	94.6	76.4
19-Aug-01	12:12:58 AM	88.7	90.0	92.7	74.2	88.1	90.7	94.1	75.9
	12:27:58 AM	88.2	89.8	92.2	74.2	87.7	90.5	93.9	75.4
	12:42:58 AM	87.9	89.4	92.1	74.4	87.3	89.9	93.5	75.1
	12:57:58 AM	87.1	88.9	91.5	74.1	86.6	89.7	93.3	74.9
	01:12:58 AM	87.1	88.7	91.3	74.7	86.6	89.5	92.9	74.6
	01:27:58 AM	86.7	88.2	90.9	74.2	86.7	89.3	92.9	74.7
	01:42:58 AM	86.7	88.0	90.7	74.0	86.6	89.2	92.8	74.6
	01:57:58 AM	86.5	87.8	90.5	74.1	86.2	88.5	92.1	74.4
	02:12:58 AM	86.4	87.7	90.3	74.5	86.2	88.6	92.2	74.5
	02:27:58 AM	86.3	87.6	90.0	74.4	86.2	88.6	91.9	74.5
	02:42:58 AM	86.2	87.5	89.8	74.5	85.8	87.9	91.5	74.4
	02:57:58 AM	86.2	87.3	89.6	74.6	85.8	88.2	91.5	74.6
	03:12:58 AM	86.2	87.2	89.6	74.0	85.8	88.1	91.2	74.6
	03:27:58 AM	85.6	87.0	89.3	75.6	85.3	87.9	91.0	74.6
	03:42:58 AM	85.5	86.9	89.0	75.0	85.5	87.6	91.0	74.8
	03:57:58 AM	85.7	86.7	88.8	74.8	85.6	87.7	90.8	74.9
	04:12:58 AM	85.3	86.7	88.8	74.2	85.0	87.4	90.7	74.8
	04:27:58 AM	85.3	86.6	88.7	74.2	84.9	87.0	90.1	74.5
	04:42:58 AM	85.0	86.3	88.4	73.6	84.6	87.0	90.3	74.4
	04:57:58 AM	84.6	85.9	88.3	74.0	84.5	86.8	90.2	74.3
	05:12:58 AM	84.3	85.8	88.2	73.1	83.6	86.5	90.1	74.2
	05:27:58 AM	83.3	84.9	87.5	73.3	83.2	86.0	89.4	74.0
	05:42:58 AM	83.2	84.7	87.4	73.1	83.0	85.6	89.3	73.9
	05:57:58 AM	83.0	84.3	86.9	73.2	82.7	85.3	89.1	73.8
	06:12:58 AM	82.6	84.2	86.8	73.3	82.3	84.9	89.0	73.6
	06:27:58 AM	82.5	83.8	86.5	73.0	82.1	84.8	88.6	73.5
	06:42:58 AM	82.2	83.8	86.4	73.2	81.8	84.5	88.3	73.5
	06:57:58 AM	82.1	83.4	86.0	73.0	81.7	84.1	88.2	73.3
	07:12:58 AM	81.5	83.1	85.7	73.6	81.0	83.9	87.8	73.4
	07:27:58 AM	81.4	82.7	85.6	74.2	81.1	83.5	87.6	73.8
	07:42:58 AM	81.6	82.7	85.3	76.1	81.3	82.9	87.1	74.8
	07:57:58 AM	82.1	82.9	85.0	77.6	82.2	83.3	86.9	77.0
	08:12:58 AM	83.1	83.4	85.2	82.6	83.5	83.5	86.7	79.6
	08:27:58 AM	83.9	83.9	85.0	80.0	84.4	84.1	86.7	82.6
	08:42:58 AM	86.0	85.2	86.0	86.7	86.4	85.1	86.9	84.6
	08:57:58 AM	87.1	85.8	85.8	85.5	87.4	85.8	86.8	88.1
	09:12:58 AM	87.3	86.5	86.2	79.6	86.7	86.7	87.4	88.5
	09:27:58 AM	86.8	86.5	86.8	79.1	86.0	86.8	87.8	86.2
	09:42:58 AM	86.3	86.3	87.0	77.8	85.2	86.5	87.8	84.2
	09:57:58 AM	86.2	86.2	87.2	77.4	84.5	86.4	87.9	82.7

	10:12:58 AM	86.1	86.1	87.1	78.4	84.8	86.1	87.7	82.2
	10:27:58 AM	86.4	86.1	86.9	79.5	85.9	86.2	87.7	82.8
	10:42:58 AM	86.8	86.3	87.1	79.9	87.0	86.5	87.5	83.6
	10:57:58 AM	87.7	86.9	87.2	81.6	87.7	86.9	87.7	84.6
	11:12:58 AM	88.4	87.3	87.3	81.5	89.0	87.5	87.7	86.2
	11:27:58 AM	89.1	88.0	87.5	85.1	90.3	88.3	88.0	87.7
	11:42:58 AM	90.4	88.8	88.0	86.1	92.2	89.1	88.0	89.6
	11:57:58 AM	92.4	90.0	88.4	88.4	94.4	90.3	88.2	92.1
	12:12:58 PM	93.3	91.2	88.8	88.6	95.2	91.6	88.5	94.2
	12:27:58 PM	93.8	91.9	89.6	88.0	95.8	92.5	89.1	95.3
	12:42:58 PM	94.2	92.3	90.2	86.5	95.7	92.9	89.5	95.5
	12:57:58 PM	94.4	92.8	90.5	88.4	96.4	93.6	89.9	95.6
	01:12:58 PM	95.1	93.5	91.1	90.1	96.8	93.9	90.3	96.0
	01:27:58 PM	95.5	94.0	91.3	87.6	97.5	94.4	90.8	96.5
	01:42:58 PM	95.7	94.4	92.0	86.8	97.3	94.7	91.1	96.2
	01:57:58 PM	96.2	94.9	92.2	86.7	97.4	95.1	91.4	96.1
	02:12:58 PM	96.4	95.1	92.8	87.0	98.0	95.4	91.8	96.2
	02:27:58 PM	96.3	95.2	93.1	89.2	98.0	95.7	92.0	95.7
	02:42:58 PM	97.3	95.7	93.4	92.8	100.8	96.4	92.3	96.6
	02:57:58 PM	99.9	97.5	93.9	95.4	103.3	98.2	92.5	99.7
	03:12:58 PM	101.2	98.6	94.4	98.1	104.7	99.3	92.9	102.1
	03:27:58 PM	100.0	98.7	94.8	86.9	103.3	100.2	93.7	101.5
	03:42:58 PM	98.9	98.1	95.7	88.4	102.0	99.9	94.5	98.6
	03:57:58 PM	100.1	98.6	96.0	87.8	104.2	100.4	94.7	99.1
	04:12:58 PM	101.3	99.5	96.1	87.1	105.7	101.1	95.2	100.3
	04:27:58 PM	99.8	99.0	96.7	86.4	103.0	101.2	95.5	98.9
	04:42:58 PM	100.1	99.1	97.3	89.7	103.9	101.1	96.2	98.8
	04:57:58 PM	101.3	100.0	97.1	94.5	105.0	101.7	96.3	100.2
	05:12:58 PM	101.8	100.3	97.4	91.4	105.1	102.0	96.6	100.8
	05:27:58 PM	102.5	101.2	98.1	88.3	105.2	102.4	97.0	100.3
	05:42:58 PM	100.9	100.2	98.3	86.2	102.8	102.0	97.4	98.4
	05:57:58 PM	99.8	99.5	98.5	86.4	101.1	101.1	97.5	96.8
	06:12:58 PM	99.6	99.0	98.3	88.3	101.6	100.6	97.5	96.2
	06:27:58 PM	98.7	98.5	98.0	85.1	100.3	100.8	97.9	95.4
	06:42:58 PM	98.0	98.3	98.0	83.0	99.1	99.9	98.1	93.5
	06:57:58 PM	96.7	97.2	97.7	82.5	97.7	99.0	98.0	91.2
	07:12:58 PM	96.1	96.4	97.4	83.7	97.3	98.3	97.6	90.1
	07:27:58 PM	96.0	96.3	97.1	82.9	96.8	97.8	97.3	89.5
	07:42:58 PM	94.8	95.6	96.6	80.6	95.3	97.3	97.3	88.0
	07:57:58 PM	93.5	94.8	96.1	79.3	93.8	96.4	96.9	86.0
	08:12:58 PM	92.8	94.1	95.7	78.5	93.1	95.5	96.7	84.3
	08:27:58 PM	92.7	93.7	95.3	77.9	92.8	94.8	96.4	82.9
	08:42:58 PM	92.2	93.2	95.0	77.6	92.1	94.4	95.9	81.7
	08:57:58 PM	91.2	92.5	94.6	77.5	91.0	93.6	95.6	80.6

	09:12:58 PM	90.6	91.9	94.0	77.1	90.7	93.0	95.3	79.7
	09:27:58 PM	90.1	91.4	93.5	76.9	90.2	92.5	94.8	79.3
	09:42:58 PM	89.7	91.0	93.3	76.7	89.3	92.1	94.4	78.6
	09:57:58 PM	89.1	90.4	92.7	76.4	88.8	91.6	94.2	78.1
	10:12:58 PM	88.5	89.9	92.5	76.1	88.3	91.1	93.9	77.6
	10:27:58 PM	88.6	89.7	92.0	75.9	88.4	90.7	93.5	77.2
	10:42:58 PM	88.3	89.6	91.7	76.2	88.4	90.4	93.3	76.9
	10:57:58 PM	88.1	89.2	91.5	76.2	88.0	90.0	92.9	76.8
	11:12:58 PM	87.9	89.0	91.1	75.8	87.5	89.8	92.6	76.5
	11:27:58 PM	87.1	88.4	90.8	75.7	86.9	89.5	92.3	76.2
	11:42:58 PM	87.1	88.4	90.5	75.2	86.9	89.0	92.1	75.9
	11:57:58 PM	86.6	88.1	90.2	75.5	86.4	88.7	91.8	75.7
20-Aug-01	12:12:58 AM	86.3	87.6	90.0	75.5	86.2	88.8	91.9	75.7
	12:27:58 AM	85.9	87.2	89.6	75.6	85.8	88.2	91.3	75.4
	12:42:58 AM	85.7	87.0	89.4	75.7	85.6	87.7	91.1	75.5
	12:57:58 AM	85.5	86.8	89.1	75.4	85.4	87.7	90.8	75.5
	01:12:58 AM	85.3	86.4	88.7	75.5	85.0	87.4	90.5	75.4
	01:27:58 AM	85.1	86.1	88.5	75.8	85.0	87.1	90.5	75.4
	01:42:58 AM	84.8	85.8	88.2	75.3	84.8	86.8	90.2	75.4
	01:57:58 AM	84.7	85.8	88.1	74.9	84.6	86.7	90.1	75.2
	02:12:58 AM	84.6	85.7	88.0	76.1	84.6	86.7	89.8	75.2
	02:27:58 AM	84.4	85.4	87.8	75.1	84.4	86.4	89.5	75.2
	02:42:58 AM	84.3	85.3	87.7	74.7	84.2	86.3	89.4	75.0
	02:57:58 AM	84.0	85.1	87.5	74.5	83.9	86.0	89.1	74.8
	03:12:58 AM	83.9	85.2	87.3	74.3	83.7	85.8	89.2	74.6
	03:27:58 AM	83.6	85.0	87.1	73.8	83.5	85.8	89.2	74.6
	03:42:58 AM	83.4	84.5	86.8	74.1	83.3	85.6	89.0	74.4
	03:57:58 AM	83.5	84.5	86.6	73.4	83.1	85.4	88.8	74.2
	04:12:58 AM	83.0	84.1	86.4	73.5	82.9	85.2	88.6	74.0
	04:27:58 AM	82.9	83.9	86.3	74.1	82.7	84.8	88.4	73.8
	04:42:58 AM	82.5	83.6	86.2	73.2	82.4	84.8	88.1	73.8
	04:57:58 AM	82.1	83.4	85.8	73.3	82.3	84.4	88.0	73.7
	05:12:58 AM	82.0	83.3	85.7	73.0	82.2	84.3	87.9	73.5
	05:27:58 AM	82.1	83.1	85.5	72.5	81.9	84.0	87.6	73.3
	05:42:58 AM	81.6	82.9	85.3	72.9	81.8	83.8	87.5	73.1
	05:57:58 AM	81.6	82.7	85.1	72.9	81.8	83.6	87.3	73.2
	06:12:58 AM	81.5	82.6	84.9	73.3	81.4	83.5	87.2	73.1
	06:27:58 AM	81.5	82.6	84.9	72.7	81.4	83.5	86.8	73.0
	06:42:58 AM	81.4	82.4	84.5	72.1	81.3	83.4	86.8	72.9
	06:57:58 AM	81.2	82.3	84.6	72.7	81.1	83.2	86.6	72.7
	07:12:58 AM	80.9	82.0	84.4	73.0	81.2	83.0	86.4	72.8
	07:27:58 AM	81.3	82.1	84.2	73.6	81.5	83.1	86.4	73.1
	07:42:58 AM	81.3	82.1	84.2	73.8	81.5	83.1	86.2	73.4
	07:57:58 AM	81.3	82.1	84.2	75.2	82.1	82.9	86.0	74.0

	08:12:58 AM	81.6	81.9	84.0	80.0	83.0	83.0	85.8	75.9
	08:27:58 AM	82.1	82.1	83.7	81.8	83.9	83.1	85.4	80.0
	08:42:58 AM	82.9	82.6	83.9	83.9	85.4	83.8	85.7	83.6
	08:57:58 AM	83.8	83.1	84.1	86.7	87.1	84.7	85.8	86.3
	09:12:58 AM	85.1	83.8	84.4	84.9	88.6	86.0	86.2	88.6
	09:27:58 AM	86.3	84.7	84.7	83.9	89.4	87.1	86.6	89.7
	09:42:58 AM	86.8	85.2	85.4	85.7	90.1	87.5	86.9	90.3
	09:57:58 AM	89.2	86.6	86.3	86.3	92.7	88.6	87.3	91.2
	10:12:58 AM	90.6	87.9	86.9	86.6	94.3	89.9	87.5	91.7
	10:27:58 AM	91.9	89.2	87.4	89.2	95.6	91.2	88.1	91.8
	10:42:58 AM	94.1	91.0	88.6	91.5	98.0	92.3	88.2	93.6
	10:57:58 AM	94.1	91.7	88.8	85.9	97.4	93.3	88.9	94.6
	11:12:58 AM	95.8	92.7	90.0	95.0	100.4	94.0	89.6	95.0
	11:27:58 AM	97.9	94.5	90.6	94.3	102.8	95.8	89.9	96.3
	11:42:58 AM	99.3	95.9	91.4	91.4	103.9	97.4	90.5	97.2
	11:57:58 AM	101.4	98.0	92.5	94.9	106.6	98.9	91.2	99.5
	12:12:58 PM	103.2	99.3	93.5	95.1	108.8	100.6	91.8	101.4
	12:27:58 PM	104.3	100.7	94.7	96.2	109.5	102.1	92.8	101.6
	12:42:58 PM	105.7	102.1	95.6	93.7	111.0	103.1	93.6	102.9
	12:57:58 PM	106.1	102.7	96.7	93.5	110.7	104.6	94.5	100.7
	01:12:58 PM	107.4	104.0	97.7	93.3	112.1	105.5	95.5	100.9
	01:27:58 PM	108.6	105.2	99.0	93.5	113.0	106.4	96.4	100.3
	01:42:58 PM	109.7	106.3	100.1	94.1	113.7	107.4	97.1	101.0
	01:57:58 PM	111.2	107.6	100.9	94.9	115.8	108.5	97.7	102.6
	02:12:58 PM	111.6	108.5	102.0	96.5	116.0	109.4	98.7	102.8
	02:27:58 PM	112.8	109.5	102.5	95.1	117.5	110.6	99.4	104.5
	02:42:58 PM	113.5	110.4	103.7	99.5	117.6	111.2	100.2	105.1
	02:57:58 PM	113.6	110.8	104.3	95.2	117.7	112.1	101.2	104.5
	03:12:58 PM	113.9	111.0	105.1	95.7	117.6	112.5	101.8	102.8
	03:27:58 PM	114.3	111.7	105.8	98.2	118.2	112.9	102.4	103.7
	03:42:58 PM	114.5	111.9	106.2	99.5	118.1	113.2	103.0	103.8
	03:57:58 PM	114.9	112.5	106.9	100.1	117.8	113.5	103.6	104.4
	04:12:58 PM	114.8	112.8	107.1	95.6	118.2	113.9	104.2	105.0
	04:27:58 PM	115.6	113.5	107.8	101.9	118.9	114.3	104.7	104.9
	04:42:58 PM	114.7	112.9	108.0	101.7	117.5	114.2	105.1	105.3
	04:57:58 PM	114.0	112.5	107.8	96.9	116.9	114.1	105.4	105.2
	05:12:58 PM	113.7	112.4	108.5	95.8	115.9	113.9	106.0	103.7
	05:27:58 PM	112.9	111.8	108.5	91.5	114.8	113.1	106.2	102.3
	05:42:58 PM	112.7	111.7	108.3	91.3	115.0	112.7	106.1	101.7
	05:57:58 PM	112.2	111.4	108.3	90.0	114.3	112.5	106.2	100.5
	06:12:58 PM	110.8	110.3	108.2	96.0	111.8	111.8	106.2	99.1
	06:27:58 PM	109.6	109.6	107.8	94.0	110.7	111.0	106.1	98.7
	06:42:58 PM	108.4	108.6	107.3	89.0	109.4	110.2	106.3	98.1
	06:57:58 PM	107.3	107.5	106.8	85.6	107.6	109.1	106.1	96.3

	07:12:58 PM	105.9	106.6	106.6	83.8	105.5	108.0	106.0	93.7
	07:27:58 PM	104.1	105.4	105.9	82.6	103.7	106.7	105.7	91.8
	07:42:58 PM	103.2	104.3	105.3	83.6	102.9	105.7	105.2	89.8
	07:57:58 PM	102.3	103.4	104.7	81.3	102.1	104.6	104.9	88.1
	08:12:58 PM	100.7	102.5	103.8	82.3	100.2	103.5	104.3	86.8
	08:27:58 PM	99.7	101.3	103.1	81.1	99.0	102.6	103.6	85.1
	08:42:58 PM	98.7	100.5	102.3	79.7	97.8	101.6	103.1	83.8
	08:57:58 PM	97.8	99.6	101.7	77.0	97.1	100.7	102.8	82.4
	09:12:58 PM	96.9	98.7	101.0	76.1	95.9	99.7	102.0	80.8
	09:27:58 PM	96.2	98.1	100.4	75.7	95.3	98.9	101.5	79.5
	09:42:58 PM	95.6	97.2	99.8	75.6	94.5	98.1	100.9	78.6
	09:57:58 PM	95.2	96.7	99.1	74.4	94.4	97.5	100.5	77.8
	10:12:58 PM	94.9	96.5	98.5	74.3	93.8	96.9	100.0	76.9
	10:27:58 PM	94.4	95.7	98.0	74.6	93.1	96.5	99.6	76.5
	10:42:58 PM	93.6	95.1	97.5	74.1	92.4	95.7	99.1	76.0
	10:57:58 PM	93.0	94.6	96.9	73.5	91.6	95.2	98.5	75.4
	11:12:58 PM	92.2	94.0	96.6	73.7	91.1	94.4	98.0	74.9
	11:27:58 PM	91.4	93.2	96.1	75.0	90.2	94.0	97.6	74.8
	11:42:58 PM	91.1	92.7	95.6	73.2	90.3	93.7	97.6	74.7
	11:57:58 PM	90.5	92.3	95.2	72.5	89.6	93.2	97.1	74.3
21-Aug-01	12:12:58 AM	89.9	91.8	94.7	72.2	89.1	92.8	96.6	73.8
	12:27:58 AM	89.5	91.4	94.2	72.1	88.7	92.1	96.2	73.3
	12:42:58 AM	89.2	90.8	93.6	73.1	88.1	91.8	95.6	73.0
	12:57:58 AM	88.8	90.4	93.3	72.4	87.8	91.2	95.6	72.9
	01:12:58 AM	88.5	90.1	93.0	71.6	87.5	90.8	94.9	72.6
	01:27:58 AM	88.0	89.5	92.4	72.4	87.0	90.3	94.7	72.4
	01:42:58 AM	87.6	89.5	92.1	71.7	86.9	90.0	94.4	72.3
	01:57:58 AM	87.4	89.2	91.8	70.9	86.6	89.7	93.9	72.0
	02:12:58 AM	87.1	88.7	91.6	70.9	86.1	89.5	93.6	71.7
	02:27:58 AM	86.8	88.4	91.0	70.9	85.8	88.9	93.3	71.4
	02:42:58 AM	86.1	88.0	90.8	72.1	85.4	88.5	92.9	71.3
	02:57:58 AM	85.9	87.4	90.3	71.0	85.2	88.3	92.7	71.3
	03:12:58 AM	85.9	87.2	90.1	70.8	85.0	88.1	92.5	71.1
	03:27:58 AM	85.4	87.0	89.9	70.3	84.7	87.6	92.0	70.9
	03:42:58 AM	85.2	86.8	89.4	70.7	84.3	87.4	91.5	70.7
	03:57:58 AM	85.0	86.3	89.2	71.2	84.1	87.2	91.3	70.7
	04:12:58 AM	84.6	86.2	88.8	71.6	83.7	86.8	91.2	70.9
	04:27:58 AM	84.4	85.8	88.6	70.1	83.6	86.7	90.8	70.7
	04:42:58 AM	84.3	85.6	88.5	70.0	83.3	86.5	90.6	70.5
	04:57:58 AM	84.1	85.5	88.1	70.1	83.4	86.0	90.4	70.3
	05:12:58 AM	83.7	85.3	87.9	69.9	83.0	85.9	90.0	70.2
	05:27:58 AM	83.6	84.9	87.5	70.0	82.6	85.5	89.9	70.0
	05:42:58 AM	83.2	84.8	87.4	69.7	82.5	85.4	89.5	70.0
	05:57:58 AM	82.8	84.4	87.0	69.8	82.1	85.0	89.4	69.8

	06:12:58 AM	82.7	84.0	86.9	70.0	82.1	84.7	89.1	69.8
	06:27:58 AM	82.4	84.0	86.6	69.4	81.8	84.6	89.0	69.7
	06:42:58 AM	82.2	83.8	86.5	69.2	81.6	84.4	88.6	69.5
	06:57:58 AM	82.4	83.4	86.0	68.8	81.4	84.0	88.4	69.3
	07:12:58 AM	82.2	83.3	85.9	69.0	81.3	83.9	88.3	69.2
	07:27:58 AM	81.8	83.1	85.7	70.1	81.4	83.7	88.1	69.3
	07:42:58 AM	82.1	83.1	85.5	70.4	81.2	83.6	87.7	69.7
	07:57:58 AM	82.1	82.9	85.6	73.7	81.9	83.5	87.6	70.4
	08:12:58 AM	82.2	83.0	85.4	72.7	82.1	83.6	87.5	72.1
	08:27:58 AM	82.9	83.2	85.3	75.2	83.6	83.6	87.3	74.0
	08:42:58 AM	83.2	83.5	85.3	75.8	83.9	84.1	87.3	75.0
	08:57:58 AM	84.2	83.9	85.5	80.0	85.7	84.4	87.0	76.3
	09:12:58 AM	85.1	84.6	85.6	79.5	86.5	84.9	87.0	78.4
	09:27:58 AM	86.2	85.2	85.9	83.8	87.7	85.9	87.2	80.7
	09:42:58 AM	88.3	86.5	86.5	86.5	88.9	86.6	87.4	83.0
	09:57:58 AM	89.4	87.6	87.0	85.7	91.3	87.6	87.6	84.8
	10:12:58 AM	91.4	88.7	87.7	88.5	93.9	89.0	88.0	86.2
	10:27:58 AM	93.1	90.3	88.4	90.0	96.2	90.7	88.4	87.6
	10:42:58 AM	94.8	91.7	89.3	90.1	98.0	92.1	89.2	89.2
	10:57:58 AM	96.7	93.3	90.1	92.5	100.1	93.7	89.5	91.3
	11:12:58 AM	98.4	94.7	91.1	93.2	102.1	95.2	90.3	94.2
	11:27:58 AM	100.3	96.7	92.2	88.8	104.3	96.6	90.7	95.1
	11:42:58 AM	99.5	97.2	93.2	93.2	102.4	97.3	91.6	95.7
	11:57:58 AM	101.6	98.7	93.7	89.2	105.1	99.0	92.3	97.7
	12:12:58 PM	101.3	98.7	94.8	92.7	104.4	99.6	93.1	96.0
	12:27:58 PM	103.8	100.4	95.7	95.2	107.8	100.7	93.7	96.6
	12:42:58 PM	105.1	101.8	96.5	95.0	108.9	102.2	94.3	97.3
	12:57:58 PM	104.7	102.6	97.4	88.5	107.4	103.3	95.1	96.9
	01:12:58 PM	107.1	103.8	98.6	93.6	110.6	104.2	95.7	97.5
	01:27:58 PM	107.7	104.6	99.2	92.6	111.2	105.1	96.6	97.6
	01:42:58 PM	107.6	105.0	100.0	93.8	111.0	105.7	97.2	97.7
	01:57:58 PM	109.0	106.4	100.7	94.1	112.1	106.7	97.7	99.0
	02:12:58 PM	109.1	106.7	101.5	96.3	112.5	107.2	98.7	99.0
	02:27:58 PM	108.7	106.7	102.0	91.0	111.4	108.1	99.6	98.6
	02:42:58 PM	110.1	107.5	102.6	96.6	113.1	108.3	99.8	98.5
	02:57:58 PM	110.7	108.4	103.2	96.1	113.4	109.3	100.3	99.6
	03:12:58 PM	110.4	108.5	103.9	96.8	113.1	109.5	101.1	99.0
	03:27:58 PM	111.0	109.0	104.3	97.3	114.4	109.8	101.6	99.3
	03:42:58 PM	110.3	108.7	104.8	95.7	112.1	109.9	102.2	98.3
	03:57:58 PM	111.7	109.7	105.0	98.5	114.8	110.5	102.3	99.7
	04:12:58 PM	113.1	110.8	105.4	98.1	116.8	111.4	102.8	101.5
	04:27:58 PM	113.4	111.6	106.2	96.5	116.2	112.1	103.2	102.7
	04:42:58 PM	113.6	111.5	106.6	98.8	117.0	113.0	103.8	102.0
	04:57:58 PM	112.7	111.4	107.0	93.2	114.5	112.8	104.4	101.8

	05:12:58 PM	110.6	110.0	107.5	96.0	112.2	111.9	105.0	99.9
	05:27:58 PM	110.5	109.9	107.1	92.0	112.3	111.3	105.2	99.3
	05:42:58 PM	109.0	108.8	107.2	90.0	110.8	110.8	105.7	96.9
	05:57:58 PM	109.0	108.5	106.9	90.2	110.9	110.1	105.5	95.7
	06:12:58 PM	108.0	107.8	106.5	92.1	109.6	109.6	105.3	94.7
	06:27:58 PM	107.3	107.3	106.2	90.6	108.8	109.0	105.2	94.4
	06:42:58 PM	106.0	106.3	105.8	88.2	107.0	108.3	105.3	93.7
	06:57:58 PM	104.6	105.4	105.4	85.3	105.2	107.2	104.9	92.1
	07:12:58 PM	102.9	104.2	105.0	84.3	103.2	106.0	104.7	90.0
	07:27:58 PM	102.0	103.3	104.3	83.9	102.0	104.5	104.3	88.8
	07:42:58 PM	100.8	102.3	103.6	83.2	100.6	103.7	103.9	87.4
	07:57:58 PM	99.7	101.3	102.9	81.1	99.3	102.4	103.4	85.9
	08:12:58 PM	98.8	100.3	102.1	79.6	98.0	101.6	103.1	84.3
	08:27:58 PM	97.8	99.3	101.7	79.3	97.0	100.6	102.7	82.8
	08:42:58 PM	96.8	98.4	100.7	79.4	96.2	99.5	102.1	81.7
	08:57:58 PM	96.0	97.8	99.9	77.8	95.5	98.8	101.4	80.7
	09:12:58 PM	95.2	97.0	99.4	77.0	94.4	98.0	100.8	79.6
	09:27:58 PM	94.4	96.2	98.8	76.5	93.6	97.2	100.5	78.5
	09:42:58 PM	93.7	95.5	98.4	76.3	92.7	96.5	99.9	77.6
	09:57:58 PM	93.0	94.8	97.7	71.3	92.1	96.0	99.6	76.5
	10:12:58 PM	92.1	94.2	97.0	72.5	91.2	95.0	99.2	75.0
	10:27:58 PM	91.5	93.4	96.5	73.6	90.5	94.4	98.5	74.4
	10:42:58 PM	91.1	92.7	95.8	72.1	90.2	93.8	97.9	74.3
	10:57:58 PM	90.6	92.4	95.3	72.1	89.8	93.4	97.5	73.9
	11:12:58 PM	90.0	91.8	95.0	71.8	89.1	92.7	97.1	72.9
	11:27:58 PM	89.5	91.3	94.2	69.9	88.6	92.2	96.6	72.5
	11:42:58 PM	88.9	90.8	93.9	69.1	88.0	91.6	96.2	71.5
	11:57:58 PM	88.2	90.2	93.4	68.8	87.4	91.1	95.7	70.7
22-Aug-01	12:12:58 AM	87.8	89.6	92.7	68.7	86.6	90.5	95.4	70.1
	12:27:58 AM	87.4	89.2	92.4	69.1	86.8	89.9	94.8	69.8
	12:42:58 AM	86.9	88.7	91.9	70.7	85.9	89.5	94.4	69.9
	12:57:58 AM	86.6	88.5	91.3	70.7	85.7	89.0	93.9	70.0
	01:12:58 AM	86.3	87.9	91.0	68.3	85.3	88.7	93.6	69.9
	01:27:58 AM	86.1	87.7	90.8	68.3	85.0	88.4	93.3	69.3
	01:42:58 AM	85.6	87.1	90.3	70.2	84.6	88.0	92.9	69.2
	01:57:58 AM	85.4	87.0	89.9	69.8	84.5	87.6	92.5	69.3
	02:12:58 AM	84.8	86.7	89.5	70.0	83.9	87.3	92.2	69.3
	02:27:58 AM	84.7	86.2	89.4	67.7	83.7	87.1	92.0	69.1
	02:42:58 AM	84.6	86.1	89.0	69.2	83.6	86.7	91.6	68.6
	02:57:58 AM	84.0	85.8	88.7	69.9	83.0	86.4	91.3	68.6
	03:12:58 AM	83.9	85.5	88.4	70.7	83.1	86.2	90.9	69.0
	03:27:58 AM	83.7	85.2	88.1	70.7	82.6	86.0	90.6	69.2
	03:42:58 AM	83.2	84.8	88.0	70.2	82.5	85.6	90.3	69.4
	03:57:58 AM	83.0	84.6	87.5	70.0	82.2	85.3	90.2	69.3

	04:12:58 AM	83.0	84.3	87.2	68.1	82.2	85.0	89.9	69.3
	04:27:58 AM	82.7	84.0	87.2	69.4	81.9	85.0	89.6	69.0
	04:42:58 AM	82.5	83.8	87.0	69.5	81.5	84.7	89.3	68.7
	04:57:58 AM	82.1	83.7	86.6	68.3	81.3	84.4	89.1	68.7
	05:12:58 AM	81.8	83.3	86.2	69.8	80.9	84.0	88.9	68.6
	05:27:58 AM	81.5	83.1	86.0	69.1	80.7	83.8	88.7	68.6
	05:42:58 AM	81.4	83.0	85.9	68.7	80.6	83.7	88.3	68.5
	05:57:58 AM	81.3	82.7	85.6	69.1	80.5	83.3	88.3	68.4
	06:12:58 AM	81.0	82.6	85.5	68.8	80.4	83.2	87.9	68.3
	06:27:58 AM	80.7	82.2	85.1	68.7	80.1	82.9	87.6	68.3
	06:42:58 AM	80.6	82.2	84.8	68.6	80.0	82.6	87.5	68.2
	06:57:58 AM	80.6	81.9	84.8	69.1	79.7	82.6	87.3	68.2
	07:12:58 AM	80.4	81.7	84.3	68.9	79.6	82.4	86.8	68.3
	07:27:58 AM	80.4	81.7	84.3	70.3	79.9	82.2	86.9	68.6
	07:42:58 AM	80.4	81.4	84.1	71.6	80.3	82.1	86.5	70.0
	07:57:58 AM	80.7	81.5	84.1	73.3	80.8	82.4	86.3	71.4
	08:12:58 AM	81.0	81.6	84.0	73.9	81.7	82.5	86.4	72.8
	08:27:58 AM	81.6	81.9	84.0	75.8	82.6	82.6	86.3	74.5
	08:42:58 AM	82.4	82.4	84.2	77.9	83.3	82.8	85.9	77.3
	08:57:58 AM	83.6	82.8	84.1	80.4	85.4	83.6	86.0	80.2
	09:12:58 AM	85.2	83.9	84.4	80.2	87.5	84.9	86.2	83.0
	09:27:58 AM	85.9	84.6	84.9	87.2	87.7	85.4	86.2	85.9
	09:42:58 AM	87.9	86.1	85.6	87.4	89.1	86.3	86.8	88.4
	09:57:58 AM	89.7	87.0	86.0	87.3	92.0	87.6	87.1	90.2
	10:12:58 AM	91.4	88.5	86.7	89.3	93.9	89.3	87.5	91.4
	10:27:58 AM	93.3	90.2	87.5	90.7	96.4	90.9	88.1	92.8
	10:42:58 AM	94.9	91.5	88.6	90.2	97.9	92.5	88.6	94.3
	10:57:58 AM	95.9	92.7	89.6	92.2	98.8	93.7	89.3	95.2
	11:12:58 AM	97.9	94.2	90.5	94.7	100.7	95.1	89.4	96.1
	11:27:58 AM	99.4	96.3	91.5	94.2	102.3	96.7	90.2	96.9
	11:42:58 AM	100.2	97.6	92.6	92.3	103.1	98.0	91.0	97.4
	11:57:58 AM	101.7	98.8	93.9	94.9	105.0	99.1	91.6	98.6
	12:12:58 PM	103.7	100.6	94.9	95.9	106.8	100.7	92.4	100.7
	12:27:58 PM	104.8	101.9	95.9	92.2	108.5	102.3	93.3	101.8
	12:42:58 PM	105.6	102.7	97.0	97.7	109.4	103.3	94.3	101.7
	12:57:58 PM	104.9	102.8	97.8	95.2	107.9	103.8	95.3	100.7
	01:12:58 PM	107.6	104.5	98.5	91.7	111.8	105.2	96.0	101.1
	01:27:58 PM	106.1	104.3	99.6	96.2	109.1	105.3	96.8	99.7
	01:42:58 PM	107.5	105.1	100.2	94.4	110.7	105.6	97.4	101.0
	01:57:58 PM	109.2	106.3	100.6	94.6	112.4	107.1	97.9	101.7
	02:12:58 PM	110.7	107.6	101.4	95.6	114.1	108.5	98.5	102.1
	02:27:58 PM	110.2	107.9	102.5	95.9	113.4	108.8	99.3	101.9
	02:42:58 PM	111.8	109.0	103.0	96.2	115.0	109.7	99.9	103.0
	02:57:58 PM	112.8	110.2	104.0	97.2	115.4	110.6	100.6	103.7

	03:12:58 PM	112.7	110.6	104.7	97.4	115.4	111.4	101.4	104.0
	03:27:58 PM	114.0	111.4	105.2	98.9	117.5	112.2	102.0	104.6
	03:42:58 PM	111.7	110.7	105.8	94.3	112.8	112.0	102.8	102.8
	03:57:58 PM	112.9	111.1	106.4	98.9	115.6	111.8	103.1	102.9
	04:12:58 PM	113.3	111.7	106.6	94.3	115.9	112.6	103.7	104.2
	04:27:58 PM	110.8	110.3	106.6	99.1	112.0	111.8	104.1	102.3
	04:42:58 PM	112.0	110.7	106.8	99.3	114.6	111.8	104.2	103.1
	04:57:58 PM	111.1	110.6	106.9	97.8	112.3	111.6	104.7	103.2
	05:12:58 PM	111.7	110.7	107.0	95.8	113.2	111.7	104.8	103.8
	05:27:58 PM	111.0	110.2	107.4	93.6	112.1	111.4	105.0	101.9
	05:42:58 PM	110.0	109.5	107.2	92.3	111.1	110.8	105.2	100.3
	05:57:58 PM	109.6	109.3	107.3	94.2	110.3	110.5	105.4	99.0
	06:12:58 PM	108.0	108.3	106.7	90.8	108.6	109.6	105.3	98.1
	06:27:58 PM	107.0	107.3	106.5	89.8	108.1	108.9	105.3	97.1
	06:42:58 PM	106.2	106.5	106.0	89.8	107.2	108.2	105.1	96.1
	06:57:58 PM	104.9	105.7	105.5	88.2	105.6	107.4	105.1	94.8
	07:12:58 PM	103.7	104.8	105.0	87.0	104.0	106.3	104.8	93.2
	07:27:58 PM	102.7	103.8	104.6	86.5	102.8	105.1	104.6	91.7
	07:42:58 PM	101.7	102.8	103.8	85.2	101.6	104.2	104.2	90.3
	07:57:58 PM	100.4	102.0	103.3	84.7	100.0	103.3	103.9	88.9
	08:12:58 PM	99.8	101.1	102.7	81.9	99.7	102.3	103.3	87.6
	08:27:58 PM	98.9	100.5	102.0	82.7	98.3	101.4	102.9	86.2
	08:42:58 PM	97.9	99.5	101.3	81.9	97.4	100.5	102.3	85.0
	08:57:58 PM	97.4	98.7	100.8	80.8	96.9	99.8	101.8	84.0
	09:12:58 PM	97.0	98.3	100.2	81.0	96.6	99.4	101.5	83.1
	09:27:58 PM	95.9	97.5	99.8	80.4	95.2	98.5	100.8	82.2
	09:42:58 PM	95.2	96.8	99.1	80.7	94.1	97.7	100.5	81.9
	09:57:58 PM	94.3	96.1	98.5	80.1	93.5	97.1	99.9	81.3
	10:12:58 PM	93.6	95.5	97.8	79.4	92.8	96.4	99.5	80.6
	10:27:58 PM	93.4	94.9	97.5	79.4	92.8	95.9	99.0	80.1
	10:42:58 PM	93.2	94.7	96.8	78.1	92.4	95.5	98.6	79.7
	10:57:58 PM	92.3	94.2	96.5	78.6	91.5	94.9	98.2	79.1
	11:12:58 PM	91.8	93.6	96.0	77.6	91.0	94.4	98.0	78.5
	11:27:58 PM	91.5	93.1	95.7	77.0	90.5	93.8	97.4	78.0
	11:42:58 PM	91.0	92.5	95.1	76.5	89.9	93.3	97.2	77.4
	11:57:58 PM	90.4	92.0	94.9	76.4	89.6	92.7	96.6	76.9
23-Aug-01	12:12:58 AM	90.0	91.8	94.4	75.2	89.2	92.3	96.2	76.4
	12:27:58 AM	89.8	91.3	94.0	75.2	88.8	91.9	95.7	76.0
	12:42:58 AM	89.1	90.7	93.6	74.1	88.3	91.4	95.5	75.3
	12:57:58 AM	89.0	90.5	93.2	71.8	88.2	91.3	95.4	74.6
	01:12:58 AM	88.4	89.9	92.8	73.0	87.8	90.9	95.1	74.3
	01:27:58 AM	88.2	89.7	92.4	72.0	87.4	90.5	94.6	73.8
	01:42:58 AM	87.5	89.1	92.0	73.3	86.8	89.9	94.3	73.5
	01:57:58 AM	87.2	88.8	91.7	71.9	86.5	89.6	94.0	73.2

	02:12:58 AM	86.8	88.4	91.3	72.6	85.8	89.2	93.8	72.8
	02:27:58 AM	86.6	88.1	91.0	72.3	85.6	88.9	93.3	72.5
	02:42:58 AM	86.1	87.7	90.6	72.6	85.1	88.5	92.9	72.3
	02:57:58 AM	85.9	87.2	90.3	71.8	84.9	88.1	92.7	72.1
	03:12:58 AM	85.5	87.1	90.0	71.2	84.8	87.9	92.3	72.0
	03:27:58 AM	85.2	86.8	89.7	71.7	84.6	87.4	92.1	71.8
	03:42:58 AM	85.0	86.3	89.2	71.0	84.3	87.2	91.6	71.5
	03:57:58 AM	84.6	86.2	89.1	70.0	83.9	87.0	91.4	71.0
	04:12:58 AM	84.4	85.7	88.9	70.4	83.4	86.6	91.2	70.9
	04:27:58 AM	83.9	85.5	88.4	69.3	83.2	86.3	91.0	70.6
	04:42:58 AM	83.8	85.3	88.2	68.6	83.0	86.1	90.5	70.1
	04:57:58 AM	83.5	85.0	87.9	69.7	82.6	85.5	90.2	69.8
	05:12:58 AM	83.1	84.6	87.5	69.5	82.4	85.2	89.9	69.8
	05:27:58 AM	82.8	84.4	87.2	68.4	82.0	85.1	89.8	69.4
	05:42:58 AM	82.5	84.1	87.0	68.7	81.7	84.8	89.5	69.1
	05:57:58 AM	82.4	83.7	86.9	69.1	81.4	84.5	89.2	69.1
	06:12:58 AM	82.1	83.7	86.6	69.4	81.5	84.4	89.0	69.2
	06:27:58 AM	81.9	83.5	86.1	69.7	81.3	84.1	88.8	69.2
	06:42:58 AM	81.9	83.4	86.1	69.9	81.2	83.8	88.5	69.4
	06:57:58 AM	81.8	83.1	85.7	70.1	80.9	83.8	88.2	69.6
	07:12:58 AM	81.6	82.9	85.6	70.2	80.8	83.6	88.0	69.8
	07:27:58 AM	81.6	82.9	85.5	70.4	81.0	83.3	87.7	70.0
	07:42:58 AM	81.6	83.0	85.3	71.3	81.1	83.4	87.6	70.3
	07:57:58 AM	81.8	82.9	85.2	72.0	81.6	83.4	87.6	71.1
	08:12:58 AM	82.2	83.0	85.1	73.2	82.3	83.6	87.2	72.3
	08:27:58 AM	82.8	83.4	85.2	75.4	83.2	84.0	87.1	73.6
	08:42:58 AM	83.1	83.6	85.2	74.9	83.5	84.3	87.1	74.6
	08:57:58 AM	83.7	83.9	85.3	77.9	84.4	84.4	86.7	75.8
	09:12:58 AM	85.5	84.8	85.5	80.3	86.8	85.2	86.8	78.7
	09:27:58 AM	86.6	85.6	85.8	84.0	87.7	86.1	87.1	81.9
	09:42:58 AM	87.9	86.6	86.3	84.7	89.1	87.1	87.3	84.7
	09:57:58 AM	89.1	87.8	87.0	85.7	90.8	88.2	87.7	86.7
	10:12:58 AM	90.1	88.8	87.7	83.0	91.7	89.6	88.3	88.3
	10:27:58 AM	91.0	89.5	88.4	87.1	93.3	90.2	88.7	88.7
	10:42:58 AM	93.6	91.0	88.9	88.1	96.1	91.7	89.1	91.2
	10:57:58 AM	95.4	92.8	89.9	92.0	98.4	93.5	89.6	93.5
	11:12:58 AM	97.7	94.8	91.2	91.4	100.7	95.3	90.1	95.0
	11:27:58 AM	99.0	96.4	92.2	91.2	101.3	96.7	90.8	95.7
	11:42:58 AM	101.3	98.2	93.2	91.9	103.8	98.2	91.5	96.9
	11:57:58 AM	102.4	99.5	94.3	93.2	104.6	99.8	92.3	98.0
	12:12:58 PM	104.2	101.1	95.4	94.3	107.3	101.2	93.2	99.4
	12:27:58 PM	106.3	102.7	96.7	96.2	110.1	102.7	94.0	100.2
	12:42:58 PM	106.8	103.7	97.7	95.1	109.6	103.8	95.0	100.9
	12:57:58 PM	108.2	104.9	98.4	91.8	111.7	105.4	95.6	100.8

	01:12:58 PM	108.6	105.5	99.7	93.5	111.6	106.2	96.7	100.1
	01:27:58 PM	109.4	106.8	100.5	91.4	112.5	107.2	97.4	101.3
	01:42:58 PM	111.2	107.8	101.0	94.3	114.7	108.4	98.1	101.4
	01:57:58 PM	111.1	108.6	102.3	95.0	114.0	109.1	98.9	101.7
	02:12:58 PM	112.1	109.7	103.3	94.4	115.2	110.1	99.6	102.7
	02:27:58 PM	113.0	110.1	103.9	95.8	116.3	110.7	100.5	102.8
	02:42:58 PM	114.1	111.0	104.5	97.5	117.5	111.9	101.2	103.5
	02:57:58 PM	114.8	112.0	105.5	98.7	118.5	112.6	101.9	103.7
	03:12:58 PM	114.5	112.5	106.5	99.7	116.2	113.2	102.7	104.3
	03:27:58 PM	114.3	112.2	106.8	94.5	116.9	113.6	103.4	103.6
08-Oct-01	09:38:48 PM	82.5	81.7	79.6	84.4	86.5	84.9	82.3	88.8
	09:53:48 PM	83.0	82.4	80.1	80.1	86.8	84.9	82.6	87.6
	10:08:48 PM	83.2	82.7	80.6	79.2	86.3	84.7	82.6	86.0
	10:23:48 PM	83.3	82.8	80.7	78.3	85.2	84.1	82.6	84.9
	10:38:48 PM	83.2	82.6	81.0	78.9	85.0	83.9	82.6	83.7
	10:53:48 PM	83.1	82.9	81.3	79.9	84.9	83.9	82.6	82.9
	11:08:48 PM	82.8	82.6	81.2	77.8	84.2	83.4	82.6	82.1
	11:23:48 PM	82.7	82.4	81.4	77.1	83.2	82.7	82.5	81.4
	11:38:48 PM	82.2	81.9	81.1	77.1	83.1	82.5	82.3	80.7
	11:53:48 PM	81.7	81.7	80.9	76.7	82.4	82.1	82.1	80.0
09-Oct-01	12:08:48 AM	81.6	81.6	81.3	76.5	81.7	81.7	82.0	79.4
	12:23:48 AM	81.1	81.1	81.1	74.7	81.0	81.2	82.3	78.9
	12:38:48 AM	80.7	81.0	81.3	74.9	80.4	80.6	81.9	78.0
	12:53:48 AM	79.9	80.1	80.7	73.5	79.2	79.7	81.5	77.1
	01:08:48 AM	79.3	79.8	80.6	71.9	77.8	78.9	81.2	76.0
	01:23:48 AM	78.3	79.1	80.1	70.3	76.5	77.8	80.7	74.7
	01:38:48 AM	77.7	78.5	80.1	70.0	75.7	77.0	80.4	73.6
	01:53:48 AM	76.8	77.6	79.7	69.3	74.8	76.3	80.0	72.4
	02:08:48 AM	76.3	77.1	79.2	68.5	74.0	75.5	79.5	71.3
	02:23:48 AM	75.5	76.3	78.7	67.7	73.2	74.8	78.7	70.3
	02:38:48 AM	74.8	75.9	78.2	66.8	72.6	74.1	78.3	69.4
	02:53:48 AM	74.2	75.3	77.9	66.2	72.0	73.8	77.7	68.5
	03:08:48 AM	73.7	74.8	77.7	65.7	71.5	73.1	77.5	67.8
	03:23:48 AM	73.5	74.5	77.2	65.2	71.0	72.8	77.0	67.0
	03:38:48 AM	73.0	74.1	76.7	64.7	70.6	72.2	76.6	66.3
	03:53:48 AM	72.7	73.5	76.4	64.6	70.5	72.1	76.3	65.7
	04:08:48 AM	72.1	73.1	76.1	64.1	69.7	71.5	75.7	65.2
	04:23:48 AM	71.8	72.9	75.8	63.8	69.4	71.0	75.4	64.6
	04:38:48 AM	71.5	72.3	75.5	63.8	70.0	71.0	75.0	64.2
	04:53:48 AM	71.2	72.0	75.2	63.2	68.9	70.7	74.6	63.8
	05:08:48 AM	70.8	71.9	74.8	63.1	68.8	70.3	74.6	63.5
	05:23:48 AM	70.5	71.6	74.8	63.0	68.5	70.1	74.3	63.2
	05:38:48 AM	70.2	71.3	74.5	62.5	67.9	69.7	74.0	62.9
	05:53:48 AM	70.2	71.0	74.2	62.4	67.6	69.4	73.7	62.6
	06:08:48 AM	69.9	70.9	73.9	62.1	67.3	69.1	73.4	62.3
	06:23:48 AM	69.6	70.6	73.8	62.3	67.3	69.1	73.1	62.0

06:38:48 AM	69.4	70.5	73.4	61.9	67.1	68.7	72.9	61.8
06:53:48 AM	69.3	70.1	73.3	62.3	67.0	68.6	72.5	61.7
07:08:48 AM	68.8	69.9	73.1	61.6	66.8	68.4	72.4	61.5
07:23:48 AM	68.6	69.7	72.9	61.4	66.3	67.9	72.1	61.3
07:38:48 AM	68.6	69.4	72.6	60.8	66.1	68.0	71.9	61.1
07:53:48 AM	68.1	69.2	72.4	60.6	65.8	67.7	71.9	60.8
08:08:48 AM	68.1	68.9	72.1	60.3	65.8	67.4	71.6	60.5
08:23:48 AM	67.8	68.9	72.1	60.0	65.5	67.1	71.3	60.2
08:38:48 AM	67.5	68.6	71.8	59.7	65.2	67.0	71.0	59.9
08:53:48 AM	67.4	68.2	71.4	59.4	65.1	67.0	71.2	59.8
09:08:48 AM	67.1	68.2	71.4	59.0	64.5	66.4	70.6	59.2
09:23:48 AM	66.8	67.9	71.1	59.0	64.8	66.3	70.8	59.2
09:38:48 AM	66.5	67.6	70.8	58.7	64.5	66.3	70.6	58.9
09:53:48 AM	66.6	67.4	70.9	58.5	64.3	66.2	70.4	58.7
10:08:48 AM	66.4	67.2	70.7	58.6	64.1	65.9	70.2	58.5
10:23:48 AM	66.2	67.0	70.5	58.2	63.9	65.8	70.0	58.3
10:38:48 AM	66.1	66.9	70.1	58.3	63.8	65.6	69.6	58.2
10:53:48 AM	65.7	66.8	70.0	58.2	63.7	65.5	69.5	58.1
11:08:48 AM	65.5	66.6	69.8	58.3	63.5	65.1	69.3	57.9
11:23:48 AM	65.5	66.5	69.7	57.9	63.2	65.0	69.3	57.9
11:38:48 AM	65.3	66.4	69.6	57.8	63.3	64.9	69.1	57.7
11:53:48 AM	65.2	66.0	69.4	57.6	62.8	64.7	68.9	57.5
12:08:48 PM	65.0	66.1	69.3	57.5	62.9	64.5	68.8	57.4
12:23:48 PM	64.8	65.6	69.1	57.3	62.5	64.4	68.6	57.2
12:38:48 PM	64.4	65.5	69.0	57.2	62.4	64.0	68.5	57.1
12:53:48 PM	64.3	65.4	68.6	57.1	62.3	63.9	68.1	57.0
01:08:48 PM	64.2	65.3	68.5	57.0	62.2	63.8	68.0	56.9
01:23:48 PM	64.1	64.9	68.4	56.9	61.9	63.7	67.9	56.8
01:38:48 PM	64.0	64.8	68.3	57.0	62.0	63.6	67.6	56.7
01:53:48 PM	63.8	64.8	68.1	57.3	61.8	63.4	67.6	56.7
02:08:48 PM	63.8	64.6	68.1	57.6	62.1	63.4	67.4	56.8
02:23:48 PM	63.7	64.5	67.8	58.6	62.9	63.9	67.4	57.3
02:38:48 PM	64.2	64.5	67.7	60.4	65.0	65.3	67.4	58.4
02:53:48 PM	64.5	64.8	67.8	62.7	65.7	65.7	67.3	59.6
03:08:48 PM	65.4	65.4	67.8	64.3	67.3	67.0	67.6	61.2
03:23:48 PM	66.2	65.9	67.8	66.2	68.7	68.2	67.9	62.9
03:38:48 PM	67.0	66.5	68.1	65.9	71.3	69.7	68.1	64.2
03:53:48 PM	68.0	67.2	68.3	66.4	72.1	70.8	68.9	65.7
04:08:48 PM	69.4	68.1	68.6	68.3	75.0	73.2	69.5	67.4
04:23:48 PM	70.6	69.3	69.0	70.6	77.4	75.0	70.3	69.0
04:38:48 PM	71.9	70.3	69.5	71.9	79.5	76.6	71.1	70.8
04:53:48 PM	73.5	71.6	70.3	73.0	80.9	78.0	72.0	73.0
05:08:48 PM	74.9	73.0	70.9	75.1	83.5	80.4	73.0	74.6
05:23:48 PM	76.5	74.3	71.7	78.1	86.2	82.8	73.9	76.3
05:38:48 PM	78.0	75.8	72.4	78.2	87.3	83.5	75.1	78.2
05:53:48 PM	79.4	77.3	73.3	80.4	88.8	84.9	75.8	79.7

10-Oct-01

06:08:48 PM	80.6	78.5	74.0	81.2	90.4	86.3	76.9	80.8
06:23:48 PM	82.2	79.8	74.8	81.7	92.1	88.0	78.1	82.3
06:38:48 PM	83.2	81.3	75.7	83.4	92.6	88.4	79.0	83.5
06:53:48 PM	84.4	82.3	76.8	85.0	94.1	89.7	80.1	84.5
07:08:48 PM	86.2	84.1	78.0	89.1	96.0	91.4	81.3	85.4
07:23:48 PM	85.9	84.3	78.5	84.3	92.6	89.2	81.9	85.8
07:38:48 PM	87.1	85.2	79.6	89.9	94.9	90.8	82.4	86.1
07:53:48 PM	88.0	86.1	80.3	91.6	96.4	92.2	83.4	86.5
08:08:48 PM	88.1	86.7	81.2	82.3	91.8	89.7	84.0	86.8
08:23:48 PM	87.8	86.5	81.8	85.7	92.7	90.1	84.4	86.2
08:38:48 PM	87.1	86.5	82.3	81.2	89.3	88.0	84.6	85.6
08:53:48 PM	87.6	86.5	82.6	82.6	89.3	88.0	84.7	85.4
09:08:48 PM	88.5	87.5	83.0	84.0	91.8	90.0	85.0	86.6
09:23:48 PM	88.6	87.5	83.0	93.3	95.4	92.1	85.6	86.6
09:38:48 PM	89.7	88.4	83.9	93.1	95.4	92.0	86.0	87.9
09:53:48 PM	89.7	88.9	84.4	82.0	91.2	89.9	86.5	88.0
10:08:48 PM	89.4	88.6	84.6	93.8	93.2	90.9	86.8	87.3
10:23:48 PM	89.5	88.7	85.0	90.3	93.8	91.2	86.8	87.3
10:38:48 PM	88.9	88.6	85.4	91.2	92.1	90.1	87.0	86.4
10:53:48 PM	88.7	88.4	85.5	81.8	89.3	88.3	86.7	86.2
11:08:48 PM	87.7	87.7	85.6	83.7	90.4	88.3	86.7	85.2
11:23:48 PM	87.0	87.0	85.5	82.3	89.2	87.6	86.6	84.8
11:38:48 PM	86.2	86.5	85.5	81.0	87.8	86.5	86.5	83.7
11:53:48 PM	85.2	85.4	84.9	78.3	85.1	85.4	86.4	82.5
12:08:48 AM	84.8	85.0	85.0	78.1	84.3	84.6	85.9	81.2
12:23:48 AM	83.9	84.5	84.7	77.3	83.6	83.8	85.6	80.2
12:38:48 AM	83.2	83.5	84.0	75.8	82.3	83.1	85.2	79.2
12:53:48 AM	82.5	83.0	83.8	74.3	81.6	82.6	85.0	78.5
01:08:48 AM	82.0	82.5	83.5	73.5	80.7	81.8	84.6	77.3
01:23:48 AM	81.3	81.9	83.2	72.3	80.1	81.4	84.0	76.2
01:38:48 AM	80.4	81.2	82.8	70.8	78.6	80.2	83.5	74.9
01:53:48 AM	79.7	80.5	82.3	70.1	78.2	79.7	83.1	73.7
02:08:48 AM	79.0	79.8	82.0	69.5	76.7	78.5	82.5	72.5
02:23:48 AM	78.4	79.5	81.6	69.4	76.4	78.0	81.9	71.7
02:38:48 AM	78.0	78.8	81.1	70.2	76.6	77.9	81.5	71.0
02:53:48 AM	77.4	78.2	80.6	69.7	75.5	77.1	81.0	70.5
03:08:48 AM	77.0	78.0	80.4	69.3	75.1	76.7	80.4	70.1
03:23:48 AM	76.4	77.5	79.9	68.4	74.6	76.2	80.1	69.6
03:38:48 AM	76.0	77.0	79.7	68.2	74.2	75.8	79.7	69.2
03:53:48 AM	75.9	76.7	79.3	68.1	73.8	75.4	79.3	68.8
04:08:48 AM	75.2	76.3	78.9	67.2	73.4	75.0	78.9	68.4
04:23:48 AM	75.0	75.8	78.8	67.0	73.3	74.8	78.5	68.0
04:38:48 AM	74.7	75.5	78.4	66.6	72.6	74.2	78.1	67.6
04:53:48 AM	74.2	75.3	78.2	65.9	72.1	73.7	77.9	67.1
05:08:48 AM	73.7	74.8	77.7	65.4	71.9	73.5	77.4	66.6
05:23:48 AM	73.5	74.5	77.5	64.6	71.1	72.9	77.1	66.1

05:38:48 AM	73.2	74.0	77.2	64.7	70.9	72.7	76.9	65.6
05:53:48 AM	73.1	73.8	76.8	64.0	70.7	72.5	76.4	65.1
06:08:48 AM	72.6	73.7	76.6	63.8	70.4	72.3	76.2	64.6
06:23:48 AM	72.4	73.2	76.4	63.3	70.0	71.9	75.8	64.2
06:38:48 AM	72.0	73.1	76.0	63.2	69.6	71.5	75.7	63.8
06:53:48 AM	71.6	72.7	75.9	62.8	69.3	71.1	75.3	63.5
07:08:48 AM	71.3	72.3	75.5	62.7	68.9	70.8	75.0	63.1
07:23:48 AM	71.2	72.3	75.5	62.4	68.6	70.5	74.7	62.8
07:38:48 AM	70.9	72.0	75.2	62.4	68.6	70.2	74.6	62.5
07:53:48 AM	70.6	71.6	74.8	61.7	68.2	69.8	74.3	62.1
08:08:48 AM	70.3	71.3	74.5	61.7	68.0	69.8	74.0	61.9
08:23:48 AM	70.0	71.1	74.3	61.4	67.9	69.5	73.7	61.6
08:38:48 AM	70.0	70.8	74.3	61.1	67.9	69.5	73.4	61.3
08:53:48 AM	69.7	70.5	74.0	60.9	67.4	69.0	73.2	61.1
09:08:48 AM	69.5	70.6	73.8	60.6	67.2	68.8	73.0	60.8
09:23:48 AM	69.3	70.3	73.5	60.4	66.9	68.5	72.7	60.6
09:38:48 AM	69.1	70.1	73.3	60.5	66.7	68.3	72.5	60.4
09:53:48 AM	68.9	69.7	73.2	60.3	66.6	68.2	72.4	60.2
10:08:48 AM	68.7	69.5	73.0	60.1	66.6	68.2	72.4	60.3
10:23:48 AM	68.2	69.3	72.8	59.6	65.9	67.8	72.0	59.8
10:38:48 AM	68.0	69.1	72.6	59.7	66.3	67.8	72.1	59.9
10:53:48 AM	67.9	68.9	72.1	59.5	65.8	67.1	71.4	59.4
11:08:48 AM	67.7	68.8	72.0	59.6	65.7	67.2	71.5	59.6
11:23:48 AM	67.6	68.7	71.9	59.3	65.5	67.1	71.3	59.4
11:38:48 AM	67.4	68.5	71.7	59.4	65.4	67.0	71.2	59.3
11:53:48 AM	67.4	68.2	71.4	59.3	65.3	66.9	70.9	59.2
12:08:48 PM	67.0	68.1	71.3	59.5	65.0	66.3	70.6	58.9
12:23:48 PM	67.0	68.1	71.0	59.5	65.3	66.6	70.6	59.2
12:38:48 PM	67.0	67.8	71.0	59.2	65.0	66.3	70.5	59.1
12:53:48 PM	66.7	67.7	70.9	59.4	65.2	66.5	70.5	59.1
01:08:48 PM	66.6	67.7	70.6	59.1	64.8	66.2	70.1	59.0
01:23:48 PM	66.5	67.4	70.6	59.3	64.8	66.1	70.1	58.9
01:38:48 PM	66.2	67.3	70.5	59.2	64.7	66.1	69.8	58.9
01:53:48 PM	66.2	67.0	70.2	59.0	64.5	65.9	69.8	58.9
02:08:48 PM	66.3	67.1	70.3	59.6	64.8	65.9	69.6	59.0
02:23:48 PM	66.4	67.2	70.1	61.0	66.3	66.6	69.5	59.1
02:38:48 PM	66.7	67.2	70.2	62.7	67.0	67.3	69.4	60.4
02:53:48 PM	67.2	67.5	69.9	64.5	68.1	68.1	69.7	61.7
03:08:48 PM	67.9	67.6	70.0	66.5	69.6	69.0	69.8	63.2
03:23:48 PM	68.5	68.2	70.1	66.9	71.0	69.9	70.2	64.7
03:38:48 PM	69.5	68.7	70.3	69.0	73.3	71.8	70.7	66.2
03:53:48 PM	70.3	69.5	70.3	70.6	75.3	73.5	71.1	68.5
04:08:48 PM	71.9	70.3	70.6	72.7	78.3	75.6	71.7	70.4
04:23:48 PM	73.3	71.7	71.2	74.1	79.9	77.3	72.6	72.9
04:38:48 PM	74.8	72.9	71.9	76.4	82.4	79.8	73.6	74.6
04:53:48 PM	76.2	74.1	72.5	77.5	84.4	81.5	74.4	76.3

11-Oct-01	05:08:48 PM	77.7	75.6	72.9	80.1	86.7	83.3	75.5	78.6
	05:23:48 PM	78.8	76.9	73.7	80.4	87.2	84.1	76.2	79.9
	05:38:48 PM	80.0	78.1	74.4	79.4	85.7	83.4	76.8	81.0
	05:53:48 PM	79.9	78.6	74.9	81.5	86.1	83.4	77.4	81.1
	06:08:48 PM	81.4	79.8	75.8	84.3	88.4	85.3	78.2	82.4
	06:23:48 PM	83.0	81.2	76.4	84.1	90.7	87.3	79.3	84.2
	06:38:48 PM	83.7	82.1	77.1	81.9	88.1	85.8	80.0	84.7
	06:53:48 PM	84.5	83.0	77.7	90.9	93.7	89.5	80.7	85.9
	07:08:48 PM	84.8	83.5	78.5	81.9	89.6	87.3	81.3	86.5
	07:23:48 PM	85.6	84.2	79.2	85.0	90.9	88.3	82.0	87.0
	07:38:48 PM	85.7	84.6	79.9	85.2	90.7	88.1	82.6	87.0
	07:53:48 PM	86.4	85.1	80.3	86.9	92.1	89.3	83.0	87.2
	08:08:48 PM	87.4	85.8	81.1	90.6	93.7	90.6	83.8	87.7
	08:23:48 PM	87.9	86.6	81.8	94.0	94.7	91.1	84.4	88.3
	08:38:48 PM	88.1	87.0	82.0	85.7	92.5	90.2	84.7	88.4
	08:53:48 PM	88.2	87.4	82.9	84.5	91.7	89.6	85.2	88.1
	09:08:48 PM	87.9	87.2	82.9	85.0	91.2	89.4	85.5	88.1
	09:23:48 PM	87.6	87.0	83.4	83.4	90.5	88.9	85.5	87.4
	09:38:48 PM	87.2	86.6	83.7	80.8	88.9	87.6	85.5	86.6
	09:53:48 PM	86.3	86.1	83.7	78.4	86.4	85.9	85.6	84.8
	10:08:48 PM	85.6	85.6	84.0	77.4	85.1	85.1	85.3	83.5
	10:23:48 PM	82.4	83.7	84.0	73.6	79.8	81.1	84.5	80.5
	10:38:48 PM	81.2	82.0	83.3	72.9	79.1	80.4	84.0	79.1
	10:53:48 PM	80.2	81.3	82.9	73.0	78.2	79.5	83.2	77.7
	11:08:48 PM	80.0	80.5	82.1	74.4	77.8	79.1	82.5	77.3
	11:23:48 PM	79.5	80.0	81.8	74.1	77.7	78.5	81.9	76.9
	11:38:48 PM	79.5	79.8	81.4	76.1	77.6	78.3	81.2	76.8
	11:53:48 PM	79.3	79.9	80.9	74.3	77.9	78.1	80.8	76.6
	12:08:48 AM	79.4	79.6	81.0	73.3	77.7	78.0	80.6	76.1
	12:23:48 AM	79.1	79.4	80.7	73.0	77.4	77.9	80.3	75.6
	12:38:48 AM	78.6	79.2	80.5	72.0	77.2	77.8	80.1	74.9
	12:53:48 AM	78.6	78.8	80.1	71.6	77.2	77.7	79.8	74.3
	01:08:48 AM	78.2	78.5	80.1	71.3	76.6	77.3	79.7	73.7
	01:23:48 AM	77.9	78.4	80.0	70.7	76.3	77.0	79.7	73.1
	01:38:48 AM	77.7	78.2	79.8	70.7	76.3	76.8	79.4	72.6
	01:53:48 AM	77.4	77.7	79.6	70.5	76.1	76.9	79.2	72.2
	02:08:48 AM	77.0	77.6	79.4	70.4	75.8	76.5	78.9	71.8
	02:23:48 AM	76.7	77.2	79.1	70.3	75.4	76.2	78.8	71.5
	02:38:48 AM	76.6	77.2	79.0	70.0	75.1	75.9	78.5	71.2
	02:53:48 AM	76.3	76.8	78.7	69.3	74.5	75.6	78.2	70.8
	03:08:48 AM	75.8	76.3	78.5	69.1	74.3	75.3	77.9	70.3
	03:23:48 AM	75.3	76.1	78.2	68.6	74.0	75.1	77.7	69.8
	03:38:48 AM	75.1	75.9	78.0	68.2	73.3	74.3	77.5	69.3
	03:53:48 AM	74.7	75.5	77.9	68.0	73.1	74.2	77.3	68.9
	04:08:48 AM	74.6	75.4	77.8	67.4	72.5	73.8	77.0	68.5
	04:23:48 AM	74.5	75.0	77.4	67.2	72.9	74.0	76.8	68.2

04:38:48 AM	74.1	74.9	77.3	67.1	72.3	73.3	76.7	67.8
04:53:48 AM	73.8	74.6	77.0	67.1	72.3	73.3	76.5	67.5
05:08:48 AM	73.5	74.3	76.7	67.1	72.0	73.1	76.2	67.3
05:23:48 AM	73.5	74.3	76.4	67.6	72.3	73.1	76.0	67.3
05:38:48 AM	73.5	74.1	76.5	67.9	72.6	73.2	75.8	67.4
05:53:48 AM	73.3	73.9	76.2	68.0	72.2	73.0	75.6	67.5
06:08:48 AM	73.4	73.9	76.0	67.8	72.3	73.0	75.7	67.5
06:23:48 AM	73.4	73.9	76.0	67.8	72.3	73.0	75.4	67.5
06:38:48 AM	73.1	73.6	75.7	67.4	71.9	72.7	75.4	67.5
06:53:48 AM	73.0	73.5	75.7	67.4	71.9	72.7	75.3	67.4
07:08:48 AM	73.0	73.5	75.7	67.9	72.1	72.6	75.3	67.4
07:23:48 AM	72.8	73.6	75.4	68.0	71.9	72.7	75.1	67.7
07:38:48 AM	72.9	73.4	75.5	68.1	71.8	72.6	74.9	67.8
07:53:48 AM	72.7	73.2	75.3	68.1	71.8	72.4	75.0	67.6
08:08:48 AM	72.5	73.3	75.2	68.3	71.7	72.5	74.8	68.0
08:23:48 AM	72.6	73.1	75.2	68.3	71.7	72.3	74.6	68.0
08:38:48 AM	72.4	72.9	75.0	68.3	71.5	72.3	74.7	67.8
08:53:48 AM	72.1	72.8	75.0	67.8	70.9	72.0	74.6	67.8
09:08:48 AM	71.9	72.7	74.9	67.9	70.8	71.9	74.5	67.7
09:23:48 AM	71.8	72.3	74.7	67.8	70.9	71.7	74.4	67.5
09:38:48 AM	71.7	72.3	74.6	67.7	70.9	71.7	74.0	67.5
09:53:48 AM	71.7	72.2	74.4	68.0	71.1	71.9	74.0	67.4
10:08:48 AM	71.6	72.1	74.3	67.3	70.5	71.3	73.9	67.3
10:23:48 AM	71.4	71.9	74.3	66.8	70.3	71.3	73.9	67.1
10:38:48 AM	71.2	72.0	74.1	66.6	70.0	70.8	73.7	66.9
10:53:48 AM	70.9	71.7	74.1	66.4	69.8	70.5	73.4	66.6
11:08:48 AM	70.7	71.5	73.9	66.4	69.8	70.6	73.5	66.4
11:23:48 AM	70.8	71.3	73.7	66.2	69.6	70.4	73.3	66.2
11:38:48 AM	70.6	71.2	73.6	66.3	69.5	70.3	73.2	66.0
11:53:48 AM	70.2	71.0	73.4	65.9	69.1	70.1	73.0	65.9
12:08:48 PM	70.0	70.8	73.2	65.8	68.9	70.0	72.9	65.7
12:23:48 PM	69.9	70.7	73.1	65.9	69.0	69.8	72.7	65.6
12:38:48 PM	69.8	70.6	73.0	65.8	68.7	69.7	72.4	65.5
12:53:48 PM	69.7	70.2	72.9	65.4	68.6	69.6	72.3	65.4
01:08:48 PM	69.6	70.2	72.8	65.3	68.5	69.3	72.2	65.3
01:23:48 PM	69.5	70.1	72.7	65.5	68.4	69.2	72.1	65.2
01:38:48 PM	69.2	70.0	72.4	65.1	68.0	69.1	72.0	65.1
01:53:48 PM	69.2	69.8	72.2	64.7	67.8	68.9	71.8	64.9
02:08:48 PM	69.1	69.6	72.3	64.8	68.2	69.0	71.6	64.8
02:23:48 PM	69.1	69.7	72.3	65.4	68.6	69.3	71.7	65.1
02:38:48 PM	69.0	69.6	72.0	65.3	68.7	69.3	71.6	65.3
02:53:48 PM	69.3	69.6	72.0	66.4	69.5	69.8	71.6	65.6
03:08:48 PM	69.9	69.9	72.0	68.0	70.4	70.7	71.7	66.4
03:23:48 PM	70.7	70.4	72.0	70.4	72.4	72.1	71.9	68.4
03:38:48 PM	71.7	70.9	71.9	73.5	75.1	74.1	72.2	70.4
03:53:48 PM	73.0	72.0	72.5	77.0	80.8	78.4	73.2	72.9

12-Oct-01	04:08:48 PM	74.3	73.0	72.7	77.0	80.3	78.7	73.7	75.6
	04:23:48 PM	76.0	74.4	73.3	78.9	83.5	81.4	74.9	77.5
	04:38:48 PM	77.7	75.6	73.7	82.5	85.9	83.6	75.5	79.4
	04:53:48 PM	78.8	77.0	74.0	84.9	87.7	85.1	76.5	81.5
	05:08:48 PM	80.0	78.2	75.0	82.4	88.4	86.0	77.4	83.4
	05:23:48 PM	81.3	79.5	75.8	85.8	90.4	87.8	78.4	85.2
	05:38:48 PM	82.6	80.5	76.3	92.1	94.3	90.7	79.5	86.8
	05:53:48 PM	83.4	81.6	77.1	87.9	90.7	87.6	80.3	88.6
	06:08:48 PM	84.7	82.9	77.8	97.9	96.2	92.4	81.2	90.8
	06:23:48 PM	86.5	84.1	78.5	93.0	96.1	92.8	82.4	93.3
	06:38:48 PM	87.2	85.1	79.5	96.4	98.5	94.4	83.2	94.2
	06:53:48 PM	86.7	85.4	80.3	93.5	96.7	93.3	84.0	94.1
	07:08:48 PM	89.0	86.6	81.1	99.5	102.5	97.9	85.0	95.6
	07:23:48 PM	90.8	88.4	81.8	98.1	103.3	98.9	86.0	97.6
	07:38:48 PM	91.2	89.1	82.8	93.6	100.9	97.3	86.9	98.0
	07:53:48 PM	91.0	89.5	83.4	97.3	100.5	96.9	87.6	97.7
	08:08:48 PM	91.4	90.1	84.2	90.3	96.1	94.0	88.1	97.6
	08:23:48 PM	92.5	90.7	84.9	98.3	102.7	98.5	88.7	97.8
	08:38:48 PM	93.3	91.5	85.4	97.2	100.9	97.3	89.5	98.3
	08:53:48 PM	92.9	91.6	86.0	89.7	97.1	95.3	89.9	97.6
	09:08:48 PM	94.5	92.4	86.9	101.6	103.5	99.2	90.6	97.9
	09:23:48 PM	94.5	93.0	87.2	91.9	101.1	98.5	91.0	98.5
	09:38:48 PM	95.3	93.7	87.6	98.7	101.7	98.6	91.4	99.6
	09:53:48 PM	95.5	94.0	88.4	99.7	102.1	99.1	92.1	100.1
	10:08:48 PM	96.0	94.4	88.9	93.6	100.2	97.8	92.4	99.9
	10:23:48 PM	94.2	93.7	89.5	85.3	94.6	94.1	92.5	95.9
	10:38:48 PM	94.1	93.6	89.6	100.6	99.1	96.8	92.4	95.5
	10:53:48 PM	93.3	93.0	89.9	85.9	93.5	92.9	92.2	93.7
	11:08:48 PM	92.1	92.1	89.8	85.3	92.8	92.0	91.8	91.3
	11:23:48 PM	91.4	91.4	89.6	85.6	92.7	91.6	91.4	90.1
	11:38:48 PM	90.8	90.8	89.5	83.1	90.4	90.4	91.0	88.6
	11:53:48 PM	89.8	90.1	89.0	84.5	90.6	90.4	90.6	87.5
	12:08:48 AM	89.5	89.5	88.7	83.7	89.6	89.6	90.2	86.8
	12:23:48 AM	88.9	89.2	88.4	81.8	88.6	88.8	89.9	86.0
	12:38:48 AM	88.4	88.6	88.4	79.7	87.2	88.0	89.5	84.9
	12:53:48 AM	87.4	87.9	87.9	77.9	85.7	87.0	89.3	83.6
	01:08:48 AM	86.9	87.2	87.7	77.6	85.3	86.3	88.7	82.2
	01:23:48 AM	86.1	86.7	87.4	76.3	84.5	85.8	88.2	80.9
	01:38:48 AM	85.6	86.2	87.0	77.7	84.4	85.2	87.8	80.0
	01:53:48 AM	85.2	85.7	86.7	76.7	83.2	84.3	87.4	79.3
	02:08:48 AM	84.2	85.0	86.3	75.2	82.3	83.6	86.7	78.4
	02:23:48 AM	83.6	84.3	85.9	74.5	81.6	82.9	86.3	77.4
	02:38:48 AM	82.9	84.0	85.5	73.9	80.9	82.5	86.1	76.8
	02:53:48 AM	82.5	83.3	85.1	72.9	80.5	82.0	85.7	75.7
	03:08:48 AM	81.9	82.7	84.8	73.1	80.2	81.5	85.2	75.0
	03:23:48 AM	81.3	82.4	84.5	73.1	79.7	81.3	84.7	74.5

03:38:48 AM	80.8	81.9	84.0	72.9	79.0	80.6	84.2	74.0
03:53:48 AM	80.4	81.2	83.8	72.4	78.6	80.2	83.8	73.6
04:08:48 AM	80.0	81.0	83.4	72.0	78.2	79.5	83.4	73.2
04:23:48 AM	79.6	80.6	83.0	71.9	77.8	79.4	83.1	72.9
04:38:48 AM	79.2	80.3	82.6	71.5	77.4	79.0	82.7	72.5
04:53:48 AM	79.0	79.8	82.4	70.5	77.0	78.5	82.2	72.0
05:08:48 AM	78.4	79.5	82.1	69.6	76.6	78.2	81.8	71.4
05:23:48 AM	78.1	78.9	81.8	69.3	76.0	77.6	81.5	70.8
05:38:48 AM	77.8	78.6	81.5	68.7	75.4	77.2	81.2	70.1
05:53:48 AM	77.4	78.2	81.1	68.1	75.3	76.9	80.8	69.5
06:08:48 AM	77.2	78.0	80.9	67.9	75.1	76.7	80.3	69.1
06:23:48 AM	77.1	77.9	80.5	67.7	75.5	76.8	80.2	68.7
06:38:48 AM	76.7	77.5	80.4	67.4	74.7	76.2	79.9	68.3
06:53:48 AM	76.4	77.4	80.1	67.3	74.5	75.8	79.8	68.0
07:08:48 AM	76.1	77.2	79.8	67.3	74.3	75.6	79.3	67.7
07:23:48 AM	76.1	76.9	79.5	66.7	74.0	75.4	79.3	67.5
07:38:48 AM	75.8	76.6	79.5	66.4	73.7	75.0	79.0	67.1
07:53:48 AM	75.5	76.3	79.2	66.4	73.4	74.8	78.7	66.9
08:08:48 AM	75.2	76.0	78.9	66.1	73.2	74.5	78.4	66.6
08:23:48 AM	75.0	75.8	78.7	66.4	73.0	74.3	78.2	66.4
08:38:48 AM	74.9	75.7	78.6	66.3	72.6	74.2	77.8	66.2
08:53:48 AM	74.7	75.5	78.2	66.2	72.7	74.0	77.7	66.1
09:08:48 AM	74.3	75.1	78.0	65.8	72.3	73.9	77.6	66.0
09:23:48 AM	74.1	74.9	77.8	65.6	72.1	73.7	77.3	65.8
09:38:48 AM	73.9	74.7	77.6	65.4	71.9	73.2	77.2	65.6
09:53:48 AM	73.8	74.6	77.5	65.5	72.0	73.3	76.7	65.4
10:08:48 AM	73.7	74.5	77.4	65.7	71.9	73.3	76.7	65.3
10:23:48 AM	73.7	74.5	77.1	65.9	72.0	73.3	76.5	65.4
10:38:48 AM	73.8	74.3	77.0	66.1	72.1	73.2	76.3	65.5
10:53:48 AM	73.7	74.2	76.8	66.4	72.2	73.3	76.2	65.6
11:08:48 AM	73.5	74.3	76.7	66.6	72.1	73.2	76.1	65.8
11:23:48 AM	73.5	74.3	76.7	67.1	72.1	73.1	76.0	66.0
11:38:48 AM	73.6	74.2	76.6	67.2	72.0	73.1	76.0	66.5
11:53:48 AM	73.5	74.1	76.5	66.9	71.9	72.9	75.8	66.3
12:08:48 PM	73.3	73.8	76.5	66.6	71.6	72.7	75.8	66.3
12:23:48 PM	73.1	73.6	76.3	66.1	71.4	72.5	75.6	66.1
12:38:48 PM	72.9	73.5	76.1	65.7	71.0	72.3	75.4	66.0
12:53:48 PM	72.8	73.3	75.9	65.8	70.8	72.1	75.3	65.8
01:08:48 PM	72.6	73.1	75.8	65.6	70.9	72.0	75.1	65.6
01:23:48 PM	72.5	73.0	75.7	65.8	70.8	71.9	75.0	65.5
01:38:48 PM	72.1	72.9	75.6	65.5	70.2	71.5	74.9	65.5
01:53:48 PM	72.0	72.8	75.4	64.8	70.3	71.3	74.7	65.2
02:08:48 PM	71.8	72.6	75.3	65.1	70.1	71.4	74.5	65.1
02:23:48 PM	71.7	72.5	75.1	66.3	70.5	71.5	74.4	65.2
02:38:48 PM	72.0	72.5	74.9	68.8	72.3	72.5	74.6	66.5
02:53:48 PM	72.7	72.7	74.9	72.2	74.7	74.2	74.7	68.4

13-Oct-01	03:08:48 PM	73.7	73.2	74.8	74.2	76.7	75.6	74.8	70.9
	03:23:48 PM	74.7	73.9	74.9	75.2	77.5	76.4	75.4	73.8
	03:38:48 PM	75.2	74.6	75.2	76.8	78.6	77.3	75.7	75.2
	03:53:48 PM	75.8	75.3	75.3	77.2	79.1	78.1	76.2	77.0
	04:08:48 PM	76.3	75.8	75.5	76.9	79.0	78.0	76.4	77.7
	04:23:48 PM	76.7	76.4	75.9	77.5	79.5	78.4	76.8	78.1
	04:38:48 PM	77.1	76.8	76.0	78.2	80.0	78.9	77.1	78.9
	04:53:48 PM	77.6	77.1	76.3	77.6	80.7	79.4	77.1	79.4
	05:08:48 PM	78.3	77.7	76.7	79.3	81.7	80.1	77.5	80.1
	05:23:48 PM	78.8	78.2	76.9	80.6	82.7	81.4	78.0	80.9
	05:38:48 PM	79.6	78.8	77.0	81.2	83.8	82.3	78.3	82.0
	05:53:48 PM	80.6	79.8	77.4	80.6	85.6	84.0	79.0	83.0
	06:08:48 PM	81.4	80.6	77.9	81.6	86.8	85.0	79.8	83.7
	06:23:48 PM	82.0	81.0	78.3	81.0	85.9	84.6	80.2	84.4
	06:38:48 PM	82.6	81.6	78.6	83.1	88.3	86.5	80.8	85.0
	06:53:48 PM	83.7	82.7	79.2	84.0	90.3	88.0	81.5	85.9
	07:08:48 PM	84.9	83.6	79.6	88.1	91.6	89.3	82.2	87.4
	07:23:48 PM	85.0	84.0	80.2	82.4	89.3	87.7	82.8	88.5
	07:38:48 PM	85.0	84.2	80.8	83.7	89.9	88.3	83.1	88.3
	07:53:48 PM	85.5	84.4	81.3	83.9	90.3	88.5	83.5	88.7
	08:08:48 PM	86.0	85.0	81.5	83.4	89.8	88.2	83.8	89.3
	08:23:48 PM	86.3	85.2	82.1	85.0	90.3	88.7	84.3	89.2
	08:38:48 PM	86.4	85.6	82.2	84.5	89.4	88.1	84.4	89.6
	08:53:48 PM	87.1	86.1	82.6	84.5	90.4	89.1	84.9	89.8
	09:08:48 PM	87.5	86.4	83.0	84.8	89.6	88.6	85.2	89.9
	09:23:48 PM	87.3	86.6	83.4	83.6	89.9	88.7	85.5	89.7
	09:38:48 PM	87.3	86.5	83.6	83.6	88.6	87.8	85.7	89.1
	09:53:48 PM	87.3	86.7	83.8	84.1	89.3	88.2	85.6	89.0
	10:08:48 PM	86.9	86.4	84.0	82.7	87.6	87.0	85.7	88.6
	10:23:48 PM	86.4	86.2	84.0	81.4	86.5	86.2	85.7	87.5
	10:38:48 PM	86.3	86.1	84.2	82.9	87.7	87.2	85.6	87.2
	10:53:48 PM	86.5	86.0	84.1	84.1	88.3	87.5	85.7	87.5
	11:08:48 PM	86.3	85.8	84.2	83.1	87.3	87.1	85.8	87.6
	11:23:48 PM	86.0	85.8	84.2	83.1	87.6	86.8	85.7	87.0
	11:38:48 PM	85.7	85.7	84.3	80.6	85.9	85.9	85.6	86.7
	11:53:48 PM	85.5	85.2	84.4	80.5	85.8	85.6	85.6	85.6
	12:08:48 AM	85.2	84.9	84.4	80.5	85.3	85.3	85.3	85.1
	12:23:48 AM	84.8	84.8	84.3	79.2	84.3	84.6	85.4	84.3
	12:38:48 AM	84.4	84.4	84.2	79.2	83.9	84.2	85.2	83.4
	12:53:48 AM	84.0	84.0	84.0	77.7	83.2	83.7	85.0	82.4
	01:08:48 AM	83.2	83.4	84.0	76.3	82.3	83.0	84.6	81.2
	01:23:48 AM	82.7	82.9	83.7	75.5	81.4	82.2	84.3	79.9
	01:38:48 AM	82.1	82.6	83.4	75.5	80.9	81.7	84.1	78.8
	01:53:48 AM	81.7	82.3	83.3	74.6	80.2	81.3	83.6	77.9
	02:08:48 AM	81.3	81.8	83.1	74.1	80.0	81.1	83.4	77.2
	02:23:48 AM	81.0	81.5	82.8	74.0	79.8	80.8	83.2	76.4

02:38:48 AM	80.8	81.1	82.4	73.1	79.4	80.4	82.8	75.7
02:53:48 AM	80.3	80.9	82.2	72.1	78.9	80.0	82.6	75.0
03:08:48 AM	79.9	80.4	82.2	72.1	78.5	79.5	82.4	74.3
03:23:48 AM	79.6	80.1	81.7	72.2	78.0	79.1	81.9	73.8
03:38:48 AM	79.4	79.9	81.5	72.2	77.9	78.9	81.8	73.4
03:53:48 AM	79.1	79.6	81.4	71.9	77.6	78.6	81.5	73.1
04:08:48 AM	78.7	79.2	81.3	71.5	77.1	78.2	81.1	72.7
04:23:48 AM	78.2	79.0	81.1	71.0	76.9	77.7	80.9	72.2
04:38:48 AM	78.1	78.6	80.7	70.9	76.5	77.6	80.5	71.8
04:53:48 AM	77.7	78.3	80.6	71.1	76.0	77.0	80.2	71.5
05:08:48 AM	77.2	78.0	80.1	71.1	75.5	76.8	80.0	71.3
05:23:48 AM	77.0	77.8	80.0	70.7	75.4	76.7	79.8	71.2
05:38:48 AM	76.7	77.5	79.7	70.6	75.1	76.4	79.5	70.9
05:53:48 AM	76.5	77.3	79.7	69.9	75.0	76.1	79.2	70.6
06:08:48 AM	76.3	77.1	79.3	69.4	74.6	75.9	79.0	70.1
06:23:48 AM	76.0	76.8	79.2	69.1	74.3	75.6	78.8	69.8
06:38:48 AM	75.7	76.5	78.9	69.1	74.3	75.3	78.5	69.5
06:53:48 AM	75.5	76.3	78.7	69.1	73.8	75.1	78.3	69.3
07:08:48 AM	75.3	76.1	78.5	68.9	73.9	75.0	78.1	69.2
07:23:48 AM	75.2	75.9	78.3	68.5	73.5	74.8	77.9	69.0
07:38:48 AM	74.9	75.7	78.1	68.8	73.5	74.6	77.7	68.8
07:53:48 AM	74.9	75.7	78.1	69.3	73.2	74.3	77.4	68.7
08:08:48 AM	74.8	75.4	77.8	69.2	73.5	74.2	77.4	68.7
08:23:48 AM	74.8	75.3	77.7	69.5	73.5	74.2	77.1	69.0
08:38:48 AM	74.6	75.1	77.5	69.2	73.2	74.3	77.2	69.0
08:53:48 AM	74.5	75.0	77.4	69.2	72.9	74.0	76.9	68.7
09:08:48 AM	74.1	74.9	77.1	68.8	72.8	73.9	76.7	68.6
09:23:48 AM	74.0	74.8	77.2	68.9	72.6	73.7	76.5	68.4
09:38:48 AM	74.0	74.6	77.0	68.4	72.6	73.7	76.6	68.2
09:53:48 AM	73.9	74.4	76.8	68.5	72.5	73.5	76.4	68.0
10:08:48 AM	73.8	74.3	76.7	68.2	72.4	73.4	76.3	67.9
10:23:48 AM	73.5	74.1	76.5	67.4	71.8	72.8	76.0	67.6
10:38:48 AM	73.4	73.9	76.3	67.3	71.9	73.0	75.9	67.2
10:53:48 AM	73.2	74.0	76.4	67.3	71.8	72.8	75.7	67.0
11:08:48 AM	73.0	73.8	76.2	66.9	71.6	72.6	75.8	66.8
11:23:48 AM	72.8	73.6	76.0	66.4	71.3	72.4	75.5	66.6
11:38:48 AM	72.8	73.6	75.9	66.3	71.0	72.3	75.5	66.2
11:53:48 AM	72.6	73.4	75.8	66.7	71.1	72.2	75.4	66.1
12:08:48 PM	72.6	73.1	75.5	66.7	71.1	72.2	75.1	66.1
12:23:48 PM	72.6	73.1	75.5	67.0	71.2	72.3	74.9	66.2
12:38:48 PM	72.4	72.9	75.3	67.6	71.3	72.1	75.0	66.5
12:53:48 PM	72.4	72.9	75.3	68.1	71.6	72.4	74.7	66.8
01:08:48 PM	72.7	73.2	75.1	68.4	71.7	72.5	74.8	67.2
01:23:48 PM	72.7	73.0	75.1	68.5	71.9	72.5	74.8	67.4
01:38:48 PM	72.7	73.2	75.1	68.4	71.9	72.4	74.8	67.7
01:53:48 PM	72.6	73.1	75.0	68.3	71.8	72.6	74.7	67.8

14-Oct-01	02:08:48 PM	72.7	73.0	74.8	68.7	71.6	72.4	74.5	67.9
	02:23:48 PM	72.6	73.2	75.0	68.9	72.1	72.6	74.7	68.2
	02:38:48 PM	72.7	73.3	74.9	70.1	72.8	73.1	74.6	68.6
	02:53:48 PM	73.0	73.3	74.9	70.6	73.1	73.1	74.6	69.1
	03:08:48 PM	73.4	73.4	74.7	71.5	73.8	73.8	74.5	69.8
	03:23:48 PM	73.8	73.8	74.9	72.8	74.8	74.6	74.8	70.9
	03:38:48 PM	74.0	74.0	74.8	73.5	75.3	75.0	75.0	72.1
	03:53:48 PM	75.9	74.8	75.1	79.4	83.0	80.2	75.7	74.4
	04:08:48 PM	76.7	75.9	75.3	77.7	80.3	78.9	76.1	76.9
	04:23:48 PM	77.3	76.8	75.7	79.5	81.4	79.8	76.7	78.2
	04:38:48 PM	79.2	77.8	76.0	83.9	89.0	86.4	77.3	80.4
	04:53:48 PM	81.4	79.5	76.6	86.9	90.7	88.1	78.5	83.4
	05:08:48 PM	81.0	80.0	77.0	78.9	84.1	83.3	79.4	84.1
	05:23:48 PM	81.1	80.0	77.6	85.3	90.2	87.6	79.8	83.4
	05:38:48 PM	83.6	81.7	78.2	83.8	90.6	88.5	80.4	85.6
	05:53:48 PM	83.9	82.6	78.6	88.6	92.8	89.7	81.4	86.9
	06:08:48 PM	84.6	83.3	79.3	82.8	90.6	88.5	82.0	87.4
	06:23:48 PM	85.1	83.8	79.8	83.8	91.4	89.3	82.6	87.8
	06:38:48 PM	86.1	84.8	80.3	86.1	93.5	90.9	83.1	89.1
	06:53:48 PM	87.0	85.4	80.9	85.2	93.3	91.0	83.7	90.0
	07:08:48 PM	87.2	85.9	81.4	90.6	93.7	91.1	84.1	90.8
	07:23:48 PM	88.5	86.9	81.9	89.6	98.5	94.9	85.0	92.0
	07:38:48 PM	89.4	87.8	82.8	87.1	96.3	93.7	85.9	92.9
	07:53:48 PM	89.4	88.1	83.3	87.3	95.6	93.0	86.2	93.0
	08:08:48 PM	90.3	88.9	83.9	90.5	98.2	95.1	86.8	93.3
	08:23:48 PM	90.4	89.1	84.3	88.8	95.6	93.6	87.6	93.3
	08:38:48 PM	91.5	89.9	84.9	96.2	99.5	96.1	88.4	93.8
	08:53:48 PM	92.6	91.0	85.5	99.6	101.1	97.5	89.0	96.0
	09:08:48 PM	93.2	91.6	86.1	88.4	97.5	95.2	89.5	96.8
	09:23:48 PM	92.9	91.6	86.6	91.6	97.4	95.3	90.2	96.1
	09:38:48 PM	93.2	92.2	86.9	100.0	100.0	97.2	90.5	96.7
	09:53:48 PM	93.9	92.8	87.6	94.7	101.4	98.5	91.1	97.5
	10:08:48 PM	95.0	93.7	88.1	101.2	102.9	99.5	91.5	98.8
	10:23:48 PM	95.3	94.0	88.7	90.0	99.4	97.3	92.1	99.6
	10:38:48 PM	94.5	93.7	89.3	89.0	98.6	96.8	92.4	97.5
	10:53:48 PM	93.3	93.1	89.4	86.5	94.7	93.9	92.4	95.2
	11:08:48 PM	92.6	92.3	89.7	85.2	92.9	92.6	91.9	92.9
	11:23:48 PM	91.9	91.9	89.5	86.1	92.6	92.1	91.6	91.6
	11:38:48 PM	91.3	91.3	89.5	86.6	93.8	92.0	91.3	91.0
	11:53:48 PM	90.8	90.8	89.4	83.6	90.7	90.7	91.2	89.6
	12:08:48 AM	89.9	90.1	89.1	82.5	89.9	89.9	90.7	88.1
	12:23:48 AM	89.5	89.5	88.9	81.8	89.0	89.3	90.3	86.9
	12:38:48 AM	88.5	88.8	88.3	81.7	88.3	88.6	89.9	85.7
	12:53:48 AM	88.2	88.2	88.2	82.2	87.9	88.2	89.7	85.1
	01:08:48 AM	87.5	87.8	88.0	80.4	86.7	87.4	89.3	84.3
	01:23:48 AM	87.0	87.2	87.8	79.3	86.1	86.9	89.0	83.3

01:38:48 AM	86.2	86.7	87.5	79.1	85.1	86.1	88.5	82.2
01:53:48 AM	85.5	86.0	87.1	77.8	84.1	85.1	88.0	81.2
02:08:48 AM	84.7	85.5	86.8	76.7	82.9	84.2	87.3	80.1
02:23:48 AM	84.2	84.7	86.3	76.5	82.5	83.6	87.0	79.1
02:38:48 AM	83.6	84.4	86.0	75.9	82.0	83.0	86.4	78.3
02:53:48 AM	83.1	83.7	85.8	75.4	81.2	82.5	85.9	77.6
03:08:48 AM	82.7	83.5	85.3	75.0	80.8	82.1	85.5	76.9
03:23:48 AM	82.0	82.8	84.9	74.6	80.7	82.0	85.4	76.5
03:38:48 AM	81.6	82.4	84.5	73.9	80.3	81.4	84.8	75.9
03:53:48 AM	81.3	82.1	84.2	73.9	80.0	81.0	84.4	75.3
04:08:48 AM	80.8	81.6	83.7	73.6	79.3	80.6	84.0	74.8
04:23:48 AM	80.6	81.4	83.5	73.2	78.8	80.1	83.8	74.4
04:38:48 AM	80.2	81.0	83.2	73.3	78.8	79.8	83.5	74.1
04:53:48 AM	80.0	80.8	82.9	73.3	78.5	79.6	83.0	74.1
05:08:48 AM	79.5	80.3	82.7	73.7	78.1	79.4	82.8	73.9
05:23:48 AM	79.3	80.1	82.5	72.9	77.9	79.2	82.4	73.7
05:38:48 AM	79.3	79.8	82.2	72.6	77.9	78.9	82.3	73.4
05:53:48 AM	78.9	79.7	81.8	73.1	77.5	78.8	81.9	73.0
06:08:48 AM	78.7	79.5	81.6	73.4	77.2	78.5	81.7	72.8
06:23:48 AM	78.7	79.2	81.6	73.9	77.8	78.6	81.5	72.8
06:38:48 AM	78.6	79.1	81.2	74.1	78.0	78.8	81.4	73.1
06:53:48 AM	78.7	79.2	81.0	73.9	77.6	78.7	81.3	73.2
07:08:48 AM	78.5	79.0	80.9	74.0	77.7	78.5	81.1	73.3
07:23:48 AM	78.4	79.0	80.8	74.2	77.7	78.5	81.1	73.5
07:38:48 AM	78.3	78.9	80.7	74.1	77.5	78.3	80.9	73.6
07:53:48 AM	78.1	78.7	80.5	74.7	77.4	78.2	80.8	73.7
08:08:48 AM	78.0	78.6	80.4	74.6	77.5	78.3	80.6	73.8
08:23:48 AM	78.2	78.4	80.3	74.7	77.7	78.5	80.5	74.0
08:38:48 AM	78.0	78.6	80.2	74.6	77.6	78.4	80.4	74.2
08:53:48 AM	77.9	78.4	80.0	74.2	77.2	78.2	80.3	74.3
09:08:48 AM	77.8	78.4	80.0	74.7	77.4	78.2	80.2	74.2
09:23:48 AM	77.8	78.1	80.0	74.1	77.3	78.1	80.2	74.2
09:38:48 AM	77.8	78.0	79.9	74.1	77.2	78.0	80.1	74.1
09:53:48 AM	77.5	78.0	79.8	74.0	76.7	77.7	80.1	74.0
10:08:48 AM	77.4	77.9	79.7	73.9	76.6	77.6	80.0	73.9
10:23:48 AM	77.3	77.8	79.4	74.1	76.8	77.6	79.9	73.9
10:38:48 AM	77.3	77.6	79.4	73.8	76.5	77.3	79.6	73.9
10:53:48 AM	76.9	77.4	79.3	73.4	76.1	77.1	79.5	73.7
11:08:48 AM	76.7	77.2	79.1	73.2	75.9	76.9	79.5	73.5
11:23:48 AM	76.5	77.0	79.2	73.3	75.9	76.7	79.3	73.3
11:38:48 AM	76.4	77.2	79.0	73.2	75.8	76.6	79.2	73.2
11:53:48 AM	76.4	76.9	78.8	74.0	75.8	76.6	79.0	73.2
12:08:48 PM	76.2	76.8	78.6	74.4	75.7	76.5	78.9	73.3
12:23:48 PM	76.4	76.9	78.5	74.8	76.0	76.7	78.8	73.6
12:38:48 PM	76.3	76.9	78.5	74.7	75.9	76.7	78.8	73.8
12:53:48 PM	76.2	76.8	78.4	74.9	76.1	76.6	78.7	74.0

15-Oct-01	01:08:48 PM	76.4	76.7	78.3	74.8	76.3	76.8	78.6	74.2
	01:23:48 PM	76.6	76.8	78.2	74.7	76.1	76.6	78.5	74.3
	01:38:48 PM	75.7	76.5	78.1	71.7	74.6	75.7	78.3	74.1
	01:53:48 PM	75.4	76.2	77.8	71.6	74.5	75.5	78.2	73.4
	02:08:48 PM	75.0	75.8	77.7	71.8	74.4	75.5	78.1	73.1
	02:23:48 PM	74.8	75.6	77.5	71.9	74.5	75.3	77.9	73.2
	02:38:48 PM	74.7	75.3	77.4	72.3	74.4	75.2	77.5	73.1
	02:53:48 PM	74.7	75.3	77.1	72.9	74.8	75.3	77.6	73.2
	03:08:48 PM	75.0	75.5	77.1	73.4	74.7	75.5	77.6	73.4
	03:23:48 PM	75.2	75.5	77.0	73.9	75.0	75.5	77.3	73.7
	03:38:48 PM	75.5	75.5	76.8	74.4	75.1	75.6	77.4	74.0
	03:53:48 PM	75.7	75.9	77.0	74.9	75.5	75.8	77.3	74.5
	04:08:48 PM	76.3	76.3	77.1	76.3	76.4	76.1	77.4	75.1
	04:23:48 PM	77.1	76.9	77.1	77.1	77.4	76.9	77.4	76.6
	04:38:48 PM	77.4	77.2	77.2	77.4	77.9	77.4	77.7	77.4
	04:53:48 PM	78.4	77.9	77.4	80.6	80.4	78.8	77.7	78.8
	05:08:48 PM	79.4	78.6	77.5	81.0	81.4	79.8	78.0	80.6
	05:23:48 PM	79.7	79.2	77.9	82.6	83.0	80.9	78.6	82.0
	05:38:48 PM	82.8	81.2	78.5	85.4	85.6	84.5	79.6	85.3
	05:53:48 PM	83.9	82.3	78.8	87.0	88.0	86.2	80.2	87.5
	06:08:48 PM	84.0	82.7	79.5	87.4	88.7	86.6	80.9	88.2
	06:23:48 PM	84.1	83.1	80.1	84.6	87.1	85.8	81.3	88.4
	06:38:48 PM	86.9	84.8	80.6	86.7	89.3	87.7	82.0	90.6
	06:53:48 PM	86.9	85.3	81.1	86.4	89.6	88.0	82.8	91.9
	07:08:48 PM	87.0	85.4	81.7	93.1	94.3	91.7	83.6	92.2
	07:23:48 PM	87.9	86.3	82.4	90.3	93.3	91.0	84.0	93.3
	07:38:48 PM	87.7	86.4	82.9	87.2	91.5	89.9	84.7	93.8
	07:53:48 PM	88.4	87.1	83.4	88.4	92.1	90.6	85.1	94.2
	08:08:48 PM	88.1	87.1	83.6	87.6	91.4	89.8	85.4	93.7
	08:23:48 PM	88.5	87.4	84.0	87.4	92.2	90.6	85.7	93.7
	08:38:48 PM	88.4	87.4	84.2	87.1	91.8	90.3	85.9	93.6
	08:53:48 PM	88.7	87.6	84.5	89.5	92.7	91.2	86.3	94.0
	09:08:48 PM	88.5	87.8	84.8	86.4	91.5	90.2	86.5	93.8
	09:23:48 PM	88.5	87.7	85.1	85.1	90.5	89.4	86.6	92.8
	09:38:48 PM	88.5	87.7	85.4	83.8	89.2	88.6	86.8	92.0
	09:53:48 PM	88.3	87.7	85.3	84.3	89.0	88.5	86.7	91.1
	10:08:48 PM	88.8	88.0	85.6	85.9	90.3	89.2	86.9	91.3
	10:23:48 PM	88.5	88.0	85.6	85.4	90.1	89.0	87.0	91.4
	10:38:48 PM	88.4	87.9	85.8	83.9	88.9	88.4	87.1	91.0
	10:53:48 PM	88.1	87.5	86.0	83.3	88.5	87.9	87.2	90.0
	11:08:48 PM	87.7	87.4	86.1	83.7	88.1	87.8	87.0	89.4
	11:23:48 PM	87.3	87.3	86.2	83.0	87.6	87.3	86.8	88.6
	11:38:48 PM	87.1	86.9	86.1	82.4	86.9	86.9	86.7	88.0
	11:53:48 PM	86.6	86.6	86.0	81.8	86.6	86.6	86.6	87.1
	12:08:48 AM	86.2	86.2	85.9	81.2	85.7	85.9	86.4	86.2
	12:23:48 AM	85.5	85.5	85.7	79.9	84.9	85.2	86.2	85.2

12:38:48 AM	84.9	85.2	85.7	78.6	83.8	84.3	85.9	84.1
12:53:48 AM	84.2	84.7	85.5	77.8	83.2	84.0	85.6	82.7
01:08:48 AM	83.8	84.3	85.4	77.2	82.3	83.3	85.4	81.5
01:23:48 AM	83.0	83.5	85.1	75.5	81.2	82.5	84.8	80.1
01:38:48 AM	82.4	83.2	84.8	74.2	80.3	81.6	84.5	78.8
01:53:48 AM	82.0	82.8	84.6	72.7	80.0	81.3	84.5	77.1
02:08:48 AM	81.3	82.1	84.2	72.0	79.1	80.7	84.0	75.7
02:23:48 AM	80.7	81.5	83.9	70.9	78.6	80.2	83.6	74.4
02:38:48 AM	80.4	81.2	83.6	70.0	77.8	79.6	83.2	73.3
02:53:48 AM	79.8	80.8	83.2	69.4	77.6	79.2	82.9	72.1
03:08:48 AM	79.4	80.2	82.8	69.5	77.0	78.6	82.3	71.5
03:23:48 AM	78.8	79.9	82.5	67.9	75.9	77.8	81.9	70.7
03:38:48 AM	78.1	79.1	82.0	67.4	75.4	77.3	81.5	69.7
03:53:48 AM	77.7	78.8	81.7	66.2	74.9	77.0	81.2	68.8
04:08:48 AM	77.2	78.3	81.5	65.7	74.4	76.5	80.7	68.1
04:23:48 AM	76.8	77.8	81.0	64.2	74.2	76.0	80.5	67.4
04:38:48 AM	76.2	77.5	80.7	63.3	73.3	75.4	79.9	66.2
04:53:48 AM	75.7	77.0	80.4	63.1	72.5	74.6	79.6	65.6
05:08:48 AM	75.3	76.4	80.1	64.6	73.0	74.9	79.1	65.1
05:23:48 AM	74.9	76.2	79.6	65.8	72.8	74.6	78.8	65.1
05:38:48 AM	74.5	75.6	79.3	65.7	72.5	74.4	78.3	65.4
05:53:48 AM	74.2	75.3	79.0	65.1	72.2	74.0	78.0	65.1
06:08:48 AM	73.7	75.1	78.5	64.4	71.4	73.3	77.7	64.8
06:23:48 AM	73.3	74.6	78.3	62.6	70.9	72.7	77.4	64.3
06:38:48 AM	72.9	74.3	78.0	63.3	70.8	72.6	77.1	63.6
06:53:48 AM	72.7	73.8	77.8	61.2	70.0	72.1	76.8	63.1
07:08:48 AM	72.3	73.4	77.6	61.0	69.8	71.7	76.4	62.4
07:23:48 AM	71.8	73.2	77.2	60.3	69.4	71.5	76.2	62.0
07:38:48 AM	71.7	72.7	76.7	59.9	69.0	71.1	75.8	61.5
07:53:48 AM	71.2	72.3	76.5	59.1	68.1	70.5	75.5	60.5
08:08:48 AM	70.9	72.2	76.2	57.4	67.4	70.1	75.3	59.7
08:23:48 AM	70.3	71.6	75.9	58.0	67.7	70.1	75.0	58.9
08:38:48 AM	69.9	71.2	75.7	55.6	66.5	69.2	74.7	58.3
08:53:48 AM	69.4	70.8	75.3	56.0	66.3	68.9	74.5	57.5
09:08:48 AM	69.3	70.3	75.1	56.1	66.2	68.8	74.1	57.4
09:23:48 AM	68.7	70.1	74.8	54.5	65.3	68.0	73.8	56.6
09:38:48 AM	68.4	69.7	74.5	55.5	65.8	67.9	73.4	56.0
09:53:48 AM	68.1	69.4	73.9	57.3	65.4	67.5	73.0	56.3
10:08:48 AM	67.6	69.0	73.8	56.6	64.7	67.4	72.6	56.5
10:23:48 AM	67.6	68.9	73.5	56.6	65.0	67.1	72.3	56.4
10:38:48 AM	67.3	68.7	73.2	52.8	63.5	66.2	72.0	55.5
10:53:48 AM	66.9	68.2	73.0	56.1	64.3	66.4	71.7	54.7
11:08:48 AM	66.6	67.9	72.4	57.4	64.3	66.4	71.4	55.5
11:23:48 AM	66.4	67.7	72.3	57.5	63.9	66.0	71.0	55.9
11:38:48 AM	66.1	67.5	72.0	57.8	64.0	66.1	70.8	56.3
11:53:48 AM	66.1	67.4	71.7	58.8	63.9	65.8	70.5	56.8

03-Nov-01	12:08:48 PM	65.9	67.2	71.5	60.0	63.8	65.7	70.4	57.2
	12:23:48 PM	65.6	67.0	71.2	59.2	63.6	65.7	70.2	57.5
	12:38:48 PM	65.6	66.9	71.2	58.8	63.7	65.3	70.1	57.6
	12:53:48 PM	65.5	66.5	70.8	57.7	63.3	65.1	69.9	57.2
	01:08:48 PM	65.2	66.2	70.8	56.5	62.9	64.8	69.8	56.8
	01:23:48 PM	64.8	66.1	70.4	56.7	62.5	64.6	69.4	56.4
	01:38:48 PM	64.6	66.0	70.2	57.1	62.6	64.4	69.2	56.2
	01:53:48 PM	64.5	65.6	70.1	56.9	62.5	64.3	69.1	56.1
	02:08:48 PM	64.4	65.4	69.7	56.6	62.3	64.2	68.7	55.9
	02:23:48 PM	64.6	65.2	69.7	59.5	64.5	65.5	68.7	57.3
	02:38:48 PM	64.5	65.0	69.3	62.3	65.1	65.9	68.6	59.3
	02:53:48 PM	65.2	65.5	69.5	65.0	67.0	67.0	68.9	61.7
	03:08:48 PM	66.0	65.8	69.3	65.5	69.6	68.9	69.1	64.1
	03:23:48 PM	66.9	66.4	69.3	66.9	71.5	70.2	69.7	66.0
	03:38:48 PM	68.1	67.3	69.7	68.1	74.5	72.1	70.0	67.7
	03:53:48 PM	69.2	68.2	69.8	69.0	75.6	73.3	70.6	69.1
	04:08:48 PM	70.3	69.0	70.1	70.3	77.5	74.7	71.2	70.5
	04:23:48 PM	71.6	70.0	70.6	72.4	79.7	76.5	72.1	72.3
	04:38:48 PM	73.0	71.2	71.2	77.6	81.3	78.2	72.7	74.0
	04:53:48 PM	74.4	72.3	71.7	82.6	83.5	80.4	73.6	76.0
	05:08:48 PM	75.5	73.9	72.0	78.4	84.7	81.8	74.5	77.9
	05:23:48 PM	76.9	75.0	72.9	84.0	86.4	82.8	75.5	79.1
	05:38:48 PM	77.9	76.3	73.4	84.3	87.5	84.1	76.5	80.2
	05:53:48 PM	79.2	77.4	74.2	87.7	89.2	85.3	77.2	81.1
	06:08:48 PM	80.7	78.6	74.9	91.3	90.8	86.9	78.1	82.3
	06:23:48 PM	82.0	79.9	75.7	90.5	91.6	88.0	79.1	83.6
	06:38:48 PM	83.2	81.1	76.6	90.3	93.2	89.3	80.0	84.6
	06:53:48 PM	84.3	82.2	77.4	94.6	94.4	90.3	80.9	85.6
	07:08:48 PM	85.6	83.4	78.4	90.6	94.8	90.7	81.8	86.5
	07:23:48 PM	86.4	84.5	79.5	92.4	95.8	91.6	82.8	87.0
	07:38:48 PM	87.4	85.3	80.3	95.6	96.3	92.2	83.6	87.5
	07:53:48 PM	88.6	86.5	81.0	95.5	97.0	92.9	84.6	88.2
	08:08:48 PM	89.3	87.5	81.9	95.1	97.7	93.6	85.3	88.9
	08:23:48 PM	90.2	88.1	82.5	101.1	97.7	93.8	86.0	89.4
	08:38:48 PM	90.6	88.7	83.2	98.7	98.1	94.3	86.8	90.4
	08:53:48 PM	91.4	89.6	84.0	103.2	98.5	94.8	87.6	91.0
	09:08:48 PM	91.7	90.1	84.8	102.4	98.7	95.1	88.1	91.5
	09:23:48 PM	92.1	90.5	85.3	103.9	98.1	94.7	88.5	91.6
	09:38:48 PM	92.3	91.0	86.3	99.6	97.8	94.7	89.0	92.4
	09:53:48 PM	93.7	92.1	87.7	103.3	98.9	95.8	90.4	87.5
	09:22:41 PM	82.7	81.6	75.8	85.6	86.0	84.4	78.2	80.3
	09:37:41 PM	82.3	81.5	76.5	100.4	87.7	84.8	79.1	86.4
	09:52:41 PM	81.8	81.3	76.8	81.8	87.6	84.5	79.2	87.3
	10:07:41 PM	81.8	81.2	77.2	78.6	87.4	84.0	79.8	85.6
	10:22:41 PM	81.4	80.9	77.7	78.7	85.9	82.7	79.9	83.8
	10:37:41 PM	80.0	80.0	77.6	75.8	81.7	80.9	79.9	81.7

04-Nov-01	10:52:41 PM	78.9	79.1	77.5	76.0	79.4	79.4	79.4	79.9
	11:07:41 PM	78.2	78.5	77.1	74.5	78.2	78.8	79.0	78.5
	11:22:41 PM	77.6	77.6	77.0	73.6	77.1	77.9	78.7	77.1
	11:37:41 PM	76.6	76.9	76.6	72.1	75.8	76.8	78.2	75.5
	11:52:41 PM	75.8	76.1	76.3	69.9	74.7	76.0	77.6	73.9
	12:07:41 AM	75.1	75.7	76.2	66.6	73.5	75.1	77.2	71.7
	12:22:41 AM	74.4	74.9	75.7	65.6	73.0	74.5	76.9	69.8
	12:37:41 AM	73.6	74.1	75.4	63.1	71.3	73.7	76.3	67.9
	12:52:41 AM	72.7	73.2	75.1	62.8	70.2	72.8	75.9	65.9
	01:07:41 AM	71.8	72.6	74.5	63.5	69.7	72.0	75.2	64.9
	01:22:41 AM	71.3	72.1	74.2	61.6	68.9	71.3	74.7	63.6
	01:37:41 AM	70.9	71.7	73.8	61.5	68.1	70.7	74.1	62.5
	01:52:41 AM	70.3	71.1	73.4	59.2	67.7	70.3	73.7	61.3
	02:07:41 AM	69.8	70.6	73.0	57.2	66.6	69.5	73.2	60.0
	02:22:41 AM	69.0	69.8	72.7	55.0	65.5	69.0	72.7	58.6
	02:37:41 AM	68.4	69.2	72.4	52.5	64.4	68.1	72.3	56.9
	02:52:41 AM	67.9	68.7	71.9	52.5	64.1	67.5	71.7	55.8
	03:07:41 AM	67.3	68.1	71.6	51.4	63.3	66.8	71.2	54.8
	03:22:41 AM	66.7	67.8	71.0	51.0	62.9	66.3	70.8	53.5
	03:37:41 AM	66.1	66.9	70.6	49.9	61.4	65.3	70.1	52.6
	03:52:41 AM	65.7	66.6	70.3	50.9	62.1	65.5	70.0	51.9
	04:07:41 AM	65.4	66.2	69.9	49.4	61.7	64.9	69.6	51.3
	04:22:41 AM	64.6	65.7	69.7	49.2	60.9	64.4	69.1	50.5
	04:37:41 AM	64.4	65.5	69.2	48.2	59.7	63.7	68.7	49.8
	04:52:41 AM	64.0	64.8	68.9	48.9	60.5	63.6	68.1	49.2
	05:07:41 AM	63.5	64.6	68.3	48.7	59.8	63.3	67.8	49.1
	05:22:41 AM	63.3	64.3	68.1	50.6	60.1	63.0	67.5	49.2
	05:37:41 AM	62.9	63.7	67.7	47.2	59.0	62.4	67.2	49.1
	05:52:41 AM	62.3	63.4	67.4	48.0	58.9	62.1	66.8	48.2
	06:07:41 AM	62.0	63.1	67.1	48.8	59.4	62.1	66.3	48.2
	06:22:41 AM	61.8	62.8	66.9	46.6	57.9	61.3	66.1	47.7
	06:37:41 AM	61.4	62.5	66.5	49.0	58.1	61.3	65.8	47.6
	06:52:41 AM	61.2	62.0	66.3	47.1	57.4	60.8	65.3	47.7
	07:07:41 AM	60.6	61.7	66.0	44.9	56.1	60.1	65.2	46.7
	07:22:41 AM	60.5	61.6	65.9	46.7	57.0	60.2	65.0	46.0
	07:37:41 AM	60.2	61.3	65.6	44.5	55.1	59.4	64.4	45.7
	07:52:41 AM	59.9	61.0	65.3	45.8	56.5	59.7	64.2	45.2
	08:07:41 AM	59.4	60.5	64.8	46.4	56.0	59.2	64.0	45.0
	08:22:41 AM	59.2	60.3	64.6	45.6	55.8	59.0	63.7	44.7
	08:37:41 AM	59.0	60.1	64.4	43.8	54.8	58.5	63.3	44.6
	08:52:41 AM	58.7	59.8	64.1	44.6	55.4	58.6	63.1	44.3
	09:07:41 AM	58.4	59.5	63.8	43.5	54.5	58.2	62.7	44.0
	09:22:41 AM	58.1	59.2	63.5	44.0	55.0	58.2	62.4	43.7
	09:37:41 AM	57.9	59.0	63.3	42.9	53.4	57.4	62.2	43.5
	09:52:41 AM	57.8	58.6	63.1	42.8	53.8	57.2	62.0	43.0
	10:07:41 AM	57.4	58.5	62.8	42.5	53.2	56.9	61.7	42.7

10:22:41 AM	57.1	58.2	62.5	42.7	53.2	56.9	61.5	42.4
10:37:41 AM	56.9	57.9	62.5	42.2	53.2	56.7	61.2	42.1
10:52:41 AM	56.6	57.7	62.3	42.2	52.9	56.4	60.9	41.9
11:07:41 AM	56.6	57.4	62.0	41.3	52.4	56.1	60.9	41.6
11:22:41 AM	56.1	57.2	61.8	42.5	52.7	55.9	60.7	41.4
11:37:41 AM	55.9	57.0	61.6	44.0	52.6	55.9	60.4	41.9
11:52:41 AM	55.9	56.7	61.3	42.8	52.4	55.6	60.1	42.2
12:07:41 PM	55.7	56.5	61.0	42.0	51.9	55.3	59.9	42.2
12:22:41 PM	55.4	56.5	60.8	41.3	51.5	55.0	59.8	41.5
12:37:41 PM	55.3	56.1	60.7	43.1	52.0	55.2	59.4	41.4
12:52:41 PM	55.0	56.1	60.6	40.8	51.1	54.6	59.4	41.4
01:07:41 PM	54.9	55.9	60.5	40.4	50.9	54.4	59.2	40.9
01:22:41 PM	54.8	55.6	60.2	40.9	51.1	54.3	58.8	40.6
01:37:41 PM	54.5	55.6	59.9	40.9	50.9	54.1	58.6	40.3
01:52:41 PM	54.5	55.3	59.9	42.0	52.6	54.7	58.7	40.7
02:07:41 PM	54.4	55.2	59.3	43.8	54.7	55.5	58.4	42.9
02:22:41 PM	55.0	55.3	59.0	47.4	56.2	56.4	58.5	46.0
02:37:41 PM	55.7	55.7	58.9	53.2	58.8	57.7	58.8	49.4
02:52:41 PM	57.2	56.6	59.3	59.9	62.0	59.9	59.4	53.2
03:07:41 PM	58.2	57.6	59.5	64.4	64.6	61.7	59.8	57.1
03:22:41 PM	59.5	58.4	59.7	67.3	66.9	63.5	60.3	60.5
03:37:41 PM	60.9	59.5	60.3	70.0	69.3	65.3	61.1	63.2
03:52:41 PM	62.4	60.8	60.6	74.2	71.4	66.9	61.8	66.1
04:07:41 PM	64.0	62.1	61.0	78.4	73.6	69.4	62.8	68.6
04:22:41 PM	65.4	63.3	61.4	82.2	75.9	71.2	63.3	71.7
04:37:41 PM	66.9	64.7	62.0	85.2	78.5	73.0	64.0	74.5
04:52:41 PM	68.3	66.2	62.7	89.0	80.9	74.9	65.2	77.3
05:07:41 PM	69.9	67.8	63.5	88.7	82.5	76.5	66.2	80.1
05:22:41 PM	71.5	69.1	64.5	92.9	84.2	78.0	67.2	82.2
05:37:41 PM	73.1	70.7	65.3	92.6	85.5	79.5	68.4	84.5
05:52:41 PM	74.3	71.9	66.2	99.5	86.6	80.1	69.3	86.4
06:07:41 PM	75.6	73.2	67.0	101.7	88.6	82.1	70.5	88.8
06:22:41 PM	76.9	74.5	68.1	104.0	88.3	82.3	71.5	90.3
06:37:41 PM	78.0	75.6	69.2	95.4	89.8	83.8	72.6	91.6
06:52:41 PM	79.1	76.7	70.3	102.0	90.8	84.5	73.8	92.0
07:07:41 PM	80.1	77.7	71.0	110.2	91.0	85.0	74.8	92.8
07:22:41 PM	80.9	78.7	72.1	97.7	91.8	86.1	75.6	93.3
07:37:41 PM	81.6	79.5	72.8	105.0	90.8	85.6	76.4	93.9
07:52:41 PM	82.5	80.4	73.7	104.5	90.9	86.3	77.4	94.0
08:07:41 PM	83.0	80.9	74.5	106.1	91.8	86.9	78.0	94.4
08:22:41 PM	83.2	81.4	75.2	100.6	91.2	87.1	78.7	94.9
08:37:41 PM	83.7	82.1	76.0	108.3	90.7	86.9	79.3	94.9
08:52:41 PM	83.8	82.2	76.6	111.2	90.6	86.7	79.7	95.0
09:07:41 PM	84.0	82.7	77.1	105.2	90.0	86.6	80.1	94.6
09:22:41 PM	84.3	83.0	78.0	108.4	89.7	86.1	80.3	94.1
09:37:41 PM	84.0	83.2	78.4	101.3	88.9	88.4	80.5	93.8

05-Nov-01	09:52:41 PM	83.0	82.5	78.5	81.7	88.1	85.2	80.5	92.2
	10:07:41 PM	82.6	81.8	78.7	79.5	87.3	84.4	80.8	89.4
	10:22:41 PM	81.8	81.5	78.6	79.4	86.1	83.3	80.7	86.4
	10:37:41 PM	80.7	80.7	78.6	77.0	83.0	81.7	80.7	84.1
	10:52:41 PM	79.9	79.9	78.4	76.5	80.2	80.5	80.2	82.3
	11:07:41 PM	79.1	79.1	78.3	75.4	78.9	79.4	79.9	80.4
	11:22:41 PM	78.2	78.5	78.0	74.8	78.1	78.6	79.4	78.8
	11:37:41 PM	77.5	77.8	77.8	73.3	76.8	77.9	78.9	77.4
	11:52:41 PM	76.7	77.0	77.3	72.5	75.8		78.4	75.8
	12:07:41 AM	75.7	76.2	77.0	67.9	73.7		77.9	73.9
	12:22:41 AM	74.9	75.5	76.8	65.8	72.5	75.4	77.5	72.0
	12:37:41 AM	74.2	74.7	76.3	63.2	71.3	74.5	77.1	69.7
	12:52:41 AM	73.2	74.0	75.9	61.1	70.6	73.7	76.6	67.4
	01:07:41 AM	72.5	73.3	75.7	57.4	68.6	72.0	75.9	64.6
	01:22:41 AM	71.4	72.4	74.8	59.0	68.5	71.4	75.3	62.9
	01:37:41 AM	71.0	71.8	74.4	56.2	67.3	70.4	74.7	61.4
	01:52:41 AM	70.2	71.2	73.9	56.2	67.0	69.9	73.9	59.9
	02:07:41 AM	69.5	70.3	73.5	56.6	66.0	69.2	73.4	59.1
	02:22:41 AM	68.7	69.8	73.0	55.0	65.3	68.5	72.7	58.1
	02:37:41 AM	68.3	69.1	72.8	51.3	63.7	67.7	72.4	56.5
	02:52:41 AM	67.5	68.6	72.3	50.8	62.8	66.8	71.8	54.8
	03:07:41 AM	66.9	68.0	71.7	50.4	62.1	66.0	71.0	54.1
	03:22:41 AM	66.4	67.5	71.2	49.9	61.8	65.8	70.8	52.7
	03:37:41 AM	65.8	66.9	70.9	49.6	62.0	65.5	70.5	51.6
	03:52:41 AM	65.4	66.4	70.4	48.6	60.9	64.9	69.9	51.3
	04:07:41 AM	64.9	66.0	70.0	50.1	61.0	64.5	69.5	50.6
	04:22:41 AM	64.4	65.5	69.5	51.7	61.0	64.2	68.9	50.8
	04:37:41 AM	64.1	65.2	69.2	49.8	59.9	63.7	68.4	50.8
	04:52:41 AM	63.7	64.7	69.0	48.8	59.7	63.1	68.1	49.8
	05:07:41 AM	63.4	64.5	68.5	46.9	57.7	62.3	67.8	48.9
	05:22:41 AM	62.9	64.0	68.3	45.9	57.5	61.7	67.3	48.1
	05:37:41 AM	62.2	63.3	67.9	46.5	58.2	61.9	67.0	47.5
	05:52:41 AM	62.2	63.2	67.5	45.6	57.6	61.3	66.6	46.8
	06:07:41 AM	61.8	62.9	67.1	45.3	57.1	60.9	66.2	46.1
	06:22:41 AM	61.3	62.4	67.0	47.0	57.3	60.8	66.1	45.8
	06:37:41 AM	61.0	62.0	66.6	44.7	55.7	60.2	65.5	45.7
	06:52:41 AM	60.9	61.9	66.2	43.8	55.7	60.0	65.3	45.0
	07:07:41 AM	60.3	61.7	65.9	45.1	56.3	59.7	64.7	44.4
	07:22:41 AM	59.6	60.7	65.3	45.5	56.0	59.4	64.5	44.4
	07:37:41 AM	59.5	60.9	65.2	44.9	55.6	59.1	64.1	44.4
	07:52:41 AM	59.3	60.4	64.9	43.3	55.1	58.8	63.9	44.1
	08:07:41 AM	59.2	60.3	64.8	42.1	54.3	58.3	63.6	43.3
	08:22:41 AM	58.7	59.8	64.4	43.0	54.4	58.1	63.2	42.8
	08:37:41 AM	58.4	59.5	64.1	41.6	53.7	57.7	63.0	42.6
	08:52:41 AM	58.1	59.4	64.0	42.6	53.8	57.6	62.9	42.2
	09:07:41 AM	57.5	58.9	63.4	41.8	53.3	57.1	62.4	42.0

09:22:41 AM	57.6	58.7	63.5	42.1	53.1	56.9	62.2	41.8
09:37:41 AM	57.3	58.4	63.2	41.8	53.0	56.5	61.8	41.4
09:52:41 AM	57.0	58.3	62.9	40.6	52.4	56.4	61.5	41.1
10:07:41 AM	56.6	57.7	62.5	40.0	52.0	56.0	61.4	40.7
10:22:41 AM	56.5	57.6	62.4	40.7	52.2	56.0	61.0	40.4
10:37:41 AM	55.9	56.9	61.8	41.1	51.9	55.7	60.7	40.3
10:52:41 AM	55.5	56.9	61.7	40.5	51.3	55.1	60.4	40.3
11:07:41 AM	55.5	56.6	61.4	39.1	51.2	55.0	60.3	39.9
11:22:41 AM	55.4	56.4	61.3	38.7	51.0	54.8	60.1	39.4
11:37:41 AM	54.9	56.0	60.8	39.6	50.9	54.6	59.7	39.3
11:52:41 AM	54.7	55.8	60.6	38.0	50.1	54.2	59.5	39.1
12:07:41 PM	54.4	55.5	60.3	38.3	50.2	53.9	59.2	38.8
12:22:41 PM	54.4	55.4	60.3	38.0	50.0	53.8	58.9	38.4
12:37:41 PM	54.2	55.3	60.1	37.3	49.3	53.3	58.7	37.9
12:52:41 PM	53.8	54.9	59.7	38.8	49.5	53.3	58.3	37.9
01:07:41 PM	53.6	54.4	59.5	38.8	49.6	53.1	58.2	38.0
01:22:41 PM	53.3	54.4	59.2	38.8	49.4	52.8	57.9	38.0
01:37:41 PM	53.1	54.2	59.0	37.3	48.8	52.6	57.6	37.7
01:52:41 PM	53.3	54.1	58.7	39.7	50.8	53.2	57.7	37.8
02:07:41 PM	53.3	54.4	58.7	42.2	53.6	54.4	57.6	39.9
02:22:41 PM	53.9	54.7	58.5	46.3	55.6	55.3	57.7	43.0
02:37:41 PM	54.8	55.1	58.6	53.7	57.7	56.9	57.9	47.2
02:52:41 PM	55.9	55.7	58.6	58.6	60.4	58.3	58.5	50.8
03:07:41 PM	57.2	56.4	58.9	63.2	63.6	60.1	59.1	54.5
03:22:41 PM	58.8	57.7	59.3	69.0	67.0	62.3	59.9	58.0
03:37:41 PM	60.0	58.7	59.5	72.3	68.4	63.7	60.2	61.8
03:52:41 PM	61.7	60.1	59.8	76.1	71.1	65.8	61.0	65.5
04:07:41 PM	63.1	61.2	60.1	78.6	73.4	68.6	62.0	69.2
04:22:41 PM	64.4	62.5	60.6	81.7	75.2	70.3	62.6	72.9
04:37:41 PM	66.1	64.2	61.2	86.0	77.6	72.0	63.6	76.3
04:52:41 PM	67.9	65.8	62.0	87.1	79.5	73.7	64.4	79.2
05:07:41 PM	69.3	67.2	62.9	93.1	81.9	75.6	65.3	82.1
05:22:41 PM	70.9	68.8	63.9	87.9	82.2	76.2	66.7	84.1
05:37:41 PM	72.4	70.0	64.7	96.5	84.0	77.7	67.7	86.1
05:52:41 PM	73.7	71.3	65.4	98.5	85.9	79.4	68.8	88.2
06:07:41 PM	75.1	72.7	66.8	90.8	86.4	80.4	69.9	89.5
06:22:41 PM	76.5	74.1	67.7	96.6	87.5	81.5	70.9	90.6
06:37:41 PM	77.6	74.9	68.5	109.3	89.2	83.2	72.2	91.6
06:52:41 PM	78.5	75.9	69.4	105.3	89.5	84.5	73.0	93.4
07:07:41 PM	79.5	77.1	70.4	110.6	90.8	84.5	74.0	93.6
07:22:41 PM	80.4	78.0	71.3	100.1	89.9	84.4	75.0	95.3
07:37:41 PM	81.2	78.8	72.1	111.8	91.3	85.6	75.9	97.0
07:52:41 PM	81.8	79.6	73.2	112.1	91.3	85.8	76.7	96.5
08:07:41 PM	82.2	80.3	73.9	100.6	90.2	85.6	77.4	96.5
08:22:41 PM	82.9	80.7	74.3	99.2	91.6	86.7	77.8	97.8
08:37:41 PM	83.2	81.6	75.4	110.9	90.5	86.3	78.4	98.7

06-Nov-01	08:52:41 PM	83.2	81.6	75.7	98.2	89.2	85.5	79.0	98.2
	09:07:41 PM	83.5	82.2	76.6	105.0	89.5	85.6	79.5	97.0
	09:22:41 PM	83.4	82.1	77.0	108.0	89.4	85.5	79.7	96.4
	09:37:41 PM	83.6	82.3	77.8	100.4	88.4	85.3	80.0	95.4
	09:52:41 PM	82.3	81.8	77.8	82.3	87.9	84.5	80.1	93.9
	10:07:41 PM	81.8	81.3	78.1	78.6	86.4	83.3	80.2	90.3
	10:22:41 PM	81.2	80.7	78.3	77.5	84.9	82.3	80.2	87.5
	10:37:41 PM	79.9	79.9	78.0	76.4	83.0	81.2	79.9	84.6
	10:52:41 PM	79.0	79.3	78.0	76.6	79.9	79.9	79.6	82.3
	11:07:41 PM	78.6	78.6	77.8	75.1	78.3	78.9	79.4	80.4
	11:22:41 PM	77.6	77.9	77.4	73.4	77.1	78.1	78.9	78.7
	11:37:41 PM	76.9	77.2	77.2	72.1	76.1	77.4	78.4	76.9
	11:52:41 PM	76.1	76.4	76.9	69.7	74.2	76.3	77.9	75.0
	12:07:41 AM	75.1	75.6	76.4	66.0	73.1	75.8	77.6	72.9
	12:22:41 AM	74.1	74.9	76.3	62.9	71.2	74.4	77.0	70.4
	12:37:41 AM	73.3	73.8	75.7	60.9	70.3	73.2	76.4	68.0
	12:52:41 AM	72.5	73.3	75.4	60.4	69.3	72.4	75.8	65.8
	01:07:41 AM	71.6	72.4	74.8	57.9	68.1	71.2	74.9	63.8
	01:22:41 AM	70.9	71.7	74.4	56.4	67.4	70.5	74.5	61.5
	01:37:41 AM	70.3	71.1	74.0	56.1	66.4	69.8	74.0	60.2
	01:52:41 AM	69.4	70.5	73.4	53.8	65.6	68.8	73.3	58.5
	02:07:41 AM	68.8	69.9	73.1	51.3	64.6	68.3	72.7	56.8
	02:22:41 AM	67.9	69.3	72.7	51.2	63.4	67.3	72.1	55.1
	02:37:41 AM	67.5	68.6	72.1	53.3	64.1	67.3	71.8	54.0
	02:52:41 AM	67.0	67.8	71.6	50.8	62.7	66.4	71.1	53.6
	03:07:41 AM	66.3	67.4	71.1	49.6	61.3	65.5	70.8	52.7
	03:22:41 AM	65.6	66.7	70.7	50.3	62.2	65.4	70.1	51.8
	03:37:41 AM	65.4	66.4	70.4	48.6	60.9	64.9	69.9	51.0
	03:52:41 AM	64.7	66.1	70.1	48.0	60.2	64.2	69.2	49.8
	04:07:41 AM	64.3	65.4	69.7	46.8	59.0	63.3	68.8	48.8
	04:22:41 AM	63.7	65.1	69.1	46.7	58.9	63.2	68.2	48.2
	04:37:41 AM	63.3	64.6	68.7	45.4	58.1	62.4	67.9	47.7
	04:52:41 AM	63.1	64.1	68.4	46.5	58.7	62.4	67.4	47.2
	05:07:41 AM	62.5	63.6	67.9	45.7	58.2	61.9	67.2	46.7
	05:22:41 AM	62.3	63.4	67.6	44.4	56.9	61.4	66.7	46.1
	05:37:41 AM	61.7	63.0	67.3	44.0	57.0	61.0	66.3	45.5
	05:52:41 AM	61.1	62.4	66.7	44.8	56.9	60.9	66.0	44.8
	06:07:41 AM	61.1	62.2	66.7	46.2	57.1	60.6	65.6	44.8
	06:22:41 AM	60.6	61.6	66.2	43.5	55.7	60.0	65.3	44.5
	06:37:41 AM	60.3	61.6	65.9	43.7	55.9	59.7	65.0	43.8
	06:52:41 AM	60.1	61.1	65.7	42.7	55.3	59.3	64.6	43.7
	07:07:41 AM	59.8	60.9	65.4	44.6	55.5	59.0	64.0	43.4
	07:22:41 AM	59.4	60.7	65.0	43.4	55.2	58.9	64.0	43.3
	07:37:41 AM	59.1	60.2	64.5	43.1	54.7	58.5	63.5	43.4
	07:52:41 AM	59.1	60.2	64.5	42.5	54.1	58.1	63.4	43.0
	08:07:41 AM	58.6	59.7	64.0	42.6	54.1	58.1	63.1	42.8

08:22:41 AM	58.5	59.6	64.2	42.2	54.0	57.8	62.8	42.4
08:37:41 AM	58.0	59.1	63.4	43.1	54.4	57.8	62.6	42.3
08:52:41 AM	58.1	59.2	63.5	41.3	53.1	57.1	62.4	42.1
09:07:41 AM	57.5	58.6	63.1	42.0	53.5	57.3	62.0	41.7
09:22:41 AM	57.6	58.6	62.9	41.0	52.8	56.8	61.8	41.4
09:37:41 AM	57.1	58.2	62.5	41.6	53.2	57.0	61.8	41.4
09:52:41 AM	57.1	57.9	62.5	41.6	53.2	56.7	61.4	41.3
10:07:41 AM	57.2	58.3	62.6	41.7	52.5	56.3	61.3	41.2
10:22:41 AM	57.2	58.0	62.3	42.8	53.1	56.6	61.1	41.2
10:37:41 AM	57.0	58.1	62.1	42.3	52.9	56.3	60.9	41.3
10:52:41 AM	56.6	57.6	61.7	42.4	53.3	56.5	60.7	41.4
11:07:41 AM	56.7	57.5	61.5	42.2	53.1	56.0	60.6	41.5
11:22:41 AM	56.6	57.7	61.8	42.5	52.6	56.0	60.3	41.5
11:37:41 AM	56.4	57.5	61.5	42.6	52.6	55.8	60.3	41.5
11:52:41 AM	56.2	57.3	61.3	43.4	53.0	55.9	60.2	41.6
12:07:41 PM	56.4	57.2	61.3	42.8	52.4	55.6	59.8	41.9
12:22:41 PM	56.3	57.1	61.1	43.5	52.8	55.7	59.7	42.2
12:37:41 PM	56.4	57.2	61.0	43.1	52.6	55.6	59.6	42.4
12:52:41 PM	56.0	56.8	60.5	43.2	52.7	55.7	59.7	42.2
01:07:41 PM	56.0	56.8	60.6	43.2	52.5	55.4	59.4	42.3
01:22:41 PM	56.1	56.9	60.6	43.8	52.6	55.5	59.5	42.6
01:37:41 PM	55.6	56.5	60.5	43.7	52.4	55.4	59.1	42.5
01:52:41 PM	55.6	56.4	60.2	44.4	52.7	55.4	59.1	43.0
02:07:41 PM	55.9	56.4	60.2	46.6	56.1	56.6	59.3	43.7
02:22:41 PM	56.0	56.5	60.0	50.0	55.8	56.8	59.2	46.6
02:37:41 PM	56.7	57.0	59.9	52.9	57.6	57.6	59.2	48.2
02:52:41 PM	57.2	57.2	59.9	54.2	59.0	58.4	59.5	49.9
03:07:41 PM	58.2	57.7	59.8	60.4	63.2	60.8	60.0	53.6
03:22:41 PM	59.2	58.6	60.3	62.1	62.7	61.1	60.3	56.5
03:37:41 PM	60.6	59.5	60.6	71.8	69.4	64.6	60.9	60.9
03:52:41 PM	62.1	60.8	60.8	75.0	70.6	66.1	61.6	65.1
04:07:41 PM	61.9	61.4	61.4	66.2	65.3	63.7	62.1	66.4
04:22:41 PM	64.6	62.7	61.4	82.4	74.9	69.1	62.7	70.4
04:37:41 PM	66.3	64.4	61.7	88.3	78.0	72.7	63.8	75.4
04:52:41 PM	68.2	66.0	62.2	86.5	81.3	74.8	64.7	79.5
05:07:41 PM	69.7	67.6	63.0	92.0	83.0	76.7	65.9	83.5
05:22:41 PM	71.5	69.1	64.0	95.0	86.1	78.8	67.0	87.2
05:37:41 PM	73.1	70.5	65.1	100.8	86.3	79.7	68.4	90.4
05:52:41 PM	74.8	72.1	66.5	93.1	88.1	81.3	69.5	91.2
06:07:41 PM	75.8	73.4	67.4	87.4	84.0	79.5	70.6	92.3
06:22:41 PM	76.9	74.2	68.0	102.9	89.7	83.2	71.6	94.1
06:37:41 PM	77.9	75.5	69.0	102.1	90.2	83.7	72.7	94.6
06:52:41 PM	79.2	76.6	70.1	102.9	91.1	84.9	73.9	95.3
07:07:41 PM	80.0	77.6	71.2	101.6		85.4	74.7	96.3
07:22:41 PM	80.8	78.5	72.0	107.3		86.7	75.7	95.2
07:37:41 PM	80.7	78.8	72.9	83.3		82.2	76.1	96.4

07-Nov-01	07:52:41 PM	81.3	79.5	73.3	108.6		85.9	76.7	97.6
	08:07:41 PM	82.2	80.4	73.7	112.3		87.1	77.7	100.3
	08:22:41 PM	83.0	81.4	75.0	103.7		86.6	78.2	101.3
	08:37:41 PM	83.4	81.8	75.9	106.2		86.9	79.0	100.3
	08:52:41 PM	84.0	82.4	76.3	106.5		87.4	79.6	100.1
	09:07:41 PM	83.9	82.6	77.0	101.3		87.4	80.0	99.3
	09:22:41 PM	84.1	82.7	77.7	93.6		86.7	80.2	96.8
	09:37:41 PM	83.5	82.5	77.7	101.4		85.8	80.3	96.2
	09:52:41 PM	82.8	82.0	78.3	82.8		85.3	80.6	94.1
	10:07:41 PM	82.2	81.6	78.4	80.0		84.1	80.7	90.6
	10:22:41 PM	81.4	81.2	78.5	79.3		83.0	80.6	87.7
	10:37:41 PM	80.6	80.4	78.5	77.5		81.8	80.3	85.0
	10:52:41 PM	79.6	79.6	78.0	77.2		80.6	80.1	83.2
	11:07:41 PM	79.1	79.1	78.0	75.9		79.5	79.8	81.3
	11:22:41 PM	78.4	78.6	77.8	75.2		78.9	79.4	79.6
	11:37:41 PM	77.6	77.9	77.6	73.6		77.9	79.0	78.2
	11:52:41 PM	77.0	77.2	77.2	70.8		76.9	78.5	76.4
	12:07:41 AM	76.0	76.3	76.8	68.0		75.7	77.8	74.4
	12:22:41 AM	75.2	75.5	76.6	67.5		75.4	77.7	72.8
	12:37:41 AM	74.5	74.8	76.1	66.0		74.4	77.0	71.0
	12:52:41 AM	73.6	74.1	75.7	64.5		73.7	76.4	69.3
	01:07:41 AM	72.8	73.6	75.5	58.3		72.1	76.0	67.1
	01:22:41 AM	72.2	73.0	75.1	61.5		72.3	75.4	65.1
	01:37:41 AM	71.7	72.5	74.6	61.0		71.3	74.7	63.6
	01:52:41 AM	71.3	71.8	74.2	59.2		71.0	74.4	62.2
	02:07:41 AM	70.6	71.4	74.0	55.8		69.9	73.8	60.9
	02:22:41 AM	69.9	70.7	73.4	56.2		69.7	73.4	59.1
	02:37:41 AM	69.5	70.3	73.0	55.2		68.9	72.9	58.6
	02:52:41 AM	68.7	69.7	72.7	52.5		68.0	72.5	56.9
	03:07:41 AM	68.2	69.0	72.4	51.4		67.3	72.0	55.6
	03:22:41 AM	67.5	68.3	72.1	50.2		66.8	71.8	54.3
	03:37:41 AM	67.0	67.8	71.5	53.0	64.5	66.6	71.1	53.6
	03:52:41 AM	66.2	67.3	71.0	51.1	63.2	65.9	70.6	53.4
	04:07:41 AM	65.9	66.9	70.7	49.7	62.8	65.4	70.2	52.1
	04:22:41 AM	65.4	66.5	70.5	48.6	61.4	64.6	69.6	51.0
	04:37:41 AM	64.7	65.7	70.0	48.2	61.5	64.4	69.2	50.3
	04:52:41 AM	64.2	65.3	69.6	50.2	61.0	63.9	68.6	50.0
	05:07:41 AM	63.7	64.8	69.0	49.9	60.3	63.4	68.2	50.1
	05:22:41 AM	63.6	64.4	68.6	49.0	60.1	63.0	67.8	49.4
	05:37:41 AM	62.7	63.8	68.1	47.0	59.5	62.7	67.5	49.1
	05:52:41 AM	62.7	63.5	68.0	47.5	59.5	62.1	67.1	48.5
	06:07:41 AM	62.3	63.4	67.7	45.8	58.1	61.5	66.5	48.1
	06:22:41 AM	61.9	63.0	67.3	45.6	58.6	61.6	66.3	47.4
	06:37:41 AM	61.5	62.6	66.9	47.4	58.1	61.0	66.0	47.1
	06:52:41 AM	61.2	62.3	66.8	45.2	57.5	60.4	65.7	46.7
	07:07:41 AM	60.8	61.9	66.5	47.0	57.4	60.3	65.4	46.4

07:22:41 AM	60.6	61.4	66.2	45.4	57.2	60.1	64.9	46.2
07:37:41 AM	59.8	60.9	65.4	45.9	56.7	59.6	64.6	45.9
07:52:41 AM	59.7	60.7	65.3	45.5	56.6	59.2	64.3	45.8
08:07:41 AM	59.6	60.7	65.3	44.4	56.2	59.2	63.9	45.5
08:22:41 AM	59.5	60.5	65.1	44.0	56.3	58.9	63.7	45.0
08:37:41 AM	59.2	60.2	64.5	45.3	56.0	58.7	63.5	44.7
08:52:41 AM	58.5	59.6	64.2	44.1	55.2	58.1	63.2	44.7
09:07:41 AM	58.6	59.4	64.2	45.3	55.2	57.9	62.7	44.5
09:22:41 AM	58.0	59.0	63.6	44.6	54.9	57.6	62.3	44.4
09:37:41 AM	57.9	58.7	63.2	44.8	55.0	57.4	62.2	44.3
09:52:41 AM	57.7	58.5	63.0	44.4	54.6	57.0	62.0	44.1
10:07:41 AM	57.6	58.6	63.2	44.5	54.5	56.9	61.7	44.0
10:22:41 AM	57.5	58.3	62.8	43.3	54.1	56.8	61.6	43.9
10:37:41 AM	57.1	58.2	62.5	42.4	53.7	56.4	61.4	43.5
10:52:41 AM	56.8	57.9	62.2	44.0	54.0	56.4	61.1	43.2
11:07:41 AM	56.4	57.5	62.1	42.8	53.8	56.2	60.7	43.0
11:22:41 AM	56.6	57.4	62.0	44.3	53.8	56.2	60.7	43.0
11:37:41 AM	56.3	57.4	61.7	43.2	53.3	55.7	60.5	43.0
11:52:41 AM	56.0	57.0	61.6	44.0	53.2	55.6	60.1	42.9
12:07:41 PM	55.6	56.7	61.2	42.0	52.8	55.2	60.0	42.8
12:22:41 PM	55.7	56.7	61.0	43.1	52.6	55.0	59.8	42.7
12:37:41 PM	55.5	56.6	60.9	41.9	51.9	54.6	59.6	42.5
12:52:41 PM	55.5	56.3	60.9	41.3	52.6	55.0	59.5	42.1
01:07:41 PM	55.2	56.3	60.6	41.9	52.1	54.8	59.3	41.9
01:22:41 PM	55.1	56.2	60.5	42.9	52.1	54.5	59.0	41.8
01:37:41 PM	54.9	55.7	60.3	42.9	51.6	54.3	58.8	42.2
01:52:41 PM	54.6	55.5	60.0	41.6	52.2	54.3	58.6	41.9
02:07:41 PM	54.4	55.2	59.7	42.1	52.4	54.3	58.5	41.9
02:22:41 PM	54.8	55.4	59.4	47.2	56.0	56.0	58.6	43.9
02:37:41 PM	55.6	55.8	59.3	52.6	59.2	57.6	58.9	47.1
02:52:41 PM	56.7	56.4	59.4	57.7	61.9	59.3	59.3	51.0
03:07:41 PM	57.7	57.1	59.6	61.7	64.0	60.6	59.8	55.0
03:22:41 PM	59.1	58.3	59.7	68.8	68.0	62.8	60.1	58.5
03:37:41 PM	60.7	59.6	60.2	73.3	69.6	64.8	60.8	62.7
03:52:41 PM	62.2	60.9	60.6	77.9	72.0	67.0	61.7	67.0
04:07:41 PM	63.8	62.2	60.9	78.3	75.4	69.6	62.2	71.0
04:22:41 PM	65.7	63.6	61.4	82.7	77.7	72.2	63.2	75.3
04:37:41 PM	67.1	64.9	62.0	87.8	79.0	73.3	64.0	78.2
04:52:41 PM	68.8	66.6	62.9	86.3	81.0	74.7	65.2	81.0
05:07:41 PM	70.4	68.0	63.7	91.3	82.6	76.3	66.3	83.4
05:22:41 PM	71.9	69.5	64.7	93.4	83.6	77.6	67.5	84.6
05:37:41 PM	73.2	70.8	65.7	93.0	85.2	78.9	68.7	85.5
05:52:41 PM	74.6	72.2	66.5	91.8	85.8	79.8	69.5	86.8
06:07:41 PM	75.6	73.2	67.6	92.3	87.0	80.7	70.7	87.0
06:22:41 PM	76.6	74.5	68.3	95.9	87.7	81.4	71.7	87.4
06:37:41 PM	77.9	75.5	69.3	94.0	87.9	82.1	72.7	87.9

08-Nov-01	06:52:41 PM	78.7	76.6	70.4	95.0	88.1	82.9	73.5	88.4
	07:07:41 PM	79.6	77.5	71.1	95.4	88.9	83.7	74.3	89.2
	07:22:41 PM	80.2	78.4	72.0	97.3	89.2	84.3	75.3	89.2
	07:37:41 PM	81.2	79.0	72.6	105.3	90.4	88.8	76.0	89.8
	07:52:41 PM	81.8	79.9	73.5	94.2	89.6	85.2	76.5	90.4
	08:07:41 PM	82.3	80.5	74.3	101.5	90.0	85.4	77.5	90.3
	08:22:41 PM	82.4	80.8	74.9	103.9	89.8		78.1	90.3
	08:37:41 PM	82.7	81.4	75.8	98.2	89.5	85.4	78.6	90.3
	08:52:41 PM	82.8	81.5	76.2	96.8	89.0	85.3	79.1	90.0
	09:07:41 PM	83.1	81.8	76.8	101.0	89.3		79.4	89.8
	09:22:41 PM	82.9	81.9	77.1	101.3	88.5		79.7	89.3
	09:37:41 PM	83.0	82.0	77.5	93.0	88.0		79.6	89.0
	09:52:41 PM	82.2	81.7	78.0	80.6	87.5		79.9	87.5
	10:07:41 PM	81.3	81.1	78.1	77.3	86.2	82.8	79.9	84.9
	10:22:41 PM	80.9	80.7	78.0	76.4	84.9	81.7	79.9	82.8
	10:37:41 PM	80.1	80.1	78.2	76.3	82.6	80.8	79.7	80.8
	10:52:41 PM	79.1	79.1	77.8	75.7	80.1	79.8	79.5	79.3
	11:07:41 PM	78.4	78.7	77.6	74.7	78.9	80.2	79.2	78.4
	11:22:41 PM	77.7	77.9	77.4	73.7	77.6	78.2	78.7	77.1
	11:37:41 PM	76.9	77.2	77.2	73.5	76.7	77.5	78.3	75.9
	11:52:41 PM	76.0	76.5	76.8	71.2	75.4	76.7	77.5	74.6
	12:07:41 AM	75.3	75.8	76.4	70.2	74.8	76.1	77.1	73.5
	12:22:41 AM	74.7	75.2	76.0	69.6	74.2	76.3	77.1	72.6
	12:37:41 AM	74.1	74.4	75.7	68.8	73.3	74.9	76.5	71.5
	12:52:41 AM	73.3	73.8	75.4	67.7	72.5	73.3	75.9	70.1
	01:07:41 AM	72.7	73.2	74.8	66.3	71.4	72.7	75.4	69.1
	01:22:41 AM	72.0	72.5	74.7	65.8	71.0	72.1	75.0	68.1
	01:37:41 AM	71.3	72.1	74.3	64.6	70.1	71.4	74.5	67.4
	01:52:41 AM	70.9	71.5	73.9	64.5	69.6	70.9	73.8	66.2
	02:07:41 AM	70.3	71.1	73.5	63.9	69.0	70.6	73.5	65.6
	02:22:41 AM	69.8	70.6	73.0	62.8	68.5	81.8	72.9	64.8
	02:37:41 AM	69.5	70.0	72.7	62.2	68.0	70.1	72.5	64.0
	02:52:41 AM	69.1	69.9	72.3	61.8	67.5	70.5	72.3	63.3
	03:07:41 AM	68.4	69.2	72.1	61.4	66.9	70.6	71.9	62.7
	03:22:41 AM	68.1	68.9	71.6	61.1	66.4		71.4	62.2
	03:37:41 AM	67.8	68.6	71.2	60.5	66.1	67.7	71.1	61.6
	03:52:41 AM	67.2	68.0	70.9	60.2	65.5	67.1	70.5	61.0
	04:07:41 AM	66.9	67.7	70.7	59.4	65.2	67.3	70.2	60.4
	04:22:41 AM	66.6	67.4	70.3	59.6	65.4	66.8	69.9	59.9
	04:37:41 AM	66.4	67.2	70.1	59.7	65.0	66.6	69.5	59.7
	04:52:41 AM	66.0	66.8	69.8	58.8	64.4	67.0	69.4	59.3
	05:07:41 AM	65.9	66.7	69.6	58.9	64.5	68.0	69.0	58.9
	05:22:41 AM	65.8	66.3	69.3	59.3	64.7	66.9	68.7	58.9
	05:37:41 AM	65.6	66.2	69.1	58.9	64.1		68.6	58.8
	05:52:41 AM	65.1	65.9	68.8	58.1	63.5	65.3	68.2	58.4
	06:07:41 AM	64.9	65.7	68.7	57.6	63.0	64.9	68.0	58.0

06:22:41 AM	64.5	65.3	68.5	56.9	62.8	66.3	67.9	57.5
06:37:41 AM	64.3	65.1	68.3	56.5	62.3	65.3	67.6	57.0
06:52:41 AM	63.8	64.6	68.1	55.7	61.8		67.4	56.5
07:07:41 AM	63.6	64.4	67.8	55.2	61.6	65.8	67.2	56.0
07:22:41 AM	63.4	64.2	67.6	55.3	61.4		66.7	55.5
07:37:41 AM	62.9	64.0	67.2	55.1	61.2	65.7	66.5	55.1
07:52:41 AM	62.9	63.7	67.2	55.3	61.0		66.3	54.8
08:07:41 AM	62.4	63.5	66.7	54.8	60.5		65.8	54.7
08:22:41 AM	62.4	63.2	66.7	54.5	60.7		66.0	54.6
08:37:41 AM	62.0	62.8	66.3	53.7	59.8		65.4	54.0
08:52:41 AM	61.8	62.6	66.1	52.9	59.6		65.5	53.8
09:07:41 AM	61.5	62.3	66.0	52.8	59.5	68.8	65.1	53.4
09:22:41 AM	61.1	62.2	65.7	52.7	59.2	62.4	65.0	53.0
09:37:41 AM	60.8	61.9	65.4	52.4	58.9	61.6	64.7	52.7
09:52:41 AM	60.5	61.6	65.4	52.4	58.9	73.7	64.5	52.5
10:07:41 AM	60.3	61.4	64.9	52.8	58.8	62.2	64.3	52.3
10:22:41 AM	60.2	61.0	64.8	52.4	58.4	62.4	63.9	52.2
10:37:41 AM	60.0	60.8	64.6	52.2	58.4		63.7	52.0
10:52:41 AM	59.8	60.6	64.4	52.0	58.0	60.1	63.6	51.8
11:07:41 AM	59.4	60.2	64.0	51.8	58.1	60.2	63.4	51.7
11:22:41 AM	59.5	60.3	64.1	51.9	57.9	60.1	63.2	51.5
11:37:41 AM	59.3	60.2	63.9	51.5	57.5	59.1	63.1	51.3
11:52:41 AM	58.8	59.7	63.4	50.7	57.2	59.3	62.8	51.1
12:07:41 PM	58.9	59.7	63.4	50.7	57.0		62.6	50.8
12:22:41 PM	58.7	59.5	63.3	50.8	56.8	58.7	62.4	50.6
12:37:41 PM	58.2	59.0	62.8	50.1	56.6	58.5	62.2	50.5
12:52:41 PM	58.3	59.1	62.9	50.4	56.7	58.3	62.0	50.3
01:07:41 PM	58.2	59.0	62.7	50.3	56.6	58.4	61.9	50.1
01:22:41 PM	57.8	58.6	62.4	50.2	56.2	58.0	61.5	50.0
01:37:41 PM	57.9	58.7	62.5	50.4	56.4	57.7	61.4	49.9
01:52:41 PM	58.0	58.5	62.3	50.9	56.4	57.7	61.2	50.0
02:07:41 PM	58.5	58.8	62.0	51.7	59.2	58.9	61.3	50.3
02:22:41 PM	58.8	58.8	62.1	55.6	60.9	59.9	61.5	52.4
02:37:41 PM	59.1	59.1	61.8	58.9	62.3	60.7	61.8	54.8
02:52:41 PM	60.3	60.0	62.2	63.2	64.9	62.2	61.9	56.9
03:07:41 PM	60.6	60.3	62.4	59.2	61.8	61.5	62.1	58.3
03:22:41 PM	60.9	60.6	62.2	62.5	65.1	62.5	62.2	58.7
03:37:41 PM	62.7	61.6	62.4	69.4	70.4	65.9	62.7	61.7
03:52:41 PM	64.5	62.9	62.9	73.0	72.3	68.1	63.6	64.4
04:07:41 PM	65.6	64.0	63.2	73.1	73.5	69.5	64.5	66.9
04:22:41 PM	66.2	65.1	64.0	66.4	69.3	68.2	65.0	68.0
04:37:41 PM	66.4	65.6	64.3	67.5	69.8	68.2	65.3	68.0
04:52:41 PM	66.4	65.8	64.7	66.1	68.5	67.7	65.6	67.7
05:07:41 PM	66.6	66.0	65.2	65.8	67.8	67.3	65.7	67.5
05:22:41 PM	66.6	66.0	65.5	69.5	70.2	68.3	66.2	67.3
05:37:41 PM	67.3	66.7	65.7	69.2	70.0	68.4	66.3	68.4

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05:52:41 PM	67.9	67.3	66.0	70.5	71.7	69.8	66.7	69.0
06:07:41 PM	68.7	67.9	66.3	74.8	73.9	71.0	67.1	70.2
06:22:41 PM	69.4	68.8	66.7	72.8	73.3	71.2	67.7	71.2
06:37:41 PM	70.1	69.3	67.1	72.0	73.4	71.6	68.1	71.6
06:52:41 PM	70.6	69.8	67.4	73.6	74.5	72.4	68.7	72.2
07:07:41 PM	71.2	70.4	68.0	75.7	74.8	72.7	69.3	73.0
07:22:41 PM	72.7	71.6	68.1	89.6	81.1	76.7	69.8	75.1
07:37:41 PM	74.5	72.9	68.6	76.4	78.8		70.4	77.5
07:52:41 PM	74.4	73.3	69.6	78.1	78.6	76.0	71.3	76.5
08:07:41 PM	74.2	73.7	70.2	92.2	79.8	86.6	71.6	75.9
08:22:41 PM	74.8	74.0	70.6	79.1	77.8	76.5	72.0	76.5
08:37:41 PM	75.7	74.9	71.1	91.5	81.3		72.7	77.9
08:52:41 PM	76.3	75.5	71.8	74.2	78.2	76.9	73.2	78.7
09:07:41 PM	76.0	75.5	72.3	73.6	77.6	76.8	73.7	77.1
09:22:41 PM	75.3	75.0	72.6	78.0	76.5		73.8	75.4
09:37:41 PM	75.4	75.1	72.7	78.3	78.1	76.3	73.7	75.8
09:52:41 PM	75.0	74.7	73.1	69.4	75.2	75.7	73.9	74.7
10:07:41 PM	74.6	74.6	73.2	70.5	75.6	75.1	74.1	73.3
10:22:41 PM	74.3	74.3	73.2	68.9	75.0		73.9	72.1
10:37:41 PM	73.8	73.8	73.3	70.1	75.6	74.6	73.8	71.4
10:52:41 PM	73.5	73.5	73.2	66.8	72.9	74.2	73.7	70.3
11:07:41 PM	72.7	73.0	73.0	66.0	72.2	73.5	73.5	69.3
11:22:41 PM	72.3	72.6	72.9	64.8	70.7	75.7	73.3	68.3
11:37:41 PM	71.9	72.1	72.7	64.9	70.5		73.1	67.3
11:52:41 PM	71.3	71.5	72.6	64.3	69.6		72.8	66.5
12:07:41 AM	70.6	70.8	72.2	62.8	68.2	70.5	72.4	65.5
12:22:41 AM	69.8	70.4	72.0	62.0	67.6		71.8	64.4
12:37:41 AM	69.1	69.7	71.5	61.9	66.8	69.4	71.5	63.6
12:52:41 AM	68.6	69.2	71.3	61.6	66.3	68.4	71.1	63.1
01:07:41 AM	68.2	68.8	70.9	61.2	66.2	69.6	70.7	62.5
01:22:41 AM	67.6	68.2	70.6	60.4	65.4		70.4	61.9
01:37:41 AM	67.3	67.8	70.2	60.6	65.6		70.1	61.4
01:52:41 AM	67.1	67.6	70.0	60.1			69.8	60.8
02:07:41 AM	66.5	67.3	69.7	59.5			69.3	60.3
02:22:41 AM	66.3	66.9	69.5	58.8			69.1	59.9
02:37:41 AM	66.2	66.7	69.1	58.9		68.2	68.7	59.4
02:52:41 AM	65.8	66.4	68.8	58.6			68.4	59.1
03:07:41 AM	65.5	66.1	68.7	58.3			68.4	58.8
03:22:41 AM	65.6	65.8	68.5	58.6		68.7	67.9	58.7
03:37:41 AM	65.4	65.9	68.3	57.5			68.0	58.4
03:52:41 AM	65.0	65.5	68.2	56.9			67.6	58.0
04:07:41 AM	64.8	65.4	68.0	56.5			67.4	57.6
04:22:41 AM	64.4	64.9	67.9	56.3		70.4	67.2	57.1
04:37:41 AM	64.3	64.8	67.5	56.5			67.2	56.8
04:52:41 AM	64.1	64.6	67.3	57.1		64.4	66.7	56.6
05:07:41 AM	64.1	64.4	67.1	58.0			66.6	56.8

05:22:41 AM	64.1	64.4	67.1	57.9		66.3	57.0
05:37:41 AM	64.0	64.6	67.0	58.1	64.5	66.3	57.3
05:52:41 AM	63.9	64.5	66.6	58.3	63.8	66.2	57.4
06:07:41 AM	64.1	64.4	66.8	58.4	64.0	66.1	57.6
06:22:41 AM	64.0	64.5	66.7	58.9	63.9	66.0	57.8
06:37:41 AM	64.2	64.5	66.6	58.8		66.0	58.0
06:52:41 AM	64.1	64.4	66.5	59.0	65.3	65.9	58.2
07:07:41 AM	64.0	64.5	66.4	59.1	63.9	66.0	58.3
07:22:41 AM	64.1	64.4	66.3	59.0	67.2	65.9	58.4
07:37:41 AM	63.9	64.5	66.3	58.8	64.3	65.9	58.5
07:52:41 AM	64.0	64.2	66.1	59.1	63.9	65.7	58.6
08:07:41 AM	64.1	64.3	66.2	59.2		65.8	58.6
08:22:41 AM	63.9	64.1	66.0	59.3	63.8	65.6	58.7
08:37:41 AM	63.9	64.2	66.1	59.4	64.1	65.7	58.8
08:52:41 AM	63.8	64.3	65.9	59.2	65.5	65.5	58.9
09:07:41 AM	63.8	64.1	66.0	59.2	64.5	65.5	58.9
09:22:41 AM	63.8	64.1	66.0	59.2	63.7	65.5	58.9
09:37:41 AM	63.8	64.1	66.0	59.2	65.5	65.5	58.9
09:52:41 AM	63.5	64.1	66.0	58.7	65.2	65.5	58.8
10:07:41 AM	63.7	63.9	65.8	58.6	63.5	65.4	58.7
10:22:41 AM	63.6	63.8	65.7	58.5	65.5	65.2	58.6
10:37:41 AM	63.4	63.7	65.6	58.0	63.0	65.3	58.4
10:52:41 AM	63.3	63.5	65.7	57.9	77.3	65.2	58.2
11:07:41 AM	63.4	63.6	65.5	57.7	63.1	65.0	58.1
11:22:41 AM	63.1	63.4	65.6	57.2		65.0	57.8
11:37:41 AM	62.9	63.4	65.6	56.9		65.0	57.5
11:52:41 AM	62.9	63.1	65.3	56.7	70.2	64.9	57.2
12:07:41 PM	62.6	63.2	65.3	56.4	62.3	64.7	57.0
12:22:41 PM	62.0	62.6	65.3	55.8		64.7	56.7
12:37:41 PM	61.4	62.2	65.1	54.9		64.2	56.2
12:52:41 PM	61.2	61.5	64.7	54.5		64.1	55.8
01:07:41 PM	60.8	61.3	64.6	54.3		63.6	55.4
01:22:41 PM	60.5	61.0	64.5	54.3		63.3	55.0
01:37:41 PM	60.1	60.7	64.2	53.9		63.2	55.0
01:52:41 PM	59.8	60.4	63.9	53.9		63.2	54.7
02:07:41 PM	59.9	60.5	63.7	54.2		62.8	54.5
02:22:41 PM	59.8	60.4	63.6	54.4		62.7	54.5
02:37:41 PM	59.5	60.0	63.3	54.4		62.4	54.4
02:52:41 PM	59.4	60.0	63.2	54.3		62.1	54.1
03:07:41 PM	59.4	59.7	62.9	54.6		61.9	54.2
03:22:41 PM	59.3	59.8	63.1	54.7		62.0	54.5
03:37:41 PM	59.3	59.6	62.8	54.5		61.6	54.4
03:52:41 PM	59.3	59.6	62.8	54.5		61.5	54.3
04:07:41 PM	59.4	59.7	62.6	55.4		61.6	54.4
04:22:41 PM	59.3	59.9	62.6	55.8		61.4	54.7
04:37:41 PM	59.6	59.8	62.5	56.6	59.5	61.4	55.2

10-Nov-01	04:52:41 PM	59.5	59.8	62.5	55.7	59.4	61.6	55.7
	05:07:41 PM	59.4	59.9	62.4	56.4		61.4	55.6
	05:22:41 PM	59.6	59.8	62.5	57.1		61.3	55.7
	05:37:41 PM	59.8	60.1	62.5	57.4		61.3	56.0
	05:52:41 PM	59.8	60.1	62.5	57.6		61.3	56.3
	06:07:41 PM	60.1	60.4	62.5	58.5		61.4	56.9
	06:22:41 PM	60.4	60.4	62.5	58.2	60.1	61.7	57.1
	06:37:41 PM	60.8	60.8	62.5	60.8	65.4	61.6	57.6
	06:52:41 PM	61.4	61.4	62.5	61.9	62.1	61.8	58.6
	07:07:41 PM	61.8	61.5	62.6	62.3	62.3	62.0	59.6
	07:22:41 PM	62.1	62.1	62.9	62.3		62.3	60.7
	07:37:41 PM	62.5	62.5	63.0	64.6		62.5	61.7
	07:52:41 PM	63.1	62.8	63.1	66.5		62.8	62.8
	08:07:41 PM	63.9	63.3	63.3	73.5	64.8	63.2	64.2
	08:22:41 PM	65.0	64.2	63.7	75.4	66.9	63.7	65.8
	08:37:41 PM	66.6	65.5	64.1	71.6	67.2	64.2	67.7
	08:52:41 PM	67.4	66.6	64.5	79.4		64.9	69.4
	09:07:41 PM	68.6	67.5	64.8	79.8		65.3	71.4
	09:22:41 PM	68.4	67.9	65.7	66.0	68.3	66.2	70.7
	09:37:41 PM	67.9	67.4	66.3	63.1	67.7	66.6	69.0
	09:52:41 PM	67.6	67.3	66.8	63.6	67.1	66.5	67.6
	10:07:41 PM	66.9	66.9	66.9	62.0		66.6	66.3
	10:22:41 PM	66.6	66.6	66.9	62.9	69.7	66.6	65.2
	10:37:41 PM	66.7	66.4	66.9	63.7		66.2	65.2
	10:52:41 PM	66.4	66.4	67.0	63.2		66.3	64.7
	11:07:41 PM	66.4	66.4	66.9	63.7	66.0	66.3	64.4
	11:22:41 PM	66.1	66.1	66.9	63.4	74.0	66.1	64.2
	11:37:41 PM	65.9	66.1	66.7	62.9		66.1	64.0
	11:52:41 PM	65.9	65.9	66.7	62.9		66.2	63.8
	12:07:41 AM	65.6	65.9	66.7	62.7	65.4	66.2	63.5
	12:22:41 AM	65.4	65.7	66.8	62.7		66.0	63.3
	12:37:41 AM	65.5	65.5	66.6	62.8		66.1	63.1
	12:52:41 AM	65.3	65.3	66.7	62.9	68.6	66.0	63.1
	01:07:41 AM	65.3	65.3	66.6	62.9		65.9	63.0
	01:22:41 AM	65.0	65.2	66.6	62.8	64.8	65.9	63.0
	01:37:41 AM	64.9	65.2	66.5	62.5	65.0	65.8	62.9
	01:52:41 AM	64.7	65.0	66.3	62.3	67.5	65.6	62.7
	02:07:41 AM	64.5	64.8	66.2	62.4		65.8	62.6
	02:22:41 AM	64.3	64.6	66.2	62.2		65.5	62.3
	02:37:41 AM	64.2	64.5	66.1	62.3		65.4	62.2
	02:52:41 AM	64.2	64.5	66.1	62.9		65.5	62.3
	03:07:41 AM	64.3	64.6	65.9	63.0		65.3	62.7
	03:22:41 AM	64.1	64.3	65.7	62.5	66.9	65.3	62.4
	03:37:41 AM	63.9	64.2	65.8	62.3	64.9	65.2	62.2
	03:52:41 AM	63.8	64.1	65.7	61.9	64.7	65.0	62.1
	04:07:41 AM	63.5	63.8	65.7	61.7	66.1	65.0	61.8

04:22:41 AM	63.2	63.5	65.6	60.5	65.7	64.9	61.4
04:37:41 AM	63.0	63.3	65.5	60.6		64.7	61.0
04:52:41 AM	62.7	63.2	65.3	60.2		64.6	60.6
05:07:41 AM	62.5	62.8	65.0	59.9		64.5	60.2
05:22:41 AM	62.2	62.7	64.9	59.2		64.1	59.8
05:37:41 AM	62.1	62.3	64.8	59.4		64.0	59.4
05:52:41 AM	61.7	62.3	64.7	59.0		63.9	59.1
06:07:41 AM	61.5	62.0	64.5	59.6		63.7	58.9
06:22:41 AM	61.3	61.9	64.3	58.9		63.6	58.8
06:37:41 AM	61.2	61.7	64.2	59.3		63.5	58.7
06:52:41 AM	61.1	61.6	64.1	59.2		63.4	58.6
07:07:41 AM	61.0	61.6	64.0	59.1	64.9	63.1	58.5
07:22:41 AM	60.9	61.5	63.6	58.8	64.6	63.0	58.5
07:37:41 AM	60.8	61.3	63.7	58.4		63.1	58.3
07:52:41 AM	60.6	61.2	63.6	58.2	62.6	62.9	58.1
08:07:41 AM	60.4	61.0	63.4	58.0	63.0	62.7	57.9
08:22:41 AM	60.5	61.0	63.2	57.8	63.0	62.8	57.7
08:37:41 AM	60.3	60.9	63.3	57.6	62.8	62.6	57.5
08:52:41 AM	60.1	60.7	63.1	57.7	63.5	62.4	57.3
09:07:41 AM	60.0	60.6	63.0	57.6	62.8	62.3	57.2
09:22:41 AM	59.9	60.5	62.9	57.8	60.1	62.2	57.1
09:37:41 AM	59.8	60.4	62.8	57.4	61.3	62.1	57.0
09:52:41 AM	59.7	60.3	62.7	57.6	61.0	62.0	57.0
10:07:41 AM	59.7	60.2	62.6	57.5	60.4	62.0	56.9
10:22:41 AM	59.6	60.2	62.6	57.7	62.4	61.6	56.9
10:37:41 AM	59.6	59.9	62.3	57.7	61.1	61.6	56.9
10:52:41 AM	59.5	59.8	62.2	57.4		61.6	56.8
11:07:41 AM	59.2	59.8	62.2	57.6		61.5	56.7
11:22:41 AM	59.4	59.7	62.1	57.3		61.5	56.7
11:37:41 AM	59.4	59.7	62.1	57.5		61.4	56.6
11:52:41 AM	59.1	59.6	62.0	57.2	59.5	61.6	56.9
12:07:41 PM	59.1	59.6	61.8	57.7	59.3	61.1	56.6
12:22:41 PM	59.3	59.5	61.7	57.4		61.1	56.5
12:37:41 PM	59.0	59.5	61.7	57.4	59.2	61.1	56.6
12:52:41 PM	59.0	59.6	61.7	57.4	59.3	61.1	56.6
01:07:41 PM	59.0	59.5	61.7	57.4	59.5	61.1	56.6
01:22:41 PM	59.0	59.5	61.4	57.6	61.0	61.0	56.5
01:37:41 PM	59.0	59.2	61.4	57.3	59.9	61.0	56.4
01:52:41 PM	59.0	59.3	61.5	57.9	61.1	60.9	56.6
02:07:41 PM	59.4	59.4	61.2	58.8	61.0	61.0	57.3
02:22:41 PM	60.1	59.8	61.4	63.0	62.2	61.1	58.5
02:37:41 PM	60.4	60.1	61.2	62.3		61.3	60.0
02:52:41 PM	60.7	60.7	61.5	63.1		61.5	60.7
03:07:41 PM	61.9	61.3	61.6	65.1		61.7	62.5
03:22:41 PM	62.3	62.0	61.8	66.3		62.1	63.2
03:37:41 PM	63.0	62.5	62.0	66.8		62.5	64.1

06-Dec-01	03:52:41 PM	63.7	63.2	62.4	66.9			63.0	65.1
	04:07:41 PM	64.2	63.6	62.8	68.2			63.4	66.1
	04:22:41 PM	65.7	64.8	63.2	71.3			64.0	68.0
	04:37:41 PM	66.8	65.7	63.3	76.9		74.1	64.6	69.4
	04:52:41 PM	67.9	66.5	64.1	71.9			65.8	71.1
	05:07:41 PM	68.0	67.2	64.5	71.8			66.2	71.2
	05:22:41 PM	68.9	67.8	65.2	74.2			66.7	71.8
	05:37:41 PM	69.8	68.7	65.5	86.7			67.4	72.7
	05:52:41 PM	71.1	69.7	66.0	77.5			67.6	74.5
	06:07:41 PM	71.9	70.6	66.6	81.0			68.4	75.5
	06:22:41 PM	72.6	71.0	67.3	78.0			69.3	76.7
	06:37:41 PM	73.2	71.9	67.9	80.1			69.8	76.9
	06:52:41 PM	73.8	72.5	68.7	79.1			70.2	77.1
	07:07:41 PM	74.9	73.3	69.0	89.4			70.9	78.0
	07:22:41 PM	75.6	74.3	69.7	82.5		78.0	71.7	79.1
	07:37:41 PM	76.1	74.7	70.2	80.8		82.5	72.3	79.1
	09:22:27 PM	74.1	73.6	72.3	75.7		76.2	73.1	76.8
	09:37:27 PM	74.7	74.2	72.6	77.6	77.5	75.4	73.3	78.0
	09:52:27 PM	74.6	74.4	72.8	77.3	77.7	75.3	73.5	78.2
	10:07:27 PM	74.6	74.4	72.8	76.8	77.1	75.0	73.7	78.2
	10:22:27 PM	74.8	74.5	73.2	75.8	75.8	74.5	73.7	77.9
	10:37:27 PM	74.3	74.3	73.2	74.5	75.4	74.1	73.9	77.0
	10:52:27 PM	74.2	73.9	73.4	73.9	74.9	73.9	73.9	76.2
	11:07:27 PM	73.9	73.9	73.4	72.8	74.1	73.3	73.6	75.4
	11:22:27 PM	73.5	73.5	73.2	73.2	74.6	73.5	73.5	74.8
	11:37:27 PM	73.4	73.4	73.1	72.9	74.2	73.2	73.4	74.5
07-Dec-01	11:52:27 PM	73.0	73.3	73.0	73.0	73.4	72.6	73.4	74.2
	12:07:27 AM	72.7	73.0	73.2	71.6	72.4	72.1	73.2	73.5
	12:22:27 AM	72.4	72.6	73.2	70.5	72.3	72.1	73.4	72.8
	12:37:27 AM	72.0	72.3	73.1	69.6	71.6	71.6	73.2	71.9
	12:52:27 AM	71.3	71.8	72.6	68.6	71.4	71.1	72.7	70.8
	01:07:27 AM	71.0	71.3	72.6	68.3	71.1	70.8	72.4	70.1
	01:22:27 AM	70.7	71.0	72.1	68.1	71.2	70.6	72.2	69.3
	01:37:27 AM	70.7	70.9	72.0	68.3	71.0	70.7	72.0	69.1
	01:52:27 AM	70.5	70.8	71.8	68.4	70.8	70.6	71.9	69.0
	02:07:27 AM	70.2	70.5	71.6	68.1	70.8	70.3	71.6	68.7
	02:22:27 AM	70.4	70.6	71.4	68.2	70.7	70.5	71.5	68.6
	02:37:27 AM	70.2	70.5	71.3	68.4	70.9	70.4	71.4	68.5
	02:52:27 AM	70.0	70.3	71.4	67.4	70.4	69.9	71.2	68.3
	03:07:27 AM	70.0	70.3	71.3	67.3	70.4	69.8	71.2	68.0
	03:22:27 AM	69.8	70.1	71.2	67.4	69.9	69.7	71.0	67.8
	03:37:27 AM	69.5	69.7	71.1	66.8	69.8	69.5	70.8	67.4
	03:52:27 AM	69.4	69.7	71.0	66.5	69.4	69.2	70.8	67.1
	04:07:27 AM	69.2	69.5	70.8	66.8	69.3	69.0	70.6	66.9
	04:22:27 AM	69.0	69.2	70.6	65.7	68.7	68.7	70.3	66.6
	04:37:27 AM	68.8	69.0	70.6	65.0	68.8	68.8	70.4	66.1

04:52:27 AM	68.9	69.2	70.3	66.2	69.2	69.0	70.0	66.1
05:07:27 AM	68.9	69.2	70.3	66.0	69.3	68.8	70.1	66.1
05:22:27 AM	68.9	69.2	70.3	66.5	69.7	69.1	69.9	66.5
05:37:27 AM	69.1	69.1	70.2	67.0	69.6	69.0	70.1	66.7
05:52:27 AM	68.9	69.2	70.0	67.1	69.7	68.9	70.0	66.8
06:07:27 AM	69.2	69.2	70.0	67.6	69.9	69.1	69.9	67.0
06:22:27 AM	69.1	69.3	70.1	67.5	69.9	69.1	69.9	67.2
06:37:27 AM	69.1	69.4	69.9	67.3	69.6	68.9	69.9	67.3
06:52:27 AM	69.1	69.1	69.9	67.0	69.6	68.8	69.9	67.2
07:07:27 AM	69.1	69.1	69.9	67.0	69.8	69.0	69.8	67.2
07:22:27 AM	69.1	69.1	69.9	66.9	69.6	69.0	69.8	67.2
07:37:27 AM	69.1	69.3	69.9	66.9	69.8	69.0	69.8	66.9
07:52:27 AM	69.1	69.3	69.9	66.9	69.5	69.0	69.8	66.9
08:07:27 AM	69.1	69.3	69.9	66.9	69.8	69.0	69.8	66.9
08:22:27 AM	69.1	69.1	69.9	66.9	69.5	68.7	69.8	66.9
08:37:27 AM	69.1	69.1	69.9	67.2	69.5	69.0	69.8	67.1
08:52:27 AM	69.1	69.1	69.9	67.3	69.6	69.1	69.6	67.2
09:07:27 AM	68.9	69.2	69.7	67.3	69.7	68.9	69.7	67.3
09:22:27 AM	69.0	69.3	69.8	67.4	69.7	68.9	69.7	67.3
09:37:27 AM	69.0	69.3	69.8	67.4	69.8	69.0	69.8	67.4
09:52:27 AM	69.1	69.1	69.9	67.5	69.8	69.0	69.6	67.4
10:07:27 AM	69.1	69.1	69.9	67.5	69.9	69.1	69.6	67.5
10:22:27 AM	68.9	69.2	69.7	67.6	69.9	69.1	69.7	67.6
10:37:27 AM	69.0	69.2	69.8	67.4	69.7	68.9	69.7	67.6
10:52:27 AM	68.9	69.1	69.9	66.7	69.6	68.8	69.6	67.2
11:07:27 AM	69.0	69.0	69.8	66.6	69.4	68.9	69.6	67.0
11:22:27 AM	68.7	69.0	69.8	66.1	69.1	68.6	69.6	66.7
11:37:27 AM	68.5	68.8	69.6	66.1	68.9	68.4	69.4	66.5
11:52:27 AM	68.6	68.9	69.7	65.7	69.0	68.5	69.5	66.3
12:07:27 PM	68.4	68.7	69.5	65.5	68.8	68.2	69.3	66.1
12:22:27 PM	68.2	68.5	69.6	65.6	68.6	68.1	69.4	66.0
12:37:27 PM	68.4	68.6	69.4	65.4	68.7	67.9	69.2	65.8
12:52:27 PM	68.3	68.5	69.3	65.6	68.7	68.2	69.2	65.8
01:07:27 PM	68.3	68.5	69.3	65.9	68.7	68.2	69.2	65.8
01:22:27 PM	68.3	68.3	69.4	66.2	68.8	68.3	69.1	65.9
01:37:27 PM	68.1	68.4	69.2	66.0	68.6	68.0	69.1	65.9
01:52:27 PM	68.0	68.3	69.4	65.4	68.2	67.9	69.0	65.8
02:07:27 PM	67.8	68.1	69.2	64.9	68.2	67.6	69.0	65.5
02:22:27 PM	67.6	67.9	69.2	64.7	69.2	67.4	68.7	65.3
02:37:27 PM	67.4	67.6	69.0	64.4	68.0	67.2	68.5	65.1
02:52:27 PM	67.1	67.4	68.7	64.2	67.7	67.0	68.5	64.8
03:07:27 PM	67.2	67.5	68.8	64.0	67.8	67.0	68.4	64.7
03:22:27 PM	67.0	67.3	68.9	63.8	67.5	66.8	68.1	64.4
03:37:27 PM	67.1	67.4	68.7	63.9	67.5	67.0	68.3	64.3
03:52:27 PM	67.2	67.4	68.5	64.2	68.1	67.0	68.1	64.4
04:07:27 PM	67.2	67.5	68.6	64.5	68.2	67.1	68.2	64.5

08-Dec-01	04:22:27 PM	67.4	67.7	68.5	65.3	68.7	67.6	68.2	65.0
	04:37:27 PM	68.0	68.0	68.5	66.3	69.0	68.0	68.2	65.6
	04:52:27 PM	68.0	68.0	68.8	65.6	68.5	68.0	68.5	65.8
	05:07:27 PM	68.0	68.0	68.8	64.8	68.2	67.7	68.5	65.6
	05:22:27 PM	67.9	67.9	68.7	64.7	68.3	67.5	68.6	65.4
	05:37:27 PM	67.7	67.7	68.8	63.5	67.6	67.3	68.4	65.2
	05:52:27 PM	67.3	67.6	68.9	62.7	67.3	67.0	68.4	64.7
	06:07:27 PM	67.4	67.4	68.7	63.4	67.9	67.1	68.2	64.5
	06:22:27 PM	67.4	67.7	68.7	63.4	68.2	67.2	68.2	64.5
	06:37:27 PM	67.7	67.7	68.8	64.2	68.9	67.5	68.3	64.9
	06:52:27 PM	67.9	67.9	68.7	63.9	68.6	67.5	68.3	65.1
	07:07:27 PM	68.3	68.1	68.9	64.9	70.1	68.2	68.5	65.3
	07:22:27 PM	68.6	68.4	68.9	64.1	69.3	67.7	68.5	65.6
	07:37:27 PM	68.9	68.6	69.1	65.1	70.6	68.7	68.4	66.1
	07:52:27 PM	69.1	68.9	69.1	65.4	71.4	68.8	68.8	66.4
	08:07:27 PM	69.8	69.6	69.3	66.6	72.2	69.9	68.8	67.5
	08:22:27 PM	70.3	69.7	69.5	66.0	71.6	69.7	69.2	67.9
	08:37:27 PM	70.5	70.2	69.7	67.0	73.1	70.4	69.4	68.3
	08:52:27 PM	70.7	70.2	69.9	66.4	72.7	70.4	69.6	68.3
	09:07:27 PM	70.8	70.5	70.2	66.0	72.2	70.3	69.8	68.2
	09:22:27 PM	70.8	70.6	70.3	66.3	72.2	70.6	70.1	68.3
	09:37:27 PM	71.1	70.9	70.3	67.4	73.2	70.8	70.3	69.0
	09:52:27 PM	71.3	70.7	70.5	67.0	72.8	70.9	70.4	68.8
	10:07:27 PM	71.1	70.8	70.6	66.8	72.3	70.7	70.4	68.9
	10:22:27 PM	70.9	70.9	70.9	66.1	72.0	70.6	70.6	68.5
	10:37:27 PM	70.7	70.7	71.0	65.1	70.9	69.8	70.6	67.7
	10:52:27 PM	70.5	70.5	71.0	64.9	70.9	69.9	70.7	67.5
	11:07:27 PM	70.5	70.5	70.8	65.5	71.4	70.0	70.6	67.4
	11:22:27 PM	70.5	70.5	70.8	66.0	71.4	70.1	70.6	67.4
	11:37:27 PM	70.3	70.3	70.8	65.2	70.8	69.7	70.5	67.1
	11:52:27 PM	70.0	70.3	70.8	64.9	70.8	69.7	70.5	66.8
	12:07:27 AM	69.8	69.8	70.8	63.9	69.4	68.9	70.5	66.0
	12:22:27 AM	69.4	69.7	70.7	63.2	69.0	68.7	70.3	65.3
	12:37:27 AM	69.0	69.3	70.6	62.8	68.5	68.3	70.1	64.6
	12:52:27 AM	68.6	68.9	70.5	62.5	67.9	67.9	69.8	64.0
	01:07:27 AM	68.4	68.6	70.2	61.9	67.7	67.7	69.5	63.7
	01:22:27 AM	68.2	68.5	70.1	61.8	67.5	67.5	69.4	63.3
	01:37:27 AM	67.8	68.3	69.9	61.6	67.2	67.4	69.3	62.9
	01:52:27 AM	67.6	67.9	69.8	60.9	66.7	67.3	69.1	62.5
	02:07:27 AM	67.2	67.7	69.6	60.4	66.2	66.8	69.2	61.7
	02:22:27 AM	67.0	67.5	69.4	60.3	65.8	66.4	68.7	61.6
	02:37:27 AM	66.6	67.1	69.3	59.9	65.7	66.2	68.6	61.2
	02:52:27 AM	66.4	67.0	69.1	59.4	65.5	66.0	68.4	60.5
	03:07:27 AM	66.0	66.6	69.0	59.3	65.1	65.6	68.3	60.3
	03:22:27 AM	65.9	66.5	68.6	59.0	65.3	65.6	68.0	60.0
	03:37:27 AM	65.9	66.5	68.6	58.7	65.0	65.3	68.0	59.7

03:52:27 AM	65.6	66.2	68.3	58.6	64.8	65.3	67.7	59.4
04:07:27 AM	65.4	65.9	68.0	58.6	64.8	65.0	67.4	59.2
04:22:27 AM	65.2	65.7	68.1	58.4	64.6	64.8	67.2	59.0
04:37:27 AM	65.0	65.5	67.9	58.5	64.4	64.7	67.1	58.9
04:52:27 AM	64.9	65.4	67.5	58.4	64.6	64.6	67.0	58.8
05:07:27 AM	64.8	65.3	67.5	58.6	64.3	64.6	66.9	58.7
05:22:27 AM	64.7	65.2	67.4	58.5	64.5	64.5	66.9	58.6
05:37:27 AM	64.7	65.2	67.3	58.5	64.2	64.4	66.5	58.6
05:52:27 AM	64.6	65.2	67.3	58.4	64.1	64.4	66.5	58.6
06:07:27 AM	64.6	65.1	67.0	58.6	64.4	64.4	66.5	58.5
06:22:27 AM	64.6	64.8	67.0	58.6	64.4	64.4	66.2	58.5
06:37:27 AM	64.3	64.8	67.0	58.6	64.1	64.1	66.3	58.6
06:52:27 AM	64.3	64.8	66.7	58.6	64.1	64.1	66.3	58.6
07:07:27 AM	64.3	64.8	66.7	58.6	64.1	64.1	66.2	58.5
07:22:27 AM	64.3	64.6	66.7	58.7	63.9	64.2	66.0	58.6
07:37:27 AM	64.4	64.6	66.5	58.7	64.2	64.2	66.0	58.6
07:52:27 AM	64.4	64.6	66.5	59.0	64.0	64.0	66.1	58.6
08:07:27 AM	64.2	64.7	66.6	59.1	64.0	64.0	65.9	58.7
08:22:27 AM	64.2	64.5	66.4	59.1	64.1	64.1	65.9	58.7
08:37:27 AM	64.3	64.5	66.4	59.2	64.1	64.1	65.7	58.8
08:52:27 AM	64.0	64.6	66.2	59.2	63.9	63.9	65.8	58.9
09:07:27 AM	64.1	64.6	66.2	59.3	64.2	64.0	65.8	58.9
09:22:27 AM	64.2	64.4	66.0	59.6	64.3	64.0	65.6	59.0
09:37:27 AM	64.3	64.5	66.1	59.4	64.1	64.1	65.7	59.1
09:52:27 AM	64.1	64.4	66.2	59.5	64.2	64.0	65.5	59.2
10:07:27 AM	64.2	64.4	66.0	59.6	64.3	64.1	65.7	59.3
10:22:27 AM	64.3	64.5	66.2	60.0	64.4	64.1	65.7	59.3
10:37:27 AM	64.1	64.6	66.0	60.1	64.5	64.0	65.6	59.5
10:52:27 AM	64.2	64.5	66.1	60.2	64.4	64.1	65.7	59.6
11:07:27 AM	64.1	64.6	65.9	60.3	64.5	64.0	65.6	59.7
11:22:27 AM	64.2	64.5	66.1	60.4	64.1	64.1	65.7	59.8
11:37:27 AM	64.1	64.6	65.9	60.6	64.2	64.0	65.6	60.0
11:52:27 AM	64.2	64.5	65.8	60.7	64.1	63.9	65.5	60.1
12:07:27 PM	64.1	64.4	66.0	60.9	64.3	64.0	65.6	60.3
12:22:27 PM	64.3	64.5	65.9	61.0	64.5	64.2	65.5	60.5
12:37:27 PM	64.1	64.4	65.7	61.2	64.4	64.1	65.4	60.6
12:52:27 PM	64.3	64.6	65.9	61.6	64.5	64.2	65.6	60.8
01:07:27 PM	64.2	64.5	65.8	61.8	64.7	64.2	65.5	61.0
01:22:27 PM	64.4	64.4	65.7	61.7	64.6	64.1	65.4	61.2
01:37:27 PM	64.3	64.5	65.9	61.8	64.7	64.2	65.5	61.3
01:52:27 PM	64.3	64.6	65.7	61.9	64.8	64.3	65.6	61.4
02:07:27 PM	64.5	64.5	65.8	62.1	64.9	64.4	65.4	61.5
02:22:27 PM	64.3	64.6	65.7	62.2	64.8	64.2	65.6	61.6
02:37:27 PM	64.5	64.7	65.8	62.3	65.2	64.4	65.5	61.8
02:52:27 PM	64.4	64.7	65.8	62.8	65.5	64.7	65.5	62.0
03:07:27 PM	64.7	65.0	65.8	62.8	65.7	64.9	65.4	62.3

09-Dec-01	03:22:27 PM	64.9	64.9	65.7	63.0	66.0	64.9	65.7	62.5
	03:37:27 PM	64.8	65.1	65.9	63.0	66.4	65.3	65.9	62.7
	03:52:27 PM	65.1	65.1	66.0	63.5	66.7	65.7	65.9	63.3
	04:07:27 PM	65.5	65.5	66.0	63.6	67.3	65.7	66.0	63.3
	04:22:27 PM	65.5	65.5	66.0	64.1	67.3	66.0	66.0	63.6
	04:37:27 PM	65.7	65.7	66.0	64.1	67.3	66.0	66.0	63.9
	04:52:27 PM	66.0	66.0	66.2	65.2	68.5	66.9	66.3	64.8
	05:07:27 PM	66.5	66.5	66.2	66.2	69.5	67.4	66.6	65.5
	05:22:27 PM	67.2	66.9	66.6	67.2	70.5	68.2	66.8	66.6
	05:37:27 PM	67.6	67.4	66.8	68.2	71.4	69.0	67.1	67.7
	05:52:27 PM	68.2	67.9	67.1	68.7	71.6	69.2	67.4	68.7
	06:07:27 PM	68.9	68.4	67.3	70.2	73.2	70.3	67.6	70.0
	06:22:27 PM	69.1	68.8	67.5	70.2	72.6	70.2	68.1	70.5
	06:37:27 PM	69.5	69.0	67.9	70.3	72.4	70.3	68.4	71.0
	06:52:27 PM	70.0	69.5	68.2	71.6	73.9	71.1	68.7	71.8
	07:07:27 PM	70.9	70.1	68.5	72.7	75.6	72.2	69.3	73.0
	07:22:27 PM	71.4	70.6	68.5	74.1	77.2	73.0	69.6	74.1
	07:37:27 PM	72.3	71.5	68.9	76.1	78.3	74.4	70.2	75.7
	07:52:27 PM	72.4	71.9	69.4	73.7	75.8	73.2	70.3	75.8
	08:07:27 PM	72.9	72.4	70.0	75.3	77.6	74.2	70.7	76.3
	08:22:27 PM	73.5	72.7	70.3	76.2	78.5	74.8	71.4	76.9
	08:37:27 PM	73.6	73.0	70.6	76.0	78.1	75.0	71.6	77.1
	08:52:27 PM	73.9	73.1	70.7	76.9	78.8	75.4	72.0	77.5
	09:07:27 PM	74.5	73.7	71.3	76.9	78.6	75.5	72.3	78.3
	09:22:27 PM	74.5	74.0	71.6	76.9	78.4	75.5	72.6	78.7
	09:37:27 PM	74.9	74.1	71.7	81.5	80.9	76.7	73.0	79.0
	09:52:27 PM	75.7	74.9	72.0	85.0	81.3	77.4	72.9	81.5
	10:07:27 PM	75.9	75.1	72.4	83.1	81.6	77.7	73.5	82.4
	10:22:27 PM	76.2	75.6	73.0	79.4	80.5	77.1	74.0	82.3
	10:37:27 PM	76.1	75.6	73.2	78.0	79.8	76.9	74.3	81.6
	10:52:27 PM	75.7	75.5	73.3	76.5	78.4	76.3	74.2	80.5
	11:07:27 PM	75.2	74.9	73.6	75.2	77.8	75.7	74.4	79.4
	11:22:27 PM	75.0	75.0	73.7	74.7	77.0	75.4	74.3	78.3
	11:37:27 PM	74.7	74.7	73.6	73.6	76.4	75.1	74.3	77.2
	11:52:27 PM	74.4	74.4	73.6	72.5	75.2	74.2	74.2	76.0
	12:07:27 AM	73.6	73.6	73.6	71.5	74.4	73.7	73.9	74.4
	12:22:27 AM	73.3	73.3	73.5	70.3	73.3	73.0	73.8	73.3
	12:37:27 AM	72.6	72.9	73.2	69.7	72.9	72.7	73.7	72.4
	12:52:27 AM	72.1	72.6	73.2	68.9	72.4	72.1	73.5	71.4
	01:07:27 AM	72.0	72.3	72.8	68.8	72.6	72.1	73.2	70.8
	01:22:27 AM	71.7	71.9	72.5	68.7	72.4	71.8	72.9	70.3
	01:37:27 AM	71.6	71.8	72.4	68.9	72.5	72.0	72.5	69.9
	01:52:27 AM	71.5	71.8	72.3	68.8	72.3	71.8	72.6	69.7
	02:07:27 AM	71.6	71.6	72.1	68.9	72.4	71.7	72.4	69.5
	02:22:27 AM	71.4	71.6	71.9	68.7	72.5	71.7	72.2	69.3
	02:37:27 AM	71.2	71.5	72.0	68.5	71.8	71.3	72.1	69.2

02:52:27 AM	71.1	71.3	71.9	68.7	72.2	71.5	72.0	69.1
03:07:27 AM	71.0	71.3	71.8	68.6	72.2	71.4	71.9	69.3
03:22:27 AM	71.2	71.2	71.7	68.8	71.8	71.3	71.8	68.9
03:37:27 AM	71.1	71.1	71.6	68.7	72.0	71.2	71.8	68.9
03:52:27 AM	71.0	71.0	71.5	68.6	72.0	71.2	71.7	68.8
04:07:27 AM	71.0	71.2	71.5	68.5	71.9	71.1	71.6	69.0
04:22:27 AM	70.9	71.2	71.4	68.8	72.1	71.1	71.6	68.7
04:37:27 AM	70.9	70.9	71.4	68.5	71.9	71.1	71.6	68.7
04:52:27 AM	70.8	70.8	71.4	68.4	71.5	71.0	71.5	68.9
05:07:27 AM	70.7	70.7	71.3	68.6	71.5	70.7	71.5	68.8
05:22:27 AM	70.7	70.7	71.3	68.6	71.4	70.6	71.4	68.8
05:37:27 AM	70.7	70.7	71.3	68.6	71.7	70.9	71.4	68.8
05:52:27 AM	70.7	70.7	71.2	68.5	71.7	70.9	71.4	68.8
06:07:27 AM	70.4	70.7	71.2	68.5	71.6	70.9	71.4	68.7
06:22:27 AM	70.7	70.7	71.2	68.5	71.9	70.9	71.4	68.7
06:37:27 AM	70.4	70.6	71.2	68.5	71.4	70.6	71.4	68.7
06:52:27 AM	70.3	70.6	71.1	68.2	71.3	70.5	71.3	68.4
07:07:27 AM	70.2	70.5	71.0	68.1	70.9	70.4	71.2	68.3
07:22:27 AM	70.1	70.4	71.0	68.0	70.9	70.3	71.1	68.2
07:37:27 AM	70.1	70.4	70.9	68.2	70.8	70.3	71.1	68.4
07:52:27 AM	70.0	70.3	70.8	68.2	70.8	70.2	71.0	68.1
08:07:27 AM	70.0	70.3	70.8	68.1	70.7	69.9	71.0	68.1
08:22:27 AM	70.0	70.0	70.8	68.1	70.7	69.9	70.7	68.1
08:37:27 AM	70.0	70.0	70.8	68.1	70.7	69.9	70.7	68.3
08:52:27 AM	70.0	70.0	70.5	68.1	70.7	69.9	70.7	68.3
09:07:27 AM	69.7	70.0	70.5	68.1	70.7	69.9	70.7	68.3
09:22:27 AM	69.7	70.0	70.5	68.1	70.7	69.9	70.7	68.3
09:37:27 AM	69.7	70.0	70.5	68.1	71.0	69.9	70.7	68.4
09:52:27 AM	69.7	70.0	70.5	68.1	71.0	69.9	70.5	68.4
10:07:27 AM	69.7	70.0	70.5	68.1	71.0	69.9	70.5	68.4
10:22:27 AM	69.7	70.0	70.5	68.1	70.7	69.9	70.4	68.1
10:37:27 AM	69.7	69.9	70.5	68.0	70.6	69.9	70.4	68.0
10:52:27 AM	69.7	69.9	70.5	68.0	70.6	69.9	70.4	68.0
11:07:27 AM	70.2	70.2	70.5	68.3	70.9	69.9	70.4	68.3
11:22:27 AM	69.9	69.9	70.5	68.3	70.6	69.9	70.4	68.3
11:37:27 AM	69.7	69.9	70.5	68.3	70.7	69.9	70.4	68.3
11:52:27 AM	69.7	69.9	70.5	68.0	70.6	69.9	70.4	68.3
12:07:27 PM	69.7	69.9	70.5	68.3	70.6	69.9	70.4	68.0
12:22:27 PM	69.7	69.9	70.2	68.3	70.6	69.9	70.4	68.3
12:37:27 PM	69.7	69.7	70.3	68.7	70.8	69.7	70.2	68.4
12:52:27 PM	69.6	69.8	70.4	68.8	70.9	69.8	70.3	68.5
01:07:27 PM	69.7	69.9	70.2	68.6	70.9	69.9	70.2	68.6
01:22:27 PM	69.7	69.7	70.2	68.6	71.0	69.9	70.2	68.6
01:37:27 PM	69.7	69.7	70.2	68.6	70.7	69.7	70.2	68.6
01:52:27 PM	69.7	69.7	70.2	68.6	70.8	69.7	70.2	68.7
02:07:27 PM	69.5	69.8	70.0	68.7	70.8	69.8	70.3	68.7

10-Dec-01	02:22:27 PM	69.6	69.8	70.1	68.8	70.9	69.8	70.3	68.7
	02:37:27 PM	69.6	69.9	70.2	68.8	70.9	69.9	70.1	68.8
	02:52:27 PM	69.8	69.8	70.3	69.2	71.3	70.0	70.3	69.0
	03:07:27 PM	69.9	69.9	70.2	69.4	71.5	70.2	70.2	69.1
	03:22:27 PM	69.9	69.9	70.2	69.9	72.1	70.6	70.3	69.5
	03:37:27 PM	70.3	70.0	70.0	70.3	72.5	70.9	70.4	69.9
	03:52:27 PM	70.5	70.5	70.2	70.8	73.3	71.2	70.4	70.4
	04:07:27 PM	70.7	70.7	70.4	71.2	73.7	71.6	70.5	70.8
	04:22:27 PM	71.1	70.8	70.6	71.6	74.1	72.0	71.0	71.2
	04:37:27 PM	71.6	71.3	70.5	72.1	74.9	72.5	71.0	71.8
	04:52:27 PM	71.9	71.7	70.6	72.7	75.5	73.2	71.3	72.4
	05:07:27 PM	72.1	71.9	71.1	72.4	75.1	73.0	71.5	72.8
	05:22:27 PM	72.5	72.3	71.2	72.8	76.0	73.7	71.8	73.1
	05:37:27 PM	72.9	72.4	71.3	73.4	76.4	73.8	72.0	73.5
	05:52:27 PM	73.3	72.8	71.5	74.1	77.7	74.8	72.1	74.0
	06:07:27 PM	73.4	73.2	71.6	73.4	77.0	74.6	72.5	74.3
	06:22:27 PM	73.7	73.5	71.9	74.0	78.0	75.1	72.7	74.6
	06:37:27 PM	74.3	73.8	71.9	76.2	78.9	75.8	72.9	75.2
	06:52:27 PM	74.5	74.0	72.1	76.1	78.9	75.8	73.2	76.1
	07:07:27 PM	75.4	74.6	72.5	79.7	82.1	77.4	73.4	77.4
	07:22:27 PM	77.7	76.1	72.9	85.1	83.6	79.6	73.9	82.0
	07:37:27 PM	78.5	76.9	73.1	91.1	90.2	83.2	74.8	84.5
	07:52:27 PM	79.6	78.0	73.5	94.6	91.9	85.2	75.7	88.5
	08:07:27 PM	80.8	79.2	74.7	88.5	87.1	83.2	76.9	90.7
	08:22:27 PM	81.0	79.6	75.6	86.8	87.3	83.4	77.6	89.1
	08:37:27 PM	80.7	79.6	75.9	88.9	88.6	83.4	77.9	88.6
	08:52:27 PM	80.7	79.9	76.4	84.9	85.7	81.7	78.1	88.5
	09:07:27 PM	80.8	80.0	76.8	84.0	85.4	81.8	78.1	88.3
	09:22:27 PM	81.3	80.2	77.0	89.4	86.3	82.6	78.5	89.9
	09:37:27 PM	81.8	80.7	77.0	93.4	87.5	83.6	78.9	91.4
	09:52:27 PM	82.1	81.0	77.5	88.9	85.4	82.6	78.9	92.7
	10:07:27 PM	82.3	81.2	78.0	92.3	88.0	84.1	79.4	92.9
	10:22:27 PM	82.1	81.6	78.4	86.1	86.8	83.1	79.7	91.7
	10:37:27 PM	81.5	81.2	78.6	82.8	83.4	81.6	79.8	89.7
	10:52:27 PM	80.8	80.5	78.7	80.8	82.5	80.6	79.6	87.2
	11:07:27 PM	80.5	80.2	78.6	79.9	81.8	80.5	79.5	85.5
	11:22:27 PM	79.8	79.8	78.5	78.7	81.3	79.9	79.4	83.9
	11:37:27 PM	79.6	79.3	78.3	77.8	81.1	79.8	79.2	82.4
	11:52:27 PM	78.9	78.9	78.4	76.6	79.8	78.8	78.8	80.9
	12:07:27 AM	78.4	78.7	78.2	75.0	78.5	78.0	78.5	79.3
	12:22:27 AM	77.9	78.1	78.1	73.3	77.6	77.3	78.4	77.6
	12:37:27 AM	77.1	77.4	77.9	72.3	76.6	76.6	77.9	76.0
	12:52:27 AM	76.7	77.0	77.5	70.1	75.6	75.9	77.5	74.3
	01:07:27 AM	76.1	76.4	77.2	69.1	75.1	75.3	77.2	73.0
	01:22:27 AM	75.6	75.9	76.9	68.4	74.9	75.1	77.0	72.0
	01:37:27 AM	75.3	75.6	76.7	68.4	75.0	75.0	76.5	71.0

01:52:27 AM	74.8	75.3	76.4	68.1	74.2	74.5	76.3	70.5
02:07:27 AM	74.2	74.8	76.1	67.3	73.4	73.9	76.0	69.5
02:22:27 AM	74.0	74.3	75.9	67.6	73.3	73.5	75.6	69.1
02:37:27 AM	73.4	73.9	75.5	67.0	72.5	73.2	75.3	68.5
02:52:27 AM	73.3	73.6	75.2	66.3	72.3	72.8	74.9	67.8
03:07:27 AM	72.8	73.3	74.9	65.8	71.6	72.4	74.7	67.4
03:22:27 AM	72.6	73.1	74.7	64.8	71.3	72.1	74.5	66.6
03:37:27 AM	72.3	72.8	74.4	64.8	71.3	71.8	74.2	66.0
03:52:27 AM	71.9	72.4	74.2	63.8	70.9	71.4	73.8	65.3
04:07:27 AM	71.5	72.1	73.9	63.5	70.1	70.9	73.5	64.8
04:22:27 AM	71.1	71.6	73.7	63.3	70.1	70.7	73.3	64.3
04:37:27 AM	71.0	71.5	73.4	62.7	69.3	70.3	73.0	64.0
04:52:27 AM	70.5	71.3	73.1	62.2		70.1	72.7	63.5
05:07:27 AM	70.3	70.9	73.0	62.0		70.0	72.6	63.1
05:22:27 AM	69.9	70.7	72.8	61.6		69.5	72.2	62.6
05:37:27 AM	69.7	70.3	72.7	61.4		69.1	72.0	62.3
05:52:27 AM	69.2	70.0	72.4	61.7		68.9	71.6	62.1
06:07:27 AM	69.2	69.7	72.1	61.7		68.6	71.5	61.7
06:22:27 AM	68.8	69.6	71.7	61.8		68.6	71.2	61.7
06:37:27 AM	68.6	69.4	71.8	60.5		68.0	70.9	61.4
06:52:27 AM	68.3	68.8	71.5	59.7		67.6	70.8	60.7
07:07:27 AM	68.1	68.6	71.0	61.4		67.6	70.5	60.7
07:22:27 AM	67.8	68.6	71.0	62.1		67.6	70.3	61.3
07:37:27 AM	67.6	68.4	70.6	61.7		67.5	70.1	61.1
07:52:27 AM	67.6	68.2	70.6	62.0		67.2	69.9	61.1
08:07:27 AM	67.4	67.9	70.3	61.8		67.0	69.7	61.2
08:22:27 AM	67.3	67.8	70.2	61.4		66.9	69.5	61.1
08:37:27 AM	66.8	67.6	70.0	61.4		66.7	69.3	61.1
08:52:27 AM	66.9	67.4	69.9	61.0		66.8	69.1	60.9
09:07:27 AM	66.8	67.3	69.7	61.9		66.7	69.1	61.4
09:22:27 AM	66.5	67.1	69.5	61.7		66.7	68.8	61.1
09:37:27 AM	66.7	67.3	69.4	62.5		66.7	68.8	61.6
09:52:27 AM	66.8	67.1	69.2	61.7		66.7	68.6	61.4
10:07:27 AM	67.0	67.3	69.1	62.4		66.9	68.5	61.9
10:22:27 AM	67.0	67.3	69.1	63.0		67.0	68.6	62.2
10:37:27 AM	67.2	67.5	69.1	62.6		66.9	68.5	62.1
10:52:27 AM	66.8	67.3	69.2	61.7		66.6	68.5	61.8
11:07:27 AM	66.7	67.0	69.1	60.8		66.2	68.6	61.4
11:22:27 AM	66.3	66.9	69.0	60.4		66.1	68.5	61.1
11:37:27 AM	66.2	66.7	68.8	61.1		66.0	68.1	60.9
11:52:27 AM	66.2	66.4	68.6	61.3		65.8	68.2	61.0
12:07:27 PM	66.0	66.5	68.4	61.4		65.6	68.0	61.1
12:22:27 PM	65.7	66.2	68.4	61.9		65.6	67.7	61.1
12:37:27 PM	65.8	66.0	68.2	62.0		65.4	67.8	61.2
12:52:27 PM	65.5	66.0	68.2	61.4		65.4	67.5	61.1
01:07:27 PM	65.6	65.9	68.0	61.3		65.5	67.6	61.0

11-Dec-01	01:22:27 PM	65.6	65.9	67.8	61.6	65.5	67.4	61.0
	01:37:27 PM	65.5	66.0	67.9	62.0	65.4	67.2	61.1
	01:52:27 PM	65.2	65.7	67.6	61.2	65.1	67.2	61.1
	02:07:27 PM	65.6	65.9	67.5	62.1	65.6	67.2	61.6
	02:22:27 PM	65.7	66.0	67.6	63.0	65.7	67.0	62.0
	02:37:27 PM	65.8	66.1	67.4	63.4	65.6	67.2	62.4
	02:52:27 PM	65.9	66.1	67.5	63.7	65.9	67.2	62.7
	03:07:27 PM	66.1	66.1	67.4	64.7	66.4	67.2	63.2
	03:22:27 PM	66.3	66.3	67.4	66.0	67.5	67.3	64.1
	03:37:27 PM	66.9	66.6	67.4	66.9	67.6	67.4	65.0
	03:52:27 PM	67.4	67.1	67.6	67.4	68.2	67.6	65.8
	04:07:27 PM	68.1	67.6	67.9	68.4	68.9	67.8	66.5
	04:22:27 PM	68.7	68.2	67.9	70.3	69.8	68.2	67.4
	04:37:27 PM	70.1	68.7	67.9	72.2	73.9	68.9	69.1
	04:52:27 PM	71.7	70.1	68.4	74.3	77.1	69.5	70.2
	05:07:27 PM	73.1	71.3	68.8	76.8	77.4	70.6	72.2
	05:22:27 PM	73.9	72.3	69.4	81.6	78.9	71.3	75.2
	05:37:27 PM	74.9	73.3	69.9	82.4	79.5	71.9	76.9
	05:52:27 PM	75.3	74.2	70.7	79.0	76.6	72.4	78.2
	06:07:27 PM	76.0	74.7	71.2	80.3	78.9	72.8	78.9
	06:22:27 PM	78.1	76.0	71.5	89.2	82.0	73.4	83.0
	06:37:27 PM	78.6	77.0	72.5	84.2	80.2	74.5	83.6
	06:52:27 PM	79.6	78.0	73.2	85.9	81.8	74.9	84.4
	07:07:27 PM	80.4	78.8	74.0	86.0	81.7	75.6	85.3
	07:22:27 PM	81.1	79.5	74.7	88.5	83.5	76.5	86.7
	07:37:27 PM	81.6	80.0	75.5	84.8	82.1	77.1	86.5
	07:52:27 PM	82.0	80.5	75.9	88.1	83.4	77.4	87.1
	08:07:27 PM	82.2	80.8	76.3	87.4	83.7	78.0	87.4
	08:22:27 PM	82.6	81.3	76.8	86.8	83.4	78.4	87.6
	08:37:27 PM	83.1	81.7	77.2	88.6	84.0	78.8	88.4
	08:52:27 PM	83.6	82.3	77.5	93.6	85.5	79.2	89.6
	09:07:27 PM	84.0	82.7	78.2	91.4	84.8	79.8	90.5
	09:22:27 PM	84.8	83.4	78.7	95.3	85.7	80.0	92.0
	09:37:27 PM	84.3	83.5	79.2	85.6	82.8	80.4	90.9
	09:52:27 PM	83.9	83.1	79.7	82.6	82.7	80.6	88.2
	10:07:27 PM	83.9	82.9	79.7	85.5	83.1	80.5	87.3
	10:22:27 PM	83.7	82.9	79.7	82.1	82.3	80.4	85.9
	10:37:27 PM	83.0	82.8	79.8	80.9	81.9	80.3	84.5
	10:52:27 PM	82.8	82.5	79.8	80.6	81.7	80.4	83.8
	11:07:27 PM	82.4	82.1	80.0	79.2	80.7	80.2	82.3
	11:22:27 PM	81.8	81.5	79.9	78.3	80.4	79.9	81.4
	11:37:27 PM	81.1	81.1	79.8	77.1	79.4	79.7	80.0
	11:52:27 PM	80.5	80.5	79.4	76.5	78.9	79.4	79.1
	12:07:27 AM	80.0	80.0	79.5	75.8	78.5	79.3	78.2
	12:22:27 AM	79.3	79.6	79.3	74.5	77.7	78.8	76.9
	12:37:27 AM	78.6	78.8	79.1	73.0	76.9	78.5	75.6

12:52:27 AM	77.7	78.2	78.7	71.0	76.0	78.1	74.2
01:07:27 AM	77.1	77.6	78.4	69.9	75.7	77.8	72.8
01:22:27 AM	76.7	77.0	78.1	69.0	75.3	77.4	71.9
01:37:27 AM	76.1	76.7	77.7	68.4	74.7	77.1	70.8
01:52:27 AM	75.4	76.2	77.5	67.6	74.3	76.7	69.8
02:07:27 AM	75.0	75.5	77.1	67.3	73.8	76.4	69.3
02:22:27 AM	74.6	75.2	76.7	67.1	73.7	76.0	68.7
02:37:27 AM	74.3	74.8	76.4	66.6	73.4	75.8	68.1
02:52:27 AM	74.2	74.4	76.0	67.0	73.1	75.4	67.8
03:07:27 AM	73.9	74.4	75.7	66.6	72.8	75.1	67.5
03:22:27 AM	73.4	73.9	75.5	67.0	72.6	74.7	67.4
03:37:27 AM	73.1	73.7	75.3	66.7	72.4	74.5	67.1
03:52:27 AM	72.9	73.5	75.1	66.8	72.2	74.3	67.2
04:07:27 AM	72.9	73.2	74.8	67.3	72.2	74.1	67.2
04:22:27 AM	72.9	73.1	74.7	68.6	72.3	73.9	67.6
04:37:27 AM	72.8	73.1	74.4	69.4	72.4	73.7	68.5
04:52:27 AM	73.1	73.3	74.4	69.6	72.4	73.7	68.7
05:07:27 AM	73.2	73.2	74.2	70.0	72.5	73.5	69.1
05:22:27 AM	73.0	73.0	73.8	70.0	72.5	73.6	69.3
05:37:27 AM	73.2	73.2	74.0	70.3	72.5	73.5	69.6
05:52:27 AM	73.1	73.1	73.9	70.5	72.7	73.5	69.8
06:07:27 AM	73.0	73.3	73.8	70.4	72.6	73.6	69.9
06:22:27 AM	73.1	73.1	73.9	70.2	72.7	73.4	70.0
06:37:27 AM	72.9	73.1	73.9	69.9	72.4	73.4	70.0
06:52:27 AM	72.9	73.1	73.9	69.9	72.6	73.4	70.0
07:07:27 AM	72.9	73.2	73.7	70.0	72.4	73.4	70.0
07:22:27 AM	73.0	73.3	73.8	70.1	72.4	73.2	70.0
07:37:27 AM	73.0	73.0	73.8	70.1	72.5	73.2	70.1
07:52:27 AM	72.5	72.8	73.3	69.9	72.5	73.3	70.1
08:07:27 AM	72.8	73.1	73.6	70.1	72.5	73.3	70.2
08:22:27 AM	72.8	72.8	73.6	70.2	72.3	73.3	70.2
08:37:27 AM	72.9	72.9	73.7	70.2	72.3	73.0	70.2
08:52:27 AM	72.6	72.9	73.4	70.2	72.3	73.1	70.2
09:07:27 AM	72.6	72.9	73.4	69.9	72.3	73.1	70.2
09:22:27 AM	72.6	72.9	73.4	69.9	72.3	73.1	70.2
09:37:27 AM	72.6	72.6	73.4	70.0	72.3	73.1	70.2
09:52:27 AM	72.4	72.6	73.4	70.0	72.1	72.9	70.2
10:07:27 AM	72.4	72.6	73.2	70.0	72.1	72.9	70.2
10:22:27 AM	72.4	72.6	73.2	70.0	72.1	72.9	70.2
10:37:27 AM	72.4	72.4	73.2	70.0	72.1	72.9	70.2
10:52:27 AM	72.1	72.4	73.2	70.0	72.1	72.9	70.2
11:07:27 AM	72.1	72.3	73.1	69.9	71.7	72.8	70.2
11:22:27 AM	72.0	72.3	73.1	69.6	71.6	72.7	70.0
11:37:27 AM	71.7	72.0	73.0	68.8	71.3	72.7	69.5
11:52:27 AM	71.4	71.9	73.0	68.2	70.9	72.5	69.1
12:07:27 PM	71.4	71.6	72.7	68.4	70.9	72.2	68.8

12:22:27 PM	71.0	71.5	72.6	68.5	70.6	72.2	68.7
12:37:27 PM	70.7	71.2	72.6	66.9	70.2	72.1	68.4
12:52:27 PM	70.8	71.0	72.4	67.3	70.5	71.9	67.9
01:07:27 PM	70.8	71.1	72.2	67.1	70.6	71.7	67.7
01:22:27 PM	70.8	71.1	72.2	68.2	70.7	71.8	68.1
01:37:27 PM	70.9	70.9	72.0	68.0	70.6	71.7	68.3
01:52:27 PM	71.0	71.0	72.1	68.4	70.7	71.8	68.3
02:07:27 PM	70.9	71.1	71.9	68.7	70.8	71.6	68.4
02:22:27 PM	71.0	71.3	72.1	68.8	71.0	71.5	68.6
02:37:27 PM	71.2	71.2	72.0	69.0	71.1	71.7	68.8
02:52:27 PM	71.0	71.3	71.8	69.2	71.1	71.6	69.0
03:07:27 PM	71.3	71.3	71.8	69.7	71.3	71.6	69.2
03:22:27 PM	71.5	71.5	71.8	69.9	71.8	71.5	69.4
03:37:27 PM	71.3	71.3	71.6	70.0	71.9	71.7	69.8
03:52:27 PM	71.6	71.6	71.6	70.8	72.2	72.0	70.4
04:07:27 PM	72.0	72.0	72.0	71.2	72.3	72.1	70.7
04:22:27 PM	72.3	72.3	72.3	71.2	72.3	72.1	71.0
04:37:27 PM	72.3	72.3	72.3	71.8	72.4	72.2	71.4
04:52:27 PM	72.4	72.4	72.1	72.6	73.4	72.3	72.1
05:07:27 PM	73.4	72.8	72.3	75.0	74.5	72.4	73.2
05:22:27 PM	73.8	73.2	72.2	76.4	75.6	72.7	75.1
05:37:27 PM	74.5	74.0	72.4	79.3	76.5	73.1	76.2
05:52:27 PM	77.4	75.8	72.6	92.2	83.4	74.0	82.1
06:07:27 PM	77.9	76.6	73.4	85.1	80.5	74.7	84.2
06:22:27 PM	78.8	77.7	74.0	86.7	81.2	75.4	86.4
06:37:27 PM	79.6	78.3	74.8	84.6	81.7	76.4	87.4
06:52:27 PM	79.7	78.9	76.0	81.5	80.6	76.7	85.8
07:07:27 PM	79.8	79.0	76.1	82.7	81.1	76.9	85.6
07:22:27 PM	80.3	79.3	76.3	83.2	81.6	77.2	86.3
07:37:27 PM	80.7	79.6	76.4	84.9	82.8	77.8	86.9
07:52:27 PM	80.9	80.1	77.2	82.5	81.8	78.1	86.4
08:07:27 PM	80.9	80.2	77.2	86.5	83.3	78.3	85.9
08:22:27 PM	82.1	81.1	77.9	88.2	83.7	78.7	88.6
08:37:27 PM	81.9	81.1	78.4	82.1	82.9	79.0	87.3
08:52:27 PM	81.8	81.3	78.3	84.4	83.1	79.2	86.7
09:07:27 PM	82.0	81.2	78.5	83.6	83.1	79.4	87.5
09:22:27 PM	82.4	81.7	79.0	83.2	82.7	79.8	86.8
09:37:27 PM	82.2	81.7	79.3	82.2	82.6	80.0	86.2
09:52:27 PM	82.5	81.9	80.3	88.8	83.4	80.0	87.0
10:07:27 PM	83.1	82.3	80.8	90.8	84.9	80.5	88.8
10:22:27 PM	83.7	83.0	80.6	84.8	84.6	80.7	88.5
10:37:27 PM	83.3	82.7	80.6	81.9	83.0	80.9	86.9
10:52:27 PM	82.6	82.3	80.7	79.9	82.1	80.8	84.9
11:07:27 PM	81.9	81.9	80.8	78.7	81.4	80.9	83.5
11:22:27 PM	81.4	81.4	80.9	78.5	80.8	80.5	82.4
11:37:27 PM	80.7	80.7	80.4	78.0	80.2	80.5	81.3

12-Dec-01	11:52:27 PM	80.1	80.3	80.6	77.1	79.6	80.1	80.1
	12:07:27 AM	79.5	79.7	80.0	76.0	79.0	80.0	79.0
	12:22:27 AM	79.0	79.2	79.8	74.4	78.4	79.7	77.4
	12:37:27 AM	78.4	78.6	79.4	72.8	77.5	79.3	75.9
	12:52:27 AM	77.7	78.0	79.3	71.3	76.8	78.8	74.4
	01:07:27 AM	77.1	77.4	79.0	70.5	76.2	78.6	73.1
	01:22:27 AM	76.6	77.1	78.7	69.6	76.2	78.3	72.3
	01:37:27 AM	76.0	76.6	78.2	69.1	75.5	77.8	71.3
	01:52:27 AM	75.6	76.1	78.0	68.4	75.0	77.6	70.5
	02:07:27 AM	75.0	75.5	77.6	67.7	74.4	77.0	69.7
	02:22:27 AM	74.5	75.3	77.1	67.5	74.3	76.7	69.0
	02:37:27 AM	74.2	75.0	76.9	67.5	73.8	76.4	68.5
	02:52:27 AM	73.9	74.5	76.6	67.2	73.5	76.2	68.0
	03:07:27 AM	73.7	74.2	76.4	67.0	73.1	75.7	67.5
	03:22:27 AM	73.2	74.0	76.1	66.5	72.9	75.5	67.1
	03:37:27 AM	73.0	73.5	75.7	66.1	72.4	75.1	66.6
	03:52:27 AM	72.5	73.3	75.5	65.6	72.2	74.8	66.1
	04:07:27 AM	72.1	72.9	75.3	65.1	71.8	74.7	65.7
	04:22:27 AM	71.9	72.5	74.9	65.0	71.4	74.3	65.3
	04:37:27 AM	71.6	72.2	74.5	65.2	71.4	74.0	65.0
	04:52:27 AM	71.2	72.0	74.4	65.3	71.0	73.6	64.9
	05:07:27 AM	71.0	71.8	74.2	65.4	70.9	73.5	65.0
	05:22:27 AM	70.7	71.5	73.9	65.6	70.6	73.2	65.0
	05:37:27 AM	70.7	71.2	73.6	65.0	70.2	72.9	64.9
	05:52:27 AM	70.6	71.2	73.8	65.8	70.5	72.6	65.0
	06:07:27 AM	70.7	71.2	73.9	66.4	70.7	72.5	65.4
	06:22:27 AM	70.7	71.2	73.1	66.4	70.5	72.6	65.7
	06:37:27 AM	70.7	71.3	73.1	66.7	70.7	72.6	66.0
	06:52:27 AM	70.9	71.2	73.1	66.7	70.7	72.2	66.2
	07:07:27 AM	70.9	71.2	73.3	67.2	70.6	72.5	66.4
	07:22:27 AM	70.8	71.1	72.9	67.3	70.8	72.4	66.6
	07:37:27 AM	71.0	71.3	72.9	67.2	70.7	72.3	66.8
	07:52:27 AM	70.9	71.1	72.7	67.4	70.9	72.2	66.9
	08:07:27 AM	71.0	71.3	72.9	67.3	70.7	72.0	67.0
	08:22:27 AM	70.8	71.3	72.7	67.0	70.7	72.0	66.8
	08:37:27 AM	70.6	71.1	72.7	66.3	70.2	72.1	66.5
	08:52:27 AM	70.1	70.6	72.7	64.7	69.6	71.9	65.9
	09:07:27 AM	69.7	70.2	72.6	63.8	69.1	71.7	64.8
	09:22:27 AM	69.0	69.8	72.5	62.3	68.6	71.5	63.6
	09:37:27 AM	68.7	69.5	72.4	61.4	68.2	71.1	62.7
	09:52:27 AM	68.4	69.2	72.1	60.9	67.9	71.1	61.8
	10:07:27 AM	68.2	68.7	71.9	60.1	67.4	70.6	61.1
	10:22:27 AM	67.8	68.6	71.5	59.4	67.1	70.2	60.4
	10:37:27 AM	67.3	68.1	71.3	58.5	66.8	70.0	59.7
	10:52:27 AM	66.9	67.7	70.9	58.3	66.4	69.9	59.0
	11:07:27 AM	66.6	67.4	70.8	58.0	65.9	69.3	58.7

11:22:27 AM	66.4	67.2	70.4	57.5	65.8	69.2	58.3
11:37:27 AM	66.0	66.8	70.3	57.4	65.4	68.8	57.9
11:52:27 AM	65.7	66.5	70.0	57.7	65.1	68.6	57.7
12:07:27 PM	65.5	66.3	69.8	57.7	65.0	68.4	57.5
12:22:27 PM	65.3	66.1	69.6	57.3	64.8	68.2	57.4
12:37:27 PM	65.1	65.9	69.4	57.0	64.6	68.0	57.1
12:52:27 PM	64.9	65.7	69.1	56.8	64.3	67.7	56.9
01:07:27 PM	64.6	65.4	68.9	56.5	64.1	67.5	56.6
01:22:27 PM	64.4	65.2	68.7	56.3	63.9	67.3	56.4
01:37:27 PM	64.2	65.0	68.5	56.1	63.7	67.1	56.2
01:52:27 PM	64.3	65.1	68.3	56.2	63.7	66.9	56.0
02:07:27 PM	63.9	64.9	68.1	56.0	63.8	67.0	56.1
02:22:27 PM	64.0	64.5	68.0	55.9	63.7	66.8	56.0
02:37:27 PM	63.6	64.4	67.9	56.1	63.4	66.3	55.7
02:52:27 PM	63.7	64.5	67.7	56.7	63.5	66.5	56.1
03:07:27 PM	64.0	64.5	67.5	57.5	63.9	66.5	56.4
03:22:27 PM	64.4	64.7	67.4	60.1	64.7	66.3	57.3
03:37:27 PM	65.2	65.2	67.3	60.9	66.3	66.3	58.1
03:52:27 PM	66.0	65.5	67.3	62.8	67.8	66.7	59.0
04:07:27 PM	66.3	66.0	67.4	63.9	67.6	67.1	59.9
04:22:27 PM	67.0	66.5	67.8	66.5	69.0	67.4	61.9
04:37:27 PM	68.2	67.4	67.9	67.6	70.2	67.8	63.3
04:52:27 PM	69.2	68.2	68.2	69.0	71.8	68.4	65.0
05:07:27 PM	70.3	69.2	68.4	69.5	73.5	69.0	66.6
05:22:27 PM	71.6	70.3	69.0	76.2	75.5	69.7	69.4
05:37:27 PM	72.8	71.4	69.3	78.3	76.6	70.6	72.7
05:52:27 PM	72.8	72.0	71.2	73.6	74.6	71.2	73.3
06:07:27 PM	73.3	72.5	75.9	74.3	74.9	71.5	73.9
06:22:27 PM	74.0	73.0	71.1	79.4	77.4	71.9	75.0
06:37:27 PM	75.5	74.2	72.1	83.5	79.1	72.6	78.1
06:52:27 PM	77.1	75.5	72.5	86.1	80.8	73.4	80.0
07:07:27 PM	78.1	76.5	72.8	86.3	81.4	74.0	82.4
07:22:27 PM	79.3	77.7	74.0	89.1	83.0	75.2	84.3
07:37:27 PM	80.1	78.5	74.5	86.4	83.6	76.0	85.4
07:52:27 PM	81.2	79.6	77.7	87.5	83.9	76.6	86.3
08:07:27 PM	81.8	80.2	76.2	89.5	84.3	77.2	87.2
08:22:27 PM	82.6	81.3	77.3	90.8	85.2	78.1	88.5
08:37:27 PM	82.7	81.6	77.9	90.9	84.9	78.9	88.8
08:52:27 PM	83.6	82.3	78.8	92.3	86.0	79.2	89.9
09:07:27 PM	83.8	82.8	79.0	89.6	84.9	80.0	90.6
09:22:27 PM	83.9	82.9	81.3	87.6	84.5	80.1	90.0
09:37:27 PM	83.7	82.9	81.3	91.3	85.3	80.3	89.4
09:52:27 PM	83.5	82.9	80.3	83.5	83.8	80.4	88.5
10:07:27 PM	83.0	82.7	80.4	79.8	82.7	80.3	86.6
10:22:27 PM	82.5	82.3	80.4	79.4	81.9	80.4	84.8
10:37:27 PM	82.3	82.1	81.3	79.7	81.8	80.2	83.9

13-Dec-01	10:52:27 PM	82.0	81.8	80.4	79.6	81.9	80.0	83.2
	11:07:27 PM	81.7	81.5	80.4	78.5	81.1	80.0	82.4
	11:22:27 PM	81.2	81.2	80.2	77.8	80.5	80.0	81.3
	11:37:27 PM	80.7	80.7	80.2	76.7	79.9	79.7	80.2
	11:52:27 PM	80.2	80.2	80.0	76.3	79.5	79.5	79.3
	12:07:27 AM	79.8	79.8	79.8	75.9	78.9	79.4	78.4
	12:22:27 AM	79.3	79.6	79.8	75.3	78.6	79.2	77.6
	12:37:27 AM	79.0	79.3	79.5	74.7	78.3	78.9	76.8
	12:52:27 AM	78.6	78.8	79.1	74.3	77.6	78.4	76.1
	01:07:27 AM	78.2	78.5	79.0	73.9	77.3	78.4	75.5
	01:22:27 AM	77.8	78.1	78.6	73.5	76.9	78.0	74.8
	01:37:27 AM	77.4	77.7	78.2	72.6	76.6	77.6	74.2
	01:52:27 AM	77.1	77.4	78.2	72.3	76.6	77.6	73.7
	02:07:27 AM	76.9	77.2	77.7	72.1	76.3	77.4	73.2
	02:22:27 AM	76.4	76.9	77.7	71.6	75.6	76.9	72.7
	02:37:27 AM	76.2	76.8	77.6	71.4	76.0	77.0	72.6
	02:52:27 AM	76.0	76.3	77.3	70.7	75.5	76.8	72.1
	03:07:27 AM	75.7	76.0	77.1	70.4	75.2	76.8	71.5
	03:22:27 AM	75.4	75.9	77.0	70.3	75.1	76.5	71.2
	03:37:27 AM	75.0	75.5	76.5	69.6	74.4	76.3	70.7
	03:52:27 AM	74.8	75.3	76.4	69.2	74.3	76.1	70.3
	04:07:27 AM	74.6	74.8	76.2	68.7	74.0	75.8	69.8
	04:22:27 AM	74.4	74.6	76.0	68.5	73.6	75.4	69.4
	04:37:27 AM	74.1	74.6	75.9	68.2	73.6	75.4	69.1
	04:52:27 AM	73.7	74.2	75.8	67.8	73.1	75.2	68.7
	05:07:27 AM	73.7	73.9	75.5	68.1	73.2	75.0	68.4
	05:22:27 AM	73.1	73.6	75.5	67.5	72.6	74.7	68.1
	05:37:27 AM	73.0	73.6	75.2	67.1	72.5	74.6	67.8
	05:52:27 AM	72.7	73.2	75.1	67.1	72.2	74.3	67.4
	06:07:27 AM	72.3	72.8	74.7	66.7	72.1	74.2	67.1
	06:22:27 AM	72.2	72.8	74.6	66.4	71.7	73.9	66.7
	06:37:27 AM	71.9	72.4	74.3	66.0	71.7	73.8	66.4
	06:52:27 AM	71.9	72.2	74.3	66.0	71.4	73.5	66.2
	07:07:27 AM	71.7	72.2	74.1	65.8	71.2	73.3	65.9
	07:22:27 AM	71.4	71.9	73.8	65.2	71.1	73.2	65.6
	07:37:27 AM	71.2	71.8	73.6	64.8	70.7	73.1	65.2
	07:52:27 AM	70.8	71.3	73.4	64.1	70.5	72.6	64.7
	08:07:27 AM	70.5	71.1	73.2	63.3	70.0	72.6	64.2
	08:22:27 AM	70.3	70.8	73.2	62.8	69.7	72.3	63.6
	08:37:27 AM	70.1	70.6	73.0	62.6	69.5	72.2	63.2
	08:52:27 AM	69.7	70.2	72.9	62.2	69.1	72.0	62.8
	09:07:27 AM	69.6	70.1	72.5	62.1	69.0	71.6	62.4
	09:22:27 AM	69.2	69.8	72.4	61.5	68.7	71.6	62.1
	09:37:27 AM	69.2	69.7	72.1	62.0	68.7	71.3	61.8
	09:52:27 AM	68.9	69.5	71.9	62.2	68.5	71.1	61.8
	10:07:27 AM	68.8	69.3	71.7	61.8	68.3	71.0	61.7

10:22:27 AM	68.6	69.1	71.8	61.6	67.8	70.7	61.4
10:37:27 AM	68.0	68.8	71.5	61.3	67.5	70.4	61.2
10:52:27 AM	68.0	68.5	71.2	61.0	67.5	70.4	60.9
11:07:27 AM	67.7	68.2	71.1	60.4	67.2	70.1	60.5
11:22:27 AM	67.3	68.1	70.8	59.8	67.0	69.9	60.1
11:37:27 AM	67.1	67.7	70.6	59.3	66.6	69.7	59.7
11:52:27 AM	66.7	67.5	70.4	58.6	66.3	69.2	59.2
12:07:27 PM	66.4	67.2	70.1	58.6	65.8	69.2	58.9
12:22:27 PM	66.3	67.1	70.1	58.5	65.7	68.9	58.6
12:37:27 PM	66.1	66.6	69.8	58.6	65.6	68.7	58.4
12:52:27 PM	65.9	66.7	69.6	58.1	65.4	68.6	58.2
01:07:27 PM	65.7	66.5	69.4	57.9	65.1	68.3	57.9
01:22:27 PM	65.4	66.2	69.4	57.3	65.1	68.3	57.6
01:37:27 PM	65.4	65.9	69.1	57.1	64.8	68.0	57.4
01:52:27 PM	65.2	65.7	69.0	57.4	64.7	67.8	57.2
02:07:27 PM	64.8	65.6	68.8	57.3	64.3	67.5	57.1
02:22:27 PM	64.7	65.5	68.4	57.4	64.2	67.4	57.0
02:37:27 PM	64.6	65.4	68.3	56.8	64.4	67.3	56.9
02:52:27 PM	64.5	65.1	68.0	57.5	64.4	67.0	56.9
03:07:27 PM	64.8	65.1	68.0	58.9	64.7	67.1	57.2
03:22:27 PM	65.4	65.4	67.6	63.3	66.2	67.0	59.0
03:37:27 PM	66.1	66.1	67.7	64.8	67.3	67.3	60.7
03:52:27 PM	66.7	66.4	67.8	65.6	67.4	67.4	61.8
04:07:27 PM	67.7	67.1	67.7	69.3	69.6	67.7	63.8
04:22:27 PM	67.9	67.3	67.6	68.7	68.9	68.1	65.7
04:37:27 PM	68.9	68.3	68.3	69.4	69.8	68.4	67.1
04:52:27 PM	70.7	69.3	68.5	74.4	74.8	69.3	69.6
05:07:27 PM	71.2	70.1	69.0	74.4	73.4	69.7	71.0
05:22:27 PM	72.6	71.2	77.4	76.0	75.1	70.4	73.0
05:37:27 PM	73.1	72.1	75.5	76.1	75.2	71.0	73.9
05:52:27 PM	73.9	72.9	76.3	76.3	75.3	71.7	74.8
06:07:27 PM	74.8	73.7	74.3	77.4	76.5	71.7	75.4
06:22:27 PM	75.2	74.4	78.1	77.6	76.3	72.4	76.3
06:37:27 PM	76.1	75.0	87.4	79.3	77.0	73.0	77.2
06:52:27 PM	77.7	76.1	72.4	85.9	81.0	73.6	79.7
07:07:27 PM	78.2	76.9	73.1	82.2	78.9	74.4	80.7
07:22:27 PM	79.4	77.8	73.6	86.8	81.8	75.0	82.6
07:37:27 PM	80.3	79.0	74.5	84.0	81.1	75.9	83.2
07:52:27 PM	80.4	79.0	74.8	89.3	83.9	76.3	83.6

APPENDIX C

FWD DATA

(Appendix C is from a printout provided
by FDOT)

Appendix D UTW Design Procedure and Sample Calculations

D.1 UTW Design Equations

Two different modes of distresses have been observed in UTW pavements, corner cracking caused by corner loading and mid-slab cracking caused by joint loading. Both of these two types of failure were accounted in the design procedure used in this study. Equations had been developed to compute stresses in concrete under corner loading and strains in asphalt caused by loads at mid-joint. Similarly, equations for calculating concrete stresses and asphalt strains caused by temperature differential in the pavements had also been developed.

AC Strain for 18-kip SAL at joint (microstrain)

$$\text{Log}_{10}(\text{JT}_{18}) = 5.194 - 0.927 * \text{Log}_{10}(\text{K}) + 0.299 * \text{Log}_{10}(\text{L}/\text{le}) - 0.037 * \text{le} \quad (1)$$

AC Strain for 36-kip TAL at joint (microstrain)

$$\text{Log}_{10}(\text{JT}_{36}) = 5.997 - 0.891 * \text{Log}_{10}(\text{K}) - 0.786 * \text{Log}_{10}(\text{le}) - 0.028 * \text{le} \quad (2)$$

Concrete Stress for 18-kip SAL at corner (psi)

$$\text{Log}_{10}(\text{COR}_{18}) = 4.952 - 0.465 * \text{Log}_{10}(\text{K}) + 0.686 * \text{Log}_{10}(\text{L}/\text{le}) - 1.291 * \text{Log}_{10}(\text{le}) \quad (3)$$

Concrete Stress for 36-kip TAL at corner (psi)

$$\text{Log}_{10}(\text{COR}_{36}) = 4.826 - 0.559 * \text{Log}_{10}(\text{K}) - 0.963 * \text{Log}_{10}(\text{le}) + 1.395 * \text{Log}_{10}(\text{L}/\text{le}) - 0.088 * (\text{L}/\text{le}) \quad (4)$$

AC Strain for temperature differential at joint (microstrain)

$$(\text{JT}_T) = (-24.255) + 1.802 * (\alpha_1 * \Delta T) + 14.969 * \text{L}/\text{le} \quad (5)$$

Concrete Stress for temperature differential at corner (psi)

$$(\text{COR}_T) = 23.805 - 2.948 * (\alpha_1 * \Delta T) - 15.451 * \text{L}/\text{le} \quad (6)$$

where

JT_n = strains at bottom of asphalt layer for axle load or temperature load, microstrain

COR_n = stress at top of concrete slab for axle load or temperature load, psi

K = Modulus of subgrade reaction, pci

L = concrete slab joint spacing, in.

l_e = effective radius of relative stiffness for a fully bonded composite pavement
 $= ((Eh^3/12)_e / (1 - \mu^2) / K)^{0.25}$, in.
 $(Eh^3 / 12)_e = (E1 * h1^3) / 12 + E1 * h1 * (NA - h1 / 2)^2 + (E2 * h2^3) / 12$
 $+ E2 * h2 * (h1 - NA + h2 / 2)^2$ (7)
 μ = Concrete Poisson's ratio = 0.15
 $E1$ = Concrete modulus of elasticity, psi
 $h1$ = Concrete slab thickness, in.
 $E2$ = Asphalt modulus of elasticity, psi
 $h2$ = Asphalt layer thickness, in.
 NA = neutral axis from top of concrete slab, in.
 $= (E1 * h1 * (h1 / 2) + E2 * h2 * (h1 + h2 / 2)) / (E1 * h1 + E2 * h2)$
 ΔT = temperature differential in concrete slabs, °F
 α_1 = concrete coefficient of thermal expansion, /°F
 $\alpha_1 * \Delta T$ had no unit and was expressed as 10⁻⁶
 R^2_{adj} = adjusted coefficient of correlation
 N = number of data points

Concrete Fatigue Equations

For $SR > 0.55$

$$\text{Log}_{10}(N) = (0.97187 - SR) / 0.0828 \quad (8)$$

For $0.45 < SR < 0.55$

$$N = (4.2577 / (SR - 0.43248))^3 \quad (9)$$

For $SR < 0.45$

$$N = \text{unlimited} \quad (10)$$

where

SR = stress to strength ratio

N = number of allowable load repetitions

Asphalt Fatigue Equations

$$N = C * 18.4 * (4.32 \times 10^{-3}) * (1 / \epsilon)^{3.29} * (1 / E_a)^{0.854} \quad (11)$$

where

N = number of load repetitions for 20% or greater AC fatigue cracking

ϵ = maximum tensile strain in the asphalt layer

E_a = asphalt mixture dynamic modulus, psi

C = a correction factor = 10^M

$M = 4.84 * ((V_b / (V_v + V_b)) - 0.69)$

V_b = volume of asphalt, percent

V_v = volume of air voids, percent

For typical asphalt concrete mixtures, M would be equal to zero and the correction factor C would become one.

D.2 UTW Pavement Thickness Design Procedure

Using equations 1 through 11, the design of an Ultra-thin Whitetopping can be determined. Separate fatigue analyses must be done for the concrete and asphalt layers. For a given set of parameters, one of the two analyses will govern and determine the required concrete thickness and joint spacing. The following are the steps for UTW pavement design:

1. Using equation 7, determine l_e and L/l_e .
2. Using equations 1 and 3, along with the modulus of subgrade reaction, compute the load induced critical asphalt strains and concrete stresses for 18-kip single axle loads (SAL). Then, use proportions to calculate the critical asphalt strains and concrete stresses for the SAL load spectra.
3. Using equations 2 and 4, repeat step 2 for the anticipated tandem axle loads (TAL).
4. Using equations 5 and 6, compute the critical temperature induced asphalt strains and concrete stresses.
5. Once the concrete stresses and asphalt strains are computed for the loading and temperature conditions, they are summed as the Total Stresses and Total Strains.
6. Compute the concrete stress ratio by dividing the total concrete stresses by the design concrete modulus of rupture.
7. Using the stress ratio and equations 8, 9, or 10, determine the allowable repetitions for the concrete layer.
8. Compute the percent fatigue by dividing the anticipated repetitions by the allowable repetitions, multiplying by 100. Total the concrete fatigue damage for both single and tandem axle loadings.
9. Using the existing asphalt modulus of elasticity and the microstrains, compute the allowable load repetitions for the asphalt layer from equation 11.
10. Calculate the percent fatigue for the asphalt layer and the total asphalt fatigue damage in the same manner as the concrete fatigue computation in Step 8. Sum the percent fatigue for the given load cases to compute the total asphalt fatigue damage.

D.3 Sample Design Calculations

D.3.1 Analysis of UTW pavement with concrete thickness of 3 in., slab dimension of 4 ft by 4 ft and design life of 5 years

Analysis results: Total concrete fatigue = 33% Total asphalt fatigue = 91%

Calculations:

Group 1, A

Axle Load, kips	Critical Concrete Stresses and Asphalt Strains						Expected Repetitions	Concrete Fatigue Analysis			Asphalt Fatigue Analysis		
	Load Induced		Temperature Induced		Total			Concrete Stress Ratio	Allowable Repetitions, N	Fatigue Percent, %	Asphalt microstrain	Allowable Repetitions, N	Fatigue Percent, %
	Stress, psi	Microstrain	Stress, psi	Microstrain	Stress, psi	Microstrain							
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Single Axles le = 14.674 L/le = 3.271													
2	31	14	33	-12	64	3	1,220	0.088	unlimited	0.0	3	unlimited	0.0
4	62	28	33	-12	95	17	1,323	0.131	unlimited	0.0	17	unlimited	0.0
6	93	43	33	-12	126	31	2,890	0.175	unlimited	0.0	31	333,076,870	0.0
8	124	57	33	-12	157	45	28,231	0.218	unlimited	0.0	45	96,245,765	0.0
10	155	71	33	-12	188	59	114,595	0.261	unlimited	0.0	59	39,160,988	0.3
12	186	85	33	-12	219	74	57,130	0.304	unlimited	0.0	74	19,340,822	0.3
14	217	99	33	-12	250	88	5,676	0.347	unlimited	0.0	88	10,822,631	0.1
16	248	114	33	-12	281	102	9,743	0.390	unlimited	0.0	102	6,608,189	0.1
18	279	128	33	-12	312	116	6,147	0.433	unlimited	0.0	116	4,303,373	0.1
20	310	142	33	-12	343	130	1,199	0.476	3,258,847	0.0	130	2,944,711	0.0
22	341	156	33	-12	374	145	144	0.519	341,335	0.0	145	2,095,691	0.0
24	372	170	33	-12	405	159	30	0.562	89,600	0.0	159	1,539,793	0.0
26	403	185	33	-12	435	173	5	0.605	27,075	0.0	173	1,161,640	0.0
28	434	199	33	-12	466	187	0	0.648	8,182	0.0	187	896,071	0.0
Tandem Axles													
4	36	13	33	-12	68	2	342	0.095	unlimited	0.0	2	unlimited	0.0
8	71	26	33	-12	104	15	20,434	0.144	unlimited	0.0	15	unlimited	0.0
12	107	40	33	-12	139	28	47,297	0.194	unlimited	0.0	28	461,790,508	0.0
16	142	53	33	-12	175	41	47,476	0.243	unlimited	0.0	41	129,581,998	0.0
20	178	66	33	-12	211	54	43,801	0.292	unlimited	0.0	54	51,929,766	0.1
24	213	79	33	-12	246	68	38,119	0.342	unlimited	0.0	68	25,409,731	0.2
28	249	93	33	-12	282	81	57,458	0.391	unlimited	0.0	81	14,129,709	0.4
32	285	106	33	-12	317	94	85,487	0.441	unlimited	0.0	94	8,588,555	1.0
36	320	119	33	-12	353	107	28,249	0.490	1,275,504	2.2	107	5,573,981	0.5
40	356	132	33	-12	388	121	3,053	0.540	168,723	1.8	121	3,804,011	0.1
44	391	145	33	-12	424	134	211	0.589	42,116	0.5	134	2,701,450	0.0
48	427	159	33	-12	460	147	26	0.638	10,658	0.2	147	1,981,386	0.0
52	463	172	33	-12	495	160	3	0.688	2,697	0.1	160	1,492,593	0.0
56	498	185	33	-12	531	173	0	0.737	682	0.0	173	1,149,931	0.0
60	534	198	33	-12	566	187	1	0.787	173	0.6	187	903,080	0.0
64	569	211	33	-12	602	200	0	0.836	44	0.0	200	721,047	0.0

Total Concrete Fatigue, % = 5.6

Total Asphalt Fatigue, % = 3.3

Group 1, B

Axle Load, kips	Critical Concrete Stresses and Asphalt Strains						Expected Repetitions	Concrete Fatigue Analysis			Asphalt Fatigue Analysis		
	Load Induced		Temperature Induced		Total			Concrete Stress Ratio	Allowable Repetitions, N	Fatigue Percent, %	Asphalt microstrain	Allowable Repetitions, N	Fatigue Percent, %
	Stress, psi	Microstrain	Stress, psi	Microstrain	Stress, psi	Microstrain							
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Single Axles le = 14.674 L/le = 3.271													
2	31	14	-2	10	29	24	265	0.040	unlimited	0.0	24	795,071,250	0.0
4	62	28	-2	10	60	38	288	0.083	unlimited	0.0	38	170,362,008	0.0
6	93	43	-2	10	91	52	628	0.126	unlimited	0.0	52	59,910,708	0.0
8	124	57	-2	10	122	66	6,137	0.169	unlimited	0.0	66	27,138,218	0.0
10	155	71	-2	10	153	81	24,912	0.212	unlimited	0.0	81	14,341,361	0.2
12	186	85	-2	10	184	95	12,420	0.255	unlimited	0.0	95	8,407,677	0.1
14	217	99	-2	10	215	109	1,234	0.298	unlimited	0.0	109	5,311,290	0.0
16	248	114	-2	10	246	123	2,118	0.342	unlimited	0.0	123	3,549,698	0.1
18	279	128	-2	10	277	137	1,336	0.385	unlimited	0.0	137	2,479,125	0.1
20	310	142	-2	10	308	152	261	0.428	unlimited	0.0	152	1,793,715	0.0
22	341	156	-2	10	339	166	31	0.471	4,916,600	0.0	166	1,335,990	0.0
24	372	170	-2	10	370	180	6	0.514	416,791	0.0	180	1,019,472	0.0
26	403	185	-2	10	401	194	1	0.557	103,300	0.0	194	794,089	0.0
28	434	199	-2	10	432	208	0	0.600	31,215	0.0	208	629,542	0.0
Tandem Axles													
4	36	13	-2	10	34	23	74	0.047	unlimited	0.0	23	1,355,200,534	0.0
8	71	26	-2	10	69	36	4,442	0.096	unlimited	0.0	36	202,665,607	0.0
12	107	40	-2	10	105	49	10,282	0.146	unlimited	0.0	49	72,449,717	0.0
16	142	53	-2	10	140	62	10,321	0.195	unlimited	0.0	62	33,128,833	0.0
20	178	66	-2	10	176	76	9,522	0.244	unlimited	0.0	76	17,614,551	0.1
24	213	79	-2	10	211	89	8,287	0.294	unlimited	0.0	89	10,370,999	0.1
28	249	93	-2	10	247	102	12,491	0.343	unlimited	0.0	102	6,572,399	0.2
32	285	106	-2	10	283	115	18,584	0.393	unlimited	0.0	115	4,403,292	0.4
36	320	119	-2	10	318	129	6,141	0.442	unlimited	0.0	129	3,081,256	0.2
40	356	132	-2	10	354	142	664	0.491	1,188,267	0.1	142	2,232,895	0.0
44	391	145	-2	10	389	155	46	0.541	162,377	0.0	155	1,665,278	0.0
48	427	159	-2	10	425	168	6	0.590	40,662	0.0	168	1,272,147	0.0
52	463	172	-2	10	461	181	1	0.640	10,290	0.0	181	991,837	0.0
56	498	185	-2	10	496	195	0	0.689	2,604	0.0	195	786,954	0.0
60	534	198	-2	10	532	208	0	0.738	659	0.0	208	633,963	0.0
64	569	211	-2	10	567	221	0	0.788	167	0.0	221	517,570	0.0

Total Concrete Fatigue, % = 0.1

Total Asphalt Fatigue, % = 1.5

Group 1, C

Axle Load, kips	Critical Concrete Stresses and Asphalt Strains						Expected Repetitions	Concrete Fatigue Analysis			Asphalt Fatigue Analysis		
	Load Induced		Temperature Induced		Total			Concrete Stress Ratio	Allowable Repetitions, N	Fatigue Percent, %	Asphalt microstrain	Allowable Repetitions, N	Fatigue Percent, %
	Stress, psi	Microstrain	Stress, psi	Microstrain	Stress, psi	Microstrain							
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Single Axles le = 14.674 L/le = 3.271													
2	31	14	-52	40	-21	54	159	-0.028	unlimited	0.0	54	53,298,150	0.0
4	62	28	-52	40	10	68	173	0.015	unlimited	0.0	68	24,745,940	0.0
6	93	43	-52	40	41	82	377	0.058	unlimited	0.0	82	13,289,069	0.0
8	124	57	-52	40	72	97	3,682	0.101	unlimited	0.0	97	7,879,346	0.0
10	155	71	-52	40	103	111	14,947	0.144	unlimited	0.0	111	5,019,442	0.3
12	186	85	-52	40	134	125	7,452	0.187	unlimited	0.0	125	3,376,408	0.2
14	217	99	-52	40	165	139	740	0.230	unlimited	0.0	139	2,370,246	0.0
16	248	114	-52	40	196	153	1,271	0.273	unlimited	0.0	153	1,722,124	0.1
18	279	128	-52	40	227	168	802	0.316	unlimited	0.0	168	1,287,126	0.1
20	310	142	-52	40	258	182	156	0.359	unlimited	0.0	182	985,061	0.0
22	341	156	-52	40	289	196	19	0.402	unlimited	0.0	196	769,205	0.0
24	372	170	-52	40	320	210	4	0.445	unlimited	0.0	210	611,133	0.0
26	403	185	-52	40	351	224	1	0.488	1,450,226	0.0	224	492,903	0.0
28	434	199	-52	40	382	239	0	0.531	221,833	0.0	239	402,824	0.0
Tandem Axles													
4	36	13	-52	40	-16	53	45	-0.022	unlimited	0.0	53	84,032,453	0.0
8	71	26	-52	40	20	66	2,665	0.027	unlimited	0.0	66	27,224,685	0.0
12	107	40	-52	40	55	79	6,169	0.077	unlimited	0.0	79	14,967,794	0.0
16	142	53	-52	40	91	93	6,192	0.126	unlimited	0.0	93	9,024,101	0.1
20	178	66	-52	40	126	106	5,713	0.176	unlimited	0.0	106	5,820,850	0.1
24	213	79	-52	40	162	119	4,972	0.225	unlimited	0.0	119	3,953,548	0.1
28	249	93	-52	40	198	132	7,495	0.274	unlimited	0.0	132	2,796,913	0.3
32	285	106	-52	40	233	146	11,150	0.324	unlimited	0.0	146	2,044,977	0.5
36	320	119	-52	40	269	159	3,685	0.373	unlimited	0.0	159	1,536,469	0.2
40	356	132	-52	40	304	172	398	0.423	unlimited	0.0	172	1,181,113	0.0
44	391	145	-52	40	340	185	28	0.472	4,372,600	0.0	185	925,805	0.0
48	427	159	-52	40	375	198	3	0.521	309,129	0.0	198	737,974	0.0
52	463	172	-52	40	411	212	0	0.571	69,688	0.0	212	596,917	0.0
56	498	185	-52	40	447	225	0	0.620	17,635	0.0	225	489,068	0.0
60	534	198	-52	40	482	238	0	0.670	4,462	0.0	238	405,293	0.0
64	569	211	-52	40	518	251	0	0.719	1,129	0.0	251	339,295	0.0

Total Concrete Fatigue, % = 0.0

Total Asphalt Fatigue, % = 2.2

Group 1, D

Axle Load, kips	Critical Concrete Stresses and Asphalt Strains						Expected Repetitions	Concrete Fatigue Analysis			Asphalt Fatigue Analysis		
	Load Induced		Temperature Induced		Total			Concrete Stress Ratio	Allowable Repetitions, N	Fatigue Percent, %	Asphalt microstrain	Allowable Repetitions, N	Fatigue Percent, %
	Stress, psi	Microstrain	Stress, psi	Microstrain	Stress, psi	Microstrain							
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Single Axles													
le = 14.674 L/le = 3.271													
2	31	14	-101	70	-70	84	265	-0.097	unlimited	0.0	84	12,335,252	0.0
4	62	28	-101	70	-39	99	288	-0.054	unlimited	0.0	99	7,393,492	0.0
6	93	43	-101	70	-8	113	628	-0.011	unlimited	0.0	113	4,748,160	0.0
8	124	57	-101	70	23	127	6,137	0.032	unlimited	0.0	127	3,213,987	0.2
10	155	71	-101	70	54	141	24,912	0.075	unlimited	0.0	141	2,267,520	1.1
12	186	85	-101	70	85	155	12,420	0.118	unlimited	0.0	155	1,654,214	0.8
14	217	99	-101	70	116	169	1,234	0.161	unlimited	0.0	169	1,240,566	0.1
16	248	114	-101	70	147	184	2,118	0.204	unlimited	0.0	184	952,149	0.2
18	279	128	-101	70	178	198	1,336	0.247	unlimited	0.0	198	745,329	0.2
20	310	142	-101	70	209	212	261	0.290	unlimited	0.0	212	593,420	0.0
22	341	156	-101	70	240	226	31	0.333	unlimited	0.0	226	479,504	0.0
24	372	170	-101	70	271	240	6	0.376	unlimited	0.0	240	392,515	0.0
26	403	185	-101	70	302	255	1	0.419	unlimited	0.0	255	325,018	0.0
28	434	199	-101	70	333	269	0	0.462	11,167,868	0.0	269	271,898	0.0
Tandem Axles													
4	36	13	-101	70	-65	83	74	-0.091	unlimited	0.0	83	19,031,839	0.0
8	71	26	-101	70	-30	97	4,442	-0.041	unlimited	0.0	97	7,896,574	0.1
12	107	40	-101	70	6	110	10,282	0.008	unlimited	0.0	110	5,177,574	0.2
16	142	53	-101	70	41	123	10,321	0.057	unlimited	0.0	123	3,561,889	0.3
20	178	66	-101	70	77	136	9,522	0.107	unlimited	0.0	136	2,545,847	0.4
24	213	79	-101	70	112	149	8,287	0.156	unlimited	0.0	149	1,877,165	0.4
28	249	93	-101	70	148	163	12,491	0.206	unlimited	0.0	163	1,420,352	0.9
32	285	106	-101	70	184	176	18,584	0.255	unlimited	0.0	176	1,098,392	1.7
36	320	119	-101	70	219	189	6,141	0.304	unlimited	0.0	189	865,391	0.7
40	356	132	-101	70	255	202	664	0.354	unlimited	0.0	202	692,895	0.1
44	391	145	-101	70	290	216	46	0.403	unlimited	0.0	216	562,645	0.0
48	427	159	-101	70	326	229	6	0.453	39,443,093	0.0	229	462,579	0.0
52	463	172	-101	70	361	242	1	0.502	689,770	0.0	242	384,519	0.0
56	498	185	-101	70	397	255	0	0.551	119,433	0.0	255	322,789	0.0
60	534	198	-101	70	433	268	0	0.601	30,223	0.0	268	273,375	0.0
64	569	211	-101	70	468	282	0	0.650	7,648	0.0	282	233,383	0.0

Total Concrete Fatigue, % = 0.0

Total Asphalt Fatigue, % = 7.4

Group 1, E

Axle Load, kips	Critical Concrete Stresses and Asphalt Strains						Expected Repetitions	Concrete Fatigue Analysis			Asphalt Fatigue Analysis		
	Load Induced		Temperature Induced		Total			Concrete Stress Ratio	Allowable Repetitions, N	Fatigue Percent, %	Asphalt microstrain	Allowable Repetitions, N	Fatigue Percent, %
	Stress, psi	Microstrain	Stress, psi	Microstrain	Stress, psi	Microstrain							
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Single Axles le = 14.674 L/le = 3.271													
2	31	14	-151	100	-120	115	212	-0.166	unlimited	0.0	115	4,495,687	0.0
4	62	28	-151	100	-89	129	230	-0.123	unlimited	0.0	129	3,061,608	0.0
6	93	43	-151	100	-58	143	503	-0.080	unlimited	0.0	143	2,170,524	0.0
8	124	57	-151	100	-27	157	4,910	-0.037	unlimited	0.0	157	1,589,755	0.3
10	155	71	-151	100	4	171	19,930	0.006	unlimited	0.0	171	1,196,178	1.7
12	186	85	-151	100	35	186	9,936	0.049	unlimited	0.0	186	920,656	1.1
14	217	99	-151	100	66	200	987	0.092	unlimited	0.0	200	722,410	0.1
16	248	114	-151	100	97	214	1,694	0.135	unlimited	0.0	214	576,370	0.3
18	279	128	-151	100	128	228	1,069	0.178	unlimited	0.0	228	466,576	0.2
20	310	142	-151	100	159	242	208	0.221	unlimited	0.0	242	382,547	0.1
22	341	156	-151	100	190	257	25	0.264	unlimited	0.0	257	317,217	0.0
24	372	170	-151	100	221	271	5	0.307	unlimited	0.0	271	265,711	0.0
26	403	185	-151	100	252	285	1	0.350	unlimited	0.0	285	224,592	0.0
28	434	199	-151	100	283	299	0	0.393	unlimited	0.0	299	191,395	0.0
Tandem Axles													
4	36	13	-151	100	-115	114	59	-0.160	unlimited	0.0	114	6,866,194	0.0
8	71	26	-151	100	-79	127	3,554	-0.110	unlimited	0.0	127	3,219,336	0.1
12	107	40	-151	100	-44	140	8,226	-0.061	unlimited	0.0	140	2,323,383	0.4
16	142	53	-151	100	-8	153	8,257	-0.011	unlimited	0.0	153	1,726,869	0.5
20	178	66	-151	100	27	166	7,617	0.038	unlimited	0.0	166	1,315,420	0.6
24	213	79	-151	100	63	180	6,629	0.087	unlimited	0.0	180	1,023,067	0.6
28	249	93	-151	100	98	193	9,993	0.137	unlimited	0.0	193	810,018	1.2
32	285	106	-151	100	134	206	14,867	0.186	unlimited	0.0	206	651,340	2.3
36	320	119	-151	100	170	219	4,913	0.236	unlimited	0.0	219	530,894	0.9
40	356	132	-151	100	205	233	531	0.285	unlimited	0.0	233	437,931	0.1
44	391	145	-151	100	241	246	37	0.334	unlimited	0.0	246	365,112	0.0
48	427	159	-151	100	276	259	4	0.384	unlimited	0.0	259	307,315	0.0
52	463	172	-151	100	312	272	1	0.433	unlimited	0.0	272	260,896	0.0
56	498	185	-151	100	348	285	0	0.483	2,003,330	0.0	285	223,215	0.0
60	534	198	-151	100	383	299	0	0.532	213,492	0.0	299	192,330	0.0
64	569	211	-151	100	419	312	0	0.582	51,797	0.0	312	166,791	0.0

Total Concrete Fatigue, % = 0.0

Total Asphalt Fatigue, % = 10.6

Group 1, F

Axle Load, kips	Critical Concrete Stresses and Asphalt Strains						Expected Repetitions	Concrete Fatigue Analysis			Asphalt Fatigue Analysis		
	Load Induced		Temperature Induced		Total			Concrete Stress Ratio	Allowable Repetitions, N	Fatigue Percent, %	Asphalt microstrain	Allowable Repetitions, N	Fatigue Percent, %
	Stress, psi	Microstrain	Stress, psi	Microstrain	Stress, psi	Microstrain							
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Single Axles le = 14.674 L/le = 3.271													
2	31	14	-185	122	-154	136	424	-0.214	unlimited	0.0	136	2,572,401	0.0
4	62	28	-185	122	-123	150	460	-0.171	unlimited	0.0	150	1,854,741	0.0
6	93	43	-185	122	-92	164	1,005	-0.128	unlimited	0.0	164	1,377,472	0.1
8	124	57	-185	122	-61	178	9,820	-0.085	unlimited	0.0	178	1,048,582	0.9
10	155	71	-185	122	-30	193	39,859	-0.042	unlimited	0.0	193	815,078	4.9
12	186	85	-185	122	1	207	19,871	0.001	unlimited	0.0	207	645,030	3.1
14	217	99	-185	122	32	221	1,974	0.044	unlimited	0.0	221	518,454	0.4
16	248	114	-185	122	63	235	3,389	0.087	unlimited	0.0	235	422,425	0.8
18	279	128	-185	122	94	249	2,138	0.130	unlimited	0.0	249	348,341	0.6
20	310	142	-185	122	125	264	417	0.173	unlimited	0.0	264	290,334	0.1
22	341	156	-185	122	156	278	50	0.216	unlimited	0.0	278	244,310	0.0
24	372	170	-185	122	187	292	10	0.259	unlimited	0.0	292	207,358	0.0
26	403	185	-185	122	218	306	2	0.302	unlimited	0.0	306	177,372	0.0
28	434	199	-185	122	249	320	0	0.345	unlimited	0.0	320	152,800	0.0
Tandem Axles													
4	36	13	-185	122	-150	135	119	-0.208	unlimited	0.0	135	3,911,513	0.0
8	71	26	-185	122	-114	148	7,107	-0.158	unlimited	0.0	148	1,936,409	0.4
12	107	40	-185	122	-78	161	16,451	-0.109	unlimited	0.0	161	1,461,468	1.1
16	142	53	-185	122	-43	174	16,513	-0.060	unlimited	0.0	174	1,127,757	1.5
20	178	66	-185	122	-7	188	15,235	-0.010	unlimited	0.0	188	886,884	1.7
24	213	79	-185	122	28	201	13,259	0.039	unlimited	0.0	201	708,962	1.9
28	249	93	-185	122	64	214	19,986	0.089	unlimited	0.0	214	574,880	3.5
32	285	106	-185	122	99	227	29,735	0.138	unlimited	0.0	227	472,050	6.3
36	320	119	-185	122	135	241	9,826	0.187	unlimited	0.0	241	391,955	2.5
40	356	132	-185	122	171	254	1,062	0.237	unlimited	0.0	254	328,705	0.3
44	391	145	-185	122	206	267	73	0.286	unlimited	0.0	267	278,136	0.0
48	427	159	-185	122	242	280	9	0.336	unlimited	0.0	280	237,255	0.0
52	463	172	-185	122	277	293	1	0.385	unlimited	0.0	293	203,871	0.0
56	498	185	-185	122	313	307	0	0.435	unlimited	0.0	307	176,359	0.0
60	534	198	-185	122	348	320	0	0.484	1,847,067	0.0	320	153,496	0.0
64	569	211	-185	122	384	333	0	0.533	204,878	0.0	333	134,351	0.0

Total Concrete Fatigue, % = 0.0

Total Asphalt Fatigue, % = 30.2

Group 2, A

Axle Load, kips	Critical Concrete Stresses and Asphalt Strains						Expected Repetitions	Concrete Fatigue Analysis			Asphalt Fatigue Analysis		
	Load Induced		Temperature Induced		Total			Concrete Stress Ratio	Allowable Repetitions, N	Fatigue Percent, %	Asphalt microstrain	Allowable Repetitions, N	Fatigue Percent, %
	Stress, psi	Microstrain	Stress, psi	Microstrain	Stress, psi	Microstrain							
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Single Axles le = 14.674 L/le = 3.271													
2	31	14	62	-30	93	-16	954	0.130	unlimited	0.0	-16	unlimited	0.0
4	62	28	62	-30	124	-1	1,035	0.173	unlimited	0.0	-1	unlimited	0.0
6	93	43	62	-30	155	13	2,261	0.216	unlimited	0.0	13	unlimited	0.0
8	124	57	62	-30	186	27	22,094	0.259	unlimited	0.0	27	523,195,081	0.0
10	155	71	62	-30	217	41	89,683	0.302	unlimited	0.0	41	130,288,975	0.1
12	186	85	62	-30	248	55	44,710	0.345	unlimited	0.0	55	49,181,984	0.1
14	217	99	62	-30	279	70	4,442	0.388	unlimited	0.0	70	23,216,070	0.0
16	248	114	62	-30	310	84	7,625	0.431	unlimited	0.0	84	12,604,147	0.1
18	279	128	62	-30	341	98	4,810	0.474	3,733,132	0.1	98	7,531,159	0.1
20	310	142	62	-30	372	112	938	0.517	365,141	0.3	112	4,825,320	0.0
22	341	156	62	-30	403	126	113	0.560	94,100	0.1	126	3,260,320	0.0
24	372	170	62	-30	434	141	23	0.603	28,435	0.1	141	2,296,892	0.0
26	403	185	62	-30	465	155	4	0.646	8,592	0.0	155	1,673,669	0.0
28	434	199	62	-30	496	169	0	0.689	2,596	0.0	169	1,253,925	0.0
Tandem Axles													
4	36	13	62	-30	98	-17	268	0.136	unlimited	0.0	-17	unlimited	0.0
8	71	26	62	-30	134	-3	15,992	0.186	unlimited	0.0	-3	unlimited	0.0
12	107	40	62	-30	169	10	37,015	0.235	unlimited	0.0	10	unlimited	0.0
16	142	53	62	-30	205	23	37,155	0.284	unlimited	0.0	23	874,632,686	0.0
20	178	66	62	-30	240	36	34,279	0.334	unlimited	0.0	36	197,268,577	0.0
24	213	79	62	-30	276	50	29,832	0.383	unlimited	0.0	50	71,031,759	0.0
28	249	93	62	-30	311	63	44,968	0.433	unlimited	0.0	63	32,616,302	0.1
32	285	106	62	-30	347	76	66,903	0.482	2,097,749	3.2	76	17,389,246	0.4
36	320	119	62	-30	383	89	22,108	0.531	218,488	10.1	89	10,257,932	0.2
40	356	132	62	-30	418	102	2,390	0.581	52,819	4.5	102	6,509,964	0.0
44	391	145	62	-30	454	116	165	0.630	13,366	1.2	116	4,366,231	0.0
48	427	159	62	-30	489	129	20	0.680	3,382	0.6	129	3,057,976	0.0
52	463	172	62	-30	525	142	2	0.729	856	0.3	142	2,217,591	0.0
56	498	185	62	-30	561	155	0	0.778	217	0.0	155	1,654,833	0.0
60	534	198	62	-30	596	168	1	0.828	55	1.5	168	1,264,793	0.0
64	569	211	62	-30	632	182	0	0.877	14	0.0	182	986,520	0.0

Total Concrete Fatigue, % = 22.1

Total Asphalt Fatigue, % = 1.2

Group 2, B

Axle Load, kips	Critical Concrete Stresses and Asphalt Strains						Expected Repetitions	Concrete Fatigue Analysis			Asphalt Fatigue Analysis		
	Load Induced		Temperature Induced		Total			Concrete Stress Ratio	Allowable Repetitions, N	Fatigue Percent, %	Asphalt microstrain	Allowable Repetitions, N	Fatigue Percent, %
	Stress, psi	Microstrain	Stress, psi	Microstrain	Stress, psi	Microstrain							
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Single Axles le = 14.674 L/le = 3.271													
2	31	14	53	-24	83	-10	318	0.116	unlimited	0.0	-10	unlimited	0.0
4	62	28	53	-24	114	5	345	0.159	unlimited	0.0	5	unlimited	0.0
6	93	43	53	-24	145	19	754	0.202	unlimited	0.0	19	unlimited	0.0
8	124	57	53	-24	176	33	7,365	0.245	unlimited	0.0	33	268,833,053	0.0
10	155	71	53	-24	207	47	29,894	0.288	unlimited	0.0	47	82,970,418	0.0
12	186	85	53	-24	238	61	14,903	0.331	unlimited	0.0	61	34,958,122	0.0
14	217	99	53	-24	269	76	1,481	0.374	unlimited	0.0	76	17,642,235	0.0
16	248	114	53	-24	300	90	2,542	0.417	unlimited	0.0	90	10,018,313	0.0
18	279	128	53	-24	331	104	1,603	0.460	13,915,623	0.0	104	6,182,547	0.0
20	310	142	53	-24	362	118	313	0.503	652,424	0.0	118	4,058,794	0.0
22	341	156	53	-24	393	132	38	0.546	138,175	0.0	132	2,794,966	0.0
24	372	170	53	-24	424	147	8	0.589	41,687	0.0	147	1,999,270	0.0
26	403	185	53	-24	455	161	1	0.632	12,597	0.0	161	1,475,109	0.0
28	434	199	53	-24	486	175	0	0.675	3,807	0.0	175	1,116,745	0.0
Tandem Axles													
4	36	13	53	-24	88	-11	89	0.122	unlimited	0.0	-11	unlimited	0.0
8	71	26	53	-24	124	3	5,331	0.172	unlimited	0.0	3	unlimited	0.0
12	107	40	53	-24	159	16	12,338	0.221	unlimited	0.0	16	unlimited	0.0
16	142	53	53	-24	195	29	12,385	0.271	unlimited	0.0	29	406,500,961	0.0
20	178	66	53	-24	230	42	11,426	0.320	unlimited	0.0	42	118,760,997	0.0
24	213	79	53	-24	266	56	9,944	0.369	unlimited	0.0	56	48,600,793	0.0
28	249	93	53	-24	302	69	14,989	0.419	unlimited	0.0	69	24,087,976	0.1
32	285	106	53	-24	337	82	22,301	0.468	6,077,802	0.4	82	13,511,326	0.2
36	320	119	53	-24	373	95	7,369	0.518	356,403	2.1	95	8,264,151	0.1
40	356	132	53	-24	408	108	797	0.567	77,435	1.0	108	5,388,802	0.0
44	391	145	53	-24	444	122	55	0.616	19,595	0.3	122	3,691,219	0.0
48	427	159	53	-24	479	135	7	0.666	4,959	0.1	135	2,629,125	0.0
52	463	172	53	-24	515	148	1	0.715	1,255	0.1	148	1,933,033	0.0
56	498	185	53	-24	551	161	0	0.765	318	0.0	161	1,459,129	0.0
60	534	198	53	-24	586	175	0	0.814	80	0.3	175	1,126,088	0.0
64	569	211	53	-24	622	188	0	0.864	20	0.0	188	885,664	0.0

Total Concrete Fatigue, % = 4.4

Total Asphalt Fatigue, % = 0.5

Group 2, C

Axle Load, kips	Critical Concrete Stresses and Asphalt Strains						Expected Repetitions	Concrete Fatigue Analysis			Asphalt Fatigue Analysis		
	Load Induced		Temperature Induced		Total			Concrete Stress Ratio	Allowable Repetitions, N	Fatigue Percent, %	Asphalt microstrain	Allowable Repetitions, N	Fatigue Percent, %
	Stress, psi	Microstrain	Stress, psi	Microstrain	Stress, psi	Microstrain							
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Single Axles le = 14.674 L/le = 3.271													
2	31	14	23	-6	54	9	265	0.075	unlimited	0.0	9	unlimited	0.0
4	62	28	23	-6	85	23	288	0.118	unlimited	0.0	23	908,434,533	0.0
6	93	43	23	-6	116	37	628	0.161	unlimited	0.0	37	185,072,104	0.0
8	124	57	23	-6	147	51	6,137	0.204	unlimited	0.0	51	63,620,072	0.0
10	155	71	23	-6	178	65	24,912	0.247	unlimited	0.0	65	28,447,860	0.1
12	186	85	23	-6	209	80	12,420	0.290	unlimited	0.0	80	14,908,373	0.1
14	217	99	23	-6	240	94	1,234	0.333	unlimited	0.0	94	8,689,209	0.0
16	248	114	23	-6	271	108	2,118	0.376	unlimited	0.0	108	5,465,529	0.0
18	279	128	23	-6	302	122	1,336	0.419	unlimited	0.0	122	3,640,700	0.0
20	310	142	23	-6	333	136	261	0.462	11,379,553	0.0	136	2,536,014	0.0
22	341	156	23	-6	364	151	31	0.505	602,046	0.0	151	1,830,968	0.0
24	372	170	23	-6	395	165	6	0.548	131,408	0.0	165	1,361,331	0.0
26	403	185	23	-6	426	179	1	0.591	39,694	0.0	179	1,037,266	0.0
28	434	199	23	-6	457	193	0	0.634	11,995	0.0	193	806,925	0.0
Tandem Axles													
4	36	13	23	-6	58	8	74	0.081	unlimited	0.0	8	unlimited	0.0
8	71	26	23	-6	94	21	4,442	0.130	unlimited	0.0	21	1,218,992,627	0.0
12	107	40	23	-6	130	34	10,282	0.180	unlimited	0.0	34	242,686,405	0.0
16	142	53	23	-6	165	47	10,321	0.229	unlimited	0.0	47	82,577,730	0.0
20	178	66	23	-6	201	61	9,522	0.279	unlimited	0.0	61	36,712,501	0.0
24	213	79	23	-6	236	74	8,287	0.328	unlimited	0.0	74	19,168,391	0.0
28	249	93	23	-6	272	87	12,491	0.378	unlimited	0.0	87	11,143,323	0.1
32	285	106	23	-6	307	100	18,584	0.427	unlimited	0.0	100	6,995,859	0.3
36	320	119	23	-6	343	113	6,141	0.476	3,108,736	0.2	113	4,653,291	0.1
40	356	132	23	-6	379	127	664	0.526	264,461	0.3	127	3,237,618	0.0
44	391	145	23	-6	414	140	46	0.575	61,745	0.1	140	2,335,328	0.0
48	427	159	23	-6	450	153	6	0.625	15,625	0.0	153	1,734,979	0.0
52	463	172	23	-6	485	166	1	0.674	3,954	0.0	166	1,321,105	0.0
56	498	185	23	-6	521	179	0	0.723	1,001	0.0	179	1,027,163	0.0
60	534	198	23	-6	556	193	0	0.773	253	0.1	193	813,038	0.0
64	569	211	23	-6	592	206	0	0.822	64	0.0	206	653,613	0.0

Total Concrete Fatigue, % = 0.7

Total Asphalt Fatigue, % = 0.9

Group 2, D

Axle Load, kips	Critical Concrete Stresses and Asphalt Strains						Expected Repetitions	Concrete Fatigue Analysis			Asphalt Fatigue Analysis		
	Load Induced		Temperature Induced		Total			Concrete Stress Ratio	Allowable Repetitions, N	Fatigue Percent, %	Asphalt microstrain	Allowable Repetitions, N	Fatigue Percent, %
	Stress, psi	Microstrain	Stress, psi	Microstrain	Stress, psi	Microstrain							
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Single Axles le = 14.674 L/le = 3.271													
2	31	14	-17	19	14	33	212	0.020	unlimited	0.0	33	274,157,561	0.0
4	62	28	-17	19	45	47	230	0.063	unlimited	0.0	47	84,115,561	0.0
6	93	43	-17	19	76	61	503	0.106	unlimited	0.0	61	35,328,367	0.0
8	124	57	-17	19	107	75	4,910	0.149	unlimited	0.0	75	17,793,821	0.0
10	155	71	-17	19	138	90	19,930	0.192	unlimited	0.0	90	10,090,727	0.2
12	186	85	-17	19	169	104	9,936	0.235	unlimited	0.0	104	6,221,113	0.2
14	217	99	-17	19	200	118	987	0.278	unlimited	0.0	118	4,081,061	0.0
16	248	114	-17	19	231	132	1,694	0.321	unlimited	0.0	132	2,808,651	0.1
18	279	128	-17	19	262	146	1,069	0.364	unlimited	0.0	146	2,008,108	0.1
20	310	142	-17	19	293	161	208	0.407	unlimited	0.0	161	1,481,053	0.0
22	341	156	-17	19	324	175	25	0.450	unlimited	0.0	175	1,120,879	0.0
24	372	170	-17	19	355	189	5	0.493	1,086,776	0.0	189	866,963	0.0
26	403	185	-17	19	386	203	1	0.536	187,989	0.0	203	683,165	0.0
28	434	199	-17	19	417	217	0	0.579	55,410	0.0	217	547,067	0.0
Tandem Axles													
4	36	13	-17	19	19	32	59	0.026	unlimited	0.0	32	449,557,290	0.0
8	71	26	-17	19	54	45	3,554	0.075	unlimited	0.0	45	96,696,776	0.0
12	107	40	-17	19	90	58	8,226	0.125	unlimited	0.0	58	41,505,906	0.0
16	142	53	-17	19	125	72	8,257	0.174	unlimited	0.0	72	21,192,464	0.0
20	178	66	-17	19	161	85	7,617	0.224	unlimited	0.0	85	12,131,034	0.1
24	213	79	-17	19	197	98	6,629	0.273	unlimited	0.0	98	7,530,136	0.1
28	249	93	-17	19	232	111	9,993	0.323	unlimited	0.0	111	4,965,459	0.2
32	285	106	-17	19	268	124	14,867	0.372	unlimited	0.0	124	3,431,269	0.4
36	320	119	-17	19	303	138	4,913	0.421	unlimited	0.0	138	2,461,348	0.2
40	356	132	-17	19	339	151	531	0.471	4,862,124	0.0	151	1,820,262	0.0
44	391	145	-17	19	375	164	37	0.520	323,923	0.0	164	1,380,731	0.0
48	427	159	-17	19	410	177	4	0.570	72,180	0.0	177	1,070,016	0.0
52	463	172	-17	19	446	190	1	0.619	18,265	0.0	190	844,573	0.0
56	498	185	-17	19	481	204	0	0.668	4,622	0.0	204	677,299	0.0
60	534	198	-17	19	517	217	0	0.718	1,170	0.0	217	550,747	0.0
64	569	211	-17	19	552	230	0	0.767	296	0.0	230	453,355	0.0

Total Concrete Fatigue, % = 0.0

Total Asphalt Fatigue, % = 1.6

Group 2, E

Axle Load, kips	Critical Concrete Stresses and Asphalt Strains						Expected Repetitions	Concrete Fatigue Analysis			Asphalt Fatigue Analysis		
	Load Induced		Temperature Induced		Total			Concrete Stress Ratio	Allowable Repetitions, N	Fatigue Percent, %	Asphalt microstrain	Allowable Repetitions, N	Fatigue Percent, %
	Stress, psi	Microstrain	Stress, psi	Microstrain	Stress, psi	Microstrain							
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Single Axles le = 14.674 L/le = 3.271													
2	31	14	-56	43	-25	57	159	-0.035	unlimited	0.0	57	44,548,248	0.0
4	62	28	-56	43	6	71	173	0.008	unlimited	0.0	71	21,452,428	0.0
6	93	43	-56	43	37	85	377	0.051	unlimited	0.0	85	11,802,052	0.0
8	124	57	-56	43	67	100	3,682	0.094	unlimited	0.0	100	7,118,824	0.1
10	155	71	-56	43	98	114	14,947	0.137	unlimited	0.0	114	4,593,505	0.3
12	186	85	-56	43	129	128	7,452	0.180	unlimited	0.0	128	3,120,789	0.2
14	217	99	-56	43	160	142	740	0.223	unlimited	0.0	142	2,208,269	0.0
16	248	114	-56	43	191	156	1,271	0.266	unlimited	0.0	156	1,614,878	0.1
18	279	128	-56	43	222	171	802	0.309	unlimited	0.0	171	1,213,501	0.1
20	310	142	-56	43	253	185	156	0.352	unlimited	0.0	185	932,960	0.0
22	341	156	-56	43	284	199	19	0.395	unlimited	0.0	199	731,373	0.0
24	372	170	-56	43	315	213	4	0.438	unlimited	0.0	213	583,044	0.0
26	403	185	-56	43	346	227	1	0.481	2,235,976	0.0	227	471,640	0.0
28	434	199	-56	43	377	242	0	0.524	281,063	0.0	242	386,454	0.0
Tandem Axles													
4	36	13	-56	43	-21	56	45	-0.029	unlimited	0.0	56	70,012,008	0.0
8	71	26	-56	43	15	69	2,665	0.020	unlimited	0.0	69	23,504,412	0.0
12	107	40	-56	43	50	83	6,169	0.070	unlimited	0.0	83	13,236,045	0.0
16	142	53	-56	43	86	96	6,192	0.119	unlimited	0.0	96	8,118,877	0.1
20	178	66	-56	43	121	109	5,713	0.169	unlimited	0.0	109	5,305,501	0.1
24	213	79	-56	43	157	122	4,972	0.218	unlimited	0.0	122	3,640,303	0.1
28	249	93	-56	43	193	135	7,495	0.267	unlimited	0.0	135	2,596,384	0.3
32	285	106	-56	43	228	149	11,150	0.317	unlimited	0.0	149	1,911,093	0.6
36	320	119	-56	43	264	162	3,685	0.366	unlimited	0.0	162	1,443,915	0.3
40	356	132	-56	43	299	175	398	0.416	unlimited	0.0	175	1,115,231	0.0
44	391	145	-56	43	335	188	28	0.465	8,164,546	0.0	188	877,722	0.0
48	427	159	-56	43	370	201	3	0.515	402,119	0.0	201	702,117	0.0
52	463	172	-56	43	406	215	0	0.564	84,379	0.0	215	569,671	0.0
56	498	185	-56	43	442	228	0	0.613	21,352	0.0	228	468,019	0.0
60	534	198	-56	43	477	241	0	0.663	5,403	0.0	241	388,792	0.0
64	569	211	-56	43	513	254	0	0.712	1,367	0.0	254	326,189	0.0

Total Concrete Fatigue, % = 0.0

Total Asphalt Fatigue, % = 2.4

Group 2, F

Axle Load, kips	Critical Concrete Stresses and Asphalt Strains						Expected Repetitions	Concrete Fatigue Analysis			Asphalt Fatigue Analysis		
	Load Induced		Temperature Induced		Total			Concrete Stress Ratio	Allowable Repetitions, N	Fatigue Percent, %	Asphalt microstrain	Allowable Repetitions, N	Fatigue Percent, %
	Stress, psi	Microstrain	Stress, psi	Microstrain	Stress, psi	Microstrain							
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Single Axles le = 14.674 L/le = 3.271													
2	31	14	-96	67	-65	81	159	-0.090	unlimited	0.0	81	13,912,168	0.0
4	62	28	-96	67	-34	95	173	-0.047	unlimited	0.0	95	8,193,128	0.0
6	93	43	-96	67	-3	110	377	-0.004	unlimited	0.0	110	5,193,157	0.0
8	124	57	-96	67	28	124	3,682	0.039	unlimited	0.0	124	3,479,731	0.1
10	155	71	-96	67	59	138	14,947	0.082	unlimited	0.0	138	2,435,252	0.6
12	186	85	-96	67	90	152	7,452	0.125	unlimited	0.0	152	1,764,914	0.4
14	217	99	-96	67	121	166	740	0.168	unlimited	0.0	166	1,316,359	0.1
16	248	114	-96	67	152	181	1,271	0.211	unlimited	0.0	181	1,005,663	0.1
18	279	128	-96	67	183	195	802	0.254	unlimited	0.0	195	784,113	0.1
20	310	142	-96	67	214	209	156	0.297	unlimited	0.0	209	622,168	0.0
22	341	156	-96	67	245	223	19	0.340	unlimited	0.0	223	501,234	0.0
24	372	170	-96	67	276	237	4	0.383	unlimited	0.0	237	409,224	0.0
26	403	185	-96	67	307	252	1	0.426	unlimited	0.0	252	338,063	0.0
28	434	199	-96	67	338	266	0	0.469	5,651,455	0.0	266	282,220	0.0
Tandem Axles													
4	36	13	-96	67	-60	80	45	-0.084	unlimited	0.0	80	21,495,656	0.0
8	71	26	-96	67	-25	94	2,665	-0.035	unlimited	0.0	94	8,769,094	0.0
12	107	40	-96	67	11	107	6,169	0.015	unlimited	0.0	107	5,676,551	0.1
16	142	53	-96	67	46	120	6,192	0.064	unlimited	0.0	120	3,866,255	0.2
20	178	66	-96	67	82	133	5,713	0.114	unlimited	0.0	133	2,741,243	0.2
24	213	79	-96	67	117	146	4,972	0.163	unlimited	0.0	146	2,007,926	0.2
28	249	93	-96	67	153	160	7,495	0.212	unlimited	0.0	160	1,510,922	0.5
32	285	106	-96	67	189	173	11,150	0.262	unlimited	0.0	173	1,162,969	1.0
36	320	119	-96	67	224	186	3,685	0.311	unlimited	0.0	186	912,588	0.4
40	356	132	-96	67	260	199	398	0.361	unlimited	0.0	199	728,134	0.1
44	391	145	-96	67	295	212	28	0.410	unlimited	0.0	212	589,451	0.0
48	427	159	-96	67	331	226	3	0.460	15,121,588	0.0	226	483,308	0.0
52	463	172	-96	67	366	239	0	0.509	506,901	0.0	239	400,782	0.0
56	498	185	-96	67	402	252	0	0.558	98,639	0.0	252	335,716	0.0
60	534	198	-96	67	438	265	0	0.608	24,961	0.0	265	283,771	0.0
64	569	211	-96	67	473	279	0	0.657	6,316	0.0	279	241,832	0.0

Total Concrete Fatigue, % = 0.0

Total Asphalt Fatigue, % = 4.1

Group 2, G

Axle Load, kips	Critical Concrete Stresses and Asphalt Strains						Expected Repetitions	Concrete Fatigue Analysis			Asphalt Fatigue Analysis		
	Load Induced		Temperature Induced		Total			Concrete Stress Ratio	Allowable Repetitions, N	Fatigue Percent, %	Asphalt microstrain	Allowable Repetitions, N	Fatigue Percent, %
	Stress, psi	Microstrain	Stress, psi	Microstrain	Stress, psi	Microstrain							
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Single Axles le = 14.674 L/le = 3.271													
2	31	14	-136	91	-105	106	159	-0.145	unlimited	0.0	106	5,899,067	0.0
4	62	28	-136	91	-74	120	173	-0.102	unlimited	0.0	120	3,894,441	0.0
6	93	43	-136	91	-43	134	377	-0.059	unlimited	0.0	134	2,693,633	0.0
8	124	57	-136	91	-12	148	3,682	-0.016	unlimited	0.0	148	1,933,652	0.2
10	155	71	-136	91	19	162	14,947	0.027	unlimited	0.0	162	1,430,884	1.0
12	186	85	-136	91	50	176	7,452	0.070	unlimited	0.0	176	1,085,931	0.7
14	217	99	-136	91	81	191	740	0.113	unlimited	0.0	191	841,924	0.1
16	248	114	-136	91	112	205	1,271	0.156	unlimited	0.0	205	664,788	0.2
18	279	128	-136	91	143	219	802	0.199	unlimited	0.0	219	533,296	0.2
20	310	142	-136	91	174	233	156	0.242	unlimited	0.0	233	433,775	0.0
22	341	156	-136	91	205	247	19	0.285	unlimited	0.0	247	357,159	0.0
24	372	170	-136	91	236	262	4	0.328	unlimited	0.0	262	297,281	0.0
26	403	185	-136	91	267	276	1	0.371	unlimited	0.0	276	249,853	0.0
28	434	199	-136	91	298	290	0	0.414	unlimited	0.0	290	211,831	0.0
Tandem Axles													
4	36	13	-136	91	-100	105	45	-0.139	unlimited	0.0	105	9,031,502	0.0
8	71	26	-136	91	-65	118	2,665	-0.090	unlimited	0.0	118	4,110,843	0.1
12	107	40	-136	91	-29	131	6,169	-0.040	unlimited	0.0	131	2,896,822	0.2
16	142	53	-136	91	7	144	6,192	0.009	unlimited	0.0	144	2,111,256	0.3
20	178	66	-136	91	42	157	5,713	0.059	unlimited	0.0	157	1,582,042	0.4
24	213	79	-136	91	78	171	4,972	0.108	unlimited	0.0	171	1,213,407	0.4
28	249	93	-136	91	113	184	7,495	0.157	unlimited	0.0	184	949,282	0.8
32	285	106	-136	91	149	197	11,150	0.207	unlimited	0.0	197	755,422	1.5
36	320	119	-136	91	185	210	3,685	0.256	unlimited	0.0	210	610,137	0.6
40	356	132	-136	91	220	223	398	0.306	unlimited	0.0	223	499,254	0.1
44	391	145	-136	91	256	237	28	0.355	unlimited	0.0	237	413,259	0.0
48	427	159	-136	91	291	250	3	0.405	unlimited	0.0	250	345,609	0.0
52	463	172	-136	91	327	263	0	0.454	32,341,227	0.0	263	291,709	0.0
56	498	185	-136	91	362	276	0	0.503	650,377	0.0	276	248,270	0.0
60	534	198	-136	91	398	290	0	0.553	115,309	0.0	290	212,898	0.0
64	569	211	-136	91	434	303	0	0.602	29,179	0.0	303	183,822	0.0

Total Concrete Fatigue, % = 0.0

Total Asphalt Fatigue, % = 6.7

Group 2, H

Axle Load, kips	Critical Concrete Stresses and Asphalt Strains						Expected Repetitions	Concrete Fatigue Analysis			Asphalt Fatigue Analysis		
	Load Induced		Temperature Induced		Total			Concrete Stress Ratio	Allowable Repetitions, N	Fatigue Percent, %	Asphalt microstrain	Allowable Repetitions, N	Fatigue Percent, %
	Stress, psi	Microstrain	Stress, psi	Microstrain	Stress, psi	Microstrain							
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Single Axles le = 14.674 L/le = 3.271													
2	31	14	-165	109	-134	124	318	-0.187	unlimited	0.0	124	3,497,945	0.0
4	62	28	-165	109	-103	138	345	-0.144	unlimited	0.0	138	2,446,685	0.0
6	93	43	-165	109	-72	152	754	-0.101	unlimited	0.0	152	1,772,425	0.0
8	124	57	-165	109	-41	166	7,365	-0.058	unlimited	0.0	166	1,321,482	0.6
10	155	71	-165	109	-10	180	29,894	-0.015	unlimited	0.0	180	1,009,269	3.0
12	186	85	-165	109	20	195	14,903	0.028	unlimited	0.0	195	786,719	1.9
14	217	99	-165	109	51	209	1,481	0.072	unlimited	0.0	209	624,096	0.2
16	248	114	-165	109	82	223	2,542	0.115	unlimited	0.0	223	502,687	0.5
18	279	128	-165	109	113	237	1,603	0.158	unlimited	0.0	237	410,339	0.4
20	310	142	-165	109	144	251	313	0.201	unlimited	0.0	251	338,932	0.1
22	341	156	-165	109	175	266	38	0.244	unlimited	0.0	266	282,907	0.0
24	372	170	-165	109	206	280	8	0.287	unlimited	0.0	280	238,375	0.0
26	403	185	-165	109	237	294	1	0.330	unlimited	0.0	294	202,562	0.0
28	434	199	-165	109	268	308	0	0.373	unlimited	0.0	308	173,457	0.0
Tandem Axles													
4	36	13	-165	109	-130	123	89	-0.180	unlimited	0.0	123	5,331,287	0.0
8	71	26	-165	109	-94	136	5,331	-0.131	unlimited	0.0	136	2,564,173	0.2
12	107	40	-165	109	-59	149	12,338	-0.081	unlimited	0.0	149	1,889,477	0.7
16	142	53	-165	109	-23	162	12,385	-0.032	unlimited	0.0	162	1,428,908	0.9
20	178	66	-165	109	12	176	11,426	0.017	unlimited	0.0	176	1,104,509	1.0
24	213	79	-165	109	48	189	9,944	0.067	unlimited	0.0	189	869,873	1.1
28	249	93	-165	109	84	202	14,989	0.116	unlimited	0.0	202	696,248	2.2
32	285	106	-165	109	119	215	22,301	0.166	unlimited	0.0	215	565,200	3.9
36	320	119	-165	109	155	228	7,369	0.215	unlimited	0.0	228	464,559	1.6
40	356	132	-165	109	190	242	797	0.264	unlimited	0.0	242	386,074	0.2
44	391	145	-165	109	226	255	55	0.314	unlimited	0.0	255	324,027	0.0
48	427	159	-165	109	262	268	7	0.363	unlimited	0.0	268	274,372	0.0
52	463	172	-165	109	297	281	1	0.413	unlimited	0.0	281	234,194	0.0
56	498	185	-165	109	333	295	0	0.462	11,294,183	0.0	295	201,358	0.0
60	534	198	-165	109	368	308	0	0.511	455,803	0.0	308	174,279	0.0
64	569	211	-165	109	404	321	0	0.561	91,945	0.0	321	151,760	0.0

Total Concrete Fatigue, % = 0.0

Total Asphalt Fatigue, % = 18.5

D. 3.2 Analysis of UTW pavement with concrete thickness of 4 in., slab dimension of 4 ft by 4 ft and design life of 5 years

Analysis results: Total concrete fatigue = 3% Total asphalt fatigue = 84%

Calculations:

Group 1, A

Axle Load, kips	Critical Concrete Stresses and Asphalt Strains						Expected Repetitions	Concrete Fatigue Analysis			Asphalt Fatigue Analysis		
	Load Induced		Temperature Induced		Total			Concrete Stress Ratio	Allowable Repetitions, N	Fatigue Percent, %	Asphalt microstrain	Allowable Repetitions, N	Fatigue Percent, %
	Stress, psi	Microstrain	Stress, psi	Microstrain	Stress, psi	Microstrain							
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Single Axles le = 16.890 L/le = 2.842													
2	23	11	59	-30	83	-19	1,220	0.115	unlimited	0.0	-19	unlimited	0.0
4	47	23	59	-30	106	-8	1,323	0.147	unlimited	0.0	-8	unlimited	0.0
6	70	34	59	-30	130	4	2,890	0.180	unlimited	0.0	4	unlimited	0.0
8	94	45	59	-30	153	15	28,231	0.212	unlimited	0.0	15	unlimited	0.0
10	117	56	59	-30	176	26	114,595	0.245	unlimited	0.0	26	577,863,802	0.0
12	141	68	59	-30	200	37	57,130	0.278	unlimited	0.0	37	178,033,544	0.0
14	164	79	59	-30	223	49	5,676	0.310	unlimited	0.0	49	74,940,347	0.0
16	188	90	59	-30	247	60	9,743	0.343	unlimited	0.0	60	37,797,630	0.0
18	211	101	59	-30	270	71	6,147	0.375	unlimited	0.0	71	21,455,077	0.0
20	235	113	59	-30	294	83	1,199	0.408	unlimited	0.0	83	13,236,566	0.0
22	258	124	59	-30	317	94	144	0.441	unlimited	0.0	94	8,687,762	0.0
24	282	135	59	-30	341	105	30	0.473	3,975,129	0.0	105	5,981,517	0.0
26	305	146	59	-30	364	116	5	0.506	581,898	0.0	116	4,278,040	0.0
28	328	158	59	-30	388	128	0	0.538	174,920	0.0	128	3,156,071	0.0
Tandem Axles													
4	28	10	59	-30	87	-20	342	0.121	unlimited	0.0	-20	unlimited	0.0
8	56	21	59	-30	115	-10	20,434	0.160	unlimited	0.0	-10	unlimited	0.0
12	84	31	59	-30	143	1	47,297	0.198	unlimited	0.0	1	unlimited	0.0
16	111	41	59	-30	171	11	47,476	0.237	unlimited	0.0	11	unlimited	0.0
20	139	51	59	-30	198	21	43,801	0.276	unlimited	0.0	21	1,168,189,054	0.0
24	167	62	59	-30	226	31	38,119	0.314	unlimited	0.0	31	317,937,231	0.0
28	195	72	59	-30	254	42	57,458	0.353	unlimited	0.0	42	125,438,320	0.0
32	223	82	59	-30	282	52	85,487	0.392	unlimited	0.0	52	60,798,916	0.1
36	251	92	59	-30	310	62	28,249	0.430	unlimited	0.0	62	33,594,107	0.1
40	279	103	59	-30	338	72	3,053	0.469	5,654,921	0.1	72	20,326,578	0.0
44	306	113	59	-30	366	83	211	0.508	534,327	0.0	83	13,146,640	0.0
48	334	123	59	-30	393	93	26	0.546	137,715	0.0	93	8,947,980	0.0
52	362	133	59	-30	421	103	3	0.585	46,888	0.0	103	6,340,817	0.0
56	390	144	59	-30	449	113	0	0.624	15,988	0.0	113	4,642,492	0.0
60	418	154	59	-30	477	124	1	0.662	5,452	0.0	124	3,492,076	0.0
64	446	164	59	-30	505	134	0	0.701	1,859	0.0	134	2,687,030	0.0

Total Concrete Fatigue, % = 0.1

Total Asphalt Fatigue, % = 0.4

Group 1, B

Axle Load, kips	Critical Concrete Stresses and Asphalt Strains						Expected Repetitions	Concrete Fatigue Analysis			Asphalt Fatigue Analysis		
	Load Induced		Temperature Induced		Total			Concrete Stress Ratio	Allowable Repetitions, N	Fatigue Percent, %	Asphalt microstrain	Allowable Repetitions, N	Fatigue Percent, %
	Stress, psi	Microstrain	Stress, psi	Microstrain	Stress, psi	Microstrain							
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Single Axles le = 16.890 L/le = 2.842													
2	23	11	13	-2	36	9	265	0.051	unlimited	0.0	9	unlimited	0.0
4	47	23	13	-2	60	21	288	0.083	unlimited	0.0	21	1,264,664,676	0.0
6	70	34	13	-2	83	32	628	0.116	unlimited	0.0	32	301,682,970	0.0
8	94	45	13	-2	107	43	6,137	0.148	unlimited	0.0	43	111,541,829	0.0
10	117	56	13	-2	130	54	24,912	0.181	unlimited	0.0	54	52,013,075	0.0
12	141	68	13	-2	154	66	12,420	0.213	unlimited	0.0	66	28,011,668	0.0
14	164	79	13	-2	177	77	1,234	0.246	unlimited	0.0	77	16,642,095	0.0
16	188	90	13	-2	201	88	2,118	0.279	unlimited	0.0	88	10,617,524	0.0
18	211	101	13	-2	224	100	1,336	0.311	unlimited	0.0	100	7,150,318	0.0
20	235	113	13	-2	248	111	261	0.344	unlimited	0.0	111	5,024,168	0.0
22	258	124	13	-2	271	122	31	0.376	unlimited	0.0	122	3,653,099	0.0
24	282	135	13	-2	294	133	6	0.409	unlimited	0.0	133	2,732,052	0.0
26	305	146	13	-2	318	145	1	0.442	unlimited	0.0	145	2,091,991	0.0
28	328	158	13	-2	341	156	0	0.474	3,678,822	0.0	156	1,634,311	0.0
Tandem Axles													
4	28	10	13	-2	41	8	74	0.057	unlimited	0.0	8	unlimited	0.0
8	56	21	13	-2	69	19	4,442	0.095	unlimited	0.0	19	unlimited	0.0
12	84	31	13	-2	96	29	10,282	0.134	unlimited	0.0	29	418,730,774	0.0
16	111	41	13	-2	124	39	10,321	0.173	unlimited	0.0	39	154,039,627	0.0
20	139	51	13	-2	152	49	9,522	0.211	unlimited	0.0	49	71,618,570	0.0
24	167	62	13	-2	180	60	8,287	0.250	unlimited	0.0	60	38,495,560	0.0
28	195	72	13	-2	208	70	12,491	0.289	unlimited	0.0	70	22,839,409	0.1
32	223	82	13	-2	236	80	18,584	0.327	unlimited	0.0	80	14,556,514	0.1
36	251	92	13	-2	264	90	6,141	0.366	unlimited	0.0	90	9,795,285	0.1
40	279	103	13	-2	291	101	664	0.405	unlimited	0.0	101	6,878,333	0.0
44	306	113	13	-2	319	111	46	0.444	unlimited	0.0	111	4,998,712	0.0
48	334	123	13	-2	347	121	6	0.482	2,067,559	0.0	121	3,736,810	0.0
52	362	133	13	-2	375	131	1	0.521	315,309	0.0	131	2,860,329	0.0
56	390	144	13	-2	403	142	0	0.560	95,315	0.0	142	2,233,869	0.0
60	418	154	13	-2	431	152	0	0.598	32,500	0.0	152	1,775,028	0.0
64	446	164	13	-2	459	162	0	0.637	11,082	0.0	162	1,431,784	0.0

Total Concrete Fatigue, % = 0.0

Total Asphalt Fatigue, % = 0.5

Group 1, C

Axle Load, kips	Critical Concrete Stresses and Asphalt Strains						Expected Repetitions	Concrete Fatigue Analysis			Asphalt Fatigue Analysis		
	Load Induced		Temperature Induced		Total			Concrete Stress Ratio	Allowable Repetitions, N	Fatigue Percent, %	Asphalt microstrain	Allowable Repetitions, N	Fatigue Percent, %
	Stress, psi	Microstrain	Stress, psi	Microstrain	Stress, psi	Microstrain							
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Single Axles le = 16.890 L/le = 2.842													
2	23	11	-53	38	-30	50	159	-0.041	unlimited	0.0	50	70,030,361	0.0
4	47	23	-53	38	-6	61	173	-0.009	unlimited	0.0	61	35,769,818	0.0
6	70	34	-53	38	17	72	377	0.024	unlimited	0.0	72	20,480,586	0.0
8	94	45	-53	38	41	84	3,682	0.057	unlimited	0.0	84	12,715,317	0.0
10	117	56	-53	38	64	95	14,947	0.089	unlimited	0.0	95	8,385,802	0.2
12	141	68	-53	38	88	106	7,452	0.122	unlimited	0.0	106	5,795,460	0.1
14	164	79	-53	38	111	117	740	0.154	unlimited	0.0	117	4,157,621	0.0
16	188	90	-53	38	135	129	1,271	0.187	unlimited	0.0	129	3,074,946	0.0
18	211	101	-53	38	158	140	802	0.220	unlimited	0.0	140	2,332,597	0.0
20	235	113	-53	38	182	151	156	0.252	unlimited	0.0	151	1,807,771	0.0
22	258	124	-53	38	205	162	19	0.285	unlimited	0.0	162	1,426,955	0.0
24	282	135	-53	38	228	174	4	0.317	unlimited	0.0	174	1,144,381	0.0
26	305	146	-53	38	252	185	1	0.350	unlimited	0.0	185	930,587	0.0
28	328	158	-53	38	275	196	0	0.382	unlimited	0.0	196	766,050	0.0
Tandem Axles													
4	28	10	-53	38	-25	49	45	-0.035	unlimited	0.0	49	111,241,168	0.0
8	56	21	-53	38	3	59	2,665	0.004	unlimited	0.0	59	39,954,908	0.0
12	84	31	-53	38	30	69	6,169	0.042	unlimited	0.0	69	23,575,548	0.0
16	111	41	-53	38	58	80	6,192	0.081	unlimited	0.0	80	14,964,563	0.0
20	139	51	-53	38	86	90	5,713	0.120	unlimited	0.0	90	10,038,218	0.1
24	167	62	-53	38	114	100	4,972	0.158	unlimited	0.0	100	7,031,292	0.1
28	195	72	-53	38	142	110	7,495	0.197	unlimited	0.0	110	5,099,460	0.1
32	223	82	-53	38	170	121	11,150	0.236	unlimited	0.0	121	3,805,674	0.3
36	251	92	-53	38	198	131	3,685	0.274	unlimited	0.0	131	2,908,882	0.1
40	279	103	-53	38	225	141	398	0.313	unlimited	0.0	141	2,269,015	0.0
44	306	113	-53	38	253	151	28	0.352	unlimited	0.0	151	1,801,052	0.0
48	334	123	-53	38	281	162	3	0.390	unlimited	0.0	162	1,451,436	0.0
52	362	133	-53	38	309	172	0	0.429	unlimited	0.0	172	1,185,336	0.0
56	390	144	-53	38	337	182	0	0.468	6,280,748	0.0	182	979,460	0.0
60	418	154	-53	38	365	192	0	0.507	562,043	0.0	192	817,851	0.0
64	446	164	-53	38	393	203	0	0.545	142,379	0.0	203	689,338	0.0

Total Concrete Fatigue, % = 0.0

Total Asphalt Fatigue, % = 1.2

Group 1, D

Axle Load, kips	Critical Concrete Stresses and Asphalt Strains						Expected Repetitions	Concrete Fatigue Analysis			Asphalt Fatigue Analysis		
	Load Induced		Temperature Induced		Total			Concrete Stress Ratio	Allowable Repetitions, N	Fatigue Percent, %	Asphalt microstrain	Allowable Repetitions, N	Fatigue Percent, %
	Stress, psi	Microstrain	Stress, psi	Microstrain	Stress, psi	Microstrain							
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Single Axles le = 16.890 L/le = 2.842													
2	23	11	-119	79	-96	90	265	-0.133	unlimited	0.0	90	9,914,908	0.0
4	47	23	-119	79	-72	101	288	-0.100	unlimited	0.0	101	6,728,630	0.0
6	70	34	-119	79	-49	113	628	-0.068	unlimited	0.0	113	4,756,947	0.0
8	94	45	-119	79	-25	124	6,137	-0.035	unlimited	0.0	124	3,476,166	0.2
10	117	56	-119	79	-2	135	24,912	-0.003	unlimited	0.0	135	2,610,585	1.0
12	141	68	-119	79	22	146	12,420	0.030	unlimited	0.0	146	2,006,033	0.6
14	164	79	-119	79	45	158	1,234	0.063	unlimited	0.0	158	1,571,892	0.1
16	188	90	-119	79	69	169	2,118	0.095	unlimited	0.0	169	1,252,621	0.2
18	211	101	-119	79	92	180	1,336	0.128	unlimited	0.0	180	1,012,941	0.1
20	235	113	-119	79	115	192	261	0.160	unlimited	0.0	192	829,742	0.0
22	258	124	-119	79	139	203	31	0.193	unlimited	0.0	203	687,475	0.0
24	282	135	-119	79	162	214	6	0.226	unlimited	0.0	214	575,426	0.0
26	305	146	-119	79	186	225	1	0.258	unlimited	0.0	225	486,057	0.0
28	328	158	-119	79	209	237	0	0.291	unlimited	0.0	237	413,964	0.0
Tandem Axles													
4	28	10	-119	79	-91	89	74	-0.127	unlimited	0.0	89	15,278,385	0.0
8	56	21	-119	79	-63	99	4,442	-0.088	unlimited	0.0	99	7,188,717	0.1
12	84	31	-119	79	-36	110	10,282	-0.049	unlimited	0.0	110	5,202,872	0.2
16	111	41	-119	79	-8	120	10,321	-0.011	unlimited	0.0	120	3,876,202	0.3
20	139	51	-119	79	20	130	9,522	0.028	unlimited	0.0	130	2,958,515	0.3
24	167	62	-119	79	48	140	8,287	0.067	unlimited	0.0	140	2,304,886	0.4
28	195	72	-119	79	76	151	12,491	0.105	unlimited	0.0	151	1,827,576	0.7
32	223	82	-119	79	104	161	18,584	0.144	unlimited	0.0	161	1,471,442	1.3
36	251	92	-119	79	132	171	6,141	0.183	unlimited	0.0	171	1,200,690	0.5
40	279	103	-119	79	159	181	664	0.221	unlimited	0.0	181	991,427	0.1
44	306	113	-119	79	187	192	46	0.260	unlimited	0.0	192	827,307	0.0
48	334	123	-119	79	215	202	6	0.299	unlimited	0.0	202	696,901	0.0
52	362	133	-119	79	243	212	1	0.337	unlimited	0.0	212	592,063	0.0
56	390	144	-119	79	271	222	0	0.376	unlimited	0.0	222	506,884	0.0
60	418	154	-119	79	299	233	0	0.415	unlimited	0.0	233	437,009	0.0
64	446	164	-119	79	327	243	0	0.454	34,258,283	0.0	243	379,186	0.0

Total Concrete Fatigue, % = 0.0

Total Asphalt Fatigue, % = 5.9

Group 1, E

Axle Load, kips	Critical Concrete Stresses and Asphalt Strains						Expected Repetitions	Concrete Fatigue Analysis			Asphalt Fatigue Analysis		
	Load Induced		Temperature Induced		Total			Concrete Stress Ratio	Allowable Repetitions, N	Fatigue Percent, %	Asphalt microstrain	Allowable Repetitions, N	Fatigue Percent, %
	Stress, psi	Microstrain	Stress, psi	Microstrain	Stress, psi	Microstrain							
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Single Axles le = 16.890 L/le = 2.842													
2	23	11	-185	119	-162	130	212	-0.225	unlimited	0.0	130	2,933,383	0.0
4	47	23	-185	119	-138	142	230	-0.192	unlimited	0.0	142	2,233,618	0.0
6	70	34	-185	119	-115	153	503	-0.159	unlimited	0.0	153	1,736,633	0.0
8	94	45	-185	119	-91	164	4,910	-0.127	unlimited	0.0	164	1,374,603	0.4
10	117	56	-185	119	-68	176	19,930	-0.094	unlimited	0.0	176	1,105,059	1.8
12	141	68	-185	119	-44	187	9,936	-0.062	unlimited	0.0	187	900,518	1.1
14	164	79	-185	119	-21	198	987	-0.029	unlimited	0.0	198	742,690	0.1
16	188	90	-185	119	3	209	1,694	0.003	unlimited	0.0	209	619,091	0.3
18	211	101	-185	119	26	221	1,069	0.036	unlimited	0.0	221	521,010	0.2
20	235	113	-185	119	49	232	208	0.069	unlimited	0.0	232	442,253	0.0
22	258	124	-185	119	73	243	25	0.101	unlimited	0.0	243	378,332	0.0
24	282	135	-185	119	96	254	5	0.134	unlimited	0.0	254	325,947	0.0
26	305	146	-185	119	120	266	1	0.166	unlimited	0.0	266	282,635	0.0
28	328	158	-185	119	143	277	0	0.199	unlimited	0.0	277	246,535	0.0
Tandem Axles													
4	28	10	-185	119	-157	129	59	-0.219	unlimited	0.0	129	4,468,492	0.0
8	56	21	-185	119	-129	140	3,554	-0.180	unlimited	0.0	140	2,341,500	0.2
12	84	31	-185	119	-102	150	8,226	-0.141	unlimited	0.0	150	1,854,612	0.4
16	111	41	-185	119	-74	160	8,257	-0.102	unlimited	0.0	160	1,491,809	0.6
20	139	51	-185	119	-46	170	7,617	-0.064	unlimited	0.0	170	1,216,305	0.6
24	167	62	-185	119	-18	181	6,629	-0.025	unlimited	0.0	181	1,003,586	0.7
28	195	72	-185	119	10	191	9,993	0.014	unlimited	0.0	191	836,906	1.2
32	223	82	-185	119	38	201	14,867	0.052	unlimited	0.0	201	704,573	2.1
36	251	92	-185	119	66	212	4,913	0.091	unlimited	0.0	212	598,264	0.8
40	279	103	-185	119	93	222	531	0.130	unlimited	0.0	222	511,946	0.1
44	306	113	-185	119	121	232	37	0.168	unlimited	0.0	232	441,180	0.0
48	334	123	-185	119	149	242	4	0.207	unlimited	0.0	242	382,651	0.0
52	362	133	-185	119	177	253	1	0.246	unlimited	0.0	253	333,852	0.0
56	390	144	-185	119	205	263	0	0.284	unlimited	0.0	263	292,863	0.0
60	418	154	-185	119	233	273	0	0.323	unlimited	0.0	273	258,198	0.0
64	446	164	-185	119	261	283	0	0.362	unlimited	0.0	283	228,697	0.0

Total Concrete Fatigue, % = 0.0

Total Asphalt Fatigue, % = 10.6

Group 1, F

Axle Load, kips	Critical Concrete Stresses and Asphalt Strains						Expected Repetitions	Concrete Fatigue Analysis			Asphalt Fatigue Analysis		
	Load Induced		Temperature Induced		Total			Concrete Stress Ratio	Allowable Repetitions, N	Fatigue Percent, %	Asphalt microstrain	Allowable Repetitions, N	Fatigue Percent, %
	Stress, psi	Microstrain	Stress, psi	Microstrain	Stress, psi	Microstrain							
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Single Axles le = 16.890 L/le = 2.842													
2	23	11	-231	147	-208	159	424	-0.289	unlimited	0.0	159	1,539,096	0.0
4	47	23	-231	147	-184	170	460	-0.256	unlimited	0.0	170	1,228,207	0.0
6	70	34	-231	147	-161	181	1,005	-0.224	unlimited	0.0	181	994,418	0.1
8	94	45	-231	147	-138	193	9,820	-0.191	unlimited	0.0	193	815,452	1.2
10	117	56	-231	147	-114	204	39,859	-0.158	unlimited	0.0	204	676,286	5.9
12	141	68	-231	147	-91	215	19,871	-0.126	unlimited	0.0	215	566,549	3.5
14	164	79	-231	147	-67	226	1,974	-0.093	unlimited	0.0	226	478,929	0.4
16	188	90	-231	147	-44	238	3,389	-0.061	unlimited	0.0	238	408,180	0.8
18	211	101	-231	147	-20	249	2,138	-0.028	unlimited	0.0	249	350,468	0.6
20	235	113	-231	147	3	260	417	0.004	unlimited	0.0	260	302,955	0.1
22	258	124	-231	147	27	271	50	0.037	unlimited	0.0	271	263,506	0.0
24	282	135	-231	147	50	283	10	0.070	unlimited	0.0	283	230,498	0.0
26	305	146	-231	147	74	294	2	0.102	unlimited	0.0	294	202,683	0.0
28	328	158	-231	147	97	305	0	0.135	unlimited	0.0	305	179,089	0.0
Tandem Axles													
4	28	10	-231	147	-204	158	119	-0.283	unlimited	0.0	158	2,333,873	0.0
8	56	21	-231	147	-176	168	7,107	-0.244	unlimited	0.0	168	1,277,413	0.6
12	84	31	-231	147	-148	178	16,451	-0.205	unlimited	0.0	178	1,051,057	1.6
16	111	41	-231	147	-120	188	16,513	-0.167	unlimited	0.0	188	874,306	1.9
20	139	51	-231	147	-92	199	15,235	-0.128	unlimited	0.0	199	734,411	2.1
24	167	62	-231	147	-64	209	13,259	-0.089	unlimited	0.0	209	622,339	2.1
28	195	72	-231	147	-36	219	19,986	-0.051	unlimited	0.0	219	531,571	3.8
32	223	82	-231	147	-9	230	29,735	-0.012	unlimited	0.0	230	457,327	6.5
36	251	92	-231	147	19	240	9,826	0.027	unlimited	0.0	240	396,049	2.5
40	279	103	-231	147	47	250	1,062	0.065	unlimited	0.0	250	345,056	0.3
44	306	113	-231	147	75	260	73	0.104	unlimited	0.0	260	302,300	0.0
48	334	123	-231	147	103	271	9	0.143	unlimited	0.0	271	266,199	0.0
52	362	133	-231	147	131	281	1	0.182	unlimited	0.0	281	235,522	0.0
56	390	144	-231	147	159	291	0	0.220	unlimited	0.0	291	209,298	0.0
60	418	154	-231	147	186	301	0	0.259	unlimited	0.0	301	186,755	0.0
64	446	164	-231	147	214	312	0	0.298	unlimited	0.0	312	167,278	0.0

Total Concrete Fatigue, % = 0.0

Total Asphalt Fatigue, % = 34.1

Group 2, A

Axle Load, kips	Critical Concrete Stresses and Asphalt Strains						Expected Repetitions	Concrete Fatigue Analysis			Asphalt Fatigue Analysis		
	Load Induced		Temperature Induced		Total			Concrete Stress Ratio	Allowable Repetitions, N	Fatigue Percent, %	Asphalt microstrain	Allowable Repetitions, N	Fatigue Percent, %
	Stress, psi	Microstrain	Stress, psi	Microstrain	Stress, psi	Microstrain							
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Single Axles le = 16.890 L/le = 2.842													
2	23	11	99	-54	122	-43	954	0.170	unlimited	0.0	-43	unlimited	0.0
4	47	23	99	-54	146	-32	1,035	0.202	unlimited	0.0	-32	unlimited	0.0
6	70	34	99	-54	169	-21	2,261	0.235	unlimited	0.0	-21	unlimited	0.0
8	94	45	99	-54	193	-9	22,094	0.268	unlimited	0.0	-9	unlimited	0.0
10	117	56	99	-54	216	2	89,683	0.300	unlimited	0.0	2	unlimited	0.0
12	141	68	99	-54	240	13	44,710	0.333	unlimited	0.0	13	unlimited	0.0
14	164	79	99	-54	263	25	4,442	0.365	unlimited	0.0	25	719,057,008	0.0
16	188	90	99	-54	286	36	7,625	0.398	unlimited	0.0	36	207,114,398	0.0
18	211	101	99	-54	310	47	4,810	0.430	unlimited	0.0	47	84,131,296	0.0
20	235	113	99	-54	333	58	938	0.463	10,143,710	0.0	58	41,508,217	0.0
22	258	124	99	-54	357	70	113	0.496	946,946	0.0	70	23,210,858	0.0
24	282	135	99	-54	380	81	23	0.528	243,118	0.0	81	14,165,236	0.0
26	305	146	99	-54	404	92	4	0.561	92,133	0.0	92	9,221,179	0.0
28	328	158	99	-54	427	103	0	0.593	37,225	0.0	103	6,308,004	0.0
Tandem Axles													
4	28	10	99	-54	127	-44	268	0.176	unlimited	0.0	-44	unlimited	0.0
8	56	21	99	-54	154	-34	15,992	0.215	unlimited	0.0	-34	unlimited	0.0
12	84	31	99	-54	182	-24	37,015	0.253	unlimited	0.0	-24	unlimited	0.0
16	111	41	99	-54	210	-13	37,155	0.292	unlimited	0.0	-13	unlimited	0.0
20	139	51	99	-54	238	-3	34,279	0.331	unlimited	0.0	-3	unlimited	0.0
24	167	62	99	-54	266	7	29,832	0.369	unlimited	0.0	7	unlimited	0.0
28	195	72	99	-54	294	17	44,968	0.408	unlimited	0.0	17	unlimited	0.0
32	223	82	99	-54	322	28	66,903	0.447	unlimited	0.0	28	480,306,218	0.0
36	251	92	99	-54	349	38	22,108	0.485	1,690,614	1.3	38	170,355,712	0.0
40	279	103	99	-54	377	48	2,390	0.524	281,131	0.8	48	77,545,883	0.0
44	306	113	99	-54	405	58	165	0.563	87,298	0.2	58	41,109,824	0.0
48	334	123	99	-54	433	69	20	0.601	29,767	0.1	69	24,154,444	0.0
52	362	133	99	-54	461	79	2	0.640	10,150	0.0	79	15,283,947	0.0
56	390	144	99	-54	489	89	0	0.679	3,461	0.0	89	10,227,675	0.0
60	418	154	99	-54	517	100	1	0.718	1,180	0.1	100	7,150,237	0.0
64	446	164	99	-54	544	110	0	0.756	402	0.0	110	5,177,621	0.0

Total Concrete Fatigue, % = 2.5

Total Asphalt Fatigue, % = 0.0

Group 2, B

Axle Load, kips	Critical Concrete Stresses and Asphalt Strains						Expected Repetitions	Concrete Fatigue Analysis			Asphalt Fatigue Analysis		
	Load Induced		Temperature Induced		Total			Concrete Stress Ratio	Allowable Repetitions, N	Fatigue Percent, %	Asphalt microstrain	Allowable Repetitions, N	Fatigue Percent, %
	Stress, psi	Microstrain	Stress, psi	Microstrain	Stress, psi	Microstrain							
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Single Axles le = 16.890 L/le = 2.842													
2	23	11	86	-46	109	-35	318	0.151	unlimited	0.0	-35	unlimited	0.0
4	47	23	86	-46	132	-24	345	0.184	unlimited	0.0	-24	unlimited	0.0
6	70	34	86	-46	156	-12	754	0.217	unlimited	0.0	-12	unlimited	0.0
8	94	45	86	-46	179	-1	7,365	0.249	unlimited	0.0	-1	unlimited	0.0
10	117	56	86	-46	203	10	29,894	0.282	unlimited	0.0	10	unlimited	0.0
12	141	68	86	-46	226	21	14,903	0.314	unlimited	0.0	21	1,138,575,904	0.0
14	164	79	86	-46	250	33	1,481	0.347	unlimited	0.0	33	281,759,991	0.0
16	188	90	86	-46	273	44	2,542	0.380	unlimited	0.0	44	106,035,333	0.0
18	211	101	86	-46	297	55	1,603	0.412	unlimited	0.0	55	49,962,968	0.0
20	235	113	86	-46	320	66	313	0.445	unlimited	0.0	66	27,092,821	0.0
22	258	124	86	-46	344	78	38	0.477	2,905,824	0.0	78	16,174,628	0.0
24	282	135	86	-46	367	89	8	0.510	487,142	0.0	89	10,356,751	0.0
26	305	146	86	-46	391	100	1	0.542	154,511	0.0	100	6,994,302	0.0
28	328	158	86	-46	414	111	0	0.575	61,996	0.0	111	4,925,550	0.0
Tandem Axles													
4	28	10	86	-46	113	-36	89	0.158	unlimited	0.0	-36	unlimited	0.0
8	56	21	86	-46	141	-26	5,331	0.196	unlimited	0.0	-26	unlimited	0.0
12	84	31	86	-46	169	-16	12,338	0.235	unlimited	0.0	-16	unlimited	0.0
16	111	41	86	-46	197	-5	12,385	0.274	unlimited	0.0	-5	unlimited	0.0
20	139	51	86	-46	225	5	11,426	0.312	unlimited	0.0	5	unlimited	0.0
24	167	62	86	-46	253	15	9,944	0.351	unlimited	0.0	15	unlimited	0.0
28	195	72	86	-46	281	26	14,989	0.390	unlimited	0.0	26	629,457,067	0.0
32	223	82	86	-46	308	36	22,301	0.428	unlimited	0.0	36	207,061,903	0.0
36	251	92	86	-46	336	46	7,369	0.467	6,799,047	0.1	46	90,333,111	0.0
40	279	103	86	-46	364	56	797	0.506	583,605	0.1	56	46,599,382	0.0
44	306	113	86	-46	392	67	55	0.544	145,937	0.0	67	26,864,236	0.0
48	334	123	86	-46	420	77	7	0.583	49,575	0.0	77	16,762,203	0.0
52	362	133	86	-46	448	87	1	0.622	16,904	0.0	87	11,097,018	0.0
56	390	144	86	-46	476	97	0	0.660	5,764	0.0	97	7,692,306	0.0
60	418	154	86	-46	503	108	0	0.699	1,965	0.0	108	5,531,849	0.0
64	446	164	86	-46	531	118	0	0.738	670	0.0	118	4,099,541	0.0

Total Concrete Fatigue, % = 0.3

Total Asphalt Fatigue, % = 0.0

Group 2, C

Axle Load, kips	Critical Concrete Stresses and Asphalt Strains						Expected Repetitions	Concrete Fatigue Analysis			Asphalt Fatigue Analysis		
	Load Induced		Temperature Induced		Total			Concrete Stress Ratio	Allowable Repetitions, N	Fatigue Percent, %	Asphalt microstrain	Allowable Repetitions, N	Fatigue Percent, %
	Stress, psi	Microstrain	Stress, psi	Microstrain	Stress, psi	Microstrain							
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Single Axles le = 16.890 L/le = 2.842													
2	23	11	46	-22	69	-11	265	0.096	unlimited	0.0	-11	unlimited	0.0
4	47	23	46	-22	93	0	288	0.129	unlimited	0.0	0	unlimited	0.0
6	70	34	46	-22	116	12	628	0.162	unlimited	0.0	12	unlimited	0.0
8	94	45	46	-22	140	23	6,137	0.194	unlimited	0.0	23	886,583,012	0.0
10	117	56	46	-22	163	34	24,912	0.227	unlimited	0.0	34	238,718,894	0.0
12	141	68	46	-22	187	46	12,420	0.259	unlimited	0.0	46	93,673,338	0.0
14	164	79	46	-22	210	57	1,234	0.292	unlimited	0.0	57	45,253,933	0.0
16	188	90	46	-22	234	68	2,118	0.324	unlimited	0.0	68	24,949,936	0.0
18	211	101	46	-22	257	79	1,336	0.357	unlimited	0.0	79	15,072,562	0.0
20	235	113	46	-22	281	91	261	0.390	unlimited	0.0	91	9,736,971	0.0
22	258	124	46	-22	304	102	31	0.422	unlimited	0.0	102	6,621,158	0.0
24	282	135	46	-22	327	113	6	0.455	28,125,865	0.0	113	4,688,496	0.0
26	305	146	46	-22	351	124	1	0.487	1,491,311	0.0	124	3,430,655	0.0
28	328	158	46	-22	374	136	0	0.520	325,691	0.0	136	2,579,233	0.0
Tandem Axles													
4	28	10	46	-22	74	-12	74	0.102	unlimited	0.0	-12	unlimited	0.0
8	56	21	46	-22	102	-2	4,442	0.141	unlimited	0.0	-2	unlimited	0.0
12	84	31	46	-22	129	9	10,282	0.180	unlimited	0.0	9	unlimited	0.0
16	111	41	46	-22	157	19	10,321	0.219	unlimited	0.0	19	unlimited	0.0
20	139	51	46	-22	185	29	9,522	0.257	unlimited	0.0	29	403,120,386	0.0
24	167	62	46	-22	213	39	8,287	0.296	unlimited	0.0	39	149,774,801	0.0
28	195	72	46	-22	241	50	12,491	0.335	unlimited	0.0	50	70,041,544	0.0
32	223	82	46	-22	269	60	18,584	0.373	unlimited	0.0	60	37,791,917	0.0
36	251	92	46	-22	297	70	6,141	0.412	unlimited	0.0	70	22,482,566	0.0
40	279	103	46	-22	324	81	664	0.451	55,117,434	0.0	81	14,357,924	0.0
44	306	113	46	-22	352	91	46	0.489	1,331,616	0.0	91	9,676,691	0.0
48	334	123	46	-22	380	101	6	0.528	244,409	0.0	101	6,803,480	0.0
52	362	133	46	-22	408	111	1	0.567	78,091	0.0	111	4,949,311	0.0
56	390	144	46	-22	436	122	0	0.605	26,627	0.0	122	3,702,987	0.0
60	418	154	46	-22	464	132	0	0.644	9,079	0.0	132	2,836,448	0.0
64	446	164	46	-22	492	142	0	0.683	3,096	0.0	142	2,216,561	0.0

Total Concrete Fatigue, % = 0.0

Total Asphalt Fatigue, % = 0.2

Group 2, D

Axle Load, kips	Critical Concrete Stresses and Asphalt Strains						Expected Repetitions	Concrete Fatigue Analysis			Asphalt Fatigue Analysis		
	Load Induced		Temperature Induced		Total			Concrete Stress Ratio	Allowable Repetitions, N	Fatigue Percent, %	Asphalt microstrain	Allowable Repetitions, N	Fatigue Percent, %
	Stress, psi	Microstrain	Stress, psi	Microstrain	Stress, psi	Microstrain							
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Single Axles													
le = 16.890 L/le = 2.842													
2	23	11	-7	10	17	21	212	0.023	unlimited	0.0	21	1,108,821,336	0.0
4	47	23	-7	10	40	33	230	0.056	unlimited	0.0	33	276,914,813	0.0
6	70	34	-7	10	63	44	503	0.088	unlimited	0.0	44	104,676,604	0.0
8	94	45	-7	10	87	55	4,910	0.121	unlimited	0.0	55	49,452,765	0.0
10	117	56	-7	10	110	67	19,930	0.153	unlimited	0.0	67	26,862,861	0.1
12	141	68	-7	10	134	78	9,936	0.186	unlimited	0.0	78	16,057,168	0.1
14	164	79	-7	10	157	89	987	0.219	unlimited	0.0	89	10,291,032	0.0
16	188	90	-7	10	181	100	1,694	0.251	unlimited	0.0	100	6,954,893	0.0
18	211	101	-7	10	204	112	1,069	0.284	unlimited	0.0	112	4,900,594	0.0
20	235	113	-7	10	228	123	208	0.316	unlimited	0.0	123	3,571,421	0.0
22	258	124	-7	10	251	134	25	0.349	unlimited	0.0	134	2,676,061	0.0
24	282	135	-7	10	275	145	5	0.381	unlimited	0.0	145	2,052,417	0.0
26	305	146	-7	10	298	157	1	0.414	unlimited	0.0	157	1,605,605	0.0
28	328	158	-7	10	322	168	0	0.447	unlimited	0.0	168	1,277,671	0.0
Tandem Axles													
4	28	10	-7	10	21	20	59	0.029	unlimited	0.0	20	1,928,800,695	0.0
8	56	21	-7	10	49	31	3,554	0.068	unlimited	0.0	31	341,349,023	0.0
12	84	31	-7	10	77	41	8,226	0.106	unlimited	0.0	41	132,320,462	0.0
16	111	41	-7	10	105	51	8,257	0.145	unlimited	0.0	51	63,456,956	0.0
20	139	51	-7	10	132	62	7,617	0.184	unlimited	0.0	62	34,814,787	0.0
24	167	62	-7	10	160	72	6,629	0.223	unlimited	0.0	72	20,958,462	0.0
28	195	72	-7	10	188	82	9,993	0.261	unlimited	0.0	82	13,503,734	0.1
32	223	82	-7	10	216	92	14,867	0.300	unlimited	0.0	92	9,163,786	0.2
36	251	92	-7	10	244	103	4,913	0.339	unlimited	0.0	103	6,478,330	0.1
40	279	103	-7	10	272	113	531	0.377	unlimited	0.0	113	4,733,955	0.0
44	306	113	-7	10	300	123	37	0.416	unlimited	0.0	123	3,555,103	0.0
48	334	123	-7	10	327	133	4	0.455	28,772,372	0.0	133	2,731,774	0.0
52	362	133	-7	10	355	144	1	0.493	1,066,038	0.0	144	2,140,536	0.0
56	390	144	-7	10	383	154	0	0.532	213,709	0.0	154	1,705,744	0.0
60	418	154	-7	10	411	164	0	0.571	69,854	0.0	164	1,379,346	0.0
64	446	164	-7	10	439	174	0	0.609	23,819	0.0	174	1,129,868	0.0

Total Concrete Fatigue, % = 0.0

Total Asphalt Fatigue, % = 0.6

Group 2, E

Axle Load, kips	Critical Concrete Stresses and Asphalt Strains						Expected Repetitions	Concrete Fatigue Analysis			Asphalt Fatigue Analysis		
	Load Induced		Temperature Induced		Total			Concrete Stress Ratio	Allowable Repetitions, N	Fatigue Percent, %	Asphalt microstrain	Allowable Repetitions, N	Fatigue Percent, %
	Stress, psi	Microstrain	Stress, psi	Microstrain	Stress, psi	Microstrain							
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Single Axles le = 16.890 L/le = 2.842													
2	23	11	-60	43	-36	54	159	-0.050	unlimited	0.0	54	54,174,254	0.0
4	47	23	-60	43	-13	65	173	-0.018	unlimited	0.0	65	28,971,572	0.0
6	70	34	-60	43	11	76	377	0.015	unlimited	0.0	76	17,127,334	0.0
8	94	45	-60	43	34	88	3,682	0.047	unlimited	0.0	88	10,886,925	0.0
10	117	56	-60	43	58	99	14,947	0.080	unlimited	0.0	99	7,310,903	0.2
12	141	68	-60	43	81	110	7,452	0.113	unlimited	0.0	110	5,125,377	0.1
14	164	79	-60	43	105	121	740	0.145	unlimited	0.0	121	3,719,814	0.0
16	188	90	-60	43	128	133	1,271	0.178	unlimited	0.0	133	2,777,684	0.0
18	211	101	-60	43	151	144	802	0.210	unlimited	0.0	144	2,124,182	0.0
20	235	113	-60	43	175	155	156	0.243	unlimited	0.0	155	1,657,625	0.0
22	258	124	-60	43	198	166	19	0.276	unlimited	0.0	166	1,316,235	0.0
24	282	135	-60	43	222	178	4	0.308	unlimited	0.0	178	1,061,069	0.0
26	305	146	-60	43	245	189	1	0.341	unlimited	0.0	189	866,780	0.0
28	328	158	-60	43	269	200	0	0.373	unlimited	0.0	200	716,411	0.0
Tandem Axles													
4	28	10	-60	43	-32	53	45	-0.044	unlimited	0.0	53	85,615,708	0.0
8	56	21	-60	43	-4	63	2,665	-0.006	unlimited	0.0	63	32,136,290	0.0
12	84	31	-60	43	24	73	6,169	0.033	unlimited	0.0	73	19,566,352	0.0
16	111	41	-60	43	52	84	6,192	0.072	unlimited	0.0	84	12,714,627	0.0
20	139	51	-60	43	80	94	5,713	0.110	unlimited	0.0	94	8,685,766	0.1
24	167	62	-60	43	107	104	4,972	0.149	unlimited	0.0	104	6,173,153	0.1
28	195	72	-60	43	135	114	7,495	0.188	unlimited	0.0	114	4,530,658	0.2
32	223	82	-60	43	163	125	11,150	0.227	unlimited	0.0	125	3,414,828	0.3
36	251	92	-60	43	191	135	3,685	0.265	unlimited	0.0	135	2,632,080	0.1
40	279	103	-60	43	219	145	398	0.304	unlimited	0.0	145	2,067,876	0.0
44	306	113	-60	43	247	155	28	0.343	unlimited	0.0	155	1,651,623	0.0
48	334	123	-60	43	275	166	3	0.381	unlimited	0.0	166	1,338,264	0.0
52	362	133	-60	43	302	176	0	0.420	unlimited	0.0	176	1,098,160	0.0
56	390	144	-60	43	330	186	0	0.459	16,734,352	0.0	186	911,297	0.0
60	418	154	-60	43	358	196	0	0.497	865,616	0.0	196	763,838	0.0
64	446	164	-60	43	386	207	0	0.536	187,858	0.0	207	646,021	0.0

Total Concrete Fatigue, % = 0.0

Total Asphalt Fatigue, % = 1.4

Group 2, F

Axle Load, kips	Critical Concrete Stresses and Asphalt Strains						Expected Repetitions	Concrete Fatigue Analysis			Asphalt Fatigue Analysis		
	Load Induced		Temperature Induced		Total			Concrete Stress Ratio	Allowable Repetitions, N	Fatigue Percent, %	Asphalt microstrain	Allowable Repetitions, N	Fatigue Percent, %
	Stress, psi	Microstrain	Stress, psi	Microstrain	Stress, psi	Microstrain							
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Single Axles le = 16.890 L/le = 2.842													
2	23	11	-113	75	-89	86	159	-0.124	unlimited	0.0	86	11,528,613	0.0
4	47	23	-113	75	-66	97	173	-0.091	unlimited	0.0	97	7,691,050	0.0
6	70	34	-113	75	-42	109	377	-0.059	unlimited	0.0	109	5,363,793	0.0
8	94	45	-113	75	-19	120	3,682	-0.026	unlimited	0.0	120	3,876,349	0.1
10	117	56	-113	75	5	131	14,947	0.007	unlimited	0.0	131	2,884,397	0.5
12	141	68	-113	75	28	142	7,452	0.039	unlimited	0.0	142	2,199,253	0.3
14	164	79	-113	75	52	154	740	0.072	unlimited	0.0	154	1,711,864	0.0
16	188	90	-113	75	75	165	1,271	0.104	unlimited	0.0	165	1,356,331	0.1
18	211	101	-113	75	99	176	802	0.137	unlimited	0.0	176	1,091,304	0.1
20	235	113	-113	75	122	187	156	0.170	unlimited	0.0	187	889,981	0.0
22	258	124	-113	75	146	199	19	0.202	unlimited	0.0	199	734,490	0.0
24	282	135	-113	75	169	210	4	0.235	unlimited	0.0	210	612,621	0.0
26	305	146	-113	75	192	221	1	0.267	unlimited	0.0	221	515,842	0.0
28	328	158	-113	75	216	233	0	0.300	unlimited	0.0	233	438,077	0.0
Tandem Axles													
4	28	10	-113	75	-85	85	45	-0.118	unlimited	0.0	85	17,796,099	0.0
8	56	21	-113	75	-57	95	2,665	-0.079	unlimited	0.0	95	8,239,753	0.0
12	84	31	-113	75	-29	106	6,169	-0.040	unlimited	0.0	106	5,886,455	0.1
16	111	41	-113	75	-1	116	6,192	-0.002	unlimited	0.0	116	4,338,598	0.1
20	139	51	-113	75	27	126	5,713	0.037	unlimited	0.0	126	3,281,684	0.2
24	167	62	-113	75	55	136	4,972	0.076	unlimited	0.0	136	2,537,078	0.2
28	195	72	-113	75	82	147	7,495	0.115	unlimited	0.0	147	1,998,400	0.4
32	223	82	-113	75	110	157	11,150	0.153	unlimited	0.0	157	1,599,721	0.7
36	251	92	-113	75	138	167	3,685	0.192	unlimited	0.0	167	1,298,763	0.3
40	279	103	-113	75	166	177	398	0.231	unlimited	0.0	177	1,067,603	0.0
44	306	113	-113	75	194	188	28	0.269	unlimited	0.0	188	887,313	0.0
48	334	123	-113	75	222	198	3	0.308	unlimited	0.0	198	744,767	0.0
52	362	133	-113	75	250	208	0	0.347	unlimited	0.0	208	630,680	0.0
56	390	144	-113	75	277	218	0	0.385	unlimited	0.0	218	538,360	0.0
60	418	154	-113	75	305	229	0	0.424	unlimited	0.0	229	462,904	0.0
64	446	164	-113	75	333	239	0	0.463	10,514,259	0.0	239	400,671	0.0

Total Concrete Fatigue, % = 0.0

Total Asphalt Fatigue, % = 3.2

Group 2, G

Axle Load, kips	Critical Concrete Stresses and Asphalt Strains						Expected Repetitions	Concrete Fatigue Analysis			Asphalt Fatigue Analysis		
	Load Induced		Temperature Induced		Total			Concrete Stress Ratio	Allowable Repetitions, N	Fatigue Percent, %	Asphalt microstrain	Allowable Repetitions, N	Fatigue Percent, %
	Stress, psi	Microstrain	Stress, psi	Microstrain	Stress, psi	Microstrain							
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Single Axles le = 16.890 L/le = 2.842													
2	23	11	-165	107	-142	118	159	-0.197	unlimited	0.0	118	4,041,584	0.0
4	47	23	-165	107	-118	130	173	-0.165	unlimited	0.0	130	2,996,519	0.0
6	70	34	-165	107	-95	141	377	-0.132	unlimited	0.0	141	2,277,822	0.0
8	94	45	-165	107	-72	152	3,682	-0.099	unlimited	0.0	152	1,768,440	0.2
10	117	56	-165	107	-48	163	14,947	-0.067	unlimited	0.0	163	1,398,034	1.1
12	141	68	-165	107	-25	175	7,452	-0.034	unlimited	0.0	175	1,122,673	0.7
14	164	79	-165	107	-1	186	740	-0.002	unlimited	0.0	186	913,998	0.1
16	188	90	-165	107	22	197	1,271	0.031	unlimited	0.0	197	753,169	0.2
18	211	101	-165	107	46	208	802	0.064	unlimited	0.0	208	627,351	0.1
20	235	113	-165	107	69	220	156	0.096	unlimited	0.0	220	527,604	0.0
22	258	124	-165	107	93	231	19	0.129	unlimited	0.0	231	447,576	0.0
24	282	135	-165	107	116	242	4	0.161	unlimited	0.0	242	382,673	0.0
26	305	146	-165	107	140	254	1	0.194	unlimited	0.0	254	329,520	0.0
28	328	158	-165	107	163	265	0	0.227	unlimited	0.0	265	285,601	0.0
Tandem Axles													
4	28	10	-165	107	-138	117	45	-0.191	unlimited	0.0	117	6,172,817	0.0
8	56	21	-165	107	-110	128	2,665	-0.152	unlimited	0.0	128	3,155,230	0.1
12	84	31	-165	107	-82	138	6,169	-0.114	unlimited	0.0	138	2,446,499	0.3
16	111	41	-165	107	-54	148	6,192	-0.075	unlimited	0.0	148	1,931,936	0.3
20	139	51	-165	107	-26	158	5,713	-0.036	unlimited	0.0	158	1,549,924	0.4
24	167	62	-165	107	2	169	4,972	0.002	unlimited	0.0	169	1,260,769	0.4
28	195	72	-165	107	30	179	7,495	0.041	unlimited	0.0	179	1,038,145	0.7
32	223	82	-165	107	57	189	11,150	0.080	unlimited	0.0	189	864,145	1.3
36	251	92	-165	107	85	199	3,685	0.119	unlimited	0.0	199	726,313	0.5
40	279	103	-165	107	113	210	398	0.157	unlimited	0.0	210	615,811	0.1
44	306	113	-165	107	141	220	28	0.196	unlimited	0.0	220	526,255	0.0
48	334	123	-165	107	169	230	3	0.235	unlimited	0.0	230	452,956	0.0
52	362	133	-165	107	197	240	0	0.273	unlimited	0.0	240	392,425	0.0
56	390	144	-165	107	225	251	0	0.312	unlimited	0.0	251	342,028	0.0
60	418	154	-165	107	252	261	0	0.351	unlimited	0.0	261	299,751	0.0
64	446	164	-165	107	280	271	0	0.389	unlimited	0.0	271	264,039	0.0

Total Concrete Fatigue, % = 0.0

Total Asphalt Fatigue, % = 6.4

Group 2, H

Axle Load, kips	Critical Concrete Stresses and Asphalt Strains						Expected Repetitions	Concrete Fatigue Analysis			Asphalt Fatigue Analysis		
	Load Induced		Temperature Induced		Total			Concrete Stress Ratio	Allowable Repetitions, N	Fatigue Percent, %	Asphalt microstrain	Allowable Repetitions, N	Fatigue Percent, %
	Stress, psi	Microstrain	Stress, psi	Microstrain	Stress, psi	Microstrain							
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Single Axles le = 16.890 L/le = 2.842													
2	23	11	-205	131	-182	143	318	-0.252	unlimited	0.0	143	2,190,526	0.0
4	47	23	-205	131	-158	154	345	-0.220	unlimited	0.0	154	1,705,567	0.0
6	70	34	-205	131	-135	165	754	-0.187	unlimited	0.0	165	1,351,682	0.1
8	94	45	-205	131	-111	176	7,365	-0.154	unlimited	0.0	176	1,087,803	0.7
10	117	56	-205	131	-88	188	29,894	-0.122	unlimited	0.0	188	887,296	3.4
12	141	68	-205	131	-64	199	14,903	-0.089	unlimited	0.0	199	732,400	2.0
14	164	79	-205	131	-41	210	1,481	-0.057	unlimited	0.0	210	610,971	0.2
16	188	90	-205	131	-17	221	2,542	-0.024	unlimited	0.0	221	514,523	0.5
18	211	101	-205	131	6	233	1,603	0.009	unlimited	0.0	233	437,012	0.4
20	235	113	-205	131	30	244	313	0.041	unlimited	0.0	244	374,054	0.1
22	258	124	-205	131	53	255	38	0.074	unlimited	0.0	255	322,424	0.0
24	282	135	-205	131	77	267	8	0.106	unlimited	0.0	267	279,709	0.0
26	305	146	-205	131	100	278	1	0.139	unlimited	0.0	278	244,085	0.0
28	328	158	-205	131	123	289	0	0.172	unlimited	0.0	289	214,156	0.0
Tandem Axles													
4	28	10	-205	131	-177	142	89	-0.246	unlimited	0.0	142	3,329,625	0.0
8	56	21	-205	131	-149	152	5,331	-0.207	unlimited	0.0	152	1,781,275	0.3
12	84	31	-205	131	-121	162	12,338	-0.169	unlimited	0.0	162	1,436,503	0.9
16	111	41	-205	131	-94	172	12,385	-0.130	unlimited	0.0	172	1,173,864	1.1
20	139	51	-205	131	-66	183	11,426	-0.091	unlimited	0.0	183	970,512	1.2
24	167	62	-205	131	-38	193	9,944	-0.053	unlimited	0.0	193	810,776	1.2
28	195	72	-205	131	-10	203	14,989	-0.014	unlimited	0.0	203	683,674	2.2
32	223	82	-205	131	18	213	22,301	0.025	unlimited	0.0	213	581,363	3.8
36	251	92	-205	131	46	224	7,369	0.063	unlimited	0.0	224	498,141	1.5
40	279	103	-205	131	74	234	797	0.102	unlimited	0.0	234	429,800	0.2
44	306	113	-205	131	101	244	55	0.141	unlimited	0.0	244	373,192	0.0
48	334	123	-205	131	129	254	7	0.180	unlimited	0.0	254	325,929	0.0
52	362	133	-205	131	157	265	1	0.218	unlimited	0.0	265	286,180	0.0
56	390	144	-205	131	185	275	0	0.257	unlimited	0.0	275	252,524	0.0
60	418	154	-205	131	213	285	0	0.296	unlimited	0.0	285	223,851	0.0
64	446	164	-205	131	241	295	0	0.334	unlimited	0.0	295	199,280	0.0

Total Concrete Fatigue, % = 0.0

Total Asphalt Fatigue, % = 19.7

D.3.3 Analysis of UTW pavement with concrete thickness of 4 in., slab dimension of 5 ¼ ft by 5 ¼ ft and design life of 4 years

Analysis results:

Total concrete fatigue = 34%

Total asphalt fatigue = 88%

Calculations:

Group 1, A

Axle Load, kips	Critical Concrete Stresses and Asphalt Strains						Expected Repetitions	Concrete Fatigue Analysis			Asphalt Fatigue Analysis		
	Load Induced		Temperature Induced		Total			Concrete Stress Ratio	Allowable Repetitions, N	Fatigue Percent, %	Asphalt microstrain	Allowable Repetitions, N	Fatigue Percent, %
	Stress, psi	Microstrain	Stress, psi	Microstrain	Stress, psi	Microstrain							
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Single Axles le = 16.890 L/le = 3.730													
2	28	12	45	-17	74	-5	972	0.102	unlimited	0.0	-5	unlimited	0.0
4	57	24	45	-17	102	8	1,054	0.142	unlimited	0.0	8	unlimited	0.0
6	85	37	45	-17	130	20	2,303	0.181	unlimited	0.0	20	unlimited	0.0
8	113	49	45	-17	159	32	22,500	0.220	unlimited	0.0	32	297,845,322	0.0
10	141	61	45	-17	187	44	91,332	0.259	unlimited	0.0	44	102,842,793	0.1
12	170	73	45	-17	215	56	45,532	0.299	unlimited	0.0	56	46,102,315	0.1
14	198	86	45	-17	243	69	4,524	0.338	unlimited	0.0	69	24,199,550	0.0
16	226	98	45	-17	272	81	7,765	0.377	unlimited	0.0	81	14,120,444	0.1
18	254	110	45	-17	300	93	4,899	0.417	unlimited	0.0	93	8,889,195	0.1
20	283	122	45	-17	328	105	955	0.456	24,586,840	0.0	105	5,925,065	0.0
22	311	134	45	-17	356	118	115	0.495	975,501	0.0	118	4,129,335	0.0
24	339	147	45	-17	385	130	24	0.534	198,608	0.0	130	2,982,551	0.0
26	368	159	45	-17	413	142	4	0.574	64,548	0.0	142	2,218,293	0.0
28	396	171	45	-17	441	154	0	0.613	21,656	0.0	154	1,690,712	0.0
Tandem Axles													
4	34	10	45	-17	79	-7	272	0.110	unlimited	0.0	-7	unlimited	0.0
8	68	21	45	-17	113	4	16,286	0.158	unlimited	0.0	4	unlimited	0.0
12	102	31	45	-17	147	14	37,695	0.205	unlimited	0.0	14	unlimited	0.0
16	136	41	45	-17	181	24	37,838	0.252	unlimited	0.0	24	751,346,970	0.0
20	170	51	45	-17	215	34	34,909	0.299	unlimited	0.0	34	234,694,815	0.0
24	204	62	45	-17	249	45	30,381	0.346	unlimited	0.0	45	99,528,035	0.0
28	238	72	45	-17	283	55	45,794	0.394	unlimited	0.0	55	50,432,843	0.1
32	272	82	45	-17	317	65	68,133	0.441	unlimited	0.0	65	28,718,464	0.2
36	306	92	45	-17	351	75	22,514	0.488	1,432,787	1.6	75	17,758,738	0.1
40	340	103	45	-17	385	86	2,433	0.535	192,308	1.3	86	11,676,405	0.0
44	374	113	45	-17	419	96	168	0.583	50,305	0.3	96	8,050,325	0.0
48	408	123	45	-17	453	106	21	0.630	13,528	0.2	106	5,764,100	0.0
52	442	133	45	-17	487	117	2	0.677	3,638	0.1	117	4,256,304	0.0
56	476	144	45	-17	521	127	0	0.724	978	0.0	127	3,224,444	0.0
60	510	154	45	-17	555	137	1	0.771	263	0.3	137	2,496,120	0.0
64	544	164	45	-17	589	147	0	0.819	71	0.0	147	1,968,373	0.0

Total Concrete Fatigue, % = 3.7

Total Asphalt Fatigue, % = 0.9

Group 1, B

Axle Load, kips	Critical Concrete Stresses and Asphalt Strains						Expected Repetitions	Concrete Fatigue Analysis			Asphalt Fatigue Analysis		
	Load Induced		Temperature Induced		Total			Concrete Stress Ratio	Allowable Repetitions, N	Fatigue Percent, %	Asphalt microstrain	Allowable Repetitions, N	Fatigue Percent, %
	Stress, psi	Microstrain	Stress, psi	Microstrain	Stress, psi	Microstrain							
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Single Axles													
le = 16.890 L/le = 3.730													
2	28	12	-1	11	27	24	211	0.038	unlimited	0.0	24	811,360,781	0.0
4	57	24	-1	11	56	36	229	0.077	unlimited	0.0	36	205,763,470	0.0
6	85	37	-1	11	84	48	501	0.117	unlimited	0.0	48	78,367,869	0.0
8	113	49	-1	11	112	60	4,891	0.156	unlimited	0.0	60	37,189,250	0.0
10	141	61	-1	11	141	73	19,855	0.195	unlimited	0.0	73	20,261,080	0.1
12	170	73	-1	11	169	85	9,898	0.235	unlimited	0.0	85	12,136,453	0.1
14	198	86	-1	11	197	97	983	0.274	unlimited	0.0	97	7,790,473	0.0
16	226	98	-1	11	225	109	1,688	0.313	unlimited	0.0	109	5,271,382	0.0
18	254	110	-1	11	254	121	1,065	0.352	unlimited	0.0	121	3,717,964	0.0
20	283	122	-1	11	282	134	208	0.392	unlimited	0.0	134	2,711,706	0.0
22	311	134	-1	11	310	146	25	0.431	unlimited	0.0	146	2,033,222	0.0
24	339	147	-1	11	338	158	5	0.470	5,131,244	0.0	158	1,560,260	0.0
26	368	159	-1	11	367	170	1	0.509	497,017	0.0	170	1,221,175	0.0
28	396	171	-1	11	395	183	0	0.549	129,127	0.0	183	972,162	0.0
Tandem Axles													
4	34	10	-1	11	33	22	59	0.046	unlimited	0.0	22	1,602,863,366	0.0
8	68	21	-1	11	67	32	3,540	0.093	unlimited	0.0	32	301,400,708	0.0
12	102	31	-1	11	101	42	8,195	0.141	unlimited	0.0	42	120,478,739	0.0
16	136	41	-1	11	135	52	8,226	0.188	unlimited	0.0	52	58,860,067	0.0
20	170	51	-1	11	169	63	7,589	0.235	unlimited	0.0	63	32,696,460	0.0
24	204	62	-1	11	203	73	6,605	0.282	unlimited	0.0	73	19,859,204	0.0
28	238	72	-1	11	237	83	9,955	0.329	unlimited	0.0	83	12,881,360	0.1
32	272	82	-1	11	271	93	14,811	0.377	unlimited	0.0	93	8,787,115	0.2
36	306	92	-1	11	305	104	4,894	0.424	unlimited	0.0	104	6,238,034	0.1
40	340	103	-1	11	339	114	529	0.471	4,706,250	0.0	114	4,573,976	0.0
44	374	113	-1	11	373	124	37	0.518	346,678	0.0	124	3,444,774	0.0
48	408	123	-1	11	407	135	4	0.566	80,650	0.0	135	2,653,396	0.0
52	442	133	-1	11	441	145	1	0.613	21,688	0.0	145	2,083,433	0.0
56	476	144	-1	11	475	155	0	0.660	5,832	0.0	155	1,663,224	0.0
60	510	154	-1	11	509	165	0	0.707	1,568	0.0	165	1,347,079	0.0
64	544	164	-1	11	543	176	0	0.755	422	0.0	176	1,104,970	0.0

Total Concrete Fatigue, % = 0.0

Total Asphalt Fatigue, % = 0.7

Group 1, C

Axle Load, kips	Critical Concrete Stresses and Asphalt Strains						Expected Repetitions	Concrete Fatigue Analysis			Asphalt Fatigue Analysis		
	Load Induced		Temperature Induced		Total			Concrete Stress Ratio	Allowable Repetitions, N	Fatigue Percent, %	Asphalt microstrain	Allowable Repetitions, N	Fatigue Percent, %
	Stress, psi	Microstrain	Stress, psi	Microstrain	Stress, psi	Microstrain							
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Single Axles le = 16.890 L/le = 3.730													
2	28	12	-67	52	-39	64	127	-0.054	unlimited	0.0	64	30,573,680	0.0
4	57	24	-67	52	-10	76	138	-0.014	unlimited	0.0	76	17,202,117	0.0
6	85	37	-67	52	18	88	300	0.025	unlimited	0.0	88	10,545,046	0.0
8	113	49	-67	52	46	101	2,935	0.064	unlimited	0.0	101	6,887,690	0.0
10	141	61	-67	52	75	113	11,913	0.104	unlimited	0.0	113	4,724,152	0.3
12	170	73	-67	52	103	125	5,939	0.143	unlimited	0.0	125	3,368,416	0.2
14	198	86	-67	52	131	137	590	0.182	unlimited	0.0	137	2,478,747	0.0
16	226	98	-67	52	159	150	1,013	0.221	unlimited	0.0	150	1,872,419	0.1
18	254	110	-67	52	188	162	639	0.261	unlimited	0.0	162	1,445,940	0.0
20	283	122	-67	52	216	174	125	0.300	unlimited	0.0	174	1,137,831	0.0
22	311	134	-67	52	244	186	15	0.339	unlimited	0.0	186	910,068	0.0
24	339	147	-67	52	272	198	3	0.378	unlimited	0.0	198	738,310	0.0
26	368	159	-67	52	301	211	1	0.418	unlimited	0.0	211	606,506	0.0
28	396	171	-67	52	329	223	0	0.457	20,945,386	0.0	223	503,790	0.0
Tandem Axles													
4	34	10	-67	52	-33	62	36	-0.046	unlimited	0.0	62	50,300,819	0.0
8	68	21	-67	52	1	72	2,124	0.002	unlimited	0.0	72	20,472,123	0.0
12	102	31	-67	52	35	83	4,917	0.049	unlimited	0.0	83	13,229,049	0.0
16	136	41	-67	52	69	93	4,935	0.096	unlimited	0.0	93	8,997,858	0.1
20	170	51	-67	52	103	103	4,553	0.143	unlimited	0.0	103	6,372,638	0.1
24	204	62	-67	52	137	113	3,963	0.191	unlimited	0.0	113	4,663,677	0.1
28	238	72	-67	52	171	124	5,973	0.238	unlimited	0.0	124	3,506,687	0.2
32	272	82	-67	52	205	134	8,887	0.285	unlimited	0.0	134	2,697,409	0.3
36	306	92	-67	52	239	144	2,937	0.332	unlimited	0.0	144	2,115,519	0.1
40	340	103	-67	52	273	154	317	0.379	unlimited	0.0	154	1,687,127	0.0
44	374	113	-67	52	307	165	22	0.427	unlimited	0.0	165	1,365,227	0.0
48	408	123	-67	52	341	175	3	0.474	3,762,937	0.0	175	1,118,979	0.0
52	442	133	-67	52	375	185	0	0.521	312,873	0.0	185	927,610	0.0
56	476	144	-67	52	409	195	0	0.568	74,734	0.0	195	776,789	0.0
60	510	154	-67	52	443	206	0	0.616	20,097	0.0	206	656,425	0.0
64	544	164	-67	52	477	216	0	0.663	5,405	0.0	216	559,278	0.0

Total Concrete Fatigue, % = 0.0

Total Asphalt Fatigue, % = 1.5

Group 1, D

Axle Load, kips	Critical Concrete Stresses and Asphalt Strains						Expected Repetitions	Concrete Fatigue Analysis			Asphalt Fatigue Analysis		
	Load Induced		Temperature Induced		Total			Concrete Stress Ratio	Allowable Repetitions, N	Fatigue Percent, %	Asphalt microstrain	Allowable Repetitions, N	Fatigue Percent, %
	Stress, psi	Microstrain	Stress, psi	Microstrain	Stress, psi	Microstrain							
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Single Axles													
le = 16.890 L/le = 3.730													
2	28	12	-133	92	-105	104	211	-0.145	unlimited	0.0	104	6,116,652	0.0
4	57	24	-133	92	-76	117	229	-0.106	unlimited	0.0	117	4,248,719	0.0
6	85	37	-133	92	-48	129	501	-0.067	unlimited	0.0	129	3,060,524	0.0
8	113	49	-133	92	-20	141	4,891	-0.027	unlimited	0.0	141	2,271,218	0.2
10	141	61	-133	92	8	153	19,855	0.012	unlimited	0.0	153	1,727,808	1.1
12	170	73	-133	92	37	165	9,898	0.051	unlimited	0.0	165	1,342,304	0.7
14	198	86	-133	92	65	178	983	0.090	unlimited	0.0	178	1,061,753	0.1
16	226	98	-133	92	93	190	1,688	0.130	unlimited	0.0	190	853,047	0.2
18	254	110	-133	92	122	202	1,065	0.169	unlimited	0.0	202	694,789	0.2
20	283	122	-133	92	150	214	208	0.208	unlimited	0.0	214	572,752	0.0
22	311	134	-133	92	178	227	25	0.247	unlimited	0.0	227	477,236	0.0
24	339	147	-133	92	206	239	5	0.287	unlimited	0.0	239	401,480	0.0
26	368	159	-133	92	235	251	1	0.326	unlimited	0.0	251	340,677	0.0
28	396	171	-133	92	263	263	0	0.365	unlimited	0.0	263	291,349	0.0
Tandem Axles													
4	34	10	-133	92	-99	102	59	-0.137	unlimited	0.0	102	9,668,358	0.0
8	68	21	-133	92	-65	113	3,540	-0.090	unlimited	0.0	113	4,755,686	0.1
12	102	31	-133	92	-31	123	8,195	-0.043	unlimited	0.0	123	3,570,059	0.2
16	136	41	-133	92	3	133	8,226	0.004	unlimited	0.0	133	2,742,379	0.3
20	170	51	-133	92	37	143	7,589	0.052	unlimited	0.0	143	2,148,251	0.4
24	204	62	-133	92	71	154	6,605	0.099	unlimited	0.0	154	1,711,481	0.4
28	238	72	-133	92	105	164	9,955	0.146	unlimited	0.0	164	1,383,694	0.7
32	272	82	-133	92	139	174	14,811	0.193	unlimited	0.0	174	1,133,220	1.3
36	306	92	-133	92	173	184	4,894	0.240	unlimited	0.0	184	938,756	0.5
40	340	103	-133	92	207	195	529	0.288	unlimited	0.0	195	785,629	0.1
44	374	113	-133	92	241	205	37	0.335	unlimited	0.0	205	663,520	0.0
48	408	123	-133	92	275	215	4	0.382	unlimited	0.0	215	565,034	0.0
52	442	133	-133	92	309	225	1	0.429	unlimited	0.0	225	484,780	0.0
56	476	144	-133	92	343	236	0	0.477	3,052,142	0.0	236	418,769	0.0
60	510	154	-133	92	377	246	0	0.524	283,248	0.0	246	364,010	0.0
64	544	164	-133	92	411	256	0	0.571	69,252	0.0	256	318,228	0.0

Total Concrete Fatigue, % = 0.0

Total Asphalt Fatigue, % = 6.6

Group 1, E

Axle Load, kips	Critical Concrete Stresses and Asphalt Strains						Expected Repetitions	Concrete Fatigue Analysis			Asphalt Fatigue Analysis		
	Load Induced		Temperature Induced		Total			Concrete Stress Ratio	Allowable Repetitions, N	Fatigue Percent, %	Asphalt microstrain	Allowable Repetitions, N	Fatigue Percent, %
	Stress, psi	Microstrain	Stress, psi	Microstrain	Stress, psi	Microstrain							
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Single Axles													
le = 16.890 L/le = 3.730													
2	28	12	-199	132	-171	145	169	-0.237	unlimited	0.0	145	2,085,780	0.0
4	57	24	-199	132	-142	157	183	-0.198	unlimited	0.0	157	1,597,426	0.0
6	85	37	-199	132	-114	169	401	-0.158	unlimited	0.0	169	1,248,146	0.0
8	113	49	-199	132	-86	181	3,913	-0.119	unlimited	0.0	181	992,175	0.4
10	141	61	-199	132	-58	194	15,884	-0.080	unlimited	0.0	194	800,597	2.0
12	170	73	-199	132	-29	206	7,919	-0.041	unlimited	0.0	206	654,554	1.2
14	198	86	-199	132	-1	218	787	-0.001	unlimited	0.0	218	541,407	0.1
16	226	98	-199	132	27	230	1,350	0.038	unlimited	0.0	230	452,479	0.3
18	254	110	-199	132	56	242	852	0.077	unlimited	0.0	242	381,684	0.2
20	283	122	-199	132	84	255	166	0.116	unlimited	0.0	255	324,672	0.1
22	311	134	-199	132	112	267	20	0.156	unlimited	0.0	267	278,278	0.0
24	339	147	-199	132	140	279	4	0.195	unlimited	0.0	279	240,165	0.0
26	368	159	-199	132	169	291	1	0.234	unlimited	0.0	291	208,585	0.0
28	396	171	-199	132	197	304	0	0.274	unlimited	0.0	304	182,211	0.0
Tandem Axles													
4	34	10	-199	132	-165	143	47	-0.229	unlimited	0.0	143	3,239,560	0.0
8	68	21	-199	132	-131	153	2,832	-0.182	unlimited	0.0	153	1,736,294	0.2
12	102	31	-199	132	-97	163	6,556	-0.135	unlimited	0.0	163	1,402,489	0.5
16	136	41	-199	132	-63	174	6,581	-0.087	unlimited	0.0	174	1,147,699	0.6
20	170	51	-199	132	-29	184	6,071	-0.040	unlimited	0.0	184	950,078	0.6
24	204	62	-199	132	5	194	5,284	0.007	unlimited	0.0	194	794,601	0.7
28	238	72	-199	132	39	204	7,964	0.054	unlimited	0.0	204	670,716	1.2
32	272	82	-199	132	73	215	11,849	0.102	unlimited	0.0	215	570,867	2.1
36	306	92	-199	132	107	225	3,916	0.149	unlimited	0.0	225	489,555	0.8
40	340	103	-199	132	141	235	423	0.196	unlimited	0.0	235	422,714	0.1
44	374	113	-199	132	175	245	29	0.243	unlimited	0.0	245	367,295	0.0
48	408	123	-199	132	209	256	4	0.290	unlimited	0.0	256	320,985	0.0
52	442	133	-199	132	243	266	0	0.338	unlimited	0.0	266	282,005	0.0
56	476	144	-199	132	277	276	0	0.385	unlimited	0.0	276	248,977	0.0
60	510	154	-199	132	311	286	0	0.432	unlimited	0.0	286	220,818	0.0
64	544	164	-199	132	345	297	0	0.479	2,507,022	0.0	297	196,673	0.0

Total Concrete Fatigue, % = 0.0

Total Asphalt Fatigue, % = 11.0

Group 1, F

Axle Load, kips	Critical Concrete Stresses and Asphalt Strains						Expected Repetitions	Concrete Fatigue Analysis			Asphalt Fatigue Analysis		
	Load Induced		Temperature Induced		Total			Concrete Stress Ratio	Allowable Repetitions, N	Fatigue Percent, %	Asphalt microstrain	Allowable Repetitions, N	Fatigue Percent, %
	Stress, psi	Microstrain	Stress, psi	Microstrain	Stress, psi	Microstrain							
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Single Axles le = 16.890 L/le = 3.730													
2	28	12	-245	161	-217	173	338	-0.301	unlimited	0.0	173	1,159,930	0.0
4	57	24	-245	161	-189	185	367	-0.262	unlimited	0.0	185	926,569	0.0
6	85	37	-245	161	-160	197	801	-0.223	unlimited	0.0	197	750,863	0.1
8	113	49	-245	161	-132	210	7,826	-0.183	unlimited	0.0	210	616,213	1.3
10	141	61	-245	161	-104	222	31,768	-0.144	unlimited	0.0	222	511,407	6.2
12	170	73	-245	161	-75	234	15,837	-0.105	unlimited	0.0	234	428,691	3.7
14	198	86	-245	161	-47	246	1,574	-0.066	unlimited	0.0	246	362,596	0.4
16	226	98	-245	161	-19	259	2,701	-0.026	unlimited	0.0	259	309,189	0.9
18	254	110	-245	161	9	271	1,704	0.013	unlimited	0.0	271	265,597	0.6
20	283	122	-245	161	38	283	332	0.052	unlimited	0.0	283	229,687	0.1
22	311	134	-245	161	66	295	40	0.092	unlimited	0.0	295	199,856	0.0
24	339	147	-245	161	94	307	8	0.131	unlimited	0.0	307	174,884	0.0
26	368	159	-245	161	122	320	1	0.170	unlimited	0.0	320	153,831	0.0
28	396	171	-245	161	151	332	0	0.209	unlimited	0.0	332	135,965	0.0
Tandem Axles													
4	34	10	-245	161	-211	171	95	-0.293	unlimited	0.0	171	1,788,311	0.0
8	68	21	-245	161	-177	181	5,665	-0.246	unlimited	0.0	181	994,254	0.6
12	102	31	-245	161	-143	192	13,111	-0.199	unlimited	0.0	192	829,539	1.6
16	136	41	-245	161	-109	202	13,161	-0.152	unlimited	0.0	202	698,686	1.9
20	170	51	-245	161	-75	212	12,142	-0.104	unlimited	0.0	212	593,506	2.0
24	204	62	-245	161	-41	222	10,567	-0.057	unlimited	0.0	222	508,062	2.1
28	238	72	-245	161	-7	233	15,928	-0.010	unlimited	0.0	233	437,980	3.6
32	272	82	-245	161	27	243	23,698	0.037	unlimited	0.0	243	379,993	6.2
36	306	92	-245	161	61	253	7,831	0.085	unlimited	0.0	253	331,627	2.4
40	340	103	-245	161	95	263	846	0.132	unlimited	0.0	263	290,986	0.3
44	374	113	-245	161	129	274	59	0.179	unlimited	0.0	274	256,606	0.0
48	408	123	-245	161	163	284	7	0.226	unlimited	0.0	284	227,337	0.0
52	442	133	-245	161	197	294	1	0.273	unlimited	0.0	294	202,275	0.0
56	476	144	-245	161	231	304	0	0.321	unlimited	0.0	304	180,698	0.0
60	510	154	-245	161	265	315	0	0.368	unlimited	0.0	315	162,027	0.0
64	544	164	-245	161	299	325	0	0.415	unlimited	0.0	325	145,795	0.0

Total Concrete Fatigue, % = 0.0

Total Asphalt Fatigue, % = 34.2

Group 2, A

Axle Load, kips	Critical Concrete Stresses and Asphalt Strains						Expected Repetitions	Concrete Fatigue Analysis			Asphalt Fatigue Analysis		
	Load Induced		Temperature Induced		Total			Concrete Stress Ratio	Allowable Repetitions, N	Fatigue Percent, %	Asphalt microstrain	Allowable Repetitions, N	Fatigue Percent, %
	Stress, psi	Microstrain	Stress, psi	Microstrain	Stress, psi	Microstrain							
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Single Axles le = 16.890 L/le = 3.730													
2	28	12	85	-41	113	-29	761	0.157	unlimited	0.0	-29	unlimited	0.0
4	57	24	85	-41	142	-17	825	0.197	unlimited	0.0	-17	unlimited	0.0
6	85	37	85	-41	170	-4	1,802	0.236	unlimited	0.0	-4	unlimited	0.0
8	113	49	85	-41	198	8	17,609	0.275	unlimited	0.0	8	unlimited	0.0
10	141	61	85	-41	226	20	71,477	0.314	unlimited	0.0	20	1,394,626,305	0.0
12	170	73	85	-41	255	32	35,634	0.354	unlimited	0.0	32	291,053,084	0.0
14	198	86	85	-41	283	44	3,540	0.393	unlimited	0.0	44	101,138,197	0.0
16	226	98	85	-41	311	57	6,077	0.432	unlimited	0.0	57	45,502,139	0.0
18	254	110	85	-41	340	69	3,834	0.472	4,548,988	0.1	69	23,940,168	0.0
20	283	122	85	-41	368	81	748	0.511	468,301	0.2	81	13,991,818	0.0
22	311	134	85	-41	396	93	90	0.550	124,131	0.1	93	8,818,792	0.0
24	339	147	85	-41	424	106	19	0.589	41,647	0.0	106	5,883,557	0.0
26	368	159	85	-41	453	118	3	0.629	13,973	0.0	118	4,103,401	0.0
28	396	171	85	-41	481	130	0	0.668	4,688	0.0	130	2,965,577	0.0
Tandem Axles													
4	34	10	85	-41	119	-31	213	0.165	unlimited	0.0	-31	unlimited	0.0
8	68	21	85	-41	153	-21	12,745	0.213	unlimited	0.0	-21	unlimited	0.0
12	102	31	85	-41	187	-10	29,501	0.260	unlimited	0.0	-10	unlimited	0.0
16	136	41	85	-41	221	0	29,612	0.307	unlimited	0.0	0	unlimited	0.0
20	170	51	85	-41	255	10	27,320	0.354	unlimited	0.0	10	unlimited	0.0
24	204	62	85	-41	289	20	23,776	0.401	unlimited	0.0	20	1,297,827,367	0.0
28	238	72	85	-41	323	31	35,839	0.449	unlimited	0.0	31	341,155,872	0.0
32	272	82	85	-41	357	41	53,321	0.496	933,142	5.7	41	132,264,323	0.0
36	306	92	85	-41	391	51	17,620	0.543	151,441	11.6	51	63,435,421	0.0
40	340	103	85	-41	425	62	1,904	0.590	40,494	4.7	62	34,804,943	0.0
44	374	113	85	-41	459	72	132	0.638	10,889	1.2	72	20,953,383	0.0
48	408	123	85	-41	493	82	16	0.685	2,928	0.5	82	13,500,870	0.0
52	442	133	85	-41	527	92	2	0.732	787	0.2	92	9,162,059	0.0
56	476	144	85	-41	561	103	0	0.779	212	0.0	103	6,477,231	0.0
60	510	154	85	-41	595	113	1	0.827	57	1.1	113	4,733,225	0.0
64	544	164	85	-41	629	123	0	0.874	15	0.0	123	3,554,601	0.0

Total Concrete Fatigue, % = 25.6

Total Asphalt Fatigue, % = 0.1

Group 2, B

Axle Load, kips	Critical Concrete Stresses and Asphalt Strains						Expected Repetitions	Concrete Fatigue Analysis			Asphalt Fatigue Analysis		
	Load Induced		Temperature Induced		Total			Concrete Stress Ratio	Allowable Repetitions, N	Fatigue Percent, %	Asphalt microstrain	Allowable Repetitions, N	Fatigue Percent, %
	Stress, psi	Microstrain	Stress, psi	Microstrain	Stress, psi	Microstrain							
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Single Axles													
le = 16.890 L/le = 3.730													
2	28	12	72	-33	100	-21	254	0.139	unlimited	0.0	-21	unlimited	0.0
4	57	24	72	-33	128	-9	275	0.178	unlimited	0.0	-9	unlimited	0.0
6	85	37	72	-33	157	4	601	0.218	unlimited	0.0	4	unlimited	0.0
8	113	49	72	-33	185	16	5,870	0.257	unlimited	0.0	16	unlimited	0.0
10	141	61	72	-33	213	28	23,826	0.296	unlimited	0.0	28	457,826,627	0.0
12	170	73	72	-33	241	40	11,878	0.335	unlimited	0.0	40	139,583,116	0.0
14	198	86	72	-33	270	53	1,180	0.375	unlimited	0.0	53	58,426,535	0.0
16	226	98	72	-33	298	65	2,026	0.414	unlimited	0.0	65	29,365,662	0.0
18	254	110	72	-33	326	77	1,278	0.453	36,103,577	0.0	77	16,629,051	0.0
20	283	122	72	-33	355	89	249	0.492	1,119,730	0.0	89	10,241,387	0.0
22	311	134	72	-33	383	101	30	0.532	216,019	0.0	101	6,713,033	0.0
24	339	147	72	-33	411	114	6	0.571	69,361	0.0	114	4,617,136	0.0
26	368	159	72	-33	439	126	1	0.610	23,271	0.0	126	3,299,467	0.0
28	396	171	72	-33	468	138	0	0.650	7,808	0.0	138	2,432,470	0.0
Tandem Axles													
4	34	10	72	-33	106	-23	71	0.147	unlimited	0.0	-23	unlimited	0.0
8	68	21	72	-33	140	-12	4,248	0.194	unlimited	0.0	-12	unlimited	0.0
12	102	31	72	-33	174	-2	9,834	0.241	unlimited	0.0	-2	unlimited	0.0
16	136	41	72	-33	208	8	9,871	0.289	unlimited	0.0	8	unlimited	0.0
20	170	51	72	-33	242	18	9,107	0.336	unlimited	0.0	18	unlimited	0.0
24	204	62	72	-33	276	29	7,925	0.383	unlimited	0.0	29	434,873,690	0.0
28	238	72	72	-33	310	39	11,946	0.430	unlimited	0.0	39	158,393,169	0.0
32	272	82	72	-33	344	49	17,774	0.478	2,846,360	0.6	49	73,216,253	0.0
36	306	92	72	-33	378	59	5,873	0.525	273,804	2.1	59	39,204,886	0.0
40	340	103	72	-33	412	70	635	0.572	67,441	0.9	70	23,197,872	0.0
44	374	113	72	-33	446	80	44	0.619	18,136	0.2	80	14,755,484	0.0
48	408	123	72	-33	480	90	5	0.666	4,877	0.1	90	9,913,867	0.0
52	442	133	72	-33	514	100	1	0.714	1,312	0.0	100	6,953,059	0.0
56	476	144	72	-33	548	111	0	0.761	353	0.0	111	5,047,965	0.0
60	510	154	72	-33	582	121	0	0.808	95	0.2	121	3,770,495	0.0
64	544	164	72	-33	616	131	0	0.855	26	0.0	131	2,884,089	0.0

Total Concrete Fatigue, % = 4.4

Total Asphalt Fatigue, % = 0.1

Group 2, C

Axle Load, kips	Critical Concrete Stresses and Asphalt Strains						Expected Repetitions	Concrete Fatigue Analysis			Asphalt Fatigue Analysis		
	Load Induced		Temperature Induced		Total			Concrete Stress Ratio	Allowable Repetitions, N	Fatigue Percent, %	Asphalt microstrain	Allowable Repetitions, N	Fatigue Percent, %
	Stress, psi	Microstrain	Stress, psi	Microstrain	Stress, psi	Microstrain							
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Single Axles le = 16.890 L/le = 3.730													
2	28	12	32	-9	60	3	211	0.084	unlimited	0.0	3	unlimited	0.0
4	57	24	32	-9	89	16	229	0.123	unlimited	0.0	16	unlimited	0.0
6	85	37	32	-9	117	28	501	0.163	unlimited	0.0	28	470,115,402	0.0
8	113	49	32	-9	145	40	4,891	0.202	unlimited	0.0	40	142,180,621	0.0
10	141	61	32	-9	174	52	19,855	0.241	unlimited	0.0	52	59,258,592	0.0
12	170	73	32	-9	202	65	9,898	0.280	unlimited	0.0	65	29,704,360	0.0
14	198	86	32	-9	230	77	983	0.320	unlimited	0.0	77	16,790,211	0.0
16	226	98	32	-9	258	89	1,688	0.359	unlimited	0.0	89	10,326,970	0.0
18	254	110	32	-9	287	101	1,065	0.398	unlimited	0.0	101	6,762,340	0.0
20	283	122	32	-9	315	113	208	0.437	unlimited	0.0	113	4,647,387	0.0
22	311	134	32	-9	343	126	25	0.477	3,030,306	0.0	126	3,318,978	0.0
24	339	147	32	-9	372	138	5	0.516	380,010	0.0	138	2,445,576	0.0
26	368	159	32	-9	400	150	1	0.555	107,503	0.0	150	1,849,393	0.0
28	396	171	32	-9	428	162	0	0.595	36,068	0.0	162	1,429,493	0.0
Tandem Axles													
4	34	10	32	-9	66	1	59	0.092	unlimited	0.0	1	unlimited	0.0
8	68	21	32	-9	100	12	3,540	0.139	unlimited	0.0	12	unlimited	0.0
12	102	31	32	-9	134	22	8,195	0.186	unlimited	0.0	22	1,026,204,082	0.0
16	136	41	32	-9	168	32	8,226	0.234	unlimited	0.0	32	291,209,277	0.0
20	170	51	32	-9	202	43	7,589	0.281	unlimited	0.0	43	117,379,114	0.0
24	204	62	32	-9	236	53	6,605	0.328	unlimited	0.0	53	57,637,990	0.0
28	238	72	32	-9	270	63	9,955	0.375	unlimited	0.0	63	32,127,422	0.0
32	272	82	32	-9	304	73	14,811	0.423	unlimited	0.0	73	19,561,708	0.1
36	306	92	32	-9	338	84	4,894	0.470	5,294,953	0.1	84	12,711,979	0.0
40	340	103	32	-9	372	94	529	0.517	365,377	0.1	94	8,684,156	0.0
44	374	113	32	-9	406	104	37	0.564	83,781	0.0	104	6,172,121	0.0
48	408	123	32	-9	440	114	4	0.611	22,530	0.0	114	4,529,968	0.0
52	442	133	32	-9	474	125	1	0.659	6,059	0.0	125	3,414,351	0.0
56	476	144	32	-9	508	135	0	0.706	1,629	0.0	135	2,631,740	0.0
60	510	154	32	-9	542	145	0	0.753	438	0.0	145	2,067,628	0.0
64	544	164	32	-9	576	155	0	0.800	118	0.0	155	1,651,438	0.0

Total Concrete Fatigue, % = 0.4

Total Asphalt Fatigue, % = 0.3

Group 2, D

Axle Load, kips	Critical Concrete Stresses and Asphalt Strains						Expected Repetitions	Concrete Fatigue Analysis			Asphalt Fatigue Analysis		
	Load Induced		Temperature Induced		Total			Concrete Stress Ratio	Allowable Repetitions, N	Fatigue Percent, %	Asphalt microstrain	Allowable Repetitions, N	Fatigue Percent, %
	Stress, psi	Microstrain	Stress, psi	Microstrain	Stress, psi	Microstrain							
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Single Axles le = 16.890 L/le = 3.730													
2	28	12	-21	24	8	36	169	0.011	unlimited	0.0	36	207,906,348	0.0
4	57	24	-21	24	36	48	183	0.050	unlimited	0.0	48	78,975,436	0.0
6	85	37	-21	24	64	60	401	0.089	unlimited	0.0	60	37,418,882	0.0
8	113	49	-21	24	92	72	3,913	0.128	unlimited	0.0	72	20,365,028	0.0
10	141	61	-21	24	121	85	15,884	0.168	unlimited	0.0	85	12,189,711	0.1
12	170	73	-21	24	149	97	7,919	0.207	unlimited	0.0	97	7,820,340	0.1
14	198	86	-21	24	177	109	787	0.246	unlimited	0.0	109	5,289,324	0.0
16	226	98	-21	24	206	121	1,350	0.286	unlimited	0.0	121	3,729,342	0.0
18	254	110	-21	24	234	134	852	0.325	unlimited	0.0	134	2,719,244	0.0
20	283	122	-21	24	262	146	166	0.364	unlimited	0.0	146	2,038,399	0.0
22	311	134	-21	24	290	158	20	0.403	unlimited	0.0	158	1,563,926	0.0
24	339	147	-21	24	319	170	4	0.443	unlimited	0.0	170	1,223,838	0.0
26	368	159	-21	24	347	182	1	0.482	2,111,470	0.0	182	974,139	0.0
28	396	171	-21	24	375	195	0	0.521	312,262	0.0	195	786,952	0.0
Tandem Axles													
4	34	10	-21	24	13	34	47	0.019	unlimited	0.0	34	371,805,229	0.0
8	68	21	-21	24	47	44	2,832	0.066	unlimited	0.0	44	104,605,598	0.0
12	102	31	-21	24	81	54	6,556	0.113	unlimited	0.0	54	52,512,669	0.0
16	136	41	-21	24	115	65	6,581	0.160	unlimited	0.0	65	29,712,325	0.0
20	170	51	-21	24	149	75	6,071	0.207	unlimited	0.0	75	18,288,165	0.0
24	204	62	-21	24	183	85	5,284	0.255	unlimited	0.0	85	11,982,144	0.0
28	238	72	-21	24	217	95	7,964	0.302	unlimited	0.0	95	8,238,249	0.1
32	272	82	-21	24	251	106	11,849	0.349	unlimited	0.0	106	5,885,486	0.2
36	306	92	-21	24	285	116	3,916	0.396	unlimited	0.0	116	4,337,946	0.1
40	340	103	-21	24	319	126	423	0.444	unlimited	0.0	126	3,281,232	0.0
44	374	113	-21	24	353	136	29	0.491	1,224,531	0.0	136	2,536,754	0.0
48	408	123	-21	24	387	147	4	0.538	176,480	0.0	147	1,998,162	0.0
52	442	133	-21	24	421	157	0	0.585	46,615	0.0	157	1,599,543	0.0
56	476	144	-21	24	455	167	0	0.633	12,536	0.0	167	1,298,628	0.0
60	510	154	-21	24	489	177	0	0.680	3,371	0.0	177	1,067,498	0.0
64	544	164	-21	24	523	188	0	0.727	907	0.0	188	887,230	0.0

Total Concrete Fatigue, % = 0.0

Total Asphalt Fatigue, % = 0.9

Group 2, E

Axle Load, kips	Critical Concrete Stresses and Asphalt Strains						Expected Repetitions	Concrete Fatigue Analysis			Asphalt Fatigue Analysis		
	Load Induced		Temperature Induced		Total			Concrete Stress Ratio	Allowable Repetitions, N	Fatigue Percent, %	Asphalt microstrain	Allowable Repetitions, N	Fatigue Percent, %
	Stress, psi	Microstrain	Stress, psi	Microstrain	Stress, psi	Microstrain							
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Single Axles le = 16.890 L/le = 3.730													
2	28	12	-73	56	-45	68	127	-0.063	unlimited	0.0	68	25,000,016	0.0
4	57	24	-73	56	-17	80	138	-0.023	unlimited	0.0	80	14,515,692	0.0
6	85	37	-73	56	11	92	300	0.016	unlimited	0.0	92	9,104,850	0.0
8	113	49	-73	56	40	105	2,935	0.055	unlimited	0.0	105	6,051,904	0.0
10	141	61	-73	56	68	117	11,913	0.094	unlimited	0.0	117	4,208,430	0.3
12	170	73	-73	56	96	129	5,939	0.134	unlimited	0.0	129	3,034,241	0.2
14	198	86	-73	56	124	141	590	0.173	unlimited	0.0	141	2,253,395	0.0
16	226	98	-73	56	153	154	1,013	0.212	unlimited	0.0	154	1,715,326	0.1
18	254	110	-73	56	181	166	639	0.251	unlimited	0.0	166	1,333,320	0.0
20	283	122	-73	56	209	178	125	0.291	unlimited	0.0	178	1,055,134	0.0
22	311	134	-73	56	238	190	15	0.330	unlimited	0.0	190	848,070	0.0
24	339	147	-73	56	266	202	3	0.369	unlimited	0.0	202	690,979	0.0
26	368	159	-73	56	294	215	1	0.409	unlimited	0.0	215	569,790	0.0
28	396	171	-73	56	322	227	0	0.448	unlimited	0.0	227	474,901	0.0
Tandem Axles													
4	34	10	-73	56	-39	66	36	-0.055	unlimited	0.0	66	40,877,691	0.0
8	68	21	-73	56	-5	76	2,124	-0.008	unlimited	0.0	76	17,120,632	0.0
12	102	31	-73	56	29	87	4,917	0.040	unlimited	0.0	87	11,306,007	0.0
16	136	41	-73	56	63	97	4,935	0.087	unlimited	0.0	97	7,821,737	0.1
20	170	51	-73	56	97	107	4,553	0.134	unlimited	0.0	107	5,615,966	0.1
24	204	62	-73	56	131	117	3,963	0.181	unlimited	0.0	117	4,156,402	0.1
28	238	72	-73	56	165	128	5,973	0.229	unlimited	0.0	128	3,154,800	0.2
32	272	82	-73	56	199	138	8,887	0.276	unlimited	0.0	138	2,446,190	0.4
36	306	92	-73	56	233	148	2,937	0.323	unlimited	0.0	148	1,931,709	0.2
40	340	103	-73	56	267	158	317	0.370	unlimited	0.0	158	1,549,754	0.0
44	374	113	-73	56	301	169	22	0.417	unlimited	0.0	169	1,260,639	0.0
48	408	123	-73	56	335	179	3	0.465	8,528,720	0.0	179	1,038,044	0.0
52	442	133	-73	56	369	189	0	0.512	447,090	0.0	189	864,065	0.0
56	476	144	-73	56	403	199	0	0.559	96,447	0.0	199	726,250	0.0
60	510	154	-73	56	437	210	0	0.606	25,936	0.0	210	615,760	0.0
64	544	164	-73	56	471	220	0	0.654	6,975	0.0	220	526,213	0.0

Total Concrete Fatigue, % = 0.0

Total Asphalt Fatigue, % = 1.7

Group 2, F

Axle Load, kips	Critical Concrete Stresses and Asphalt Strains						Expected Repetitions	Concrete Fatigue Analysis			Asphalt Fatigue Analysis		
	Load Induced		Temperature Induced		Total			Concrete Stress Ratio	Allowable Repetitions, N	Fatigue Percent, %	Asphalt microstrain	Allowable Repetitions, N	Fatigue Percent, %
	Stress, psi	Microstrain	Stress, psi	Microstrain	Stress, psi	Microstrain							
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Single Axles													
le = 16.890 L/le = 3.730													
2	28	12	-126	88	-98	100	127	-0.136	unlimited	0.0	100	6,964,357	0.0
4	57	24	-126	88	-70	113	138	-0.097	unlimited	0.0	113	4,771,006	0.0
6	85	37	-126	88	-41	125	300	-0.058	unlimited	0.0	125	3,398,541	0.0
8	113	49	-126	88	-13	137	2,935	-0.018	unlimited	0.0	137	2,498,932	0.1
10	141	61	-126	88	15	149	11,913	0.021	unlimited	0.0	149	1,886,414	0.6
12	170	73	-126	88	43	161	5,939	0.060	unlimited	0.0	161	1,455,928	0.4
14	198	86	-126	88	72	174	590	0.100	unlimited	0.0	174	1,145,136	0.1
16	226	98	-126	88	100	186	1,013	0.139	unlimited	0.0	186	915,525	0.1
18	254	110	-126	88	128	198	639	0.178	unlimited	0.0	198	742,464	0.1
20	283	122	-126	88	156	210	125	0.217	unlimited	0.0	210	609,719	0.0
22	311	134	-126	88	185	223	15	0.257	unlimited	0.0	223	506,312	0.0
24	339	147	-126	88	213	235	3	0.296	unlimited	0.0	235	424,642	0.0
26	368	159	-126	88	241	247	1	0.335	unlimited	0.0	247	359,340	0.0
28	396	171	-126	88	270	259	0	0.374	unlimited	0.0	259	306,544	0.0
Tandem Axles													
4	34	10	-126	88	-92	98	36	-0.128	unlimited	0.0	98	11,036,282	0.0
8	68	21	-126	88	-58	109	2,124	-0.081	unlimited	0.0	109	5,362,318	0.0
12	102	31	-126	88	-24	119	4,917	-0.034	unlimited	0.0	119	3,984,641	0.1
16	136	41	-126	88	10	129	4,935	0.014	unlimited	0.0	129	3,034,647	0.2
20	170	51	-126	88	44	139	4,553	0.061	unlimited	0.0	139	2,359,797	0.2
24	204	62	-126	88	78	150	3,963	0.108	unlimited	0.0	150	1,868,108	0.2
28	238	72	-126	88	112	160	5,973	0.155	unlimited	0.0	160	1,501,967	0.4
32	272	82	-126	88	146	170	8,887	0.202	unlimited	0.0	170	1,224,087	0.7
36	306	92	-126	88	180	180	2,937	0.250	unlimited	0.0	180	1,009,641	0.3
40	340	103	-126	88	214	191	317	0.297	unlimited	0.0	191	841,683	0.0
44	374	113	-126	88	248	201	22	0.344	unlimited	0.0	201	708,389	0.0
48	408	123	-126	88	282	211	3	0.391	unlimited	0.0	211	601,346	0.0
52	442	133	-126	88	316	221	0	0.439	unlimited	0.0	221	514,461	0.0
56	476	144	-126	88	350	232	0	0.486	1,647,038	0.0	232	443,252	0.0
60	510	154	-126	88	384	242	0	0.533	207,211	0.0	242	384,372	0.0
64	544	164	-126	88	418	252	0	0.580	53,662	0.0	252	335,292	0.0

Total Concrete Fatigue, % = 0.0

Total Asphalt Fatigue, % = 3.6

Group 2, G

Axle Load, kips	Critical Concrete Stresses and Asphalt Strains						Expected Repetitions	Concrete Fatigue Analysis			Asphalt Fatigue Analysis		
	Load Induced		Temperature Induced		Total			Concrete Stress Ratio	Allowable Repetitions, N	Fatigue Percent, %	Asphalt microstrain	Allowable Repetitions, N	Fatigue Percent, %
	Stress, psi	Microstrain	Stress, psi	Microstrain	Stress, psi	Microstrain							
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Single Axles le = 16.890 L/le = 3.730													
2	28	12	-179	120	-151	133	127	-0.209	unlimited	0.0	133	2,780,543	0.0
4	57	24	-179	120	-123	145	138	-0.170	unlimited	0.0	145	2,080,445	0.0
6	85	37	-179	120	-94	157	300	-0.131	unlimited	0.0	157	1,593,657	0.0
8	113	49	-179	120	-66	169	2,935	-0.092	unlimited	0.0	169	1,245,414	0.2
10	141	61	-179	120	-38	181	11,913	-0.052	unlimited	0.0	181	990,150	1.2
12	170	73	-179	120	-9	194	5,939	-0.013	unlimited	0.0	194	799,066	0.7
14	198	86	-179	120	19	206	590	0.026	unlimited	0.0	206	653,376	0.1
16	226	98	-179	120	47	218	1,013	0.065	unlimited	0.0	218	540,487	0.2
18	254	110	-179	120	75	230	639	0.105	unlimited	0.0	230	451,751	0.1
20	283	122	-179	120	104	243	125	0.144	unlimited	0.0	243	381,101	0.0
22	311	134	-179	120	132	255	15	0.183	unlimited	0.0	255	324,200	0.0
24	339	147	-179	120	160	267	3	0.223	unlimited	0.0	267	277,891	0.0
26	368	159	-179	120	188	279	1	0.262	unlimited	0.0	279	239,847	0.0
28	396	171	-179	120	217	291	0	0.301	unlimited	0.0	291	208,320	0.0
Tandem Axles													
4	34	10	-179	120	-145	131	36	-0.202	unlimited	0.0	131	4,336,534	0.0
8	68	21	-179	120	-111	141	2,124	-0.154	unlimited	0.0	141	2,277,339	0.1
12	102	31	-179	120	-77	151	4,917	-0.107	unlimited	0.0	151	1,807,211	0.3
16	136	41	-179	120	-43	161	4,935	-0.060	unlimited	0.0	161	1,456,084	0.3
20	170	51	-179	120	-9	172	4,553	-0.013	unlimited	0.0	172	1,188,904	0.4
24	204	62	-179	120	25	182	3,963	0.035	unlimited	0.0	182	982,242	0.4
28	238	72	-179	120	59	192	5,973	0.082	unlimited	0.0	192	820,050	0.7
32	272	82	-179	120	93	202	8,887	0.129	unlimited	0.0	202	691,097	1.3
36	306	92	-179	120	127	213	2,937	0.176	unlimited	0.0	213	587,370	0.5
40	340	103	-179	120	161	223	317	0.224	unlimited	0.0	223	503,050	0.1
44	374	113	-179	120	195	233	22	0.271	unlimited	0.0	233	433,849	0.0
48	408	123	-179	120	229	243	3	0.318	unlimited	0.0	243	376,559	0.0
52	442	133	-179	120	263	254	0	0.365	unlimited	0.0	254	328,751	0.0
56	476	144	-179	120	297	264	0	0.412	unlimited	0.0	264	288,561	0.0
60	510	154	-179	120	331	274	0	0.460	14,905,471	0.0	274	254,546	0.0
64	544	164	-179	120	365	285	0	0.507	554,396	0.0	285	225,578	0.0

Total Concrete Fatigue, % = 0.0

Total Asphalt Fatigue, % = 6.7

Group 2, H

Axle Load, kips	Critical Concrete Stresses and Asphalt Strains						Expected Repetitions	Concrete Fatigue Analysis			Asphalt Fatigue Analysis		
	Load Induced		Temperature Induced		Total			Concrete Stress Ratio	Allowable Repetitions, N	Fatigue Percent, %	Asphalt microstrain	Allowable Repetitions, N	Fatigue Percent, %
	Stress, psi	Microstrain	Stress, psi	Microstrain	Stress, psi	Microstrain							
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Single Axles le = 16.890 L/le = 3.730													
2	28	12	-219	145	-190	157	254	-0.265	unlimited	0.0	157	1,601,205	0.0
4	57	24	-219	145	-162	169	275	-0.225	unlimited	0.0	169	1,250,885	0.0
6	85	37	-219	145	-134	181	601	-0.186	unlimited	0.0	181	994,206	0.1
8	113	49	-219	145	-106	193	5,870	-0.147	unlimited	0.0	193	802,132	0.7
10	141	61	-219	145	-77	206	23,826	-0.107	unlimited	0.0	206	655,734	3.6
12	170	73	-219	145	-49	218	11,878	-0.068	unlimited	0.0	218	542,329	2.2
14	198	86	-219	145	-21	230	1,180	-0.029	unlimited	0.0	230	453,209	0.3
16	226	98	-219	145	7	242	2,026	0.010	unlimited	0.0	242	382,269	0.5
18	254	110	-219	145	36	255	1,278	0.050	unlimited	0.0	255	325,145	0.4
20	283	122	-219	145	64	267	249	0.089	unlimited	0.0	267	278,664	0.1
22	311	134	-219	145	92	279	30	0.128	unlimited	0.0	279	240,485	0.0
24	339	147	-219	145	121	291	6	0.167	unlimited	0.0	291	208,851	0.0
26	368	159	-219	145	149	303	1	0.207	unlimited	0.0	303	182,433	0.0
28	396	171	-219	145	177	316	0	0.246	unlimited	0.0	316	160,211	0.0
Tandem Axles													
4	34	10	-219	145	-185	155	71	-0.257	unlimited	0.0	155	2,478,267	0.0
8	68	21	-219	145	-151	165	4,248	-0.209	unlimited	0.0	165	1,351,438	0.3
12	102	31	-219	145	-117	175	9,834	-0.162	unlimited	0.0	175	1,108,336	0.9
16	136	41	-219	145	-83	186	9,871	-0.115	unlimited	0.0	186	919,273	1.1
20	170	51	-219	145	-49	196	9,107	-0.068	unlimited	0.0	196	770,172	1.2
24	204	62	-219	145	-15	206	7,925	-0.020	unlimited	0.0	206	651,111	1.2
28	238	72	-219	145	19	216	11,946	0.027	unlimited	0.0	216	554,964	2.2
32	272	82	-219	145	53	227	17,774	0.074	unlimited	0.0	227	476,529	3.7
36	306	92	-219	145	87	237	5,873	0.121	unlimited	0.0	237	411,949	1.4
40	340	103	-219	145	121	247	635	0.168	unlimited	0.0	247	358,326	0.2
44	374	113	-219	145	155	257	44	0.216	unlimited	0.0	257	313,456	0.0
48	408	123	-219	145	189	268	5	0.263	unlimited	0.0	268	275,642	0.0
52	442	133	-219	145	223	278	1	0.310	unlimited	0.0	278	243,565	0.0
56	476	144	-219	145	257	288	0	0.357	unlimited	0.0	288	216,188	0.0
60	510	154	-219	145	291	298	0	0.405	unlimited	0.0	298	192,690	0.0
64	544	164	-219	145	325	309	0	0.452	45,047,007	0.0	309	172,415	0.0

Total Concrete Fatigue, % = 0.0

Total Asphalt Fatigue, % = 20.1