

# BEFORE WE DEVELOPED THESE PROBLEM-SOLVING TURFGRASS MIXTURES, WE MARCHED THROUGH ACRES AND ACRES OF PROBLEMS.

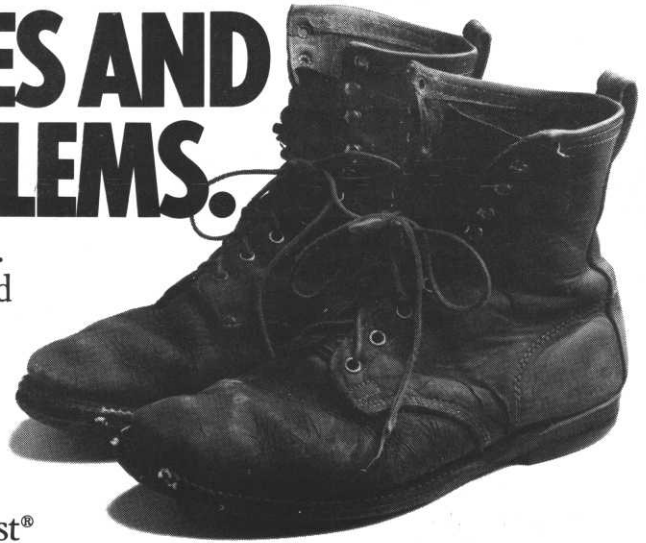
Nobody knows the troubles we've seen.

Our Northrup King turf specialists and researchers have hoofed through salt problems, soil compaction, disease, starved turf, baked turf, cleated-to-shreds turf, and dormant winter turf—all depressing sights. But it was a road well worth our travels.

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# HOLE NOTES

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## GCSAA IS EXPANDING

by KEITH SCOTT, CGCS  
MGCSA PRESIDENT

Thank you to all the clubs for hosting MGCSA's Third Annual Turfgrass Research Benefit Day and to the Golden Valley Country Club for the evening dinner. It is our hope that we will see larger numbers and equal enthusiasm for 1990. Watch for early announcements. Congratulations to Bill Johnson, Superintendent at the Edina Country Club, for carding a hole-in-one at the Oak Ridge Country Club during the event.

I recently received current information from the GCSAA and I would like to share it with you. GCSAA is experiencing tremendous membership growth with well over 8000 members and soon to reach 9000. Over 1000 superintendents are certified and that number continues to rise. This growth has necessitated GCSAA officials to build a new headquarters in 1990. It is projected that the current 42 full-time employees will have to be increased to approximately 65-70 over the next six years. With all the impending pesticide and chemical issues that we are facing, the GCSAA's Governmental Affairs Committee has already many of these key programs in place: educational seminars dealing specifically with the environment and chemicals, the compliance self-audit program, a solid relationship with the chemical companies, communication with the green industry (sod growers, arborists, lawn care, etc.), contacts with EPA, USDA, Congress and OSHA and specific research dealing with environmental concerns. GCSAA is definitely taking the leadership roll in addressing these issues.

Over sixty MGCSA members traveled to the Detroit Country Club for our June monthly meeting. Thanks to Superintendent Brad Klein, CGCS, to all the people at the Club for hosting the event and to the Turf Supply Company for the educational portion of the day.

## DEADLINE MOVED UP

In a move to try to get the *Hole Notes* out on time at the beginning of each month with a better quality, the Editorial Committee and the MGCSA Staff concluded that the Deadline of the 20th of each month will be moved up to the 15th of each month for Editorial contributions. The 20th remains the deadline for advertising.

# EVERYTHING YOU WANTED TO KNOW ABOUT STRESS AND MORE!

Second part of a two part series.

by John P. McNamara, M. D.

*Editor's Note -*

*Publication deadlines cause stress to editor's too, affecting our performance adversely. Our apologies to Dr. McNamara and readers for dropping the last sentence of part 1. The last paragraph of part 1 is repeated below along with part 2 of this fine article.*

Studies of top executives suggest that those in high-pressured jobs are often more able to handle stress than others. Perhaps this is due to the fact that those with the most skills in adapting to stress rise to the top-a Darwinian survival of the fittest. It is my own studies that suggest that the persons who face persistent and frequent stress, suffer the most stress-related damage in their jobs. The top executives may have high pressure jobs, but they also have unlimited resources (other people, committees, consultants) at their disposal. They can delegate away their pressures. They can achieve victory in their workplace. For those of less lofty position, there is no delegation of duty or responsibility. No matter how hard they work, nor how perfectly they complete their tasks, will they see victory. They rarely are commended and bonuses are unheard of. Crime and crisis prevails as policemen continue unrewarded. Gifted teachers are stressed to depression and illness by over crowded classes and unappreciative parents. The lack of recognition and reward coupled with the inability to escape job pressures through the delegation of responsibility naturally results in stress. Accidents, absenteeism, and alcoholism all arise from the inability of the body to adapt to such chronic and intense stresses.

## PART II

*In part I, Dr. McNamara discussed stress and how it affects us. Part II will define stress, identify its symptoms, and offer resolution of its effects.*

### DEFINITION OF STRESS

Stresses are social, psychological, or physical conditions to which we cannot readily adapt. This results in psychological or physiological tension that can lead to ill-

ness or death. Changes in our bodies or psyches are complex, but nevertheless the same regardless if the

perceived threat is physical (e.g. a bear is about to attack us) or psychological (e.g. we lose our jobs because the greens died). Bodily response is automatic and in most instances unconscious. The longer the wear and tear on the body and the emotions, the greater the chance of burnout and permanent damage. Temporary or transient rises in blood pressure due to intermittent stress may lead to sustained elevated blood pressure and vascular changes that reduce the ability of the person to adapt to future stress.

### SYMPTOMS OF STRESS

How we feel stress varies by age, sex, background, genes, social-cultural makeup, and the accumulated effects of the multiple and varied "wear and tear" stresses on our minds and bodies. Illnesses associated with stress range from heart attack and ulcers to depression, trauma, suicide, anxiety disorders, and chemical abuse. Even cancer can be caused by stress. Stress also leads to smoking and heavy drinking which in turn causes lung cancer and cancers of the throat, esophagus, and stomach. By impairing our bodies immune responses, stress not only limits our ability to reject these cancers but also limits our ability to fight infection and disease as well.

Stress creates vicious cycles. It often causes social isolation leading to depression causing more stress. People begin to skip meals, failing to ventilate their problems with others. Many of us subsequently fail to use this opportunity to discuss our problems with others, unaware of how often we do so in our daily lives. Our inability to let off steam at lunchtime, in our share-ride to work, or between lines at the bowling alley leads us to accumulated stress pressures which leads to unexplained anger or rage. This process causes strain at work and with our loved ones, increasing the amount of stress related problems in our lives. Impaired judgement and poor concentration soon follow and bring about accidents at home, on the highway, and at work. Intentional suicide behavior is not uncommon. Such chronic states of tension and frustration often lead to hypertension which likewise leads to heart attacks, disease, accidental injury, and highway fatalities.

### STRESSORS

Stresses vary depending upon each individual's personal coping skills, personal history, and available resources. A business loss of \$200,000 is obviously not as much stress to a multimillionaire as to a golf course manager who has borrowed it to improve his 18 hole course.

Stresses are not simply life events that are negative or positive in nature. There are continuing subtle pressures

# Turf Aerators from Toro



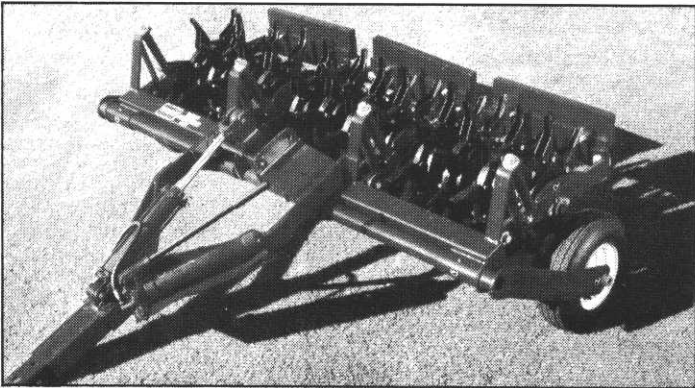
## Greens Aerator

Compare that to the competition. Toro keeps you way out in front because of its increased ground speed — and wider coring width. 13,000 square feet per hour means you'll do the job almost twice as fast as you're doing it today.



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The compact Turf Aerator 96 can be drawn by any 16-24 hp tractor with a Category 1, 3 pt. hitch. The 4 foot aerator will penetrate your hardest soil, helping to develop a good root system and healthier turf.

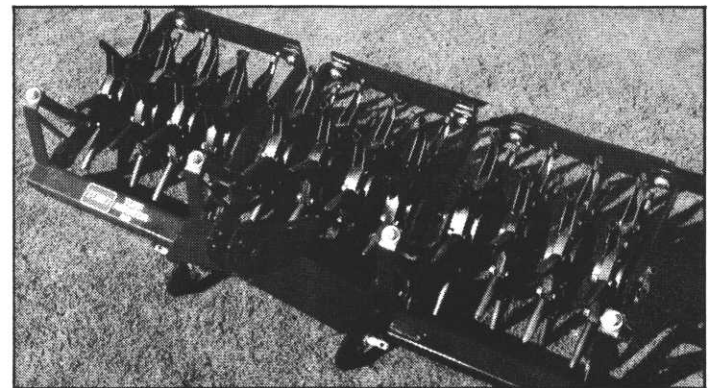


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Choose Toro's Turf Aerator 686 for an effective, efficient means to aerate those large area turfs.



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The Turf Aerator 687 has all the design features of the Turf Aerator 686 except it is designed for use with tractors having a Category 1, 3 point hitch. This tractor-drawn aerator efficiently aerates your large turf areas at speeds of up to 10 mph while aerating a 78" swath in one sweep.

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Your invited to our Golf September Appreciation day of Golfing and Fishing at the New Izaty's Golf and Yacht Club.

WHEN: Monday, Sept. 18, 1989

TIME: 8:00 a.m. to 8:00 p.m.

PLACE: Izaty's Golf and Yacht Club

WHAT: Golfing, Fishing and Dining

**Don't miss a fun relaxing day!"**

More details will be mailed later.

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that envelop and devour us, testing the fiber of which we are made. Crowded cities, noise and air pollution, isolation, loneliness, and the constant bad news reported daily in the media presses in on us and takes its toll. These, coupled with the threat of AIDS, nuclear holocaust, and health worries, all add up. All are stresses that may one day break the proverbial camel's back. We then find ourselves shouting, "Stop the world,... I want to get off!", but most of us don't. Why don't we succumb to these pressures?

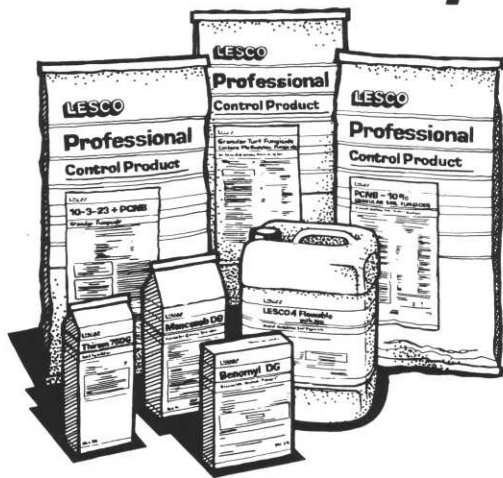
The Chinese sign for crisis is a combination of two characters; one is the character for DANGER and the other is the character for OPPORTUNITY. In fact, there is an old Chinese proverb: "Welcome Crisis". Crisis and stress allow us to see in bold relief that which creates who we are... what our needs are, what our vulnerabilities are, and what we could become if we are able to make stress work for us rather than against us. Freud stated that stress to the personality allows us to better understand ourselves, much as a crack in fine china delineates its structure. At a time of stress, we better comprehend the biological, psychological, social, and existential parameters that combine and converge to define us. This allows an understanding of ourselves that would not exist if not for stress. Our challenge is to seize the opportunity for growth and actualize what would have never been possible if the crisis had not occurred. Bernard Shaw

taught us the lost opportunity is life's greatest hell. We must learn to savor the opportunity afforded by an entangled marriage, a complicated merchandising task, or a life-threatening illness to learn more of why we act as we do, and with such knowledge obtain more of what is consistent with our goals and values.

This can be done. Successful people will tell you it is their secret. Emotional fires that cause burnout can also fuel success. The effect depends on how well we handle it. Expending maximum energy to master challenging tasks increases wear and tear on the body and mind, but it also enhances self-esteem, self-respect and a feeling of control over our lives. Competitive, hardworking, ambitious people respond to the positive aspects of stress. The trouble with stress success is that the formula is often the same for a nervous breakdown or a heart attack. We must learn to recognize stress and use it to our advantage. We must learn how to vent the negative aspects of stress through other people and learn how to delegate responsibility. Stress is all around us. Recognition and management is the key for survival!



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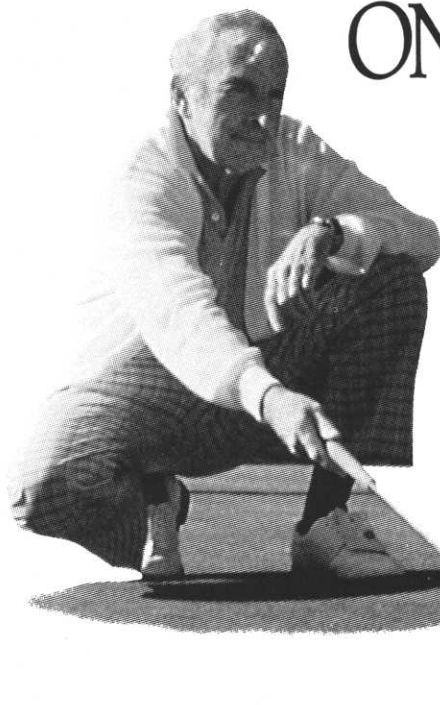
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Dollar spot	1 oz.	28 days	April-May through September
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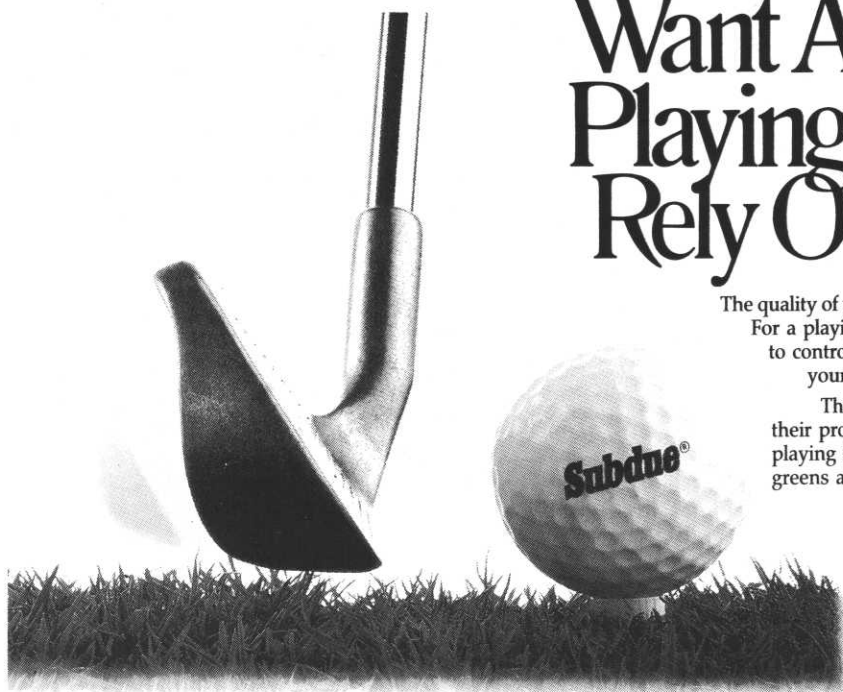
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# OVERLAYING PEAT

## A SECOND LOOK AT

### USING A GEOTEXTILE FABRIC

by ANDY LINDQUIST, Brookview Golf Club

In 1984 an extensive overlay project using a geotextile fabric (a very tightly knit plastic fiber that resembles burlap) was installed under fairways 1,2,9,14,15 and 18 at Brookview Golf course. In 1985 I wrote an article for the **HOLE NOTES** detailing the construction sequence and ended with the assessment that: "Does it work?...yes, but time will be the final judge. Now, three plus years later I thought I would review the project, its results and other things I've learned from using this type of construction fabric.

The area of concern contained various amounts of peat ranging from a few feet to 30+ feet in depth. The "standard" method of reconstruction was to remove all peat down to a solid subsurface and then fill with a suitable material. For small volumes of work this works out just dandy. However, when 20 acres are involved (about 300,000 cubic yards of peat are to be removed) the cost of trucking the material off site goes right out the door and overlay with fabric is considered.

Peat is a very low density material that can hold large quantities of water. Anything denser (almost any suitable soil) will sink into or compress it. The speed of this movement is dependent upon the quality of peat that you're working with. The more fibrous (brown) it is, the more it will compress and the more decomposed (black) it is, the more it will "squish" to the sides and the less useful it is (i.e. the brown fibrous peat can be mixed with the overlay material to develop a better physical overlay whereas the black peat won't mix well and will create a very physically clogged overlay). Also by mixing the brown peat with the overlay, you won't need to haul in as much overlay. Since the denser overlay material will sink and mix into the peat you want to use a fabric to maintain the physical separation of the "good" overlay material from the "bad" peat. The fabric and overlay will not move as a uniform mass and you will get variable compression dependent upon the peat density (which means you will have to "surcharge" the area with the overlay material...let it sit for two or three weeks and then relevel and final grade).

Steps that we have used in installation of the fabric are as follows:

1. **HAUL ROADS:** You will want to create haul roads on top of the peat to get the overlay material on site. Using the fabric gravel on top of the spread out

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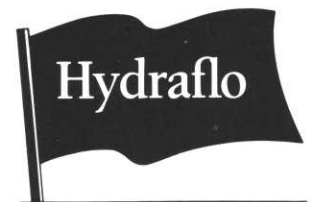


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**Gregory E. Wahl**  
Turf Sales Supervisor  
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fabric. Now you have yourself a road that will hold up the heaviest of trucks.

2. **CAP ENTIRE PROJECT:** It is very important to first apply a layer of fabric and overlay material over the entire project so you can get a uniform compression (surcharge).

Point in case: We remodeled our Par 3 Course in '88 in areas of very deep peat depths and very soft peat (black muck). We didn't "cap" the project first (tried to save a step) and proceeded in one of our areas to dump 32 ft. of fill to get a surface grade change to 4 ft. Oh, ya, we also raised an adjacent pond bottom up 10 ft higher than where it had been! The fill cut through the peat like a punch and that surcharge pressure popped up at the closest point of relief. Things do move if you don't cap first.

3. **SURCHARGE TIME:** The added weight (surcharge) will compress the peat to about 30 to 50% of its original volume (dependent upon the peat quality..brown peat compresses a lot more than black peat). Most of the erratic compression occurs within the first three weeks and will settle down to a slow and uniform "sinking" after that time. Once the initial rapid movement is over with you can come back and concentrate on the

areas that you will be placing deeper overlay material on and figure in those areas you will get an additional 10% compression (i.e. 6 ft. of additional overlay placed on an area that was capped will give you a final grade change of 5 1/2 ft...the other 1/2 ft. will be compressed into the peat). Again, this will vary with peat quality and overlay density.

4. **Don't destroy the integrity of the overlay fabric.** Cutting through for irrigation or tree installation will create point at which the underlying peat (which is pressurized due to surcharging) will bubble up and create nasty little humps.

Now, long term results: Peat will "mogel" up and down with frost movement and moisture content. The overlaying eliminates the severity of the humps but you still do get some gentle "waves" over an entire area (but not much more than 3" over an 100 foot distance). It is important to note that if you planned your drainage of the previous area to be at a 2% slope the 3" movement will create "pockets" to catch water... the solution is to establish a minimum of a 4% slope in all areas to ensure drainage.

Does the overlay work? Yes, with proper installation and a very close look at what type of peat you have, it will work.

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## THE EXTENSION LINE

Bob Mugaas of the University of Minnesota Extension Service is a regular contributor to Hole Hotes. As Hennepin County Extension Agent, Mr. Mugaas compiles various articles related to the golf field for our information. Bob is an excellent source for answers to many questions on horticultural problems. He may be reached at 542-1420. Written requests should be sent to:

**Bob Mugaas**  
Minnesota Extension Service-Hennepin County  
701 Decatur Ave. N.  
Suite 105  
Minneapolis, MN 55427

This month's articles cover Tree Mulch, Tree Stress, and Verticillium Wilt.

### MULCHING TREES AND SHRUBS - ADVANTAGES & DISADVANTAGES

by **Thomas L. Green**  
MORTON ARBORETUM

Mulch has been defined as "any material used at the sur-

face of soil primarily to prevent loss of water by evaporation, to keep down weeds, to dampen temperature fluctuations or to promote soil productivity." Organic mulches include a full range of organic and inorganic materials. Organic mulches include leaves, wood chips, bark, sawdust, perennial groundcovers, peatmoss, moss, lawn clippings, hay, straw, nut shells, grain hulls, corn cobs, mushroom compost, manure, conifer needles, newspaper, sludge, and numerous other organic by-products. Inorganic mulches include polyethylene, river stone, crushed rock, volcanic rock, crushed bricks, ground tires, aluminum foil, asphalt, synthetic fabrics, and numerous other materials.

When mulches are used correctly they can greatly enhance plant growth and make the landscape more attractive. Incorrectly used, mulches can be harmful to plant health.

#### Part I: ADVANTAGES

Plants grow best when conditions are favorable for root growth. Mulches can enhance root growth by creating a favorable microclimate in the rhizosphere and improving the physical, chemical, and biological properties of the soil.

**Favorable Microclimate.** Few people water established trees and shrubs sufficiently during dry periods. Mulch --

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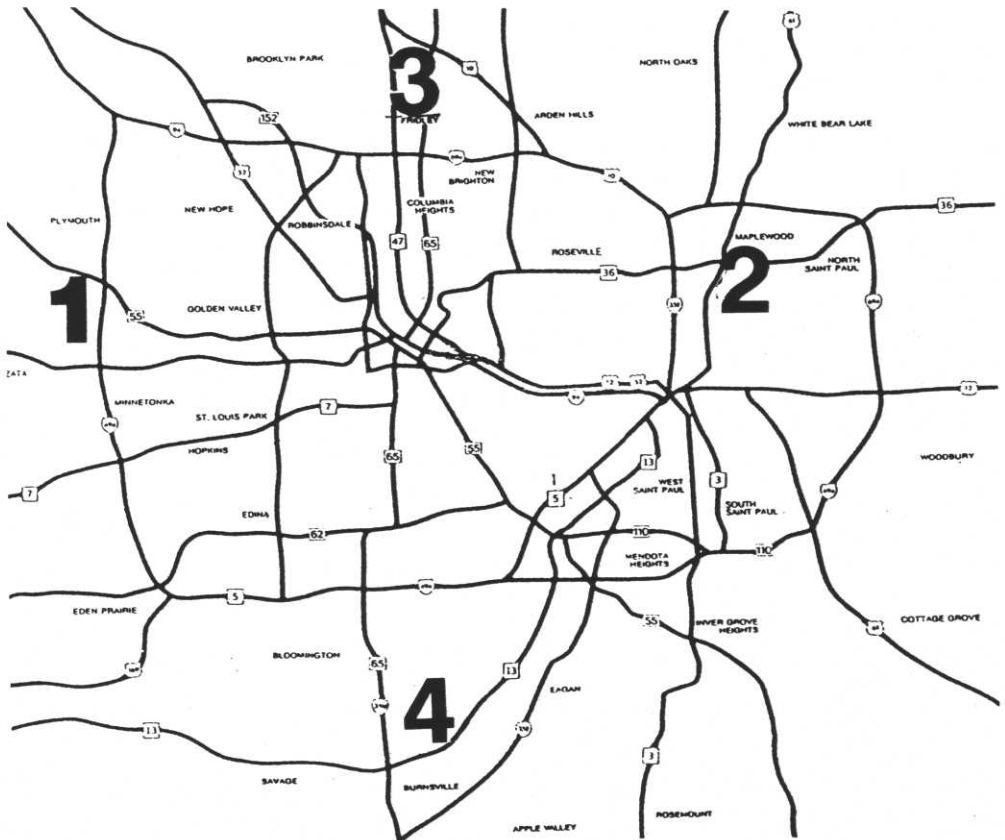
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