KEEP GREENS, FAIRWAYS
in Championship Form
with
PMAS

REMEMBER - There is only ONE
the original, patented product
of W. A. CLEARY CORPORATION

Apply PMAS early for dual control of BOTH disease and Crabgrass. PMAS has stood the test of time... the genuine PMAS has demonstrated its worth, over the years, to the golf course superintendent and is now an established control chemical for BOTH disease and Crabgrass on courses in all parts of the country. Be safe, be sure... if PMAS does not appear on the label it is not the genuine PMAS, patented and manufactured by W. A. Cleary Corporation.

THIMER
Fungicide combines Thiram and Organic Mercury in a wettable powder. Treats fungus diseases, like Snow Mold.

AMA
Amine Methylarsonate, liquid, for Crabgrass and Dallisgrass control.

MCPP
For weed control on bentgrass greens and fairways; bluegrass and fescues.

25% GRANULAR
CHLORDANE
pre-emergence control of Silver Crabgrass, grubs, insects.

SPOTRETE
75% Dry Thiram Fungicide

CADDY
Liquid Cadmium for Turf Disease

METHAR
Lightest concentration of DSMA-Disodium Methylarsonate for Crabgrass and Dallisgrass in both liquid and powder.

PM2,4-D
Phenyl mercury-2, 4-d dichlorophenoxyacetate for selective weed control.

ALL-WET
makes water "wetter" for better penetration in all turf areas, especially thatched or compacted spots.

AMA2, 4D
Amine Methylarsonate plus 2, 4-D liquid for Dallisgrass and weed control.

May, 1964
For Those Sessions with the Batter-Boards

How To Square Up For A Building Foundation

It is estimated that in a year's time one out of five supts. is called upon to supervise construction of some kind of a building. It may be a shelter, small service building, halfway house or, at some clubs, even a large maintenance building. Usually these projects are taken in stride after the initial layout is made. But it is this same layout that so often proves to be the stumbling block. Getting a building site squared up may be the most difficult thing about the entire construction job. This article is presented with the intent of helping the supt. to overcome this initial obstacle with a minimum amount of expense.—Ed.

By SIDNEY C. SAILOR
Civil Engineer

Many things have to be considered before construction of a building is started. These include the size of the structure, location, type of construction, floor elevation and similar factors. The location of a building usually is referenced to an existing building, street, lot line or some other convenient object. After this is done, a scaled sketch of the foundation floor plan of the new building should be made, with the direction and distance of the reference points being noted on the plan.

Construction of a building actually starts with the laying out of its dimensions (usually the outside ones) on the ground. It is very important to have all angles square and all linear measurements accurate. We will assume that you do not have a transit available, or are not familiar with the use of this instrument since it is an engineer’s tool. As a substitute, we recommend the batter-board method of squaring up a building.

These Tools Are Needed

In the batter-board method of layout the following tools and miscellaneous equipment are needed: A one-hundred foot steel tape, a carpenter's level, good, strong builder's twine, a carpenter's rule, hammer and nails, a maul or heavy hammer for driving stakes, one-inch boards each at least six feet long and stakes. It's important to have all batter-boards at the same elevation.

There are two methods of transferring elevation. One is the transit-level method, the most accurate, but we are ruling this out because transit-levels often are hard to come by. In the second and more practical one, a 40- or 50- foot piece of garden hose is used. This embodies the principle of water seeking its own level and is explained in Figure 2.

The actual laying out and squaring up of a building site is essentially a simple job. But it is a rather tedious one and care must be taken in making accurate
There's just no hiding the fact that FLINTITE asbestos-cement pipe is your best buy. FLINTITE is backed by two nationally known names: Flintkote which has had manufacturing experience with asbestos and cement for more than a quarter of a century; and Orangeburg which has had an outstanding reputation in the pipe field since 1893.

But FLINTITE is not all we have—we make a complete pipe package that includes PVC Plastic Pipe for intermediate mains or complete systems; SP Polyethylene Pipe for tee and green lines or par 3 courses; and Orangeburg® Underdrain for drainage of greens and fairway wet spots.

Yes, we make superior pipe for all underground turf services—every pipe you need for a first-class irrigation installation. For more details, write to Dept. G-4.

FLINTITE asbestos-cement pipe is being produced at our new plant in Ravenna, Ohio.

Orangeburg Manufacturing Co., Div. of The Flintkote Co., 30 Rockefeller Plaza, New York 10020
After the building is checked and found to be square, the points of intersection for the building lines (see Detail A) are transposed to the ground line. A nail in the top of the stake designates the exact intersection.

To extend the line, A-B, past the batter boards the following steps should be taken.

1. Tie one end of the builder's twine to the nail on the top of the stake marked '2';
2. Extend the line past Stake 1;
3. Pull the line very tight and draw up to touch the nail driven in top of Stake 1;
4. Any point on this tight line lies on or is an extension of line A-B. This can be done to extend any line;
5. A certain amount of care has to be taken because the wind will blow the line and may possibly cause some error.

Measurements which incidentally, should be re-checked several times. Referring to Figure 1 again, the layout should be made in these steps:

1. Locate the corners of the building by using a steel tape. This is only to help locate the batter-boards and need not be 100 per cent accurate;
2. Drive three stakes in a triangular pattern (Figure 1) around each of the temporary corners of the building. These should be from four to six feet beyond the building line. The stakes should extend at least two feet above the ground;
3. Nail the two batter-boards to one set of stakes, as shown in Detail A. Use a carpenter's level here to make sure that the boards are level;
4. Install the batter-board setup at the other three corners of the building. Once again, be sure that all the boards are level and at the same elevation. Use the method described in Fig. 2 in transferring the correct elevation to all batter-boards. The stakes should be securely anchored. In nailing the batter-boards to them, use your maul, as a back-up so the stakes are not jarred loose while nailing;

Base Line Established

5. Re-measure accurately from the reference line and mark the tops of the batter-board. You now have two points (A and B) accurately positioned with respect to the reference line. A line tightly drawn between these two points will be the base line of the building. This line is not changed during the squaring off process;
6. Accurately re-measure from the reference point and locate a point (C) on
Only the RYAN GREENSAIRE gives you superfine aerating!

- more cores—36—per sq. ft.
- every core over 3" deep
- evenly spaced cores on 2" centers

The self-propelled Ryan Greensaire will help you build your greens to tournament quality—and keep them that way—the first year you use it. Greensaire aerating is thorough: 36,000 evenly spaced cores per 1,000 sq. ft.—all over 3" deep! Play can resume as soon as wind-rowed cores (optional attachment) are raked away or cores are crumbled into top dressing (use the Ryan Mataway for this). The Greensaire covers up to 100 sq. ft. per minute so the average green is ready to play again in less than 2 hours. Transport speed is 3½ mph from green to green. And the Greensaire has earned a world-wide reputation for superfine aerating—plus trouble-free maintenance!

See how Ryan units team up to do more jobs: apply top dressing, turf builder, or fertilizer with the self-propelled Ryan Spread-Rite immediately after aerating. Exclusive “live action” hopper (7 cu. ft.) handles all materials, damp or dry, spreads an even 39" swath in precise thicknesses to ½". See your Ryan distributor or write:

Ryan EQUIPMENT COMPANY
2055 WHITE BEAR AVE., ST. PAUL, MINN., 55109

AERATORS, RENOVATORS, VERTICAL MOWERS, SPREADERS, ROLLERS, AND SOD CUTTER
Fig. 2 — This shows a method of leveling one point with respect to another. It consists of a length of ordinary garden hose with a one-foot length of clear plastic hose attached to each end. Point A is the reference elevation. All other batter boards must be placed at the same elevation as the batter board at point A.

Hold the hose as shown here and fill with water so that the water line may be seen in the clear plastic sections of the hose.

By trial and error, these points can be moved until the diagonals are equal. This should require no more than three or four movings;

**Transpose Corners**

11. Use a plumb-bob or a carpenter's level to transpose the corner of the rectangle to the ground level. (See intersection of A-B and C-G in Detail A;

12. Reference the lines that extend beyond the batter-boards by use of the taut line method, explained in Figure 1. We suggest putting in these secondary stakes just in case the batter-board stakes are distributed when the building excavation is made.

If your building is not rectangular in shape but is, say, such as an L-shape structure, the procedure described here can be used by breaking down the overall floor plan into a series of rectangular shapes.

**18 GCSA Committees**

David Moote of Toronto, Can., president of the GSCA, recently appointed 18 committee chairmen to direct various activities of the association. The committees aid in all GCSA activities ranging from internal matters to those dealing with other organizations and groups in golf, turfgrass and related industries.
HOW TO BUILD HEALTHY GREENS WITH TURFACE®

TURFACE is a soil additive which works mechanically rather than chemically in a soil mix. Properly applied, it keeps greens healthy by 1) providing aeration, 2) retaining moisture, and 3) assisting drainage. It prevents compaction and waterlogged greens. Here's how it's applied when building or rebuilding a green:

Turfase is dumped with fill dirt in a proportion of about 1 to 3.

Next, it is mixed. A farm harrow breaks up soil chunks and works Turface in.

After topsoil has been laid, additional Turface is worked in by discing.

Using a drag, the treated topsoil is levelled before seeding or sodding.

Find out how TURFACE can help give you the healthiest greens year round. Call your Wyandotte representative or write us today.
the most useful 18 horses you can own!

NEW! CUSHMAN TURF-TRUCKSTER®

the multi-purpose grounds maintenance vehicle for golf courses...developed and made by Cushman, world leader in golf course transportation!

This new Turf-Truckster has 18 hp OMC air-cooled engine with 6-speed dual-range drive which gives you the proper speed and power for every job on the turf. Equipped with a variable-speed fast-acting governor this Turf-Truckster responds instantly to any load change. Big 9.50 x 8 Terra Tires on the rear provide great lugging capacity and prevent damage to the turf. Optional power take-off can be used as auxiliary power source for operating accessory equipment such as compressors, generators, sprayers. Stellite valves and rotators insure long engine life.
CUSHMAN TURF-TRUCKSTER HELPS YOU DO ALL THESE JOBS FASTER AND CHEAPER:

SPRAYING. Built especially for spraying greens, this boom sprayer covers 16-foot wide strip thoroughly and evenly, is operated by Truckster engine through power take-off. Boom and spray rig can be removed in minutes.

PULLING MOWERS. Turf-Truckster's terrific lugging capacity gives it all the uses of a tractor. Big tires give plenty of traction, will not damage turf. Variable speed governor insures steady even pull with heavy loads.

NIGHT WATERING. Load the sprinkler heads into your big Cushman Truckster and start out. Big 9.50 x 8 tires allow Truckster to drive freely, even on wet fairways.

SPREADING FERTILIZER. Truckster's power take-off operates this Cyclone spreader as well as many other power-operated tools. Spreads evenly, heavy or light as you wish.

CARRY GREENS MOWERS. Greens mowers fit easily into large pickup box. There's no time lost between greens; just roll the mowers up into the Truckster bed and go on to the next green.

USE THIS COUPON TO GET COMPLETE INFORMATION

Cushman Motors,
923 N. 21st, Lincoln, Nebraska

Please send me complete information about the Cushman Turf-Truckster.

Name ____________________________
Address ____________________________
City ____________________________ State ________

SEE YOUR CUSHMAN DEALER FOR A FREE DEMONSTRATION OR WRITE DIRECT FOR COMPLETE INFORMATION!

CUSHMAN MOTORS
"the big name in little wheels"

922 NORTH 21ST STREET, LINCOLN, NEBRASKA • A DIVISION OF OUTBOARD MARINE CORP.

May, 1964
During their spring meeting in 1962, the board of directors at North Oaks GC, a private club located in suburban St. Paul, decided that their golf course would be more beautiful with additional trees. Questions arose, however, as to how to raise the necessary funds to buy the trees, and how to get them planted. Typical answers to these questions might have been, “Assess the membership,” and “Let the supt. handle it.” North Oak’s board, however, had a different answer.

In order to raise the necessary funds and induce volunteer planters, the board decided to hold a tournament. Entries would be limited to members who agreed to donate their time or money to the project.

Restricted to 100

Whatever amount of time or money the member wished to contribute would entitle him to an entry. The tournament was to be called, “The Tree Planting Open,” and it would be held on a Saturday in early May. The board decided to restrict the entry to 100 members and to close the course until all the trees were planted and the tournament was completed.

The board set 1200 three-year old pine trees as its goal and agreed to pay the difference from the total cost of the trees and the contributions from the entries.

A “landscape committee” was appointed to contact the 260 golfing members. Letters were sent a month in advance to tell each member of the project and tournament and to appeal for a donation of either time or money.

Donate Money and Labor

In less than two weeks, the Board had received about $400 from the first 100 entries. Three-fourths of the entrants also offered their time to plant the trees. Approximately 1200 pine trees of various types including Austrian, Norway, Ponderosa, White and Colorado and Black Hills Spruce were purchased from a local nursery for $558.00. Since actually $389.00 had been contributed, the cost to the board was $169.

On the day before the tournament, the supt. and his staff placed stakes at the spots where the trees were to be planted. The length of the hole and its need for trees determined the number of trees to be planted on each hole.

On Saturday morning, a 7:30 breakfast was held in the clubhouse. From the list of volunteers, the Board had chosen 18 captains, one for each hole on the course. A captain was assigned one planter for each 16 trees he had to plant. Each captain was given his allotted number of