



Keuffel & Esser Company

82 0020

Weatherproof Field Book

"Rite in the Rain"

ALL-WEATHER WRITING PAPER



"Rite in the Rain" - A unique All-Weather Writing Paper created to shed water and enhance the written image. It is widely used throughout the world for recording critical field data in all kinds of weather.

"Rite in the Rain" All-Weather Paper
32 Leaves

4⁵/₈" X 7"

NOV. 30, 1992

- 8:00 AM -

9:30 MET WITH CONTRACTOR, WENT OVER
WHAT TREES TO TAKE OUT.
THE PLAN IS TO TAKE OUT THE DECK
TODAY. CALLED RD DEPT TO GET
BARRICADES TO CLOSE ROAD.

LEFT AT 9:45-

TOTAL ~~MI~~ MILES - 46 TIME -

LEFT OFFICE 8:00 AM RETURNED 10:30 AM

1:43 PM CUT TREES ON SE SIDE OF
BRIDGE. NO ONE AT SITE

ROAD CLOSED SIGNS IN PLACE

LEFT SITE AT 2:30 PM NO ONE

SHOWED UP.

1:30. 3:00 MILES 46

DECEMBER 1, 1992

ARRIVED AT THE SITE 1:30 PM. NO ONE WORKING TODAY. YESTERDAY CONTRACTOR FINISHED REMOVING TREES AND TORE OUT OLD DECK. OLD DECK AND TIMBERS PLACED IN FRONT OF THE STREAM. A SMALL TELEPHONE OR T.V. LINE THAT WAS ATTACHED TO THE BRIDGE WAS BROKEN.

LEFT SITE AT 1:45 PM ROAD CLOSED SIGNS IN PLACE.

1:00 - 2:15

MILES: 33

DEC. 2, 1992

ARRIVED AT 9:30 AM. JOHNSON'S BACKHOE WAS HERE. BEGAN TO CLEAN-UP AROUND THE AREA.

DISCUSSED WITH VON KREBS ABOUT USING TYPE 3 CONC. IN FOOTINGS. I TOLD HIM AS LONG AS THE STRENGTH IS THE SAME IT WOULD BE OKAY. U.S. WEST MAN CAME TO REPAIR BROKEN PHONE LINE. ASKED CENDY TO CHECK IF AN ENCROACHMENT PERMIT HAD BEEN TAKEN OUT. HAD JIM CHECK ON PROPERTY OWNERS TO GET PERMISSION TO CROSS THEIR LAND WITH THE BACKHOE. NO CONTACT COULD BE MADE.

2:00 PM BEGAN TO DIG NORTH FOOTING. *SEE DRAWING NEXT PAGE FOR LAYOUT OF FOOTING EXC.

SINCE NO CONTACT WITH THE PROPERTY OWNERS WAS MADE IT WAS DECIDED TO NOT CROSS THEIR PROPERTY.

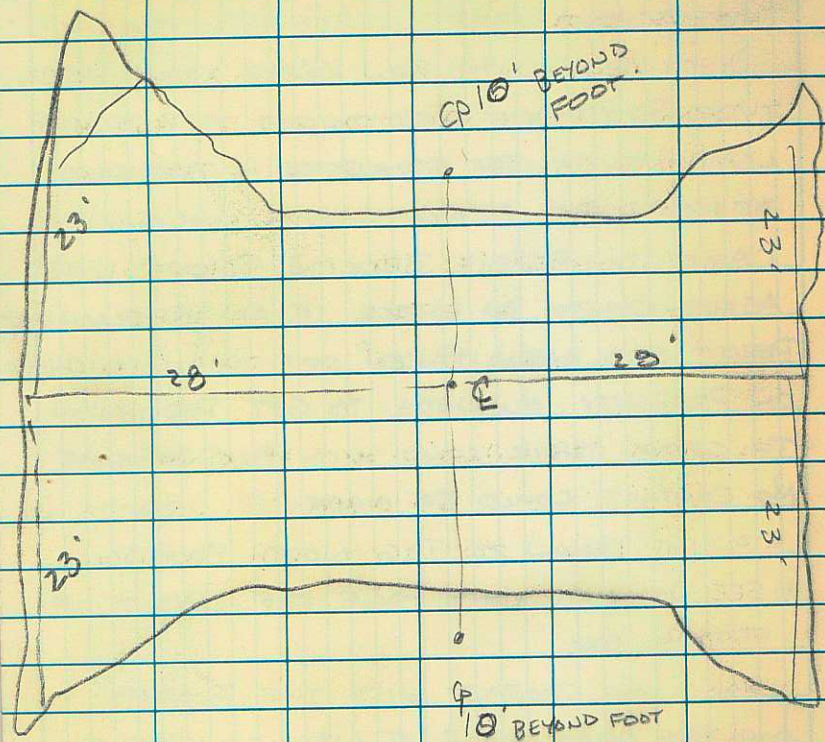
CONTINUED TO DIG OUT NORTH FOOTING

LEFT SITE AT 3:15

TIME = 9:00 AM - 3:45 PM

MILEAGE = 35

- EXC. LAYOUT -



DEC. 3, 1992

26° SNOWING HEAVILY -

ARRIVED AT SITE 9:30 AM. BEGAN PUMPING FOOTING AREA.

SET FOOTING FORMS. BEGAN TO TIE REBAR. ORDERED CONCRETE FOR 2:00 TODAY. (6 1/2 YDS, TYPE 3, 2" SLUMP HOT WATER) FROM JOHNSON'S.

POURED NORTH FOOTING. I TOOK 3 CYLINDERS TO BREAK - LEFT THEM ON THE NORTH SIDE OF THE FOOTING ABOUT MID POINT - ASKED THAT THEY BE COVERED WITH THE FOOTING. LEFT SITE AT 3:00 PM STILL POURING WEST 1/3 OF FOOTING THE REST IS POURED.

TIME = 9:00 - 11:00 - 12:30 - 3

MILES = 70

FRIDAY DEC 4

REMOVED FOOTING FORMS BEGAN
TO ERECT NORTH WALL.

POURED NORTH WALL AT 3:15-

HOURS 3

MILES 35

MONDAY DEC 7, 1992

REMOVED FORMS FROM NORTH WALL
CONCRETE LOOKS GOOD. WALL WAS
COVERED ALL WEEKEND WITH HEAT
BEGAN TO DIG SOUTH FOOTING.

HOURS 2

MILES 35-

TUESDAY DEC 8, 1992

BEGAN TIEING STEEL IN SOUTH
FOOTING, CONCRETE ORDERED FOR

10:30 AM. (6 yds TYPE III CONCRETE
1/2 - 2" SLUMP) (6 BAG MIX.)

TOOK 3 CYLINDERS FOR FOOTINGS
PICKED - UP CYLINDERS FROM NO.
FOOTING.

LEFT SITE AT 11:30 AM.

HOURS 3

MILES 35

* USED 14 DAY CYLINDER TO FILL
OUT FOOTINGS -

WEDNESDAY DEC 9, 1992

TOOK NO. FOOTING SAMPLES TO CA CART-
WRIGHT TO TEST.

ARRIVED AT SITE 9:30 AM BEGAN TO
FORM SOUTH WALL. LEFT SITE AT
9:45. RETURNED TO SITE AT 11:00

THEY ORDERED CONC FOR 2:15 PM

TOOK SLUMP ON 1ST LOAD 9 yds
SLUMP 3" TOOK 3 CYLINDERS
TO TEST FOR STRENGTH.

LEFT SITE AT 3:00 PM

TOTAL TIME 4 HRS

MILES 70

TUESDAY DEC 29

FORMED BRIDGE DECK AND TIED
STEEL

WEDNESDAY DEC 30

10:00 POWDED DECK SNOWING
TEMP 25° SLUMP APPROX 12"
COVERED DECK WITH PLASTIC AND
CONC. BLANKETS, PUT PROPANE
HEATER UNDER BRIDGE DECK
LEFT JOB SITE AND 11:45AM

MT DISGAN BRIDGE -

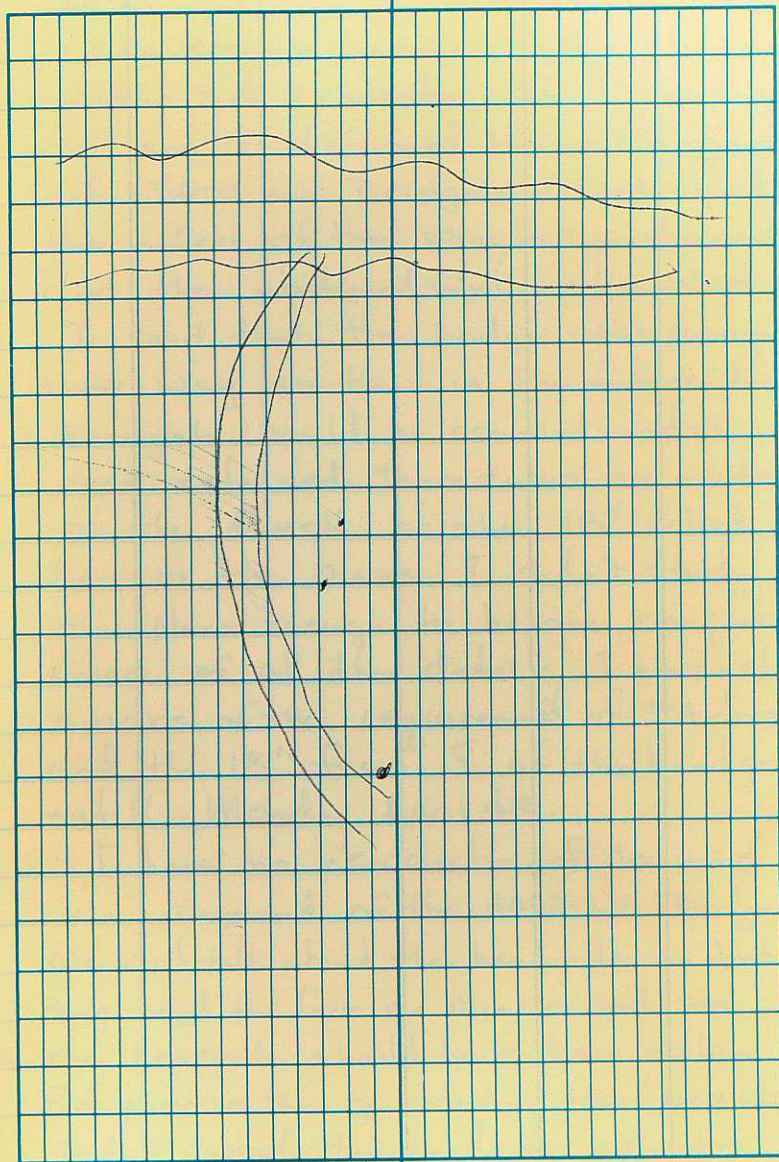
CULVERT SIZE = 15' x 20"

R/W STAKES IN -

PT ON EAST BANK OF RIVER IS #212

CULVERT HAS A HEAD GATE AND CONC.

HEADWALLS



5 April 1993

NOTES:

Conversation about bridge alignment with Sid Crookston - as I remember Sid and I discussed the alignment of 3400 No Bridge. Talked about the offset of the wing wall on the east and the abutment wall on the west.

I said that the bridge was designed that way so that in the future the headgate could be removed and the deck extended. There was no mention of the dowels or the 18" called for on the plans. I didn't study the plans enough to become completely aware of all the details. I was not aware of the requirement of #4 dowels and the 18" from E. of the headgate until Monday April 4th.

I have no recollection of discussing the alignment of the 4400 No Bridge. We did talk about the headgate on that bridge and the fact Mr Mickle had said the headgate should have been replaced. But prior to the construction he (Mickle) didn't want the headgate replaced.

On the High Creek Bridge Sid said that the South side was 6" high. I did tell him we could take care of that in the road grades. I talked to Joe about that and feel that we can take care of that quite easily.

MAY 6, 1993

CLOUDY-RAINY - 45°

BEGINNING TO REDD SOUTH SIDE OF 4400 NO BRIDGE - QUITE A BIT OF RUN-OFF WATER IN CANAL. TOLD BY JIM AND JOE BOTH THAT CANAL COMPANY IS NOT PLANNING ON PUTTING WATER IN CANAL YET. PLACING 30" PIPE IN CANAL TO CARRY THE WATER SO FOOTING AREA WILL BE DRY.

DUG OUT CANAL BOTTOM TO PREPARE FOR 30" PIPE. JOE EXPLAINED THAT IF GRAVEL IS NEEDED LET HIM KNOW AND HE WOULD GET SOME HERE.

AT 10:50 AM BEGAN TO BURN THE SCRAPE LUMBER AROUND THE SITE. FIRE WENT OUT. TO WET.

LEFT SITE AT 11:15 AM. WORKERS WE STILL TRYING TO GET 30" PIPE.

1:30 pm ARRIVED AT SITE. TROUBLE WITH KEEPING OUT WATER. TALKED WITH JOE ABOUT MORE PIPE. JOE WILL COME OUT AND GO OVER OPTIONS.

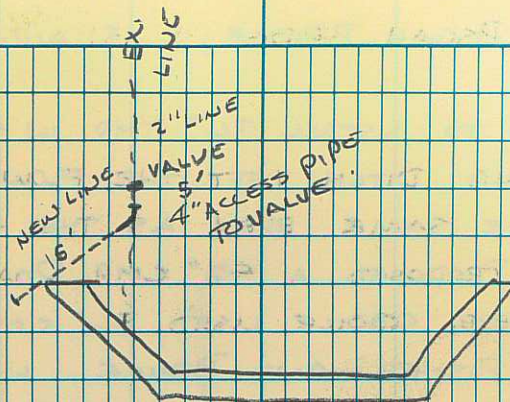
1:45 PULLED OUT 20' SECTION OF PIPE.

2:05 pm DECIDED TO WAIT UNTILL NEXT WEEK FOR THE BRIDGE BECAUSE OF HIGH WATER JOE MADE THE DECISION TO SHUT DOWN

PIPE AT HIGH CREEK

14 JUNE 1993

ASKED BY SETH TO LOOK AT THE
SMALL PLASTIC PIPE THAT WAS
DESTROYED WITH THE REMOVAL OF
THE HIGH CREEK BRIDGE:



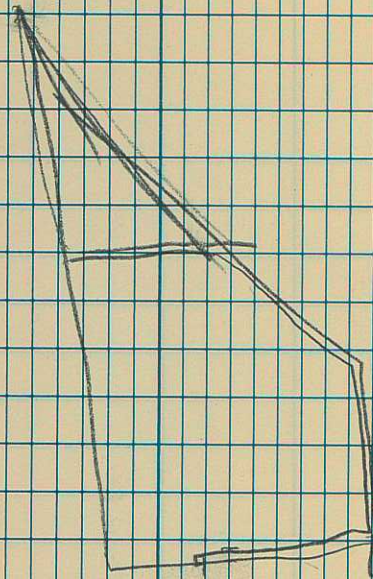
MT. ASGAN BRIDGE

31 AUGUST 1993

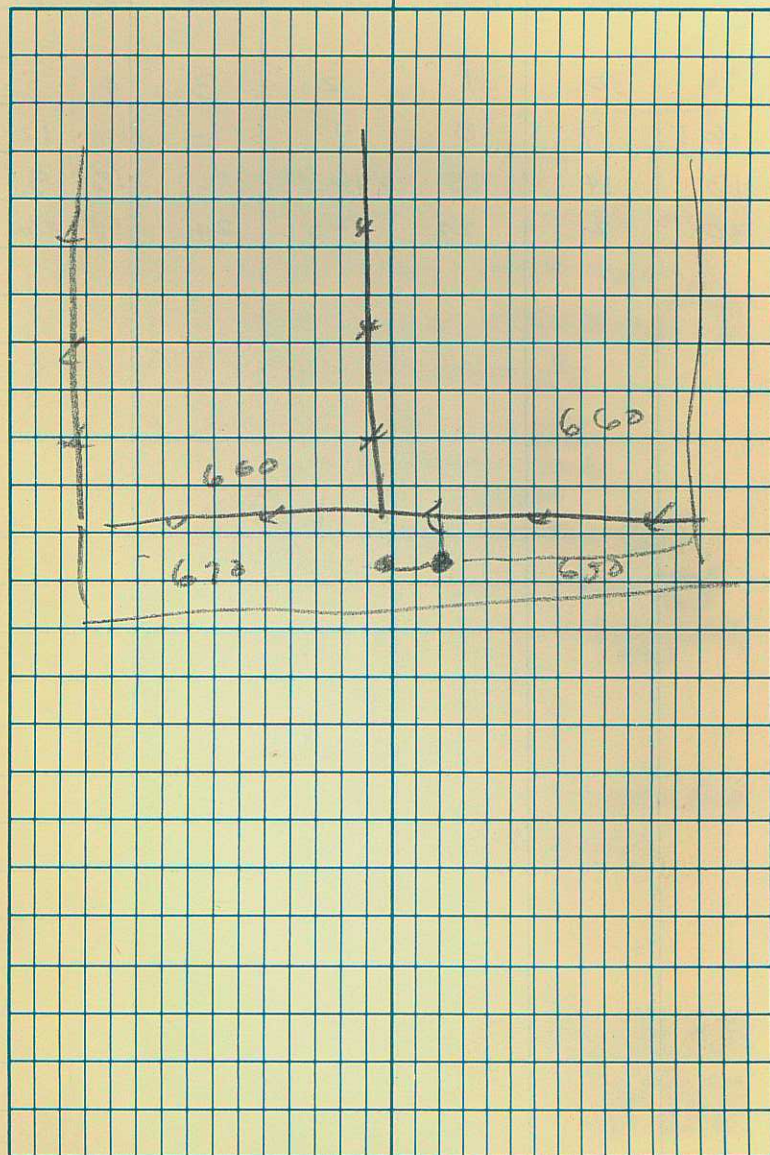
BEGAN TO INSTALL 36" CMP IN THE
EXISTING DITCH. LEFT THE FLOWLINE
AT THE SAME ELEV AS THE EXIST.
DITCH. PROPOSED A 42" CMP. ROAD DEPT.
AT THEIR CHOICE USED 36" CMP.
JOHN FISHER AND BRUCE WERE
THE CREW. BILL OBRAY STOPPED BY
SEVERAL TIMES, JOE AND TIM GIBBONS
WERE OUT IN THE A.M.

723-7004

734-2047



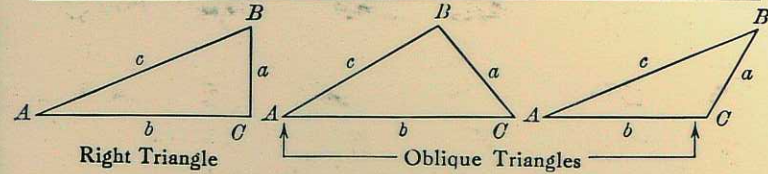
-4.21 -5.10



SUN MON TUES WED THURS FRI SAT

29	30	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26

TRIGONOMETRIC FORMULÆ



Solution of Right Triangles

For Angle A. $\sin = \frac{a}{c}$, $\cos = \frac{b}{c}$, $\tan = \frac{a}{b}$, $\cot = \frac{b}{a}$, $\sec = \frac{c}{a}$, $\text{cosec} = \frac{c}{b}$

Given	Required	Formula
a, b	A, B, c	$\tan A = \frac{a}{b} = \cot B$, $c = \sqrt{a^2 + b^2} = a \sqrt{1 + \frac{b^2}{a^2}}$
a, c	A, B, b	$\sin A = \frac{a}{c} = \cos B$, $b = \sqrt{(c+a)(c-a)} = c \sqrt{1 - \frac{a^2}{c^2}}$
A, a	B, b, c	$B = 90^\circ - A$, $b = a \cot A$, $c = \frac{a}{\sin A}$
A, b	B, a, c	$B = 90^\circ - A$, $a = b \tan A$, $c = \frac{b}{\cos A}$
A, c	B, a, b	$B = 90^\circ - A$, $a = c \sin A$, $b = c \cos A$

Solution of Oblique Triangles

Given	Required	Formula
A, B, a	b, c, C	$b = \frac{a \sin B}{\sin A}$, $C = 180^\circ - (A + B)$, $c = \frac{a \sin C}{\sin A}$
A, a, b	B, c, C	$\sin B = \frac{b \sin A}{a}$, $C = 180^\circ - (A + B)$, $c = \frac{a \sin C}{\sin A}$
a, b, C	A, B, c	$A + B = 180^\circ - C$, $\tan \frac{1}{2}(A - B) = \frac{(a - b) \tan \frac{1}{2}(A + B)}{a + b}$ $c = \frac{a \sin C}{\sin A}$
a, b, c	A, B, C	$s = \frac{a + b + c}{2}$, $\sin \frac{1}{2} A = \sqrt{\frac{(s - b)(s - c)}{bc}}$ $\sin \frac{1}{2} B = \sqrt{\frac{(s - a)(s - c)}{ac}}$, $C = 180^\circ - (A + B)$
a, b, c	Area	$s = \frac{a + b + c}{2}$, $\text{area} = \sqrt{s(s - a)(s - b)(s - c)}$
A, b, c	Area	$\text{area} = \frac{bc \sin A}{2}$
A, B, C, a	Area	$\text{area} = \frac{a^2 \sin B \sin C}{2 \sin A}$

REDUCTION TO HORIZONTAL

Horizontal distance = Slope distance multiplied by the cosine of the vertical angle. Thus: slope distance = 319.4 ft. Vert. angle = 5° 10'. From Table, Page IX. $\cos 5^\circ 10' = .9959$. Horizontal distance = 319.4 × .9959 = 318.09 ft.
Horizontal distance also = Slope distance minus slope distance times (1 - cosine of vertical angle). With the same figures as in the preceding example, the following result is obtained. $\cos 5^\circ 10' = .9959$. $1 - .9959 = .0041$. $319.4 \times .0041 = 1.31$. $319.4 - 1.31 = 318.09$ ft.

When the rise is known, the horizontal distance is approximately:—the slope distance less the square of the rise divided by twice the slope distance. Thus: rise = 14 ft., slope distance = 302.6 ft. Horizontal distance = $302.6 - \frac{14 \times 14}{2 \times 302.6} = 302.6 - 0.32 = 302.28$ ft.

