# INFORMATION REPORT

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COUNTRY: Hungary

SUBJECT: Details of Switch and Rail Systems Used by Hungarian State Railroad

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SUPPLEMENT TO REPORT #





THIS IS UNEVALUATED INFORMATION

1. Up until 1954, the Hungarian State Railways used three types of rail switches designated 48 I, 48 II, and 48 III. All of these switches employed pivot points in which the rails were physically separated. From 1954 to the present a new type switch in which the pivot points are continuous rails with the flanges left off, has been used. These types are designated 48 VI, 48 VII, 48 VIII, 48 XI, 48 XII, and 48 XIII. Figure 1, consisting of illustrations 1 through 8, which gives detailed drawings of these switches as well as related data. Points are numbered on the illustrations and described here.



Illustration 1: This is a plan drawing of the conventional old style switch, with annotated measurements, common to all Hungarian rail lines and yards.

Point #1: The "point" rail pivot (inner).
Point #2: The "point" rail pivot arm (outer).
Point #3: The "point" rail pivot (outer).
Point #4: Manual or electric switch actuator.
Point #5: Tip of "point" rails.

Letters a and b refer to corresponding switch dimensions in Illustration 6.

Illustration 2: Rail shape diagram (old style switch) all points are common to those in Illustration 1.

Illustration 3: This is a plan drawing of the new spring-rail type switch used on all lines since 1954. There is no break in the rail at the pivot, however, the rail flanges are removed at the pivot allowing for free lateral movement of the point rails.

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Illustration 4: This is a plan view of the point rail on the new type of switch.

Point #1: Corresponds to Point #5 on old rail.
Point #2: Corresponds to Point #2 on old rail.
Point #3: This is the deflanged portion of the point rail.
Point #4: A cross section of the point rail at Point #3.

Illustration 5: Depicts the signal for each switch position for either the old or new type switch.

Illustration 6: The exact dimensions, radii and angle or turnout for each old type of switch are shown. Type 48 refers to the rail weight and the Roman numeral indicates the type of switch, ie, 48 III indicates a switch using Type 48 rails with dimensions as indicated. This system permits easy reference in designing yards and drafting blueprints.

Illustration 7: The exact dimensions of new type switches are given.

Illustration 8: Indicates the applications that were used for all types of switches.

NOTE: Turnout ratio figures are affixed under each type of switch, ie. 1:9, 1:6, etc. The initial M L indicates Main Line./ 50X1-HUM

2. During 1956 Hungarian State Railway design engineers designed a simple four-way railway turnout. When I left Hungary in 1956 it was planned to adopt this new turnout beginning in 1957. Figure 2, consisting of Illustrations 1 through 3, which gives a schematic drawing of this switching system, the exact dimensions of the various parts and the signal system employed. Points are numbered on the illustrations and described here.

Illustration 1: Simple plan view of four-way turnout.

Point #1: Point rail pivots.
Point #2: Turnout rails.
Point #3: Main and crossover line rails.
Point #4: Internal main line and crossover rails.

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Illustration 2: Dimensions of the four-way turnout.

Illustration 3: Signals for positions of turnout, indicating the direction of the switches./

3. Since World War II, the Hungarian State Railways have completed or are planning a number of Delta-type switch lines which will tend to speed up traffic by bypassing various railway yards and metropolitan rail complexes. Figure 3, an overlay to mosaics of WAC 232,251 and 252, on which important switch tracks in the Hungarian rail net have been numbered. These points are described here. 50X1-HUM

Point #1: Planned (1957) Delta-switch line on the Miskolc-Budapest, Miskolc-Diosgyor lines to afford direct access from Budapest to the iron plant at Diosgyor without entering the Miskolc yards for turnaround.

Point #2: A delta-switch line connecting the Miskolc-Banreve line with the Banreve-Ozd line delta was built shortly after World War II.

Point #3: A delta-switch line at Kuszentmiklos which provides access to Czechoslovakia, through Szolnok, from Yugoslavia, without passing through the Budapest rail complex. Built in 1951.

**Point #4: (Planned for 1957) a delta-switch line located in the south outskirts of Miskolc to connect the Budapest-Nyekladhaza line with the Nyekladhaza-Tiszapalkonya line without passing through the Nyekladhaza yards.**

**Point #5: A delta-switch line near Hatvan to provide uninterrupted access (without switching into yards or turntables) from Budapest to Szolnok. Built during early post World War II days.**

[redacted] sketches: 

(A) Figure 1, Eight detailed drawings of switches used by Hungarian State Railways.

(B) Figure 2, Three Schematic drawings of the fourway railway turnout switching system. 

[redacted] Figure 3, an overlay to mosaics of WAC 232, 251 and 252, on which important switch tracks in the Hungarian rail net have been numbered. All of the above are UNCLASSIFIED.

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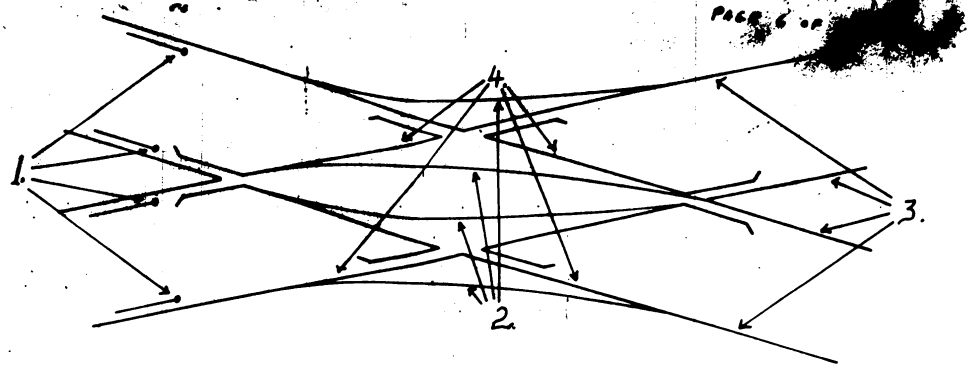
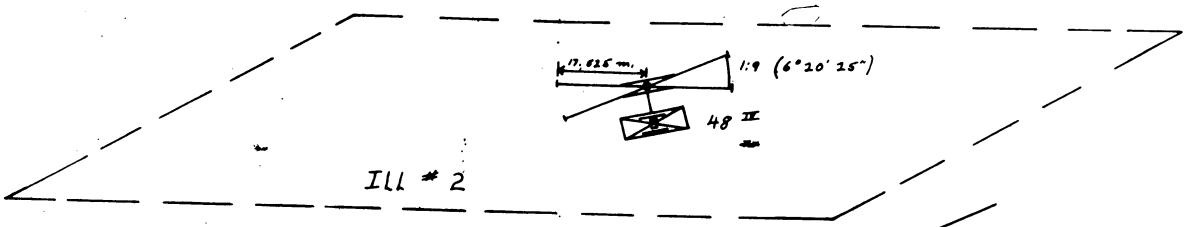



Ill # 1

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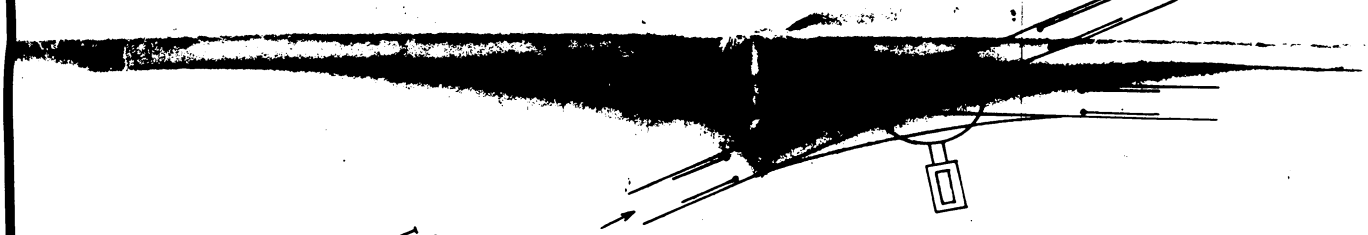

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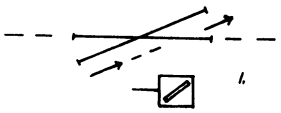

1. (always white lights)

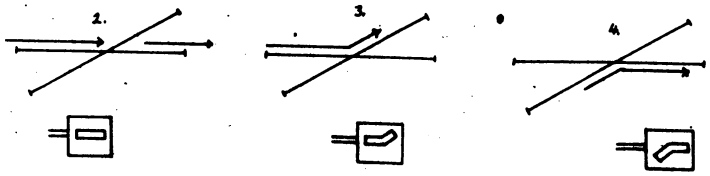


Fig # 2
FOUR-WAY RAILWAY TURNOUT
Sketch

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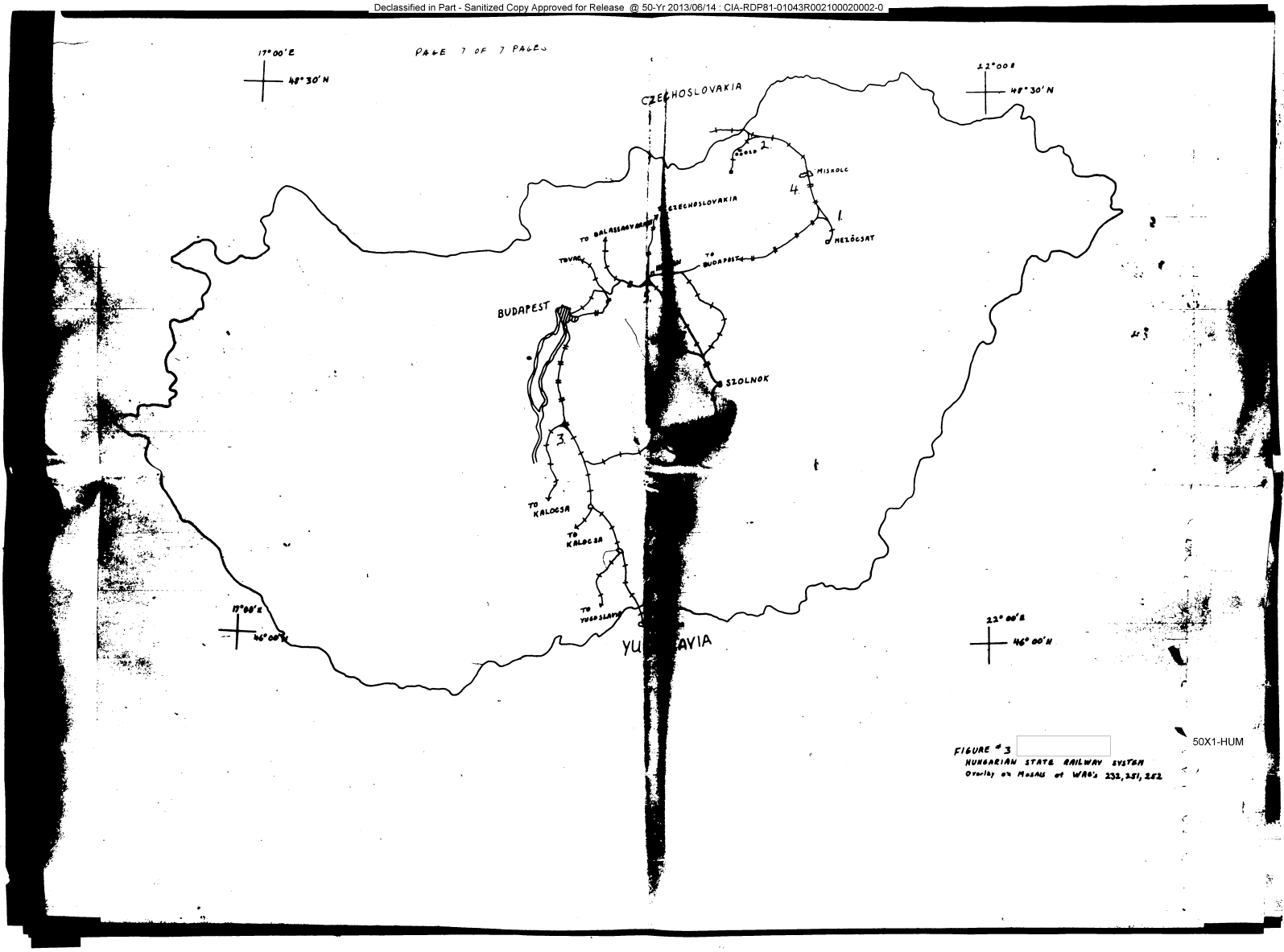


FIGURE # 3
HUNGARIAN STATE RAILWAY SYSTEM
Overlay on Maps of WAC's 232, 251, 252

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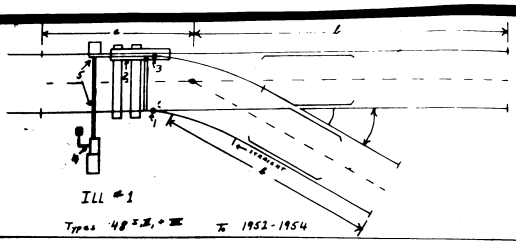
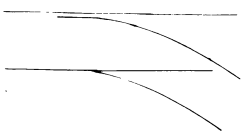


ILL # 1

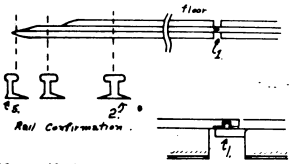
Types 48 I, II, & III to 1952-1954



ILL # 3

1954 to Present Types 48 II, III, IV, V, VI & VII

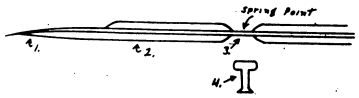
Point Rail




ILL # 2

Up Till - 1952-1954

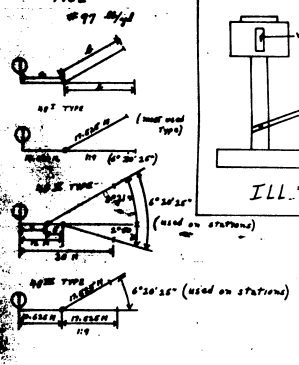
Point Rail

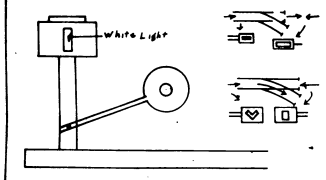



ILL # 4

From 1954 → on

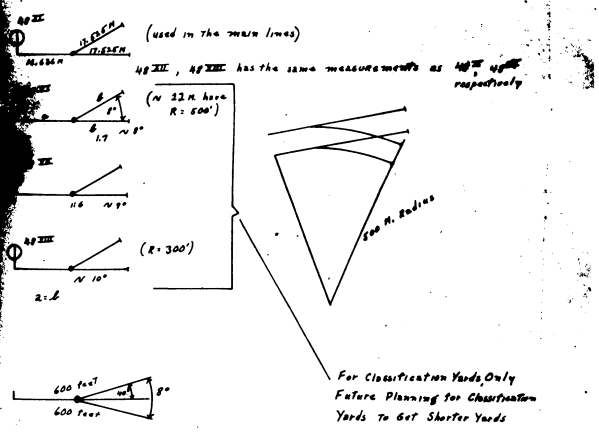
1952




ILL # 5

ILL # 6

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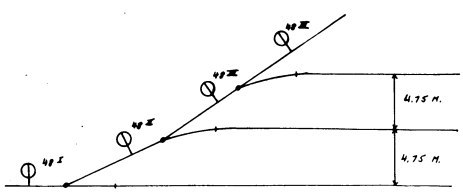


ILL # 8

FIG # 1

SWITCH SYSTEMS

Sketch

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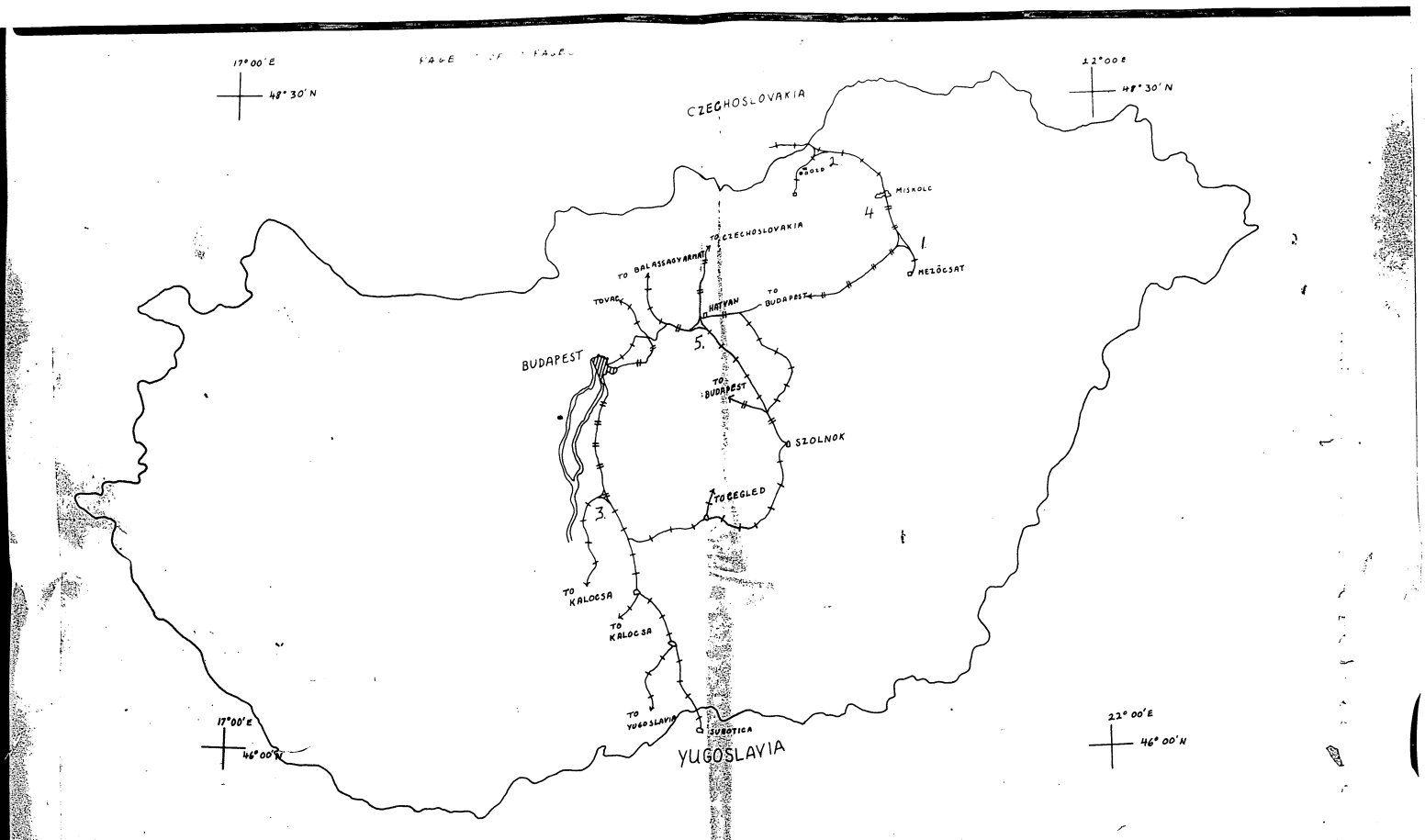


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FIGURE # 3
HUNGARIAN STATE RAILWAY SYSTEM
Overlay on Mosais of WAC's 232, 251, 252