



STATE OF MICHIGAN

Office of the Michigan Public Service Commission } ss.

I, S. A. Lund, Secretary of the Michigan Public Service Commission

Do Hereby Certify, That I have compared the annexed copy of a wire crossing Permit No. ED2-8-2694

with the original Permit

recorded in ED2-8-2694

and that it is a true and correct transcript therefrom, and of the whole of such original.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of the Commission, at Lansing, this fourth day of January in the year of our Lord one thousand nine hundred fifty.

[Handwritten signature]

Secretary Michigan Public Service Commission

6.7.2729
24 2729

RECORDED RIGHT OF WAY NO. 34636
P304

STATE OF MICHIGAN
BEFORE MICHIGAN PUBLIC SERVICE COMMISSION

Standard Railroad Wire-Crossing Permit No. ED2-8-2694

In Re Application of **The Detroit Edison Company**
Detroit 26, Michigan

Pursuant to Act No. 171 of the Session Laws of 1893, as amended, application having been made to Michigan Public Service Commission by said **Detroit Edison Company**

for permission to string wires across the tracks of the **Grand Trunk Western Railroad Co.**

and said **Detroit Edison Company**

having conformed to the Commission's rules governing the filing of notices and issuing of permits for the construction of electrical lines and said rail road company having waived the right of notice and hearing provided for in said act

THEREFORE, It is ordered that said **Detroit Edison Company**

be permitted to string the following described wires across the tracks of said railroad at the following described place:

City of Royal Oak
County of Oakland
Michigan

In private property, at a point approx. 1115'
SE of M.P.17 and 1000' NW of South line of
Sect. 32 (14 Mile Rd.) with:
6-477,000cm ACSR 26al/7st. conductors 120 KV
1-3/8" Bethanized "C" 7st. steel Grd. wire

as indicated on the attached plans, when, as and if approved.

At the point of crossing said wires shall be constructed in accordance with this Commission's rules and regulations.

Given under our hands and the Official Seal of this
Commission at the City of Lansing, State of Mich-
igan, this **fourth** day of **January**
A. D. 19**50**

MICHIGAN PUBLIC SERVICE COMMISSION
By

SEAL

J. H. McCarthy

Chairman,

S. L. Marshall

Commissioner,

J. M. Veale

Commissioner.

Countersigned

S. A. Lund

Secretary

RECORDED RIGHT OF WAY NO.

34636

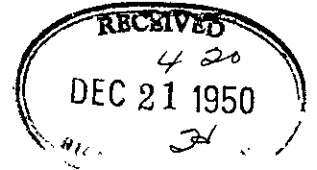
204

GRAND TRUNK WESTERN RAILROAD COMPANY

DETROIT DIVISION

V. C. PALMER
SUPERINTENDENT

7350 ORLEANS STREET,
DETROIT 11, MICH.,



December 19, 1950

File: 4650-3

The Detroit Edison Company
2000 Second Avenue
Detroit, Michigan

Gentlemen:

Kindly refer to your letter of November 30th, plan RX 2729, wherein you requested permission to cross over our siding tracks with a 120 KV steel tower transmission line (known as your Lincoln-Bloomfield Line) over our property at a point approximately 1115 ft. southeast of Mile Post 17 and 1000 ft. northwest of the South line of Section 32 (14 Mile Road) in the City of Royal Oak, Oakland County, Michigan. Same being at our Mile Post 16.79 on the Holly Subdivision 0.96 miles east of Birmingham.

We have no objections to the construction of this line nor the specifications on the construction of it as shown on the data sheets and your plan RX 2729. Therefore, you may accept this letter as a waiver of hearing before the Michigan Public Service Commission.

License will not be required as this crossing is presently covered in our agreement with you on a construction of your transmission line between Royal Oak and South Boulevard, Pontiac.

Yours very truly,

A handwritten signature in cursive script that reads "V. C. Palmer".

Superintendent

A/1

RECORDED RIGHT OF WAY NO.

34636

pa04

DATA SHEET TO ACCOMPANY DRAWING RX-2729

Name of Company

The Detroit Edison Company.

Name and Location of Crossing

Crossing of the Lincoln-Bloomfield steel tower line over the siding track of the Grand Trunk Western Railroad at a point approximately 1115' southeast of Mile Post 17 and 1000' northwest of south line of Section 32 (14 Mile Road), City of Royal Oak, Troy Township, Oakland County, Michigan.

Circuits

Proposed two 120,000 volt, 60-cycle, 3-wire, 3-phase transmission circuits with one ground wire.

Poles and Crossarms

Steel poles and crossarms as per attached photostats T-2057 and T-7811.

Conductors

Proposed 6 - 477,000 cm, ACSR 26a1/7 st conductors and one 3/8" Bethanized "C" 7-strand steel ground wire.

Guy and Guy Attachments

None

Guy Clamps

None

Guy Insulators

None

Guy Anchors

None

Anchor Rods

None

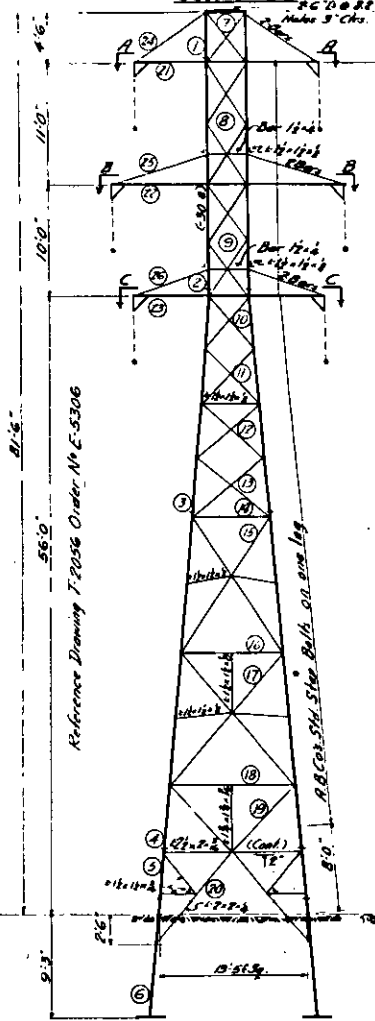
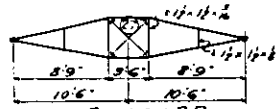
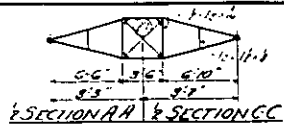
Pin, Insulators and Ties

Suspension details as shown on RX-2729.

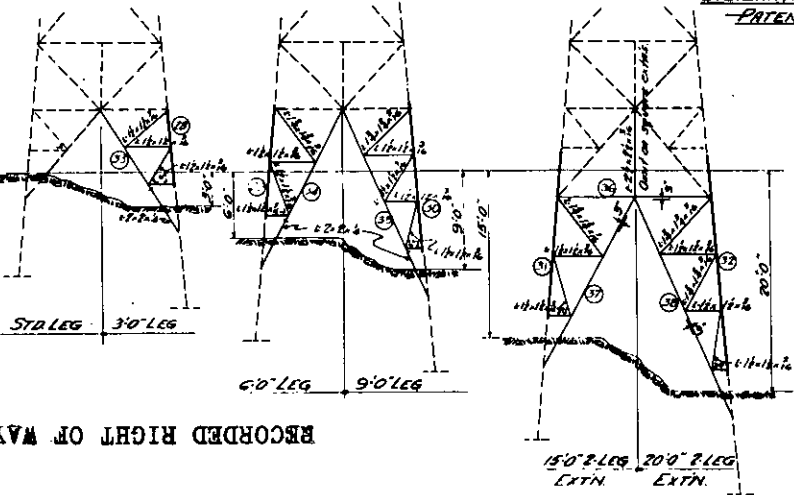
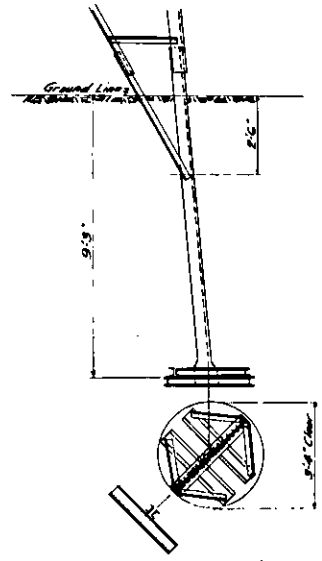
Electrical Engineering Division
Engineering Department
RLM:ad
11-13-50

RECORDED RIGHT OF WAY NO.

34636
p204



NOTE: Cross arms to be detailed so as to accommodate either 11' or 14' Flexible hangers.



SUSPENSION TOWER "P"

The tower is designed to support 1- $\frac{3}{8}$ " H.S. Crucible Steel Ground Wire and 6-477000 cm H.C.S.R. Conductors on a maximum span of 600' with 5" maximum angle in line.

The cables are to be so strong that the maximum tension under 4" wind on $\frac{1}{2}$ " ice coated cables will not exceed 5300" in the Ground Wire and 7770" in the Conductors in accordance with 5th Edition N.E.S.C.

LOADS

- (1) Vertical 1-Gnd. Wire @ 500" = 500"
6-Conductors @ 1000" = 6000"
Total = 6500"
- (2a) Wind on wires 1-Gnd. Wire @ 280" = 280"
6-Conductors @ 375" = 2250"
Total = 2530"
- (2b) 5" Angle in line 1-Gnd. Wire @ 460"
6-Conductors @ 670" = 4020"
Total = 4480"
- (3) Longitudinal 1-Gnd. Wire @ 5300" or
1-Conductor @ 6160" (30% of 7770")
(For Combine loads assume of middle arm)
- (4) Wind on tower of 6.5" per sq. ft. on 12 times projected area of one face.
- (5) Dead load of tower
Combined 174, 175, 176, 165, 174, 110, 131, 54, 4 and 117, 5

UNIT STRESSES

- Tension on net section 33000" per sq. in.
- Comp on gross section 33000" 130% = 42900"
24000" 70% = 16800"
- Shear on bolts = 30000" per sq. in.
- Bearing on bolts = 60000" per sq. in.

MATERIAL: O.H. Steel ASTM A7 latest revision.

COATING: All material galvanized

CONNECTIONS: Bolted, $\frac{5}{8}$ " bolts

SPECIFICATIONS: A.B.C.'s Standard specifications for Transmission Towers

Member Number	Ult. Stress	SECTION
1	6.7	1-28" x 28" x $\frac{3}{4}$ "
2	43.1	1-36" x 36" x $\frac{3}{4}$ "
3	50.8	1-4" x 4" x $\frac{3}{8}$ "
4	64.4	1-4" x 4" x $\frac{3}{8}$ "
5	64.5	do
6	64.0	do
7	1.7	1-12" x 12" x $\frac{3}{8}$ "
8	10.7	1-28" x 28" x $\frac{3}{8}$ "
9	13.3	1-28" x 28" x $\frac{3}{8}$ "
10	9.5	1-12" x 12" x $\frac{3}{8}$ "
11	7.0	do
12	6.2	do
13	4.8	do
14	9.5	1-28" x 28" x $\frac{3}{8}$ "
15	11.1	1-12" x 12" x $\frac{3}{8}$ "
16	5.6	1-28" x 28" x $\frac{3}{8}$ "
17	7.9	1-12" x 12" x $\frac{3}{8}$ "
18	7.7	1-3" x 3" x $\frac{3}{8}$ "
19	9.9	1-12" x 12" x $\frac{3}{8}$ "
20	7.1	do
21	14.5	1-3" x 28" x $\frac{3}{4}$ "
22	18.9	do
23	15.7	do
24	1.1	1-Bar 12" x 6"
25	2.2	do
26	2.0	do
27	5.1	1-12" x 12" x $\frac{3}{8}$ "
28	65.8	1-4" x 4" x $\frac{3}{8}$ "
29	66.5	do
30	67.4	do
31	63.1	do
32	63.2	do
33	8.8	1-12" x 12" x $\frac{3}{8}$ "
34	9.0	do
35	11.4	1-12" x 12" x $\frac{3}{8}$ "
36	4.0	1-36" x 3" x $\frac{3}{4}$ "
37	4.3	do
38	4.8	1-4" x 3" x $\frac{3}{4}$ "

* Denotes selling tag/plate numbers

GRILLAGE MATERIAL
 2" x 10" @ 9.8" x 3.3"
 2" x 6" CBS @ 15.5" x 3.0"
 4" x 3" x 4" x 1.9"

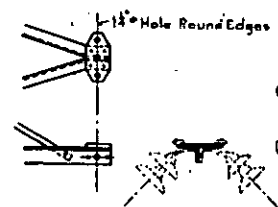
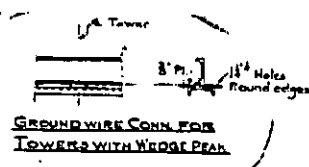
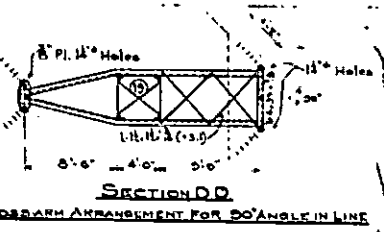
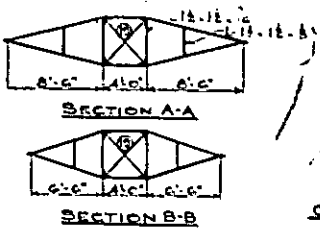
RECORDED RIGHT OF WAY NO. 34636

TRANSMISSION TOWERS
THE DETROIT EDISON CO.
 DETROIT, MICH.
SUSPENSION TOWER "P"
 LINCOLN-BLOOMFIELD LINE

AMERICAN BRIDGE CO.
 PITTSBURGH, PA.

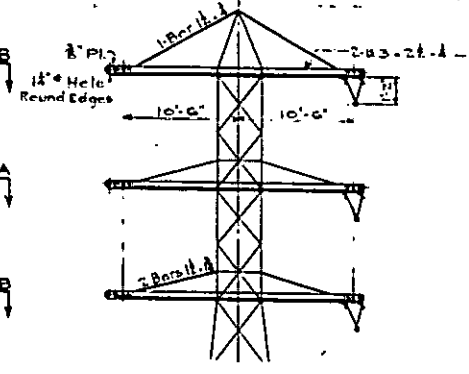
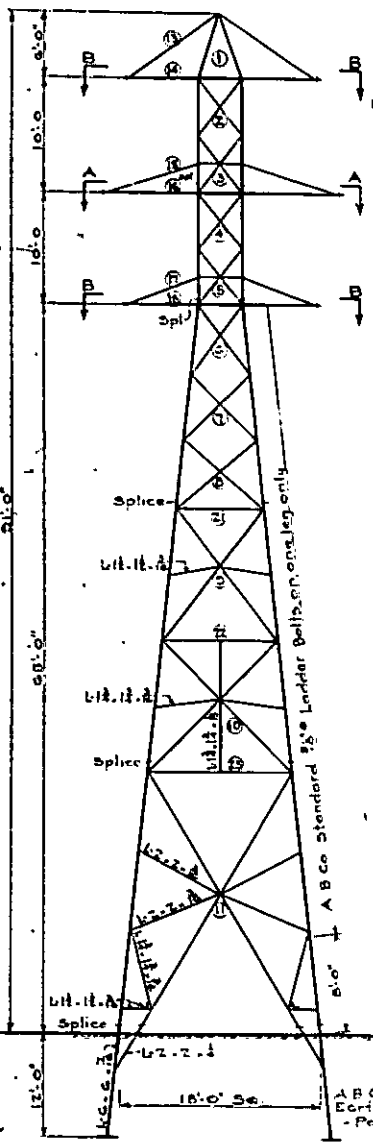
INQUIRY No. T-4483-A
 ORDER No. J-5901-03
 DRAWING T-7811

DATE 5/11/48 SCALE

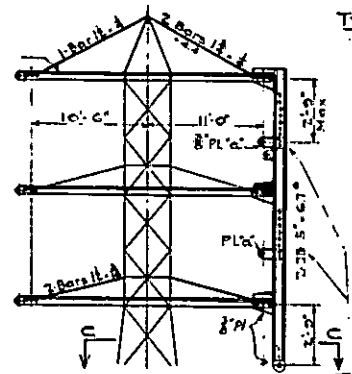


- LOADS**
- (1) A vertical load of cable support of 3500⁺ total 5100⁺
 - (2) A horizontal load normal to line of each cable support of 800⁺ total 4200⁺
 - (3) A horizontal load in the direction of the line of 3500⁺ at each cable support, total 24500⁺ or 4700⁺ at any one conductor support.
 - (4) Wind on tower of 30⁺ per lin. foot of height of tower.
 - (5) Dead load of tower.

NOTE:
For unit stresses and specifications for conductors and span lengths See Drawing T-2056

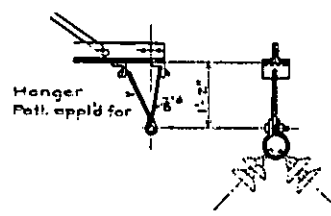


CROSS-ARM ARRANGEMENT FOR ANGLES IN LINE UP TO 20°



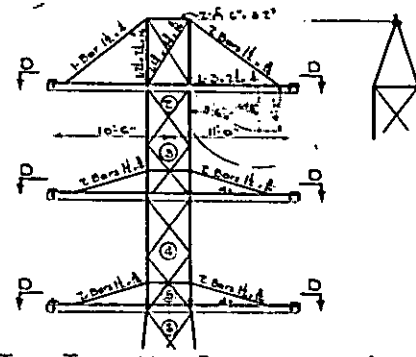
CROSS-ARM ARRANGEMENT FOR ANGLE IN LINE UP TO 45°

TYPICAL DETAIL AT END OF CROSS-ARM FOR COPPER CONDUCTORS

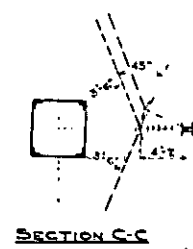


TYPICAL DETAIL AT END OF CROSS-ARM FOR ALUMINUM CONDUCTORS

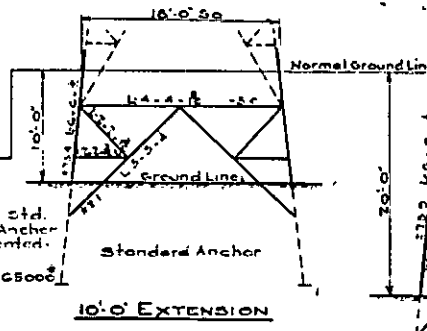
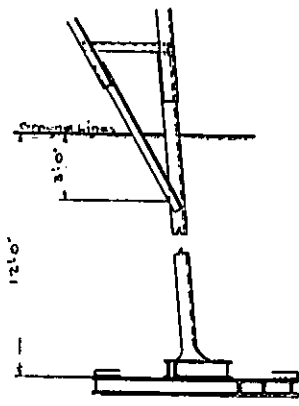
Punch holes in 30 so that Pl'c can be moved to suit each condition of angle in line



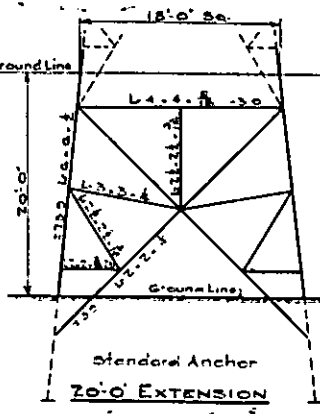
TOWER TOP WITH WEDGE PEAK & X-ARMS FOR 90° ANGLE IN LINE



SECTION C-C



Standard Anchor



Standard Anchor

MATERIAL FOR GRILLAGE
2-8 5 x 10.75 x 2'-0"
3-Ties 5 1/2 x 20 x 6'-0"
3-4 1/2 x 1 1/2 x 2'-0"

Member	Stress	Material
3	± 10.7	L-3 x 3 x 1/2
5	± 41.0	L-4 x 4 x 1/2
8	± 60.0	L-5 x 5 x 1/2
10	± 68.5	L-6 x 6 x 1/2
11	± 78.1	L-6 x 6 x 1/2
1	± 3.4	L-2 x 2 x 1/4
2	± 3.5	L-1 1/2 x 1 1/2 x 1/4
3	± 5.5	do
4	± 5.8	L-2 1/2 x 2 1/2 x 1/4
5	± 5.5	do
6	± 5.7	do
7	± 6.5	do
8	± 6.8	do
9	± 10.5	L-1 1/2 x 1 1/2 x 1/4
10	± 7.0	L-1 1/2 x 1 1/2 x 1/4
11	± 7.3	do
12	± 7.3	1-1 Bar 1 1/2 x 1/4
13	± 5.8	L-3 x 3 x 1/2
14	± 5.8	L-3 x 3 x 1/2
15	± 2.1	2 Bars 1 1/2 x 1/4
16	± 12.7	L-3 x 3 x 1/2
17	± 1.6	2 Bars 1 1/2 x 1/4
18	± 5.0	L-3 x 3 x 1/2
19	± 5.4	Bar 1 1/2 x 1/4
21	± 4.0	L-2 1/2 x 2 1/2 x 1/4
22	± 6.0	L-3 x 3 x 1/2
23	± 5.0	do

TRANSMISSION TOWERS
DETROIT EDISON Co.

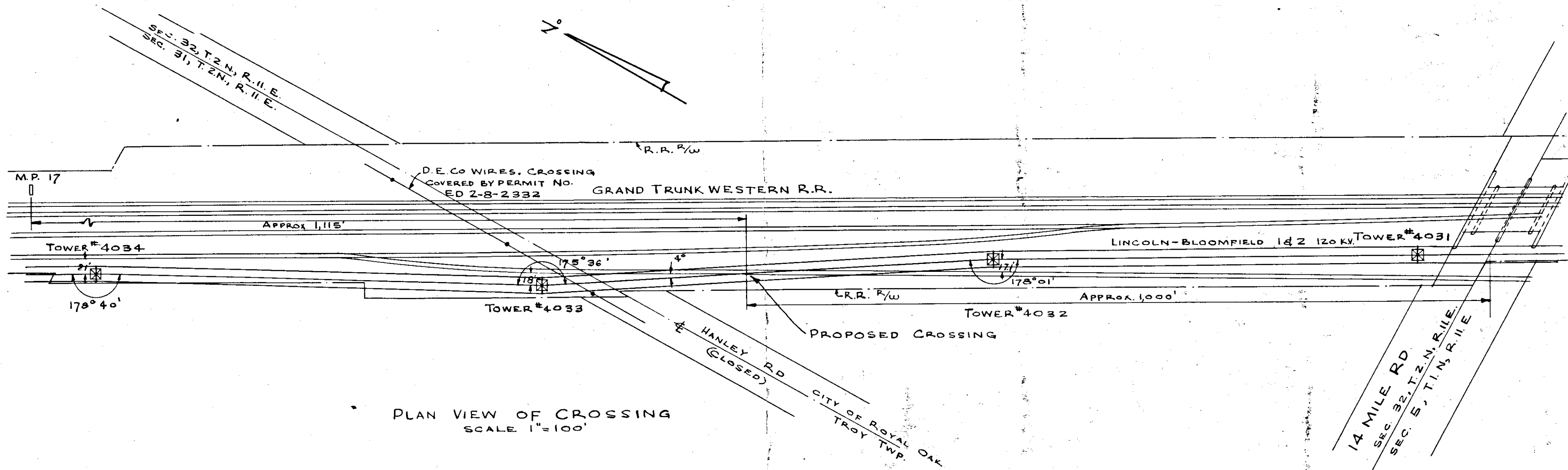
STRAIN TOWER B

Anchor 2085
Tower 5315
Total 17204

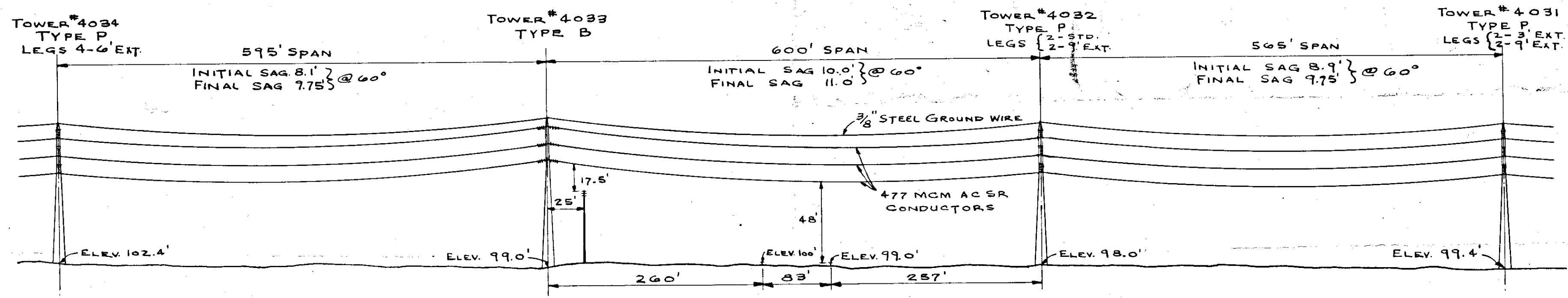
34636
RECORDED RIGHT OF WAY NO.

AMERICAN BRIDGE CO.
PITTSBURGH, PA.

ORDER NO. E-5307
DRAWING T-2057

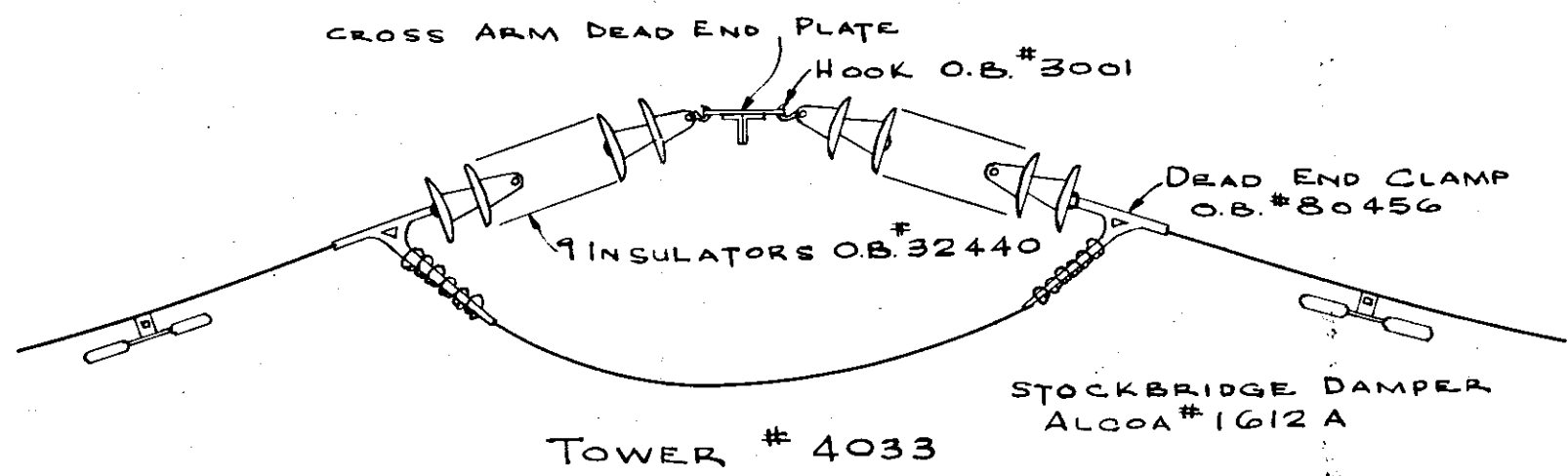
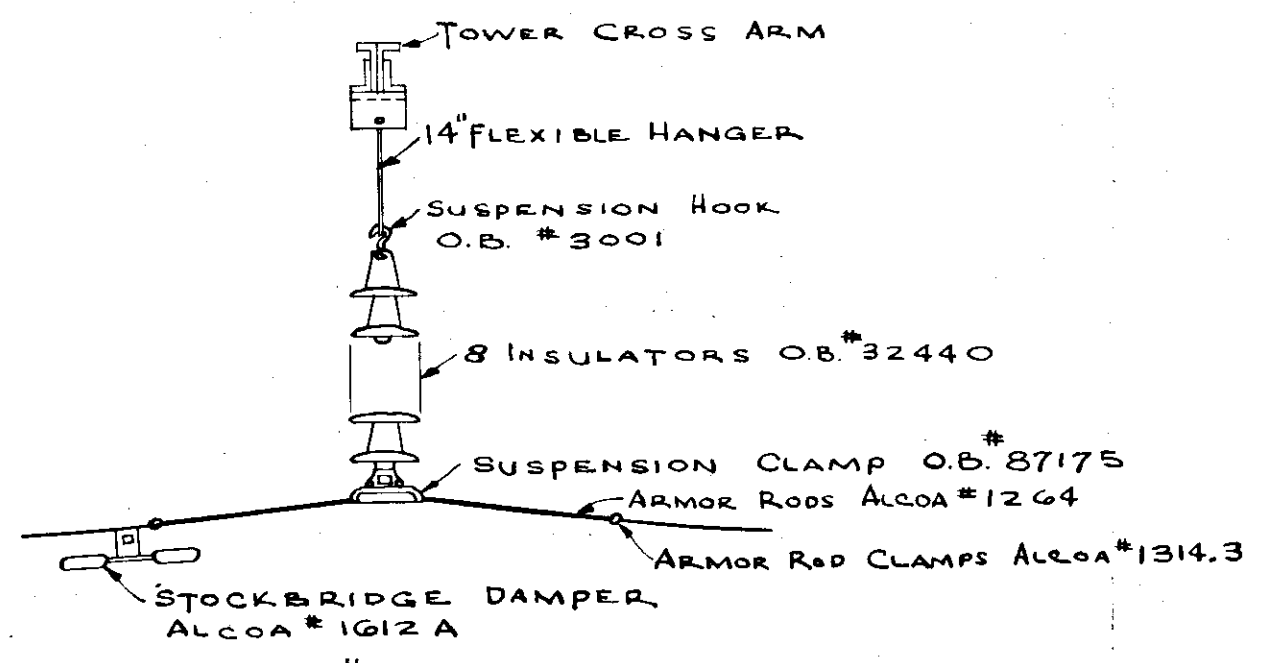


PLAN VIEW OF CROSSING
SCALE 1"=100'



ELEVATION OF CROSSING
SCALE: HORIZ. 1"=100'
VERT. 1"=50'

NOTE:
ALL CLEARANCES BASED ON FINAL SAGS AT 60°F.



SUSPENSION DETAILS
SCALE 1/2"=1'-0"

RECORDED R/W FILE NO. 34636 p 204

CITY ROYAL OAK
COUNTY OAKLAND
TOWNSHIP TROY
SURVEY NO. T.2 N.
RANGE NO. R. 11. E.
SECTION NO. S.W. 1/4 of 32

APPROVED
FOR
MICHIGAN PUBLIC SERVICE
COMMISSION
John W. ...
DIRECTOR OF PUBLIC UTILITIES
FILE ED 2-8-2694 DATE Dec. 27, 50

THE DETROIT EDISON COMPANY
PLAN SUBMITTED TO MICHIGAN
PUBLIC UTILITIES COMMISSION
FOR 120,000 VOLT CROSSING
OVER GRAND TRUNK WESTERN R.R.
DRAWN BY RLM DATE 11-29-50
CHECKED BY SB. DATE 11-29-50

PERMIT NO. RX-2729

RECORDED RIGHT OF WAY NO. 34636
P204