| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 9 | VT. | 7 (2) | 1941 | 1 | 17 |

INDEX OF SHEETS

SHEET NO. 1 TITLE PAGE
" " 2 TYPICAL CROSS-SECTION OF IMPROVEMENT { 2½" Crushed Stone Mixed-in-Place Surface Course with Cutback Asphalt and Prime Coat of Refined Tar Items 27, 30 and 31
" " 3 BANKING AND WIDENING TABLES
" " 4-5 PLAN AND PROFILE STA.
" " 6 ABUTMENT DETAILS AND SUPERSTRUCTURE LAYOUT
" " 7 STD. SHEET S I B 24 SQ. OR SKEW FOR 54' SPAN 45° SKEW MODIFIED
" " 8 STD. SHEET S B5 C CURB AND CABLE GUARD RAIL MODIFIED (BRIDGE)
" " 9 STD. SHEET I I BARRICADES, LIGHTS AND SIGNS
" " 10 STD. SHEET S C 2-4 DETAILS 2X2 R.C.BOX
" " 11 STD. SHEET S C W 2-3 WINGS 2X2 R.C. BOX
" " 12 STD. SHEET S 30 CABLE GUARD RAIL AND GUIDE POSTS (ROADWAY)
" " 13 STD. SHEET S 30 A FEDERAL AID AND BOUNDARY MARKERS
" " 14-17 CROSS SECTIONS

STANDARD STRUCTURE SHEET APPROVED
BY THE CHIEF ENGINEER

S-30 AUG. 15, 1934

# STATE OF VERMONT
# STATE HIGHWAY DEPARTMENT

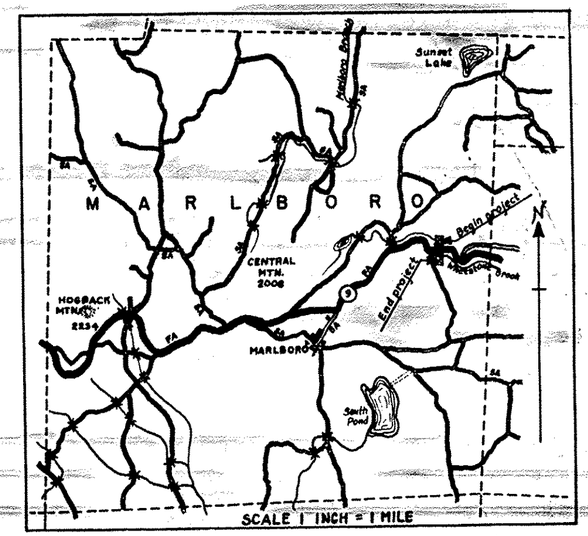
# PLAN AND PROFILE OF PROPOSED STATE HIGHWAY

FEDERAL AID PROJECT

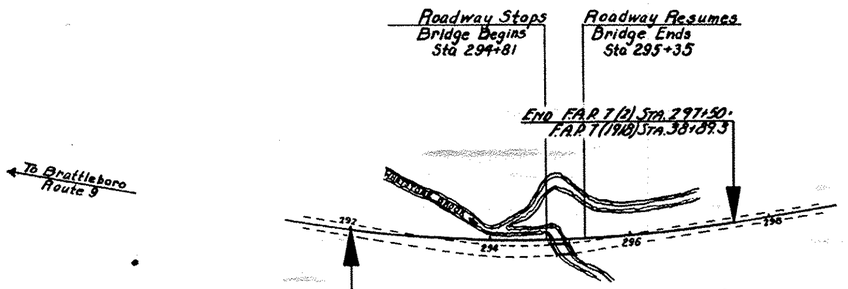
## TOWN OF MARLBORO

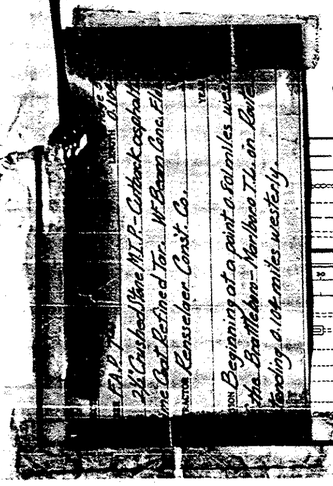
## BRATTLEBORO — WILMINGTON ROAD

BEGINNING AT A POINT 0.801 MILES WESTERLY OF THE BRATTLEBORO—MARLBORO TOWN LINE ON STATE ROUTE 9 AND EXTENDING 0.104 MILES WESTERLY.




| | | | | |
|---|---|---|---|---|
| | LENGTH OF | APPROACHES | 496.0 FT. | = 0.094 MILES |
| | " " | BRIDGE | 54.0 " | = 0.010 " |
| TOTAL | " " | PROJECT | 550.0 " | = 0.104 " |




CONVENTIONAL SIGNS

GROUND ELEVATION ..... DATUM ..... LINE

GRADE ELEVATION ..... DATUM ..... LINE

CURVE DATA

DEFLECTION ANGLE ..... △
DEGREE OF CURVE ..... D.
RADIUS OF CURVE ..... R.
TANGENT DISTANCE ..... T.
LENGTH OF CURVE ..... L.
EXTERNAL DISTANCE ..... E.
POINT OF INTERSECTION ..... P. I.
POINT OF CURVE ..... P. C.
POINT OF TANGENT ..... P. T.
POINT ON TANGENT ..... P. O. T.

SCALES

TITLE ..... 1"= 100'
TYPICAL ..... 1"= 2'
PLAN ..... 1"= 50'
PROFILE HORIZONTAL ..... 1"= 50'
PROFILE VERTICAL ..... 1"= 10'
CROSS SECTIONS ..... 1"= 5'

APPROVED: APRIL 1, 1940
H. E. Laurent
COMMISSIONER OF HIGHWAYS

SUBMITTED BY ORDER OF THE STATE HIGHWAY BOARD

BRIDGE NO. 48
OVER WHETSTONE BROOK
MARLBORO, VT

RECOMMENDED FOR APPROVAL

DISTRICT ENGINEER
PUBLIC ROADS ADMINISTRATION
FEDERAL WORKS AGENCY

APPROVED

COMMISSIONER
PUBLIC ROADS ADMINISTRATION
FEDERAL WORKS AGENCY

THESE PLANS ARE SUBJECT TO SUCH REVISIONS AS MAY BE REQUIRED BY THE PUBLIC ROADS ADMINISTRATION OR THE COMMISSIONER OF HIGHWAYS.

CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THE PLANS AND THE STANDARD ROAD AND BRIDGE SPECIFICATIONS OF 1936 AS APPROVED DECEMBER 28TH, 1935 BY THE PUBLIC ROADS ADMINISTRATION, INCLUDING ALL SUBSEQUENT APPROVED REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE SUBMITTED WITH THE PLANS.

| APPROVED | APPROVED | APPROVED March 26, 1940 | SERIES FAP No. 7 (2) FILED |
|---|---|---|---|
| BRIDGE ENGINEER | | DISTRICT HIGHWAY COMMISSIONER | SHEET 1 OF 17 |

NOTE:

All existing Superstructure and Substructure shall be tembred to elevations which will conform with the limits of the Channel and the 1 on 1½ slope of riprap under the new superstructure.
Payment for same will be made as Channel Excavation except for that part which lies within the defined limits of Structure Excavation.

Lester Whitney

Channel

NEW CHANNEL LOCATION

CURVE DATA
Δ = 20°-02' Lt.
D = 3°
R = 1910
T = 337.4
L = 667.8
E = 29.5

Elmer Fisk

Rip Rap for Bank Protection (W.T.) Slope 1 on 1½

FLOW

TOE OF RIP RAP

Toe of Rip Rap

2'-2" Conc. Box

Route #9

To Brattleboro

To Marlboro

Lester Whitney

Lester Whitney

Boulder

P.C. 291+09.5

P.I. 294+14.9
= 294+39.9

P.T. 298+

BORING DATA

#1 #2 #3

915
910
905

Sand & Gravel & Boulders
Gravel & Boulders & Boulders
Sand & Gravel & Boulders
Gravel & Boulders & Boulders
Gravel Coarse to Boulders

other locations tried but unable to penetrate due to boulders.

STREAM DATA
Few signs of scour
Velocity at H.W. - Medium.
Stream bed - Boulders.

BRIDGE DATA

| | O & D | PROPOSED |
|---|---|---|
| Span Lgth. | 38'-0" | 54'-0" |
| Clear Lgth. | 18'-6" | 34'-0" (Skew) |
| Clear Hgt. | 7'-0" | 7'-6 |
| TYPE | Conc. Arch. | W Beam Cont. Fr. |
| Waterway | 110' | 180' |
| Roadway | 18'-0" | 24'-0" |

295+00
300' V.C.
El. 924.00

45° Skew 54'-0" W Beam
24' Rdwy. Bank ½ Fl.

Begin Br. Str. 294+85.5 P.O. 922.68
P.V.I. 295+11.5 El. 924.00

End Br. Str. 295+39.5 P.O. 923.39
P.T. 295+65.5 El. 924.00

+3.20%

292+50
200' V.C.

297+00
100' V.C.

N.H.W. - 919.0

N.H.W. - 913.0
E.L.W. - 912.0

El. 907.92

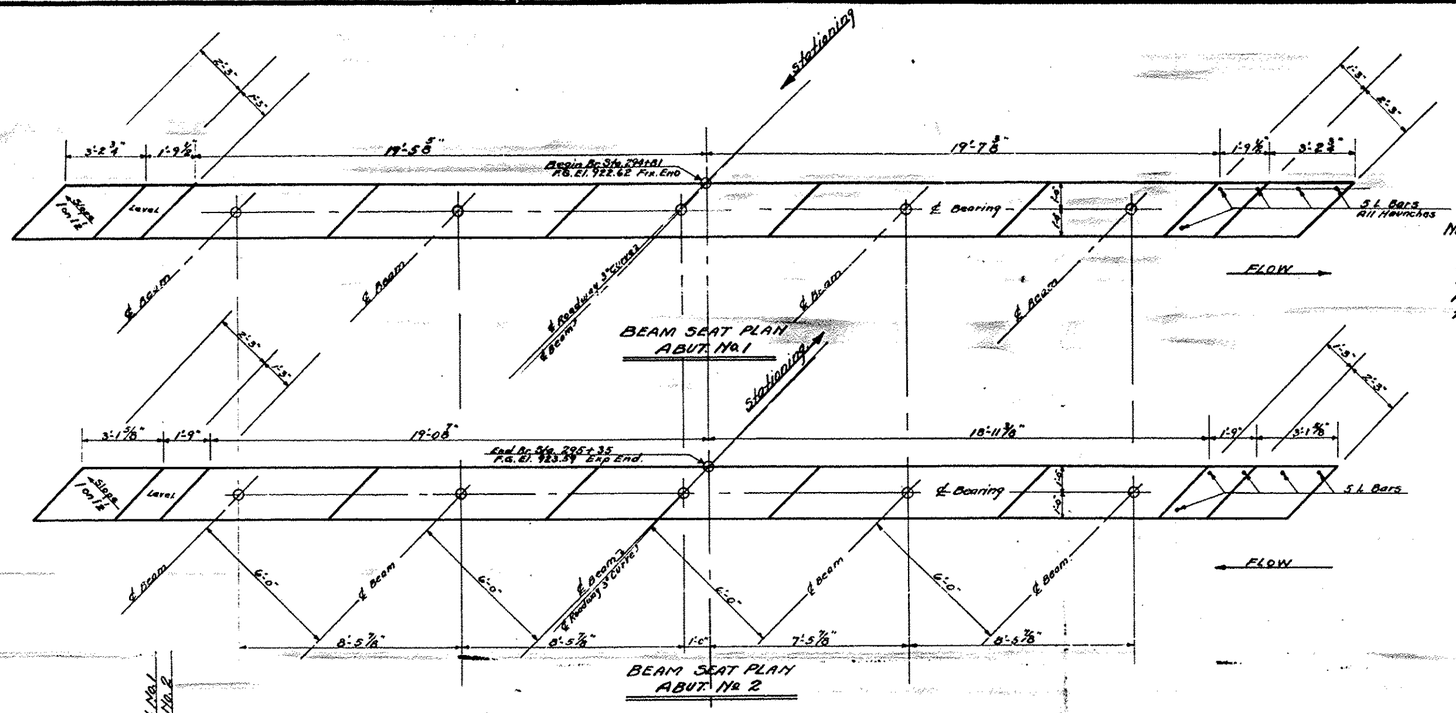
El. 907.89

LIST OF SHEETS

1 Title Sheet
2 Alignment & Profile
3 Superstructure Layout
4 Substructure
5 Steel Details

"BRIDGE NO. 48"
OVER WHETSTONE BROOK
MARLBORO, VT.

Marlboro
Sawmill Bridge
F.A.P. - 7-(2)
Sheet 5 of 17 Sheets




REINFORCING STEEL FOR ONE ABUTMENT

| Mark | No. | Size | Tot. Lgth. | Details |
|---|---|---|---|---|
| A | 4 | 1¼ ℄ | 50'-0" | 46'-6" R=5" |
| B | 4 | 1" ℄ | 43'-0" | |
| C | 16 | 1¼ ℄ | 12'-3" | 9'-6" R=5" |
| H | 14 | ⅝ ℄ | 18'-0" | Straight bend to fit in field. |
| S | 27 | ⅝ ℄ | 6'-0" | 5'-6" 1'-6" |
| L | 10 | ¾ ℄ | 5'-4" | Straight. |

132 Bars required for Abutments.

ESTIMATED QUANTITIES

| Abutments | No. 1 | No. 2 | |
|---|---|---|---|
| Concrete Class 'A' | 28 | 29 | C.Y. |
| Reinforcing Steel | 2955 | 2955 | lbs. |
| Structure Excav. | 40 | 60 | C.Y. |
| Channel Excav. | 200 | 300 | C.Y. |
| Rip Rap for Bank Prot. (Mx) | 150 | 150 | C.Y. |

| Superstructure* | | |
|---|---|---|
| Concrete Class A | 38 | C.Y. |
| Reinforcing Steel | 7600 | Lbs. |
| Steel Superstructure (37500) | 1 | L.S. |

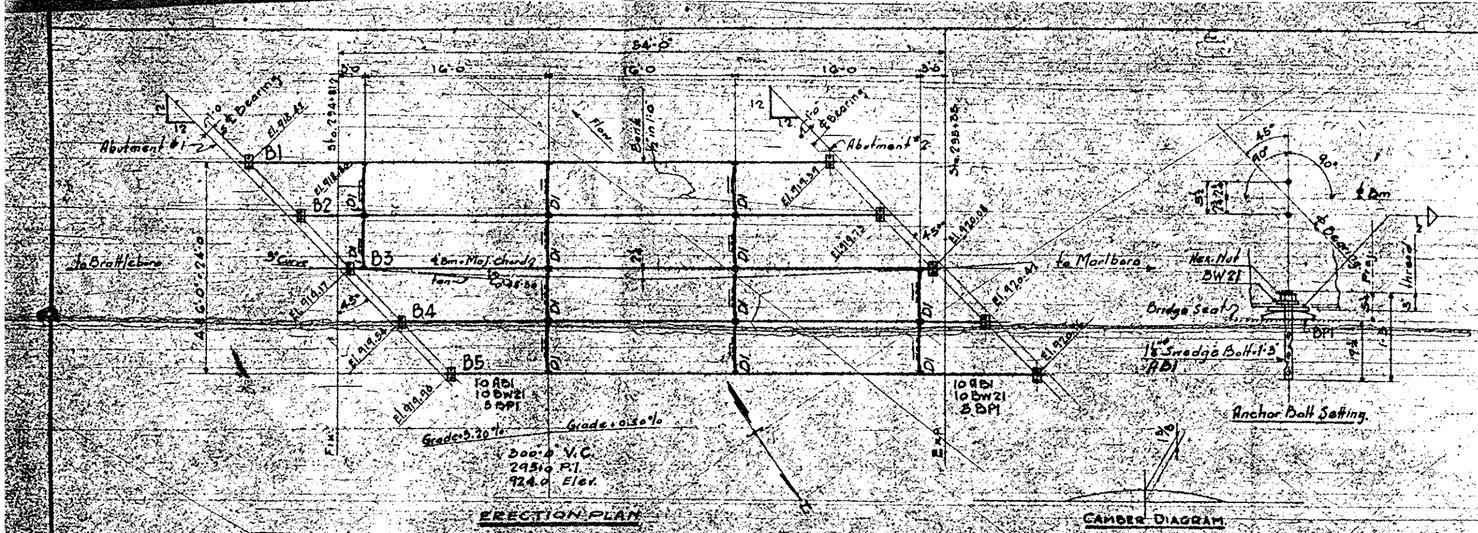
*Does not include quantities for curb and end posts See SB-5C

Surveyed by
Designed by W.A.S.
Drawn by W.A.S
Traced by H.R.C.
Checked by L.M.B.
Series F.A.P. No. 7 (2) Filed
Sheet 6 of 17 Sheets

SAWMILL BRIDGE
ABUTMENT DETAILS & SUPERSTRUCTURE LAYOUT
MARLBORO
NOT TO SCALE

BRIDGE No. 48
OVER WHETSTONE BROOK
MARLBORO, VT.

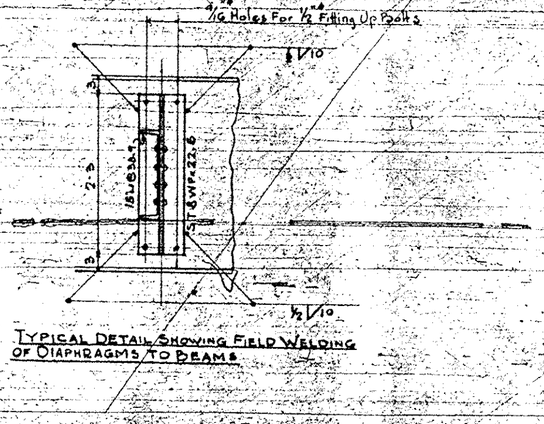
| FED. R.D. DIST. NO. | State | FED. AID PROJ. NO. | FISCAL YEAR |
|---|---|---|---|
| 9 | Vt | 7(2) | 1941 |




ERECTION PLAN



CAMBER DIAGRAM




TYPICAL DETAIL SHOWING FIELD WELDING OF DIAPHRAGMS TO BEAMS

Notes:
Anchor Bolts furnished by B.S.Co. and set by others.
Erection by others.
Elevations given to Under side of Base Rs or top of masonry.
Diaphragms to be Field welded by others.

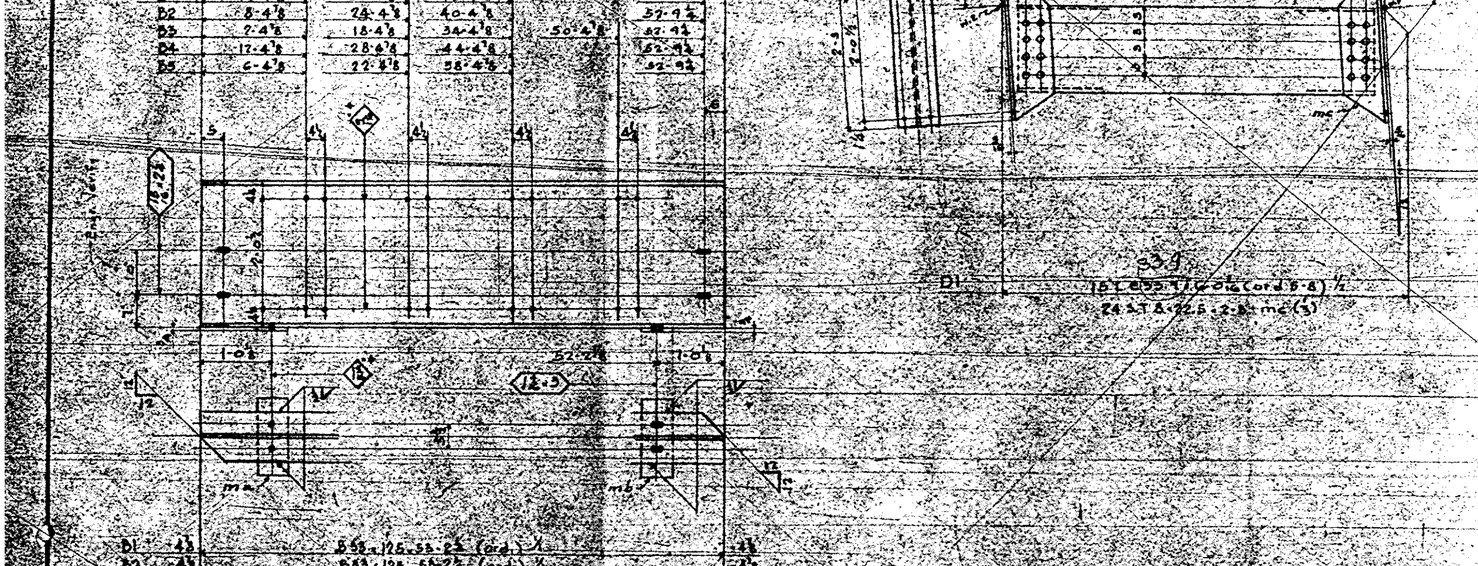
| | |
|---|---|
| B1 | 18-4⅛ |
| B2 | 8-4⅛ |
| B3 | 7-4⅛ |
| B4 | 17-4⅛ |
| B5 | 6-4⅛ |

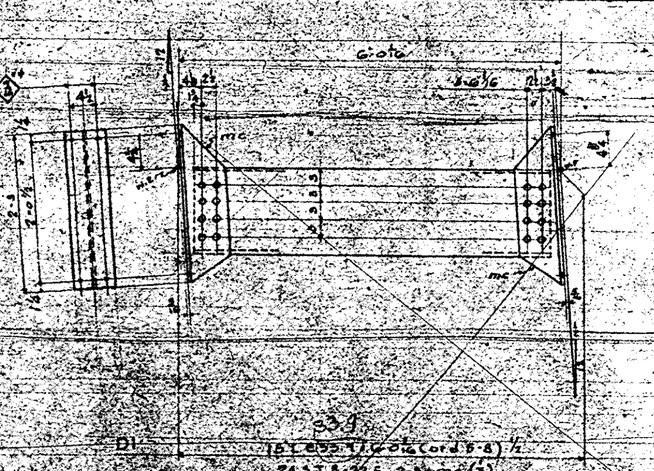
| | |
|---|---|
| B1 | 30-4⅛ |
| B2 | 24-4⅛ |
| B3 | 18-4⅛ |
| B4 | 28-4⅛ |
| B5 | 22-4⅛ |

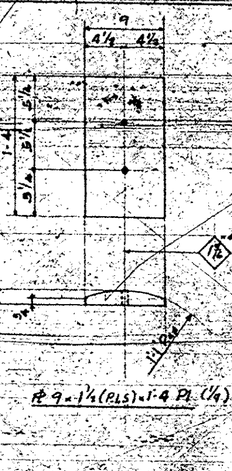
| | |
|---|---|
| B1 | 46-4⅛ |
| B2 | 40-4⅛ |
| B3 | 34-4⅛ |
| B4 | 44-4⅛ |
| B5 | 38-4⅛ |

50'-4⅛"

| | |
|---|---|
| B1 | 52-9½ |
| B2 | 52-9½ |
| B3 | 52-9½ |
| B4 | 52-9½ |
| B5 | 52-9½ |




Note: Bearing Rs must be flat + true.
Edges Coiled from Bearing not permitted.
Stencil necessary to insure flat pls.

BRIDGE NO. 4 ON
OVER WHETSTONE BROOK
MARLBORO, VT.

Checked
12-7-42
D.R.B.

| Mk. | No. | Description | Remarks |
|---|---|---|---|
| B1 | 11 | Stringers | |
| B2 | 4 | Stringers | |
| B3 | 1 | Stringers | |
| B4 | 4 | Stringers | |
| B5 | 1 | Stringers | |
| D1 | 12 | Diaphragms | |
| P1 | 10 | Bearing Rs. | |

REQUIRED LIST

| | |
|---|---|
| RIVETS | ⅞ |
| OPEN HOLES | As Noted |
| PAINT | One Coat |
| SHOP CONTACT SURFACES | Painted |

ERECTION PLAN AND DETAILS

State Highway Bridge F.A.P. 7(2)
Marlboro, Vt.
Cent. Rensselaer Cont'g. (Am'l w'th Rensselaer N.Y.

BETHLEHEM STEEL COMPANY
FABRICATED STEEL CONSTRUCTION
BETHLEHEM DRAWING ROOM DETR BORKE

IN CHARGE Dickert MADE BY A.Y.
CHECKED BY TRACED BY T.B.S. 12/14
REVISED LAST ADDED NO.

CONTRACT HPB60 SHEET 1

SHOP NO.