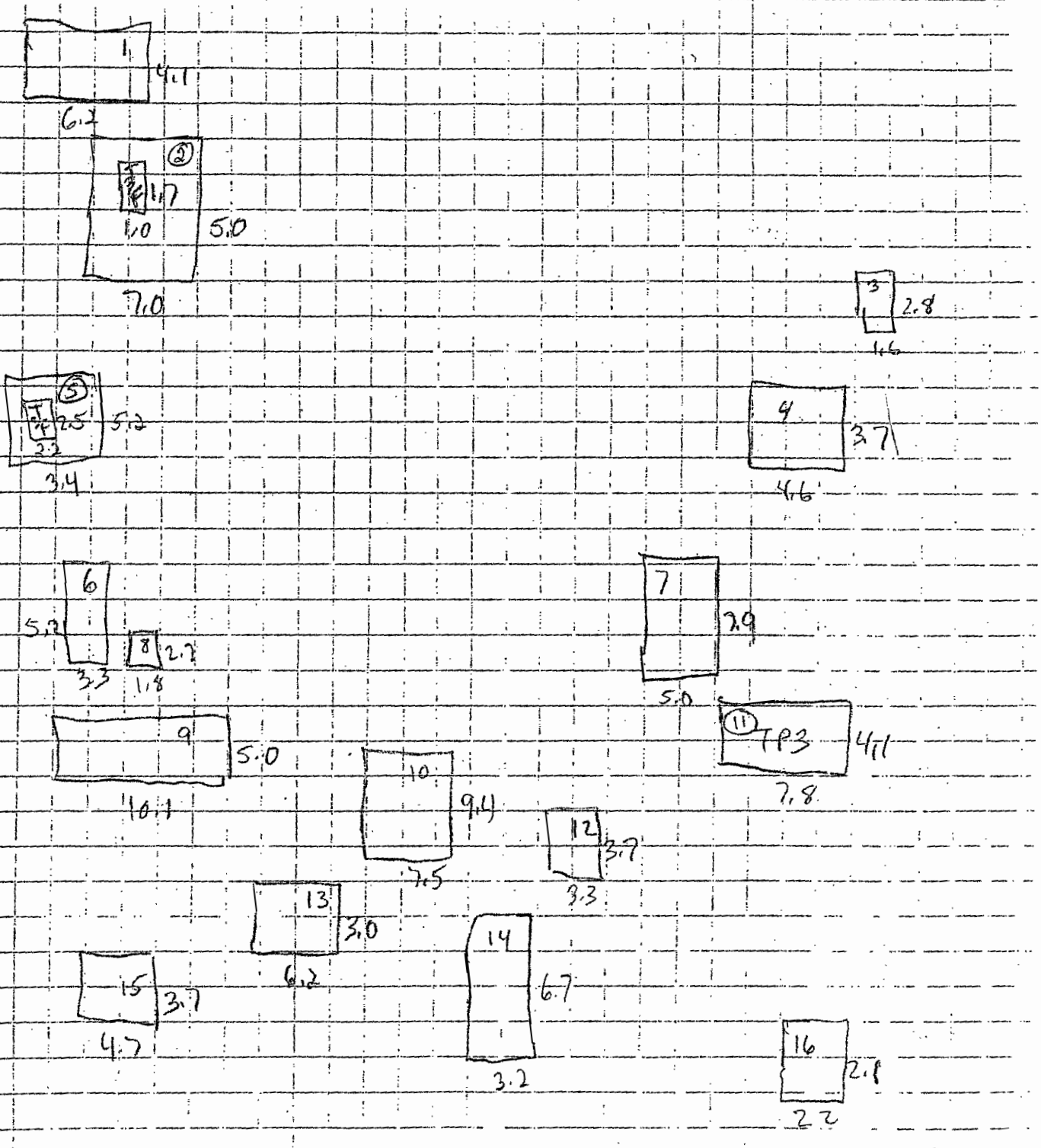
**MINNEAPOLIS HIGHWAY CONSTRUCTION FACTORS**
**ATTACHMENT 7B**
**BRIDGE 9340 COLLAPSE**
**MINNEAPOLIS, MN.;8/1/07**
**HWY-07-MH024**

1500 - 1600




ured/Comp'd By: A. Richey date

ked By: RTRESSLER date 8.6.7

SB LT LANE 1500'-1600'

1 4.1 x 6.2 = 25.42
2 5.0 x 7.0 = 35.0
3 1.6 x 2.8 = 4.48
4 3.7 x 4.6 = 17.02
5 3.4 x 5.2 = 17.68
6 3.3 x 5.2 = 17.16
7 7.9 x 5.0 = 39.5
8 2.7 x 1.8 = 4.86

Total 161.12 (RT)

9 5 x 10.1 = 50.5
10 9.4 x 7.5 = 70.5
11 4.1 x 7.8 = 31.98
12 3.7 x 3.3 = 12.21
13 3.0 x 6.2 = 18.6
14 3.2 x 6.7 = 21.44
15 3.7 x 4.7 = 17.39
16 2.1 x 2.2 = 4.62

Total 227.24 (RT)

Total 388.36 (RT)

TP 3

11 4.1 x 7.8 = 31.98 (RT)

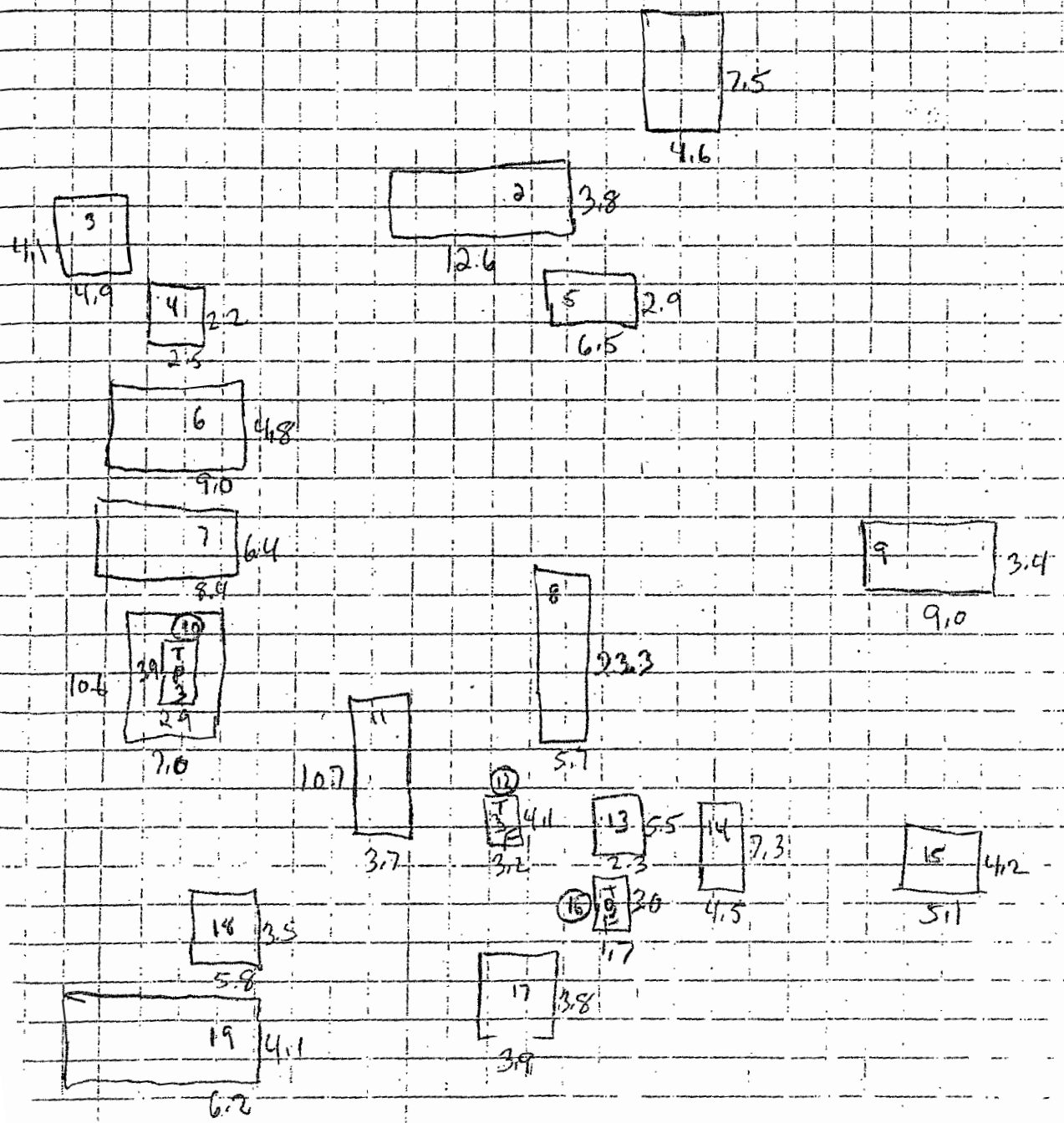
T3F

2 1.0 x 1.7 = 1.7
5 3.4 x 5.2 = 17.68

Total 19.38 (RT)

comp by RSR

1690 - 1700




sured/Comp'd By: A. Fuller date

cked By: PFRESSLER date 8-6-7

SB LT LANE 1600'-1700'

| | | | |
|---|---|---|---|
| 1 | 4.6 x 7.5 = 34.5 | 11 | 3.7 x 10.7 = 39.59 |
| 2 | 3.8 x 12.6 = 47.88 | 12 | 3.2 x 4.1 = 13.12 |
| 3 | 4.1 x 4.9 = 20.09 | 13 | 2.3 x 5.5 = 12.65 |
| 4 | 2.2 x 2.5 = 5.5 | 14 | 4.5 x 7.3 = 32.85 |
| 5 | 2.9 x 6.5 = 18.85 | 15 | 4.2 x 5.1 = 21.42 |
| 6 | 4.8 x 9.0 = 43.2 | 16 | 1.7 x 3.0 = 5.1 |
| 7 | 6.4 x 8.4 = 53.76 | 17 | 3.8 x 3.9 = 14.82 |
| 8 | 5.7 x 23.3 = 132.81 | 18 | 3.5 x 5.8 = 20.3 |
| 9 | 3.4 x 9.0 = 30.6 | 19 | 4.1 x 6.2 = 25.42 |
| 10 | 7.0 x 10.6 = 74.2 | | |
| | Total 461.39 (RT) | | Total 185.27 (RT) |

Total 646.66 (RT)

TP3

10 2.9 x 3.9 = 11.31 (RT)

T3F

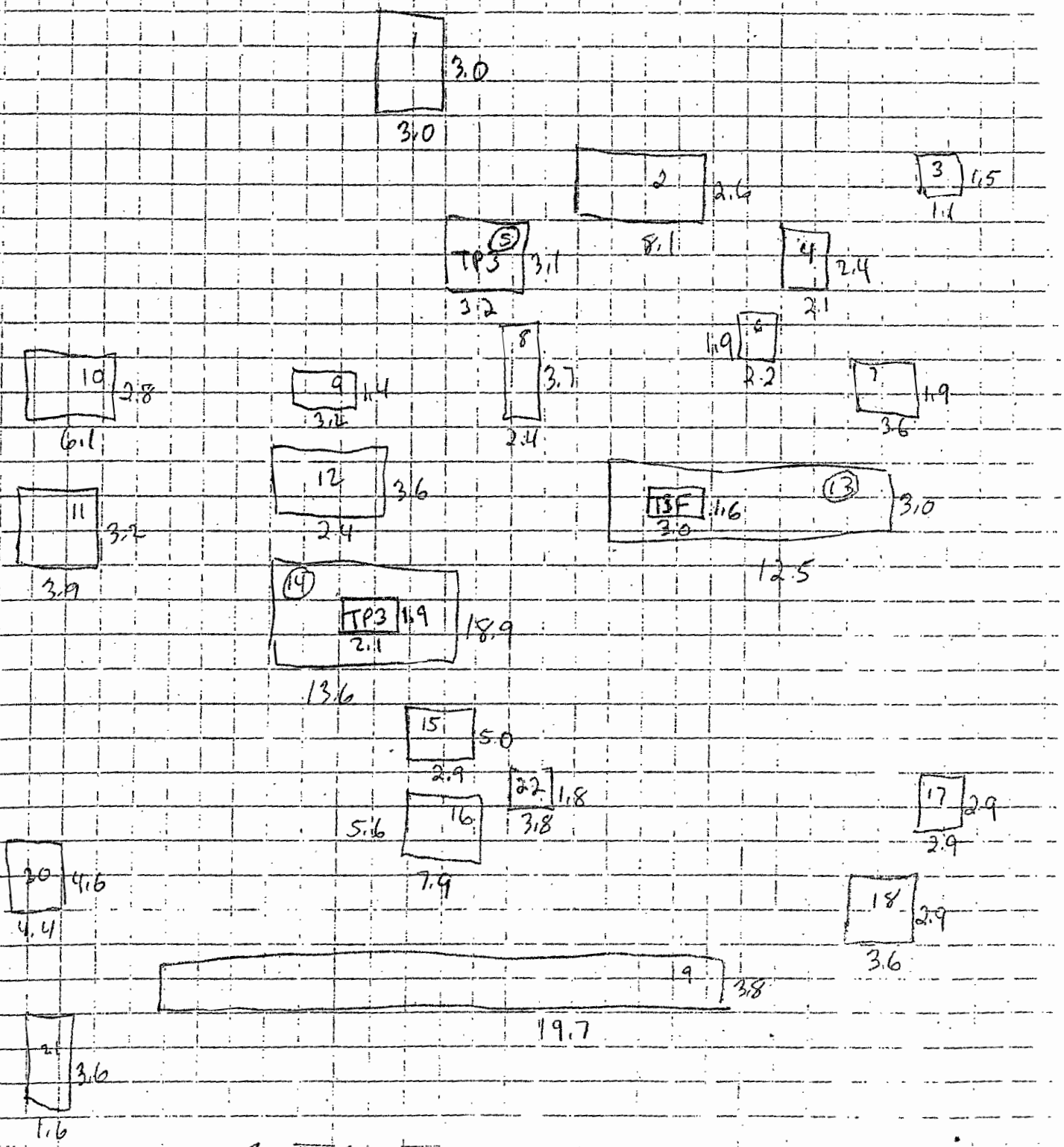
12 3.2 x 4.1 = 13.12

16 1.7 x 3.0 = 5.1

Total 18.22 (RT)

comp by RJR

SB LT. LANE 1900 - 1800




Measured/Comp'd By: R. Stanley date

Checked By: RTRESSLER date 8-6-7

SB LT LANE 1700-1800'

| | | | |
|---|---|---|---|
| 1 | 3.0 x 3.0 = 9.0 | 12 | 2.4 x 3.6 = 8.64 |
| 2 | 2.6 x 8.1 = 21.06 | 13 | 3.0 x 12.5 = 37.5 |
| 3 | 1.1 x 1.5 = 1.65 | 14 | 13.6 x 18.9 = 257.04 |
| 4 | 2.1 x 2.4 = 5.04 | 15 | 2.9 x 5.0 = 14.5 |
| 5 | 3.1 x 3.2 = 9.92 | 16 | 5.6 x 7.9 = 44.24 |
| 6 | 1.9 x 2.2 = 4.18 | 17 | 2.9 x 2.9 = 8.41 |
| 7 | 1.9 x 3.6 = 6.84 | 18 | 2.9 x 3.6 = 10.44 |
| 8 | 2.4 x 3.7 = 8.88 | 19 | 3.8 x 19.7 = 74.86 |
| 9 | 1.4 x 3.2 = 4.48 | 20 | 4.6 x 4.4 = 20.24 |
| 10 | 2.8 x 6.1 = 17.08 | 21 | 3.6 x 1.6 = 5.76 |
| 11 | 3.2 x 3.9 12.48 | 22 | 1.8 x 3.8 = 6.84 |
| | Total ~~100.55~~ 100.61 (RT) | | Total 488.47 |
| | | | Total ~~589.02~~ 589.08 (RT) |

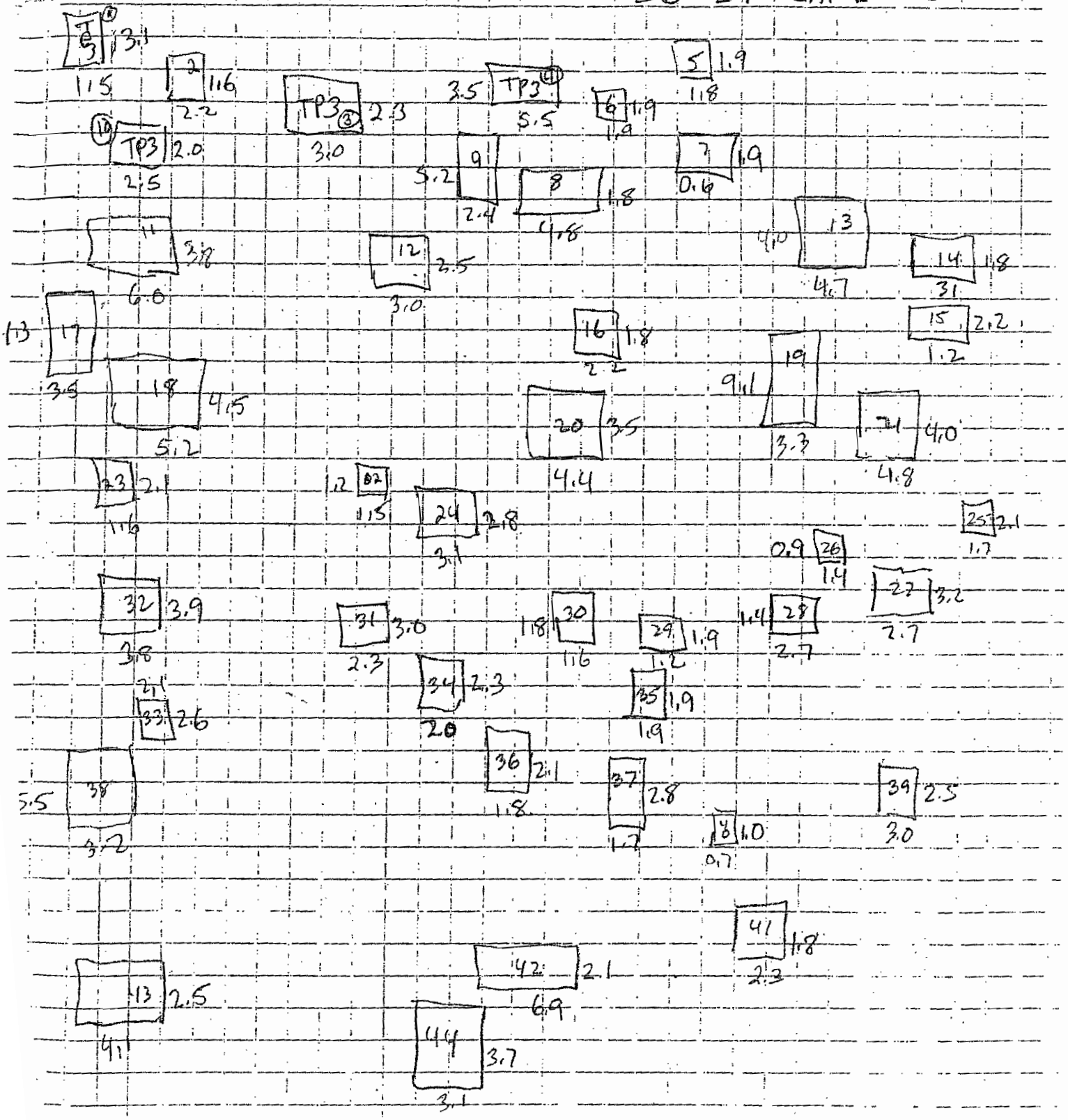
TP3

| | | | |
|---|---|---|---|
| 5 | 3.1 x 3.2 = 9.92 | 13 | 1.6 x 3.0 = 4.8 |
| | | 14 | 2.1 * 1.9 = 3.99 |
| | | | Total 8.79 |

comp by RJR

SM UNIT: SB

# SB LT LANE 1800' - EN




Measured/Comp'd By: R. TNESSLER date 8.6.7

Checked By: [signature] date 8-7-07

SB LT LANE 1800' - END

| | | | |
|---|---|---|---|
| 1 | 1.5 x 3.1 = 4.65 | 23 | 2.1 x 1.6 = 3.36 |
| 2 | 1.6 x 2.2 = 3.52 | 24 | 2.8 x 3.1 = 8.68 |
| 3 | 2.3 x 3.0 = 6.9 | 25 | 1.7 x 2.1 = 3.57 |
| 4 | 3.5 x 6.5 = 19.25 | 26 | 0.9 x 1.4 = 1.26 |
| 5 | 1.9 x 1.8 = 3.42 | 27 | 3.2 x 2.7 = 8.64 |
| 6 | 1.9 x 1.9 = 3.61 | 28 | 1.4 x 2.7 = 3.78 |
| 7 | 0.6 x 1.9 = 1.14 | 29 | 1.2 x 1.9 = 2.28 |
| 8 | 1.8 x 4.8 = 8.64 | 30 | 1.6 x 1.8 = 2.88 |
| 9 | 2.4 x 5.2 = 12.48 | 31 | 2.3 x 3.0 = 6.9 |
| 10 | 2.0 x 2.5 = 5.0 | 32 | 3.9 x 3.8 = 14.82 |
| 11 | 3.8 x 6.0 = 22.8 | 33 | 2.1 x 2.6 = 5.46 |
| 12 | 2.5 x 3.0 = 7.5 | 34 | 2.3 x 2.0 = 4.6 |
| 13 | 4.0 x 4.7 = 18.8 | 35 | 1.9 x 1.9 = 3.61 |
| 14 | 1.8 x 3.1 = 5.58 | 36 | 2.1 x 1.8 = 3.78 |
| 15 | 1.2 x 2.2 = 2.64 | 37 | 1.7 x 2.8 = 4.76 |
| 16 | 1.8 x 2.2 = 3.96 | 38 | 3.2 x 5.5 = 17.6 |
| 17 | 4.3 x 3.5 = 15.05 | 39 | 2.5 x 3.0 = 7.5 |
| 18 | 4.5 x 5.2 = 23.4 | 40 | 1.0 x 0.7 = .7 |
| 19 | 3.3 x 9.1 = 30.03 | 41 | 1.8 x 2.3 = 4.14 |
| 20 | 3.5 x 4.4 = 15.4 | 42 | 2.1 x 6.9 = 14.49 |
| 21 | 4.0 x 4.8 = 19.2 | 43 | 2.5 x 4.1 = 10.25 |
| 22 | 1.2 x 1.5 = 1.8 | 44 | 3.1 x 3.7 = 11.47 |
| | TOTAL 234.77 | | TOTAL 144.53 |

Total 379.3 HH

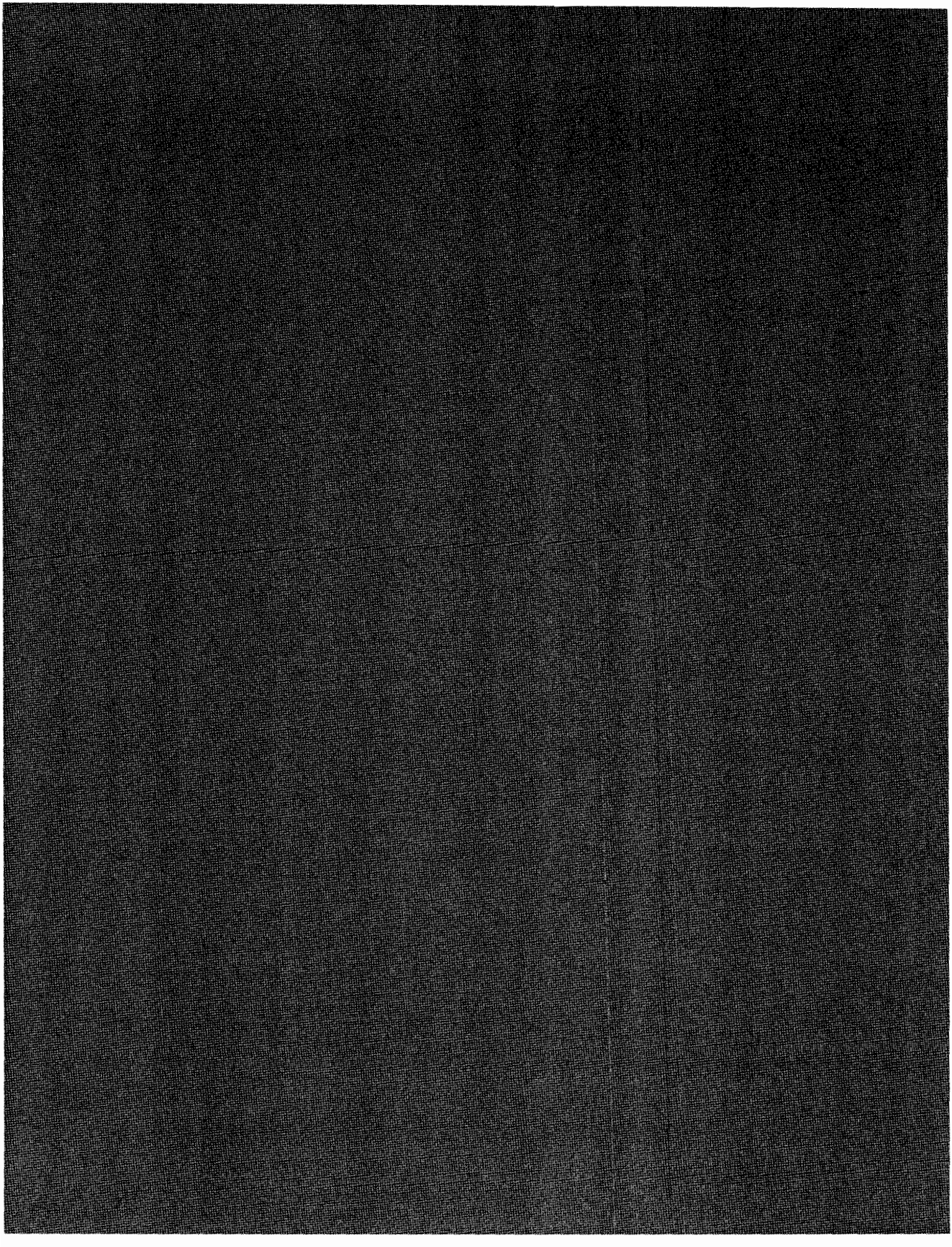
TP3

1 1.5 x 3.1 = 4.65 4 3.5 x 5.5 = 19.25

3 2.3 x 3.0 = 6.9 10 2.0 x 2.5 = 5

TOTAL TP3 = 35.8 ✓ HH

comp by RJR



~~Mill~~ 7-2-07

NB PLACE CONCRETE PATCH FINISH 7-20-07

Summary NB Rt LANES BR 9340

| | | | TP3 | T3F |
|---|---|---|---|---|
| So. Abut | 0 – 100' | 7.02 | | |
| | 100 – 200' | 387.17 | | |
| | 200 – 300' | 474.15 | 28.23 | 19.96 |
| | 300 – 400' | 179.39 | 5.25 | 6.6 |
| | 400 – 500' | 321.99 | | 5.44 |
| | 500 – 600' | 52.65 | | |
| | 600 – 700' | 494.48 | 0.96 | |
| | 700 – 800' | 555.19 | 10.88 | 42.02 |
| | 800 – 900' | 281.73 | 1.56 ~~10.60~~ | ~~17.9~~ 26.44 |
| | 900 – 1000' | ~~309.28~~ 310.18 | | 42.94 |
| | 1000 – 1100' | 558.61 | 5.63 ~~7.308~~ | 24.16 |
| | 1100 – 1200' | 462.69 | 3.04 | 56.9 |
| | 1200 – 1300' | 737.95 | | 53.27 |
| | 1300 – 1400' | 794.9 | 16.17 | 155.45 |
| | 1400 – 1500' | 970.89 | 35.73 | 38.01 |
| | 1500 – 1600' | ~~659.72~~ 471.0 | 32.07 | 29.05 |
| | 1600 – 1700' | 1053.32 | 3.84 | |
| ABUT | 1700 – END | 873.74 | 7.2 | 127.88 |
| | Total | ~~9174.87'~~ | ~~161.278'~~ | ~~619.68'~~ |
| | | 8987.05 | 150.56 | 628.72 |

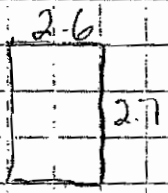
comply RJR

V/B/y KWK

NOTE: DRAWINGS ARE APPX. LOCATIONS AND NOT TO SCALE.

ITEM: REMOVE SLAB TYPE 1
ITEM #: 2433.505
ITEM UNIT: SF

NB RT Lane 100'




2.6 x 2.7 = 7.02

Measured/Comp'd By: R. Thurber date
Checked By: MH date 7-23-07

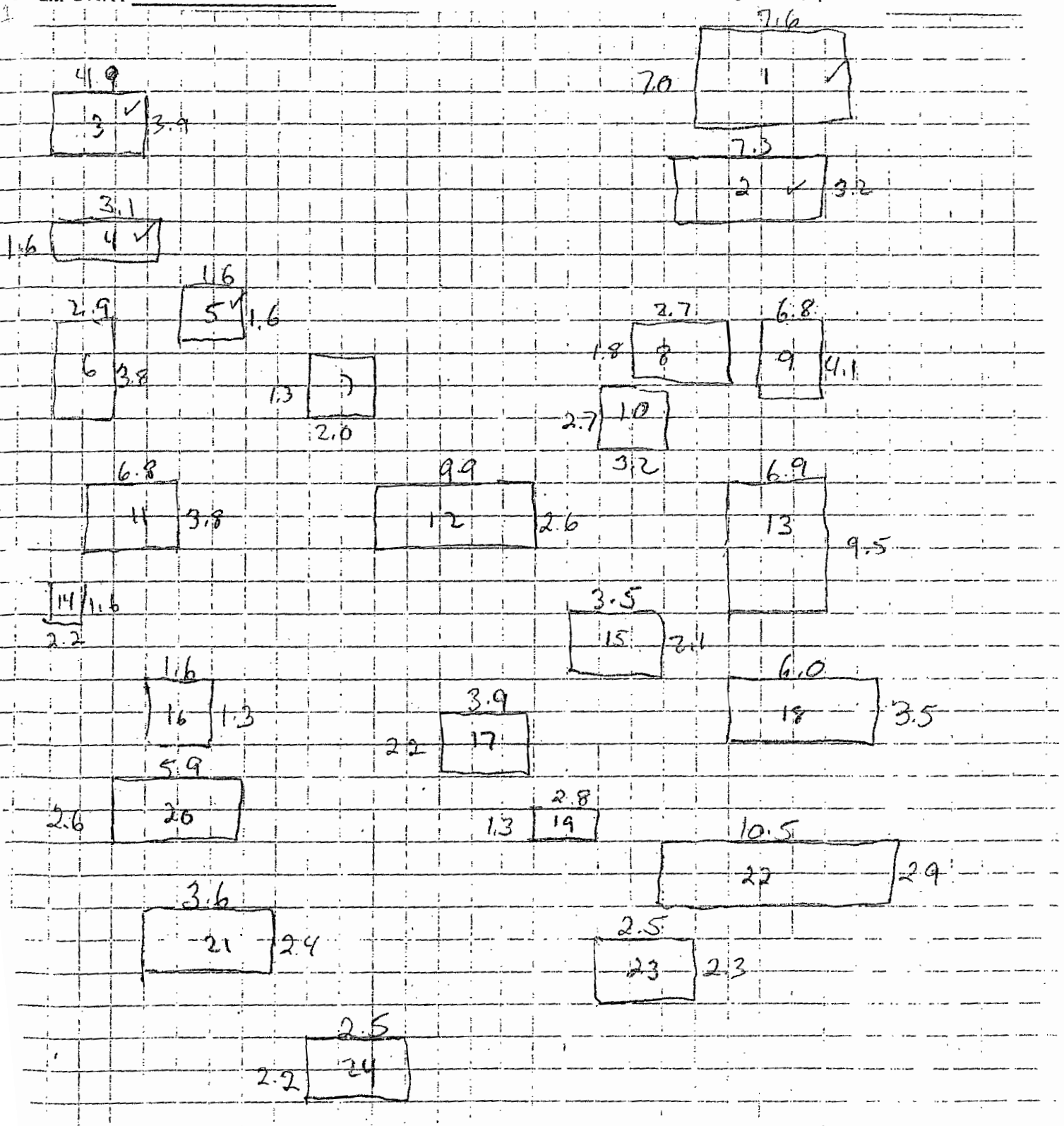
0 - 100'

ITEM: REMOVE SLAB TYPE 1

ITEM #: 2433.505

ITEM UNIT:

NB RT Lane 200'




Measured/Comp'd By: R. Rinker date

Checked By: HR T- date 7-23-07

100 - 200'

NB Rt Lane 100' - 200

| | | | | | |
|---|---|---|---|---|---|
| 1 | 7.6 x 7.0 = | 53.2 | 13 | 6.9 x 9.5 = | 65.55 |
| 2 | 7.3 x 3.2 = | 23.36 | 14 | 1.6 x 2.2 = | 3.52 |
| 3 | 4.9 x 3.9 = | 19.11 | 15 | 3.5 x 2.1 = | 7.35 |
| 4 | 3.1 x 1.6 = | 4.96 | 16 | 1.6 x 1.3 = | 2.08 |
| 5 | 1.6 x 1.6 = | 2.56 | 17 | 3.9 x 2.2 = | 8.58 |
| 6 | 2.9 x 3.8 = | 11.02 | 18 | 6.0 x 3.5 = | 21.0 |
| 7 | 1.3 x 2.0 = | 2.6 | 19 | 2.8 x 1.3 = | 3.64 |
| 8 | 2.7 x 1.8 = | 4.86 | 20 | 5.9 x 2.6 = | 15.34 |
| 9 | 6.8 x 4.1 = | 27.88 | 21 | 3.6 x 2.4 = | 8.64 |
| 10 | 2.7 x 3.2 = | 8.64 | 22 | 10.5 x 2.9 = | 30.45 |
| 11 | 6.8 x 3.8 = | 25.84 | 23 | 2.5 x 2.3 = | 5.75 |
| 12 | 9.9 x 2.6 = | 25.74 | 24 | 2.5 x 2.2 = | 5.5 |
| | | 209.77 | | | 177.40 |

Total 387.17 ✓

AU 7-23-07

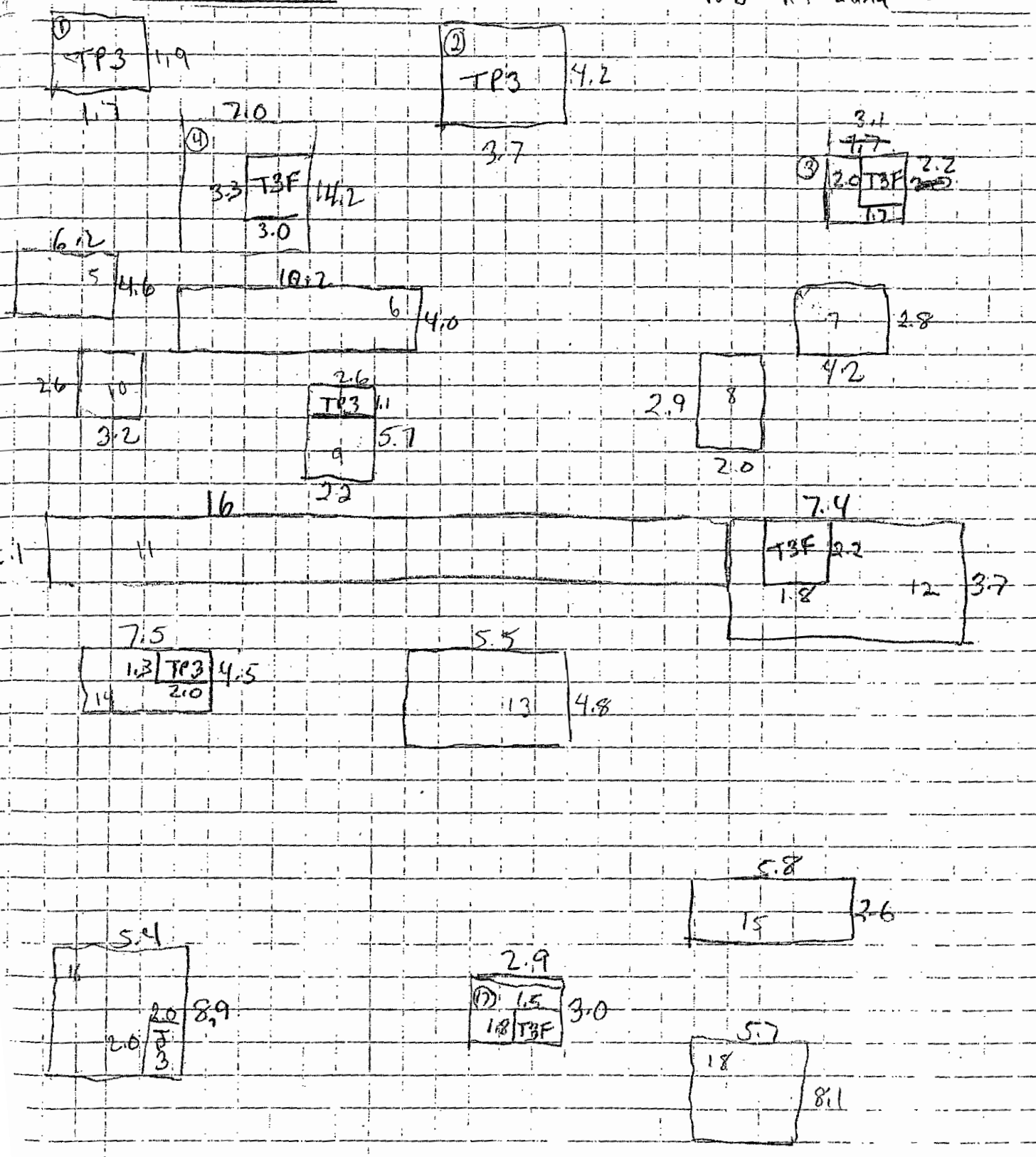
Comp by RJR

ITEM: Remove Slabs Type 1 & 3

ITEM #: 2433.505

ITEM UNIT:

NB Rt Lane 300




Measured/Comp'd By: Rutley date

Checked By: HCC date 7-23-07

200 - 300

NB Rt Lane 200'-

| | | | | | |
|---|---|---|---|---|---|
| 1 | 1.9 x 1.7 = | 3.23 | 10 | 2.6 x 3.2 = | 8.32 |
| 2 | 4.2 x 3.7 = | 15.54 | 11 | 16.0 x 2.1 = | 33.6 |
| 3 | 3.1 x 2.2 = | 6.82 | 12 | 7.4 x 3.7 = | 27.38 |
| 4 | 7.0 x 14.2 = | 99.4 | 13 | 5.5 x 4.8 = | 26.4 |
| 5 | 6.2 x 4.6 = | 28.52 | 14 | 7.5 x 4.5 = | 33.75 |
| 6 | 10.2 x 4.0 = | 40.8 | 15 | 5.8 x 2.6 = | 15.08 |
| 7 | 2.8 x 4.2 = | 11.76 | 16 | 5.4 x 8.9 = | 48.06 |
| 8 | 2.9 x 2.0 = | 5.8 | 17 | 2.9 x 3.0 = | 8.7 |
| 9 | 5.7 x 2.6 = | 14.82 | 18 | 5.7 x 8.1 = | 46.17 |
| | | 226.69 | | | 247.46 |

Total 474.15 ✓

IP3

| | | |
|---|---|---|
| 1. | 1.9 x 1.7 = | 3.23 |
| 2. | 4.2 x 3.7 = | 15.54 |
| 9. | 2.6 x 1.1 = | 2.86 |
| 14. | 1.3 x 2.0 = | 2.6 |
| 16. | 2.0 x 2.0 = | 4.0 |
| | | 28.23 ✓ |

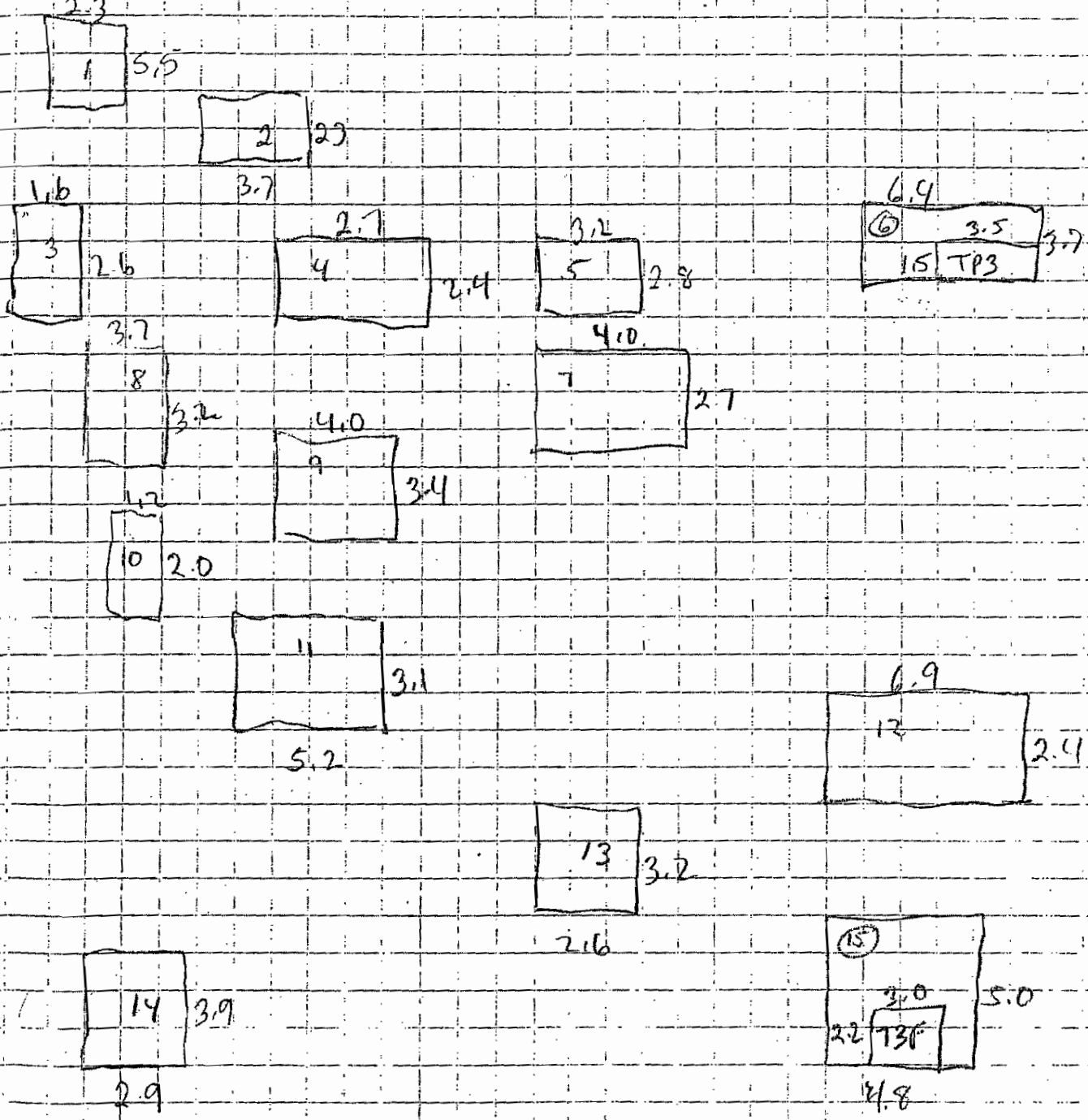
I3F

| | | |
|---|---|---|
| 3. | 2.0 x 1.7 = | 3.4 |
| 4. | 3.3 x 3.0 = | 99 |
| 12. | 2.2 x 1.8 = | 3.96 |
| 17. | 1.5 x 1.8 = | 2.7 |
| | | 19.96 ✓ |

✓
AL
7-23-07
copy by RJR

ITEM: Remove SLAB TYPE 1&3
ITEM #: 2433.505
ITEM UNIT: SF

NB Rt Lane 400'




Measured/Comp'd By: [signature] date
Checked By: HH date 7-25-07

300 - 400'

NB Rt Lane 300' - 400'

1 2.3 x 5.5 = 12.65
2 2.3 x 3.7 = 8.51
3 1.6 x 2.6 = 4.16
4 2.7 x 2.4 = 6.48
5 3.2 x 2.8 = 8.96
6 6.4 x 3.7 = 23.68
7 4.0 x 2.7 = 10.8
8 3.7 x 3.2 = 11.84
9 4.0 x 3.4 = 13.60
10 1.2 x 2.0 = 2.4
11 3.1 x 5.2 = 16.12
12 6.9 x 2.4 = 16.56
13 3.2 x 2.6 = 8.32
14 3.9 x 2.9 = 11.31
15 5.0 x 4.8 = 24.0

Total 179.39 ✓

TP 3

6. 3.5 x 1.5 = 5.25 ✓

TBF

15 3.0 x 2.2 = 6.6 ✓

✓HH 7-25-✓

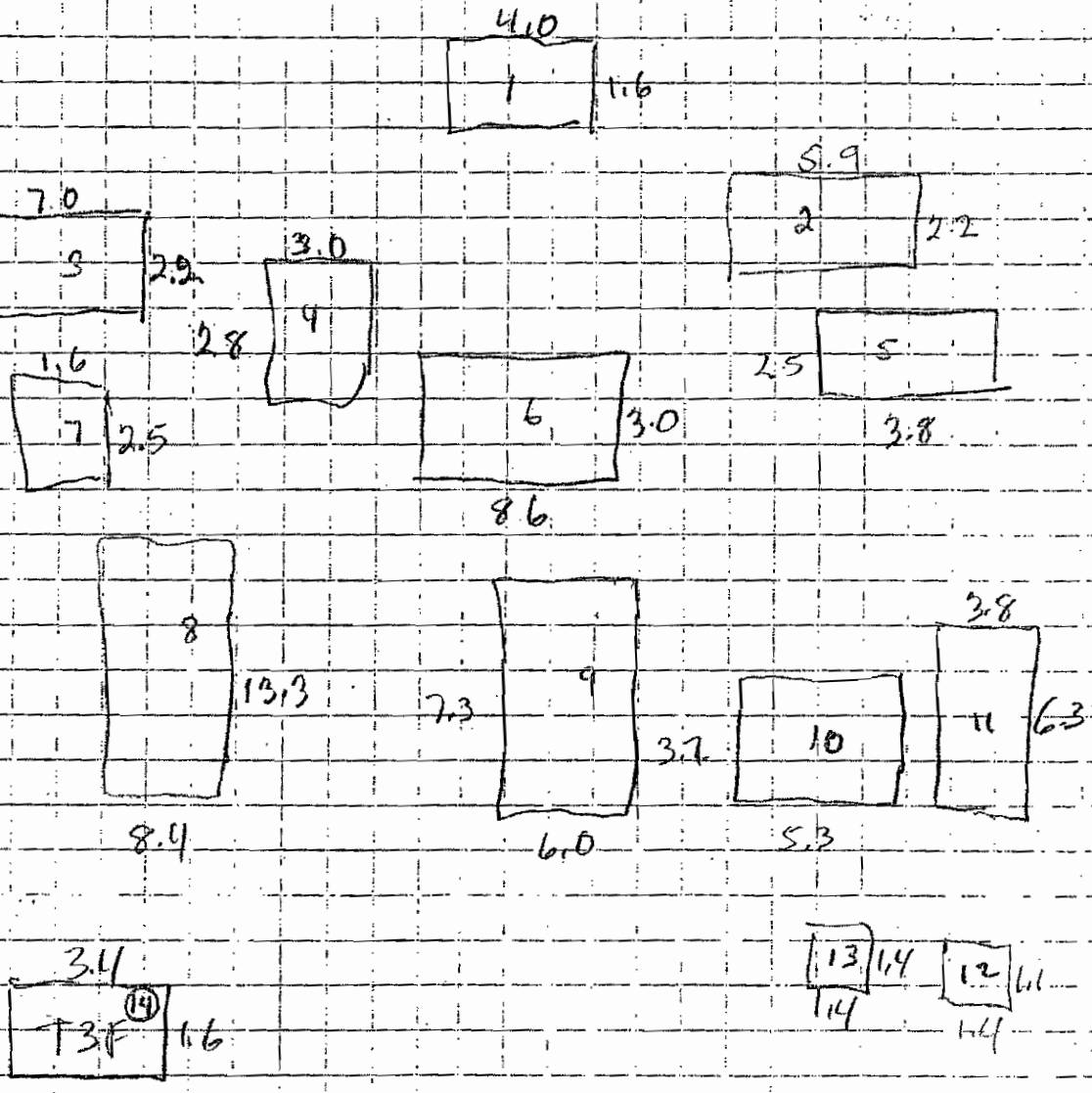
comp by RJR

ITEM: REMOVE SLAB TURN 183

ITEM #: 2433.505

ITEM UNIT: SF

NB Rt Lane 500




Measured/Comp'd By: N. Turley date

Checked By: MH date 7-25-07

400 - 500

NB Rt Lane 400'-500'

1 4.0 x 1.6 = 6.4
2 5.9 x 2.2 = 12.98
3 7.0 x 2.2 = 15.40
4 3.0 x 2.8 = 8.4
5 2.5 x 3.8 = 9.5
6 3.0 x 8.6 = 25.8
7 1.6 x 2.5 = 4.0
8 13.3 x 8.4 = 111.72
9 7.3 x 6.0 = 43.8
10 3.7 x 5.3 = 19.61
11 3.8 x 6.3 = 23.94
12 1.1 x 1.4 = 15.40
13 1.4 x 1.4 = 19.60
14 3.4 x 1.6 = 5.44

TOTAL 321.99 ✓

T3F

14 3.4 x 1.6 = 5.44 ✓

✓ HL 7-25-07

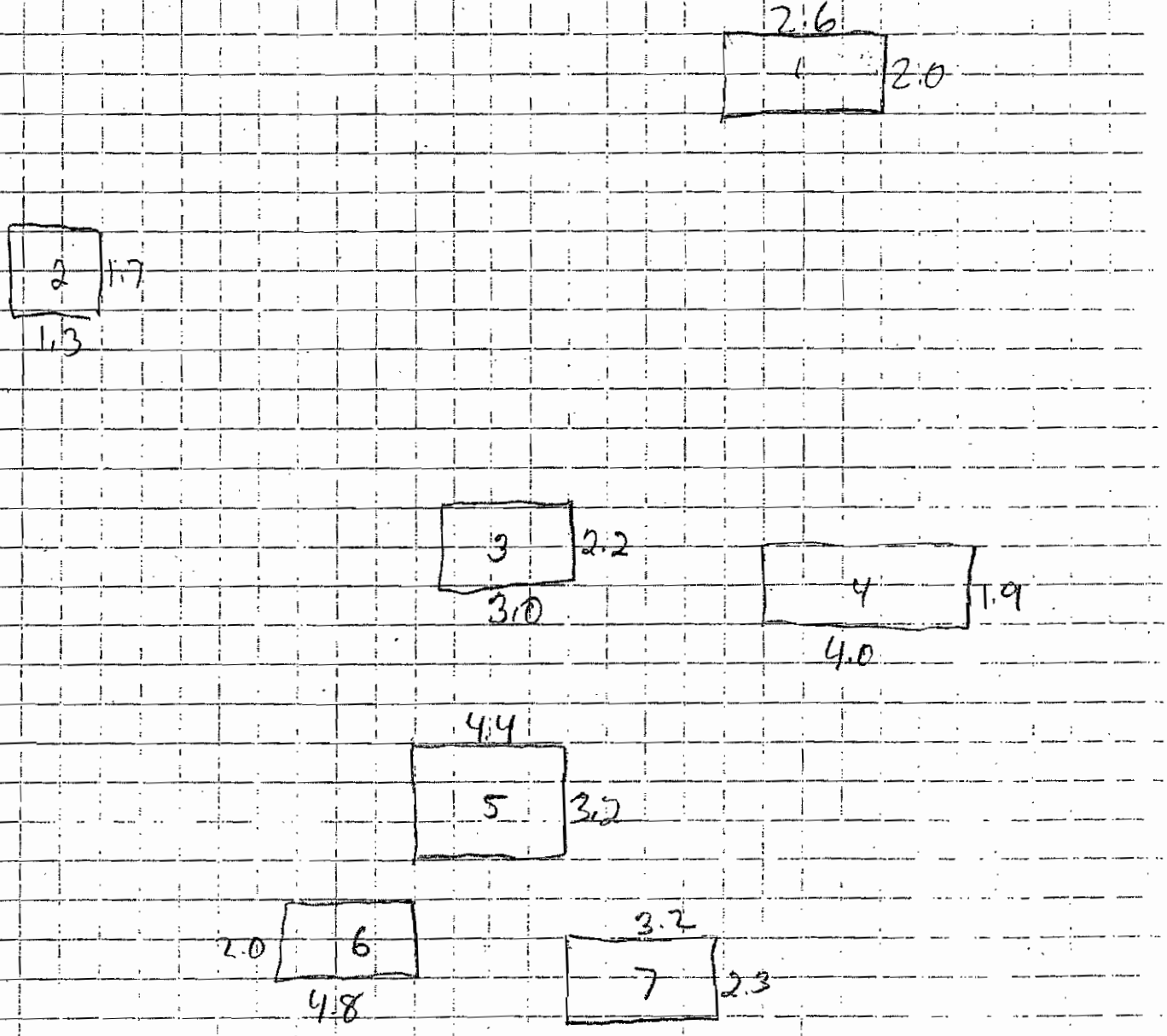
comply RJR

ITEM: REMOVE SLAB TYPE I B3

ITEM #: 2433.505

ITEM UNIT: SF

NB Rt Lane ~~600~~




Measured/Comp'd By: N. Turkey date

Checked By: MH date 2-25-07

560 - 600

NB Rt Lane 500–600

1 2.6 x 2.0 = 5.2
2 1.7 x 1.3 = 2.21
3 2.2 x 3.0 = 6.6
4 1.9 x 4.0 = 7.6
5 4.4 x 3.2 = 14.08
6 2.0 x 4.8 = 9.6
7 3.2 x 2.3 = 7.36

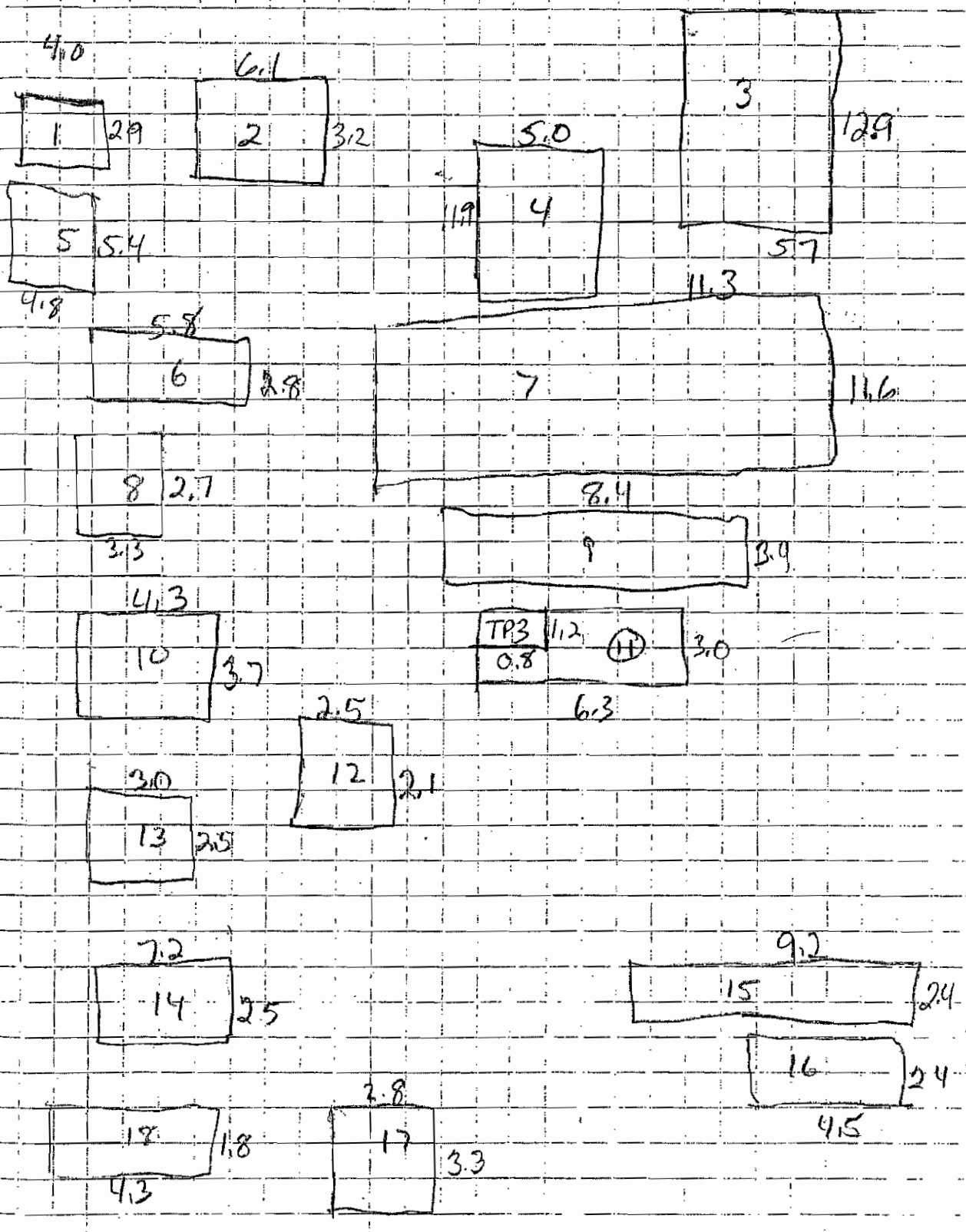
Total 52.65 ✓ Type I

KM 7-25-07

comp by R+R

ITEM: REMOVE SLAB TYPE 1 & 3
ITEM #: 2433.505
ITEM UNIT: SF

NB Rt lane 700




Measured/Comp'd By: [signature] date
Checked By: [signature] date 7-25-07

600 - 700

NB Rt Lane 600 - 700'

| | | | | | |
|---|---|---|---|---|---|
| 1 | 4.0 x 2.9 = | 11.6 | 10 | 4.3 x 3.7 = | 15.91 |
| 2 | 6.1 x 3.2 = | 19.52 | 11 | 3.0 x 6.3 = | 18.9 |
| 3 | 12.9 x 5.7 = | 73.53 | 12 | 2.5 x 2.1 = | 5.25 |
| 4 | 5.0 x 11.9 = | 59.5 | 13 | 3.0 x 2.5 = | 7.5 |
| 5 | 5.4 x 4.8 = | 25.92 | 14 | 7.2 x 2.5 = | 18.0 |
| 6 | 5.8 x 2.8 = | 16.24 | 15 | 9.2 x 2.4 = | 22.08 |
| 7 | 11.3 x 11.6 = | 131.08 | 16 | 2.4 x 4.5 = | 10.8 |
| 8 | 2.7 x 3.3 = | 8.91 | 17 | 2.8 x 3.3 = | 9.24 |
| 9 | 8.4 x 3.9 | 32.76 | 18 | 1.8 x 4.3 = | 7.74 |
| | | 379.06 ✓ | | | 115.42 ✓ |

Total 494.48 ✓

TP 3

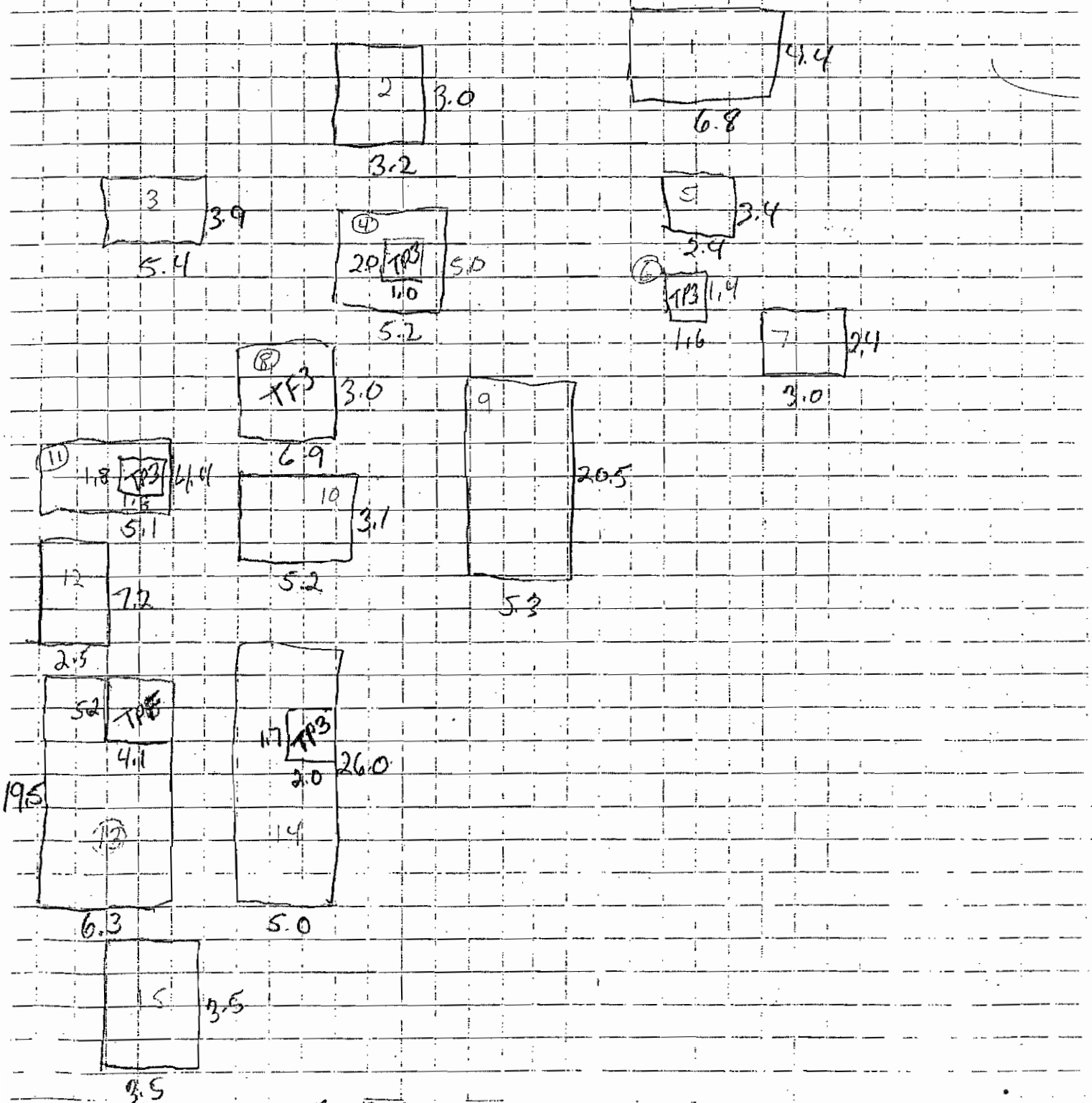
11 1.2 x 0.8 = 0.96 ✓

HLL 7-25-07

comp by RJR

ITEM: REMOVE SLAB TYPE 1 & 3
ITEM #: 2433.505
ITEM UNIT: SF

NB Rt Lane » 800




Measured/Comp'd By: N. Nuñez date
Checked By: MM date 7-25-07

700 - 800

NB Rt Lane 700-800'

1 4.4 x 6.8 = 29.92
2 3.0 x 3.2 = 9.6
3 3.9 x 5.4 = 21.06
4 5.0 x 5.2 = 26.00
5 3.4 x 2.4 = 8.16
6 1.4 x 1.6 = 2.24
7 2.4 x 3.0 = 7.2
8 3.0 x 6.9 = 20.7
9 20.5 x 5.3 = 108.65
10 3.1 x 5.2 = 16.12
11 4.4 x 5.1 = 22.44
12 7.2 x 2.5 = 18.0
13 19.5 x 6.3 = 122.85
14 26.0 x 5.0 = 130.0
15 3.5 x 3.5 = 12.25

Total 555.19 ✓

TP3

4 2.0 x 1.0 = 2.0
6 1.4 x 1.6 = 2.24
11 1.8 x 1.8 = 3.24
14 1.7 x 2.0 = 3.4

Total 10.88 ✓

TF3

8 3.0 x 6.9 = 20.7
13 5.2 x 4.1 = 21.32

Total 42.02 ✓

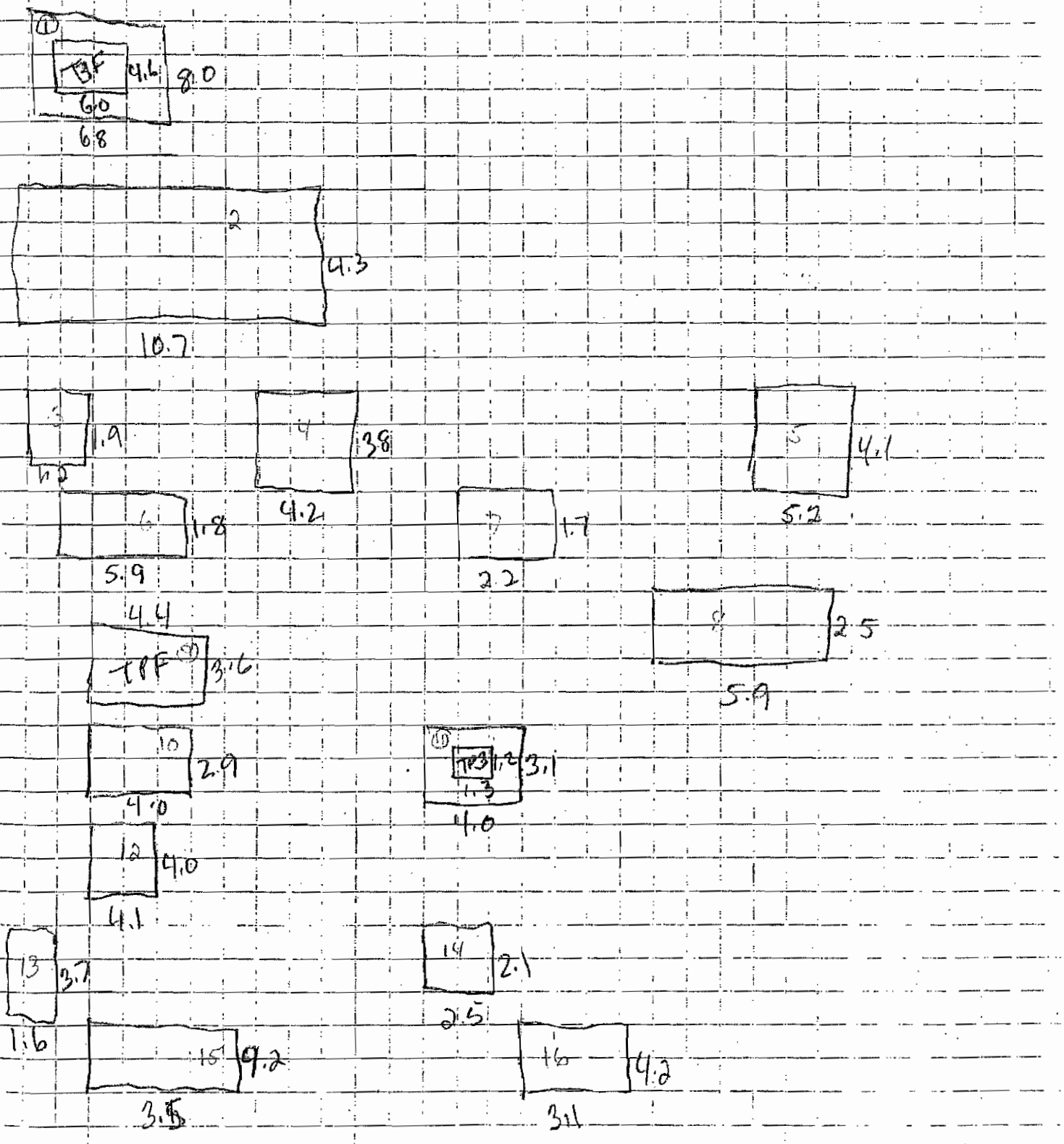
Ck'd 7-25-07
comp by RJR

ITEM: REMOVE SLABS TYPE I & 3

ITEM #: 2433.505

ITEM UNIT: SF

NB Rt Lane 900'




Measured/Comp'd By: [signature] date

Checked By: HCL date 7-25-07

800 - 900

NB Rt Lane 800'-900'

| | | | |
|---|---|---|---|
| 1 | 8.0 x 6.8 = 54.4 | 9 | 4.4 x 3.6 = 15.84 |
| 2 | 4.3 x 10.7 = 46.01 | 10 | 2.9 x 4.0 = 11.6 |
| 3 | 1.2 x 1.9 = 2.28 | 11 | 4.0 x 3.1 = 12.4 |
| 4 | 3.8 x 4.2 = 15.96 | 12 | 4.0 x 4.1 = 16.4 |
| 5 | 4.1 x 5.2 = 21.32 | 13 | 3.7 x 1.6 = 5.94 |
| 6 | 1.8 x 5.9 = 10.62 | 14 | 2.1 x 2.5 = 5.25 |
| 7 | 1.7 x 2.2 = 3.74 | 15 | 9.2 x 3.5 = 32.2 |
| 8 | 2.5 x 5.9 14.75 | 16 | 4.2 x 3.1 = 13.02 |
| | Total 169.08 | | Total 112.65 |

Total 281.73 ✓

T3F

1 4.6 x 6.0 = 10.60
9 4.4 x 3.6 = 15.84

Total 26.44

TP3

~~9 4.4 x 3.6 = 15.84~~
11 1.2 x 1.3 = 1.56

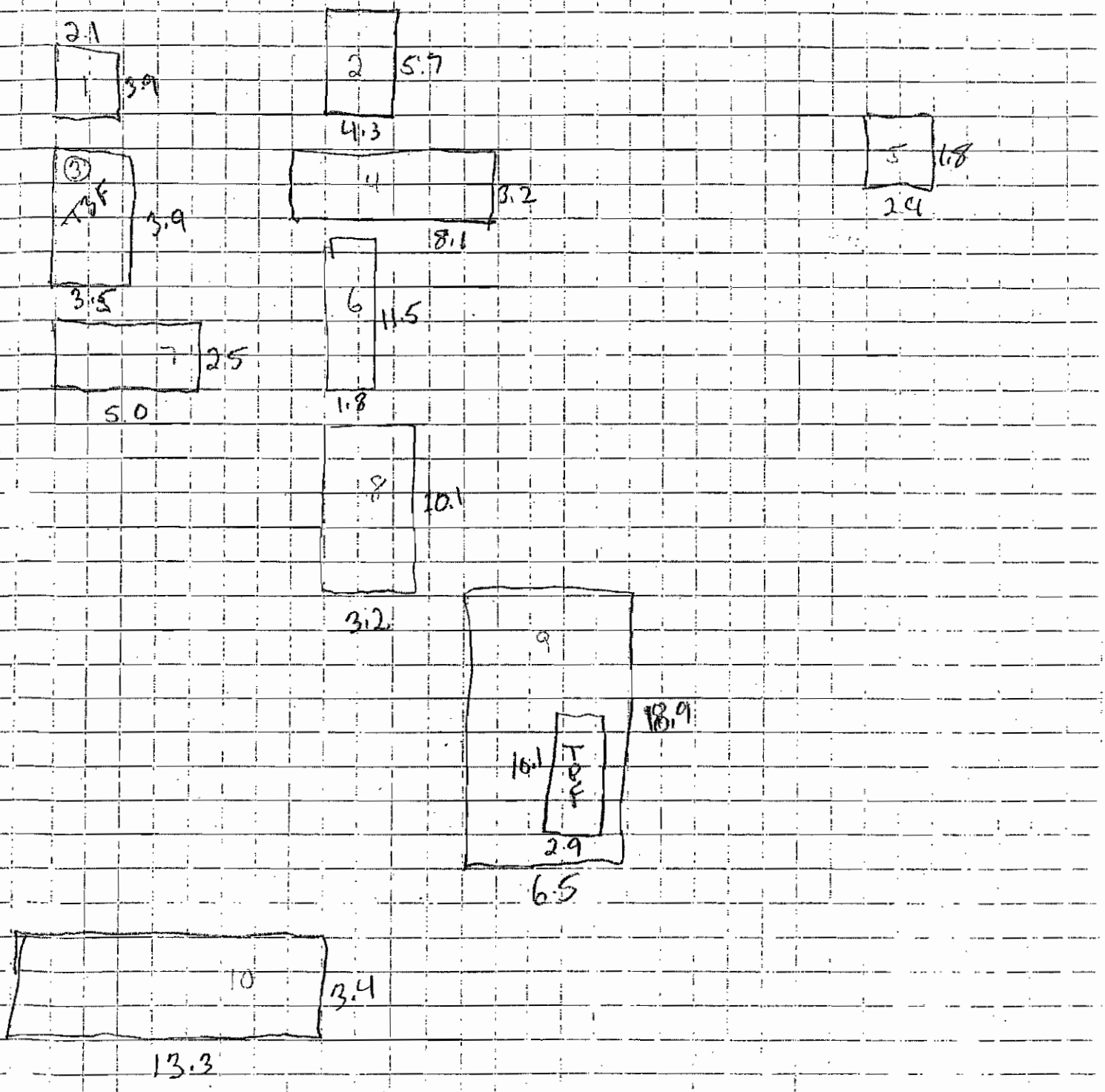
Total ~~17.4~~ 1.56

✓ T3F MH 7-25-07

comp by RJR

ITEM: REMOVE SIGN TYPE 1&3
ITEM #: 2433 - [illegible] 585
ITEM UNIT: SF

NB Rt Lane 1000'




Measured/Comp'd By: [signature] date
Checked By: KH date 7-25-07

900 - 1000