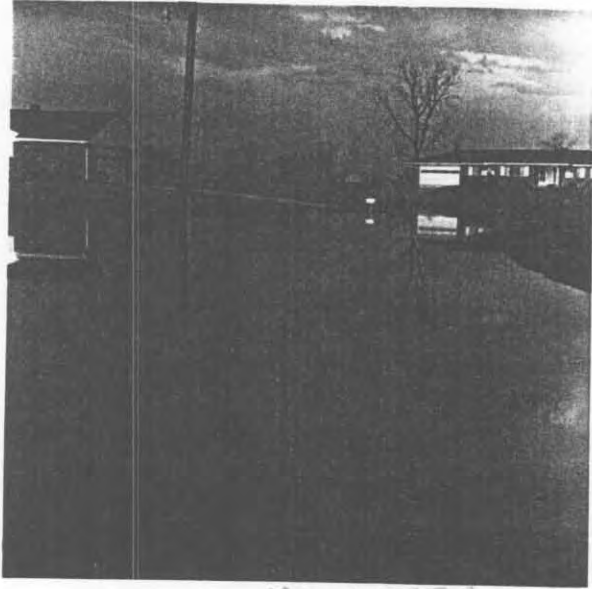


SPRING '65



MANCHESTER
LOOKING EAST



MANCHESTER
LOOKING WEST

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Tottenham



Manchester





May 1998



May 1998



May 1998



May 1998



May 1998



April 1998



April 1998



April 1998



April 1998



April 1998



April 1998



April 1998



April 1998



April 1998



April 1998



Spring 2002



Spring 2002



Spring 2002



Spring 2002



Spring 2002



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PROJECT: US 21
 (111th - 116th St.)

HAMILTON COUNTY
 SURVEYOR'S OFFICE

BY: JLK
 DATE: 12/30/96

TOTAL ACKEAGE: 9.8 AC
 13.8 AC
 15.2 AC
 14.0 AC
 6.3 AC
 12.0 AC

 71.1 AC

71.1 AC

PIPE SIZING FOR CMPA UNDER 111th ST

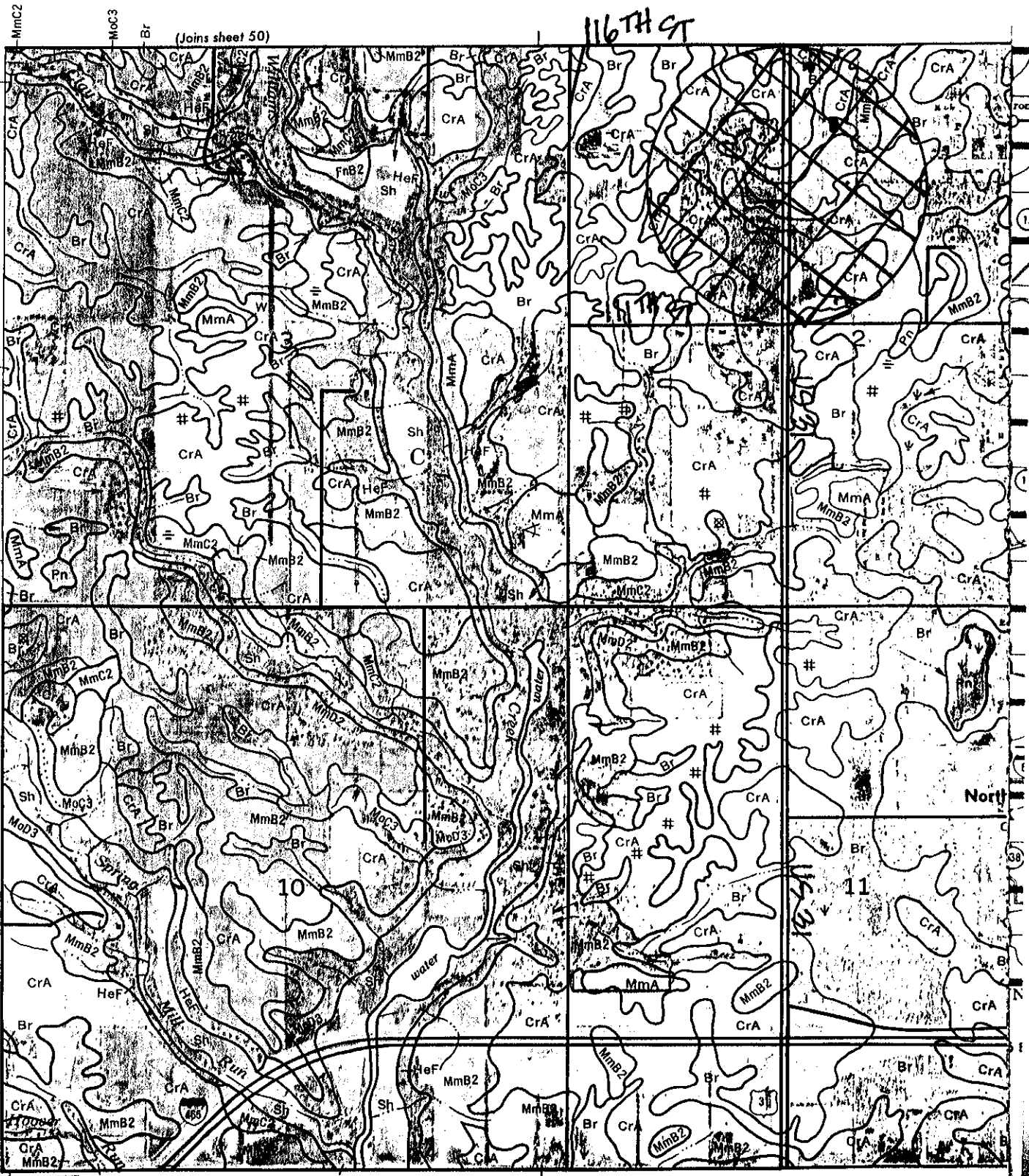
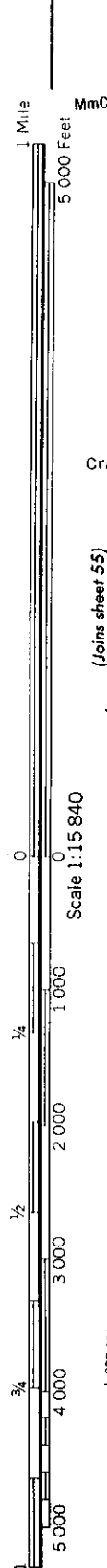
METHOD	SIZE	FORMED DIAM
SCS ACREAGE	16" @ 0.33%	18" x 11" → 22" x 13"
RATIONAL	48" / 48" / 54" @ 0.33%	58" x 30" → 65" x 40"
TR-55	54" / 54" / 60" @ 0.33%	65" x 40" → 72" x 44"

EXISTING PIPE = 36" x 48" (≈ 42")

13-782 500 SHEETS, FILLER, 5 SQUARE
 42-381 50 SHEETS, EYE CASE, 5 SQUARE
 42-382 100 SHEETS, EYE CASE, 5 SQUARE
 42-383 50 SHEETS, EYE CASE, 5 SQUARE
 42-384 100 SHEETS, EYE CASE, 5 SQUARE
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 Made in U.S.A.

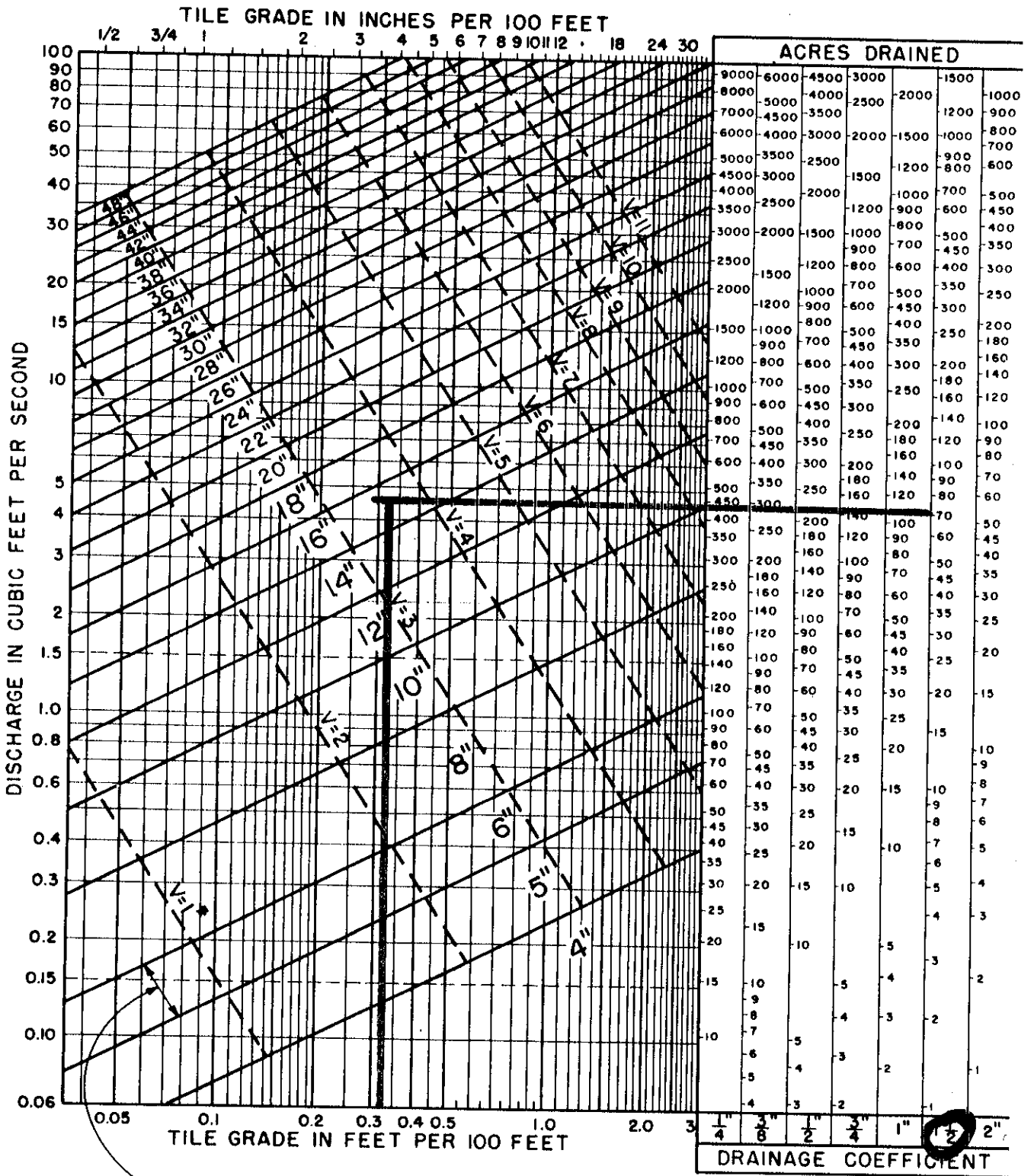


N



MARION

CMPA UNDER 111th ST



Space between lines is the range of tile capacity for the size shown between lines.

* V = velocity in feet per second
 Reference: Yarnell-Woodward Formula $v = 138r^{2/3} s^{1/2}$
 U.S.D.A. Bulletin 854

71.1 AC
 G = 0.33%

16" CMPA

Figure 3. Tile drain design chart.
 22

TOTAL ACREAGE: 71.1 AC = 3097,116 ft²

DESCRIPTION	Ac	%	C	WEIGHTED C
CULTIVATED FIELD	16.1	23%	0.3	0.069
DEVELOPED AREAS (PAVED/BLDG'S)	47.5	66.5%	0.9	0.7999
STEEP GRASSED AREA (US 31 DITCH)	7.5	10.5%	0.6	0.0603
				<u>0.531</u>

$$T_c = 0.0078 \left(\frac{D}{\sqrt{S}} \right)^{0.77}$$

MAXIMUM DIST: 3500'

AVG SLOPE: 0.005 ft/ft (0.5%)

$$T_c = 0.0078 \left(\frac{3500'}{\sqrt{0.005}} \right)^{0.77} = 3/2 \text{ min}$$

$$I_2: 1.9 \text{ "/hr} \left(\frac{1}{12} \right) \left(\frac{1 \text{ hr}}{3600 \text{ s}} \right) = 4.40 (10)^{-5} \text{ fps}$$

$$I_5: 2.5 \text{ "/hr} = 5.79 (10)^{-5} \text{ fps}$$

$$I_{10}: 3.0 \text{ "/hr} = 6.94 (10)^{-5} \text{ fps}$$

$$Q = CIA$$

$$Q_2 = (0.531) (4.4 \times 10^{-5} \text{ fps}) (3097116 \text{ ft}^2) = 72.36 \text{ cfs}$$

$$Q_5 = (0.531) (5.79 \times 10^{-5} \text{ fps}) (3097116 \text{ ft}^2) = 95.22 \text{ cfs}$$

$$Q_{10} = (0.531) (6.94 \times 10^{-5} \text{ fps}) (3097116 \text{ ft}^2) = 114.13 \text{ cfs}$$

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USED BY / S H C

Values of Runoff Coefficients (C) for Use in the Rational Formula

Type of Surface Runoff Coefficient

Rural Areas

Concrete or sheet asphalt pavement	0.8 - 0.9
Asphalt macadam pavement.....	0.6 - 0.8
Gravel roadways or shoulders.....	0.4 - 0.6
Bare earth.....	0.2 - 0.9
Steep grassed areas (2:1).....	0.5 - 0.7
Turf meadows.....	0.1 - 0.4
Forested areas.....	0.1 - 0.3
Cultivated fields.....	0.2 - 0.4

Urban Areas

All water-tight roof surfaces.....	0.75 - 0.95
Bituminous or concrete pavement.....	0.80 - 0.95
Traffic bound pavement.....	0.70 - 0.90
Gravel pavement.....	0.35 - 0.70
Impervious soils (heavy).....	0.40 - 0.65
Impervious soils (w/turf).....	0.30 - 0.55
Slightly pervious soil.....	0.15 - 0.40
Slightly pervious soil (w/turf).....	0.10 - 0.30
Moderately pervious soil.....	0.05 - 0.20
Moderately pervious soil (w/turf).....	0.00 - 0.10

Example of a Weighted "C" Factor

5% Water tight roof surfaces.....	5% x 0.85 = 0.04
10% Bituminous or concrete pavement.....	10% x 0.9 = 0.09
10% Traffic Bound pavement.....	10% x 0.8 = 0.08
50% Slightly impervious soil.....	50% x 0.4 = 0.2
15% Slightly impervious soil (w/turf).....	15% x 0.2 = 0.03
10% Moderately pervious soil.....	10% x 0.1 = 0.01

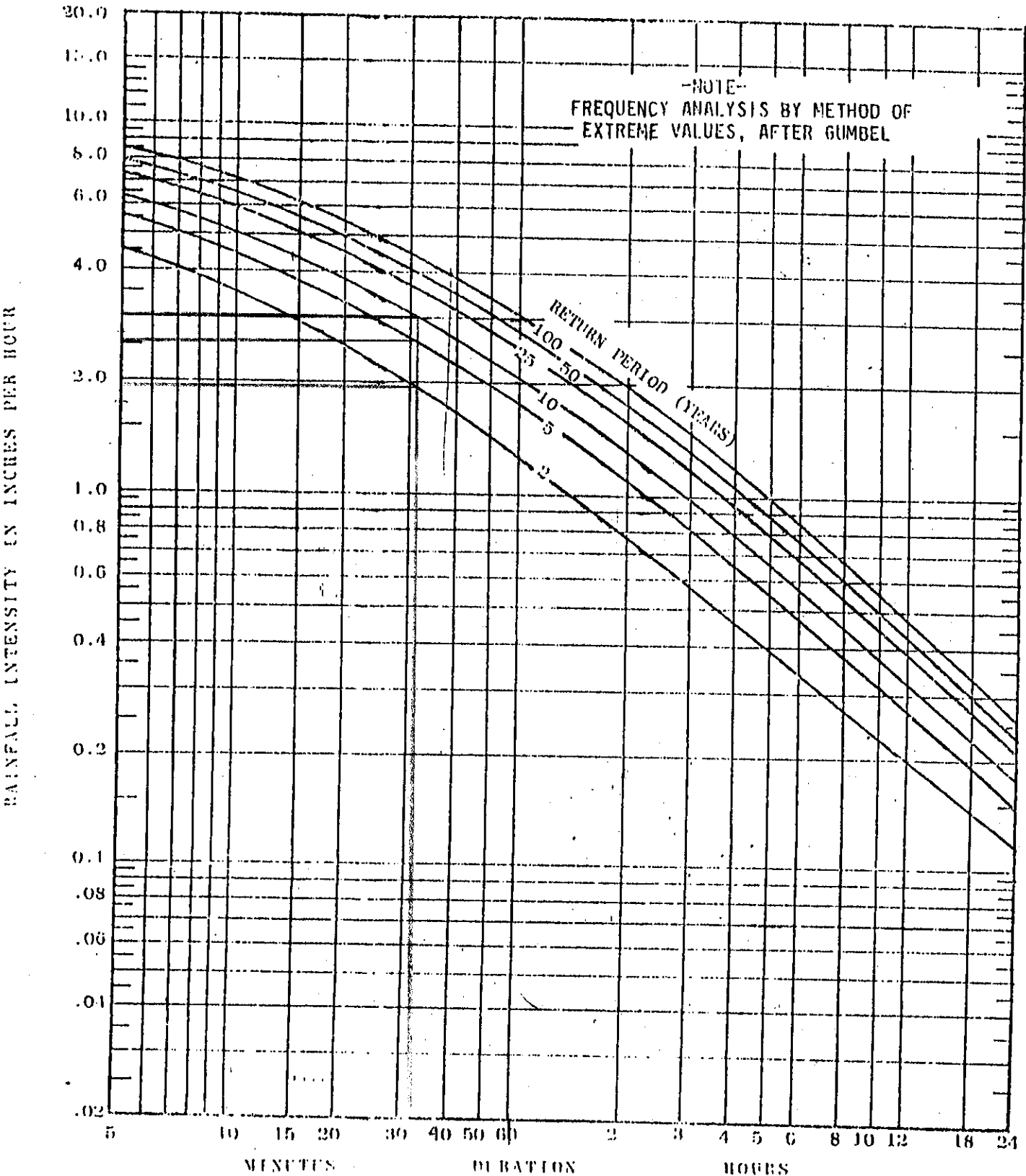
Weighted "C" Factor = 0.45

Fig. 7-415.04 B

RATIONAL C VALUES

U.S. DEPARTMENT OF COMMERCE WEATHER BUREAU COOPERATIVE STUDIES SECTION

RAINFALL INTENSITY - DURATION - FREQUENCY CURVES
INDIANAPOLIS, INDIANA
1903 - 1951



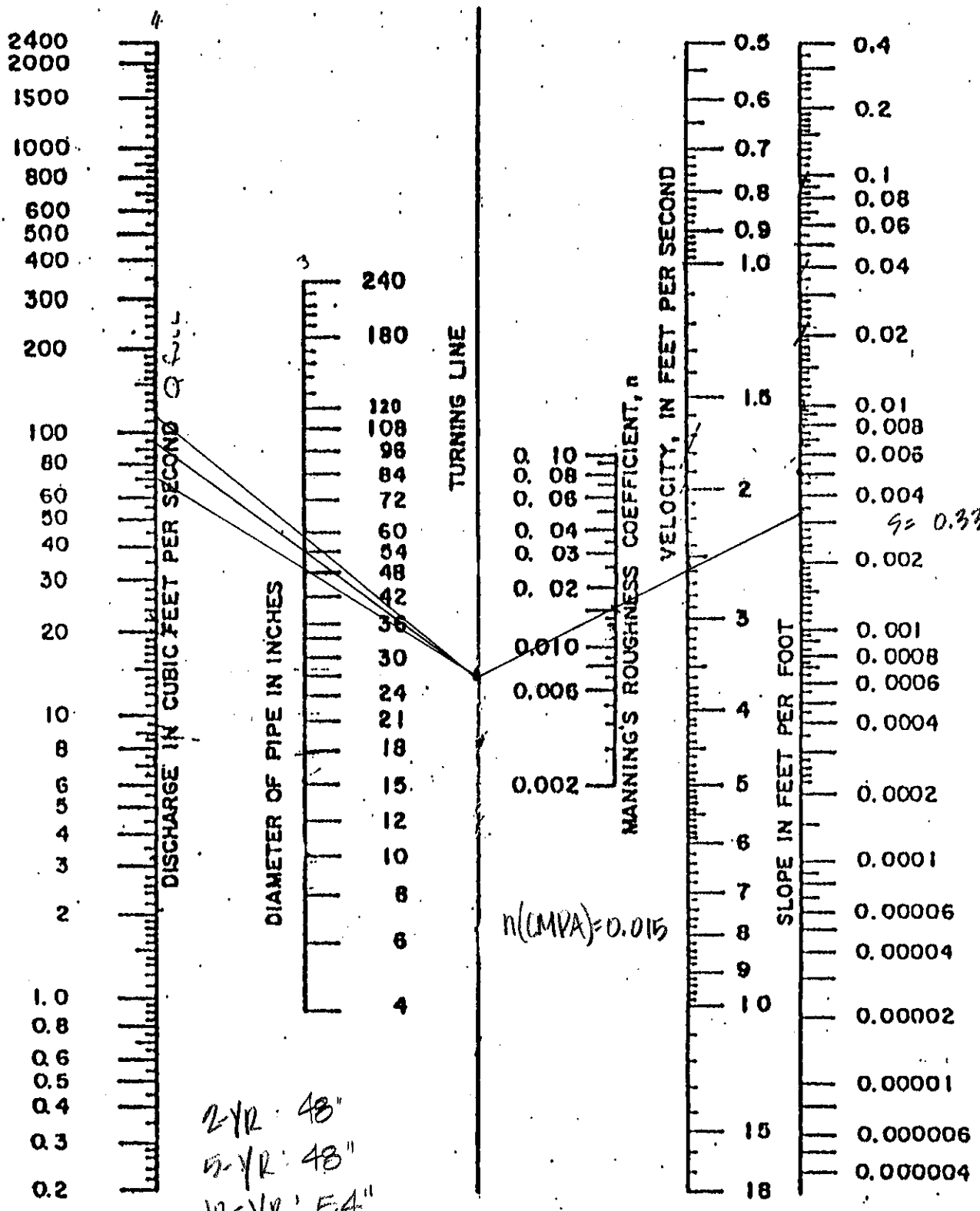
RATIONAL

CMPA UNDER 111th ST (W of US31)

NOMOGRAPH FOR SOLUTION OF MANNING'S FORMULA FOR FLOW IN STORM SEWERS

DRAINAGE AREA: 71.1 AC ALONG US31
FROM 111th TO 114th ST

Q₂: 72.76 cfs
Q₅: 95.02 cfs
Q₁₀: 114.13 cfs



Worksheet 4: Graphical Peak Discharge method

Project RCP UNDER 111TH ST By JLK Date 12/30/96

Location US 31 (116TH ST → 111TH ST) Checked _____ Date _____

Circle one: Present Developed

1. Data:

Drainage area $A_m = \underline{0.1111}$ mi² (acres/640)
 Runoff curve number CN = 91.2 (From worksheet 2)
 Time of concentration .. $T_c = \underline{0.789}$ hr (From worksheet 3)
 Rainfall distribution type = II (I, IA, II, III)
 Pond and swamp areas spread throughout watershed = 0 percent of A_m (_____ acres or mi² covered)

		Storm #1	Storm #2	Storm #3
2. Frequency	yr	2	5	10
3. Rainfall, P (24-hour)	in	3.0	3.75	4.3
4. Initial abstraction, I_a	in	0.195	0.195	0.195
(Use CN with table 4-1.)				
5. Compute I_a/P		0.065	0.052	0.045
6. Unit peak discharge, q_u	csn/in	425	430	435
(Use T_c and I_a/P with exhibit 4- <u>II</u>)				
7. Runoff, Q	in	2.09	2.805	3.332
(From worksheet 2).				
8. Pond and swamp adjustment factor, F_p		-	-	-
(Use percent pond and swamp area with table 4-2. Factor is 1.0 for zero percent pond and swamp area.)				
9. Peak discharge, q_p	cfs	98.7	134.0	161.0
(Where $q_p = q_u A_m Q F_p$)				

Worksheet 2: Runoff curve number and runoff

Project RCP UNDER 111TH ST (W OF US 31) By JLK Date 12/30/96
 Location ALONG US 31 (116TH ST → 111TH ST) Checked _____ Date _____
 Circle one: Present Developed

1. Runoff curve number (CN)

Soil name and hydrologic group (appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN ^{1/}			Area <input checked="" type="checkbox"/> acres <input type="checkbox"/> mi ² <input type="checkbox"/> %	Product of CN x area
		Table 2-2	Fig. 2-3	Fig. 2-4		
CROSBY, C	IMPERVIOUS AREAS	98			27.5	2695
BROOKSTON B/D	"	98			27.5	2695
CROSBY, C	WOODS (FAIR)	70			8.05	563.5
BROOKSTON, B/D	"	66			8.05	531.3
Totals =					71.1	6484.8

^{1/} Use only one CN source per line.

CN (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{6484.8}{71.1} = 91.2$; Use CN = 91.2

2. Runoff

Frequency yr
 Rainfall, P (24-hour) in
 Runoff, Q in
 (Use P and CN with table 2-1, fig. 2-1, or eqs. 2-3 and 2-4.)

Storm #1	Storm #2	Storm #3
2	5	10
3.0"	3.75"	4.3"
2.09	2.805	3.332

5-YR STORM

	90	91.2	95
3.5	2.45		2.94
3.75	2.685	2.805	3.185
4.0	2.92		3.43

10-YR STORM

	90	91.2	95
4.0	2.92		3.43
4.3	3.208	3.3752	3.714
4.5	3.4		3.92

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43-000



Made in U.S.A.



$Q_2 = 2.1$
 $Q_5 = 2.9$
 $Q_{10} = 3.3$
 $Q_{25} = 3.9$
 $Q_{50} = 4.4$
 $Q_{100} = 4.9$

4.9

$Q_2 = 2.1$
 $Q_5 = 2.8$
 $Q_{10} = 3.3$
 $Q_{25} = 3.8$
 $Q_{50} = 4.3$
 $Q_{100} = 4.8$

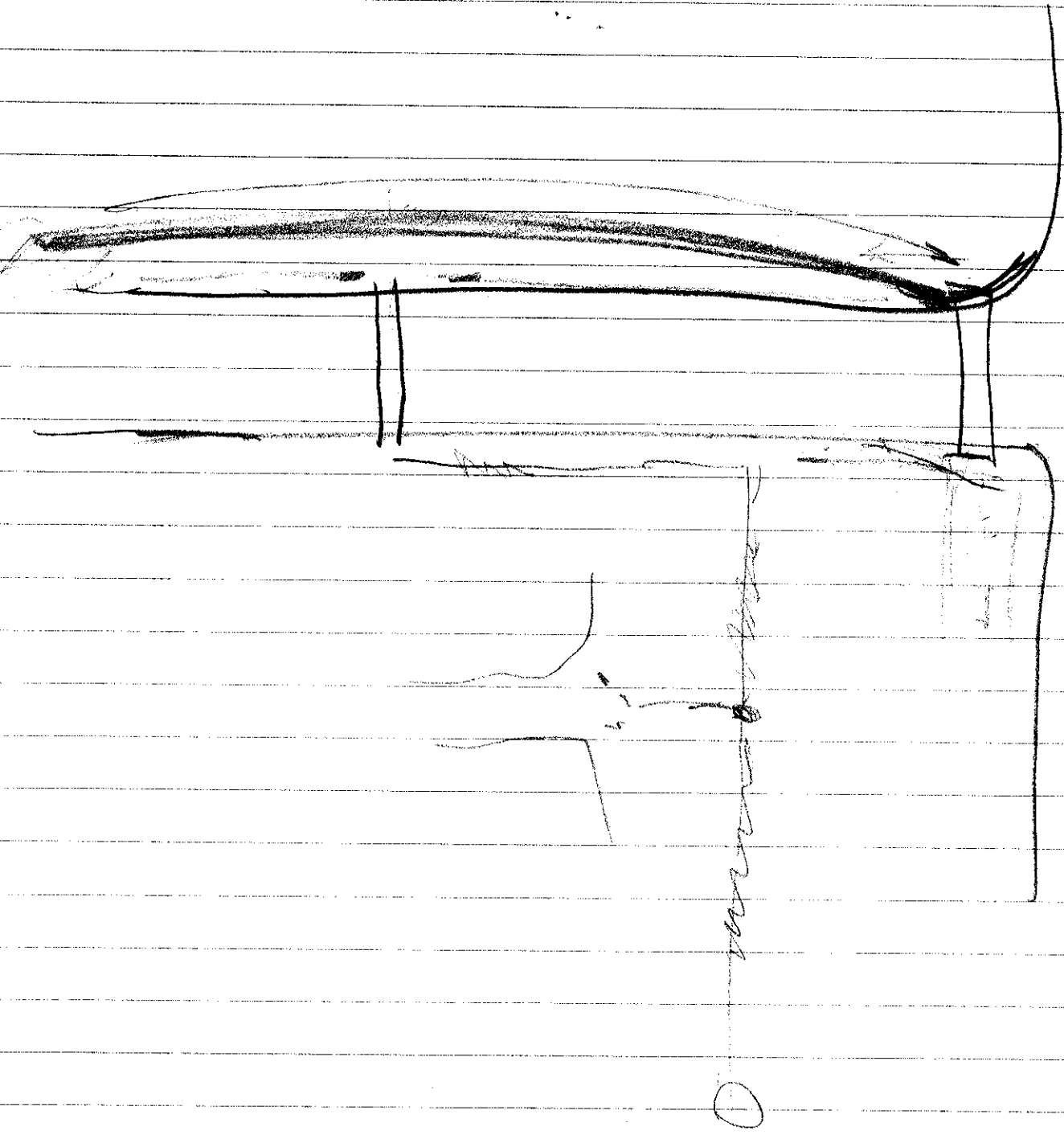
$Q_2 = 0.7$
 $Q_5 = 0.9$
 $Q_{10} = 1.1$
 $Q_{25} = 1.2$ →
 $Q_{50} = 1.4$
 $Q_{100} = 1.5$

$Q_2 = 2.0$
 $Q_5 = 2.7$
 $Q_{10} = 3.2$
← $Q_{25} = 3.8$
 $Q_{50} = 4.2$
 $Q_{100} = 4.7$

1.50 AC

1.70 AC

0.50 AC



HAMILTON COUNTY SURVEYOR'S OFFICE

DRAINAGE CALCULATIONS - Rational Method

ACTIVITY: Size inlets and storm drain

Location: Meridian Sub., 111 th. St. at Tottenham dr., To Manchester Ct.

Area (A): 2.95 Acres
 Runoff Coeff. (C): 0.40

Subarea Description	Sq. Ft.	(Acres)	(%age of total)	subarea "c"	c * %age
S.Fam.		2.95	1.00	0.4	0.40
			0.00		0.00
			0.00		0.00
			0.00		0.00
			0.00		0.00
			0.00		0.00
			0.00		0.00
			0.00		0.00
		2.950 ac.		Weighted C:	0.40

Time of Concentration Calculations (Note: tables & figures are from TR-55)

BEGINNING (≤ 300')

Surface desc. = dev.
 Manning's (table 3.1) 0.24
 Flow length (L) = 70 feet
 2yr.24hr. P2 = 2.74 in. (rain)
 elev. Drop (D) = feet
 avg. slope (D/L), s = 0.01 feet/feet
 T1 = 0.255 hours

Intensity (I):

$$(I_n = a/(t+b)^n)$$

Per City of Indianapolis Stormwater Manual; t is In minutes.

I₂ = 1.76 in./ hr.
 I₅ = 2.35 in./ hr.
 I₁₀ = 2.76 in./ hr.
 I₂₅ = 3.25 in./ hr.
 I₅₀ = 3.67 in./ hr.
 I₁₀₀ = 4.03 in./ hr.

SHALLOW CONCENTRATED FLOW

desc. (paved/unpaved) unpaved
 Flow length, L = 830 feet
 Watercourse slope, s = 0.0036 feet/feet
 Ave. velocity, V (fig. 3.1) = 1.5 feet/sec.

Flow Rate (" Q "):

Q₂ = 2.1 c.f.s.
 Q₅ = 2.8 c.f.s.
 Q₁₀ = 3.3 c.f.s.
 Q₂₅ = 3.8 c.f.s.
 Q₅₀ = 4.3 c.f.s.
 Q₁₀₀ = 4.8 c.f.s.

T₂ = 0.346 hours

T_{total} = T₁ + T₂ = 0.601 hours
 36.04 minutes

CHANNEL OR PIPE FLOW (input from other calcs., dist.=0 & vel. = 0.001 for initial area)

velocity (ft/sec)= 0 dist. (ft.) = 0
 T₃ = 0.00 hours (Time 2A to 6 in pipe)
 0.00 minutes
 T_{total} = T₁ + T₂ + T₃ = 0.601 hours
 36.04 minutes

DATA INPUT BY: D. Sedler

DATE: 7/9/97
8/13/97

CHECKED BY: _____

DATE: _____

HAMILTON COUNTY SURVEYOR'S OFFICE

DRAINAGE CALCULATIONS - Rational Method

ACTIVITY: Size inlets and storm drain

Location: Meridian Sub., 111 th. St. at Tottenham dr., West side, So. Of Manchester

Area (A): 0.78 Acres
Runoff Coeff. (C): 0.40

Subarea Description	Sq. Ft.	(Acres)	(%age of total)	subarea "c"	c * %age
S.Fam.		0.78	1.00	0.4	0.40
			0.00		0.00
			0.00		0.00
			0.00		0.00
			0.00		0.00
			0.00		0.00
			0.00		0.00
			0.00		0.00
		0.780 ac.		Weighted C:	0.40

Time of Concentration Calculations (Note: tables & figures are from TR-55)

BEGINNING (≤ 300')

Surface desc. = dev.
 Manning's (table 3.1) = 0.24
 Flow length (L) = 80 feet
 2yr.24hr. P2 = 2.74 in. (rain)
 elev. Drop (D) = feet
 avg. slope (D/L), s = 0.01 feet/feet
 T1 = 0.284 hours

Intensity (I):

($I_n = a/(t+b)^n$)

Per City of Indianapolis Stormwater Manual; t is in minutes.

I₂ = 2.18 in./ hr.
 I₅ = 2.90 in./ hr.
 I₁₀ = 3.39 in./ hr.
 I₂₅ = 3.99 in./ hr.
 I₅₀ = 4.48 in./ hr.
 I₁₀₀ = 4.92 in./ hr.

SHALLOW CONCENTRATED FLOW

desc. (paved/unpaved) unpaved
 Flow length, L = 350 feet
 Watercourse slope, s = 0.0033 feet/feet
 Ave. velocity, V (fig. 3.1) = 1.5 feet/sec.

T₂ = 0.146 hours

T_{total} = T₁ + T₂ = 0.429 hours
 25.77 minutes

Flow Rate (" Q "):

Q₂ = 0.7 c.f.s.
 Q₅ = 0.9 c.f.s.
 Q₁₀ = 1.1 c.f.s.
 Q₂₅ = 1.2 c.f.s.
 Q₅₀ = 1.4 c.f.s.
 Q₁₀₀ = 1.5 c.f.s.

CHANNEL OR PIPE FLOW (input from other calcs., dist.=0 & vel. = 0.001 for initial area)

velocity (ft/sec)= 0 dist. (ft.) = 0
 T₃ = 0.00 hours (Time 2A to 6 in pipe)
 0.00 minutes

T_{total} = T₁ + T₂ + T₃ = 0.429 hours
 25.77 minutes

DATA INPUT BY: D. Sedler DATE: 9/9/97

CHECKED BY: _____ DATE: _____

HAMILTON COUNTY SURVEYOR'S OFFICE

DRAINAGE CALCULATIONS - Rational Method

ACTIVITY: Size inlets and storm drain

Location: Meridian Sub., 111 th. St. at Tottenham dr., Initial area

Area (A): 3.06 Acres
Runoff Coeff. (C): 0.40

Subarea Description	Sq. Ft.	(Acres)	(%age of total)	subarea "c"	c * %age
S.Fam.		3.06	1.00	0.4	0.40
			0.00		0.00
			0.00		0.00
			0.00		0.00
			0.00		0.00
			0.00		0.00
			0.00		0.00
		3.060 ac.		Weighted C:	0.40

Time of Concentration Calculations (Note: tables & figures are from TR-55)

BEGINNING (≤ 300')

Surface desc. = dev.
Manning's (table 3.1) = 0.24
Flow length (L) = 70 feet
2yr.24hr. P2 = 2.74 in. (rain)
elev. Drop (D) = feet
avg. slope (D/L), s = 0.01 feet/feet
T1 = 0.255 hours

Intensity (I):

$$(I_n = a/(t+b)^n)$$

Per City of Indianapolis Stormwater Manual; t is in minutes.

I₂ = 1.74 in./hr.
I₅ = 2.33 in./hr.
I₁₀ = 2.73 in./hr.
I₂₅ = 3.22 in./hr.
I₅₀ = 3.63 in./hr.
I₁₀₀ = 3.99 in./hr.

SHALLOW CONCENTRATED FLOW

desc. (paved/unpaved) = unpaved
Flow length, L = 850 feet
Watercourse slope, s = 0.0036 feet/feet
Ave. velocity, V (fig. 3.1) = 1.5 feet/sec.

Flow Rate (" Q "):

Q₂ = 2.1 c.f.s.
Q₅ = 2.9 c.f.s.
Q₁₀ = 3.3 c.f.s.
Q₂₅ = 3.9 c.f.s.
Q₅₀ = 4.4 c.f.s.
Q₁₀₀ = 4.9 c.f.s.

T₂ = 0.354 hours

T_{total} = T₁ + T₂ = 0.609 hours
36.54 minutes

CHANNEL OR PIPE FLOW (Input from other calcs., dist.=0 & vel. = 0.001 for initial area)

velocity (ft/sec)= 0 dist. (ft.) = 0
T₃ = 0.00 hours (Time 2A to 6 in pipe)
0.00 minutes

T_{total} = T₁ + T₂ + T₃ = 0.609 hours
36.54 minutes

DATA INPUT BY: D. Sedler

DATE: 9/9/97
8/15/97

CHECKED BY: _____

DATE: _____

HAMILTON COUNTY SURVEYOR'S OFFICE

DRAINAGE CALCULATIONS - Rational Method

ACTIVITY: Size inlets and storm drain

Location: Meridian Sub., 111 th. St. at Tottenham dr., East Side of Tottenham

Area (A): 3.37 Acres
Runoff Coeff. (C): 0.40

Subarea Description	Sq. Ft.	(Acres)	(%age of total)	subarea "c"	c * %age
S.Fam.		3.37	1.00	0.4	0.40
			0.00		0.00
			0.00		0.00
			0.00		0.00
			0.00		0.00
			0.00		0.00
			0.00		0.00
			0.00		0.00
		3.370 ac.		Weighted C:	0.40

Time of Concentration Calculations (Note: tables & figures are from TR-55)

BEGINNING (≤ 300')

Surface desc. = dev.
Manning's (table 3.1) 0.24
Flow length (L) = 80 feet
2yr.24hr. P2 = 2.74 in. (rain)
elev. Drop (D) = feet
avg. slope (D/L), s = 0.01 feet/feet
T1 = 0.284 hours

Intensity (I):

$$(I_n = a/(t+b)^n)$$

Per City of Indianapolis Stormwater Manual; t is in minutes.

I₂ = 1.50 in./hr.
I₅ = 2.01 in./hr.
I₁₀ = 2.36 in./hr.
I₂₅ = 2.78 in./hr.
I₅₀ = 3.15 in./hr.
I₁₀₀ = 3.45 in./hr.

SHALLOW CONCENTRATED FLOW

desc. (paved/unpaved) unpaved
Flow length, L = 1150 feet
Watercourse slope, s = 0.0033 feet/feet
Ave. velocity, V (fig. 3.1) = 1.5 feet/sec.

Flow Rate (" Q "):

Q₂ = 2.0 c.f.s.
Q₅ = 2.7 c.f.s.
Q₁₀ = 3.2 c.f.s.
Q₂₅ = 3.8 c.f.s.
Q₅₀ = 4.2 c.f.s.
Q₁₀₀ = 4.7 c.f.s.

T₂ = 0.479 hours

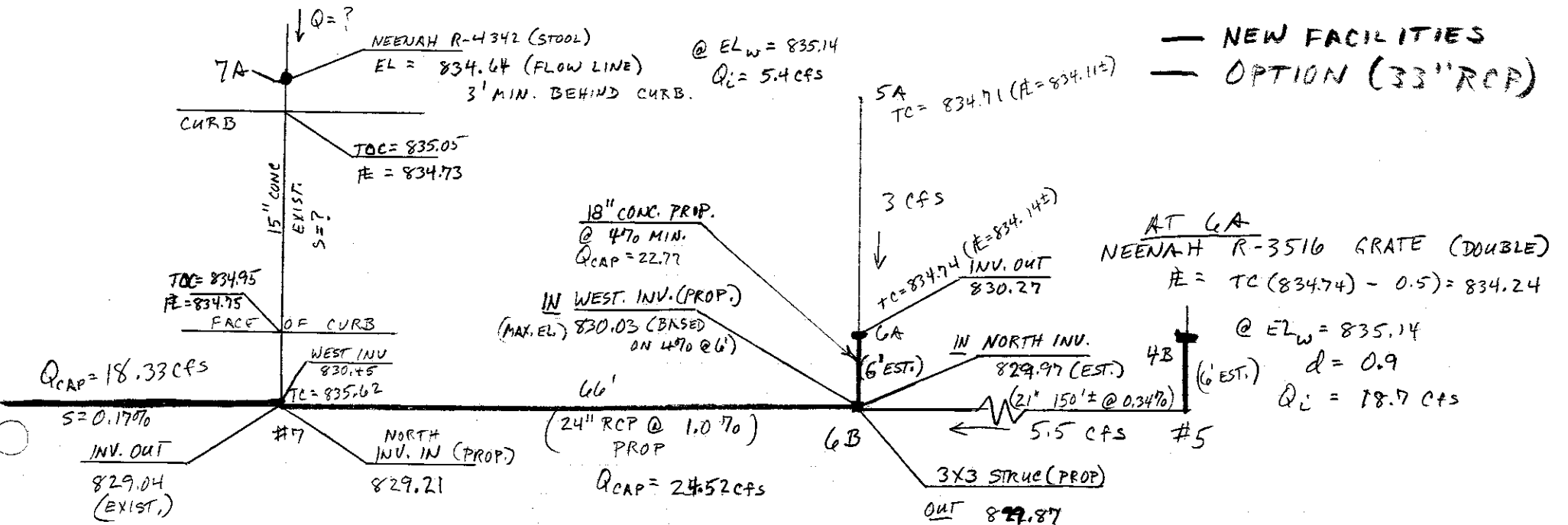
T_{total} = T₁ + T₂ = 0.763 hours
45.77 minutes

CHANNEL OR PIPE FLOW (input from other calcs., dist.=0 & vel. = 0.001 for initial area)

velocity (ft/sec)= 0 dist. (ft.) = 0
T₃ = 0.00 hours (Time 2A to 6 in pipe)
0.00 minutes
T_{total} = T₁ + T₂ + T₃ = 0.763 hours
45.77 minutes

DATA INPUT BY: D. Sedler DATE: 9/9/97

CHECKED BY: _____ DATE: _____



— NEW FACILITIES
 — OPTION (33" RCP)

AT 6A
 NEENAH R-3516 GRATE (DOUBLE)
 $\bar{E} = TC (834.74) - 0.5 = 834.24$

@ $EL_w = 835.14$
 $d = 0.9$
 $Q_c = 18.7 \text{ cfs}$

$$\frac{0.73}{66} = 1.1\%$$

NEW FACILITIES - 66' OF 24" RCP

- 6' OF 18" RCP
- 6' OF 15" RCP
- 1 3X3 STRUCTURE OR MANHOLE

1 2X2 STRUCTURE W/ STOOL GRATE

1 CURB INLET W/ DOUBLE GRATE

1 CURB INLET W/ SINGLE GRATE

OPTION

466' 33" RCP
 @ 0.3%
 $Q_{CAP} = 31 \text{ cfs}$

WEIR OVER CURB TO STOOL GRATE

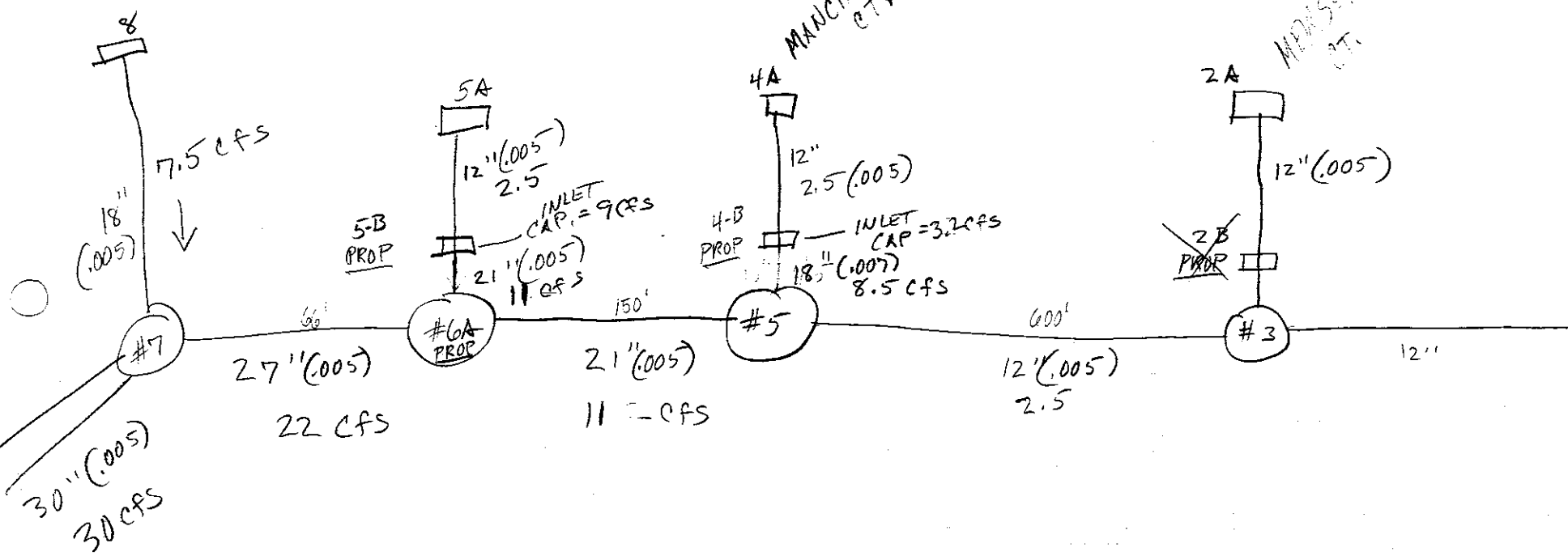
$$Q = 3.33 L H^{3/2}$$

$H = 0.1$
 $L = 4'$

$$= (3.33 \times 4) (0.1)^{3/2}$$

$$= 0.42 \text{ cfs}$$

PIPE CAPACITY SCHEME



\$8.5K FOR NEW
 REMOVAL
 & EROSION CONTROL.

NEW FAC.

66' 27" RCP @ #50 MANHOLE	#7 TO #6A	3300
2 INLETS	#6A	3500
5' TO 10' 21" RCP @ #40	#5-B, #4-B.	1000
5' TO 10' 18" RCP @ #25	#5B TO #6A	400
	#4B TO #5	250
		8450

+15%
 1275
 9725 ≈ 10K

CURB OPENING
NO DEPRESSION

$$Q_i = C_w L d^{1.5} \quad L = 2 \text{ ft.} \quad C_w = 2.3$$

(d IS TO CENTER OF ORIFICE)

d = 0.5' $Q_i = 1.6 \text{ cfs}$ (9" DEPTH)
d = 0.75' $Q_i = 3 \text{ cfs}$ (1' DEPTH)
d = 1' $Q_i = 4.6 \text{ cfs}$ (1'3" DEPTH)

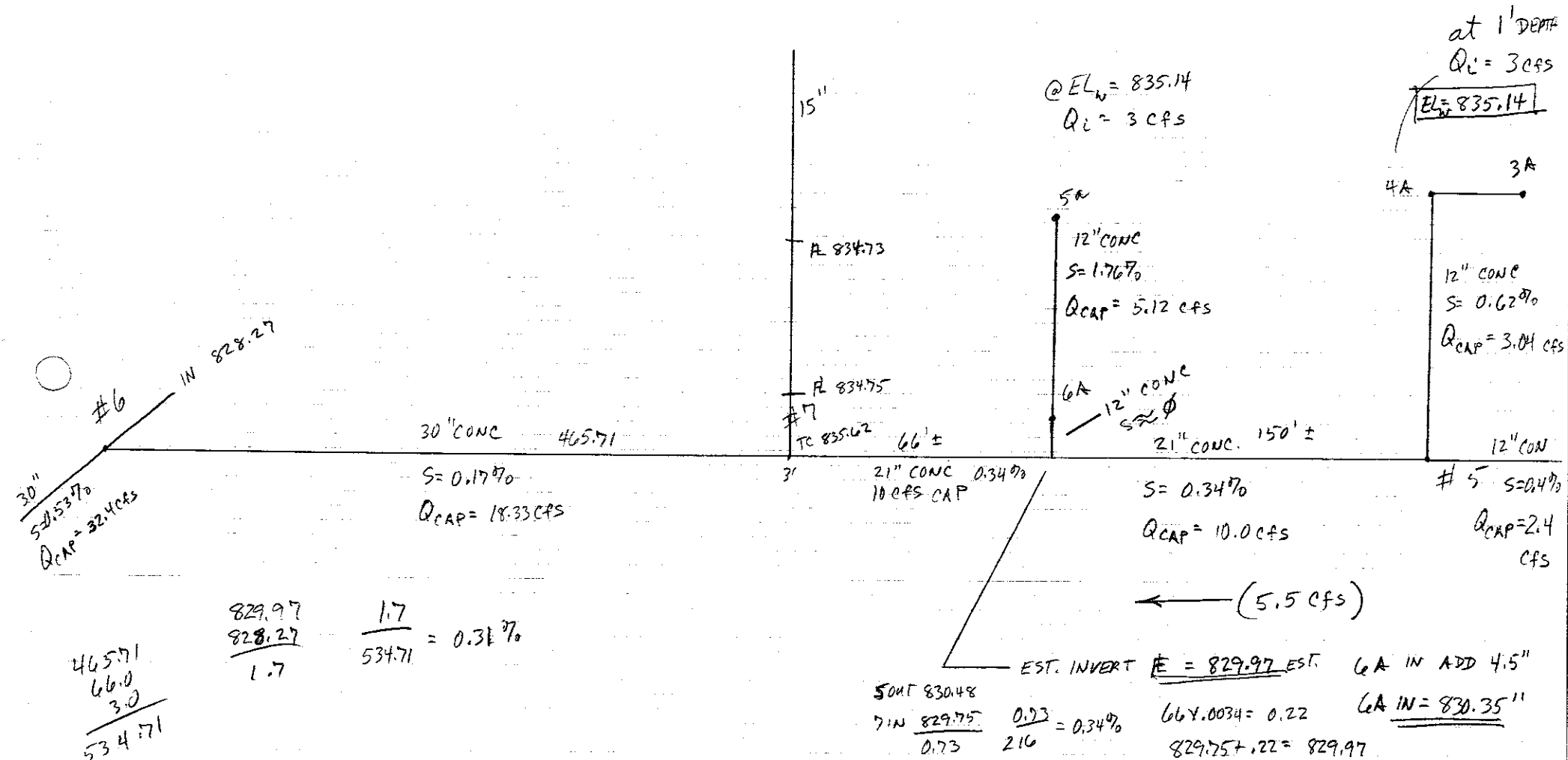
$$A = 2' \times 0.5' = 1 \text{ SQ FT}$$

$$d = 8.4" \quad Q = 3.6 \text{ cfs}$$

CHART 13

$$Q_i = C_w L d^{1.5} @ 0.4$$

$$Q_i = 2.3 = (2.3)(2)(H)^{1.5} = 1.2 \text{ cfs}$$



9/17/97

**SUBURBAN MERIDIAN SUBDIVISION
STORM SEWER INFORMATION**

<u>STR. #'S</u>	<u>DIST. BETWEEN STR.'S</u>	<u>GRADE</u>	<u>PIPE SIZE</u>	<u>PIPE TYPE</u>
2 TO 3	410.42'	0.29%	12"	CONC.
3 TO 5	603.89'	0.40%	12"	CONC.
7 TO 6	465.71'	0.17%	30"	CONC.
6 TO OUTLET	238.00'	0.53%	30"	CONC.
1A TO 2A	39.75'	0.83%	12"	PVC
2A TO 3	41.65'	0.60%	12"	PVC
3A TO 4A	43.59'	0.73%	10"	CLAY
4A TO 5	41.71'	0.62%	12"	CONC.
5A TO 6A	25.50'	1.76%	12"	CONC.
5 TO 7	216±	0.34%	21"	CONC.

<u>STR. #'S</u>	<u>T.C. ELEV.'S</u>	<u>INV. IN</u>	<u>INV. OUT</u>
2	839.71'	834.57'	834.48'
3	838.40'	833.54 W., 833.28 N.	833.35'
5	836.32'	831.24 W., 830.92 N.	830.48'
7	835.62'	830.45 W., 829.75 N.	829.04'
6	833.27'	828.27'	N/A
INV. OUTLET	827.02'	N/A	827.02'
1A	836.78'	N/A	834.48'
2A	836.75'	833.97'	833.79'
3A	834.65	N/A	831.96'
4A	834.64'	831.64'	831.50'
5A	834.71'	N/A	831.31'
6A	837.74' 834.74'	830.86'	830.27'

IS THIS
RIGHT?

SPOT
EAST TO
WEST

834.95	TOP OF CURB	EAST SIDE	OVER 15"
834.75	FE		
834.73	FE		
834.05	TOP CURB	WEST SIDE	OVER 15"

**SUBURBAN MERIDIAN SUBDIVISION
STORM SEWER INFORMATION**

9/17/97

<u>STR. #'S</u>	<u>DIST. BETWEEN STR.'S</u>	<u>GRADE</u>	<u>PIPE SIZE</u>	<u>PIPE TYPE</u>
2 TO 3	410.42'	0.29%	12"	CONC.
3 TO 5	603.89'	0.40%	12"	CONC.
7 TO 6	465.71'	0.17%	30"	CONC.
6 TO OUTLET	238.00'	0.53%	30"	CONC.
1A TO 2A	39.75'	0.83%	12"	PVC
2A TO 3	41.65'	0.60%	12"	PVC
3A TO 4A	43.59'	0.73%	10"	CLAY
4A TO 5	41.71'	0.62%	12"	CONC.
5A TO 6A	25.50'	1.76%	12"	CONC.

<u>STR. #'S</u>	<u>T.C. ELEV.'S</u>	<u>INV. IN</u>	<u>INV. OUT</u>
2	839.71'	834.57'	834.48'
3	838.40'	833.54 W., 833.28 N.	833.35'
5	836.32'	831.24 W., 830.92 N.	830.48'
7	835.62'	830.45 W., 829.75 N.	829.04'
6	833.27'	828.27'	N/A
INV. OUTLET	827.02'	N/A	827.02'
1A	836.78'	N/A	834.48'
2A	836.75'	833.97'	833.79'
3A	834.65	N/A	831.96'
4A	834.64'	831.64'	831.50'
5A	834.71'	N/A	831.31'
6A	834.74'	830.86'	830.27'
	834.74		

9/17/97

**SUBURBAN MERIDIAN SUBDIVISION
STORM SEWER INFORMATION**

<u>STR. #'S</u>	<u>DIST. BETWEEN STR.'S</u>	<u>GRADE</u>	<u>PIPE SIZE</u>	<u>PIPE TYPE</u>
2 TO 3	410.42'	0.29%	12"	CONC.
3 TO 5	603.89'	0.40%	12"	CONC.
7 TO 6	465.71'	0.17%	30"	CONC.
6 TO OUTLET	238.00'	0.53%	30"	CONC.
1A TO 2A	39.75'	0.83%	12"	PVC
2A TO 3	41.65'	0.60%	12"	PVC
3A TO 4A	43.59'	0.73%	10"	CLAY
4A TO 5	41.71'	0.62%	12"	CONC.
5A TO 6A	25.50'	1.76%	12"	CONC.

<u>STR. #'S</u>	<u>T.C. ELEV.'S</u>	<u>INV. IN</u>	<u>INV. OUT</u>
2	839.71'	834.57'	834.48'
3	838.40'	833.54 W., 833.28 N.	833.35'
5	836.32'	831.24 W., 830.92 N.	830.48'
7	835.62'	830.45 W., 829.75 N.	829.04'
6	833.27'	828.27'	N/A
INV. OUTLET	827.02'	N/A	827.02'
1A	836.78'	N/A	834.48'
2A	836.75'	833.97'	833.79'
3A	834.65	N/A	831.96'
4A	834.64'	831.64'	831.50'
5A	834.71'	N/A	831.31'
6A	834.74'	830.86'	830.27'

AREA SQ. IN. SQ. FT. AC. MERIDIAN SUBDIVISION

1. ADDITIONAL AREAS.

TRIAL 1	6.603		
2	6.572		
3	6.572		
TOTAL	19.747	197470	4.533

AVG. 1.51 AC.

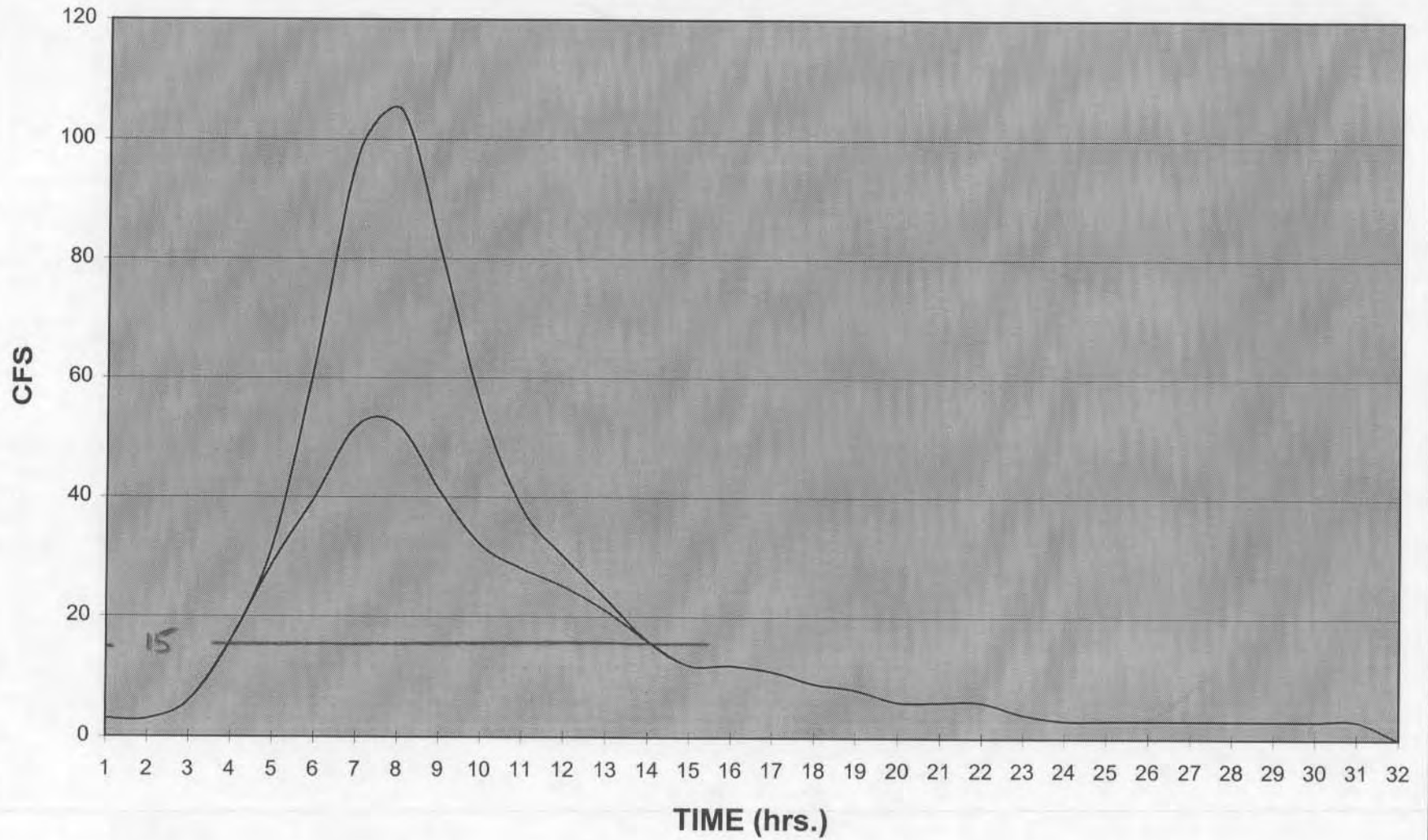
9

TRIAL 1	8.060		
2	8.060		
3	7.998		
TOTAL	24.118	241180	5.537

AUG 1.85 AC.

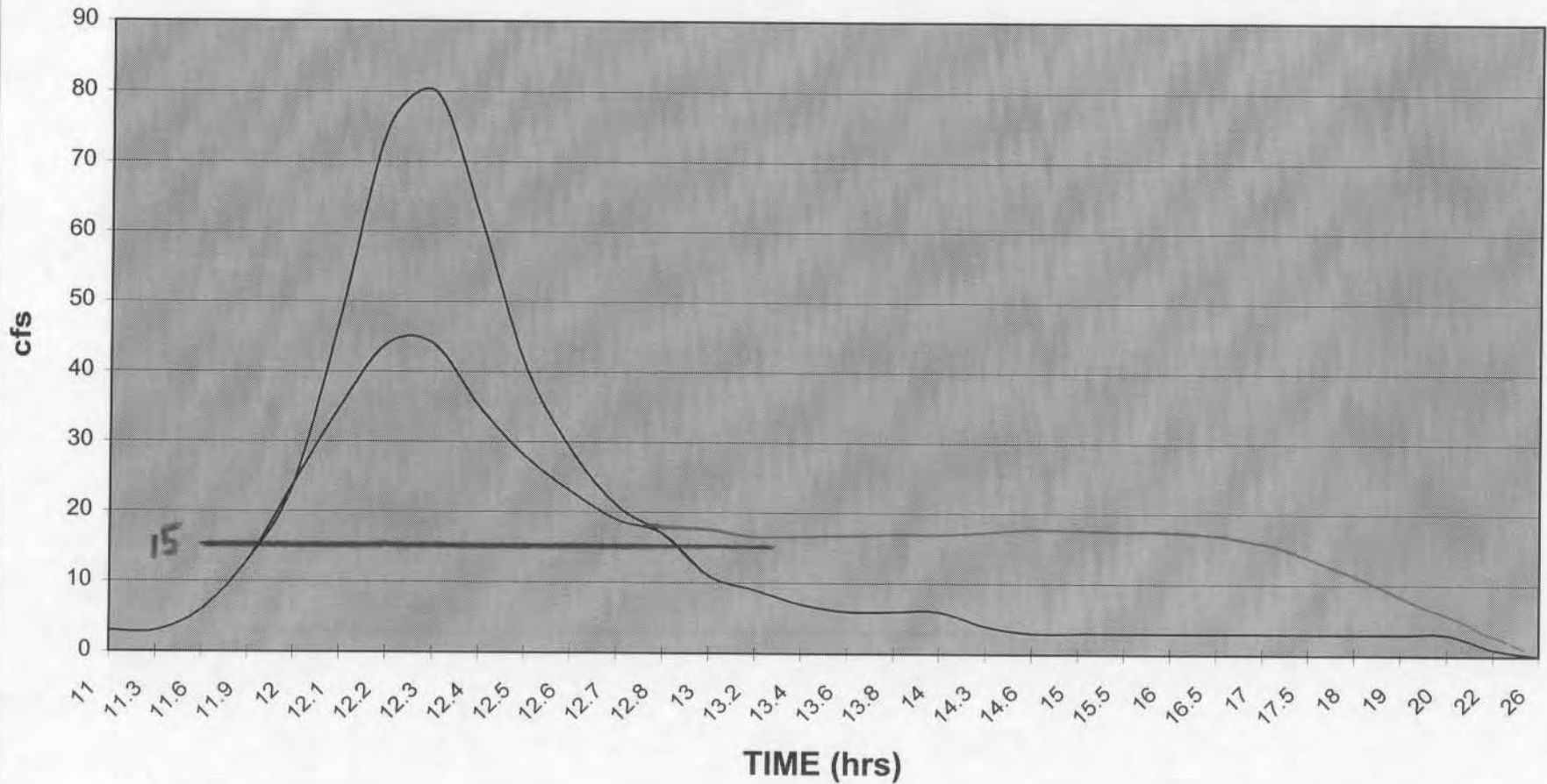
111th St. @ Meridian, 5 yr. Storm With and Without Detention

OFFSITE

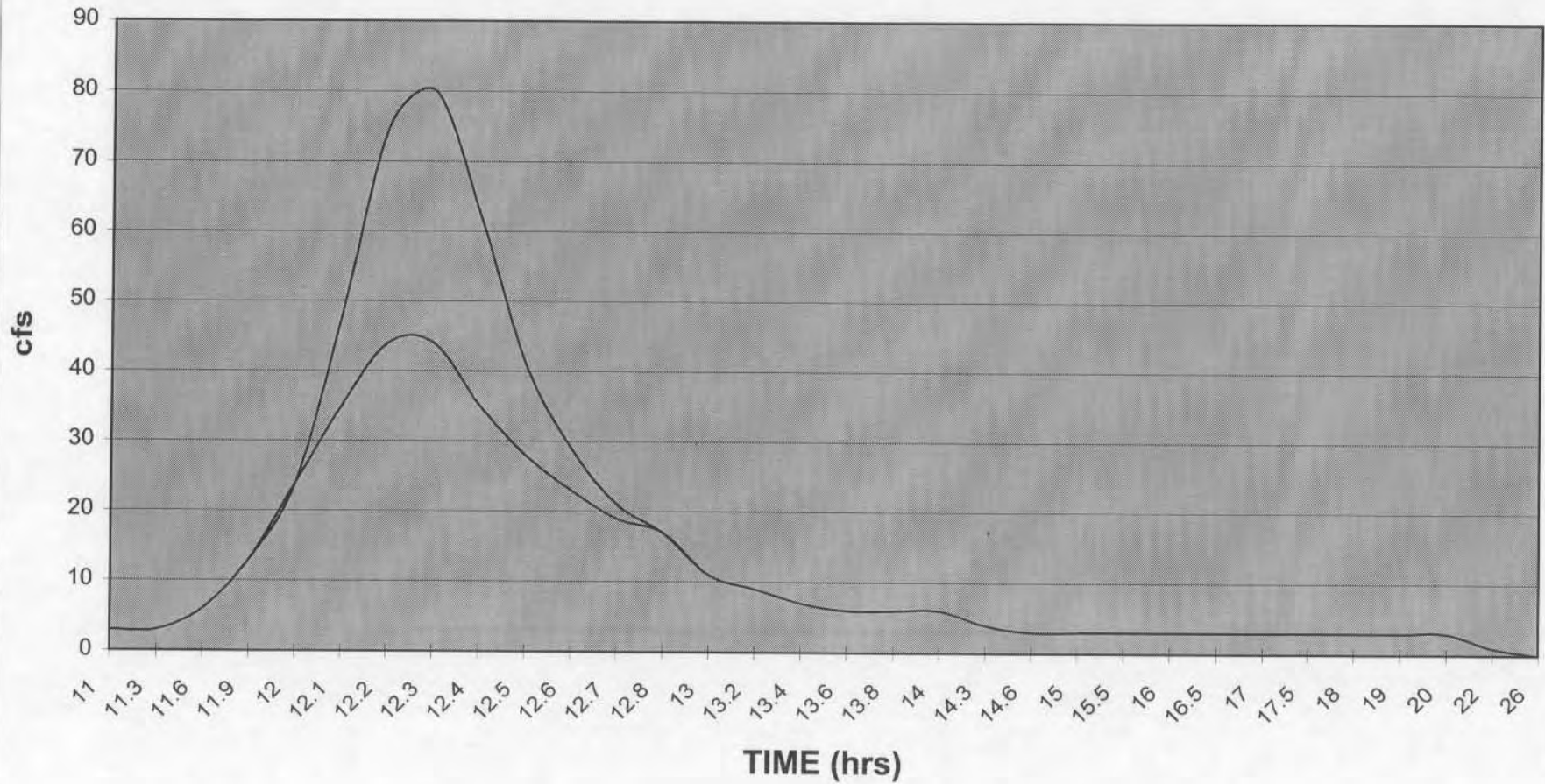


111th St. Hydrographs With & Without Detention

2 YR. OFFSITE



111th St. Hydrographs With & Without Detention



Meridian S_u Project

D = 1000 ft

C = 0.3

$S = \frac{850 - 839.9}{1000} \times 100 = 1.0\%$

$T_c = 0.0078 \left(\frac{D}{V_s}\right)^{0.77} = 0.0078 \left(\frac{1000}{10.01}\right)^{0.77} = 9.3 \text{ min} = 0.15 \text{ hr}$

$t_c = 9.3 \text{ min}$

$I_2 = 3.5 \text{ "/hr}$

180 ft

$I_5 = 4.7 \text{ "/hr}$

$I_{10} = 5.1 \text{ "/hr}$

$Q_2 = CIA = 0.3 (3.5 \text{ "/hr})(17 \text{ acre}) = 17.85 \text{ cfs}$

$Q_5 = CIA = 0.3 (4.7 \text{ "/hr})(17 \text{ acre}) = 23.97 \text{ cfs}$

$Q_{10} = CIA = 0.3 (5.1 \text{ "/hr})(17 \text{ acre}) = 26.01 \text{ cfs}$

839.09

S = 1.5%

Dia = 24" RCP for 10-year storm

837.46

661 ft - North of 111th St.

181 ft - Pipe

837.58 - FL

(125')

92 ft Dist

1,124 ft

943 ft - Ditching

1,330 ft

838.26 ft
WEST END

$Q_{10} = CIA = 0.2 (5.1 \text{ "/hr})(17 \text{ acres}) = 17.34 \text{ cfs}$

D = 24 in RCP

S = 0.6%

54,000 cfs @ 2000 yd³ ≈ 8,000 to excavate

180

837-X $X_{100} = 0.6\%$

180 ft

835.90

4.05

$\frac{835.90 - 831.87}{180} \times 100\% = 0.36\%$

180

1800

$$WP_1 = \sqrt{a^2 + b^2} = [(4.38 - 3.71)^2 + 27.39^2]^{1/2} = 27.40 \text{ ft.}$$

$$WP_2 = [(34.34 - 27.39)^2 + (3.71 - 2.33)^2]^{1/2} = 7.56 \text{ ft.}$$

$$WP_3 = [(10.51)^2 + (4.38 - 2.33)^2]^{1/2} = 10.71$$

$$45.67 \text{ ft.}$$

○ CAPACITY

$$Q = AV = (24.75) \left(\frac{1.486}{0.030} \right) \left(\frac{24.75}{45.67} \right)^{2/3} (0.011)^{1/2}$$

$$= 85.6 \text{ cfs}$$

$$= (24.75)(49.53)(0.665)(0.105)$$

$$Q_{CAP} = 85.6 \text{ cfs}$$

$$A_1 = \frac{1}{2}bh = \left(\frac{1}{2}\right)(27.39)(4.38 - 3.71) = 9.18 \text{ sq. ft.}$$

$$A_2 = \left(\frac{1}{2}\right)(34.34 - 27.39)(3.71 - 2.33) = 4.80 \text{ sq. ft.}$$

$$A_3 = \left(\frac{1}{2}\right)(44.85 - 34.34)(4.38 - 2.33) = 10.77 \text{ sq. ft.}$$

$$24.75 \text{ sq. ft.}$$

$$@ y = 844.38$$

$$844.38 = 0.195x + 842.33$$

$$x = \frac{4.38 - 2.33}{0.195} = 10.51$$

$$10.51 + 34.34 = 44.85$$

$$y = 0.195x + 842.33$$

$$y = mx + c$$

$$c = 842.33$$

$$m = \frac{7.06 - 2.33}{58.59 - 34.34} = 0.195$$

844.38

843.71

842.33

842.06

0.198
5:1

S = 0.195
5:1

H 1" = 10'

V 1" = 10'

0 + 58.59

SECTION @
STA 11+17.55

840.00

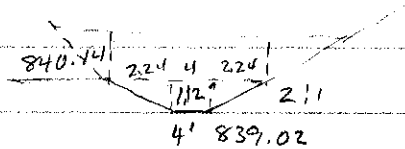
0+00

0 + 29.34

0 + 34.34

ESTIMATE OF STORAGE CAPACITY UPSTREAM OF 111 TH. STREET

DITCH ALONG W. SIDE US 31.



$$\begin{array}{r} 6+00 \\ + 42.23 \\ \hline 557.77 \text{ ft.} \end{array}$$

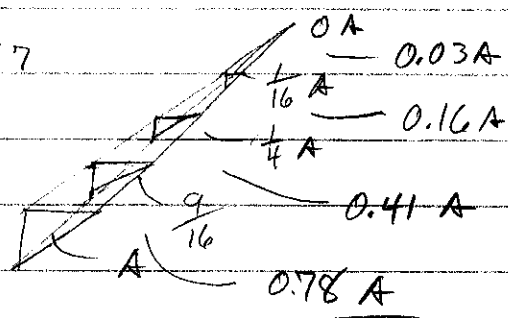
1.12'

$$4.48 \text{ S.F.} + 2.51 = 7 \text{ SQ. FT.}$$

@ MID-PT. 0.56'

$$(4 \times 0.56) + (1.12)(0.56) = 2.87$$

$$(2.24) + 0.63$$

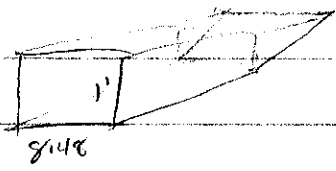


	CENTER	SIDES
560	$\frac{1}{2}(4.48)$	$(0.35)(2.51)$

$$= (3.12)(560) = 1746 \text{ cu. ft. EXIST.}$$

$$(1.38A) \frac{1}{2} = 0.35A$$

ADD 1 FT.
BERM

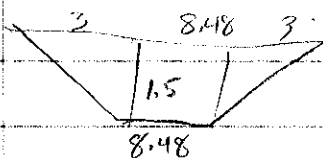


$$(8.48) + (4) = 12.48$$

$$(0.35)(12.48)(950) = 41,49.6 \approx (4150 \text{ cu. ft.})$$

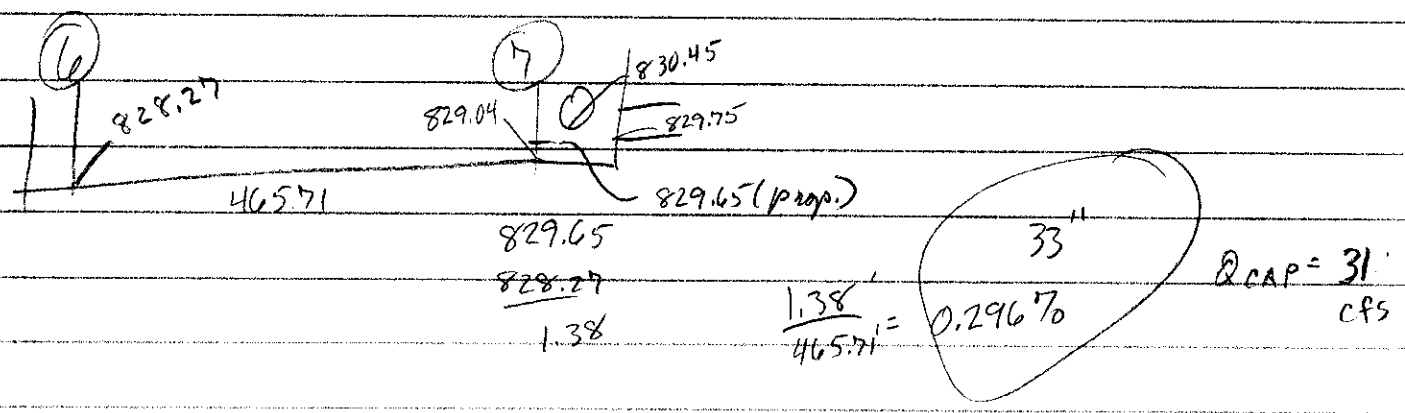
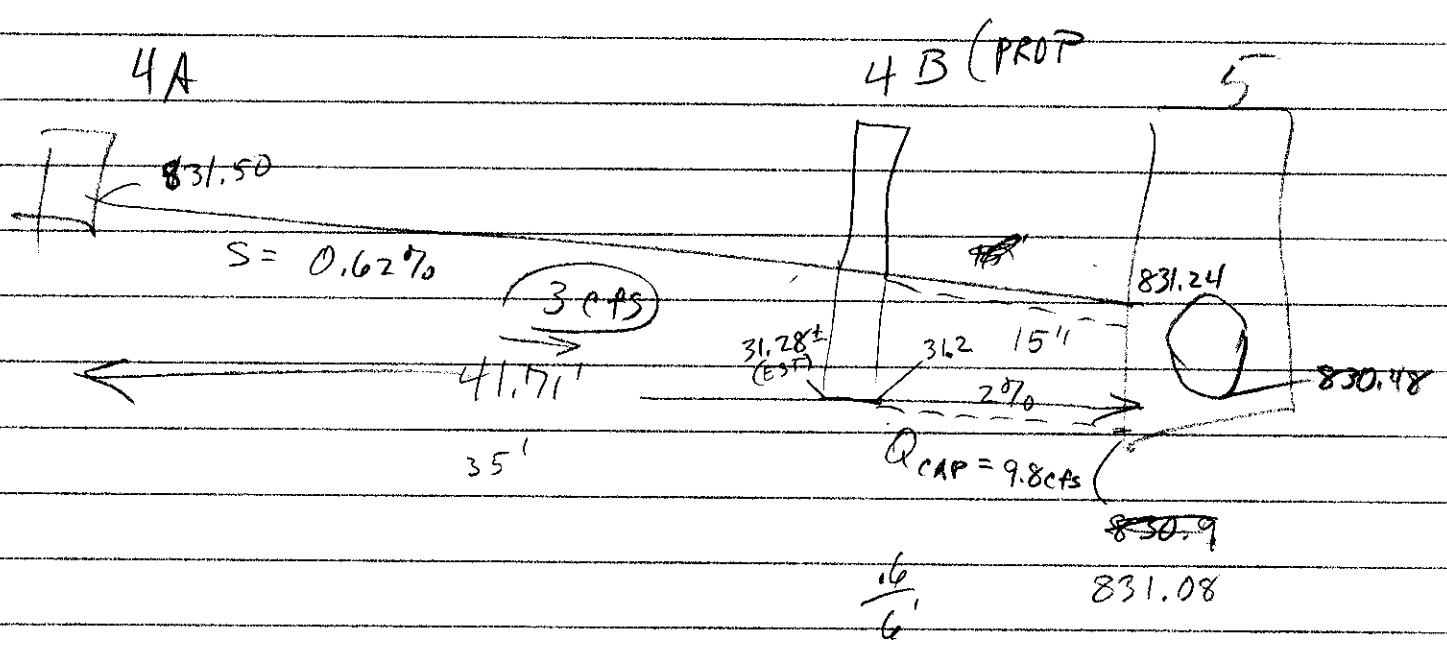
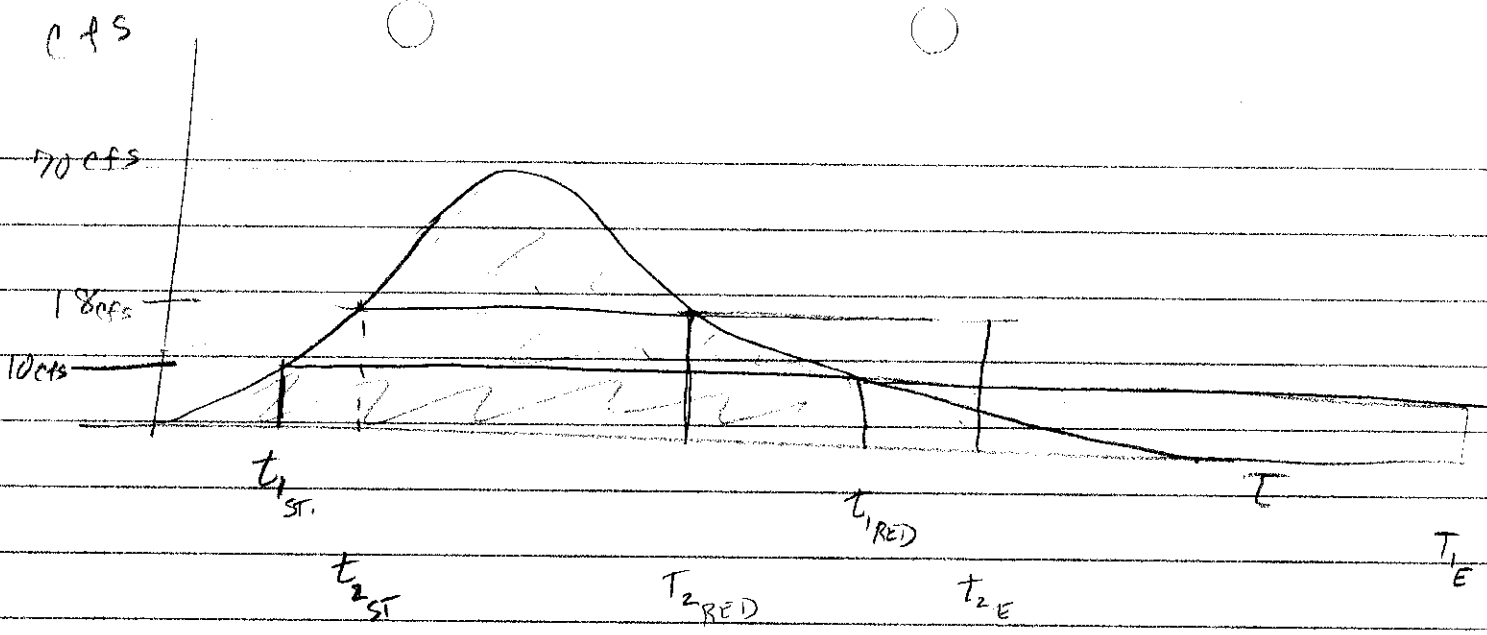
W/ 1 FT. OF BERM.

ADD 1.5 FT.



$$12.72 + 4.5 = 17.22 \text{ SQ. FT.}$$

$$(0.35)(17.22)(1000) = 4452 \approx (4500 \text{ cu. ft.})$$



IMPROVE STR 7 TO STR 6 TO 36"

7366

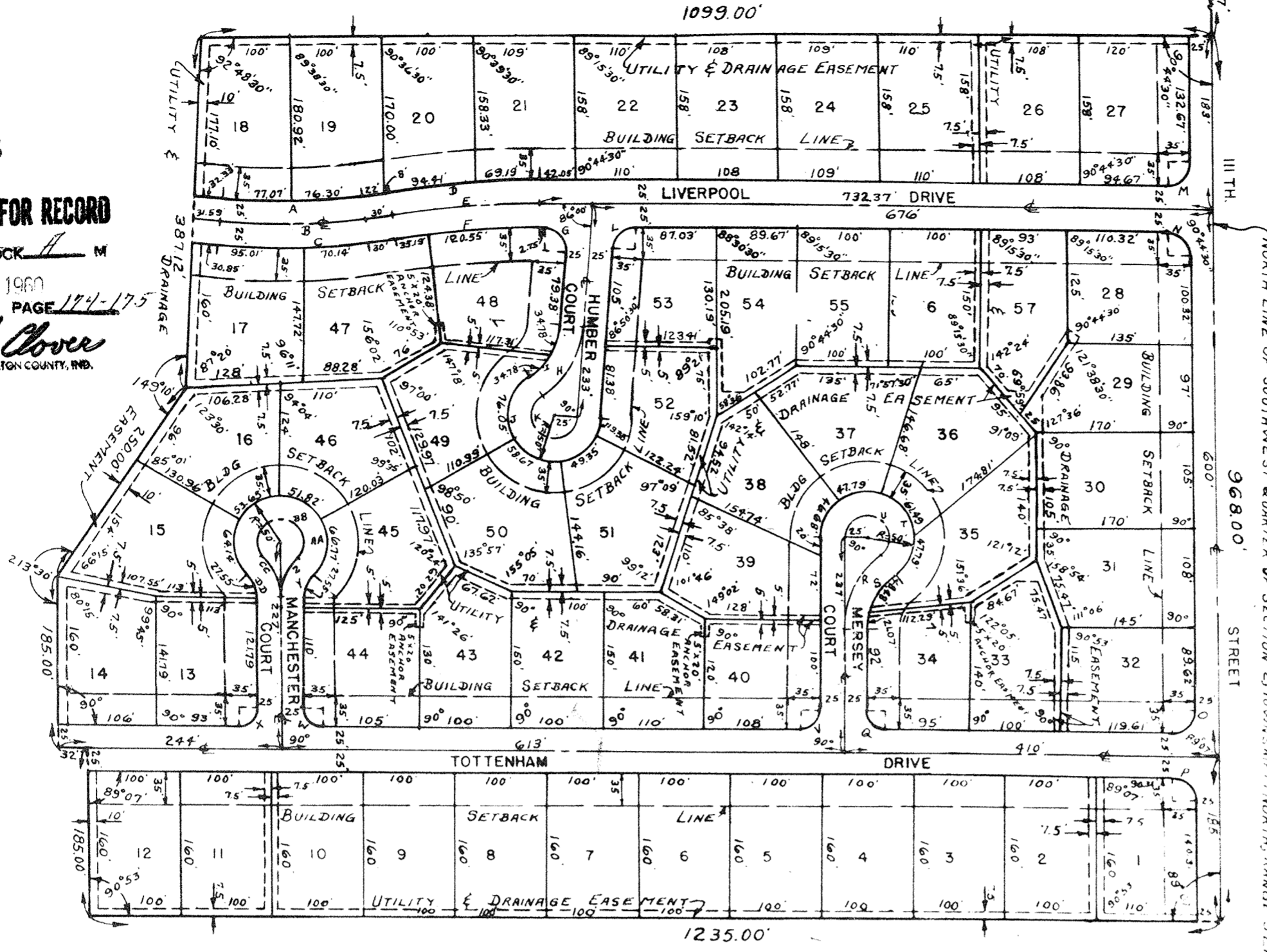
RECEIVED FOR RECORD

AT 9:30 O'CLOCK A.M.

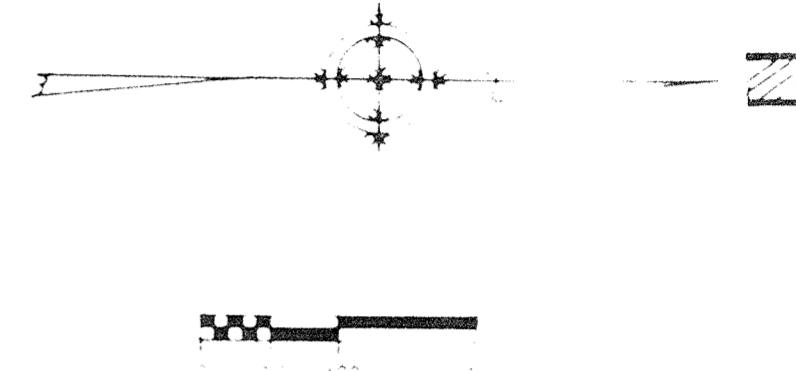
JAN 6 1960

BOOK PAGE 174-175

Elizabeth Clover
RECORDER HAMILTON COUNTY, IND.



CURVE	Δ	R	T	L
A	13.30	650.9		153.37
B	13.30	676.9	80	159.26
C	13.30	702.9		165.15
D	9.00	124.44		128.90
E	9.00	106.48	80	122.90
F	9.00	98.52		116.90
G	9.00	23.00	26.81	41.21
H	53.08	100.00	22.62	24.73
I	53.08	75.00		49.54
J	233.08	50.00		202.45
K	233.08	25.00		101.22
L	80.00	25.00	43.37	31.52
M	80.00	25.00	29.33	33.52
N	80.00	25.00	24.68	35.52
O	80.00	25.00	20.03	37.52
P	80.00	25.00	15.38	39.52
Q	80.00	25.00	10.73	41.52
R	80.00	25.00	6.08	43.52
S	80.00	25.00	1.43	45.52
T	233.08	25.00		181.22
U	233.08	25.00		161.22
V	233.08	25.00		141.22
W	233.08	25.00		121.22
X	233.08	25.00		101.22
Y	233.08	25.00		81.22
Z	233.08	25.00		61.22
AA	233.08	25.00		41.22
BB	233.08	25.00		21.22
CC	233.08	25.00		1.22
DD	233.08	25.00		



MERIDIAN SUBURBAN
FIRST SECTION

A PART OF THE SOUTHWEST QUARTER OF SECTION 2, TOWNSHIP 17 NORTH, RANGE 3 EAST IN HAMILTON COUNTY, INDIANA

We, the undersigned, P. H. NIDDLERSON, INC., registered, professional engineers and land surveyors of the State of Indiana, hereby certify that the within plat of Meridian Suburban, First Section is true and correct and represents a subdivision of part of the southwest quarter of Section 2, Township 17 North, Range 3 East in Hamilton County, Indiana, more particularly described as follows:

Beginning at a point on the north line of aforesaid southwest quarter section 964.87 feet east of the northwest corner thereof, run thence east along and with the north line of said section 964.87 feet; thence southwardly deflecting right 90°53' a distance of 1274.00 feet to a point; thence southwardly parallel to the north line of said quarter section 185.00 feet; thence southwardly parallel to the east line of the within described tract 52.44 feet; thence westwardly at right angles to the last described line 185.00 feet; thence northwardly deflecting right 34°00' a distance of 250.00 feet; thence westwardly deflecting left 30°55' a distance of 87.12 feet; thence northwardly 199.88 feet to the place of beginning, containing 26,226 acres, more or less.

The width of the lots, widths of streets, easements, and public ways and all figures denoting feet and decimal parts thereof. This subdivision consists of lots numbered 1 to 32, inclusive.

WITNESS our hand and corporate seal this 1st day of DECEMBER, 1959.
P. H. NIDDLERSON, INC., ENGINEERS
By: Paul W. Moore, Reg. #2473
Paul W. Moore, President

The undersigned, VALLEY DEVELOPMENT CO., INC., by Stanley Valinet, its President, and Mary Valinet, its Secretary; and Paul A. Todd and Mabel Todd, his wife, owners of the real estate above and described herein, do hereby certify that they have filed, recorded and acknowledged, and do hereby agree, grant and divide, said real estate in accordance with the within plat. This subdivision shall be known and designated as MERIDIAN SUBURBAN, First Section, a subdivision of part of the southwest quarter of Section 2, Township 17 North, Range 3 East in Hamilton County, Indiana.

- All streets and public ways shown and not heretofore dedicated, are hereby dedicated, to the public and shall be improved by the subdivisor in accordance with the minimum requirements set forth by the Board of County Commissioners of Hamilton County.
- All lots in this subdivision shall be used for residential purposes. No building shall be erected, altered, placed or permitted to remain on any lot other than one detached single family dwelling not to exceed two stories in height and a private garage. The garage shall be for at least two (2) cars.
- The ground floor area of the main structure, exclusive of one-story open porches and garages, shall not be less than one thousand (1000) square feet for a one-story dwelling, not less than eight hundred fifty (850) square feet for a dwelling of more than one story.
- No dwellings shall be erected nearer to the front lot line than the building set-back line shown on this plat nor nearer than five (5) feet to the side lines of any lot in this plat nor shall any accessory building, other than a two car garage, be erected and maintained nearer than seventy-five (75) feet to the front line of any lot in this plat except that in any case when the same persons own two adjoining lots, such owners may build a residence or dwelling or appurtenant garage across the dividing line or to coincide therewith provided that in no case shall any residence be erected nearer to any residence than ten (10) feet. Any private garage on a corner lot shall be attached either directly or by means of a porch, breezeway, etc., to the dwelling erected on the lot.
- No building shall be located nearer than five (5) feet to an interior lot line. For the purposes of this covenant garage, balcony, and open porches shall not be considered as a part of a building, provided however, that this shall not be construed to permit any portion of a building on a lot to encroach upon another lot or be constructed over a filter bed.
- No dwelling shall be erected or placed on any lot having an area of less than twelve thousand (12,000) square feet or a width of less than 70 feet at the minimum building set-back line. No lot in this addition shall be subdivided.
- The exterior finish of any dwelling erected in this subdivision shall be of brick or stone or a combination of brick and stone or a combination of brick or stone and new wood.

7. Easements as shown on this plat for installation and maintenance of utilities, including, but not limited to, water, sewer, gas, telephone, electric, and other lines, shall be reserved as shown on the recorded plat, and shall be subject at all times to the proper laws, with relation to the easements herein reserved. No permanent or other structure shall be erected or maintained upon said easements, but such Owners shall take their title subject to the right of the utility companies and to the right of the owners of the other lots in this addition to said easement herein granted for ingress and egress in, along, across and through the strips so reserved. No planting of trees shall be done on the foregoing easement.

8. There are strips of ground of a width shown on this plat and marked "utility and drainage easement" which are subject to the easement as set forth in item numbered 7 above and also subject to drainage both surface and underground, over and under which may be constructed open drainage ditches and underground sewers; these strips are subject at all times to the proper authorities and to the easement herein granted for ingress and egress for the purposes of drains, ditches, herein set forth.

9. No noxious or offensive activity shall be carried on upon any lot, nor shall anything be done thereon which may be or may become an annoyance or nuisance to the neighborhood.

10. No structure of a temporary character, trailer, basement, tent, shack, garage, barn or other outbuilding shall be used on any lot at any time as a residence either temporary or permanent.

11. No animals, livestock or poultry of any kind shall be raised, bred, or kept on any lot, except dogs, cats or other household pets may be kept provided that they were not kept, used, or maintained for any commercial purposes.

12. No lot shall be used or maintained as a dumping ground for rubbish. Trash, garbage or other waste shall not be kept except in sanitary containers. All incinerators or other equipment for storage or disposal of such material shall be kept in a clean and sanitary condition.

13. Until such a time as a sanitary sewer system is available for use in this addition, no sewage disposal method may be installed, constructed or maintained except a method or type and construction as approved by the Indiana State Board of Health in writing, such approval to be maintained for any and all lots either separately or collectively and no other sanitary provisions or device shall be employed or permitted to remain on any lot in this addition. In the event of the availability of a sanitary sewer system, each and every lot must be connected to the said sewer system. The owners of the lots at the time of the availability of a sewer system shall be responsible for this connection and the plattee shall not be held liable if an approved septic tank and absorption bed have previously been installed.

14. Until an approved water supply is available in this addition, individual wells will be permitted, providing such well is located, constructed and equipped in accordance with the approval of the Indiana State Board of Health.

15. These covenants are to run with the land and shall be binding on all parties and all persons claiming under them for a period of twenty-five (25) years from the date these covenants are recorded, after which time said covenants shall be automatically extended for successive periods of ten (10) years unless an instrument signed by a majority of the owners of the lots has been recorded, agreeing to change said covenants in whole or in part.

16. Invalidation of any one of these covenants by judgment or court order shall in no wise affect any of the other provisions which shall remain in full force and effect.

17. The right to enforce these provisions by injunction, together with the right to cause the removal, by due process of law of any structure or part thereof erected or maintained in violation hereof, is hereby dedicated to the public, and reserved to the several owners of the lots in this subdivision and to their heirs and assigns.

18. No improvements shall be erected or placed on any of the lots in this addition until the building plans have been approved in writing by the majority of a committee composed of Stanley Valinet, Mary Valinet, and William H. Traylor for the conformity of external design with existing structures in this area. In the event of the death or resignation of any member or members of this committee, the surviving member or members shall have the authority to approve or disapprove such design and location. If said committee shall fail to approve or disapprove such design or location within ten days after said plans have been submitted or if no suit to enjoin the erection of such improvements shall have been commenced within 30 days after the completion thereof, such approval shall not be required. Said committee shall act and serve without compensation until January 1, 1971, at which time the ten recorded owners of the majority of the lots in this addition may designate in writing, duly recorded among the land records of Hamilton County, their authorized representatives who thereafter shall have all the powers, subject to the above limitations, as were previously delegated herein to said committee.

IN WITNESS WHEREOF, the Valley Development Co., Inc., by Stanley Valinet, its president, and Mary Valinet, its secretary; and Paul A. Todd and Mabel Todd, his wife, have caused this instrument to be executed this 1st day of DECEMBER, 1959.

LEGAL AUTHORITY DERIVED BY CHAPTER 47 OF THE GENERAL ASSEMBLY OF INDIANA OF 1951 THIS PLAT WAS GIVEN APPROVAL BY THE BOARD OF COUNTY COMMISSIONERS OF HAMILTON COUNTY, INDIANA, AT A MEETING HELD Jan. 4, 1960.

BOARD OF COUNTY COMMISSIONERS
Attest:
Thomas H. Kansas
Ray D. Roth
Hogel A. Larson

VALLEY DEVELOPMENT CO., INC.
BY: Stanley Valinet, President
Mary Valinet, Secretary
Paul A. Todd, Owner
Mabel Todd, wife

STATE OF INDIANA)
)SS:
COUNTY OF MARION)
Before me, the undersigned a Notary Public in and for said State and County, appeared the Valley Development Co., Inc., by Stanley Valinet, its President, and Mary Valinet, its secretary, and acknowledged the execution of the foregoing instrument for the purposes therein expressed. Witness my hand and notarial seal this 1st day of DECEMBER, 1959.

Jeannette Crause
Notary Public

My Commission expires JUNE 23, 1962

STATE OF INDIANA)
)SS:
COUNTY OF)
Before me, the undersigned, a Notary Public in and for said State and County, appeared Paul A. Todd and Mabel Todd, his wife, and acknowledged the execution of the foregoing instrument for the purposes therein expressed. Witness my hand and notarial seal this 2nd day of DECEMBER, 1959.

Frank W. Campbell
Notary Public

My commission expires January 13, 1963

This instrument was prepared by P. W. Moore

1.56
.8
.8
1.45
1.73
1.5
.78

8.62

CIA

$$A = 10 \pm \text{AT LEAST}$$

$$C = 0.45$$

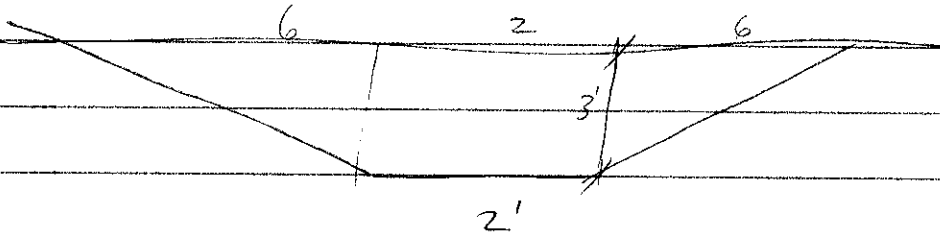
$$@ I = 3.5 = 15.75 \text{ cfs}$$

$$@ I = 4 = 18 \text{ cfs}$$

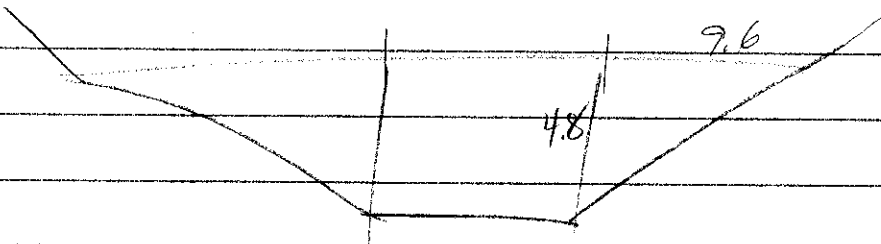
$$@ I = 4.5 = 20.25 \text{ cfs}$$

~~36" RCP @ 0.01 =~~

(2) 3.17 x 2 38" x 24" ELLIPTICAL.



$$18 + 6 = 24 \text{ SO FT}$$



X

$$46.08 + 9.6 = 55.68$$

$$9.6 \times 4.8$$

$$\frac{55.68 + 24}{2} = 39.84$$

$$39.84 \times 900 = \underline{35856 \text{ cu ft.}}$$

27

$$= 1328 \text{ c.y.}$$

X \$5

$$\# 6,640$$

X

TAPE #1

30" at lower end (longitudinal) cracked in top of pipe.

circular crack. 14 ft ±

long. crack 28 ft ±, 40, 45, 55, 83, 90, 110, etc. ²²²⁻²³⁰

77 ± bad cracks

rocks throughout up to 9'-10" ±

180 ± sag, 212 gravel on bottom

235 manhole, bend. (brick manhole).

10" ~~con~~ CMP? heading south, water, rocks.
head south

10" CMP head north. 10 ft.

10" ~~con~~ CONC. MH 4 TO 5 east. 4" of water

12" CONE 1 TO 2 EAST ~~8 ft~~

12" CONC. 2 TO 3 SOUTH (OVAL-NOW)

collapsed - 7-8 ft.

17 ft.

12" conc. 2 TO 1 West 14-27 flooded 6" ±

12" conc. 2 TO 3 SOUTH? broken & collapsed.
(north) ↙ ↘ misaligned & settled
roots @ 176

12" conc 3 TO 5 (SOUTH) roots, roots & more roots

~~786~~ ~~176~~? misaligned

30" conc. 6 TO 5 NORTH 52.4 ft. dropped joint

186 misaligned

18" CONC 7 TO 8 West

TAPE #2

21" CONC 7 TO 5 NORTH

66 ft. lateral, obstruction

12" PVC 2A TO 1A NORTH
1A TO 2A SOUTH

23 ft. mis joint

12" PVC 2A TO 3 EAST

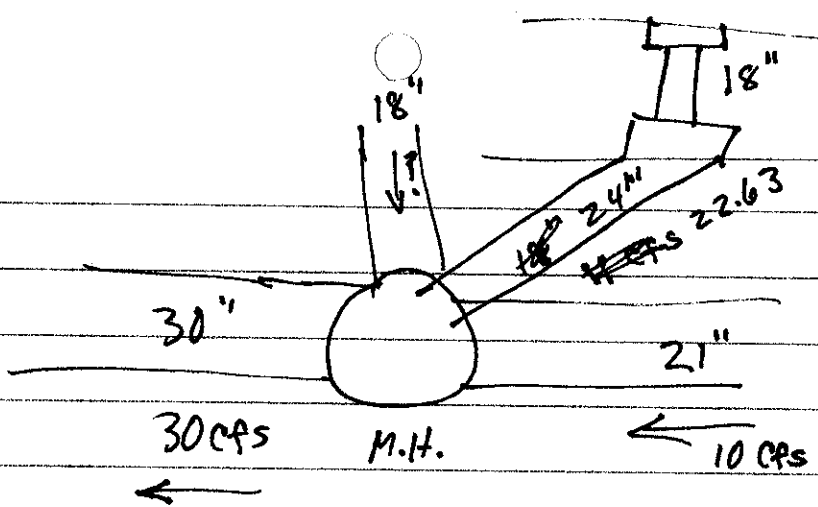
12" PVC 6A TO 5A WEST

21" CONC. 5 TO 7 SOUTH

70 ft misaligned
100 ft lateral
(gravel) 4"-5"
150 ft to lateral

12" CONC 2 to 1 west

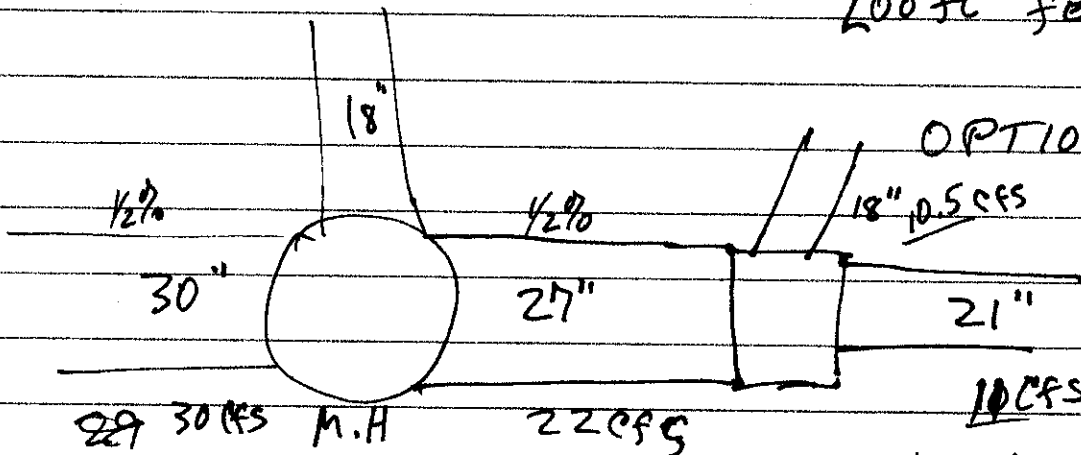
41' collapse.
water in pipe to that point



OPTION #1

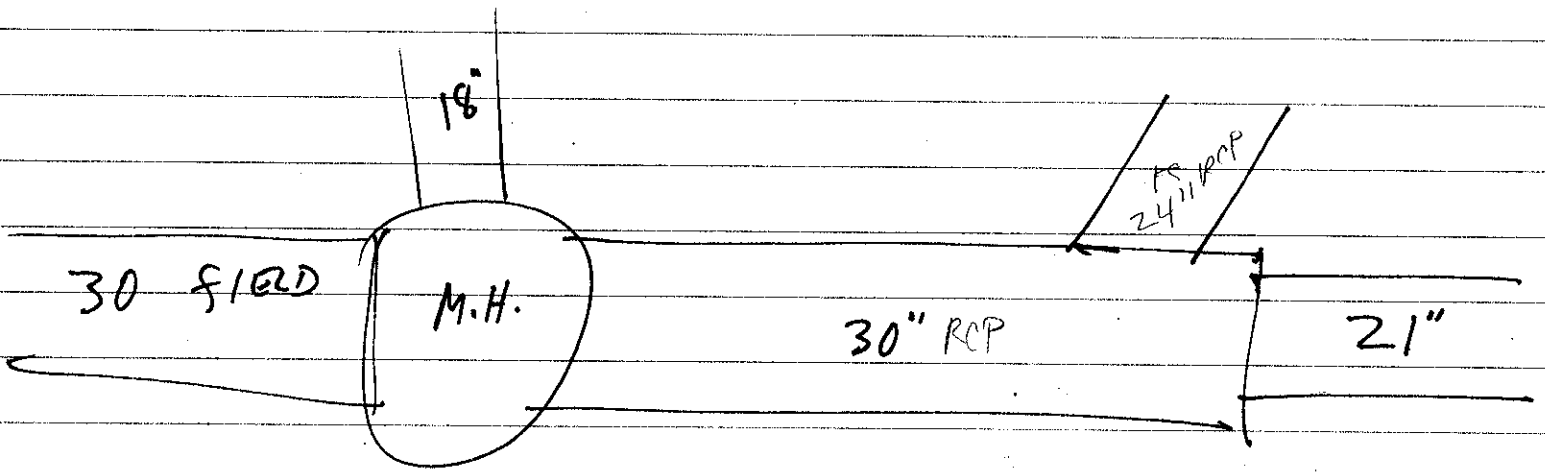
1 M.H.	\$ 3000
2 INLETS	\$ 1000
10 FT 24" RCP	\$ 400
20 FT 18" RCP	\$ 500
	<u>\$ 5000</u>

200 ft fence



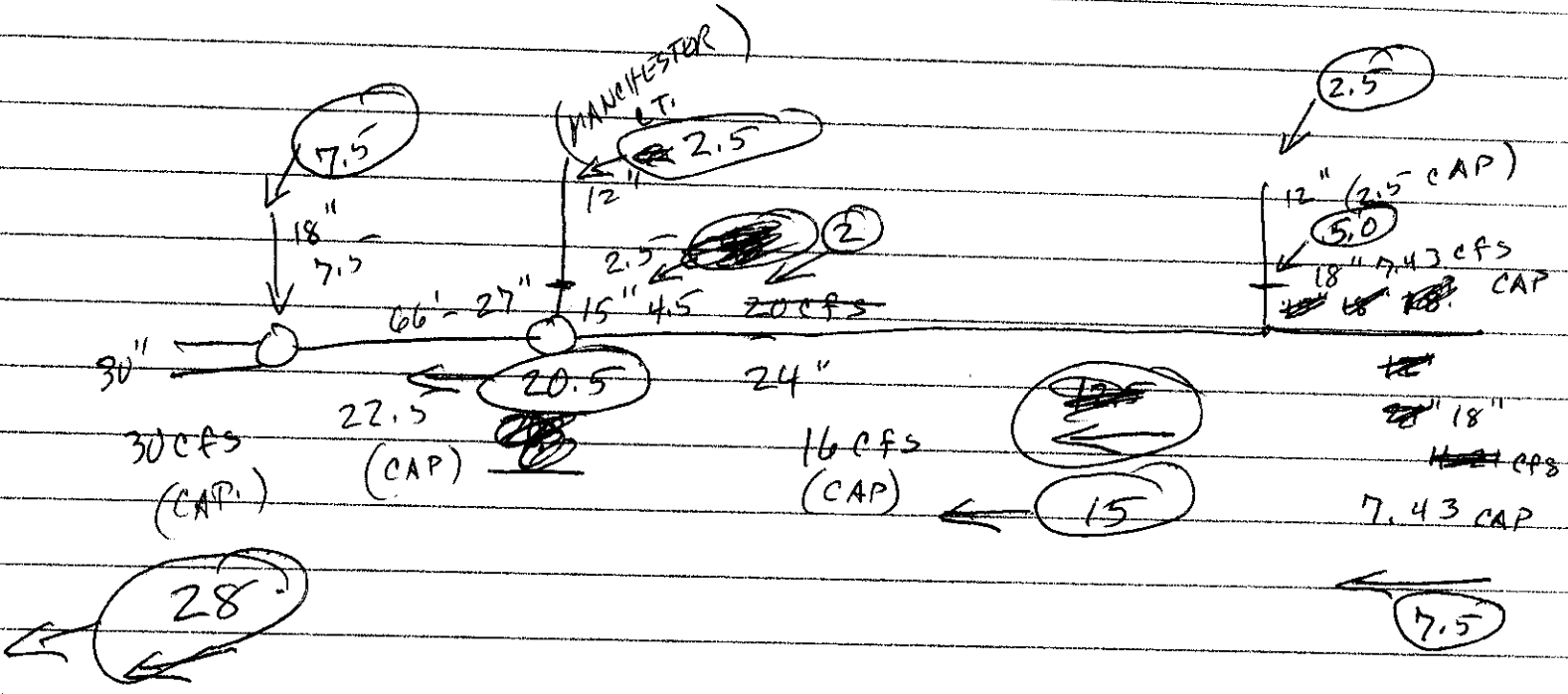
OPTION #2

1 M.H.	\$ 3000
60' 27"	\$ 3000
10' 18"	\$ 250
1 INLET	\$ 500
10' 21"	\$ 200
	<u>\$ 6950</u>



2.5
2.5
 5.0
2.5
7.5

2.5
7.5
 10.0



TOTAL FLOW TO CHANNEL

<u>AREA</u>	ELEV.	FLOW LINE
15.2 AC	6 ft.	1500 ft.
13.8 AC	2.6 ft.	900 ft. (ditch)
3.0 AC (1/4 US31 RW)	—	—
9.8 AC		1550 ft. ^{ditch} ^{overland} ^{ditch}
<u>6.5</u> ?		

EL. DIFF. =

FLOW LINE =

10 YEAR STORM. W. SIDE US 31

15.2 AC. DEVELOPED (COMM.) $t_c = 18.23 \text{ MIN}$ $I_{10} = 4.0 \text{ in./min.}$

A-1 $\frac{6'}{1500'} = 0.004 \text{ ft.}$ $t_c = 0.0078 \left(\frac{D}{\sqrt{S}}\right)^{0.77} = 0.0078 \left(\frac{1500'}{\sqrt{0.004}}\right)^{0.77} = 18.23 \text{ min.}$

$Q_{10} = CIA = (0.9)(4.0)(15.2) = \underline{54.7 \text{ cfs.}}$

13.8 AC DEVELOPED (COMM.) $t_c = 21.56 \text{ MIN}$ $I_{10} = 3.75 \text{ in./min.}$

A-2 $C = 0.9$

$Q_{10} = CIA = (0.9)(3.75)(13.8) = \underline{46.58 \text{ cfs.}}$

12 AC. $(1/4)(12) = 3 \text{ AC.}$ $t_c = 18 \text{ MIN}$ $I_{10} = 4.0 \text{ in./min.}$

US 31 $C = 0.5$

$Q_{10} = CIA = (0.5)(4.0)(3) = \underline{6.0 \text{ cfs}}$ each side

MEDIAN $= 6 \text{ AC} = 12 \text{ cfs}$ $\underline{12.0 \text{ cfs}}$ median

$\frac{10'}{2500'} = 0.004$ GRASS 4:1 V-DITCH

A-1 TO A-2 800' travel time (adj. t_c) avg. slope 0.003

grass lined 2:1 side 4' bottom $n = 0.022$

$S = 0.003$ $S^{1/2} = 0.055$ $V = \left(\frac{1.486}{0.022}\right)(R^{2/3})(0.055) = 3.72(R^{2/3})$

D	$R^{2/3}$	A	V	Q
1	0.794	6	2.95	17.7
2	1.15	16	4.28	68.5
* 1.75	1.074	13.125	4.00	52.5

* close enough $\frac{800'}{4 \text{ ft/s}} = 200 \text{ Sec} = 3.33 \text{ min.}$

$18.23 \text{ min.} + 3.33 = 21.56 \text{ min.}$

$S = 0.004$ $S^{1/2} = 0.063$ $V = \left(\frac{1.486}{0.025}\right)(R^{2/3})(0.063) = (3.74)(R^{2/3})$
grass - good.

D	$R^{2/3}$	A	WP	V	Q
0.5	0.39	1	4.125	1.46	1.46
1.0	0.62	4	8.25	2.31	9.28

$t_c = 1,082 \text{ sec} = 18 \text{ min.}$



7/2/97

E. SIDE US 31

$Q = CIA$

AREA 1 14 AC. DEVELOPED

$C = 0.95$

8' drop $S = \frac{8}{1400} = 0.0057$
 1400 ft. dist.

$t_c = 0.0078 \left(\frac{1400}{\sqrt{0.0057}} \right)^{0.777} = 15.91 \text{ min.}$

Travel 1000 ft. in ditch.

USE KIRPICH $t_c = 0.0078 L^{0.777} S^{-0.385} = (0.0078)(1400)^{0.777} (0.008)^{-0.385}$
 $= (0.0078)(264.6)(6.42)$
 $= 13.25 \text{ min.}$

FOR ASPHALT $= (0.4)(13.25 \text{ min.}) = 5.3 \text{ min.}$

OVERLAND

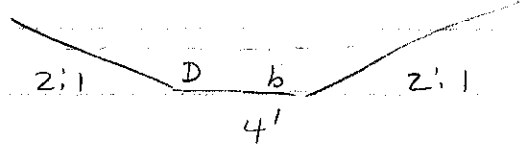
$V = 1.4$

$t_c = \frac{1400}{1.4} = 1000 \text{ Area} = 16.66 \text{ min.}$

~~$Q_{100} = (0.95)(7.2)(14) = 95.76 \text{ cfs}$~~

$Q_{10} = (0.95)(4.3)(14) = 57.2 \text{ cfs}$

channel slope = $\frac{3}{1000} = 0.003 \pm$



$Q = VA$

$V = \left(\frac{1.486}{n} \right) \left(\frac{A}{WP} \right)^{2/3} (S)^{1/2}$

$n = 0.050$

$S = 0.003$

$V = (29.72)(R^{2/3})(0.055)^{1/2} = 1.635(R^{2/3})$

$S^{1/2} = 0.055$

D	D/b	A	R	$R^{2/3}$	Q ($1.635 \times R^{2/3} \times A$)
1	0.25	6	0.708	0.794	7.79
2	0.5	16	0.618	0.726	18.99
3	0.75	30	0.574	0.691	33.89
4	1.0	48	0.548	0.670	52.58
5	1.25	70	0.532	0.657	75.19
6	1.50	96	0.530	0.655	102.81

HEADWATER LIMIT
 ON E. SIDE OF 31;
 MAY ONLY POND TO
 2.5 TO 3.0 FT.

Q_{25} PASSED $\approx 25 \text{ cfs}$
 3 ft. depth assumed. $\approx 32 \text{ cfs}$

SAY 30 cfs.

15 cfs AT MID POINT FROM US 31

SAY 45 cfs AT OUTLET ?

STA 12+00 ±	D	D/b	R	$R^{2/3}$	A	Q	V	Fr	Fr
	1'	0.25	0.708	0.794	6	24.8	4 ft/s	0.705	0.96
	2'	0.5	1.24	1.15	11	95.19	7.0	0.75	1.1

$n = 0.030$ $n = 0.02$

RCP CAPACITY (NON-PRESSURE)

$$n = 0.013$$

$$V = \left(\frac{1.486}{0.013} \right) \left(\frac{A}{WP} \right)^{2/3} (S)^{1/2}$$

D	S	A	WP	R	R ^{2/3}	V	Q
12"	0.002	0.785	3.14	0.25	0.397	2.03	1.6
	0.01					4.53	3.6
18"	0.002	1.77	4.71	0.38	0.52	2.66	4.71
	0.01					5.95	10.53
24"	0.002	3.14	6.28	0.5	0.63	3.22	10.11
	0.01					7.20	22.61
30"	0.002	4.71	7.85	0.625	0.73	3.74	18.36
	0.005					5.91	29.04
	0.01					8.36	41.06
36"	0.002	7.07	9.42	0.75	0.83	4.22	29.85
	0.005					6.67	47.20
	0.01					9.44	66.75
42"	0.002	9.62	10.99	0.88	0.92	4.7	45.24
	0.005					7.43	71.53
48"	0.002	12.56	12.56	1.00	1.00	5.11	64.21
	0.003					6.25	78.64
	0.004					7.23	90.81

OVER TIDE BANK @ STA 800-900 ± WHERE A-1 & A-2
ARE CONFLUENCED

$$\begin{array}{r} 54.7 \\ 46.6 \\ \hline 101.3 \text{ cfs} \end{array}$$

MAIN DITCH CAPACITY
@ 2' = 36.4 cfs

ESTIMATE OF OVERFLOW

$$\begin{array}{r} 101.3 \\ 36.4 \\ \hline \end{array}$$

$$\boxed{66.9 \text{ cfs}}$$

OVERLAND TO 111TH ST.
THROUGH WOODS

WOODED AREA 9.8 AC.

$$1000 \text{ ft.} \quad 4 \text{ ft.} \quad S = 0.004$$

$$C = 0.2 \quad I = 3.0$$

TRAVEL TIME (UPLAND METHOD) $V = 1.75 \text{ ft/SEC.}$

$$t = \frac{1000}{(1.75)(60)} = 9.5 \text{ min.} + 21.56 = 31 \text{ MIN.}$$

$$Q = CIA = (0.2)(3.0)(9.8) = 5.9 \text{ cfs}$$

TOTAL THROUGH TREES	66.9 cfs.
TO 111TH ST. CONCENTRATION POINT	5.9 cfs.
	<u>72.8 cfs.</u>

TOTAL TO CULVERT UNDER 111TH

36.4 cfs IN DITCH

30.0 cfs IN CULVERT UNDER US 131

66.4 cfs

30 cfs THROUGH 111TH ST. CULVERT

36.4 OVERLAND TO 111TH ST. CONCENTRATION POINT

TOTAL CONCENTRATION AT 111TH ST 72.8

$$\begin{array}{r} 36.4 \\ 109.2 \text{ cfs. } Q_{10} \end{array}$$

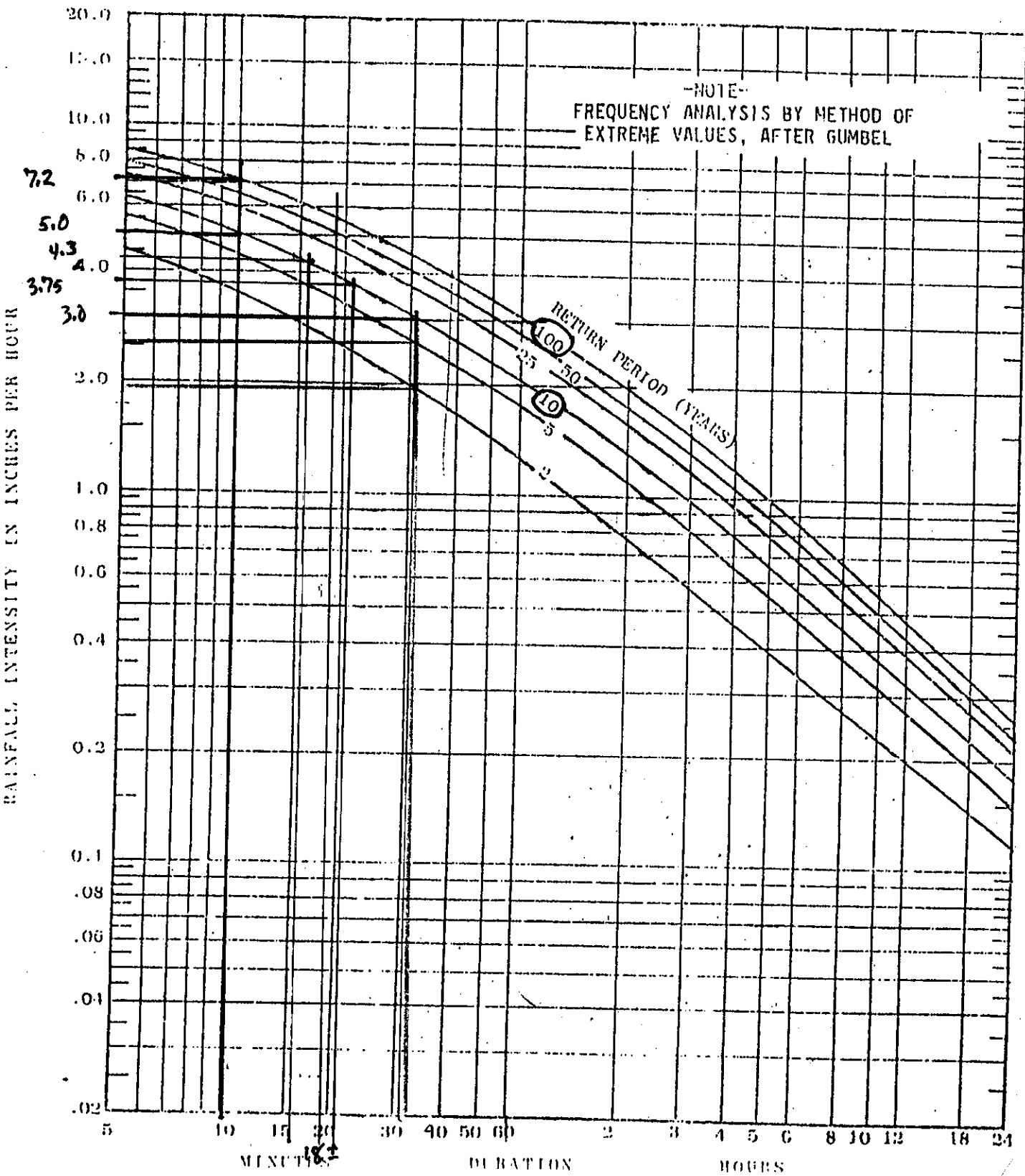
ITEMS TO CHECK

US 31 @ 111th.

1. LOOK AT (WALK) CHANNEL IN GRASSY AREA BY DEVELOPMENTS, NOTE OUTLET PIPE FROM RETENTION POND & ANY EVIDENCE OF EROSION, OVERFLOW ETC.
2. LOOK FOR OVERFLOW NEAR STA 8700 - 9700.
3. LOOK FOR CROSS CULVERTS ACROSS US 31.
4. LOOK AT E. SIDE OF US 31 NEAR INLET TO X-CULVERT.
5. CHECK DOWNSTREAM OF CULVERT IN 111TH. FOR CHANNEL CHARACTERISTICS.
6. WALK AREA DOWNSTREAM OF SUBDIV.
7. CHECK E. SIDE OF US 31 BELOW 111th. FOR CAPACITY.

U.S. DEPARTMENT OF COMMERCE WEATHER BUREAU COOPERATIVE STUDIES SECTION

RAINFALL INTENSITY - DURATION - FREQUENCY CURVES
INDIANAPOLIS, INDIANA
1903 - 1951



HAMILTON COUNTY SURVEYOR'S OFFI DRAINAGE CALCULATIONS

PROJECT: Suburban Meridian
LOCATION: 111th St & Meridian

BY: JLK
DATE: 1/17/1997

CHKD:
DATE:
PAGE: 1

PIPE FROM STR3 TO 111TH ST & TOTTENHAM DR

TR-55 DRAINAGE CALCULATIONS

RUNOFF CURVE NUMBER

SOIL NAME	HYDR. GROUP	COVER DESCRIPTION	CN	AREA (acres)	Product CN x Area
Crosby, CrA	C	Residential, 1/3 Ac Lots	81	2.15	174.15
Brookston, Br	B	Residential, 1/3 Ac Lots	72	1.7	122.4
					0
					0
					0
					0
					0
					0
					0
				3.85	296.55

WEIGHTED CN: 77.02597

RUNOFF

	STM #1	STM #2	STM #3
Frequency.....yr	2	5	10
Rainfall, P (24-hour).....in	3	3.75	4.3
Runoff (Q).....in	1.07251562	1.62063567	2.05137527

HAMILTON COUNTY SURVEYOR'S OFFICE DRAINAGE CALCULATIONS

PROJECT: Suburban Meridian
LOCATION: 111th St & Meridian

BY: JLK
DATE: 1/17/1997

CHECKED: NA
DATE: NA
PAGE: 2

TR-55 DRAINAGE CALCULATIONS

TIME OF CONCENTRATION (T_c) OR TRAVEL TIME (T_t)

SHEET FLOW

1. Surface Description (table 3-1)
2. Manning's Roughness Coeff., n (table 3-1)
3. Flow Length, L (total L less than 300')
4. Two-year, 24-hour rainfall, P2
5. Land Slope, s
6. T_t

		TOTALS	
Bermuda Grass			
0.4			
280		ft	
3		in	
0.025		ft/ft	
0.7704347	0	0.7704347	hr

SHALLOW CONCENTRATED FLOW

7. Surface Description (paved or unpaved)
8. Flow Length, L
9. Watercourse Slope, s
10. Average Velocity, V (figure 3-1)
11. T_t

Unpaved			
125		ft	
0.005		ft/ft	
1.15		ft/s	
0.0301932	0	0.0301932	hr

CHANNEL FLOW

12. Cross Sectional Flow Area, a
13. Wetted Perimeter, P_w
14. Hydraulic Radius, r=a/P_w
15. Channel Slope, s
16. Manning's Roughness Coefficient, n
17. Velocity, V
18. Flow Length, L
19. T_t

		sq ft	
		ft	
		ft	
		ft/ft	
0	0	ft/s	
		ft	
0	0	0	hr

20. Total Time of Concentration

0.8006279 hr

HAMILTON COUNTY SURVEYOR'S OFFICE

DRAINAGE CALCULATIONS

PROJECT: Suburban Meridian
 LOCATION: 111th St & Meridian

BY: JLK
 DATE: 1/17/1997

CHECKED: NA
 DATE: NA
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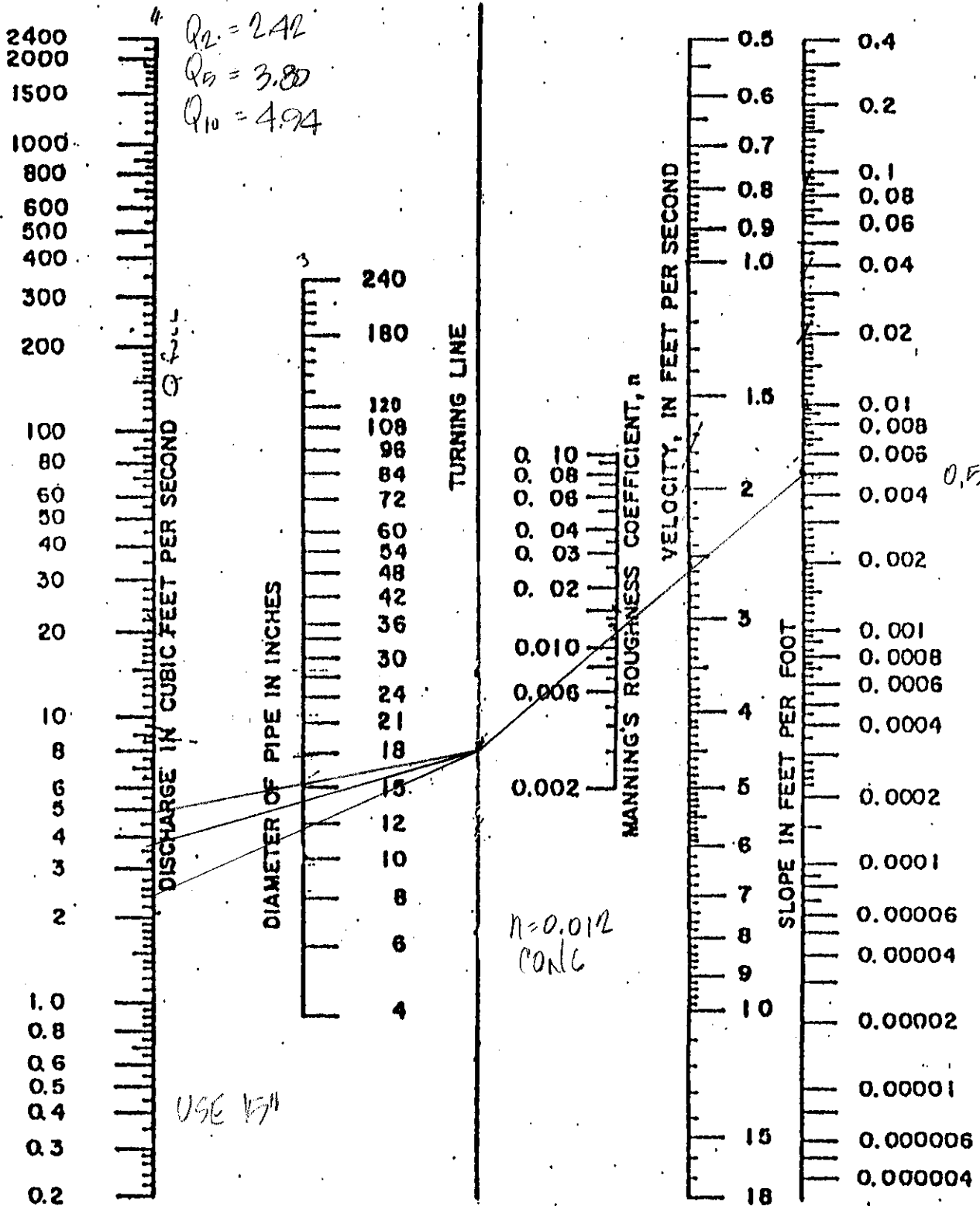
TR-55 DRAINAGE CALCULATIONS

GRAPHICAL PEAK DISCHARGE

Drainage Area: 0.0060156 sq. miles
 Runoff Curve Number: 77.025974
 Time of Concentration: 0.8006279 hr
 Rainfall Distr'n Type: II (I, IA, II, III)
 Pond/Swamp Area: 0 % of Drainage Area

	STM #1	STM #2	STM #3	
Frequency	2	5	10	yr
Rainfall, P (24-hour)	3	3.75	4.3	in
Initial Abstraction, Ia (use CN with Table 4-1)	0.597	0.597	0.597	in
Ia/P	0.199	0.1592	0.1388372	
Unit Peak Discharge, qu (use Tc & Ia/P with exhibit 4-__)	375	390	400	csm/in
Runoff, Q	1.0725156	1.6206357	2.0513753	in
Pond/Swamp Adj. Factor (use % area with Table 4-2) (factor is 1.0 for 0% area)	1	1	1	
Peak Discharge, qp	2.419444	3.802163	4.936122	cfs

NOMOGRAPH FOR SOLUTION OF MANNING'S FORMULA FOR FLOW IN STORM SEWERS



HAMILTON COUNTY SURVEYOR'S OFFICE DRAINAGE CALCULATIONS

PROJECT: Suburban Meridian
LOCATION: 111th St & Meridian

BY: JLK
DATE: 01/17/97

CHKD:
DATE:
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PIPE FROM STR 5 TO STR 3

TR-55 DRAINAGE CALCULATIONS

RUNOFF CURVE NUMBER

SOIL NAME	HYDR. GROUP	COVER DESCRIPTION	CN	AREA (acres)	Product CN x Area
Crosby, CrA	C	Residential, 1/3 Ac Lots	81	1.5	121.5
Brookston, Br	B	Residential, 1/3 Ac Lots	72	2.5	180
					0
					0
					0
					0
					0
					0
				4	301.5

WEIGHTED CN: 75.375

RUNOFF

	STM #1	STM #2	STM #3
Frequency.....yr	2	5	10
Rainfall, P (24-hour).....in	3	3.75	4.3
Runoff (Q).....in	0.98092747	1.50684135	1.92341132

HAMILTON COUNTY SURVEYOR'S OFFICE DRAINAGE CALCULATIONS

PROJECT: Suburban Meridian
LOCATION: 111th St & Meridian

BY: JLK
DATE: 1/17/1997

CHECKED: NA
DATE: NA
PAGE: 2

TR-55 DRAINAGE CALCULATIONS

TIME OF CONCENTRATION (Tc) OR TRAVEL TIME (Tt)

SHEET FLOW

1. Surface Description (table 3-1)
2. Manning's Roughness Coeff., n (table 3-1)
3. Flow Length, L (total L less than 300')
4. Two-year, 24-hour rainfall, P2
5. Land Slope, s
6. Tt

		TOTALS
Bermuda Grass		
0.4		
80		ft
3		in
0.05		ft/ft
0.2143233	0	0.2143233 hr

SHALLOW CONCENTRATED FLOW

7. Surface Description (paved or unpaved)
8. Flow Length, L
9. Watercourse Slope, s
10. Average Velocity, V (figure 3-1)
11. Tt

Unpaved		
450		ft
0.005		ft/ft
1.15		ft/s
0.1086957	0	0.1086957 hr

CHANNEL FLOW

12. Cross Sectional Flow Area, a
13. Wetted Perimeter, Pw
14. Hydraulic Radius, $r=a/Pw$
15. Channel Slope, s
16. Manning's Roughness Coefficient, n
17. Velocity, V
18. Flow Length, L
19. Tt

		sq ft
		ft
		ft
		ft/ft
0	0	ft/s
		ft
0	0	0 hr

20. Total Time of Concentration

0.323019 hr

HAMILTON COUNTY SURVEYOR'S OFFICE

DRAINAGE CALCULATIONS

PROJECT: Suburban Meridian
LOCATION: 111th St & Meridian

BY: JLK
DATE: 1/17/1997

CHECKED: NA
DATE: NA
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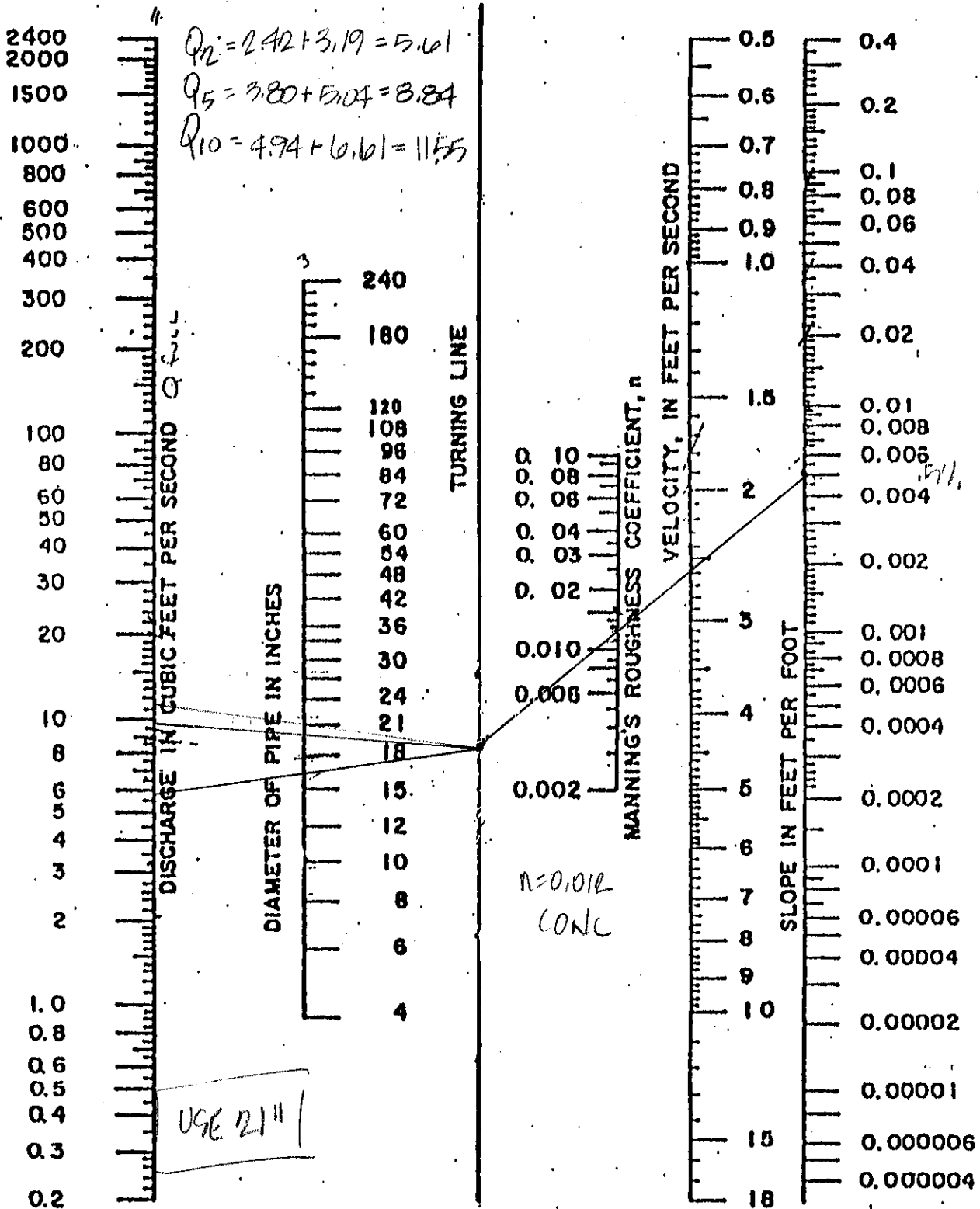
TR-55 DRAINAGE CALCULATIONS

GRAPHICAL PEAK DISCHARGE

Drainage Area: 0.00625 sq. miles
Runoff Curve Number: 75.375
Time of Concentration: 0.323019 hr
Rainfall Distr'n Type: II (I, IA, II, III)
Pond/Swamp Area: 0 % of Drainage Area

	STM #1	STM #2	STM #3	
Frequency	2	5	10	yr
Rainfall, P (24-hour)	3	3.75	4.3	in
Initial Abstraction, Ia (use CN with Table 4-1)	0.654	0.654	0.654	in
Ia/P	0.218	0.1744	0.152093	
Unit Peak Discharge, qu (use Tc & Ia/P with exhibit 4-__)	520	535	550	csm/in
Runoff, Q	0.9809275	1.5068413	1.9234113	in
Pond/Swamp Adj. Factor (use % area with Table 4-2) (factor is 1.0 for 0% area)	1	1	1	
Peak Discharge, qp	3.188014	5.038501	6.611726	cfs

NOMOGRAPH FOR SOLUTION OF MANNING'S FORMULA FOR FLOW IN STORM SEWERS



HAMILTON COUNTY SURVEYOR'S OFFICE DRAINAGE CALCULATIONS

PROJECT: Suburban Meridian
LOCATION: 111th St & Meridian

BY: JLK
DATE: 1/17/1997

CHKD:
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PIPE ALONG 111TH STREET (111TH & TOTTENHAM TO 15" CMP UNDER 111TH)

TR-55 DRAINAGE CALCULATIONS

RUNOFF CURVE NUMBER

SOIL NAME	HYDR. GROUP	COVER DESCRIPTION	CN	AREA (acres)	Product CN x Area
Crosby, CrA	C	Residential, 1/3 Ac Lots	81	0.1	8.1
Brookston, Br	B	Residential, 1/3 Ac Lots	72	0.3	21.6
					0
					0
					0
					0
					0
					0
					0
				0.4	29.7

WEIGHTED CN: 74.25

RUNOFF

	STM #1	STM #2	STM #3
Frequency.....yr	2	5	10
Rainfall, P (24-hour).....in	3	3.75	4.3
Runoff (Q).....in	0.92121408	1.43178669	1.83847135

HAMILTON COUNTY SURVEYOR'S OFFICE DRAINAGE CALCULATIONS

PROJECT: Suburban Meridian
LOCATION: 111th St & Meridian

BY: JLK
DATE: 1/17/1997

CHECKED: NA
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TR-55 DRAINAGE CALCULATIONS

TIME OF CONCENTRATION (T_c) OR TRAVEL TIME (T_t)

SHEET FLOW

1. Surface Description (table 3-1)
2. Manning's Roughness Coeff., n (table 3-1)
3. Flow Length, L (total L less than 300')
4. Two-year, 24-hour rainfall, P₂
5. Land Slope, s
6. T_t

Bermuda Grass		TOTALS
0.4	0.4	
60	280	ft
3	3	in
0.02	0.005	ft/ft
0.2456374	1.466641	1.7122784 hr

SHALLOW CONCENTRATED FLOW

7. Surface Description (paved or unpaved)
8. Flow Length, L
9. Watercourse Slope, s
10. Average Velocity, V (figure 3-1)
11. T_t

Unpaved		
		ft
		ft/ft
		ft/s
	0	0 hr

CHANNEL FLOW

12. Cross Sectional Flow Area, a
13. Wetted Perimeter, P_w
14. Hydraulic Radius, r=a/P_w
15. Channel Slope, s
16. Manning's Roughness Coefficient, n
17. Velocity, V
18. Flow Length, L
19. T_t

		sq ft
		ft
		ft
		ft/ft
	0	0 ft/s
		ft
	0	0 hr

20. Total Time of Concentration

1.7122784 hr

HAMILTON COUNTY SURVEYOR'S OFFICE DRAINAGE CALCULATIONS

PROJECT: Suburban Meridian
LOCATION: 111th St & Meridian

BY: JLK
DATE: 1/17/1997

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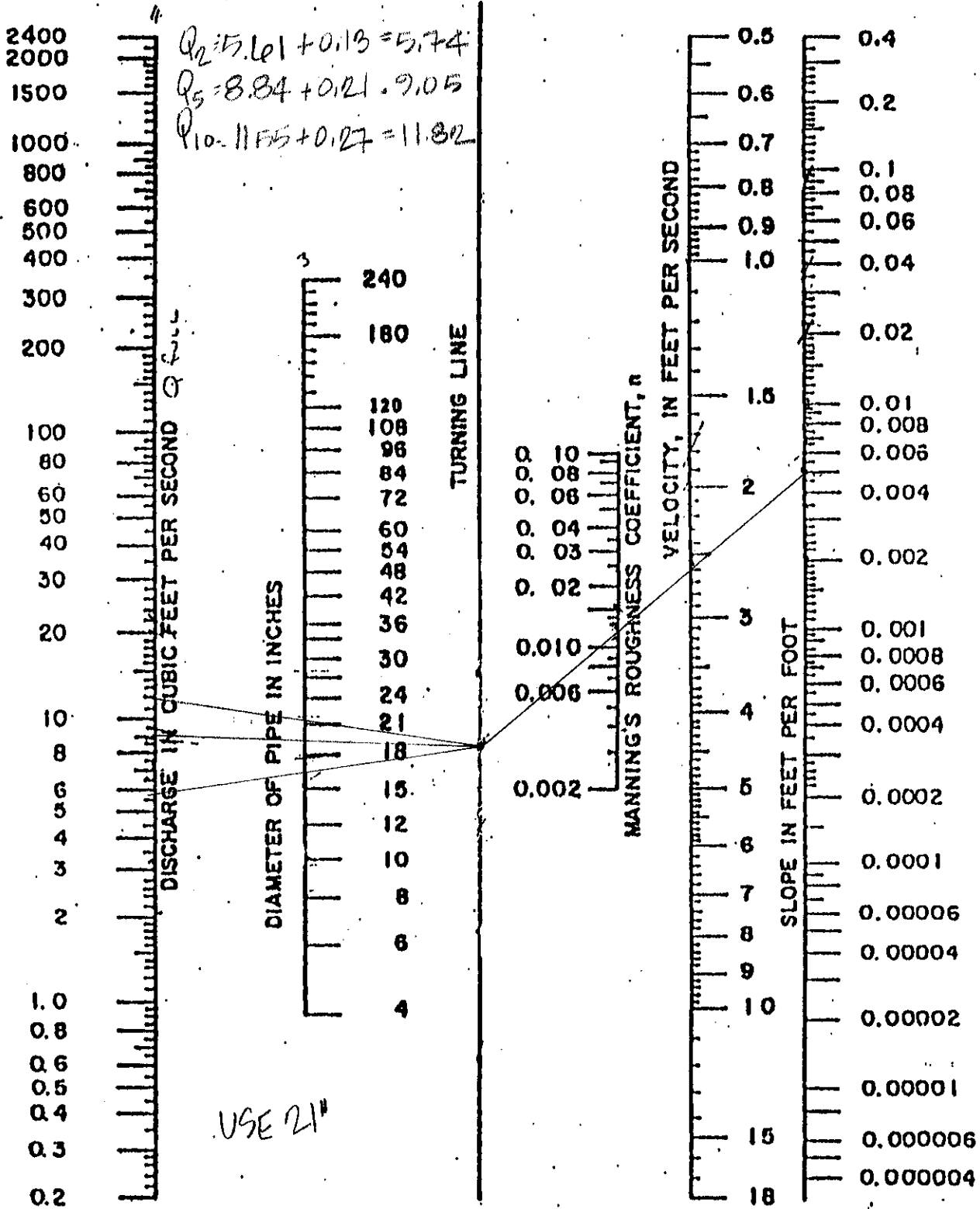
TR-55 DRAINAGE CALCULATIONS

GRAPHICAL PEAK DISCHARGE

Drainage Area: 0.000625 sq. miles
Runoff Curve Number: 74.25
Time of Concentration: 1.7122784 hr
Rainfall Distr'n Type: II (I, IA, II, III)
Pond/Swamp Area: 0 % of Drainage Area

	STM #1	STM #2	STM #3	
Frequency	2	5	10	yr
Rainfall, P (24-hour)	3	3.75	4.3	in
Initial Abstraction, Ia (use CN with Table 4-1)	0.694	0.694	0.694	in
Ia/P	0.2313333	0.1850667	0.1613953	
Unit Peak Discharge, qu (use Tc & Ia/P with exhibit 4-__)	225	235	240	csm/in
Runoff, Q	0.9212141	1.4317867	1.8384714	in
Pond/Swamp Adj. Factor (use % area with Table 4-2) (factor is 1.0 for 0% area)	1	1	1	
Peak Discharge, qp	0.129546	0.210294	0.275771	cfs

NOMOGRAPH FOR SOLUTION OF MANNING'S FORMULA FOR FLOW IN STORM SEWERS



SUBURBAN MERIDIAN

1. ... CALCS ARE ON YELLOW PCK
2. ... I USED ONLY TR-FDS
3. ... MY SIZES ARE ON AERIAL (WATERSHEDS)
 - 18"
 - 21"
 - 21"

~~TOTTENHAM~~
TOTTENHAM

.23 mi = 1215 feet

RCP 600' @ 24" = \$35 21,000

RCP 615' @ 30" = \$45 27,675

2 INLETS @ 2000 = \$ 4000

RESEED: 1215 X 15 X .10 = 1823

~~PERMITS~~ CONTRACT PREP. = \$2000

VIDEO PIPE @ \$2 X 1215 = \$2430 (OR \$110/HR)
+ BACKHOLE 1000

TRAFFIC CONTROL = \$800

~~\$5,000~~
\$60,728

INVESTIGATE ONLY - PRIVATIZE OR IN HOUSE ENGINEERING-OT.

BID OR QUOTE

RESIDENTS HAVE COVERED SOME OF THE INLETS,

WE MAY FIND MORE.

NEED ADDITIONAL FROM COUNCIL

102.000.3107 DRAIN REPAIRS (\$50,000)
102.000.4016 CULVERTS, TILE, PIPE (50,000)

LEFT FOR YE
\$20,000.00
\$9,000.00

	MI	MI	RESIDENTS HOMES	
H-1247-042	MANCHESTER	CT.	.04	6
H-1293-001	MERSEY	CT.	.04	7
H-1896-001	TOTTENHAM		.23	18
			<u>.31</u>	

31 HOMES
 SAY 62 VEHICLES
 SAY $31 \times 2.5 = 77.5$ RESIDENTS

$$26,997 \div [(2163.73 \times .31) + (62 \times 6.93) + (77.5 \times 11.25)] =$$

$$26,997 \div (670.76 + 429.66 + 871.88) =$$

$$26,997 \div (1972.30) = 13.7 \text{ years}$$

This does not include any activities which are of a general nature i.e. snow removal, simple cleaning of inlets & etc which are not charged to a specific street. Also this would not then include these residents use of any of the rest of the ~~country's~~ roads.

MILEAGE BASED COSTS ONLY = $26,997 \div 670.76 = 40.25 \text{ years}$

MILE AVG = $3,192,928 \div 912 = \$3501.02 \times .31 = \1085.32
 $26,997 \div 1085.32 = 24.9 \text{ YEARS}$

MILE AVG₉₅ = $(2,488,492 + 758,614) \div 946 = \3432

HOLT, FLECK & FREE

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CICERO, INDIANA 46034
(317) 904-5626

OF COUNSEL
STEPHEN H. FREE

TELECOPY MEMORANDUM

DATE: September 20, 1996

TO: Les Locke

FROM: Steven A. Holt

NUMBER OF PAGES, INCLUDING THIS PAGE: 4

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Meridian Suburban

Neighborhood Newsletter

Urgent Call To Action

EXTREMELY URGENT!!

The quality of our neighborhood could be affected by your action!

HERE'S THE SITUATION

The Hamilton County Highway Department is responsible for our streets and our storm sewers. As you probably know, our storm sewers do not work because of a collapse along Tottenham, somewhere between Mersey and Manchester. We know the collapse is somewhere in this one block area because we have good flow north of Mersey and south of Manchester. The storm sewers were designed and installed about 30 years ago. We believe they are adequate for our neighborhood if in working condition. They were not designed to handle all the water, leaves, sticks, and crud that flows from the woods across 111th Street into our streets. We believe the cause of the collapsed storm sewer was clearly contributed to by the 20 year overflow from the woods. This situation has existed since they began to develop the southwest corner of 116th and Meridian over 20 years ago. Therefore our storm sewers have had massive overuse. The County Highway has known about this problem for two decades! We've suffered floods, mud and crud every fall, winter and spring for 20 years. Every spring the County Highway would eventually come out to clean the sewers, clear the blockage and allow the standing water to drain away. We are now pleased to see that the woods have been cleared a bit, and hope it will be graded so perhaps the overflow might stop. Keep fingers crossed! But either way our storm sewers are still not working!

HERE'S THE PROBLEM

Some storm sewers are maintained by the County Highway and others are maintained by the County Drainage Board. Certain county officials are now saying that over 25 years ago, the formal paperwork to officially turn our storm sewers over to the county was apparently not properly completed by the developer (Mr. Valinet). Therefore we are not an officially regulated drain and the Hamilton County Drainage Board has taken a position that they will not maintain or rebuild our storm sewers. They want us to petition to become a regulated drain. They want us to pay for engineering studies. They want us to pay to fix our storm sewers. And then we would pay to become a regulated drain. They would then begin maintenance. They won't give any cost estimates, but we have heard figures from \$30,000 and up! This would be assessed equally to each homeowner. We don't think this is the right way to go. We think the County Highway should *continue* to maintain our storm sewers as they have for over 25 years.

We believe the County Highway should fix our storm sewers ... and we would like them to do it now while our streets are torn up. The primary reason we believe they should fix our storm sewer is because they have maintained and serviced the storm sewer already for over 25 years! Now they decide they don't want to! There is a precedent of over 25 years for them maintaining, servicing, and yes, even fixing our storm sewers! Now they arbitrarily decide to quit. We don't believe this is right. Why didn't they take this position 23 years ago, 17 years ago, 8 years ago, 4 years ago? It's not right. They have fixed and replaced segments of our storm sewers before, including some much needed and extensive work just 3 and 4 years ago! This included pipe replacement, and continued cleanouts this past spring. There is a truck record here. They should not just arbitrarily quit.

We believe most residents do not oppose being a regulated drain. The annual cost is nominal. But we do not believe we should have to fix the sewer first out of our own pocket in order to become regulated. A petition was distributed over a month ago to ask the drainage board to consider our storm sewers to become regulated. Drainage board member and county commissioner Sharon Clark suggested we not submit the petition because of concern over high costs. Therefore we have not submitted the petition. Let's get the County Highway to fix the storm sewer first! Now!! Even if it delays repaving the road for a week or two. Let's get it done right, and done now, so we won't have our new road torn up later!

There are additional arguments for them to fix our storm sewer. A big reason for the collapsed storm sewer is because of overuse which was allowed by the county! They have allowed the overflow to continue for almost 25 years without intervention. During heavy rain and flooding they put a big portable sign up on 111th Street, warning drivers of the flooded road. But that's about it, until spring when they clean out the clog. Their neglect contributed to the problem.

Another reason they should fix the storm sewer is the fact that sump pumps are not allowed to be dumped into the new sanitary sewer, *nor into the street*. It is against the law. But without another place to put it, people will potentially continue to dump into the street, keeping the new pavement wet, soft and easily damaged. The county has admitted that if the homeowner does not have an alternate place to dump the sump water (like into the storm sewer) they will not enforce the street dump. This is an invitation to continue dumping on the new road, causing premature damage. Let's stop this potential problem before it happens. It takes action now!

THIS IS WHAT WE CAN DO TO FIX IT! NOW!

With polite urgency we ALL need to get on the phone NOW! The squeaky wheel gets the grease. You will probably get a run-around so expect it. Call all the officials twice a week beginning today. If you have a spouse, have them call separately. Give your name, address and phone number. Tell them you would like the storm sewers fixed now, while it's smart to do it. Some of us have called. We've been politely put off by the bureaucratic shuffle. But if we all call it will be hard to ignore! Be polite, but persistent. Call everyone and don't fall for their story about being unregulated. They have maintained it before, they can do it now. It's a matter of applying pressure and decision makers finally saying "Oh what the @%*#! Just go fix the #&\$%@ thing!" Again, they've done it before. No matter what they tell you, the commissioners have the ability to get it fixed tomorrow if they want. In the past, they have said no, no, no, and no! Then all of a sudden they do it. Sometimes the day after they said no. Perhaps you can end each conversation by asking them to look into it, and that you will follow up with another call to

Please make these calls! We have an opportunity to improve our neighborhood in a very big way! The summer has been long and ugly, and when finished, our development will look great cosmetically. Let's not allow it to degrade and be worse than it has to be because of storm sewers that do not work. Fix it now while the roads are torn up. We can win this one but it requires action from all of us!

Action Call List

Commissioner Steven C. Dillinger, President of the Commissioners Board (this term)
773-8888

This is the number at his insurance agency. As a part-time commissioner, he expects calls at his business office as well as at home, if you are so inclined. Call.
There are three commissioners, all are the major decision makers!

Commissioner Sharon Clark
844-1316

This is her home number. As a home maker she takes all calls at home. As one of three commissioners she has tremendous influence, seems diligent and very sympathetic to our situation. We think we could have her support but let's all call everyone on this list to create a tidal wave. Remember the squeaky wheel. Call.

Commissioner Steven A. Holt, Attorney
773-5997

This is his office number. Also call at home if so inclined. He has been very neutral about our situation. Perhaps hung up on bureaucratic technicalities and legalities of the situation. Pure speculation since he is a lawyer. Call! Make him tired of hearing from us.
Push the fact that there is a 25 year precedent.

Administrative Office of the Hamilton County Board of Commissioners
Fred Swift, Administrative Assistant to the Commissioners
776-9719

Fred seems to be a very nice individual. Has the ear of all commissioners! Probably well organized, knows our situation, will probably try to put us off. Let's be nice but persistent. Bother them with calls until they fix it! These are our government service providers.
Let's get what we need, and what is right for our neighborhood!

Hamilton County Highway Department
Tom Stevens, Director
773-7770

Tom is on vacation until the last week of September. Call anyway, leave messages, create a storm. Be polite but persistent. This is the department that needs to fix our storm sewer. They don't want to! Call, call, call. These folks communicate with the commissioners daily! Don't let up. They'll say Tom Stevens is on vacation and nothing can happen till he returns. Not true. If all of us call often enough, they will start to push the commissioners office. Everyone will

Hamilton County Highway Department

9/20/96 3:32 pm

WORK ACTIVITY COST SUMMARY

Page 1

DATE	TWP	SEPID	ROAD NAME	Labor Cost	Equip. Cost	Mat. Cost	Activity Quantity	Emp.	Equip.	Material
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141 - DRAINAGE: INSPECTION/CLEAN

4/05/93	11	H-1896-001	Tottenham	58.29	30.00	0.00	EACH	0023	010	
4/05/93	11	H-1896-001	Tottenham	58.29	0.00	0.00	EACH	0035		
3/15/94	11	H-1896-001	Tottenham	15.81	0.00	0.00	1.00 EACH	0011		

TOTALS:				132.39	30.00	0.00	1.00 EACH			
TOTAL COST:				162.39	UNIT COST:	162.39				

142 - DRAINAGE: PIPES/TILES

5/15/92	11	H-1896-001	Tottenham	0.00	0.00	0.00	LOC		128	9999-WMDS
5/15/92	11	H-1896-001	Tottenham	114.26	812.50	0.00	LOC	0014	110	
5/15/92	11	H-1896-001	Tottenham	221.41	357.50	0.00	LOC	0018	125	9999-WMDS
5/15/92	11	H-1896-001	Tottenham	118.32	220.00	0.00	LOC	0021	124	
5/15/92	11	H-1896-001	Tottenham	252.88	37.50	0.00	1.00 LOC	0034	020	
5/15/92	11	H-1896-001	Tottenham	130.50	37.50	0.00	LOC	0036	004	
5/15/92	11	H-1896-001	Tottenham	221.41	260.00	0.00	LOC	0044	103	
5/15/92	11	H-1896-001	Tottenham	114.26	357.50	0.00	LOC	0050	119	9999-WMDS
5/15/92	11	H-1896-001	Tottenham	221.41	357.50	73.34	LOC	0051	128	0146-S#53

TOTALS:				1394.47	2440.00	73.34	1.00 LOC			
TOTAL COST:				3907.81	UNIT COST:	3907.81				

149 - MISC. DRAINAGE

5/05/93	11	H-1896-001	Tottenham	117.74	65.00	0.00	LOC	0019	103	
5/05/93	11	H-1896-001	Tottenham	122.38	60.00	0.00	1.00 LOC	0024	021	
5/05/93	11	H-1896-001	Tottenham	185.83	0.00	0.00	LOC	0038		
5/05/93	11	H-1896-001	Tottenham	116.58	500.00	0.00	LOC	0044	110	
5/05/93	11	H-1896-001	Tottenham	117.74	0.00	0.00	LOC	0048		
5/06/93	11	H-1896-001	Tottenham	122.38	250.00	0.00	LOC	0024	110	
5/06/93	11	H-1896-001	Tottenham	135.14	156.00	0.00	LOC	0038	234	
5/06/93	11	H-1896-001	Tottenham	116.58	130.00	0.00	LOC	0044	103	
5/06/93	11	H-1896-001	Tottenham	117.74	60.00	0.00	LOC	0048	021	
5/06/93	11	H-1896-001	Tottenham	55.64	0.00	0.00	LOC	0070		
5/06/93	11	H-1896-001	Tottenham	55.64	0.00	0.00	LOC	0072		

Hamilton County Highway Department
 WORK ACTIVITY COST SUMMARY

9/20/96 3:32 pm

Page 2

DATE	TWP	SEGID	ROAD NAME	Labor Cost	Equip. Cost	Mat. Cost	Activity Quantity	Emp.	Equip.	Material
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149 - MISC. DRAINAGE

TOTALS:	1263.39	1221.00	0.00	1.00	LOC
TOTAL COST:	2484.39	UNIT COST: 2484.39			

163 - SIGN INSTALLATION

5/19/92	11	H-1896-001	Tottenham	14.28	0.00	7.81	1.00 EACH	0039		0468-11'P
5/19/92	11	H-1896-001	Tottenham	14.28	10.00	14.90	1.00 EACH	0047	127	0468-R1-1B

TOTALS:	28.57	10.00	22.71	2.00	EACH
TOTAL COST:	61.28	UNIT COST: 30.64			

189 - MISC. VEGETATION

6/11/92	11	H-1896-001	Tottenham	118.32	0.00	0.00	HOURS	0024		
6/11/92	11	H-1896-001	Tottenham	130.50	45.00	0.00	8.00 HOURS	0038	021	
6/11/92	11	H-1896-001	Tottenham	115.42	0.00	0.00	HOURS	0049		
5/12/93	11	H-1896-001	Tottenham	61.19	30.00	0.00	15.00 HOURS	0024	027	
5/12/93	11	H-1896-001	Tottenham	58.29	30.00	0.00	HOURS	0035	021	
5/12/93	11	H-1896-001	Tottenham	58.87	0.00	0.00	HOURS	0048		
5/12/93	11	H-1896-001	Tottenham	20.87	0.00	0.00	HOURS	0073		

TOTALS:	563.46	105.00	0.00	23.00	HOURS
TOTAL COST:	668.46	UNIT COST: 29.06			

533 - CONTRACT SURFACING: RESURFACE

12/08/92	11	H-1896-001	Tottenham	0.00	0.00	19712.92	.46 LM			0067-999
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TOTALS:	0.00	0.00	19712.92	.46	LM
TOTAL COST:	19712.92	UNIT COST: *****			

Hamilton County Highway Department

9/20/96 3:32 pm

WORK ACTIVITY COST SUMMARY

Page 3

DATE	TWP	SEGID	ROAD NAME	Labor Cost	Equip.Cost	Mat.Cost	Activity Quantity	Emp.	Equip.	Material
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REPORT TOTAL: 26997.23

THIS REPORT COVERS THE PERIOD FROM 5/15/92 TO 3/15/94.

Hamilton County Highway Department
 WORK ACTIVITY COST SUMMARY

9/23/96 8:29 am

Page 1

DATE	TWP	SEGID	ROAD NAME	Labor Cost	Equip.Cost	Mat.Cost	Activity Quantity	Emp.	Equip.	Material
533 - CONTRACT SURFACING: RESURFACE *****										
12/08/92	11	H-1247-042	Manchester Ct.	0.00	0.00	5251.80	.04 LM			0067-999
12/08/92	11	H-1293-001	Mersey Ct.	0.00	0.00	5016.13	.08 LM			0067-999

TOTALS: 0.00 0.00 10267.93 .12 LM
 TOTAL COST: 10267.93 UNIT COST: *****

REPORT TOTAL: 10267.93

THIS REPORT COVERS THE PERIOD FROM 12/08/92 TO 12/08/92.

HAMILTON COUNTY BOARD OF COMMISSIONERS
OCTOBER 14, 1996

Holt made a motion that the Highway Department petition the Drainage Board for drain reconstruction for suburban Meridian and everything upstream that drains through it. Clark seconded. Clark stated she is having a hard time accepting that the people of Tottenham will have to pay for reconstruction. She believes their drains have been damaged by water that was not theirs. It has been going on for 30 years, and when they bought their homes they paid for the drain in their subdivision. That drain had deteriorated due to someone else's water. Holt stated that the owner of the woods can say the same thing, which it is not his water it is someone else's water creating the problem. Clark's position is that after 35 years of poor government interaction with these people that they have had no relief in all these years and now their drains are gone. It seems to her that they are having to pay twice for something that is not necessarily their fault. Mr. Stevens stated that he is reluctant to use Highway maintenance funds to replace that drain, when subdivisions built today are designed with the cost of storm sewers included in the cost of the the development. In this situation this subdivision was before that time and they have not paid those costs. Holt withdrew his motion. Clark withdrew her second. Clark asked if there is any way to divert the water that is coming over the road? Mr. Locke answered that there is a possibility of that, he would have to look at Liverpool and see how much grading we have. Mr. Stevens believes the situation is the same today as when it was constructed. Mr. Schleicher presented pictures from the 1960's showing flooding. Clark asked Mr. Ward if he was telling her that the only way to look at it is the entire drainage shed and these people will be assessed for reconstruction. Mr. Ward stated they would be assessed according to the code. Mr. Stevens stated recommendation #3 states just replacing the 12" pipe. Dillinger is not for that at all. Clark asked Mr. Ward if it is possible to do an on site detention to the north? Mr. Ward said it would reduce it, but we need to look into the future. When it is developed, where is the water going to go? Clark motioned that the Highway Department petition the Drainage Board for reconstruction. Holt seconded. Mr. Mike Granger addressed the commissioners. He has spoken to Steve Valinet and his engineer and this problem has existed for more than 25 years. He suggested at that time to create a brim on the north side of 111th Street that would actually pool the water into the woods and then evaporate. He asked if water is coming from the east side of the woods? Mr. Locke answered yes. If that is the case then Mr. Valient would probably want to put a brim up on the east side of the woods to stop the water and aggravating the situation even more. Mr. Ward stated that you can't wall the water out. Dillinger explained that this is the reason we are choosing to do this reconstruction, it is the only long-term solution. Mr. Granger stated that there are two problems, bad storm sewers and water coming across 111th. He stated that the only time it ever floods is when the water comes over 111th. Motion carried unanimously.

Retainage Escrow Agreement for 96th Street - Construction Contract #2:
(Tape 1-2457)

Mr. Locke presented an agreement for Hamilton County, Hunt Paving Co. and National City Bank of Indiana.

Holt made a motion to accept agreement. Clark seconded. Motion carried unanimously.

Retainage Escrow Agreement for 96th Street - Construction Contract #3:

Mr. Locke presented an agreement for Hamilton County, E & B Paving, Inc. and National City Bank of Indiana.

Holt made a motion to approve. Clark seconded. Motion carried unanimously.

Release of Bonds/Letters of Credit:

Mr. Locke presented the following bonds and letters of credit for release: 1) B-93-0088 - Fidelity & Deposit Bond #11860-1193-567 for an open road cut at the intersection of Adios Pass & Bennett Road, Clay Township. 2) B-93-0097 - Amwest Surety Bond #22002578 on Permit #11133-1193-664; B-93-0098 Amwest Surety Bond # 22002577 on Permit # 11116-1093-665, and B-95-0103 Amwest Surety Bond #1309553 on Permit #11899-1095-834 for Wiche Construction, Inc. On three major commercial driveways located 545' west of College on 111th Street, 530' north on 111th Street on College and 430' north of Spring Highland on Springmill, Clay Township. Holt made a motion to approve. Clark seconded. Motion carried unanimously.

Acceptance of Bonds/Letters of Credit:

Mr. Locke presented the following Bonds and letters of credit for acceptance: 1) B-90-0031 - Fidelity and Deposit Company Bond #3020 67 20 for Indianapolis Power & Light Co. in the amount of \$24,000 to expire 8/21/97. 2) B-90-0038 - Continental Casualty Company Bond #007521582 for Harold Lawson dba Harolds Septic & Excavating in the amount of \$25,000 to expire 10/5/97. 3) B-92-0081 - Continental Casualty Company Bond #60074977 for Quakenbush Construction Co., Inc. in the amount of \$25,000 to expire 9/24/97. 4) B-06-0093 - United States Fidelity and Guaranty Company Bond #3152147 96 9 for James Lockhart, Jr. in the amount of \$15,000 for public road approach/private road approach to expire 9/23/97. 5) B-960094 - United States Fidelity and Guaranty Company Bond #31-0120-49831-96-5 for The Hunt Paving Company, Inc. In the amount of \$4,737,064.14 for East 96th Street Transportation Project Contract No. 2 to expire one year after the date when final payment becomes due. 6) B-96-0095 - United States Fidelity and Guaranty Company Bond # 31-0120-49831-96-5 for The Hunt Paving Company, Inc in the amount of \$4,737,064.14 on Payment Bond to expire one year after the final payment becomes due. 7) B-96-0096 - Safeco Insurance Company of America Performance bond #5868608 in the name of Centex Homes for \$169,192.10 on Bridge #266 over Vestal Ditch in Haverstick Subdivision to expire 9/27/98. 8) B-96-0098 - Continental Casualty Co. Bond #124066558 for Adams Water & Sewer Service, Inc. in the amount of \$5,000 to expire 9/30/97. 9) B-960099 - Fidelity and Deposit company Permit bond #8012022 for the Town of Westfield in the amount of \$25,000 to expire 9/26/97. 10) B-96-0100 - Fidelity and Deposit company Permit Bond for Wilfong Construction Corporation in the amount of \$10,000 to do a road cut - 200' west of Quail Point Road on 141st Street (Permit No. P960756) to expire 10/1/97. 11) B-96-0101 - Fidelity and Deposit Company Permit Bond for Wilfong Construction Corporation in the amount of \$10,000 to do a road cut - 540' N. Of 141st Street on Ditch Road (Permit # P960755) to expire 10-1-97. 12) B-960103 - Fidelity and Deposit Company Permit Bond for Wilfong Construction Corporation in the amount of \$5,000 to do a road boar at 410' west of Thomas on 146th Street Permit # P960757 to expire 10/1/97. 13) L-960013 - First Fidelity & Guaranty Co., Inc. Irrevocable Credit # SBG-7-ST for Davis Homes, LLC in the amount of \$78,591.55 and expires 8/12/97, but such expiration dates will be automatically extended for a period of one year on 8/13/97 and on each successive expiration date, unless a release is received. 14) L-960012 - NBD Band, N.A. #00037684 for Land Innovators Co. in the amount of \$5,000 to expire 9-9-97 for the installation of an irrigation system in the right-of-way. Clark made a motion to approve. Holt seconded. Motion carried unanimously.

Five Year Bridge Management Program:

Mr. Locke presented the Five Year Bridge Management Program. Mr. Locke would like the commissioners approval of this program. It was the one submitted May 1, 1996 from the Highway County Highway Task Force Bridge Committee. Holt motioned for approval. Clark seconded. Clark thanked Mark Fisher for the map that he prepared for her. Clark has a real concern on the bridge over River Road, bridge #141, between 126th and 136th. She would like to see its repairs moved forward. It is extremely dangerous. Mr. Locke suggested taking another look at it when the plan is updated in May or ask the Highway Department, by a motion, to look at how this bridge fits in the priority of repairs. Clark asked if any of the bridges on the program are unable to be traveled over? Mr. Locke stated no, but the majority of the bridges on the program cannot have school buses travel on them. Bridge #141 can have



MEMO

To: Hamilton County Board of Commissioners
From: Les Locke *[Signature]*
Subject: Repair of Storm Drains
Tottenham Drive
Meridian Suburban Subdivision
Date: September 23, 1996

I have prepared the following summary of the facts surrounding the position of the Highway Department concerning the above referenced drain. Due to Tom being on vacation I can not verify his previous conversations with the residents, but I do believe he would concur with this letter.

We are not aware of any original construction plans for this drain system, however we believe that the section along Tottenham is within the R/W and thus the responsibility of the county to maintain within its budgetary means and on a level equal to other streets within the county. To the best of my knowledge the streets do drain, however in heavy rains it may take awhile for the water to all drain away. On Saturday, September 21, 1996, I visited the site at approximately 4:00 P.M. while it was raining and after there had been a light rain all day long. I found no standing water at any of the inlets. This drain continues south of the Meridian Suburban Subdivision onto private property with no legal access for maintenance. I am not sure where the drain outlets or terminates.

The repair of this drain is primarily a level of service issue. I believe our position has been to not maintain this drain because while it is slow to drain, it does still work. I believe this drain is constructed with butt end concrete tiles. With this type of construction and its age, it is very likely that the main trunk line of the drain would have to be entirely replaced. A quick estimate without a detailed investigation is shown on attached Exhibit "A". I believe the maximum cost to repair the part of the system within the right of way to be \$74,000. A more accurate estimate could be made after the storm sewer was videoed. During my tenure with the county, I do not know of any instances where the Highway Department has completely reconstructed a drain system. Unfortunately at our present funding level we are not financially able to maintain all roads

Hamilton County Board of Commissioners

Page 2

September 23, 1996

and drains in the perfect condition the residents would like. In many cases residents would not maintain a piece of infrastructure if it was theirs and at their cost, but because it is the county's responsibility, they feel like it is free. To show the level of service we have provided this subdivision, we have expended \$37,265 in 1992 thru 1996 to date for major repairs, maintenance and resurface. This does not include minor items such as simple cleaning of inlets, snow removal, salt, sand and etc. which are not charged to a specific street. Based on our 1995 distribution of Motor Vehicle Highway and Local Road and Street funds, a mile of road receives about \$3400 in funding from the state per year. With this subdivision having .31 miles of road, the expenditures we have made since 1992 equal approximately $(37,265 \div (3400 \times .31))$ 35 years of state funding. As you can see, we are very reluctant to spend additional large sums of money for this location at the expense of other roads within the county. This is why we have recommended the residents pursue a regulated drain if they are not happy with the level of service we can provide.

In summary, if the Highway Department is to pursue this issue, I would make the following recommendations. If the Commissioners feel this should become a regulated drain, then I would recommend they petition this to be regulated thru the Highway Department, thus making the Highway Department responsible for the investigation costs if the drain is not approved. If the Commissioners do not want this to be regulated, then I recommend they direct the Highway Department to video the storm sewer within the right of way and then bring back a recommendation for spot repairs or full replacement. The only problem I see with this second option is that it may not provide for long term maintenance and does not provide a means to maintain the down stream sections of pipe which are located out of the right of way.

Please let me know what action you would like for us to take, if any. Please be advised we have two accounts to pay for this work. One is Drain Repairs which has \$20,000 left out of the \$50,000 annual 1996 budget, and the other is Culverts, Tile & Pipe which has \$9,000 left out of the \$50,000 annual 1996 budget. Obviously any major expense would require us to go to the Council for additional funding.

cc: Tom Stevens
Dave Landis
Becki Wise
Fred Swift

EXHIBIT "A"

Estimated cost of reconstruction of the main line of the storm sewer along Tottenham.

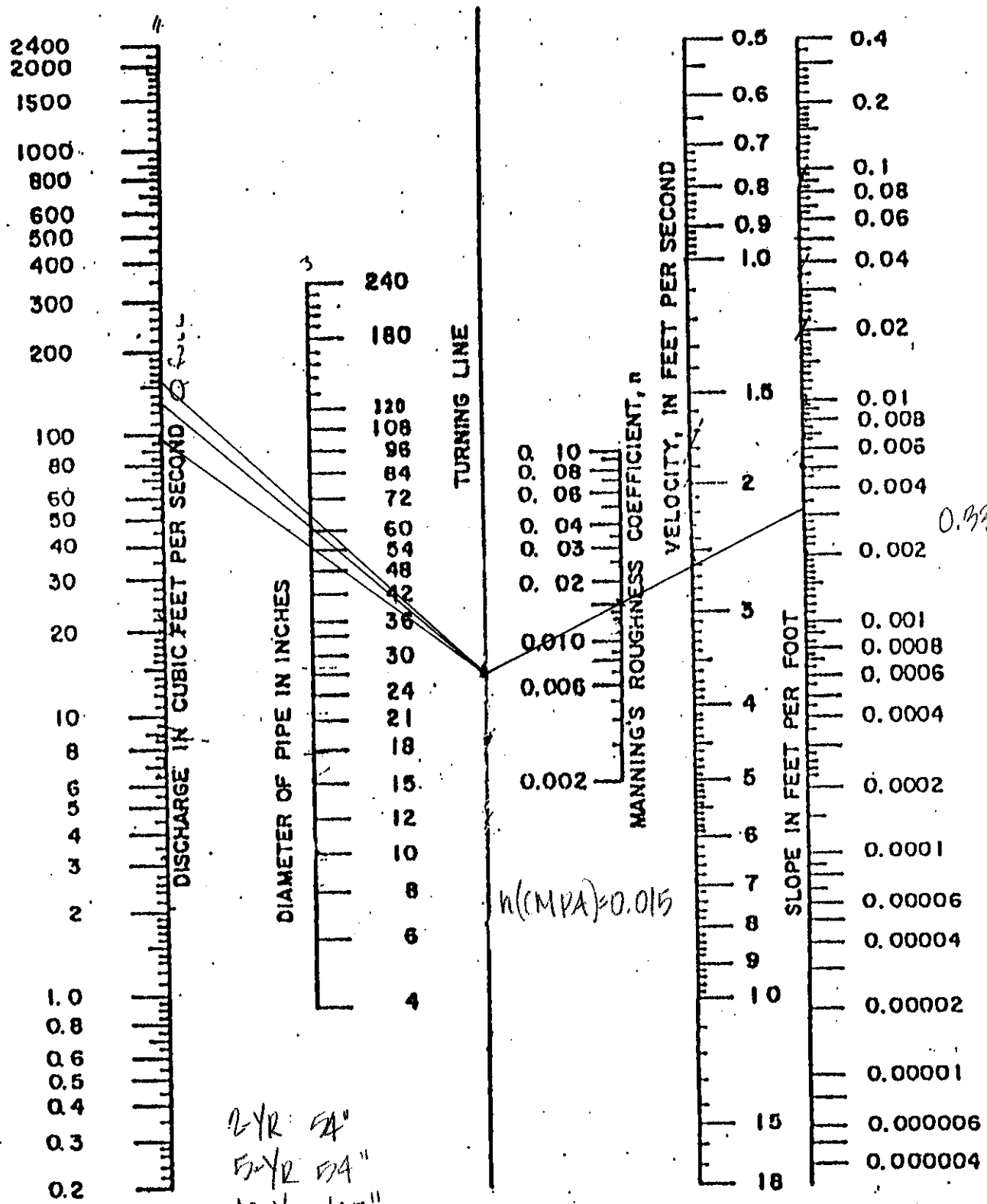
Contract Preparation:	\$ 2,000
Video Investigation:	
Video 1215' @ \$2.00 per ft.=	2,430
Backhoe =	1,000
Reinforced Concrete Pipe	
24" dia. - 600' @ \$35 =	21,000
30" dia. - 615' @ \$45 =	27,675
Inlets 2 @ \$2,000 =	4,000
Drive Repair 11 x 20 x 6 x 6 x 110 ÷ 9 ÷ 2000 x \$100 =	4,840
Tree Removal =	500
Seed & Mulch = 1215 x 15 x .10 =	1,823
Traffic Control:	1,500
Constuction Inspection	<u>7,000</u>
Total Cost	\$ 73,768

TR-55

CMRA UNDER 111th ST (W of US31)

Q₂ 90.7 cfs
Q₅ 134.0 cfs
Q₁₀ 161.0 cfs

NOMOGRAPH FOR SOLUTION OF MANNING'S FORMULA FOR FLOW IN STORM SEWERS 71.1 AC DRAINAGE AREA



PROJECT: 0631 & 111TH
ST

HAMILTON COUNTY
SURVEYOR'S OFFICE

BY: JLK
DATE: 1/13/96

HYDRAULIC DESIGN OF HIGHWAY CULVERTS

GCS
RATIONAL
TR-55

13-782 500 SHEETS, FILLER, 5 SQUARE
42-381 50 SHEETS, FILLER, 5 SQUARE
42-382 100 SHEETS, FILLER, 5 SQUARE
42-383 200 SHEETS, FILLER, 5 SQUARE
42-384 300 SHEETS, FILLER, 5 SQUARE
42-385 400 SHEETS, FILLER, 5 SQUARE
42-386 500 SHEETS, FILLER, 5 SQUARE
42-387 100 RECYCLED WHITE 5 SQUARE
42-388 200 RECYCLED WHITE 5 SQUARE
Made in U. S. A.



PROJECT: US31 @ 111th St

STATION: 0+00

CULVERT DESIGN FORM

SHEET 1 OF

DESIGNER/DATE: JLK / 1/15/96

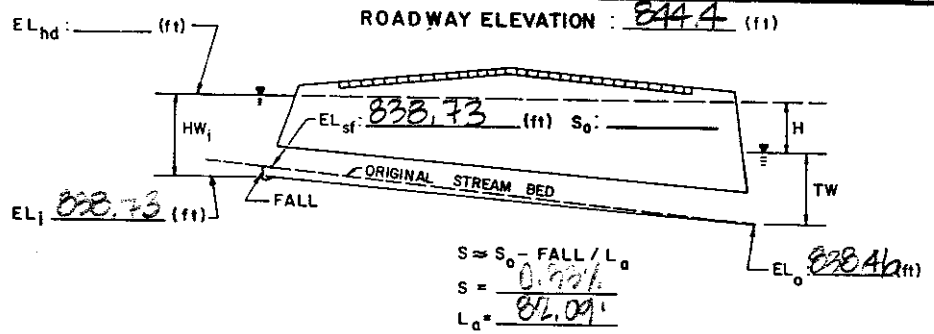
REVIEWER/DATE: /

HYDROLOGICAL DATA

- SEE ADD'L SHTS.
- METHOD: RATIONAL
 - DRAINAGE AREA: 71.1 AC STREAM SLOPE: 0.5%
 - CHANNEL SHAPE:
 - ROUTING: OTHER:

DESIGN FLOWS/TAILWATER

R.I. (YEARS)	FLOW (cfs)	TW (ft)
<u>2.5</u>	<u>72.4</u>	<u> </u>
<u>5</u>	<u>95.1</u>	<u> </u>
<u>10</u>	<u>114.1</u>	<u> </u>



CULVERT DESCRIPTION:

MATERIAL - SHAPE - SIZE - ENTRANCE

TOTAL FLOW
Q
(cfs)

FLOW PER BARREL
Q/N
(1)

HEADWATER CALCULATIONS

INLET CONTROL

OUTLET CONTROL

CONTROL HEADWATER ELEVATION

OUTLET VELOCITY

COMMENTS

MATERIAL - SHAPE - SIZE - ENTRANCE	TOTAL FLOW Q (cfs)	FLOW PER BARREL Q/N (1)	INLET CONTROL				OUTLET CONTROL							CONTROL HEADWATER ELEVATION	OUTLET VELOCITY	COMMENTS
			HW _i /D (2)	HW _i	FALL (3)	EL _{hi} (4)	TW (5)	d _c	d _c +D/2	h _o (6)	k _e	H (7)	EL _{ho} (8)			
<u>CMPA 36" x 48"</u>	<u>72.4</u>	<u>72.4</u>	<u>1.2</u>	<u>4.9</u>	<u>-</u>	<u>843.63</u>	<u>3.2</u>	<u>3.6</u>	<u>3.6</u>	<u>0.5</u>	<u>1.1'</u>	<u>843.16</u>	<u>843.63</u>	<u>15.2</u>	<u>A LITTLE > 15fps (max) but OK</u>	
	<u>95.1</u>	<u>95.1</u>	<u>1.8</u>	<u>7.35</u>	<u>-</u>	<u>846.08</u>	<u>3.6</u>	<u>3.8</u>	<u>3.8</u>	<u>0.5</u>	<u>1.2'</u>	<u>843.46</u>	<u>846.08</u>	<u>15.6</u>		
	<u>114.1</u>	<u>114.1</u>	<u>2.3</u>	<u>9.39</u>	<u>-</u>	<u>848.12</u>	<u>3.8</u>	<u>3.9</u>	<u>3.9</u>	<u>0.5</u>	<u>1.4'</u>	<u>843.26</u>	<u>848.12</u>	<u>15.8</u>		

TECHNICAL FOOTNOTES:

(1) USE Q/NB FOR BOX CULVERTS

(2) HW_i/D = HW_i/D OR HW_i/D FROM DESIGN CHARTS

(3) FALL = HW_i - (EL_{hd} - EL_{sf}); FALL IS ZERO FOR CULVERTS ON GRADE

(4) EL_{hi} = HW_i + EL_i (INVERT OF INLET CONTROL SECTION)

(5) TW BASED ON DOWN STREAM CONTROL OR FLOW DEPTH IN CHANNEL.

(6) h_o = TW or (d_c + D/2) (WHICHEVER IS GREATER)

(7) $H = \left[1 + k_e + (29n^2 L) / R^{1.33} \right] v^2 / 2g$

(8) EL_{ho} = EL_o + H + h_o

SUBSCRIPT DEFINITIONS:

- o. APPROXIMATE
- f. CULVERT FACE
- hd. DESIGN HEADWATER
- hi. HEADWATER IN INLET CONTROL
- ho. HEADWATER IN OUTLET CONTROL
- i. INLET CONTROL SECTION
- o. OUTLET
- sf. STREAMBED AT CULVERT FACE
- tw. TAILWATER

COMMENTS / DISCUSSION:

CULVERT BARREL SELECTED:

SIZE: 36" x 48"

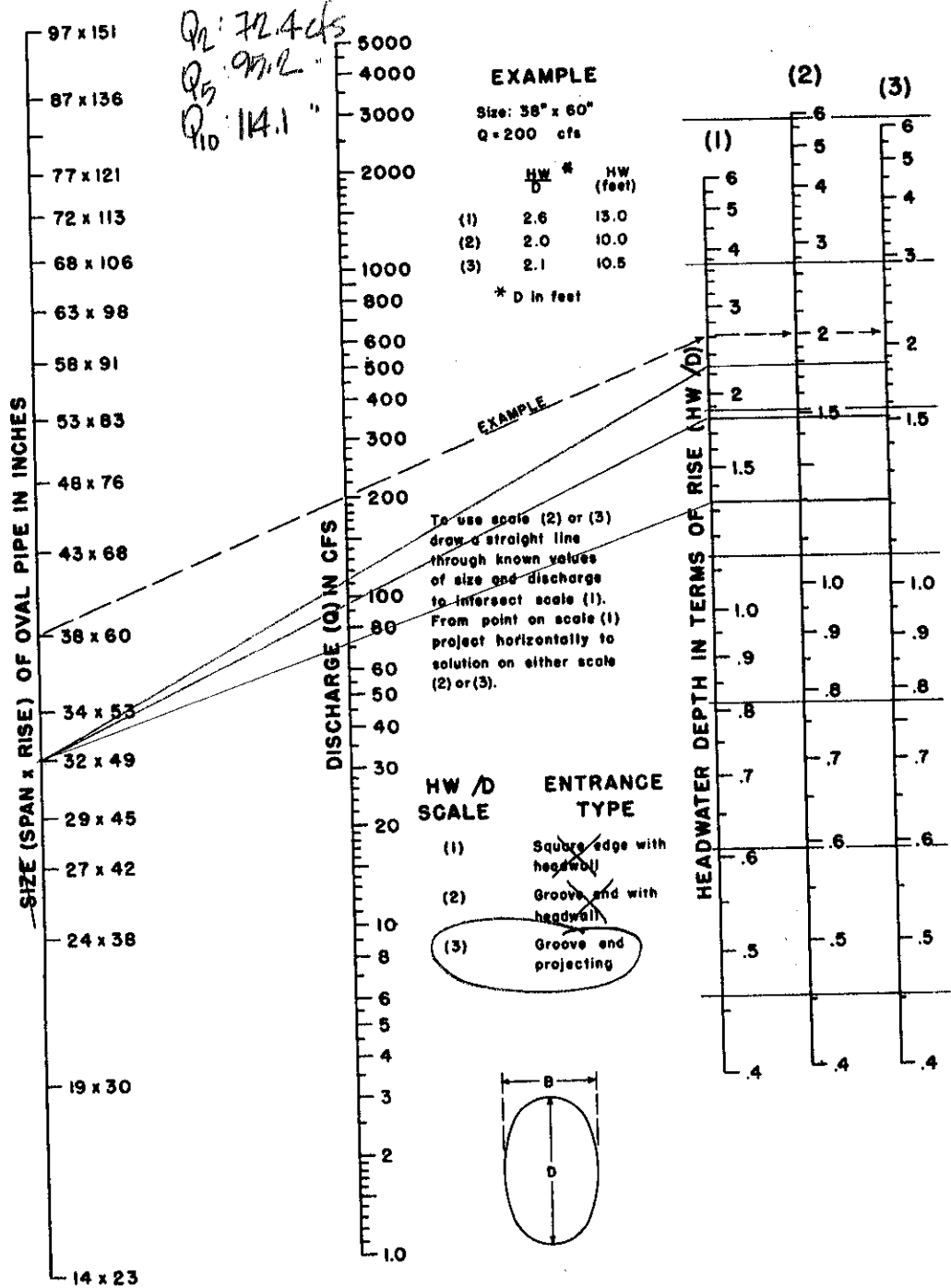
SHAPE:

MATERIAL: CMPA n.O.012

ENTRANCE:

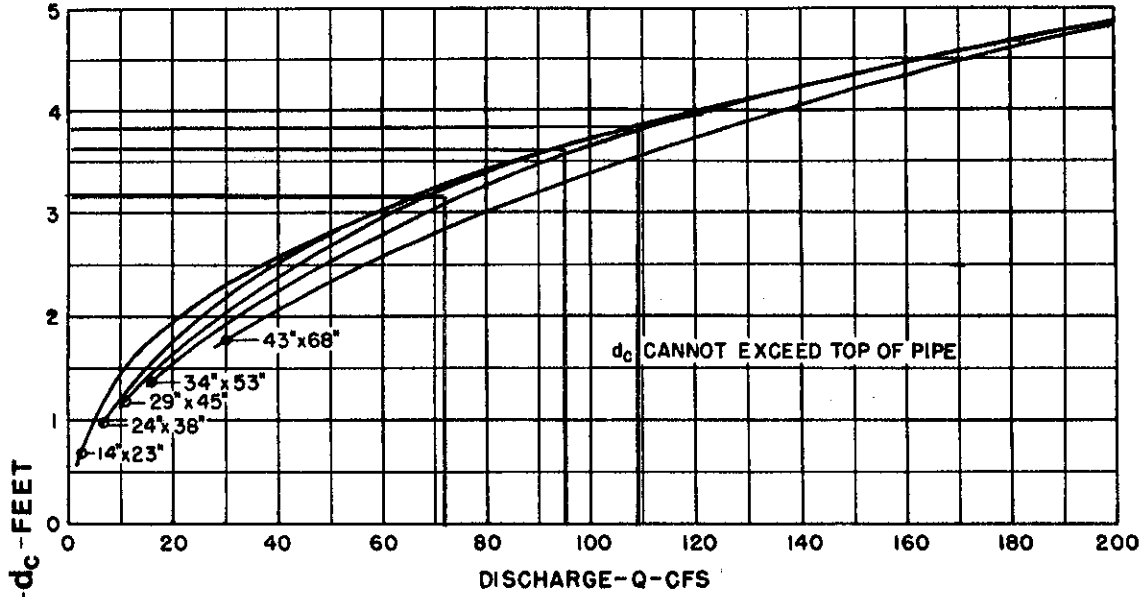
CALPA UNDER 111TH ST
(RATIONAL)

CHART 30

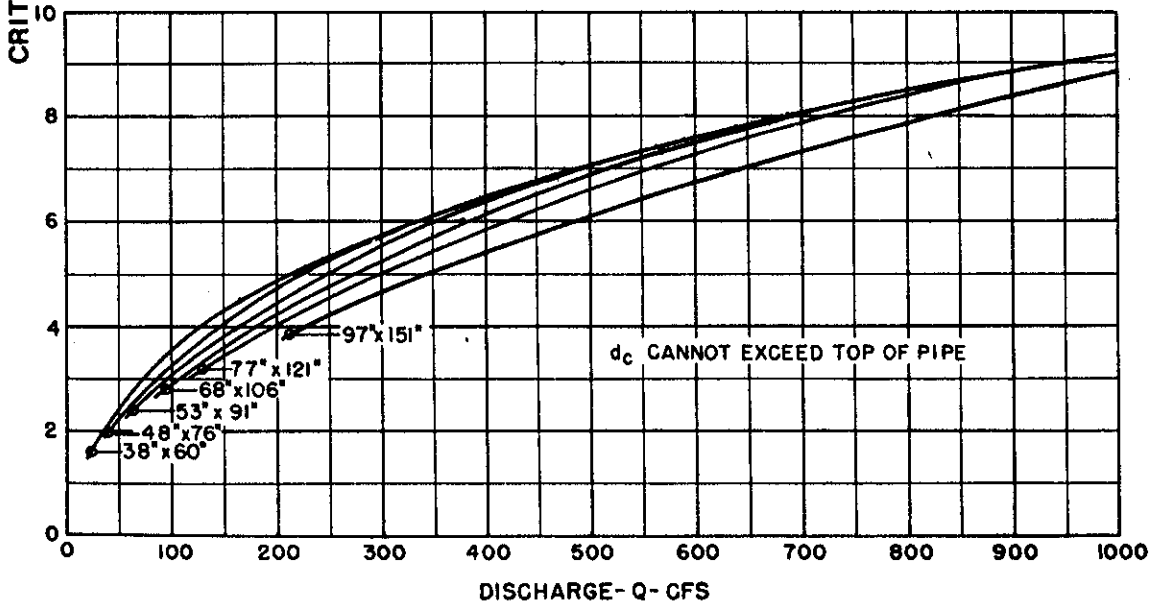


HEADWATER DEPTH FOR
 OVAL CONCRETE PIPE CULVERTS
 LONG AXIS VERTICAL
 WITH INLET CONTROL

CHART 32



$Q_2 = 72.4 \text{ cfs}$
 $Q_3 = 95.2 \text{ cfs}$
 $Q_{10} = 114.1 \text{ cfs}$

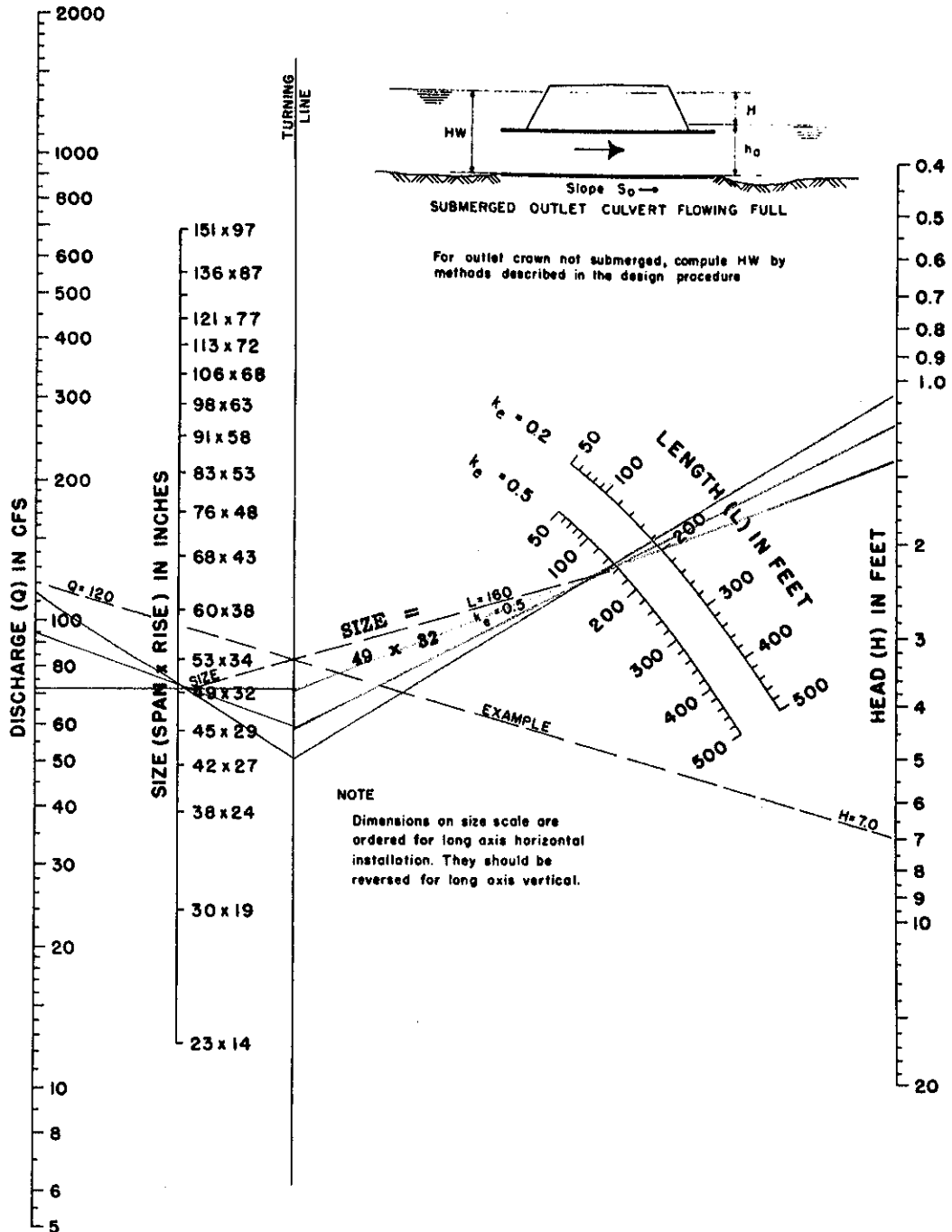


BUREAU OF PUBLIC ROADS
 JAN. 1964

**CRITICAL DEPTH
 OVAL CONCRETE PIPE
 LONG AXIS VERTICAL**

CHART 33

$Q_n: 72.4$
 $Q_s: 95.2$
 $Q_o: 114.1$



HEAD FOR OVAL CONCRETE PIPE CULVERTS LONG AXIS HORIZONTAL OR VERTICAL FLOWING FULL $n = 0.012$

BUREAU OF PUBLIC ROADS JAN, 1963

PROPOSAL

D.R. Childs Corporation
P.O. Box 251
Zionsville, IN 46077
(317) 873-2549
(Fax) 873-0670

October 10, 1996

Michael Rich, Project Engineer
Hamilton County Highway Department
1717 East Pleasant Street
Noblesville, Indiana 46060

RE: Storm Sewer Work @ 111th Street & Tottenham Drive

We propose to furnish all material and labor to complete the storm sewer work at the above referenced site for the following unit prices. Said prices include all costs associated with the performance of the work, including but not limited to mobilization, maintenance of traffic, yard and street restoration (with the exception the surface course on Tottenham Drive) and connection to new or existing structures.

1.	12" RCP	435 LF	34.00 \$/LF	\$	14,790.00
2.	15" RCP	60 LF	62.00 \$/LF		3,720.00
3.	18" RCP	412 LF	40.00 \$/LF		16,480.00
4.	21" RCP	605 LF	44.00 \$/LF		26,620.00
5.	Inlet "E-7"	1 EA	1,116.00 \$/EA		1,116.00
6.	Reconst. Inlet	2 EA	766.00 \$/EA		<u>1,532.00</u>
			TOTAL \$		64,258.00

D.R. Childs Corporation,

Chris Childs, Project Engineer

PROPOSAL

D.R. Childs Corporation
P.O. Box 251
Zionsville, IN 46077
(317) 873-2549
(Fax) 873-0670

October 10, 1996

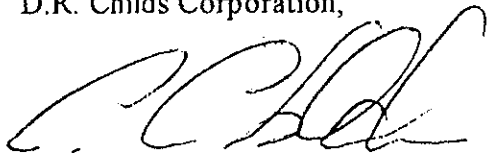
Michael Rich, Project Engineer
Hamilton County Highway Department
1717 East Pleasant Street
Noblesville, Indiana 46060

RE: Storm Sewer Work @ 111th Street & Tottenham Drive

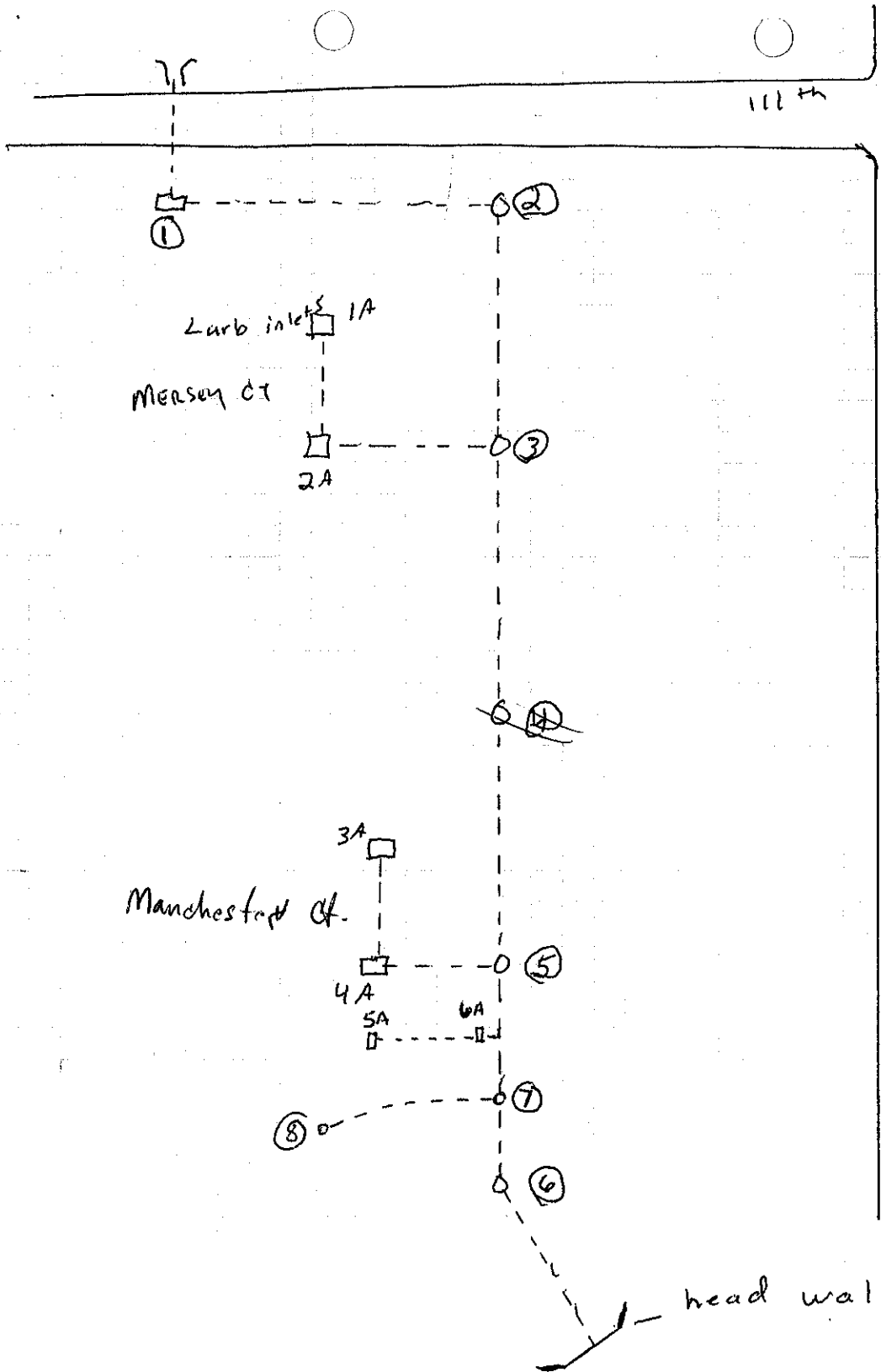
We propose to furnish all material and labor to complete the storm sewer work at the above referenced site for the following unit prices. Said prices include all costs associated with the performance of the work, including but not limited to mobilization, maintenance of traffic, yard and street restoration (with the exception the surface course on Tottenham Drive) and connection to new or existing structures.

1.	12" SDR-26	435 I.F.	32.30 \$/I.F.	\$	14,050.50
2.	15" SDR-35	60 L.F.	59.25 \$/L.F.		3,555.00
3.	18" SDR-35	412 I.F.	38.50 \$/I.F.		15,862.00
4.	21" SDR-35	403 I.F.	44.50 \$/I.F.		17,933.50
5.	Inlet "E-7"	1 EA	1,116.00 \$/EA		1,116.00
6.	Reconst. Inlet	2 EA	766.00 \$/EA		<u>1,532.00</u>
			TOTAL \$		63,038.00

D.R. Childs Corporation,



Chris Childs, Project Engineer



INDEPENDENT CONCRETE PIPE CORPORATION



SALES OFFICES	TELEPHONE
INDIANAPOLIS, IN	317/262-4920
MISHAWAKA, IN	219/259-5401
ST. LOUIS, MO	314/842-2900
LOUISVILLE, KY	502/448-2920
TOLEDO, OH	419/841-3361

PROJECT Meridian Suburban
(Storm)

ITEM _____

CHECKED BY _____

DATE _____

HAMILTON COUNTY SURVEYOR'S OFFICE DRAINAGE CALCULATIONS

PROJECT: Suburban Meridian
LOCATION: 111th St & Meridian

BY: JLK
DATE: 1/17/1997

CHKD:
DATE:
PAGE: 1

PIPE ALONG 111TH STREET (111TH & TOTTENHAM TO 15" CMP UNDER 111TH)

TR-55 DRAINAGE CALCULATIONS

RUNOFF CURVE NUMBER

SOIL NAME	HYDR. GROUP	COVER DESCRIPTION	CN	AREA (acres)	Product CN x Area
Crosby, CrA	C	Residential, 1/3 Ac Lots	81	0.1	8.1
Brookston, Br	B	Residential, 1/3 Ac Lots	72	0.3	21.6
					0
					0
					0
					0
					0
					0
					0
				0.4	29.7

WEIGHTED CN: 74.25

RUNOFF

	STM #1	STM #2	STM #3
Frequency.....yr	2	5	10
Rainfall, P (24-hour).....in	3	3.75	4.3
Runoff (Q).....in	0.92121408	1.43178669	1.83847135

HAMILTON COUNTY SURVEYOR'S OFFICE DRAINAGE CALCULATIONS

PROJECT: Suburban Meridian
LOCATION: 111th St & Meridian

BY: JLK
DATE: 1/17/1997

CHKD:
DATE:
PAGE: 1

PIPE FROM STR3 TO 111TH ST & TOTTENHAM DR

TR-55 DRAINAGE CALCULATIONS

RUNOFF CURVE NUMBER

SOIL NAME	HYDR. GROUP	COVER DESCRIPTION	CN	AREA (acres)	Product CN x Area
Crosby, CrA	C	Residential, 1/3 Ac Lots	81	2.15	174.15
Brookston, Br	B	Residential, 1/3 Ac Lots	72	1.7	122.4
					0
					0
					0
					0
					0
					0
				3.85	296.55

WEIGHTED CN: 77.025974

RUNOFF

	STM #1	STM #2	STM #3
Frequency.....yr	2	5	10
Rainfall, P (24-hour).....in	3	3.75	4.3
Runoff (Q).....in	1.07251562	1.62063567	2.05137527

HAMILTON COUNTY SURVEYOR'S OFFICE DRAINAGE CALCULATIONS

PROJECT: Suburban Meridian
LOCATION: 111th St & Meridian

BY: JLK
DATE: 01/17/97

CHKD:
DATE:
PAGE: 1

PIPE FROM STR 5 TO STR 3

TR-55 DRAINAGE CALCULATIONS

RUNOFF CURVE NUMBER

SOIL NAME	HYDR. GROUP	COVER DESCRIPTION	CN	AREA (acres)	Product CN x Area
Crosby, CrA	C	Residential, 1/3 Ac Lots	81	1.5	121.5
Brookston, Br	B	Residential, 1/3 Ac Lots	72	2.5	180
					0
					0
					0
					0
					0
					0
					0
				4	301.5

WEIGHTED CN: 75.375

RUNOFF

	STM #1	STM #2	STM #3
Frequency.....yr	2	5	10
Rainfall, P (24-hour).....in	3	3.75	4.3
Runoff (Q).....in	0.98092747	1.50684135	1.92341132

HAMILTON COUNTY SURVEYOR'S OFFICE

DRAINAGE CALCULATIONS

PROJECT: INGERMAN
LOCATION: 206TH ST. (SR19 TO EDITH AVE)

BY: JLK
DATE: 1/2/97

CHKD:
DATE:
PAGE: 1

TR-55 DRAINAGE CALCULATIONS

RUNOFF CURVE NUMBER

SOIL NAME	HYDR. GROUP	COVER DESCRIPTION	CN	AREA (acres)	Product CN x Area
					0
Crosby, CrA	C	Residential, 1/3 Ac Lots	81	0.605	49.005
Brookston, Br	B	Residential, 1/3 Ac Lots	72	0.605	43.56
					0
					0
					0
					0
					0
					0
				1.21	92.565

WEIGHTED CN: 76.5

RUNOFF

	STM #1	STM #2	STM #3
Frequency.....yr	2	5	10
Rainfall, P (24-hour).....in	3	3.75	4.3
Runoff (Q).....in	1.04281633	1.58390538	2.01017665

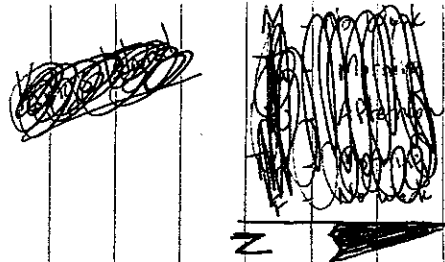
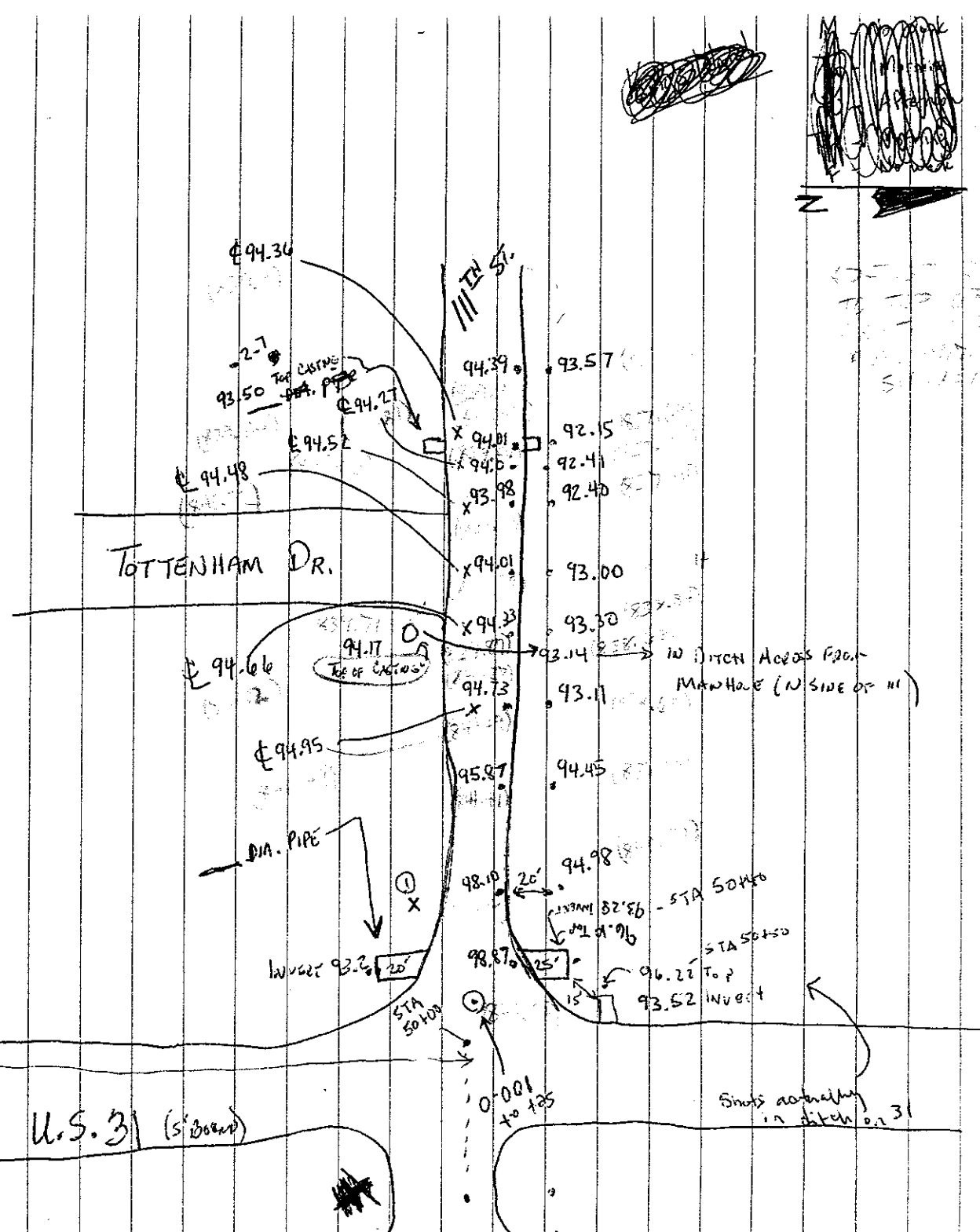
Station	Elev	Notes
51+0	93.78	
52+0	93.90	
53+0	94.20	
54+0	94.30	
55+0	94.60	
56+0	94.80	
57	95.6	96.5
58		96.0
59		96.7
60		97.1

56+70 - Begin cat tails

WRONG WAY SIGN - 100.41' (at Hole) in post

T HAWK STORM SQUARE OUTLET

U.S. 31 (S' Bound)



us 31

STA 50+00

BM
100.0

TH

X
①
PK=98.20

X
②
PK=98.10
PK=92.52

PK2

X
③
PK=99.46

7.45
3.85

3.60

SHOTS FROM ②

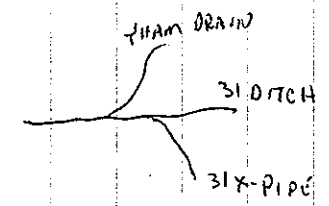
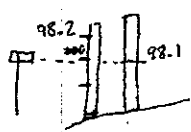
50+0	DITCH
48+0	92.6
46+0	92.3
45+0	91.8
44+0	91.4
43+0	91.2
42+0	
42+0	91.3
40+0	89.0
38+0	88.2

91.5
3.3

88.2

SHOTS FROM ③

37+0	DITCH	44.7
36+0		93.4
35+0		92.3
34+0		91.3
33+0		90.6
32+0		89.3
30+60		89.05 → US 31 Cross Pipe
30+50	OUTLET OF T'HAM DRAIN	88.5 → @ H'wall
30+50		87.3 → T'HAM DRAIN MEETS 31 SIDE DITCH



* 3:1 SLOPE ON US 31 AT THIS JUNCTION

10-10

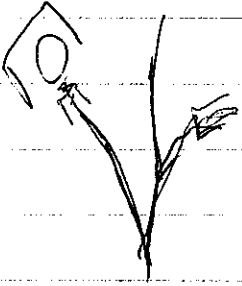
D.R. CHILOS - CHRIS CHILOS 873-2549
625-3818

QUOTE FOR T'HAM → USE JOEL'S GUY FROM VILL. FARMS ~~Approved~~

↳ ~~MADE~~ MEET ON SITE

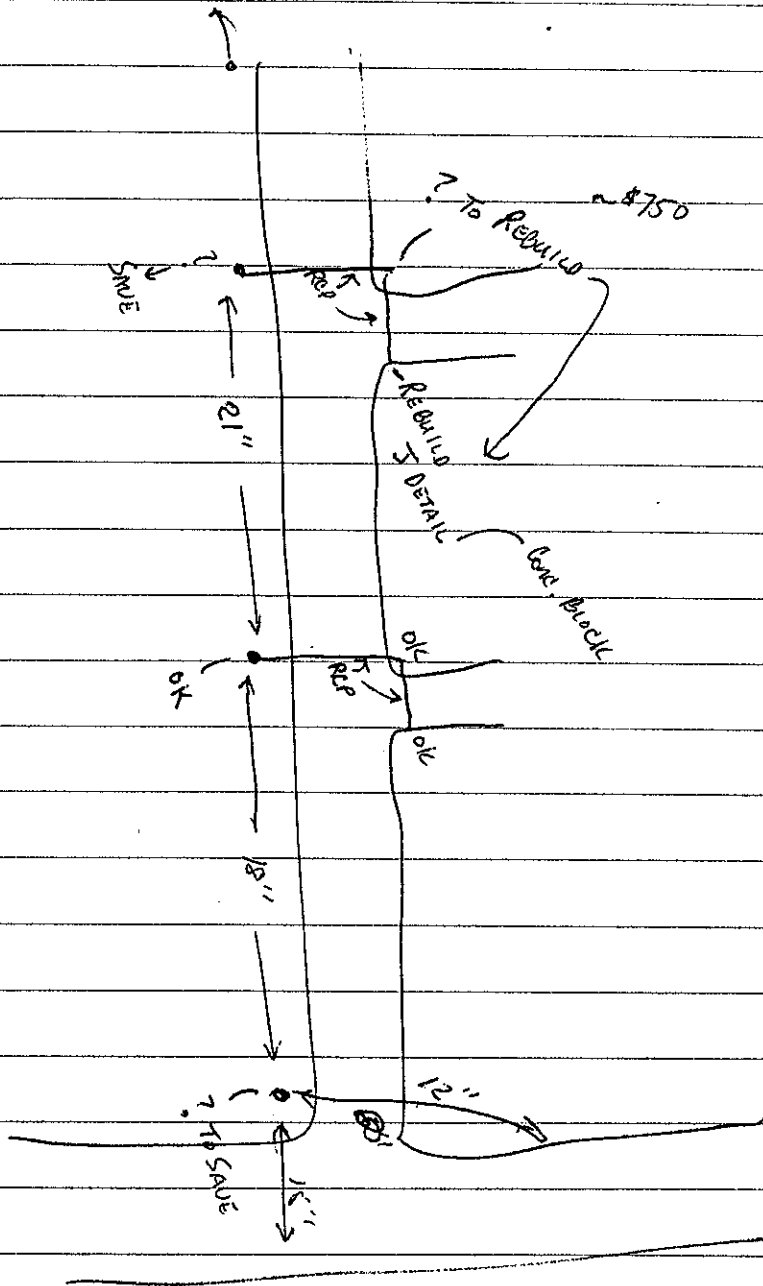
5-3 21" , 605' - RCP PRICE - SEALED JOINTS
3-2 18" , 412' - GREEN PLASTIC -
2 - New 15" , 60'
↳ 2x2 INLET w/BEEHIVE (E-7)
2-1 12" , ~~300~~ (MEAS.) 275'
CUL-DE-SAC CROSSINGS 12" , ~160' (MEAS.)

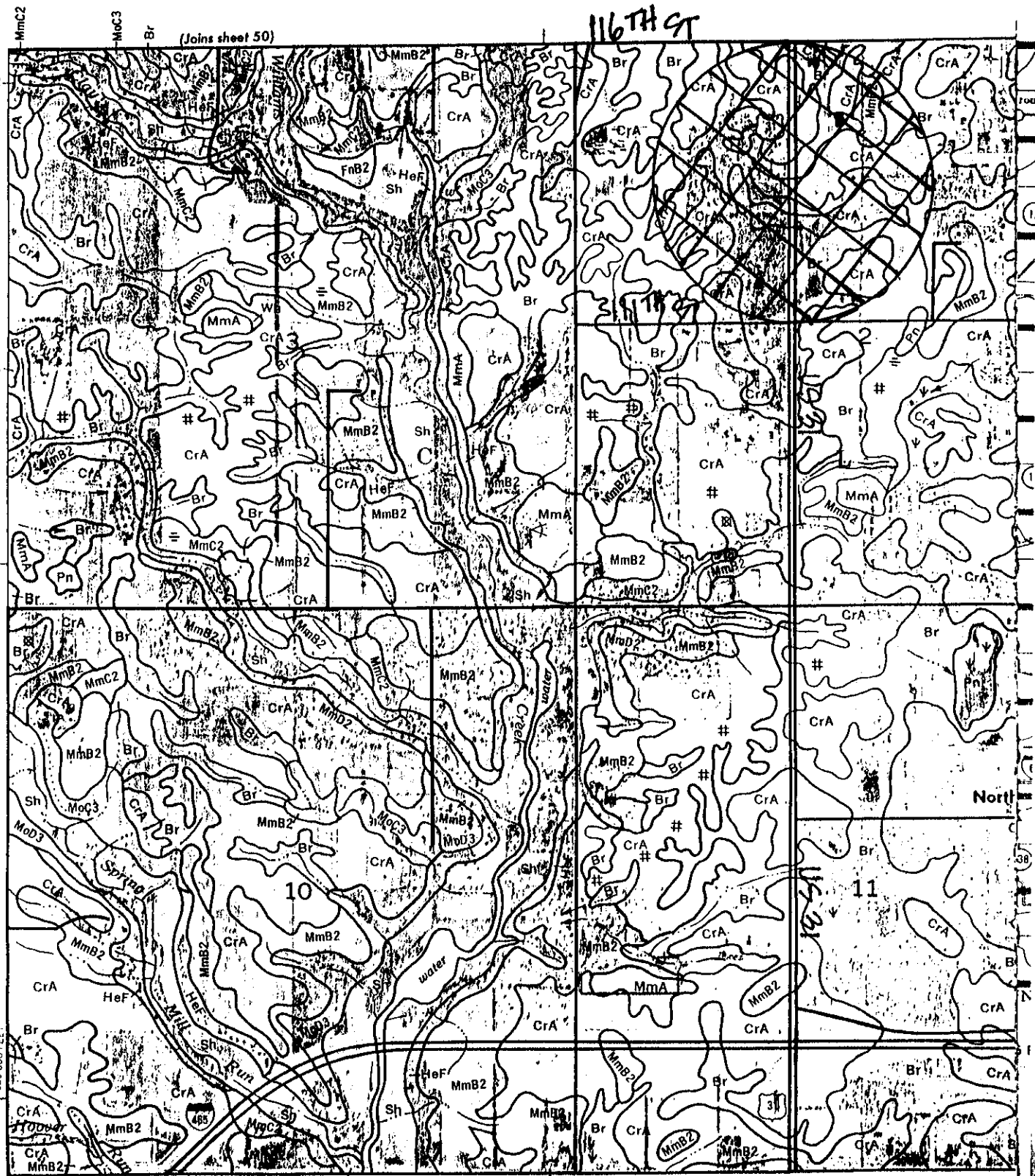
REPLACE EXIST. STRUCTURES ?



10-8-96, 2:00pm, Meet w/ Chris Chico of D.R. Chico

About quote for pipe replacement @ Titman





MARION

(111th - 116th St.)

TOTAL ACREAGE:

9.8 AC
 13.8 AC
 15.2 AC
 14.0 AC
 6.3 AC
12.0 AC
 71.1 AC

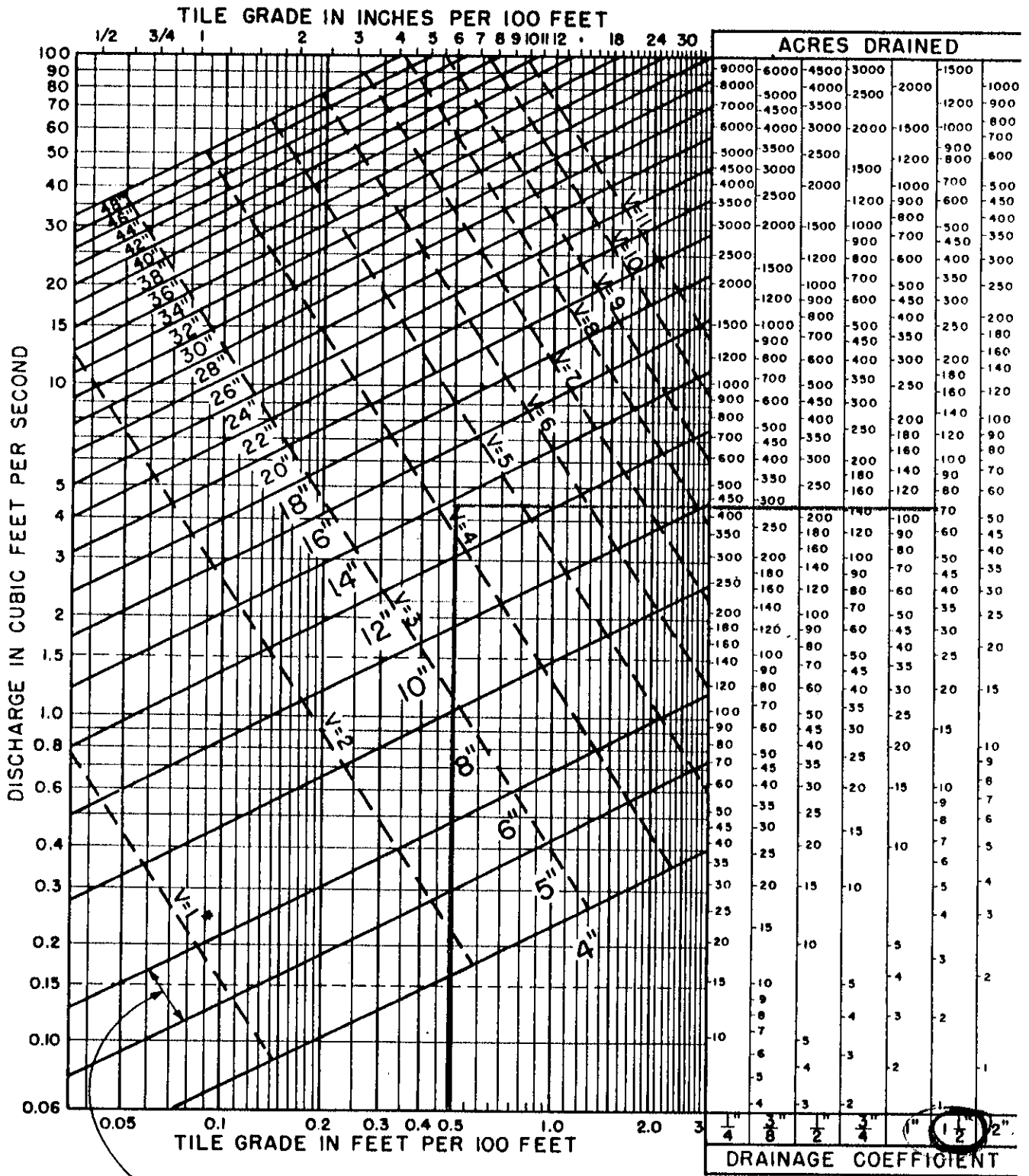
71.1 AC

PIPE SIZING FOR RCP UNDER 211th ST

METHOD	SIZE
SCS ACREAGE	16" @ 0.5%
RATIONAL	36"/42"/48" @ 0.5%
TR-55	42"/48"/54" @ 0.5%

19 792
 42 381
 42 382
 42 383
 42 384
 42 385
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 42 499
 42 500





Space between lines is the range of tile capacity for the size shown between lines.

• V = velocity in feet per second
 Reference : Yarnell-Woodward Formula $v = 138r^{2/3} s^{1/2}$
 U.S.D.A. Bulletin 854

711 AC
 14" @ 0.5%
 USE 16"

Figure 3. Tile drain design chart.

used by US

Values of Runoff Coefficients (C) for Use in the Rational Formula

Type of Surface Runoff Coefficient

Rural Areas

Concrete or sheet asphalt pavement	0.8 - 0.9
Asphalt macadam pavement.....	0.6 - 0.8
Gravel roadways or shoulders.....	0.4 - 0.6
Bare earth.....	0.2 - 0.9
Steep grassed areas (2:1).....	0.5 - 0.7
Turf meadows.....	0.1 - 0.4
Forested areas.....	0.1 - 0.3
Cultivated fields.....	0.2 - 0.4

Urban Areas

All water-tight roof surfaces.....	0.75 - 0.95
Bituminous or concrete pavement.....	0.80 - 0.95
Traffic bound pavement.....	0.70 - 0.90
Gravel pavement.....	0.35 - 0.70
Impervious soils (heavy).....	0.40 - 0.65
Impervious soils (w/turf).....	0.30 - 0.55
Slightly pervious soil.....	0.15 - 0.40
Slightly pervious soil (w/turf).....	0.10 - 0.30
Moderately pervious soil.....	0.05 - 0.20
Moderately pervious soil (w/turf).....	0.00 - 0.10

Example of a Weighted "C" Factor

5% Water tight roof surfaces.....	5% x 0.85 = 0.04
10% Bituminous or concrete pavement.....	10% x 0.9 = 0.09
10% Traffic Bound pavement.....	10% x 0.8 = 0.08
50% Slightly impervious soil.....	50% x 0.4 = 0.2
15% Slightly impervious soil (w/turf).....	15% x 0.2 = 0.03
10% Moderately pervious soil.....	10% x 0.1 = 0.01

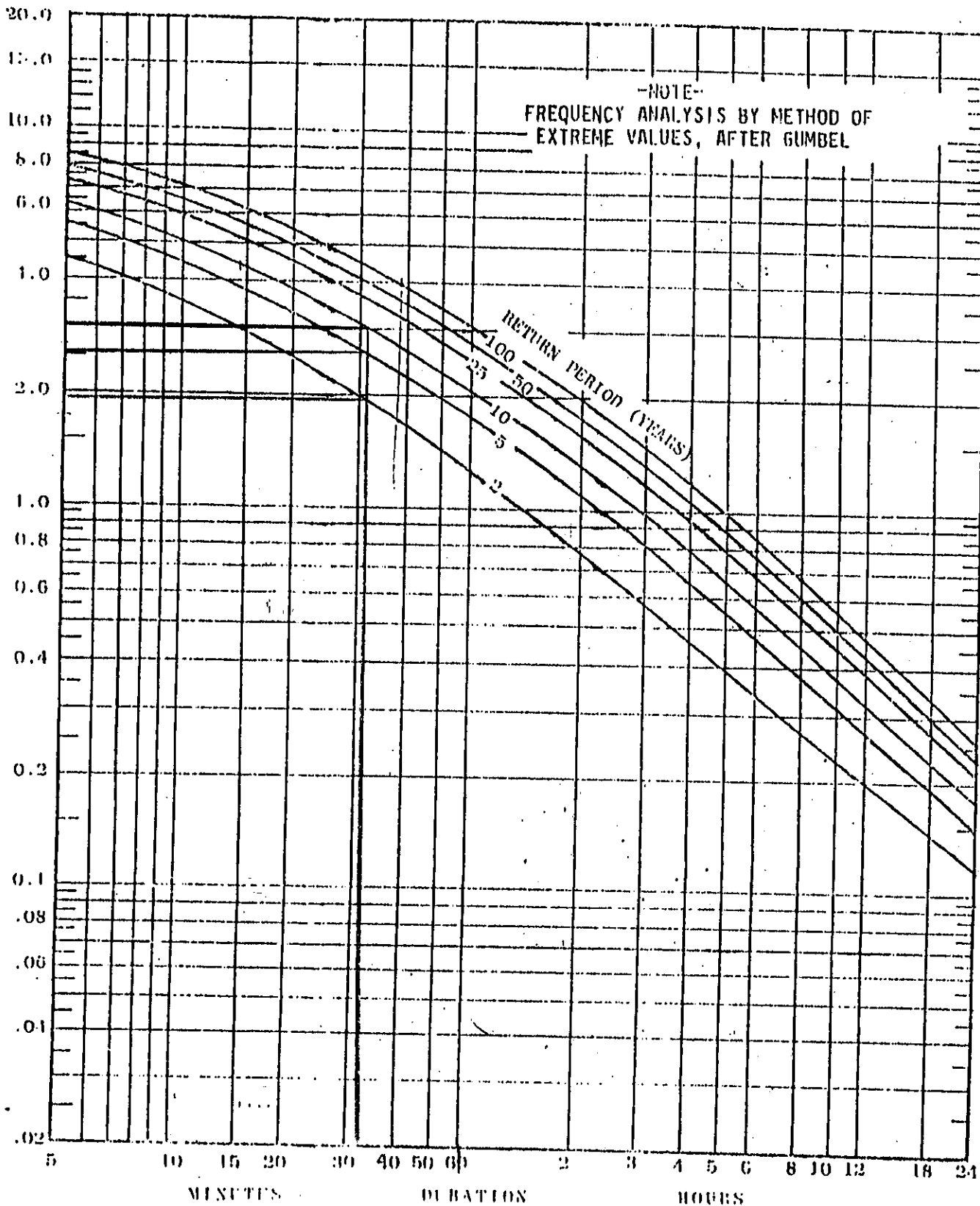
Weighted "C" Factor = 0.45

Fig. 7-415.04 B

RATIONAL C VALUES

U.S. DEPARTMENT OF COMMERCE WEATHER BUREAU COOPERATIVE STUDIES SECTION

RAINFALL INTENSITY - DURATION - FREQUENCY CURVES
INDIANAPOLIS, INDIANA
1903 - 1951



MINIMUM

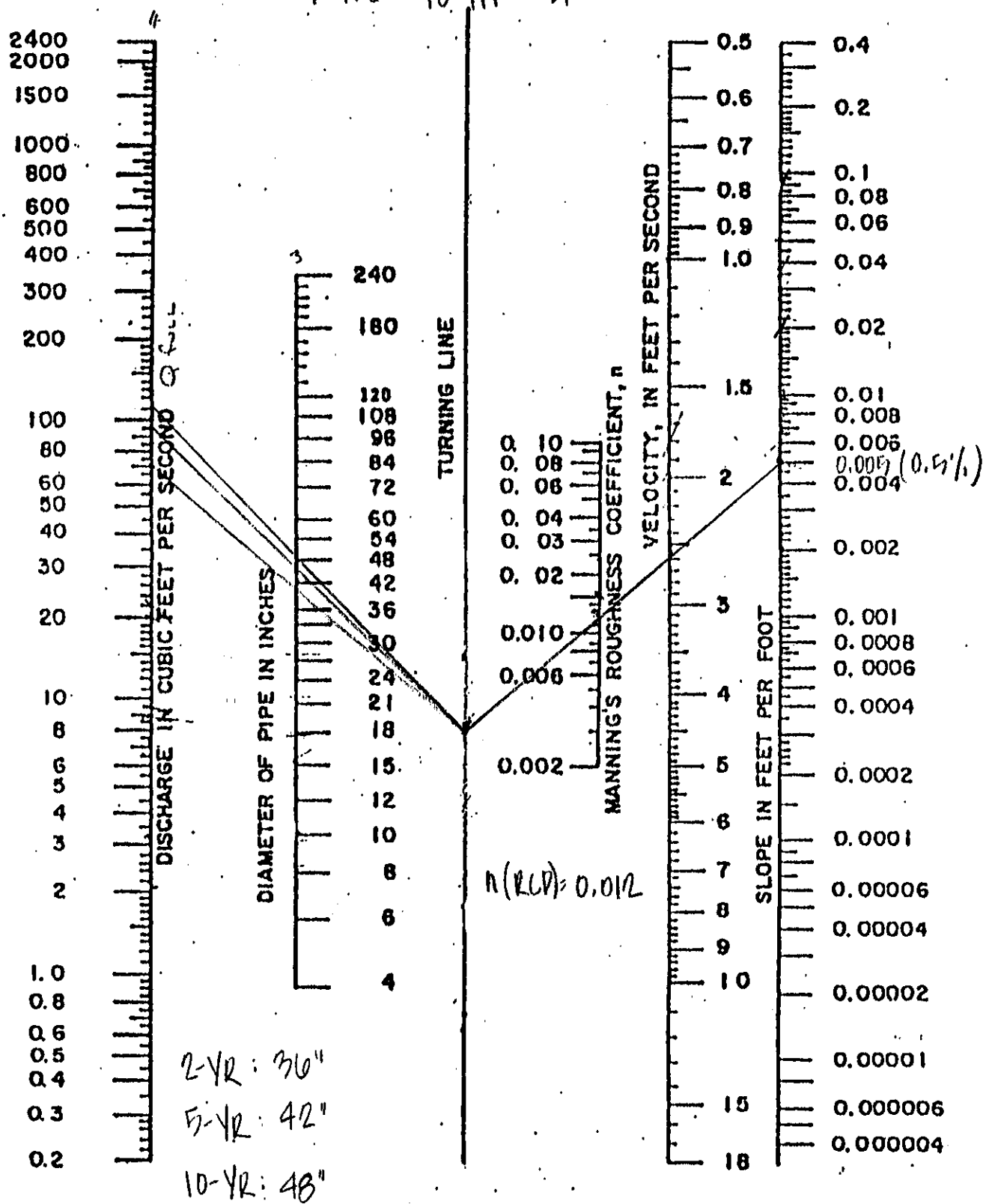
RCP UNDER 111TH ST (W of US 31)

Q₂: 71.36 cfs
Q₅: 95.22 cfs
Q₁₀: 114.13 cfs

NOMOGRAPH FOR SOLUTION OF MANNING'S

FORMULA FOR FLOW IN STORM SEWERS

DRAINAGE AREA: 71.1 AC ALONG US 31
FROM 116TH TO 111TH ST



Worksheet: Graphical Peak Discharge method

Project RCP UNDER 111TH ST By JLK Date 12/30/96
 Location US 31 (116TH ST - 111TH ST) Checked _____ Date _____
 Circle one: Present Developed

1. Data:

Drainage area $A_m = \underline{0.1111}$ mi² (acres/640)
 Runoff curve number CN = 91.2 (From worksheet 2)
 Time of concentration .. $T_c = \underline{0.789}$ hr (From worksheet 3)
 Rainfall distribution type = II (I, IA, II, III)
 Pond and swamp areas spread throughout watershed = 0 percent of A_m (_____ acres or mi² covered)

		Storm #1	Storm #2	Storm #3
2. Frequency	yr	2	5	10
3. Rainfall, P (24-hour)	in	3.0	3.75	4.3
4. Initial abstraction, I_a	in	0.195	0.195	0.195
(Use CN with table 4-1.)				
5. Compute I_a/P		0.065	0.052	0.045
6. Unit peak discharge, q_u	csm/in	425	430	435
(Use T_c and I_a/P with exhibit 4- <u>II</u>)				
7. Runoff, Q	in	2.09	2.805	3.332
(From worksheet 2).				
8. Pond and swamp adjustment factor, F_p		-	-	-
(Use percent pond and swamp area with table 4-2. Factor is 1.0 for zero percent pond and swamp area.)				
9. Peak discharge, q_p	cfs	98.7	134.0	161.0
(Where $q_p = q_u A_m Q F_p$)				

Worksheet 2: Runoff curve number and runoff

Project RCP UNDER 111TH ST (W OF US 31) By JLK Date 12/30/96
 Location ALONG US 31 (110TH ST → 111TH ST) Checked _____ Date _____
 Circle one: Present **Developed**

1. Runoff curve number (CN)

Soil name and hydrologic group (appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN ^{1/}			Area <input checked="" type="checkbox"/> acres <input type="checkbox"/> mi ² <input type="checkbox"/> %	Product of CN x area
		Table 2-2	Fig. 2-3	Fig. 2-4		
CROSBY, C	IMPERVIOUS AREAS	98			27.5	2695
BROOKSTON B/D	"	98			27.5	2695
CROSBY, C	WOODS (FAIR)	70			8.05	563.5
BROOKSTON, B/D	"	66			8.05	531.3
Totals =					71.1	6484.8

^{1/} Use only one CN source per line.

CN (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{6484.8}{71.1} = 91.2$; Use CN = 91.2

2. Runoff

Storm #1	Storm #2	Storm #3
2	5	10
3.0"	3.75"	4.3"
2.09	2.805	3.332

Frequency yr
 Rainfall, P (24-hour) in
 Runoff, Q in
 (Use P and CN with table 2-1, fig. 2-1, or eqs. 2-3 and 2-4.)

5-YR STORM

	90	91.2	95
3.5	2.45		2.94
3.75	2.685	2.805	3.185
4.0	2.92		3.43

10-YR STORM

	90	91.2	95
4.0	2.92		3.43
4.3	3.208	3.372	3.724
4.5	3.4		3.92

11/10/2021

11/10/2021

SURVEYOR'S OFFICE

DATE: _____

13-752 50 SHEETS, FILLER 5 SQUARE
42-381 50 SHEETS, FILLER 5 SQUARE
42-382 100 SHEETS, FILLER 5 SQUARE
42-389 200 SHEETS, FILLER 5 SQUARE
42-392 100 RECYCLED WHITE 5 SQUARE
42-399 200 RECYCLED WHITE 5 SQUARE
Made in U.S.A.



RCP OVER 111TH ST (W of US 31) ○

NOMOGRAPH FOR SOLUTION OF MANNING'S

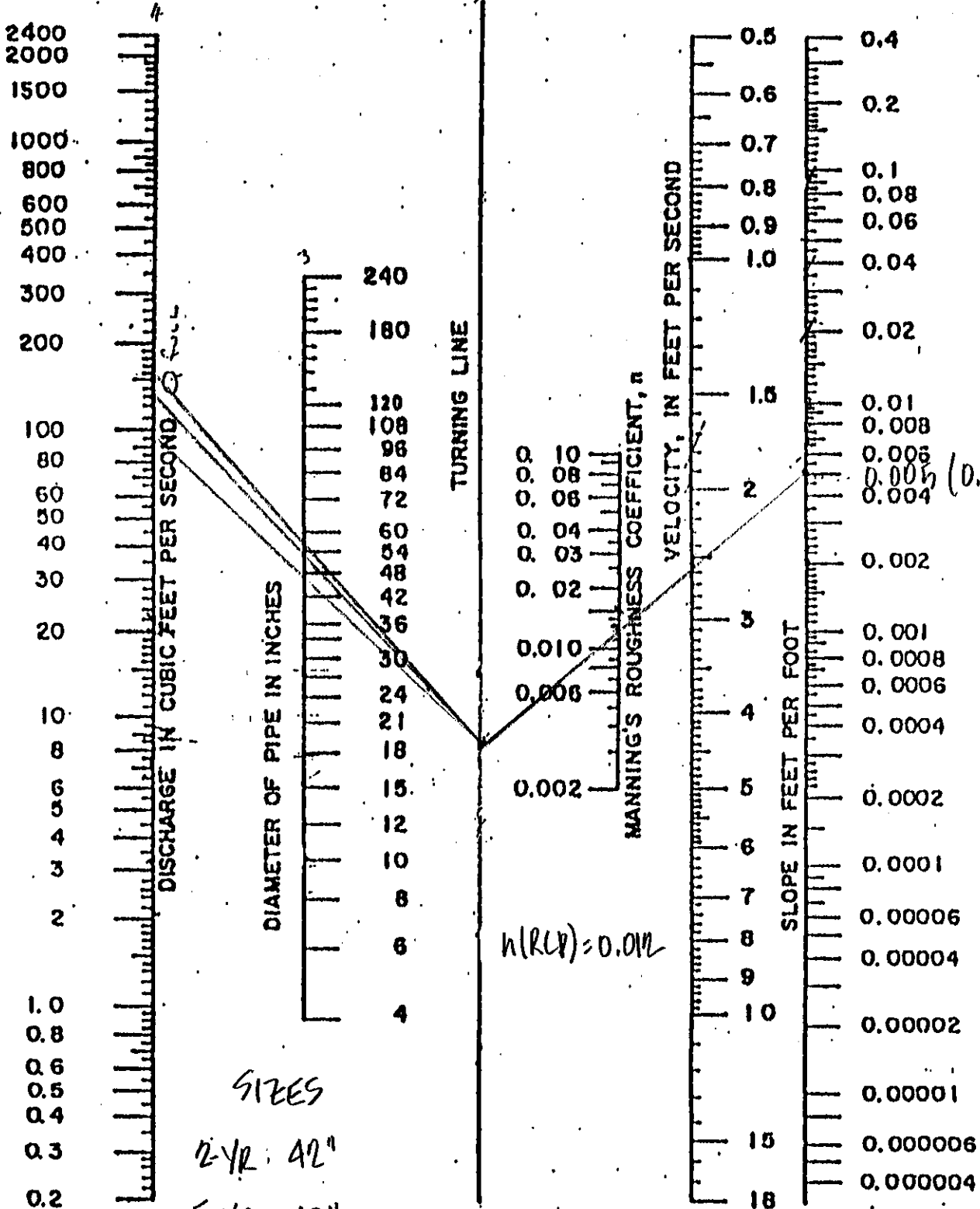
FORMULA FOR FLOW IN STORM SEWERS

DRAINAGE AREA: 71.1 AC ALONG US 31
(116TH → 111TH ST)

Q_2 : 98.7 cfs

Q_5 : 134.0 cfs

Q_{10} : 161.0 cfs



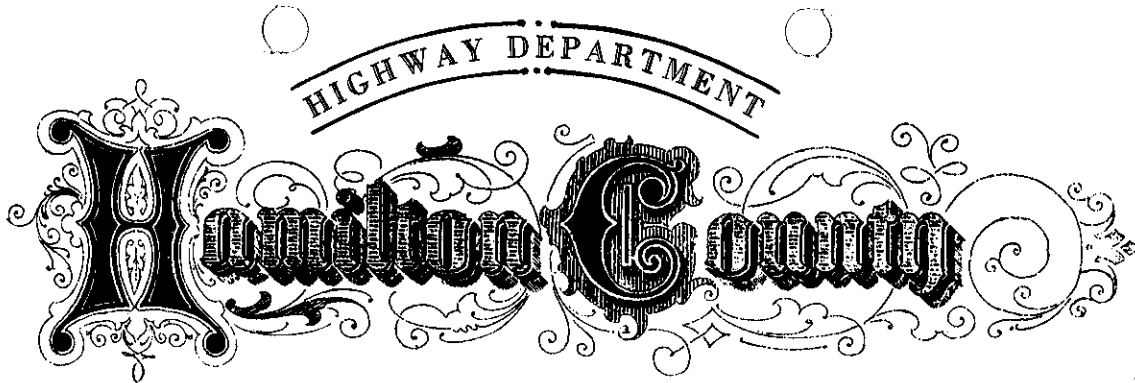
SIZES

2-YR: 42"

5-YR: 48"

10-YR: 54"

$n(RCP) = 0.012$



pg. 1 of 2

LETTER OF TRANSMITTAL

TO: HAMILTON Co. Surveyor's
OFFICE

DATE	Oct. 24, 1996
ATTENTION	Kent Ward
RE: CONTRACT	Meridian Suburban Subdivision

GENTLEMEN:

The following documents are enclosed:

COPIES	FORM NO.	DESCRIPTION
1		Video Tape 1A from Fluid Waste
1		Video Tape 2A from Fluid Waste
1		Invoice from Fluid Waste
1		2 PAGES ENGINEER NOTES
1		4 Page memo written by Meridian Suburban Homeowners Assoc.
1		4 Page Printout of Activity Cost Summary
1		2 Page memo to Board of Commissioners from Les Locke 10/14/96
1		3 Page memo to Board of Commissioners from Les Locke 9/23/96

THESE ARE TRANSMITTED FOR YOUR ACTION AS INDICATED:

- | | |
|--|---|
| <input type="checkbox"/> Please sign and return the original and _____ copies. | <input type="checkbox"/> For your approval. |
| <input type="checkbox"/> Retain one copy for your file. | <input checked="" type="checkbox"/> For your use. |
| <input type="checkbox"/> Returned to you for corrections as noted. | <input checked="" type="checkbox"/> For your files. |
| <input type="checkbox"/> | |

REMARKS:

COPY TO: _____

SIGNED: _____



pg. 2 of 2

LETTER OF TRANSMITTAL

TO:

DATE
ATTENTION
RE: CONTRACT

GENTLEMEN:

The following documents are enclosed:

COPIES	FORM NO.	DESCRIPTION
1		Autocad drawing of grades along 111 TH ST.
1		4 pages of field notes from grades taken along 111 TH + meeting w/DR. CHILDS
1		2 pages of proposals for various pipe work from D.R. CHILDS CORP.
1		20 pages of notes to taken during video taping of pipe (by Sewer Cam)
1		Plat for Meridian Surban
1		Autocad drawing of Storm Sewer in Meridian Sururban
1		24"x36" Drawing for Sanitary Sewer being installed
1		2 pages of profile grade along ditch on west side of us 31

THESE ARE TRANSMITTED FOR YOUR ACTION AS INDICATED:

- | | |
|--|---|
| <input type="checkbox"/> Please sign and return the original and _____ copies. | <input type="checkbox"/> For your approval. |
| <input type="checkbox"/> Retain one copy for your file. | <input checked="" type="checkbox"/> For your use. |
| <input type="checkbox"/> Returned to you for corrections as noted. | <input checked="" type="checkbox"/> For your files. |
| <input type="checkbox"/> | |

REMARKS:

Kent -

If you need anything else, please give me a call.

Mike

COPY TO: _____

SIGNED: Michael Rich

FLUID WASTE SERVICES
 PO BOX 264
 FISHERS , IN 46038
 PHONE, 317-773-7996

INVOICE

DATE	INVOICE #
10/3/96	4089

BILL TO

HAMILTON COUNTY HIGHWAY DEPARTMENT
 1717 EAST PLEASANT STREET
 NOBLESVILLE, IN 46060

P.O. NUMBER	TERMS	PROJECT
VERBAL	Net 30	STORM STRUCTR & PI

QUANTITY	DESCRIPTION	RATE	AMOUNT
	COTTINGHAM 111th & US 31		
16.5	JET AND VAC STOM LINES AND STRUCTURES FOR VIDEO SEWER CAM TELEWISE AS DIRECTED , HOURLY RATE	95.00	1,567.50
25	JET AND VAC WITH COMBINATION CLEANING TRUCK	87.50	2,187.50
15	WATER TRUCK - SPECIAL PRICING	20.00	300.00
RECEIVED			
HAMILTON CO. HIGHWAY DEPT.			

Thank you for your business.

TOTAL 4,055.00

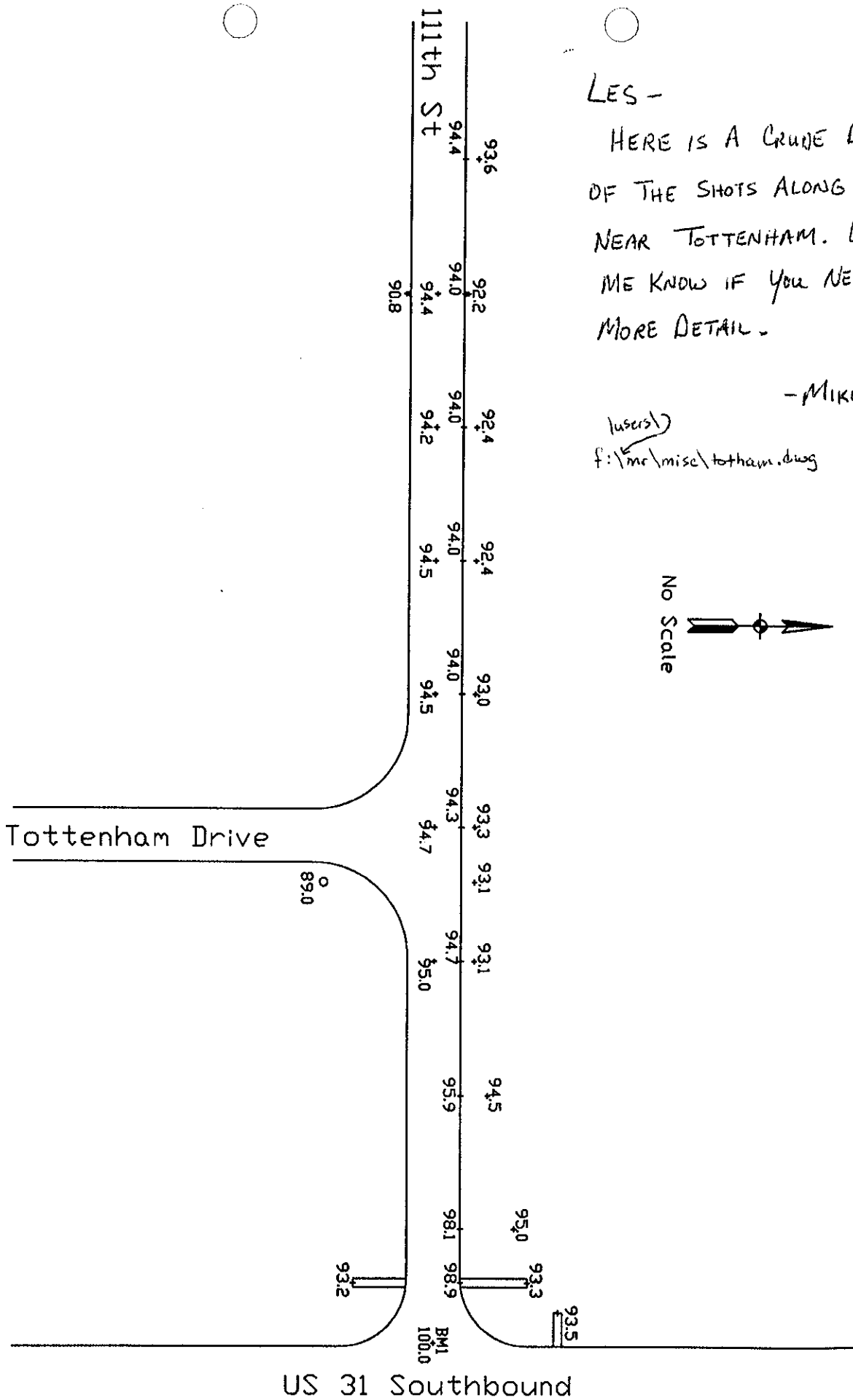
10-8-96

LES -

HERE IS A CRUDE DRAWING OF THE SHOTS ALONG 111TH NEAR TOTTENHAM. LET ME KNOW IF YOU NEED MORE DETAIL.

-MIKE

users\ f:\mr\misc\tottham.dwg



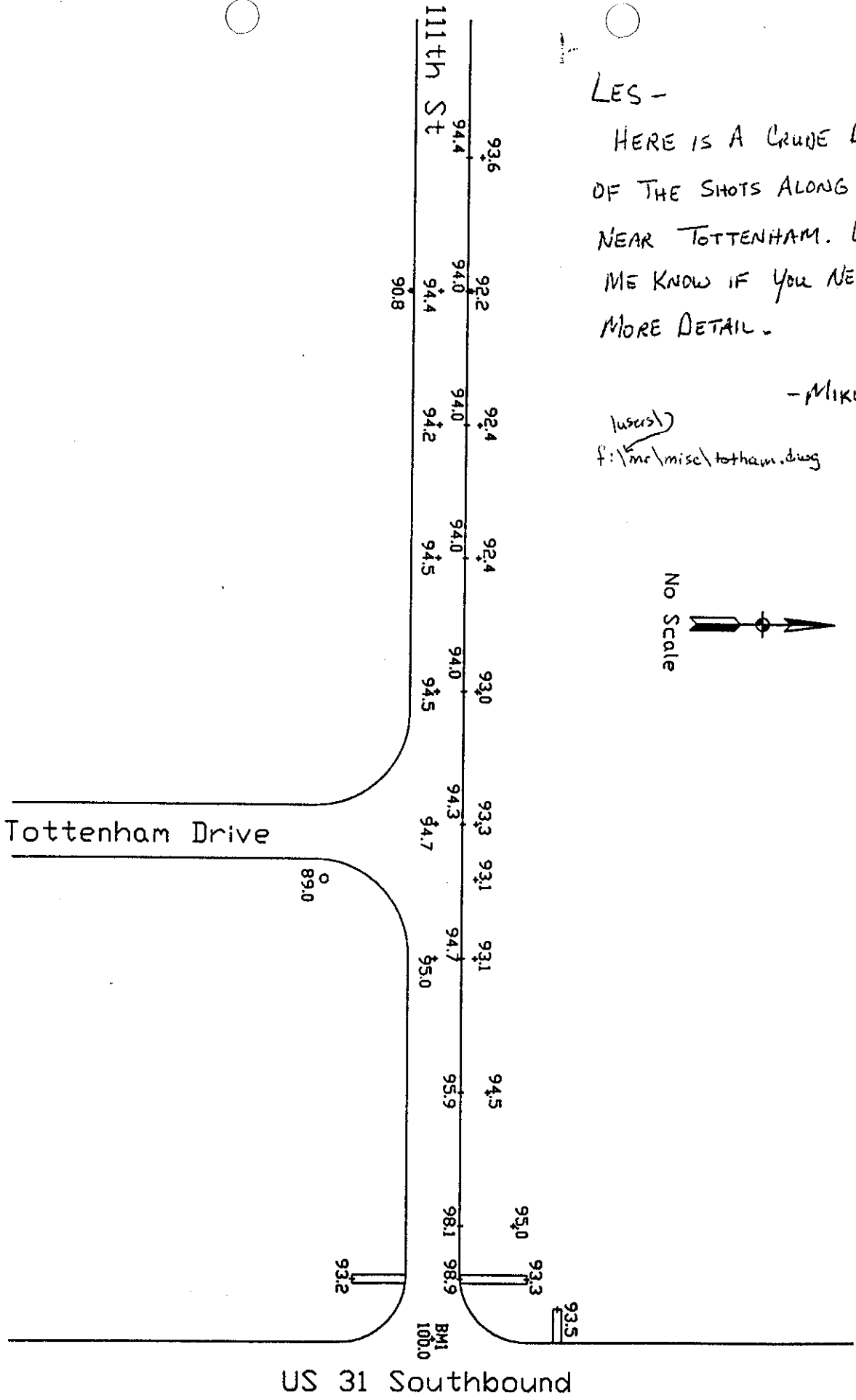
10-8-96

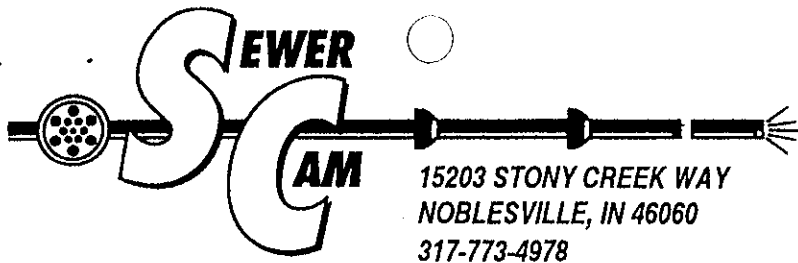
LES -

HERE IS A CRUDE DRAWING OF THE SHOTS ALONG 111TH NEAR TOTTENHAM. LET ME KNOW IF YOU NEED MORE DETAIL.

-MIKE

(insert)
f:\mr\misc\tottham.dwg





JOB COVER SHEET

Job Location or Number Meridian Suburban

Client Fluid Waste

Date 10/1/96

Type of Work Done T.V. Storm

Inspector _____

Type of Pipe All

Size of Pipe All

Laborers Chad

Total Man Hours _____

Total time used in transportation to job site _____

Total production for the day (feet, yards, etc.) _____

Camera Truck #1

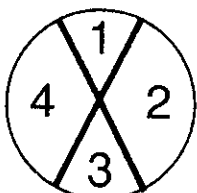
Repairs _____

Materials Needed _____

Expenses _____

Supervisor Jason Holmes

Billing Info: _____



Quadrants

ORDINANCE NO. 8-28-00-A

A PROPOSED ORDINANCE TO AMEND THE HAMILTON COUNTY COMPREHENSIVE PLAN, ORDINANCE NO. 12-05-95, AND THE HAMILTON COUNTY THOROUGHFARE PLAN AND MAP AS AMENDED, AN INTEGRAL COMPONENT OF THE HAMILTON COUNTY COMPREHENSIVE PLAN.

WHEREAS, the Board of Commissioners of Hamilton County, on the 5th day of December, 1989, passed an ordinance providing for a Comprehensive Plan and a County wide Thoroughfare Plan for Hamilton County, and

WHEREAS, the Hamilton County Plan Commission has held the required Public Hearing and recommends an amendment to said ordinance, and

WHEREAS, the Board of Commissioners of Hamilton County have held the required Public Meeting concerning said amendments, and

WHEREAS, the Board of Commissioners find it is in the best interest of the County to promote good thoroughfare planning for the County,

IT IS THEREBY ORDAINED by the board of Commissioners that the Hamilton County Thoroughfare Plan & Map be amended as follows:

1. Change 146th Street from a primary arterial with a 120 ft. right-of-way to a primary arterial with a 150 ft. right-of-way from Hamilton County/Boone County limits to White River.

Show extension of West Road as a proposed collector road from 141st Street north to 146th Street with a proposed right-of-way of 80 ft.
3. Show extension of 136th Street as a proposed collector road west from Towne Road to West Road with a proposed right-of-way of 80 ft.
4. Change 136th Street from a collector road with an 80 ft. right-of-way to a secondary arterial with a 90 ft. right-of-way from Towne Road east to Spring Mill Road.
5. Change 131st Street from a secondary arterial with a 90 ft. right-of-way to a residential parkway with a 100 ft. right-of-way from Spring Mill Road west to the Hamilton County/Boone County limits.
6. Change 131st Street from a secondary arterial with a 90 ft. right-of-way to a secondary parkway with a 120 ft. right-of-way from Spring Mill Road east to Guilford Road.

7. Change 131st Street from a secondary arterial with a 90 ft. right-of-way to a residential parkway with a 100 ft. right-of-way from Guilford Road east to River Road.
8. Show extension of 126th Street as a proposed collector road with an 80 ft. right-of-way from Shelborne Road west to West Road.
9. Change location of 126th Street extension as a collector road with an 80 ft. right-of-way east of Towne Road from existing proposed route to Spring Mill Road to proposed route to Ditch Road.
10. Change 116th Street from a primary arterial with a 120 ft. right-of-way to a primary parkway with a 140 ft. right-of-way from the Hamilton County/Boone County limits to the White River.
11. Change 106th Street from a collector road with an 80 ft. right-of-way to a residential parkway with a 100 ft. right-of-way from Spring Mill Road to the Hamilton County/Boone County limits.
12. Change 106th Street from a secondary arterial with a 90ft. right-of-way to a primary arterial with a 150 ft. right-of-way from Spring Mill Road east to Pennsylvania Parkway.
13. Change 96th Street from a collector road with an 80 ft. right-of-way to a primary arterial with a 150 ft. right-of-way from the Hamilton County/Boone County limits to east of Shelborne Road.
14. Change 96th Street from a collector road with an 80 ft. right-of-way to an "area of special study corridor" from just east of Shelborne Road to Spring Mill Road.
15. Change 96th Street from a collector road with an 80 ft. right-of-way and a primary arterial with a 120 ft. right-of-way to a primary parkway with a 140 ft. right-of-way from Spring Mill Road to College Avenue
16. Change 96th Street from a secondary arterial with a 90 ft. right-of-way to an "area of special study corridor" from College Avenue to Keystone Avenue
17. Change 96th Street from a primary arterial with a 120 ft. right-of-way to a primary arterial with a 150 ft. right-of-way from Keystone Avenue to White River.
18. Add Carmel Drive as a secondary arterial with a 90 ft. right-of-way from Rangeline Road east to Keystone Avenue.
19. Change existing Carmel Drive, a local road with a 50 ft. right-of-way, to a collector road with an 80 ft. right-of-way from Keystone Avenue to 126th Street.

20. Change 126th Street from a collector road with an 80 ft. right-of-way to a secondary arterial with a proposed 90 ft. right-of-way from Hazeldell Parkway to River Road.
21. Add new proposed road (an extension of Avian Way to the west) as a proposed collector road with an 80 ft. right-of-way from Hazeldell Parkway east to River Road.
22. Reconfigure Cherry Tree Road, a proposed collector road, with an 80 ft. right-of-way at its intersection with extended Avian Way.
23. Add new proposed road (an extension of West Road) north from 141st Street to 146th Street as a proposed collector road with an 80 ft. right-of-way.
24. Add secondary arterial road system on the east and west side of Michigan Road between 106th Street and 96th Street with a proposed right-of-way of 90 ft.
25. Add a new proposed road halfway between Shelborne Road and Towne Road from 126th Street north to 146th Street. This road is to be a collector road with a proposed right-of-way of 80 ft.
26. Change Towne Road from an existing primary arterial with a 120 ft right-of-way to a primary parkway with a proposed right-of-way of 140 ft. from 96th Street to 146th Street.
27. Add a new proposed collector road with a right-of-way of 80 ft. halfway between Towne Road and Ditch Road from 136th Street to 146th Street.
28. Change Spring Mill Road from just north of I-465 to 146th Street from an existing collector with an 80 ft. right-of-way/secondary arterial with a 90 ft. right-of-way to a residential parkway with a 100 ft. right-of-way.
29. Add a secondary parkway (called Illinois Parkway) between Spring Mill Road and Meridian Street (U.S. 31) with a right-of-way of 120 ft. A part of this road is now classified as a secondary arterial with a right-of-way of 90 ft.
30. Change Rohrer Road from a local road with a proposed right-of-way of 50 ft. to a collector road with 80 ft. right-of-way.
31. Change Meridian Street, U.S.31, from an Expressway (right-of-way per Federal/State Standards) to a Freeway/Interstate (right-of-way per Federal/State Standards).

32. Change Pennsylvania Street from a secondary arterial with a proposed right-of-way of 90 ft. to a secondary parkway with a proposed right-of-way of 120 ft. from College Avenue to Old Meridian Street.
33. Change Old Meridian Street from an existing collector road with an 80 ft. right-of-way to a secondary parkway with a proposed right-of-way of 120 ft.
34. Add and change Carmel Drive from a secondary arterial with a proposed right-of-way of 90 ft. to a primary arterial with a right-of-way of 150 ft. from Illinois Parkway to Old Meridian Street.
35. Change College Drive, from Congressional Blvd. to Pennsylvania Street, from a local road with a right-of-way of 50 ft. to a secondary arterial with a right-of-way of 90 ft.
36. Change Congressional Blvd. from a local and secondary arterial with a right-of-way of 50 ft. and 90 ft. to a collector road with a right-of-way of 90 ft.
37. Change 122nd Street/Adams Street from an existing local road of 50 ft. right-of-way to a proposed primary parkway with a 140 ft. right-of-way.
38. Change Westfield Blvd./Range Line Road from 96th Street to 116th Street, currently a proposed primary arterial with a 120 ft. right-of-way, to a residential parkway with a 100 ft. right-of-way; and from 116th Street to 146th Street, currently a primary arterial with a 120 ft. right-of-way, to a secondary arterial with a right-of-way of 90 ft.
39. Change Keystone Avenue from 96th Street to 146th Street from a proposed Expressway with a (to be determined right-of-way) to a Freeway/Interstate with a (to be determined right-of-way).
40. Change Haverstick Road from an existing local road with a proposed right-of-way of 50 ft. to a collector road with a proposed right-of-way of 80 ft.
41. Change Gray Road from 96th Street to 116th Street from an existing primary/secondary arterial with a proposed right-of-way of 120 ft. and 90 ft. to a secondary parkway with a proposed right-of-way of 120 ft.
42. Change Hazeldell Road from 96th Street to 146th Street from a proposed primary arterial with a proposed right-of-way of 120 ft. to a Primary Parkway with a right-of-way of 140 ft.
43. Change River Road from 126th Street to 131st Street from an existing collector road with a proposed right-of-way of 80 ft. to a secondary arterial with a proposed right-of-way of 90 ft.

44. Amend the proposed road right-of-way alignment and width for 96th Street from Keystone Avenue to the Boone County Line per the 96th Street Corridor Study Michigan Road to Keystone Avenue, by Parsons Bumckerhoff Dec. 1999
45. Amend the proposed road right-of-way alignment and width for 146th Street from Spring Mill to the Boone County Line per Board of Commissioners Hamilton County 146th Street Corridor Supplement to Hamilton County Comprehensive and Thoroughfare Plan, by American Consulting Engineers of Indiana dated August 21, 1996.
46. Amend the proposed road right-of-way alignment and width for the 116th Street and Shelborne Road intersections per Traffic Study Intersection Improvements of 116th Street and Shelborne Road in Clay Township by Paul I Cripe, Inc. dated October 07, 1998.

Dated this 11 day of Sept, 2000.

Commissioners of Hamilton County

Steve Holt
Steve Holt, President

Steve Dillinger
Steve Dillinger, Vice President

Sharon Clark
Sharon Clark, Member

ATTEST:

Jim Oyle
Hamilton County Auditor

9-11-2000
Date

Instrument
9809855801

9809855801
Filed for Record in
HAMILTON COUNTY, INDIANA
MARY L CLARK
On 10-02-1998 At 04:04 pm.
ENCROACHMNT 13.00

13.00
2.00
NO RILE
③

CONSENT TO ENCROACHMENT

THIS AGREEMENT, made and entered into this 3rd day of Sept. August, 1998, by and between LESLIE O. CURTIS and DEBORAH D. CURTIS (hereinafter called "First Party"), and SCOTT W. EICHMAN and DIANA L. EICHMAN (hereinafter "Second Party"):

WHEREAS, First party is the owner of real estate located in Hamilton County, Indiana, being described as follows:

Lot Number Thirty-Three (33) in Meridian Suburban First Section, an Addition in Hamilton County, Indiana, as per plat thereof, recorded in Plat Book 2, page 97, in the Office of the Recorder of Hamilton County, Indiana.

and commonly known as 11032 Tottenham Drive, Carmel, IN 46032, which said real estate adjoins the hereinafter described real estate owned by Second Party to the South;

WHEREAS, Second Party is the Owner of real estate located in Hamilton County, State of Indiana, being described as:

Lot Number Thirty-Four (34) in Meridian Suburban First Section, an Addition in Hamilton County, Indiana, as per plat thereof, recorded in Plat Book 2, ~~page 97~~, in the Office of the Recorder of Hamilton County, Indiana. *page 174-175*

and commonly known as 11022 Tottenham Drive, Carmel, IN 46032, which said real estate adjoins the hereinafter described real estate owned by First Party to the North;

WHEREAS, it would appear that pursuant to a Survey prepared by Richard A. O'Brien, dated July 7, 1997, a copy of which is attached hereto and incorporated herein as Exhibit "A" that the fence now located on the property of Second Party may encroach over and across the property of First Party for 3 feet +/- as reflected on Exhibit "A"; and

WHEREAS, it is the desire and intent of the Parties hereto to permit said fence to remain as now situated, for the use and convenience of the Second Party, without such continued use in any way serving as a basis for the Second Party to acquire any right, title or interest in and to that real estate owned by First Party.

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENCE, that for and in consideration of the mutual covenants and agreements herein contained and set forth, the Parties hereto now mutually promise, covenant and agree as follows:

1.) First Party does hereby consent to the encroachment of the fence now belonging to the property of Second Party as identified in Exhibit "A" Attached Hereto and Incorporated Herein.

2.) It is mutually understood and agreed that such consent to encroachment does not create in Second Party any right, title or interest in and to that portion of real estate owned by First Party upon which said existing fence now or hereafter may be located.

3.) The covenants and agreements herein contained and set forth shall be construed as covenants and agreements running with the title to each of the above-described parcels of real estate and shall be binding upon the Parties hereto, their respective heirs, devisees, legal representatives and assigns.

IN WITNESS WHEREOF, the Parties have hereunto set their hands and seals the day and year first above written.

FIRST PARTY

SECOND PARTY

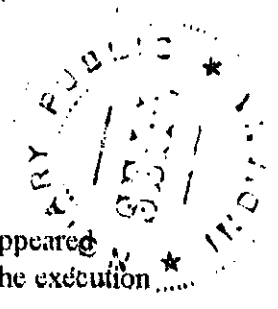
Leslie O. Curtis
LESLIE O. CURTIS

Scott W. Eichman
SCOTT W. EICHMAN

Deborah D. Curtis
DEBORAH D. CURTIS

Diana L. Eichman
DIANA L. EICHMAN

STATE OF INDIANA)
) SS:
COUNTY OF HAMILTON)



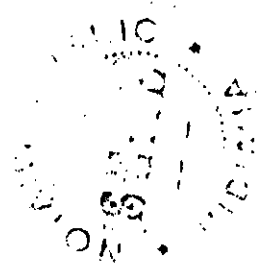
Before me a Notary Public in and for said County and State, personally appeared LESLIE O. CURTIS and DEBORAH D. CURTIS, who acknowledged the execution of the foregoing Consent to Encroachment.

WITNESS my hand and Notarial Seal this 10th day of Sept. ~~August~~, 1998.

My Commission Expires: 6-26-2001 Signature *Marilyn Harbison*
Printed MARILYN HARBISON
Notary Public

Residing in Hamilton County, Indiana.

STATE OF INDIANA)
) SS:
COUNTY OF HAMILTON)



Before me a Notary Public in and for said County and State, personally appeared SCOTT W. EICHMAN and DIANA L. EICHMAN, who acknowledged the execution of the foregoing Consent to Encroachment.

WITNESS my hand and Notarial Seal this 3 day of Sept. ~~August~~, 1998.

My Commission Expires: 4/7/00 Signature *Myra E. Medley*
Printed MYRA E. MEDLEY
Notary Public

Residing in Hamilton County, Indiana.

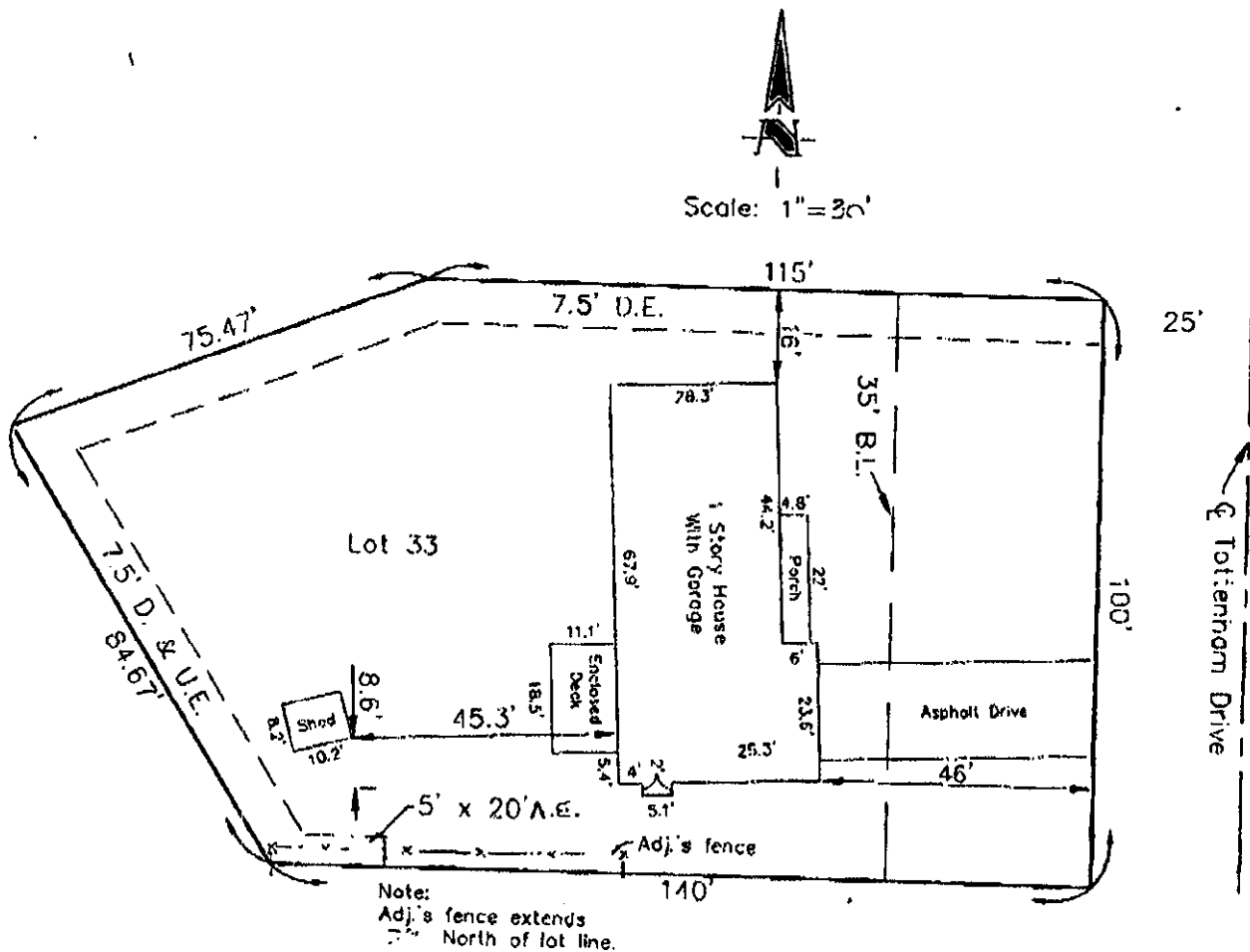
SURVEYOR LOCATION REPORT

THIS REPORT IS DESIGNED FOR USE BY A TITLE INSURANCE COMPANY WITH RESIDENTIAL LOAN POLICIES. NO CORNER MARKERS WERE SET AND THE LOCATION DATA HEREIN IS BASED ON LIMITED ACCURACY MEASUREMENTS. THEREFORE, NO LIABILITY WILL BE ASSUMED FOR ANY USE OF THIS DATA FOR CONSTRUCTION OF NEW IMPROVEMENTS OR FENCES.

This is to certify that the subject property does does not X lie within that Special Flood Hazard Area Zone "A". The accuracy is subject to map scale uncertainty and to any other uncertainty in location or elevation on Community Panel Number 180081 0012C of the Flood Insurance Rate Maps, effective date 5/17/81.

PROPERTY ADDRESS: 11032 Tottenham Drive

PROPERTY DESCRIPTION: Lot 33 in MERIDIAN SUBURBAN FIRST SECTION the plat of which is recorded in Plat Book 2, Pages 174-175, in the Office of the Recorder of Hamilton County, Indiana.



TITLE COMPANY: ENTERPRISE TITLE SERVICES OF INDIANA, INC.

LENDER: IRWIN MORTGAGE CORPORATION

I hereby certify to the parties named above that the real estate described herein was inspected under my supervision on the date indicated and that to the best of my knowledge, this report conforms with the requirements contained in Sections 27 through 29 of 865 IAAC 1-1-12 for a SURVEYOR LOCATION REPORT.

PURCHASER: Leslie O. & Deborah D. Curtis

Exhibit "A"

CLIENT NO: 98-9993

CERTIFIED: 07/07/98

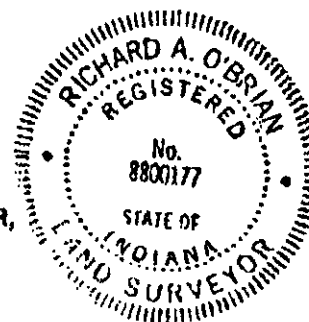


HAHN & ASSOCIATES, INC.
Engineers & Surveyors

2850 E. 96th Street • Indianapolis, IN 46240-3715
(317) 846-4119 / FAX: 582-0662

Richard A. O'Brien
RICHARD A. O'BRIAN
REGISTERED LAND SURVEYOR,
INDIANA #8800177

JOB NO: 98071127



June 18, 2002

WRITER'S DIRECT NUMBER: (317) 236-2319
DIRECT FAX: (317) 592-4788
INTERNET: weiss@icemiller.com

**VIA FACSIMILE: 776-9628 &
CERTIFIED MAIL RETURN RECEIPT REQUESTED**

Kenton C. Ward
Hamilton County Surveyor
One Hamilton County Square
Suite 188
Noblesville, IN 46060-2230

RE: Meridian Suburban Drain
Valley Development Co., Inc./NRC Corp.

Dear Mr. Ward:

We are counsel to Valley Development Co., Inc. ("Valley Development") and NRC Corp. ("NRC"), both of which are property owners affected by the proposed expansion of Meridian Suburban Drain. Reference is hereby made to your letter dated May 17, 2002, together with the various notices provided to Valley Development and NRC in connection therewith.

In each of the notices you provided to Valley Development and NRC, you failed to assess any damages. However, both NRC and Valley Development believe that they have been damaged as a result of the expansion of the drain and the way the same bisects its respective properties. We would like to have this matter addressed. However, I am unable to attend your proposed meeting date of June 24, 2002. We respectfully request that that hearing be reset so as to allow us to present information and evidence at that hearing.

We appreciate your consideration and rescheduling of this hearing. I will be out of the office during the period of June 20-28, 2002. Otherwise, I will generally be available during July and August.

Please call at once if there is any difficulty in providing the requested continuance.

Very truly yours,

ICE MILLER

Zeff A. Weiss

ZAW/sd

INDY 1008478v1

FILED
JUN 24 2002

OFFICE OF HAMILTON COUNTY SURVEYOR

11:13 AM



June 18, 2002

WRITER'S DIRECT NUMBER: (317) 236-2319
DIRECT FAX: (317) 592-4788
INTERNET: weiss@icemiller.com

**VIA FACSIMILE: 776-9628 &
CERTIFIED MAIL RETURN RECEIPT REQUESTED**

Kenton C. Ward
Hamilton County Surveyor
One Hamilton County Square
Suite 188
Noblesville, IN 46060-2230

RE: Meridian Suburban Drain
Valley Development Co., Inc./NRC Corp.

Dear Mr. Ward:

We are counsel to Valley Development Co., Inc. ("Valley Development") and NRC Corp. ("NRC"), both of which are property owners affected by the proposed expansion of Meridian Suburban Drain. Reference is hereby made to your letter dated May 17, 2002, together with the various notices provided to Valley Development and NRC in connection therewith.

In each of the notices you provided to Valley Development and NRC, you failed to assess any damages. However, both NRC and Valley Development believe that they have been damaged as a result of the expansion of the drain and the way the same bisects its respective properties. We would like to have this matter addressed. However, I am unable to attend your proposed meeting date of June 24, 2002. We respectfully request that that hearing be reset so as to allow us to present information and evidence at that hearing.

We appreciate your consideration and rescheduling of this hearing. I will be out of the office during the period of June 20-28, 2002. Otherwise, I will generally be available during July and August.

Please call at once if there is any difficulty in providing the requested continuance.

Very truly yours,

ICE MILLER

Zeff A. Weiss

ZAW/sd

INDY 1008478v1





June 19, 2002

WRITER'S DIRECT NUMBER: (317) 236-5958
DIRECT FAX: (317) 592-5439
INTERNET: marsh@icemiller.com

**VIA FACSIMILE
& INDY EXPRESS COURIER**

Hamilton County Drainage Board
33 N. 9th Street, #L21
Noblesville, IN 46060



Re: Meridian Suburban Drain Reconstruction
Valley Development Co., Inc./NRC Corp.

Dear Sir or Madam:

We are counsel to Valley Development Co., Inc. ("Valley Development") and NRC Corp. ("NRC"), both of which are property owners affected by the proposed reconstruction of Meridian Suburban Drain. Together, the two companies own approximately 40 acres and 18 undeveloped lots which would be impacted by the reconstruction. Reference is hereby made to a letter from Kenton Ward, Hamilton County Surveyor ("Surveyor"), dated May 17, 2002, together with the various notices provided to Valley Development and NRC in connection therewith, including the Reconstruction Report ("Report") and the Schedule of Assessments ("Schedule").

Pursuant to Indiana Code section 36-9-27-52(d), Valley Development and NRC hereby object to the Report and the Schedule. Valley Development and NRC are owners of land that will be damaged by the reconstruction, but the Hamilton County Drainage Board ("Board") failed to find that their land will be so damaged. See IC § 36-9-27-52(d)(3)(A).

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ICE MILLER

Tanya D. Marsh

cc: Mark Howard, Esq. (via facsimile #776-2369)
Stephen L. Valinet, President, Valley Development Co., Inc. and NRC Corp.
Zeff A. Weiss, Esq.



TRANSMITTAL COVER SHEET

DATE: June 19, 2002 2 PAGES (INCLUDING THIS PAGE)

HARD COPY TO FOLLOW: Yes No VIA: Mail Courier

	TO:	COMPANY:	FAX NO.:	PHONE NO.:
1.	Hamilton County Drainage Board		(317) 776-9628	

FROM: Tanya D. Marsh TELEPHONE NO.: (317) 236-5958

SUBJECT: Meridian Suburban Drain Reconstruction -- Valley Development Co., Inc./NRC Corp.

COMMENTS:

WARNING CONFIDENTIALITY NOTICE:	This cover sheet and the materials enclosed with this transmission are the private confidential property of the sender, and the materials are privileged communications intended solely for the receipt, use, benefit and information of the intended recipient indicated above. If you are not the intended recipient, you are hereby notified that any review, disclosure, copying, distribution, or the taking of any other action in reliance on the contents of this transmission is strictly prohibited, and may result in legal liability on your part. If you have received this transmission in error, please notify us immediately at the telephone number below and arrange for return of this transmission to us.
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CLIENT/MATTER NO. 17718.0003 JOB CODE (Fax Center Use Only): 32197

For questions or problems in transmission, please contact our Fax Operators at either: (317) 236-2352 Or (317) 236-2474
 One American Square | Box 82001 | Indianapolis, IN 46282-0002 | (317) 236-2100 | FAX (317) 236-2219

June 12, 2002

Robert E. & Carol J. Scott
11015 Tottenham Drive
Carmel, IN 46032

Tricia J. Banta, P.E.
Hamilton County Surveyor's Office
One Hamilton County Square, Suite 188
Noblesville, IN 46060-2230

RE: June 24, 2002, 9:05 A.M. Drainage Project Hearing

Dear Ms. Banta,

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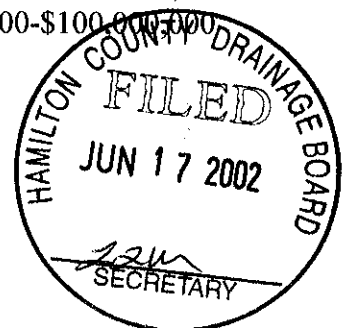
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- Of second concern is the cost of this project. We understand that each household has been charged a one-time \$536 fee, payable in one year at no interest, for this public work. Why cannot tax monies be used?

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RE: June 24, 2002, 9:05 A.M., Drainage Project Hearing

June 11, 2002

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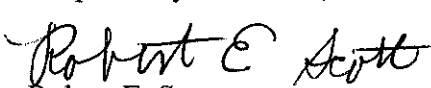
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Respectfully submitted,



Robert E. Scott

and



Carol J. Scott

Residents of Meridian Suburban Subdivision

Lot 4

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One Hamilton County Square, Suite 188
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June 19, 2002

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Scott & Diana Eichman
11022 Tottenham Drive
Carmel, IN 46032



Scott & Diana Eichman

Fax

To: Tricia J. Banta **From:** Scott & Diana Eichman

Fax: 776-9628 **Pages:** 2 including cover

Phone: 776-9627 **Date:** 06/19/02

Re: Drainage Objection **CC:**

Urgent **For Review** **Please Comment** **Please Reply** **Please Recycle**

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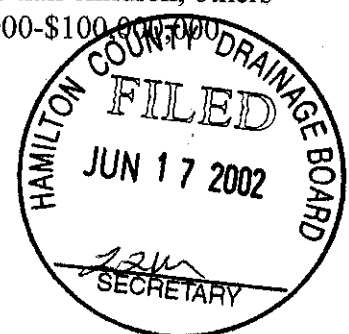
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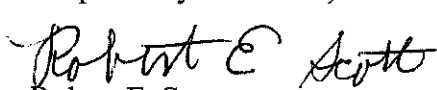
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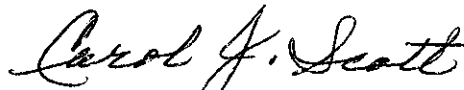
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Robert E. Scott

and



Carol J. Scott

Residents of Meridian Suburban Subdivision

Lot 4



June 19, 2002

WRITER'S DIRECT NUMBER: (317) 236-9958
DIRECT FAX: (317) 592-5439
INTERNET: marsh@icemiller.com

**VIA FACSIMILE
& INDY EXPRESS COURIER**

Hamilton County Drainage Board
33 N. 9th Street, #L21
Noblesville, IN 46060



Re: Meridian Suburban Drain Reconstruction
Valley Development Co., Inc./NRC Corp.

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Zeff A. Weiss, Esq.



June 18, 2002

WRITER'S DIRECT NUMBER: (317) 236-2319
DIRECT FAX: (317) 592-4788
INTERNET: weiss@icemiller.com

**VIA FACSIMILE: 776-9628 &
CERTIFIED MAIL RETURN RECEIPT REQUESTED**

Kenton C. Ward
Hamilton County Surveyor
One Hamilton County Square
Suite 188
Noblesville, IN 46060-2230

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We appreciate your consideration and rescheduling of this hearing. I will be out of the office during the period of June 20-28, 2002. Otherwise, I will generally be available during July and August.

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ICE MILLER

Zeff A. Weiss

ZAW/sd

INDY 1008478v1



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Diana Eichman

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17-13-02-03-02-007.000

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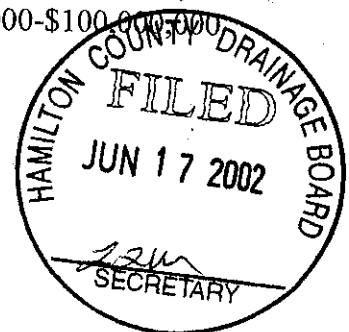
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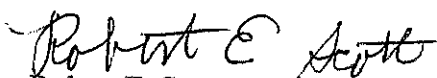
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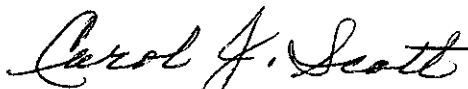
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Residents of Meridian Suburban Subdivision

Lot 4

BEFORE THE HAMILTON COUNTY DRAINAGE BOARD
IN THE MATTER OF THE
Meridian Suburban Subdivision Drain

NOTICE

Notice is hereby given pursuant to Section 405 of the 1965 Indiana Drainage Code that this Board, prior to final adjournment has issued an order adopting the Schedule of Assessments, filed the same and made public announcement thereof at the hearing and ordered publication. If judicial review of the findings and order of the Board is not requested pursuant to Article Eight of this code within twenty (20) days from the date of this publication, the order shall be conclusive.

Hamilton County Drainage Board

Attest: Lynette Mosbaugh

ONE TIME ONLY

June 19, 2002

WRITER'S DIRECT NUMBER: (317) 236-5958
DIRECT FAX: (317) 592-5439
INTERNET: marsh@icemiller.com

VIA FACSIMILE
& INDY EXPRESS COURIER

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Dear Sir or Madam:

We are counsel to Valley Development Co., Inc. ("Valley Development") and NRC Corp. ("NRC"), both of which are property owners affected by the proposed reconstruction of Meridian Suburban Drain. Together, the two companies own approximately 40 acres and 18 undeveloped lots which would be impacted by the reconstruction. Reference is hereby made to a letter from Kenton Ward, Hamilton County Surveyor ("Surveyor"), dated May 17, 2002, together with the various notices provided to Valley Development and NRC in connection therewith, including the Reconstruction Report ("Report") and the Schedule of Assessments ("Schedule").

Pursuant to Indiana Code section 36-9-27-52(d), Valley Development and NRC hereby object to the Report and the Schedule. Valley Development and NRC are owners of land that will be damaged by the reconstruction, but the Hamilton County Drainage Board ("Board") failed to find that their land will be so damaged. See IC § 36-9-27-52(d)(3)(A).

Valley Development and NRC further request a continuance for this matter to the next public meeting of the Board to allow their engineers a reasonable opportunity to work with the Surveyor and propose changes to the Report which would accomplish the intended result and lessen the damage to their land. We will renew our request for a continuance at the June 24, 2002 hearing.

Should you have any questions, please contact me at (317) 236-5958.

Very truly yours,

ICE MILLER

A handwritten signature in black ink, appearing to read "Tanya D. Marsh".

Tanya D. Marsh

cc: Mark Howard, Esq. (via facsimile #776-2369)
Stephen L. Valinet, President, Valley Development Co., Inc. and NRC Corp.
Zeff A. Weiss, Esq.



735 S. CAPITOL AVENUE
INDIANAPOLIS, IN 46225
(317) 635-4910

ORDER# _____

DRIVER 1

DATE 6-19-02

Tanya Marsh

ICE MILLER

SHIPPER _____

CONSIGNEE Hamilton Co. Drainage Board

ADDRESS **ONE AMERICAN SQ. SUITE 3100**

ADDRESS 33 N. 9th Street # L21

CITY, STATE **INDIANAPOLIS IN 46282**

CITY, STATE Noblesville, IN 46060

# OF PCS.	WEIGHT	DECLARED VALUE	PPD	COLL	COD AMOUNT	REFERENCE
<u>1</u>			<input type="checkbox"/>	<input type="checkbox"/>		<u>17718.LC03</u>

SPECIAL INSTRUCTIONS _____

RUSH <input checked="" type="checkbox"/>	SAME DAY <input type="checkbox"/>	NEXT DAY <input type="checkbox"/>	SHUTTLE <input type="checkbox"/>	HOURLY <input type="checkbox"/>
MISCELLANEOUS	CARRIER CHGS	WAITING TIME		
TOTAL ▶		CASH FEE <input type="checkbox"/>	BILL <input type="checkbox"/>	

ARTICLES OF LIABILITY
ARTICLES SUBJECT TO UNIFORM DOMESTIC STRAIGHT BILL OF LADING CONDITIONS.
"LIABILITY IS LIMITED TO \$100.00 UNLESS EXCESS VALUE CHARGE IS PAID."

X _____

TIME _____ AM
PM DATE _____

CONSIGNEE'S COPY

Meridian Suburban Drain
June 24, 2002 at 9:05 A.M.
Hearing for reconstruction & maintenance.

City of Carmel will have
additional benefit of \$711.00.
County Highway will have
additional benefit of \$4,453.00.
County Highway to pay for structure under 111th &
RCP under Liverpool Dr. in the amount of \$23,500.00.

	Maint.	Maint.Min.	Recnstr.
Commercial	75.00	75.00	1154.00
Plat	15.00	50.00	536.00
Roads	10.00	5.00	385.00
Ag	5.00	15.00	385.00
Damages	0.00	0.00	Zero

Parcel	Owner	Address	City	State	Zip	Description1	Description 2	Acres	MntAsmt	RecAsmt	RecPer
17-13-02-00-00-001.000	Jec Partnership LP c/o John N. Pittman	201 W. 106th St.	Indianapolis	IN	46290	S2 T17 R3 68.60 Ac	Undeveloped/Agricultural	3.80	19.00	1,463.00	0.92
16-13-02-00-00-002.001	Fidelity Office Bldg II Ip c/o REI Inv.	11711 N. Pennsylvania St., Ste. 200	Carmel	IN	46032	S2 T17 R3 8.22 Ac	Commercial	7.72	579.00	8,908.88	5.59
16-13-02-00-00-002.101	Fidelity Office Building The	11711 N. Pennsylvania St., Ste. 200	Carmel	IN	46032	S2 T17 R3 0.80 Ac	Commercial	0.80	75.00	923.20	0.58
16-13-02-00-00-002.111	Fidelity Office Bldg II Ip c/o REI Inv.	11711 N. Pennsylvania St., Ste. 200	Carmel	IN	46032	S2 T17 R3 0.79 Ac	Commercial	0.79	75.00	911.66	0.57
16-13-02-00-00-002.112	Timarron Capital Group Lic	P.O. Box 796	Carmel	IN	46082	S2 T17 R3 0.84 Ac	Commercial	0.84	75.00	969.36	0.61
16-13-02-00-00-002.121	Timarron Capital Group Lic	P.O. Box 796	Carmel	IN	46082	S2 T17 R3 0.68 Ac	Commercial	0.68	75.00	784.72	0.49
16-13-02-00-00-003.001	Sepro Development Company II LLC	11550 N. Meridian St, Ste 600	Carmel	IN	46032	S2 T17 R3 8.12 Ac	Commercial	8.12	609.00	9,370.48	5.88
16-13-02-00-00-003.002	Fidelity Office Bldg II Ip c/o REI Inv.	11711 N. Pennsylvania St., Ste. 200	Carmel	IN	46032	S2 T17 R3 1.02 Ac	Commercial	0.52	75.00	600.08	0.38
16-13-02-00-00-003.004	Scott, Suzanne & Walter TR c/o Magnum Resources	302 S. 36th St, Ste 800	Omaha	NE	68131	S2 T17 R3 2.36 Ac	Commercial	2.36	177.00	2,723.44	1.71
16-13-02-00-00-003.005	11460 Meridian St N LLC c/o Blue & Co LLC	11460 Meridian St N	Carmel	IN	46032	S2 T17 R3 3.20 Ac	Commercial	2.85	213.76	3,288.90	2.06
16-13-02-00-00-004.000	Scott, Suzanne & Walter TR Charitable Remainder Unitrust	302 S. 36th St, Ste 800	Omaha	NE	68131	S2 T17 R3 4.33 Ac	Commercial	3.70	277.50	4,269.80	2.68
X16-13-02-00-00-004.001	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3 0.17 Ac	Undeveloped/Agricultural	0.17	15.00	65.45	0.04
X16-13-02-00-00-005.000	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3 13.71 Ac	Undeveloped/Agricultural	13.71	68.56	5,278.35	3.31
16-13-02-00-00-006.000	NRC Corp c/o Stephen L Valinet	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3 11.07 Ac	Commercial	11.07	830.26	12,774.78	8.02
16-13-02-00-00-007.002	Three Penn Mark Plaza c/o Colliers Turley Martin Tucker	2500 One American Square	Indianapolis	IN	46282	S2 T17 R3 3.83 Ac	Commercial	3.83	287.26	4,419.82	2.77
16-13-02-00-00-007.004	Penn Mark c/o Angelo, Gordon & Co LP	245 Park Ave, 26th Fir	New York	NY	10167	S2 T17 R3 5.09 Ac	Commercial	5.09	381.76	5,873.86	3.69
16-13-02-00-00-007.005	Capstar Indianapolis Co Lic c/o Deloitte & Touche	P.O. Box 811280	Chicago	IL	60681-1280	S2 T17 R3 0.08 Ac	Commercial	0.08	75.00	92.32	0.06
16-13-02-00-00-007.301	Capstar Indianapolis Co Lic c/o Deloitte & Touche	P.O. Box 811280	Chicago	IL	60681-1280	S2 T17 R3 3.90 Ac	Commercial	3.90	292.50	4,500.60	2.82
X16-13-02-00-00-023.000	Valley Development Co Inc c/o Stephen Valinet	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3 15.08 Ac	Undeveloped/Agricultural	6.50	32.50	2,502.50	1.57
17-13-02-03-01-001.000	Noble, Vance A. & Roslyn L.	127 111th St W	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 27	One Lot -	50.00	536.00	0.34
X17-13-02-03-01-002.000	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3	Meridian Suburban Lot 26	One Lot -	50.00	536.00	0.34
X17-13-02-03-01-003.000	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3	Meridian Suburban Lot 25	One Lot -	50.00	536.00	0.34
X17-13-02-03-01-004.000	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3	Meridian Suburban Lot 24	One Lot -	50.00	536.00	0.34
X17-13-02-03-01-005.000	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3	Meridian Suburban Lot 23	One Lot -	50.00	536.00	0.34
X17-13-02-03-01-006.000	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3	Meridian Suburban Lot 22	One Lot -	50.00	536.00	0.34
X17-13-02-03-01-007.000	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3	Meridian Suburban Lot 21	One Lot -	50.00	536.00	0.34
X17-13-02-03-01-008.000	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3	Meridian Suburban Lot 20	One Lot -	50.00	536.00	0.34
X17-13-02-03-01-009.000	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3	Meridian Suburban Lot 19	One Lot -	50.00	536.00	0.34
X17-13-02-03-01-010.000	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3	Meridian Suburban Lot 18	One Lot -	50.00	536.00	0.34
17-13-02-03-02-001.000	Cox, Eric Stephen & Deborah L.	107 W. 111th St	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 28	One Lot -	50.00	536.00	0.34
17-13-02-03-02-002.000	DeCaudin, Jean Pierre Pascal & Jeanine	59 W. 111th St.	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 29	One Lot -	50.00	536.00	0.34
17-13-02-03-02-003.000	Jones, Cathy Corbitt	49 W 111th St	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 30	One Lot -	50.00	536.00	0.34
17-13-02-03-02-004.000	Ruden, Susan L. & Jeffery S. Jacob	39 W. 111th St	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 31	One Lot -	50.00	536.00	0.34
17-13-02-03-02-005.000	Conklin, Philip 1/2 & Philip L. Conklin Lvg	31 W. 111th St	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 32	One Lot -	50.00	536.00	0.34
17-13-02-03-02-006.000	Brehm, John E. & Rhonda Ann	11032 Tottenham Dr	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 33	One Lot -	50.00	536.00	0.34
17-13-02-03-02-007.000	Eichman, Scott W & Diana	11022 Tottenham Dr	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 34	One Lot -	50.00	536.00	0.34
17-13-02-03-02-008.000	Timmerman, Delbert T. & Wilda G	40 Mersey Ct.	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 35	One Lot -	50.00	536.00	0.34
17-13-02-03-02-009.000	Thomas, David S. & Kathryn L	50 Mersey Ct	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 36	One Lot -	50.00	536.00	0.34
17-13-02-03-02-010.000	York, Walter E. & Georgia Sue	58 Mersey Ct	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 37	One Lot -	50.00	536.00	0.34
17-13-02-03-02-011.000	Kosch, Susan W	51 Mersey Ct	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 38	One Lot -	50.00	536.00	0.34

Parcel	Owner	Address	City	State	Zip	Description1	Description 2	Acres	MntAsmt	RecAsmt	RecPer
17-13-02-03-02-012.000	Ebeling, August A	41 Mersey Ct	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 39	One Lot	50.00	536.00	0.34
17-13-02-03-02-013.000	Airgood, Louis	11006 Tottenham Dr	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 40	One Lot	50.00	536.00	0.34
17-13-02-03-02-014.000	Schafer, Cindy M.	10946 Tottenham Dr	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 41	One Lot	50.00	536.00	0.34
17-13-02-03-02-015.000	Gilliam, Kenneth E. & Martha	10930 Tottenham Dr	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 42	One Lot	50.00	536.00	0.34
17-13-02-03-02-016.000	McWilliams, Kathryn J. Trustee	10926 Tottenham Dr	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 43	One Lot	50.00	536.00	0.34
17-13-02-03-02-017.000	Granger, Susan Cahill	10916 Tottenham Dr	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 44	One Lot	50.00	536.00	0.34
17-13-02-03-02-018.000	Hart, Marjorie & Pamela Trout Jt/Rs	31 Manchester Ct	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 13	One Lot	50.00	536.00	0.34
17-13-02-03-02-019.000	Dearmond, Douglas & Rebecca	10842 Tottenham Dr	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 14	One Lot	50.00	536.00	0.34
17-13-02-03-02-020.000	Nickel, John C & Marjorie	43 Manchester Ct	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 15	One Lot	50.00	536.00	0.34
17-13-02-03-02-021.000	Gassman, Dean & Gloria	53 Manchester Ct	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 16	One Lot	50.00	536.00	0.34
17-13-02-03-02-022.000	Causey, Kevin Allen & Julienne	52 Manchester Ct	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 46	One Lot	50.00	536.00	0.34
17-13-02-03-02-023.000	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3	Meridian Suburban Lot 17	One Lot	50.00	536.00	0.34
17-13-02-03-02-024.000	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3	Meridian Suburban Lot 47	One Lot	50.00	536.00	0.34
17-13-02-03-02-025.000	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3	Meridian Suburban Lot 48	One Lot	50.00	536.00	0.34
17-13-02-03-02-026.000	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3	Meridian Suburban Lot 49	One Lot	50.00	536.00	0.34
17-13-02-03-02-027.000	Alley, Eleanor	42 Manchester Ct	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 45	One Lot	50.00	536.00	0.34
17-13-02-03-02-028.000	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3	Meridian Suburban Lot 50	One Lot	50.00	536.00	0.34
17-13-02-03-02-029.000	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3	Meridian Suburban Lot 51	One Lot	50.00	536.00	0.34
17-13-02-03-02-030.000	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3	Meridian Suburban Lot 52	One Lot	50.00	536.00	0.34
17-13-02-03-02-031.000	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3	Meridian Suburban Lot 53	One Lot	50.00	536.00	0.34
17-13-02-03-02-032.000	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3	Meridian Suburban Lot 54	One Lot	50.00	536.00	0.34
17-13-02-03-02-033.000	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3	Meridian Suburban Lot 55	One Lot	50.00	536.00	0.34
17-13-02-03-02-034.000	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3	Meridian Suburban Lot 56	One Lot	50.00	536.00	0.34
17-13-02-03-02-035.000	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3	Meridian Suburban Lot 57	One Lot	50.00	536.00	0.34
17-13-02-03-03-001.000	Schleicher, Earl H. I & Julia	11 W. 111th St	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 1	One Lot	50.00	536.00	0.34
17-13-02-03-03-002.000	Renschler, John W	11035 Tottenham Dr	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 2	One Lot	50.00	536.00	0.34
17-13-02-03-03-003.000	Chambers, Charles & Adrienne	11025 Tottenham Dr	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 3	One Lot	50.00	536.00	0.34
17-13-02-03-03-004.000	Scott, Robert E. & Carol J	11015 Tottenham Dr	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 4	One Lot	50.00	536.00	0.34
17-13-02-03-03-005.000	Yang, Tongchee Y. & Pang Vang	11005 Tottenham Dr	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 5	One Lot	50.00	536.00	0.34
17-13-02-03-03-006.000	Stickler, Bruce H.	4251 Twilight Dr	Indianapolis	IN	46254	S2 T17 R3	Meridian Suburban Lot 6	One Lot	50.00	536.00	0.34
17-13-02-03-03-007.000	Bickers, Wesley H. Sr & Carlene	10941 Tottenham Dr	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 7	One Lot	50.00	536.00	0.34
17-13-02-03-03-008.000	Owens, Michael E. & Sherry	3804 Lafayette Rd	Indianapolis	IN	46254	S2 T17 R3	Meridian Suburban Lot 8	One Lot	50.00	536.00	0.34
17-13-02-03-03-009.000	St. John, Joshua D. & Myah A. Barnes JT	10921 Tottenham Dr	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 9	One Lot	50.00	536.00	0.34
17-13-02-03-03-010.000	Courtney, June	10911 Tottenham Dr	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 10	One Lot	50.00	536.00	0.34
17-13-02-03-03-011.000	Paris, Anthony & Jeannette	10901 Tottenham Dr	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 11	One Lot	50.00	536.00	0.34
17-13-02-03-03-012.000	Mulrey, John T. Sr & JoAnn	10845 Tottenham Dr	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 12	One Lot	50.00	536.00	0.34
99-99-99-99-999.001	Hamilton County Highway Dept.	1700 S. 10th St.	Noblesville	IN	46060	Humber Ct, Manchester Ct	Tottenham Dr, Liverpool Dr, Mersey Ct	11.04	110.40	32,203.40	20.21
99-99-99-99-999.002	Indiana Dept. of Transportation	32 S. Broadway St.	Greenfield	IN	46140	S2 T17 R3	U.S. 31	57.24	572.40	22,037.40	13.83
99-99-99-99-999.005	City of Carmel, Clerk Treasurer	One Civic Square	Carmel	IN	46032	S2 T17 R3	Penn & 111th	10.71	107.10	4,834.35	3.03

Acres: 155.52 7,873.00 159,348.35 100.00
+ Lots: 57 ^m R
= 212.52

Meridian Suburban Drain
 June 24, 2002 at 9:05 A.M.
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City of Carmel will have
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Damages	0.00	0.00	Zero

Parcel	Owner	Address	City	State	Zip	Description 1	Description 2	Ac. Ben	MntAsmt	RecAsmt	RecPer
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16-13-02-00-00-002.001	Fidelity Office Bldg II lp c/o REI Inv.	11711 N. Pennsylvania St., Ste. 200	Carmel	IN	46032	S2 T17 R3 8.22 Ac	Commercial	7.72	579.00	8,908.88	5.91
16-13-02-00-00-002.101	Fidelity Office Building The	11711 N. Pennsylvania St., Ste. 200	Carmel	IN	46032	S2 T17 R3 0.80 Ac	Commercial	0.80	75.00	923.20	0.61
16-13-02-00-00-002.111	Fidelity Office Bldg II lp c/o REI Inv.	11711 N. Pennsylvania St., Ste. 200	Carmel	IN	46032	S2 T17 R3 0.79 Ac	Commercial	0.79	75.00	911.66	0.60
16-13-02-00-00-002.112	Timarron Capital Group Llc	P.O. Box 796	Carmel	IN	46082	S2 T17 R3 0.84 Ac	Commercial	0.84	75.00	969.36	0.64
16-13-02-00-00-002.121	Timarron Capital Group Llc	P.O. Box 796	Carmel	IN	46082	S2 T17 R3 0.68 Ac	Commercial	0.68	75.00	784.72	0.52
16-13-02-00-00-003.001	Sepro Development Company II LLC	11550 N. Meridian St, Ste 600	Carmel	IN	46032	S2 T17 R3 8.12 Ac	Commercial	8.12	609.00	9,370.48	6.21
16-13-02-00-00-003.002	Fidelity Office Bldg II lp c/o REI Inv.	11711 N. Pennsylvania St., Ste. 200	Carmel	IN	46032	S2 T17 R3 1.02 Ac	Commercial	0.52	75.00	600.08	0.40
16-13-02-00-00-003.004	Scott, Suzanne & Walter TR c/o Magnum Resourc	302 S. 36th St, Ste 800	Omaha	NE	68131	S2 T17 R3 2.36 Ac	Commercial	2.36	177.00	2,723.44	1.81
16-13-02-00-00-003.005	11460 Meridian St N LLC c/o Blue & Co LLC	11460 Meridian St N	Carmel	IN	46032	S2 T17 R3 3.20 Ac	Commercial	2.85	213.76	3,288.90	2.18
16-13-02-00-00-004.000	Scott, Suzanne & Walter TR Charitable Remainde	302 S. 36th St, Ste 800	Omaha	NE	68131	S2 T17 R3 4.33 Ac	Commercial	3.70	277.50	4,269.80	2.83
16-13-02-00-00-004.001	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3 0.17 Ac	Undeveloped/Agricultural	0.17	15.00	65.45	0.04
16-13-02-00-00-005.000	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3 13.71 Ac	Undeveloped/Agricultural	13.71	68.56	5,278.35	3.50
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16-13-02-00-00-007.002	Three Penn Mark Plaza c/o Colliers Turley Martin	2500 One American Square	Indianapolis	IN	46282	S2 T17 R3 3.83 Ac	Commercial	3.83	287.26	4,419.82	2.93
16-13-02-00-00-007.004	Penn Mark c/o Angelo, Gordon & Co LP	245 Park Ave, 26th Flr	New York	NY	10167	S2 T17 R3 5.09 Ac	Commercial	5.09	381.76	5,873.86	3.89
16-13-02-00-00-007.005	Capstar Indianapolis Co Llc c/o Deloitte & Touche	P.O. Box 811280	Chicago	IL	60681-1280	S2 T17 R3 0.08 Ac	Commercial	0.08	75.00	92.32	0.06
16-13-02-00-00-007.301	Capstar Indianapolis Co Llc c/o Deloitte & Touche	P.O. Box 811280	Chicago	IL	60681-1280	S2 T17 R3 3.90 Ac	Commercial	3.90	292.50	4,500.60	2.98
16-13-02-00-00-023.000	Valley Development Co Inc c/o Stephen Valinet	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3 15.08 Ac	Undeveloped/Agricultural	6.50	32.50	2,502.50	1.66
17-13-02-03-01-001.000	Noble, Vance A. & Roslyn L.	127 111th St W	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 27	One Lot	50.00	536.00	0.36
17-13-02-03-01-002.000	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3	Meridian Suburban Lot 26	One Lot	50.00	536.00	0.36
17-13-02-03-01-003.000	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3	Meridian Suburban Lot 25	One Lot	50.00	536.00	0.36
17-13-02-03-01-004.000	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3	Meridian Suburban Lot 24	One Lot	50.00	536.00	0.36
17-13-02-03-01-005.000	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3	Meridian Suburban Lot 23	One Lot	50.00	536.00	0.36
17-13-02-03-01-006.000	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3	Meridian Suburban Lot 22	One Lot	50.00	536.00	0.36
17-13-02-03-01-007.000	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3	Meridian Suburban Lot 21	One Lot	50.00	536.00	0.36
17-13-02-03-01-008.000	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3	Meridian Suburban Lot 20	One Lot	50.00	536.00	0.36
17-13-02-03-01-009.000	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3	Meridian Suburban Lot 19	One Lot	50.00	536.00	0.36
17-13-02-03-01-010.000	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3	Meridian Suburban Lot 18	One Lot	50.00	536.00	0.36
17-13-02-03-02-001.000	Cox, Eric Stephen & Deborah L.	107 W. 111th St	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 28	One Lot	50.00	536.00	0.36
17-13-02-03-02-002.000	DeCaudin, Jean Pierre Pascal & Jeanine	59 W. 111th St.	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 29	One Lot	50.00	536.00	0.36
17-13-02-03-02-003.000	Jones, Cathy Corbitt	49 W 111th St	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 30	One Lot	50.00	536.00	0.36
17-13-02-03-02-004.000	Ruden, Susan L. & Jeffery S. Jacob	39 W. 111th St	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 31	One Lot	50.00	536.00	0.36
17-13-02-03-02-005.000	Conklin, Philip 1/2 & Philip L. Conklin Lvg	31 W. 111th St	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 32	One Lot	50.00	536.00	0.36
17-13-02-03-02-006.000	Brehm, John E. & Rhonda Ann	11032 Tottenham Dr	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 33	One Lot	50.00	536.00	0.36
17-13-02-03-02-007.000	Eichman, Scott W & Diana	11022 Tottenham Dr	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 34	One Lot	50.00	536.00	0.36
17-13-02-03-02-008.000	Timmerman, Delbert T. & Wilda G	40 Mersey Ct.	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 35	One Lot	50.00	536.00	0.36
17-13-02-03-02-009.000	Thomas, David S. & Kathryn L	50 Mersey Ct	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 36	One Lot	50.00	536.00	0.36
17-13-02-03-02-010.000	York, Walter E. & Georgia Sue	58 Mersey Ct	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 37	One Lot	50.00	536.00	0.36
17-13-02-03-02-011.000	Kosch, Susan W	51 Mersey Ct	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 38	One Lot	50.00	536.00	0.36

Parcel	Owner	Address	City	State	Zip	Description 1	Description 2	Acres	MntAsmt	RecAsmt	RecPer	
17-13-02-03-02-012.000	Ebeling, August A	41 Mersey Ct	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 39	One Lot	50.00	536.00	0.36	
17-13-02-03-02-013.000	Airgood, Louis	11006 Tottenham Dr	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 40	One Lot	50.00	536.00	0.36	
17-13-02-03-02-014.000	Schafer, Cindy M.	10946 Tottenham Dr	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 41	One Lot	50.00	536.00	0.36	
17-13-02-03-02-015.000	Gilliam, Kenneth E. & Martha	10930 Tottenham Dr	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 42	One Lot	50.00	536.00	0.36	
17-13-02-03-02-016.000	McWilliams, Kathryn J. Trustee	10926 Tottenham Dr	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 43	One Lot	50.00	536.00	0.36	
17-13-02-03-02-017.000	Granger, Susan Cahill	10916 Tottenham Dr	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 44	One Lot	50.00	536.00	0.36	
17-13-02-03-02-018.000	Hart, Marjorie & Pamela Trout Jt/Rs	31 Manchester Ct	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 13	One Lot	50.00	536.00	0.36	
17-13-02-03-02-019.000	Dearmond, Douglas & Rebecca	10842 Tottenham Dr	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 14	One Lot	50.00	536.00	0.36	
17-13-02-03-02-020.000	Nickel, John C & Marjorie	43 Manchester Ct	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 15	One Lot	50.00	536.00	0.36	
17-13-02-03-02-021.000	Gassman, Dean & Gloria	53 Manchester Ct	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 16	One Lot	50.00	536.00	0.36	
17-13-02-03-02-022.000	Causey, Kevin Allen & Julienne	52 Manchester Ct	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 46	One Lot	50.00	536.00	0.36	
X 17-13-02-03-02-023.000	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3	Meridian Suburban Lot 17	One Lot	50.00	536.00	0.36	
X 17-13-02-03-02-024.000	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3	Meridian Suburban Lot 47	One Lot	50.00	536.00	0.36	
X 17-13-02-03-02-025.000	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3	Meridian Suburban Lot 48	One Lot	50.00	536.00	0.36	
X 17-13-02-03-02-026.000	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3	Meridian Suburban Lot 49	One Lot	50.00	536.00	0.36	
X 17-13-02-03-02-027.000	Alley, Eleanor	42 Manchester Ct	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 45	One Lot	50.00	536.00	0.36	
X 17-13-02-03-02-028.000	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3	Meridian Suburban Lot 50	One Lot	50.00	536.00	0.36	
X 17-13-02-03-02-029.000	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3	Meridian Suburban Lot 51	One Lot	50.00	536.00	0.36	
X 17-13-02-03-02-030.000	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3	Meridian Suburban Lot 52	One Lot	50.00	536.00	0.36	
X 17-13-02-03-02-031.000	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3	Meridian Suburban Lot 53	One Lot	50.00	536.00	0.36	
X 17-13-02-03-02-032.000	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3	Meridian Suburban Lot 54	One Lot	50.00	536.00	0.36	
X 17-13-02-03-02-033.000	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3	Meridian Suburban Lot 55	One Lot	50.00	536.00	0.36	
X 17-13-02-03-02-034.000	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3	Meridian Suburban Lot 56	One Lot	50.00	536.00	0.36	
X 17-13-02-03-02-035.000	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3	Meridian Suburban Lot 57	One Lot	50.00	536.00	0.36	
17-13-02-03-03-001.000	Schleicher, Earl H. I & Julia	11 W. 111th St	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 1	One Lot	50.00	536.00	0.36	
17-13-02-03-03-002.000	Renschler, John W	11035 Tottenham Dr	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 2	One Lot	50.00	536.00	0.36	
17-13-02-03-03-003.000	Chambers, Charles & Adrienne	11025 Tottenham Dr	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 3	One Lot	50.00	536.00	0.36	
X 17-13-02-03-03-004.000	Scott, Robert E. & Carol J	11015 Tottenham Dr	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 4	One Lot	50.00	536.00	0.36	
17-13-02-03-03-005.000	Yang, Tongchee Y. & Pang Vang	11005 Tottenham Dr	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 5	One Lot	50.00	536.00	0.36	
17-13-02-03-03-006.000	Stickle, Bruce H.	4251 Twilight Dr	Indianapolis	IN	46254	S2 T17 R3	Meridian Suburban Lot 6	One Lot	50.00	536.00	0.36	
17-13-02-03-03-007.000	Bickers, Wesley H. Sr & Carlene	10941 Tottenham Dr	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 7	One Lot	50.00	536.00	0.36	
17-13-02-03-03-008.000	Owens, Michael E. & Sherry	3804 Lafayette Rd	Indianapolis	IN	46254	S2 T17 R3	Meridian Suburban Lot 8	One Lot	50.00	536.00	0.36	
17-13-02-03-03-009.000	St. John, Joshua D. & Myah A. Barnes JT	10921 Tottenham Dr	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 9	One Lot	50.00	536.00	0.36	
17-13-02-03-03-010.000	Courtney, June	10911 Tottenham Dr	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 10	One Lot	50.00	536.00	0.36	
17-13-02-03-03-011.000	Paris, Anthony & Jeannette	10901 Tottenham Dr	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 11	One Lot	50.00	536.00	0.36	
17-13-02-03-03-012.000	Mulrey, John T. Sr & JoAnn	10845 Tottenham Dr	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 12	One Lot	50.00	536.00	0.36	
99-99-99-99-999.001	Hamilton County Highway Dept.	1700 S. 10th St	Noblesville	IN	46060	Humber Ct, Manchester Ct	Tottenham Dr, Liverpool Dr, Mers	11.04	110.40	32,203.40	21.35	
99-99-99-99-999.002	Indiana Dept. of Transportation	32 S. Broadway St	Greenfield	IN	46140	S2 T17 R3	U.S. 31	57.24	572.40	22,037.40	14.61	
99-99-99-99-999.005	City of Carmel, Clerk Treasurer	One Civic Square	Carmel	IN	46032	S2 T17 R3	Penn & 111th	10.71	107.10	4,834.35	3.21	
								Acres:	155.52	7,098.10	150,835.52	100.00
								Lots:	57			

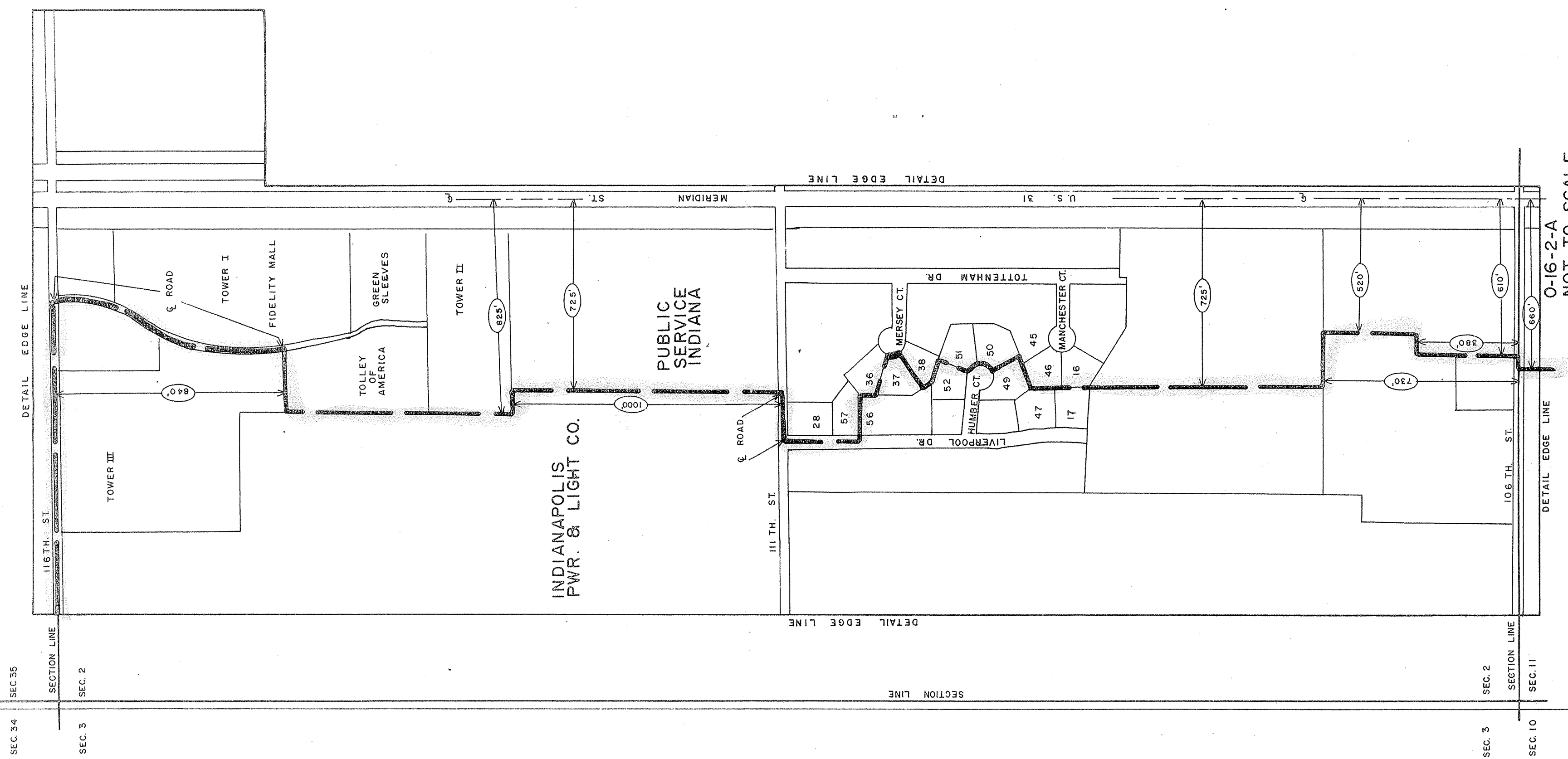
Meridian Suburban Drain
 June 24, 2002 at 9:05 A.M.
 Hearing for reconstruction & maintenance.

	Maint.	Recnstr.
Commercial	75.00	1154.00
Plat	50.00	536.00
Roads	10.00	385.00
Ag	5.00	385.00

Parcel	Dain	Owner	Address	City	State	Zip	Description1	Description 2	Acres	MntAsmt	Assmt.	RecPer
17-13-02-00-00-001.000	Meridian Suburban	Jec Partnership LP c/o John N. Pittman	201 W. 106th St.	Indianapolis	IN	46290	S2 T17 R3 68.60 Ac	Undeveloped/Agricultural	3.80	285.00	1463.00	0.97
16-13-02-00-00-002.001	Meridian Suburban	Fidelity Office Bldg II lp c/o REI Inv.	11711 N. Pennsylvania St., Ste. 200	Carmel	IN	46032	S2 T17 R3 8.22 Ac	Commercial	7.72	579.00	8908.88	5.91
16-13-02-00-00-002.101	Meridian Suburban	Fidelity Office Building The	11711 N. Pennsylvania St., Ste. 200	Carmel	IN	46032	S2 T17 R3 0.80 Ac	Commercial	0.80	75.00	923.20	0.61
16-13-02-00-00-002.111	Meridian Suburban	Fidelity Office Bldg II lp c/o REI Inv.	11711 N. Pennsylvania St., Ste. 200	Carmel	IN	46032	S2 T17 R3 0.79 Ac	Commercial	0.79	75.00	911.66	0.60
16-13-02-00-00-002.112	Meridian Suburban	Timarron Capital Group Llc	P.O. Box 796	Carmel	IN	46082	S2 T17 R3 0.84 Ac	Commercial	0.84	75.00	969.36	0.64
16-13-02-00-00-002.121	Meridian Suburban	Timarron Capital Group Llc	P.O. Box 796	Carmel	IN	46082	S2 T17 R3 0.68 Ac	Commercial	0.68	75.00	784.72	0.52
16-13-02-00-00-003.001	Meridian Suburban	Sepro Development Company II LLC	11550 N. Meridian St, Ste 600	Carmel	IN	46032	S2 T17 R3 8.12 Ac	Commercial	8.12	609.00	9370.48	6.21
16-13-02-00-00-003.002	Meridian Suburban	Fidelity Office Bldg II lp c/o REI Inv.	11711 N. Pennsylvania St., Ste. 200	Carmel	IN	46032	S2 T17 R3 1.02 Ac	Commercial	0.52	75.00	600.08	0.40
16-13-02-00-00-003.004	Meridian Suburban	Scott, Suzanne & Walter TR c/o Magnum Resources	302 S. 36th St, Ste 800	Omaha	NE	68131	S2 T17 R3 2.36 Ac	Commercial	2.36	177.00	2723.44	1.81
16-13-02-00-00-003.005	Meridian Suburban	11460 Meridian St N LLC c/o Blue & Co LLC	11460 Meridian St N	Carmel	IN	46032	S2 T17 R3 3.20 Ac	Commercial	2.85	213.75	3288.90	2.18
16-13-02-00-00-004.000	Meridian Suburban	Scott, Suzanne & Walter TR Charitable Remainder Unitrust	302 S. 36th St, Ste 800	Omaha	NE	68131	S2 T17 R3 4.33 Ac	Commercial	3.70	277.50	4269.80	2.83
16-13-02-00-00-004.001	Meridian Suburban	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3 0.17 Ac	Undeveloped/Agricultural	0.17	75.00	65.45	0.04
16-13-02-00-00-005.000	Meridian Suburban	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3 13.71 Ac	Undeveloped/Agricultural	13.71	1028.25	5278.35	3.50
16-13-02-00-00-006.000	Meridian Suburban	NRC Corp c/o Stephen L Valinet	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3 11.07 Ac	Commercial	11.07	830.25	4261.95	2.83
16-13-02-00-00-007.002	Meridian Suburban	Three Penn Mark Plaza c/o Colliers Turley Martin Tucker	2500 One American Square	Indianapolis	IN	46282	S2 T17 R3 3.83 Ac	Commercial	3.83	287.25	4419.82	2.93
16-13-02-00-00-007.004	Meridian Suburban	Penn Mark c/o Angelo, Gordon & Co LP	245 Park Ave, 26th Flr	New York	NY	10167	S2 T17 R3 5.09 Ac	Commercial	5.09	381.75	5873.86	3.89
16-13-02-00-00-007.005	Meridian Suburban	Capstar Indianapolis Co Llc c/o Deloitte & Touche	P.O. Box 811280	Chicago	IL	60681-1280	S2 T17 R3 0.08 Ac	Commercial	0.08	75.00	92.32	0.06
16-13-02-00-00-007.301	Meridian Suburban	Capstar Indianapolis Co Llc c/o Deloitte & Touche	P.O. Box 811280	Chicago	IL	60681-1280	S2 T17 R3 3.90 Ac	Commercial	3.90	292.50	4500.60	2.98
16-13-02-00-00-023.000	Meridian Suburban	Valley Development Co Inc c/o Stephen Valinet	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3 15.08 Ac	Undeveloped/Agricultural	6.50	487.50	2502.50	1.66
17-13-02-03-01-001.000	Meridian Suburban	Noble, Vance A. & Roslyn L.	127 111th St W	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 27	One Lot	50.00	536.00	0.36
17-13-02-03-01-002.000	Meridian Suburban	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3	Meridian Suburban Lot 26	One Lot	50.00	536.00	0.36
17-13-02-03-01-003.000	Meridian Suburban	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3	Meridian Suburban Lot 25	One Lot	50.00	536.00	0.36
17-13-02-03-01-004.000	Meridian Suburban	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3	Meridian Suburban Lot 24	One Lot	50.00	536.00	0.36
17-13-02-03-01-005.000	Meridian Suburban	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3	Meridian Suburban Lot 23	One Lot	50.00	536.00	0.36
17-13-02-03-01-006.000	Meridian Suburban	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3	Meridian Suburban Lot 22	One Lot	50.00	536.00	0.36
17-13-02-03-01-007.000	Meridian Suburban	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3	Meridian Suburban Lot 21	One Lot	50.00	536.00	0.36
17-13-02-03-01-008.000	Meridian Suburban	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3	Meridian Suburban Lot 20	One Lot	50.00	536.00	0.36
17-13-02-03-01-009.000	Meridian Suburban	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3	Meridian Suburban Lot 19	One Lot	50.00	536.00	0.36
17-13-02-03-01-010.000	Meridian Suburban	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033	S2 T17 R3	Meridian Suburban Lot 18	One Lot	50.00	536.00	0.36
17-13-02-03-02-001.000	Meridian Suburban	Cox, Eric Stephen & Deborah L.	107 W. 111th St	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 28	One Lot	50.00	536.00	0.36
17-13-02-03-02-002.000	Meridian Suburban	DeCaudin, Jean Pierre Pascal & Jeanine	59 W. 111th St.	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 29	One Lot	50.00	536.00	0.36
17-13-02-03-02-003.000	Meridian Suburban	Jones, Cathy Corbitt	49 W 111th St	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 30	One Lot	50.00	536.00	0.36
17-13-02-03-02-004.000	Meridian Suburban	Ruden, Susan L. & Jeffery S. Jacob	39 W. 111th St	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 31	One Lot	50.00	536.00	0.36
17-13-02-03-02-005.000	Meridian Suburban	Conklin, Philip 1/2 & Philip L. Conklin Lvg	31 W. 111th St	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 32	One Lot	50.00	536.00	0.36
17-13-02-03-02-006.000	Meridian Suburban	Brehm, John E. & Rhonda Ann	11032 Tottenham Dr	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 33	One Lot	50.00	536.00	0.36
17-13-02-03-02-007.000	Meridian Suburban	Eichman, Scott W & Diana	11022 Tottenham Dr	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 34	One Lot	50.00	536.00	0.36
17-13-02-03-02-008.000	Meridian Suburban	Timmerman, Delbert T. & Wilda G	40 Mersey Ct.	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 35	One Lot	50.00	536.00	0.36
17-13-02-03-02-009.000	Meridian Suburban	Thomas, David S. & Kathryn L	50 Mersey Ct	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 36	One Lot	50.00	536.00	0.36
17-13-02-03-02-010.000	Meridian Suburban	York, Walter E. & Georgia Sue	58 Mersey Ct	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 37	One Lot	50.00	536.00	0.36
17-13-02-03-02-011.000	Meridian Suburban	Kosch, Susan W	51 Mersey Ct	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 38	One Lot	50.00	536.00	0.36
17-13-02-03-02-012.000	Meridian Suburban	Ebeling, August A	41 Mersey Ct	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 39	One Lot	50.00	536.00	0.36
17-13-02-03-02-013.000	Meridian Suburban	Airgood, Louis	11006 Tottenham Dr	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 40	One Lot	50.00	536.00	0.36
17-13-02-03-02-014.000	Meridian Suburban	Schafer, Cindy M.	10946 Tottenham Dr	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 41	One Lot	50.00	536.00	0.36
17-13-02-03-02-015.000	Meridian Suburban	Gilliam, Kenneth E. & Martha	10930 Tottenham Dr	Carmel	IN	46032	S2 T17 R3	Meridian Suburban Lot 42	One Lot	50.00	536.00	0.36

17-13-02-03-02-016.000	Meridian Suburban	McWilliams, Kathryn J. Trustee	10926 Tottenham Dr	Carmel	IN	46032 S2 T17 R3	Meridian Suburban Lot 43	One Lot	50.00	536.00	0.36	
17-13-02-03-02-017.000	Meridian Suburban	Granger, Susan Cahill	10916 Tottenham Dr	Carmel	IN	46032 S2 T17 R3	Meridian Suburban Lot 44	One Lot	50.00	536.00	0.36	
17-13-02-03-02-018.000	Meridian Suburban	Hart, Marjorie & Pamela Trout Jt/Rs	31 Manchester Ct	Carmel	IN	46032 S2 T17 R3	Meridian Suburban Lot 13	One Lot	50.00	536.00	0.36	
17-13-02-03-02-019.000	Meridian Suburban	Dearmond, Douglas & Rebecca	10842 Tottenham Dr	Carmel	IN	46032 S2 T17 R3	Meridian Suburban Lot 14	One Lot	50.00	536.00	0.36	
17-13-02-03-02-020.000	Meridian Suburban	Nickel, John C & Marjorie	43 Manchester Ct	Carmel	IN	46032 S2 T17 R3	Meridian Suburban Lot 15	One Lot	50.00	536.00	0.36	
17-13-02-03-02-021.000	Meridian Suburban	Gassman, Dean & Gloria	53 Manchester Ct	Carmel	IN	46032 S2 T17 R3	Meridian Suburban Lot 16	One Lot	50.00	536.00	0.36	
17-13-02-03-02-022.000	Meridian Suburban	Causey, Kevin Allen & Julienne	52 Manchester Ct	Carmel	IN	46032 S2 T17 R3	Meridian Suburban Lot 46	One Lot	50.00	536.00	0.36	
17-13-02-03-02-023.000	Meridian Suburban	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033 S2 T17 R3	Meridian Suburban Lot 17	One Lot	50.00	536.00	0.36	
17-13-02-03-02-024.000	Meridian Suburban	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033 S2 T17 R3	Meridian Suburban Lot 47	One Lot	50.00	536.00	0.36	
17-13-02-03-02-025.000	Meridian Suburban	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033 S2 T17 R3	Meridian Suburban Lot 48	One Lot	50.00	536.00	0.36	
17-13-02-03-02-026.000	Meridian Suburban	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033 S2 T17 R3	Meridian Suburban Lot 49	One Lot	50.00	536.00	0.36	
17-13-02-03-02-027.000	Meridian Suburban	Alley, Eleanor	42 Manchester Ct	Carmel	IN	46032 S2 T17 R3	Meridian Suburban Lot 45	One Lot	50.00	536.00	0.36	
17-13-02-03-02-028.000	Meridian Suburban	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033 S2 T17 R3	Meridian Suburban Lot 50	One Lot	50.00	536.00	0.36	
17-13-02-03-02-029.000	Meridian Suburban	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033 S2 T17 R3	Meridian Suburban Lot 51	One Lot	50.00	536.00	0.36	
17-13-02-03-02-030.000	Meridian Suburban	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033 S2 T17 R3	Meridian Suburban Lot 52	One Lot	50.00	536.00	0.36	
17-13-02-03-02-031.000	Meridian Suburban	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033 S2 T17 R3	Meridian Suburban Lot 53	One Lot	50.00	536.00	0.36	
17-13-02-03-02-032.000	Meridian Suburban	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033 S2 T17 R3	Meridian Suburban Lot 54	One Lot	50.00	536.00	0.36	
17-13-02-03-02-033.000	Meridian Suburban	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033 S2 T17 R3	Meridian Suburban Lot 55	One Lot	50.00	536.00	0.36	
17-13-02-03-02-034.000	Meridian Suburban	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033 S2 T17 R3	Meridian Suburban Lot 56	One Lot	50.00	536.00	0.36	
17-13-02-03-02-035.000	Meridian Suburban	Valley Development Co Inc	3641 Brumley Way	Carmel	IN	46033 S2 T17 R3	Meridian Suburban Lot 57	One Lot	50.00	536.00	0.36	
17-13-02-03-03-001.000	Meridian Suburban	Schleicher, Earl H. I & Julia	11 W. 111th St	Carmel	IN	46032 S2 T17 R3	Meridian Suburban Lot 1	One Lot	50.00	536.00	0.36	
17-13-02-03-03-002.000	Meridian Suburban	Renschler, John W	11035 Tottenham Dr	Carmel	IN	46032 S2 T17 R3	Meridian Suburban Lot 2	One Lot	50.00	536.00	0.36	
17-13-02-03-03-003.000	Meridian Suburban	Chambers, Charles & Adrienne	11025 Tottenham Dr	Carmel	IN	46032 S2 T17 R3	Meridian Suburban Lot 3	One Lot	50.00	536.00	0.36	
17-13-02-03-03-004.000	Meridian Suburban	Scott, Robert E. & Carol J	11015 Tottenham Dr	Carmel	IN	46032 S2 T17 R3	Meridian Suburban Lot 4	One Lot	50.00	536.00	0.36	
17-13-02-03-03-005.000	Meridian Suburban	Yang, Tongchee Y. & Pang Vang	11005 Tottenham Dr	Carmel	IN	46032 S2 T17 R3	Meridian Suburban Lot 5	One Lot	50.00	536.00	0.36	
17-13-02-03-03-006.000	Meridian Suburban	Stickle, Bruce H.	4251 Twilight Dr	Indianapolis	IN	46254 S2 T17 R3	Meridian Suburban Lot 6	One Lot	50.00	536.00	0.36	
17-13-02-03-03-007.000	Meridian Suburban	Bickers, Wesley H. Sr & Carlene	10941 Tottenham Dr	Carmel	IN	46032 S2 T17 R3	Meridian Suburban Lot 7	One Lot	50.00	536.00	0.36	
17-13-02-03-03-008.000	Meridian Suburban	Owens, Michael E. & Sherry	3804 Lafayette Rd	Indianapolis	IN	46254 S2 T17 R3	Meridian Suburban Lot 8	One Lot	50.00	536.00	0.36	
17-13-02-03-03-009.000	Meridian Suburban	St. John, Joshua D. & Myah A. Barnes JT	10921 Tottenham Dr	Carmel	IN	46032 S2 T17 R3	Meridian Suburban Lot 9	One Lot	50.00	536.00	0.36	
17-13-02-03-03-010.000	Meridian Suburban	Courtney, June	10911 Tottenham Dr	Carmel	IN	46032 S2 T17 R3	Meridian Suburban Lot 10	One Lot	50.00	536.00	0.36	
17-13-02-03-03-011.000	Meridian Suburban	Paris, Anthony & Jeannette	10901 Tottenham Dr	Carmel	IN	46032 S2 T17 R3	Meridian Suburban Lot 11	One Lot	50.00	536.00	0.36	
17-13-02-03-03-012.000	Meridian Suburban	Mulrey, John T. Sr & JoAnn	10845 Tottenham Dr	Carmel	IN	46032 S2 T17 R3	Meridian Suburban Lot 12	One Lot	50.00	536.00	0.36	
99-99-99-99-99-999.001	Meridian Suburban	Hamilton County Highway Dept.	1700 S. 10th St.	Noblesville	IN	46060 Humber Ct, Manchester Ct	Tottenham Dr, Liverpool Dr, Mersey Ct	11.04	110.40	32203.40	21.35	
99-99-99-99-99-999.002	Meridian Suburban	Indiana Dept. of Transportation	32 S. Broadway St.	Greenfield	IN	46140 S2 T17 R3	U.S. 31	57.24	572.40	22037.40	14.61	
99-99-99-99-99-999.005	Meridian Suburban	City of Carmel, Clerk Treasurer	One Civic Square	Carmel	IN	46032 S2 T17 R3	Penn & 111th	10.71	107.10	4834.35	3.21	
								Totals:	155.52	9,613.65	150,835.52	100.00
								57 Lots				

Approx. 181 acres Total		Acreage	% Total
Commercial Development	52.35	28.92	
Residential Development/Lots	25.48	14.08	
Forested Undeveloped/Ag	24.18	13.36	
Right-of-ways	78.99	43.64	
Totals:	181.00	100.00	



0-16-2-A
NOT TO SCALE

GREG MICHEEL

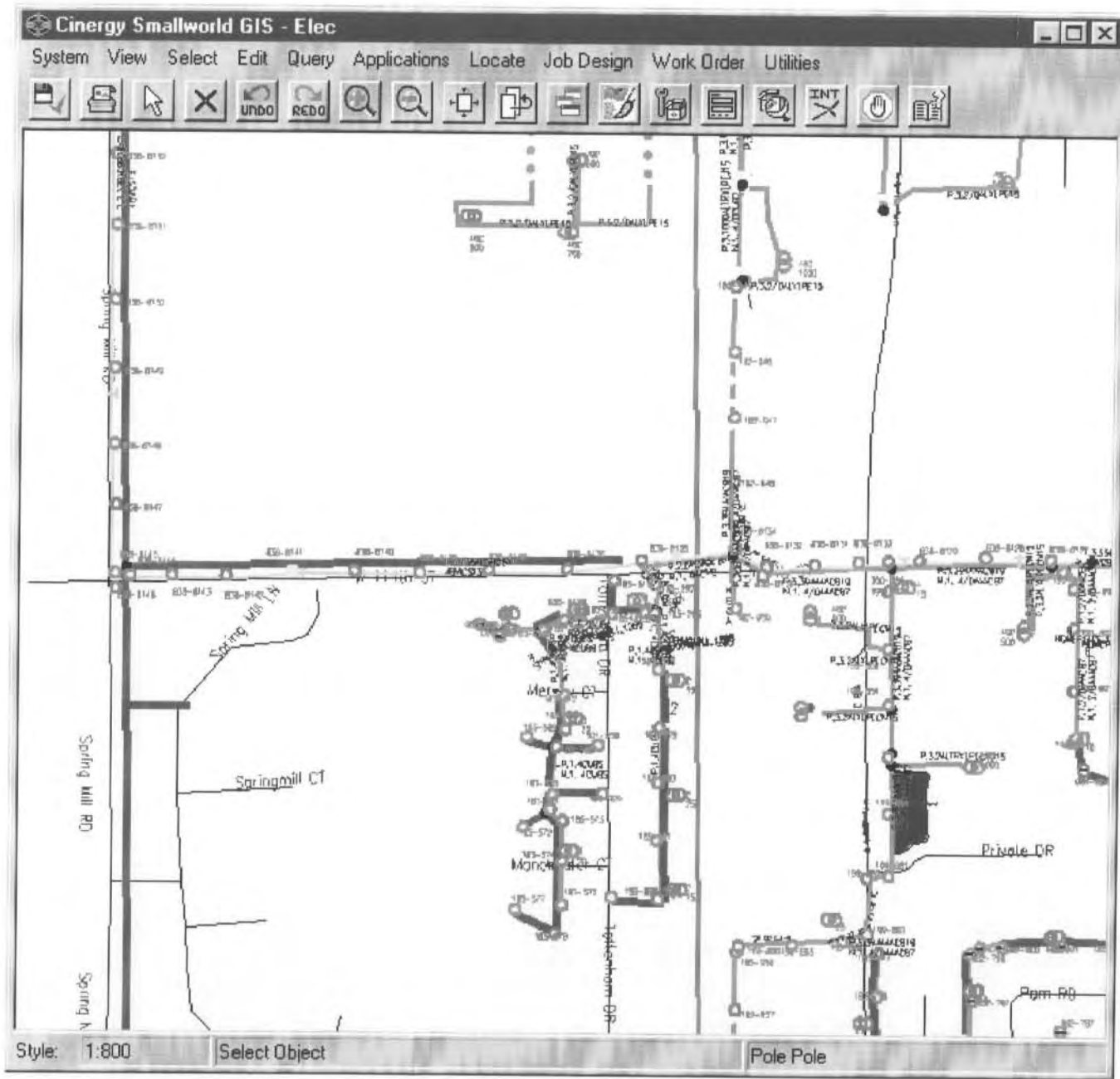
TEAM LEADER
LINES TEAM



ARLINGTON SERVICE CENTER
3600 N. ARLINGTON AVENUE
INDIANAPOLIS, INDIANA 46218-1807

OFFICE 317-261-5230
CELL 317-997-0091
FAX 317-261-5201
greg.micheel@aes.com

Area around 111th st between Springmill and Meridian



One Hamilton County Square Suite 188
Noblesville, IN 46060
Phone: (317) 776-9627
Fax: (317) 776-9628

**Hamilton County
Surveyor's Office**

Fax

To: Joyce Harrison

From: Tricia J. Banta *T.J.B.*

Fax: 317-581-2620

Date: June 18, 2002

Phone: 317-753-6933

Pages: 1 including cover

Re: Drainage Objection

CC:

Urgent **For Review** **Please Comment** **Please Reply** **Please Recycle**

•Comments: Attached is the objections that may be for causes as specified by law for the Meridian Suburban Subdivision. If you have any questions please call me at 776-8495. Thank you.

36-9-27-52 Reconstruction of drains; notice and hearing on surveyor's report and schedules; objections; final order

Sec. 52. (a) When the schedules of damages and assessments are completed and marked filed, the board shall fix a date, time, and place for a hearing on the reconstruction report of the county surveyor and on the schedules of damages and assessments, and shall prepare a notice for each owner of land affected by the reconstruction. The notice must state:

(1) the name and identifying number by which the proposed reconstruction is known;

(2) that the reconstruction report of the surveyor and the schedules of damages and benefits as determined by the board have been filed and are available for inspection in the office of the surveyor;

(3) that the land of the owner is shown by the schedule of damages to be damaged in the sum of ___ dollars;

(4) that the land of the owner is shown by the schedule of assessments to be assessed ___ percent of the total cost of reconstruction, and that ___ percent of the estimated total cost of the reconstruction is in the sum of ___ dollars;

(5) that the land of the owner is shown by the schedule of assessments to be annually assessed in the sum of ___ dollars for estimated periodic maintenance of the reconstruction; and

(6) the date, hour, and place of the hearing on the surveyor's reconstruction report and on the schedules of damages and assessments.

(b) Not less than thirty (30) nor more than forty (40) days before the date of the hearing, the board shall mail a copy of the notice in a five (5) day return envelope to each owner

named in the schedules of damages and assessments.

(c) The board shall publish a notice in accordance with IC 5-3-1. The notice must:

(1) identify the proposed reconstruction;

(2) be addressed to whom it may concern and to the addressee on each letter that was mailed under subsection (b) and was returned undelivered; and

(3) state that:

(A) the reconstruction report of the county surveyor and the schedules of damages and assessments made by the board have been filed and are available for public inspection in the office of the county surveyor; and

(B) a hearing will be held before the board on the report and schedules, specifying the time and place of hearing.

(d) Not less than five (5) days before the board's hearing on a reconstruction report, an owner of lands affected by the report or by the schedules of damages and assessments may file with the board written objections to the report, schedules, or both. The objections may be for one (1) or more of the following causes:

(1) The costs, damages, and expenses of the proposed reconstruction will exceed the benefits that will result to the owners of all land benefited.

(2) The objector is the owner of land assessed as benefited, and the benefits assessed against his land are excessive.

(3) The objector is the owner of land damaged by the reconstruction, and:

(A) the board failed to find that his land is damaged; or

(B) the damages assessed to his land are inadequate.

Each objector may file written evidence in support of his objections. The failure of an owner to file objections constitutes a waiver of his right to subsequently object, on the grounds stated in this subsection, to any final action of the board.

(e) On or before the day of the hearing, the county surveyor shall, and any owner of land affected by the proposed reconstruction may, cause written evidence to be filed in support of or in rebuttal to any objection filed under subsection (d).

(f) The board shall consider the objections and evidence filed, may adjourn the hearing from day to day or to a day certain, and may issue an order permitting additional written evidence to be filed in support of or in rebuttal to the objections and evidence previously filed.

(g) After considering all of the objections and evidence, the board may amend the schedules of damages and assessments, and the county surveyor may modify his report, as justice may require.

(h) Before final adjournment of the hearing, the board shall determine in writing whether the costs, damages, and expenses of the proposed reconstruction will be less than the benefits accruing to the owners of land benefited by the construction. If the board answers this question in the negative, it shall dismiss the proceedings. If the board answers the question in the affirmative, it shall adopt the reconstruction report of the county surveyor and the schedule of damages and assessments, including annual assessments for periodic maintenance, as originally filed or as amended, into its findings, and issue an order declaring the proposed reconstruction established. The board shall mark the findings and order filed and publicly announce the findings and order at the hearing. Immediately after that, the board shall publish a notice in accordance with IC 5-3-1. The notice must identify the drainage proceedings and state that the findings and order of the board have been filed

PittmanPartners

FAX COVER SHEET

To: TRISUA BANTA
Company: HAMILTON CO. SURVEYOR'S OFFICE
Phone: 776-8495
Fax: 776-9628

From: Neal Smith
Company: Pittman Partners, Inc.
Phone: (317) 580-0883
Fax: (317) 580-9786

Date: 5-30-02

**Pages including this
cover page:** 1

Comments:

COPY OF MY
BUSINESS CARD

PittmanPartners 

Neal Smith

P.O. Box 554 • Carmel, IN 46082
(317) 580-0883 • (317) 580-9693
(317) 580-9786 Fax

CONFIDENTIALITY NOTICE: This message is for the exclusive use of the individual or entity to which it is addressed and is confidential. If you are not the addressee or an employee or agent of the addressee responsible for delivering it to the addressee, please do not read, use, disclose, copy or distribute this message and do not take any action in reliance upon it. If you have received this message in error, please notify us immediately by telephone to arrange for its return.

HAMILTON COUNTY SURVEYOR'S OFFICE

One Hamilton County Square, Suite 188

Noblesville, IN 46060

Phone: 317-776-8495

Fax: 317-776-9628

LETTER OF TRANSMITTAL

Date: 06/07/2002

Company: Pittman Partners, Inc.

P.O. Box 554

Carmel, In 46082

Attention: Neil Smith

Re: Meridian Suburban Subdivision

We are sending you the following items:

Plans Map Copy of Letter Change Order Other

Copies	Date	Description
1	06/07/02	Preliminary Constructions plans for the Meridian Suburban Subdivision Drainage Project.

These are transmitted as checked below:

For your file As requested For Review & Comment For Approval
 For your use

REMARKS:

Please call me with any questions or concerns.

Thank You.

Signed: _____

Tricia J. Banta

Tricia J. Banta

Date: _____

6/7/02