(5) 4/7/2008
JF / KK

AZ: 79°47'26"
BS - 234
HS - 5.47/1.668m

T @ 140
BNH = 4.93/1.497
HI = 5.388'
ΔH = 0.006
ΔV = 0.027

BS (ZA - 94°15'39"
SD - 802.576')

FS 90 (HS = 4.77/1.453m)
set rebar + cap 12.3' SW
of Bent col #94 (N)
and 22' east of Abutment Wall

(HA - 62°26'00"
ZA - 93°42'17" ✓ 90 ✓✓
SD - 124.840')

PT	Rod	Code	Desc
17517	10.7	BTNB-R7-D	(0.5' PZ)
17518	11.4	BTNB-R7-S	"
17519	5.0	520	MHSS
17520	"	520	"
17521	7.0	521	MHSD

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07-07-036 (c)

(5)

Check / Recon all obs Areas

✓117 ΔZA H = 0°00'03" 0.009'
ΔZA V = -0°00'14" 0.017'

FS 89 (HS = 4.835/1.474m)
set MAG N + WASH "89" on
top NE side conc V ditch
North of Bent col #91
5' NW of "Y" junction in ditch

(HA - 28°51'14"
ZA - 106°51'40"
SD - 182.333')

✓ 89 ✓✓

(6) 4/7/2008
JF / KK

AZ: 71°20'00"

A @ 90 BS - 234

BNH = 4.258/1.298m MS - 5.47/1.668m

HI = 4.763'

ΔH = 0.007 ΔV = 0.03

PT	Rod	Code	Desc
✓ 140	5.39/1.644	—	ΔHA = 0°00'11" ΔVA =
17522	2.9	303	Wing Wall @ Abut
17529 -	5.0	303	Wing Wall @ Day light
17541 -	0.377	601-2	top conc ditch
17543 -	"	602	Ft "
17578	.377	520	MHSS raised
17580	4.91	386	Gnd @ BASE

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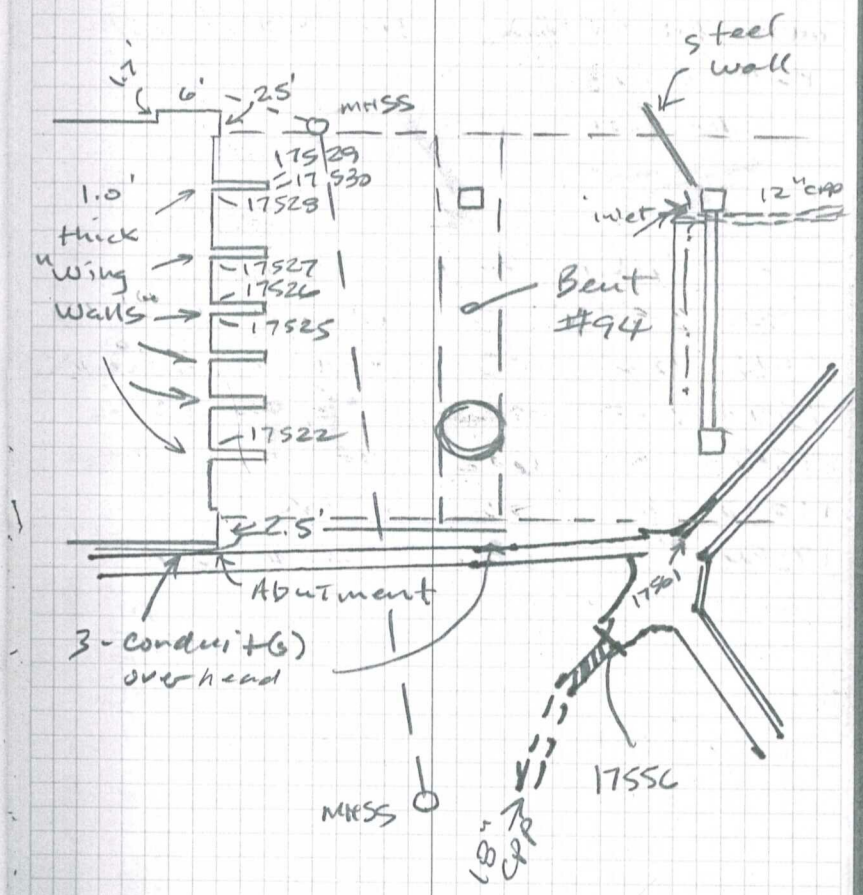
(6)



(7) 4/8/2008 JF/KK
50° Cloudy/Clear

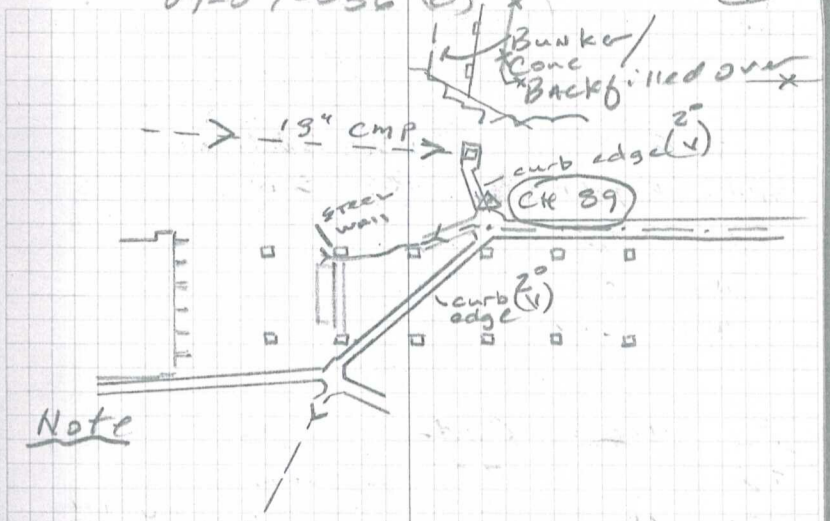
T @ 89
BHH = 4.42/1.347m
HI = 4.928'
ΔH = 0.01
ΔV = 0.016

Az: 72°22'53"
BS - 234
HS - 568/1.731m

PT	Rod	Code	Desc
✓90	~~4.91~~ 7.0	—	ΔHA -3" (0.007') ΔZA -10" (0.006')
✓140	4.91	—	ΔHA -5" (0.008') ΔZA -9" (0.003')
17531	6.0	337	top slope ⊥
17536	7.0	246	top metal sleeve
17539	"	513_18" VCP	
17594	"	291	SD Jct Box
17604	4.91	294	toe ⊥ Bunker
17608	"	310	Column Cor NE
17609	"	"	" SE
17630	.377	601_2	edge conc ditch
17648	6.0	"	"
17652	7.0	"	"
17675	6.0	601_2	ec ditch
17694	8.0	310	SE cor col

ARUP/Doyle
07-07-036 (c)

(7)



Note

over 18" SS VCP

18" VCP elbow structure

0.5' wide curb edge
C conform to old ditch ⊥ PT
C conform / BC flared section
C conform / inlet ditch flowdown

(3) 4/9/2003 JF/KK

Az: 71°20'00"

π @ 90 BS - 234

BMH = 4.22/1.286m FS - 5.68/1.731m

HI = 4.727'

ΔH = 0.008

ΔV = 0.02

PT	Rod	Code	Desc
17695	5.5	397	top
17702	4.91	311 4.6	Bent 94 retro fit
17718	7.0	310	SW cor Bent

Az: 72°22'53"

π @ 89 BS - 234

BMH = 4.26/1.298 FS - 5.68/1.731

HI = 4.766'

ΔH = 0.014 ΔV = 0.02

PT	Rod	Code	Desc
17719	4.91	900	Mon Well base
17720	7.0	545	GAS POST
17721	"	420-10-8"	Tree

ARUP Doyle
07-07-036(c)

(8)

Fill in ground shots and locate temp drainage @ Bent columns 93 west side.

#93

Note

Grnd elev 0.4 square 2.5' high w/lock

(9) 4/9/2008 JF/KK

A2 - 289°31'58"
BS - 27
HS - 4.91

π - 305
BMH = 5.099/1.554
HI = 5.609'

<HT 2253 destroyed>
(Drainage to Bay F 5'+@ edge)

Level to CH V 132
From N 913 / HT 0712

PT	BS	HI	FS	elev	desc
(100) N 913				11.09	VERT BD
	1.3555m 4.451				
TP 175			1.515m 4.967	10.569	MAGNW
	1.472m 4.831				
132			1.527m 5.01	10.386 ~~10.388~~	MAGNS
	1.525m 5.002				
TP 176			1.470m 4.824	10.569	MAGNW
	1.436m 4.718				
(177) N 913			1.277 4.191	11.094	VERT BD

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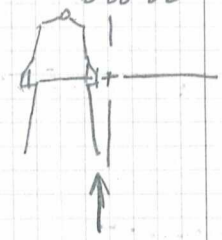
(9)

W.B Richardson to Doyle
@ EAST ABUTMENT Fill-in

NGS BM search Turk RM 1

Search HT 2258

0°00'00"



Ft Pt Lt Horse
BS NAT'L

V 132 = 10.394
10.386
(Came in Low 0.008)

0736-DL3 cont
RWS

Note /PID
NGS BM HT 0712 (used #100 in TPS)

(CA.14 MAC Tec)

CH. V. 132 <Doyle ARUP>

(CA.14 MAC Tech)

CLOSE NGS BM N 913

(10) 4/9/2008 JF/KK

Az: 259°06'07"

T @ 225 BS - 226

BHH = 5.062/1.543 5.465/1.665m

HI = 5.572'

ΔH = 0.02

ΔV = ~~0~~

BS (ZA - 89°49'20"
SD - 575.808'

HS = ~~4.652~~ 5.002 / ~~1.418~~ 1.525 - site @ 44

(HA - 270°20'54"
ZA - 90°16'05"
SD - 340.691'

HS 5.455/1.662m @ 123

(HA - 359°59'59"
ZA - 90°00'31"
SD - 620.404'

ARUP / Doyle
07-07-036 (c)

(12)

New DC file TSC2
0736-topo-c4.job

FS 112 = C4 V 132

HS = 6.5' Avg sets

(HA - 25°47'59"
ZA - 90°09'01"
SD - 246.341'

Horizontal Coord Subject to change

Note Adjusted Elev @ 225 to 11.97'

225

Resect Results		STD error
N -	2121033.017	0.002
E -	5997723.020	0.002
el -	11.978	0.001

✓ 226 ΔHA 3" - 0.008'
ΔVA 8" - 0.007'

✓ 125 ΔHA = 13" - 0.01'
ΔVA =

✓ 44 ΔHA = 1" - 0.003'
ΔVA = 3" - 0.006'

✓ 246 ΔHA = ~~0~~ - 0.009'
ΔVA = 12" - 0.007'

(11) 4/9/09 JF/KK

New ✗ Az: 258°06'08"

π @ 225 BS - 226

BNH = 5.062 / 1.543 HS - 5.465 / 1.665m

HI = 5.572'

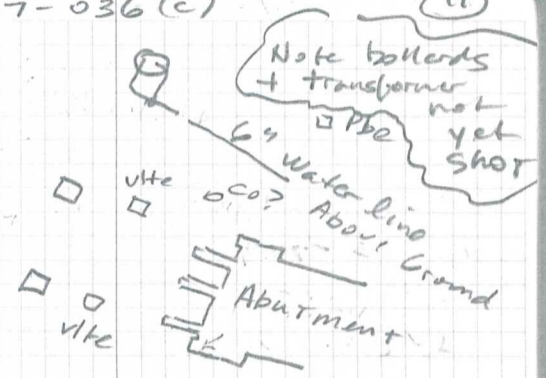
ΔH = 0.004

ΔV = 0.008

PT	Rod	Code	Desc	Note
✓ 44	5.002	—	ΔHA 1" — ⊖ ΔZH 1" — ⊖	
17722	4.91	303	Wing Wall daylight	AC @ conc
17728	"	303	" @ upper	retrofit / interior Abutment
17734	4.91	310	Col int Abut ✗	
17736	"	300	Abut ✗	Overlap / checks Abut Cor
17737	7.0	310	SE Abut Col ✗	— 1.45' North to Doyle Ret Wall
17741	5.0	521	5' diam storm	Jet — Note 6" water lines - force mains
17742	5.1	514_10	top 10" ID pipe	@ elbow
17746	5.0	555	1.7 diam co?	
17750	5.0	611_4.25	DIR 2'x2'	C 4.25 FL

ARUP / Doyle
07-07-036 (c)

(11)



(12) 4/10/2008 JF / KK

Az: 145°57'04"
BS - 67
HS - 5.367/1.635

T @ 229
BNH = 5.095/1.553
HI = 5.605'
ΔH = 0.003"
ΔV = 0.022'

BS { ZA - 89°52'29"
SD - 624.425'

PI	Rod	Code	Desc
91	5.39/1.642	SET MAGNW	
✓ 223	4.91	—	ΔHA = 11" - 0.007' ΔVA = 12" - 0.008'
17751	0.0	502	Guy Anch on Bent
17754	8.5	514-10	top pipe SD
17766	7.0	514-10	"
17767	"	"	"
17774	"	310	Abut Cor
17779	"	226	Gate Post 0.7 diam
17780	"	211-6	FP 6 CLF

ARVP / Doyle
07-07-036 (c)

(12)

FS 91 (HS = 5.39/1.642m)

Set MAGNW "91" in AC under Doyle Dr near East Abutment east of Crook St (10.3' SW / Abut cor 4' North of Wing Wall end)

{ HA - 295°33'10"
ZA - 90°06'52"
SD - 173.304'

Column

above ground SD 12" O.D. plastic
@ Daylight under Crook St
" "

6' CLF end

(13) 4/10/2009 JF / KK

Az: 261°30'14"

π @ 91 BS - 229

BNH = 5.02'/1.531m HS - 5.46/1.665m

HI = 5.532' ΔH = 0.003

ΔV = 0.015

PT	Rod	Code	Desc
17781	5.54	303	wing wall @ Abut
17789	6.0	303	" " @ AC/end
17801	4.91	211-6	FP 6' CLF

Az: 258°06'08"

π @ 225 BS - 226

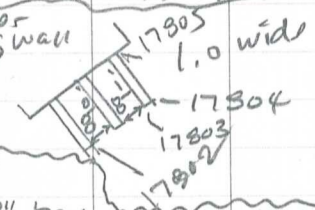
BNH = 5.158/1.572m HS - 5.645/1.720m

HI = 5.667' ΔH = 0.001

ΔV = 0.001

p 58 See Book1

PT	Rod	Code	Desc
✓265	4.91	100d - retie	N 2121006.408
		el - 10.725	E 599 7943.310
17802	6.2	303	Cor Wing wall
17803	4.1	"	
17805	4.05	"	
17807	6.0	611	2x2 DIR



c1 ⊥ 8" box abandoned outlet east

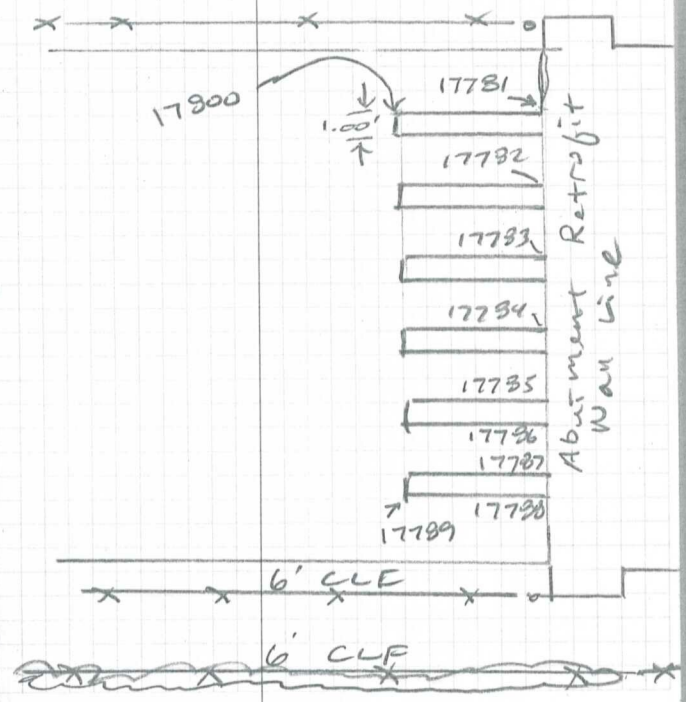
c3 25 bottom box

ARUP / Doyle
07-07-036 (c)

(13)

(changed code 229 NS-CH 229
" 228 CUT X-CH 229)

Note
Retrofit Line / AC grade (1.0' wide)



(14) 4/10/2008

Az: 81°30'14"

+ @ 229 BS - 91

BNM = 4.96 / 1.511m HS - 4.91

HI = 5.467' ΔH = 0.01

ΔV = 0

Pt	Rod	Code	Dose
17808	4.91	533 10	4' x 8' N-S

thin steel plate over sink hole - possible abandoned DI (in Lo Pt)

ARUP / Doyle
07-07-036(c)

(14)

Downloads / Exports

89-90, 17517-17721

Q: 2007/07-07-036... /TSC/
0736-TOPO-WEST/EXPORT/
0736-041008.txt

91, 17722-17808, 112

Q: 2007/07-07-036... /TSC
0736-TOPO-EAST/EXPORT/
0736-041108.TXT

✓ Updated Control File 4-11-08
✓ Updated CPT As built Point Group