④ 1/30/2003

Az: 346°21'00"

* C 45 135 @ 46

BNH = 4905/1495 HS = 5.578/1.700m

HI = 5.414' ΔH = 0.007

BS (ZA - 90°11'29" ΔV = -0.003
SD - 310.268')

PT	Rod	Desc
10770	6.0	column cor 2.1 x 2.1
10774	6.0	" " "
10794	6.0	DIR CTR 3.4 x 2.0
10795	"	cor DI
10800	"	Lip - new conform
10852	"	SN - "Stop AHD"
10985	7.0	DI in street
10917	7.0	SN - No stopping
10923	7.0	SN - one way
10941	6.0	DIR CTR 3.4 x 2.0
10944	"	TFC 1.0 high
10945	"	0.5 "
10931	"	BFPD 1" @ CTR
10989	5.0	MH
10990	6.0	island TEC
11015	7.0	MH
11032	"	DIR
11105	4.91	EP island

ARUP | Doyle
07-07-036(c) Book3 ④

Topo Site 14

S6 / TSC2

0736 - topo east - 2

Next CP # 64

Next topo # 10770 -

FS 64 set MAGNW between WCRS in the NW'ly cor intersection Richardson / Francisco (HS = 5.502/1.677m)

HA - 120°30'50" N - 2117969.394
ZA - 89°13'18" E - 5999048.635
SD - 186.900' el - 20.592

FS 65 set MAGNW in SW on the NEly cor int Francisco @ Richardson

HA - 110°27'13" N - 2119788.911
ZA - 89°43'23" E - 5999160.601
SD - 292.866' el - 19.972

⑤ 1/31/2008
JF/KK

AZ = 166°21'00"

T @ 46 BS - 45
BNH = 5.032/1.534m HS - 5.555/1.693m
HI = 5.542'
ΔH = 0.006 BS (ZA - 89°46'44"
ΔV = 0.023 SD - 310.265'

FS 48 STARNET 10032
HS = 7.5 (A 46-45-48)
(HA - 131°29'54"
ZA - 90°43'29"
SD - 328.845'

Horizon ~Az: 320°15'21"
T @ 46 BS @ 66
BNH = 5.032/1.534m HS = 5.537/1.687m
HI = 5.542'
ΔH = 0.005 BS (ZA - 91°21'19"
ΔV = 0.007 SD - 304.338'

ARVP Doyle
07-07-036 (C) ⑤

(HS = 5.537/1.687m)
FS 66 Set MAG NAIL + WASHER
3' SW of BS W @ the CTR of High voltage X Former room # 2048 along the west side of the Palace of fine Arts bldg.
(HA - 153°54'21"
ZA - 91°21'19"
SD - 304.335'

FS 6 (HS = 4.99')
10033 (H 46-66-6)
(HA - 99°16'04"
ZA - 90°06'53"
SD - 187.510'

FS 45 HS = 5555/1.693
10034 (H 46-66-45)
(HA - 206°05'38"
ZA - 89°46'42"
SD - 310.265'

(6) 1/31/2008
JF / KK

<CONT> Az: 166°21'00"
* @ 46 BS - 45
BMH = 5.032'/1.534m HS - 5.555'/1.693m
HI = 5.542' ΔH = 0.003
ΔV = 0.021

PT	Rod	Desc
11106	7.0	TFC Bus stop BC end tangent
11126	"	MH - "Detector"
11177	8.0	DIR @ FE FC
11184	8.0	MH
11236	7.0	Fire valve riser / BO
11251	"	Trash enc ramp / BSW
11261	"	1.2 square PI
11269	"	PAd - "cabinet stainless
11311	5.0	BCOE outside column
11312	7.0	AC

Topo site 15

4.8' to main Bwell line

(6)

(7)

1/31/2008
JF / KK

Az: 280°59'15"

→ @ BS

BS-46

BNH = 4.85/1.478m

HS = 5.444/1.659m

HI = 5.358'

ΔH = 0.01

ΔV = 0.007

PT	Rod	Desc
11313	6.0	FE 4' CLF
11321	6.0	FE @ & DI
11345	"	EP

2/1/2008 JF/KK

Az: 286°51'50"

→ @ 64

BS @ 45

BNH = 5.293/1.613m

HS = 5.967'/1.819m

HI = 5.802'

ΔH = 0.01

ΔV = 0.005

PT	Rod	Desc
11346	7.0	TFC @ BC
11383	6.5	DI @ FE FC
11384	"	" "
11392	7.0	MH
11405	"	PB "shelter"
11413	6.5	MHSS

0736 - topo - east 2.dc

Topo Richardson / Francisco / Lyon

Site 15

(8) 2/1/2008
JF / KK

site 15

CONT>
* @ 64
BHR = 5.293 / 1.613
HI = 5.302'

Az: 286° 51' 50"
BS @ 45
HS = 5.967 / 1.819m
ΔH = ✓
ΔV = ✓

PT	Rod	Desc
11450	6.5	DI @ FE EC sly cr
11506	7.0	PB "SE DOFE"
11509	"	DI @ FL FC
11545	4	BCOR / toe stairs
11546	"	BS W @ ~~BC~~
11563	4	MHSS
11577	8.0	PB "shelter"
11663	8.5	DI @ FE FC
11687	7.0	MHSS
11740	7.5	WM

(9) 2/1/08
JF/KK

Az: 276°48'13"
T @65 BS - 45
BNH = 5.26/1.604 HS - 5.967/1.819 m
HI = 5.772' ΔH = 0.005
ΔV = 0.003

PI	Rod	Desc
11741	8.5	NWM
11772	8.0	Lip

2/5/2008

Az: 280°59'15"
T @ 95 BS - 46
BNH = 5.251/1.607 HS - 5.69/1.734 m
HI = 5.762' ΔH = 0.004
ΔV = 0.008

PI	Rod	Desc
11773	7.0	TFC POC @ WCR
11774	"	FE/EP WCR
11325	6.5	EC planter X
11952	6.5	DI @ Q FE
11873	5.8	PB comm (PAC bell)
11895	6.0	BSW X

ARUP / Doyle
07-07-036 (C)

(9)

site is

11381 HR = 5.8 FND chiseled X
Possible city BM Lyon east CR
Rd Richardson N.B

(10) 2/5/2009 JF/KK

Az: 140°15'21"

π @ 66 BS @ 46

BMH: 5.055/1.541m HS = 5.69/1.734m

HI: 5.565'

ΔHz 0.008

ΔV: 0.015

BS (ZA - 88°37'33"
SD - 304.346'

FS 48 (HS = 4.91)

10035 A 66-46-48

(HA - 89°52'34"
ZA - 89°48'59"
SD - 125.317'

Horizon

Az: 322°06'31"

π @ 66 BS - 67

BMH = 5.055/1.541m HS = 5.531/1.686m

HI = 5.565'

ΔH: 0

ΔV: 0.004

BS (ZA - 89°32'12"
SD - 304.028'

FS 46 HS = 5.69/1.734m

10036 (H 46-67-46)

(HA - 178°08'51"
ZA - 88°37'32"
SD - 304.346'

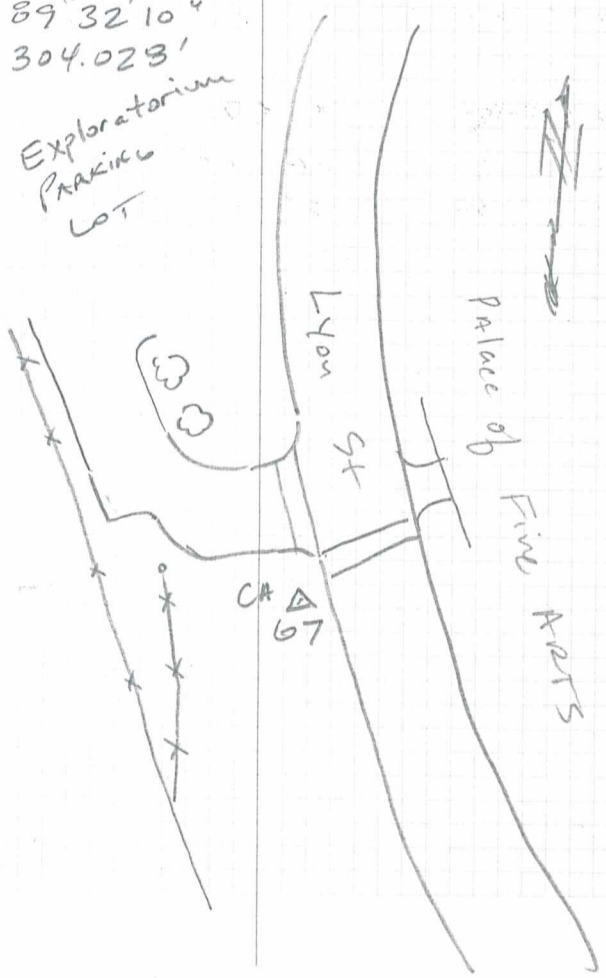
ARVP/Doyle
07-07-036(C)

(10)

(HS = 5.531/1.686m)

FS 67 set Rebar + Cap 25' south of Stop sign, 15' w/ly of EP (approx 15' west of Lyon) (see sketch)

(HA - 181°51'10"
ZA - 89°32'10"
SD - 304.023'



site
15

(11) 2/5/2008 JF/KK

cont >

π @ 66

BNH = 5.055/1.541 m

HI = 5.565'

AZ: 140°15'21"

BS - 46

HS = 5.69/1.734 m

PI	Rod	Desc
11896	7.0	FH
11917	"	MH SD
11918-	"	FL @ curb inlet
11929-	6.0	Cor bldg 2048
11935-	"	Cor bldg col 4.8' - MAIN
11943	"	MHSD
11944	"	"
11979	"	GB
11981	8.5	MH

ARUP / Doyle
07-07-036 (c)

(11)

site 15

Note 8.1' east to main bldg

(12) 2/5/08 JF/KK

Az: 142°06'31"

T @ 67
BNH = 5.145/1.567m
HI = 5.651'
ΔH = 0.012
ΔV = 0.014

BS (ZA - 90°28'34"
SD - 304.020'

BS - 66
HS - 5.635/1.717m

Pt	Rod	Desc
11982	7.0	e vault corr
12006	4.91	0.5 steel column OH support
12019	7.0	MHSD
12020	"	"
12042	4.91	TFC

ARUP / D04(c
07-07-036 (c)

(12)

site 15

FS 68 (HS = 5.422/1.653m)
set nail 12' west of EP Lyonst AF and 9' south of extention of elect bldg # 2049 (on Exploratorium) and 35' North of water pump fence enclosure

HA - 224°58'20"
ZA - 90°06'54"
SD - 349.328'

Horizon

+/- Az: 7°04'51"

T @ 67
BNH = 5.145/1.567m
HI =
ΔH =
ΔV =

BS @ 68
HS = 5.422/1.653m

BS (ZA - 90°06'54"
SD - 349.328'

FS 66 (HS = 5.635/1.717m)
10037 (H 67-68-66)

HA - 135°01'37"
ZA - 90°28'35"
SD - 304.021'

(13) 2/6/2008
JF / KK

Az: 7°04'51"

T @ 67 BS - 63
BHH = 4.925/1.501m HS - 5.40/1.646m
HI = 5.434'
ΔH = 0.005
ΔV = 0.01

BS ZA - 90°04'53"
SD - 349.326'

PT	Rod	Desc	Note
12043	6.0	TS-R3	* CB 0.5' GROUT IN AC
12118	5.65	MHSS	
12142	6.0	Auto Sprinkler 4"	Riser

ARUP / Doyle
07-07-036 (C)

(13)

Site 15

FS 229 HS = 4.915/1.501m
10038 (A 67-63-229)

HA - 318°52'14"
ZA - 90°11'45"
SD - 624.426'

(14) 2/6/2008 JF / KK

π @ 68
BNH = 5.165 / 1.574m
HI = 5.674'
ΔH = 0.006
ΔV = 0.011

BS (ZA - 89°57'04"
SD - 349.321'

AZ: 137°04'51"
BS - 67
HS - 5.51 / 1.690

PT	Rod	Desc
12143	5.0	25" Cypress
12147	"	pad
12152	"	SE cor pad 9'x5' / 4" BFPD enclosure
12153	"	NE " " "
12155	"	Cor 7' CLF pump 4" enclosure
12184	6.0	MHSD
12195	6.0	"
12203	6.5	MHSS
12208	"	MHSD
12226	"	ontside BCOR 8' to Ing Cor BWall
12231	"	SW cor bldg 204 (room)
12256	6.5	ICValve

ARUP | Doyle
07-07-036 (c)

(14)

site 15

(HS = 5.392 / 1.644m)

FS 69 set MAG N+WASH CA.69
on curb island south nose
@ the North end of Lynn St
@ the South side of Doyle / Morina

HA - 221°32'18"
ZA - 90°01'11"
SD - 509.690'

Horizon 68-69-67

π @ 68
BNH = 5.165 / 1.574m
HI = 5.674'
ΔH = 0.002
ΔV = 0.005

BS (ZA - 90°01'09"
SD - 509.693'

AZ: 48°37'09"
BS - 69
HS - 5.392 / 1.644m

FS 67 (HS = 5.51 / 1.680m)
10039 (H 68-69-67)

HA - 133°27'42"
ZA - 89°57'06"
SD - 349.322'

(15) 2/7/2008 JF/KK

Site 15

Az: 49°37'09"

T @ 68 BS @ 69

BM ℄ = 4.75/1.447m HS - 5.54/1.688m

HI = 5256' ΔH = 0.003 (ZA - 90°01'07"

ΔV = 0.019 (SD - 509.694'

PT	Rod	Desc
12257	~~4.41~~ 7.0	TFC 0.0 Begin / END EP
12258	" 7.0	Lip End
12262	"	MHSD
12263	"	MHSD
12283	8.0	PSL

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07-07-036 (C)

(15)

CA.70

Not exported

~~10035~~ 10039

11773 - 12256

Download Pts

Q: 2007/07-07-036 ARUP Doyle

5.465

CH 70 HS = 5.475/1.669

Set 100d nail GB 8.5' west of EP and aprox 33' North of the North drive to Exploratorium west lot aprox 100' south/Doyle

(HA - 345°06'56"

(ZA - 89°59'09"

(SD - 173.707'

(16) 2/7/2008 JE/KK

Az: 213°44'05"

* @ 70 BS - 68

BNH = 5.05/1.539m HS = 5.13/1.578m

HI = 5.559' ΔH = 0.002

ΔV = 0.02

BS - (ZA - 90°04'31" SD - 173.701')

PT	Rod	Desc	NOTE
12284	5.0	PB metal	
12312	7.0	FP parking lot	
12313	7.0	FP Doyle R/W	
12350	7.0	MHSD	
12359	5.5	MHSS	
12393	7.0	MHSS	
12405	7.0	RW15-RW1	0.5 GROUT/AC

71 4.91 set MAGNS ON SW near BC from Lyon EB to Exploratorium main Lot

HA - 211°59'02"
ZA - 90°24'27"
SD - 206.821'

ARUP / Doyle
07-07-036 (c)

(16)

Site 15 topo

Level check 68 - 70

PT	BS	HI	FS	elev	desc
68	3.494	15.262		11.768	100d
70	3.705	15.307	3.66	11.602	"
68			3.539	11.769	"
				0	

* 12405 is RW15-R1

(17) 2/7/2008 JF/KK

Resection 3pt +L
(10040) Az 231°09'22"
T @ 71 (1)
BNH = 4.998/1.521m BS - 68
HI = 5.500' HS = 5.18/1.578
ΔH = 0.001
ΔV = 0.003
HA - 0°00'01"
ZA - 89°53'48"
SD - 365.925

PT	Rod	Desc
12406	6.0	mHSS
12407	"	"
12408	"	DI
12409	"	7' CLF enclosure pump control
12447	5.0	EP
12448	"	3" Campro

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(17)

site 16 topo

BS(2) - 70 (HS = 5.375/1.639m)
HA - 14°33'47"
ZA - 89°48'27"
SD - 206.827'

BS(3) - 69 (HS = 5.54/1.688m)
HA - 171°03'02"
ZA - 89°32'57"
SD - 145.034'

(18)

2/11/2008
JRR / JBigo

CA 72

Az: 228°37'09"

↑ @ 69 — BS @ 68

BMH = 5.13 / 1.563m HS = 5.17 / 1.575m
HI = 5.638'
ΔH = 0.001
ΔV = 0.023

BS (ZA - 90°04'02"
     SD - 509.691'

FS 72 set MAGN + WASH on EB Doyle Dr @ T/C (south) approx west of C/R Lyon St (@ Exploratorium entrance)

HS = 5.201 / 1.584m
(HA - 12°53'55"
  ZA - 89°52'47"
  SD - 291.975'

Site 16

FS 5 HS = 5.73 / 1.745m
10041 (@ 69-68-5)
(HA - 137°35'12"
  ZA - 90°05'08"
  SD - 437.933'

FS 71 (HS = 4.91)
10042 (@ 69-68-71)
(HA - 353°35'15"
  ZA - 90°43'26"
  SD - 145.065'

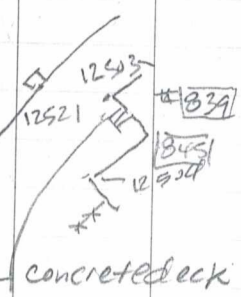
(19) 2/11/2009
JF / JBigo

+/- Az: 6°12'29"
BS - S
HS - 5.73/1.745m

π @ 69
BHH = 5.13/1.563m
HI = 5.638
ΔH = 0.006
ΔV = 0.047

BS (ZA - 90°05'08"
SD - 437.934'

PT	Rod	Desc
12449	6.0	TPC @ Dwy
12469	5.5	MHSS
12485	7.0	MHSS
12503	3.0	BCOR
12504	"	"
12521		DI @ ℄
12546	6.5	MH 3.6 PGE
12575	7.0	End Doyle - concrete deck
12580	7.0	RW @ BSW
12585	0.377	Chisled X - City Bm. P
Lyon / Doyle / Maring - SW		
12588	7.0	TFC island CR - 0.7' rad)
12605	7.0	strip drain 0.2 wide North edge
12608	"	DIR 3.4 x 2.1
12609	"	DI @ ℄ FC
12610	"	" "
12706	5.6	GB



ARUP | Doyle
07-07-036 (c)

(19)

site 16

FS 71 (HS = 4.91)
10043 (H 69-5-71)
HA - 216°00'-4"
ZA - 90°43'27"
SD - 145.047

FS 68 (HS = 5.17/1.575m)
10044 (H 69-5-68)
HA - 222°24'52"
ZA - 90°04'01"
SD - 509.693'

FS 72 HS = 5.201/1.534m
10045 (H 69-5-72)
HA - 235°18'46"
ZA - 89°52'48"
SD - 291.975

2/11/2008
JF / J Bigo

cont'd
T @ 69
BNH = 5.13 / 1.563m
HI = 5.638'

Az: 6°12'29"
BS - 5
HS - 5.73 / 1.745m

PI	Rod	Desc
12655	7.0	EC - PSL base
12693	4.91	mHSS
12694	"	30" Pine tag 2663
12701	7.0	mH

2/12/2008 JF / J Bigo

T @ 73
BHH = 5.148 / 1.569m
HI = 5.657'
ΔH = 0.009
ΔV = 0.046

Az: 9°01'43"
BS - 5
HS - 5.295 / 1.614

BS (ZA - 90°12'40"
SD - 237.527'

Site 16

2/12/2008 JF / J Bigo

FS 69 (HS = 5.425 / 1.653m
10046 (A 73-5-69)
HA - 171°49'07"
ZA - 90°04'34"
SD - 151.415'

FS 127 HS = (4.91)
10047 (A 73-5-127)
HA - 245°40'48"
ZA - 90°30'12"
SD - 323.647'

2/12/2009
JF / J Bigo

Az: 9°01'43"

cont > π @ 73
BNH = 5.148
HI = 5.657'

BS @ 5
HS = 5.295'

PT	Rod	Desc
12707	7.0	island TFC
12792	"	DI CTR
74	.377	BDF - top bol
12908	6.5	MHSS
12909	"	DI - ℄ FE
12947	6.5	DI - CTR
12948	6.5	MHSS
12963	7.0	MH PT&T
12985	"	SD MH
12996	"	MH
12997	"	"
13026	7.0	DIR 1.5x1.5
13030	"	DIR 2.9x2.3
13040	"	ins. bcor
13043	5.5	vault cor

site 16

BS (ZA - 90°12'42"
SD - 287.52'

FS 74 (HS = 0.377) **74**
FND BD on top bollard
aprox 70' east of ℄ Lyon
and 18.5' North / FC Marina

HA - 22°28'12"
ZA - 93°25'15"
SD - 71.846'

FS 75 (HS = 4.91) **75**
FND BD in well near FSW
@ the NE int marina / Lyon
aprox 6' east of ext BSW Lyon /
Yacht Harbor Dr (10' SSE BSW @ BSW)

HA - 0°39'26"
ZA - 92°05'04"
SD - 58.176'

(21) 2/12/2008
JF / JBigo
+/- Az: 4°12'29"

π @ 69 BS @ 5
BHH = 4.975 / 1.516m HS = 5.295 / 1.614m
HI = 5.485
ΔH = 0.01
ΔV = 0.05

PT	Rod	Desc
13044	7.0	RW toe / GND
13079	5.5	4x8" tree tag 2ds
13082	8.0	6' CLF around AC units)
13112	6.4	MH @ 12" above ground outfall

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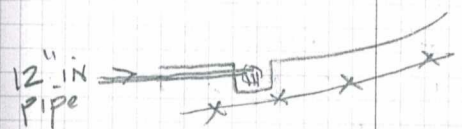
07-07-036(c)

(21)

* see p3
* Download 12257 - 13112
Q12007/07-07-036 ARUP Doyle

(site 16 Finish topo)

* END file 0736-topo-east2.dc



(22) 2/13/2008 JF / KK

Az: 250°49'44"

T @ 49 BS @ 44

BMH = 5.17 / 1.576m HS = 5.46 / 1.664m

HI = 5.68' ΔH = 0.007

ΔV = 0.007

PT	Rod	Desc
13113	7.0	BCOR
13115	"	MH SS
13116	"	MH "S"
13117	"	DIR 2'x2'
13118	"	DIR 2.8'x2.7'
13119	"	MH "S"
13129	5.3	MH SS
13130	"	DIR 2.3'x2.4'
13131	"	" "
13133	6.0	DIR 2.3'x2.3'
13150	0.0	Bldg Roof Cor
13151	0.0	top vent

ARUP / Doyle
07-07-036 (C)

(22)

New job file TSC2
0736-topo east-3.dc

Next topo # 13113
Next CP # 76-84

site 17 topo

Control File *
* 232 Retin Book 2 p 74
225 " "
Fill in Book 2 Angles

Need Latest Control file

~~site 13 topo~~

(23) 2/13/2008 JF/KK

Az: 180°04'25"

T @ 225 BS - 44

BMH = 5.217/1.590m HS - 5.46/1.664

HI = 5.726'

ΔH = 0.0'

ΔV = 0.0'

PT	Rod	Desc
13152	7.0	DIR 2.0 x 3.4'
13153	8.5	toe conc wall
13162	8.5	EP @ Footing daylight
13164	"	MH SD
13167	"	RW toe transition
13192	6.0	DIR 2.0 x 3.4

ARUP / Doyle
07-07-036 (C)

(23)

Helev @ 225 is 11.93

* Topo New Gorgas o/b ramp (site 17)

(24) 2/13/2008 VF/KK

Az: 129° 41' 57"

T @ 44 BS - 47

BNH = 4.83/1.472m HS - 5.74/1.749m

HI =

ΔHz 0.006

ΔVz 0.041

PT	Rod	Desc
13193	6.0	GP RW toe begin conc RAIL
*13201	7.0	07-CPT-13
13212	8.5	DI 2'x2' @ ℄ ℉
13229	8.5	DI 1.2 x 1.2
13275	"	GP @ West face connect South to -BCOR
13276	"	DIR 1.2' square
13316	"	MH
13328	"	DIR 1.2 square

ARUP / Doyle
07-07-036 (c)

(24)

Topo site 13 - Gorgas

07-CPT 0.3' in AC

(25)

2/14/2008
VF / KK

AZ: 118°34'57"
BS @ 44
HS = 5.01/1.527m

$\bar{x}$ @ 123
BNH = 4.952'/1.510m
HI = 5.465'

BS (ZA - 90°07'24"
SD - 705.977'

PT	Rod	Desc	
301	4.91	MAGNWF	Tredwell CA.11
300	4.91	MAGNSF	Tredwell CA.25
302	4.91	MAGNF	Tredwell CA.18
303	4.91	MAGNSF	Tredwell CA.26
*13329	"	07-CPT-12 (0.3' SB IN AC)	
304	"	MAGNWF	Tredwell CA.13
305	"	MAGNSF	Tredwell CA.17
306	"	MAGNWF	Tredwell CA.12

13 ~~10048~~
17 ~~10049~~
12 ~~10050~~

search only
deleted

ARVP / Doyle
07-07-036 (c)

(25)

Begin topo site 11
Set control for site 10

* Note 300 series ties are to control from other projects <Tredwell + Rollo/02-05-037>

Meaned angles + Distance

PT	HA	ZA	SD	TR desc
301 -	9°09'29"	90°15'34"	313.052'	MAGNWF CA.11
302 -	52°46'53"	88°52'09"	101.698	MAGNF CA18
303 -	73°30'35	88°13'48	429.784'	MAGNSF CA 26
300 -	66°23'16"	88°37'57"	354.422'	MAGNSF CA 25
44 -	0°00'00"	90°07'24"	705.977	BS
306 -	325°48'39"	90°22'44"	233.757	MAGNW CA.12
305 -	279°14'53"	90°22'58"	265.672'	MAGNS CA.17
304 -	228°00'06"	90°57'24"	115.132'	MAGNW CA.13

(26) 2/15/2008
JF / KK Recon -

SW of Sports BASEMENT
12'x12' CLF - E pad enclosure
old MH # 7331P

mon Well - @ Doyle between
column 81 - 82

check for Retwall between
Col 93 - 94. 1-2 col east
of Abutment (Diag to NW)

WL - Runs 11 along N Doyle
FH 30' N cols 93 - 94

3 Culverts Run North to conc V-ditch
bet col 85 - 86 10", 10" cmp 18" CPP

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mc Dowell - Stables
see control pts named
426 mc Dowell / Putter east MASON
425 mc Dowell / cowley east CNTX

ARUP / Doyle
07-07-036

(26)

New utility Recon
Cross check for existing
INFO Doyle / Marshall

Halleck - Girard Apts - Fill Excl site

Bsw w/Apts - WLS 108 | S/Apts - WLS 105

New SW - N Lincoln bet Girard / Halld -
- CA-1 Fire STN SW main Post Lincoln
- BDNPS PRSF 94 Halleck NB TC

PGE vault N / Doyle
IBO bldg 1134
HVE and water line N/Doyle
EAST Abutment WBT to
Richardson/Doyle ON Ramp + Above ground 12" pipe