

APPENDIX N
SEWER LINE VIDEO SURVEY REPORT

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Science Applications International Corporation
An Employee-Owned Company

September 5, 2002

Mr. Glen Beckham
U.S. Army Corps of Engineers, Louisville District
ATTN: CELRL-PM-M
600 Martin Luther King, Jr. Place
P.O. Box 59
Louisville, Kentucky 40202-0059

Reference: Contract No. DACA 62-00-D-0001, Delivery Order No. CY06
Contract No. DACA 27-97-D-0025, Delivery Order No. 0003
Contract No. F44650-99-0007, ECAS 186

Subject: Storm and Sanitary Sewer Video Survey Data for Phase II Remedial Investigations (RIs) at Load Lines 1, 2, 3, 4 and 12

Dear Mr. Beckham:

Enclosed for your records are video tape logs and paper copies of the project logs for the storm and sanitary sewer camera surveys conducted at Load Lines 1, 2, 3, 4, and 12. In addition, data provided for Load Lines 2, 3, and 4 includes a compact disk containing digital photographic records of the camera surveys. These surveys were performed as part of the Phase II RI field investigations at each of the facilities. Transmittal of these data completes a key action item derived from the July 17, 2002, comment response meeting for the draft Phase II RI report for Load Line 1. Science Applications International Corporation appreciates the opportunity to provide these services to the U.S. Corps of Engineers, Louisville District and RVAAP.

If you have questions or comments, please feel free to contact me at (865) 481-4614.

Sincerely,

SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

Kevin Jago
Project Manager

cc: John Jent - USACE

cc w/o Enclosure: Ike Diggs - SAIC
Mark Patterson - OSC
Martha Turpin - SAIC
Bob Whelove - OSC
Project File
SAIC CRF

	DATE	AREA	STREET	FROM MANHOLE	TO MANHOLE	SECTION	PIPE SIZE	TAPE #
1	08/09/2001	Ravenna Army	Load Line 4	GA 17	East	51.39	12"	003
2	08/09/2001	Ravenna Army	Load Line 4	GA 17	West	51.69	12"	003
3	08/09/2001	Ravenna Army	Load Line 4	GA 17	North	28.93	18"	003
4	08/09/2001	Ravenna Army	Load Line 4	GA 17	South	50.4	18"	003
5	08/09/2001	Ravenna Army	Load Line 4	Mh 10	South	174.76	18"	003
6	08/09/2001	Ravenna Army	Load Line 4	MH 9	South	104.28	18"	003
7	08/09/2001	Ravenna Army	Load Line 4	MH 15	West	175.56	24"	003
8	08/09/2001	Ravenna Army	Load Line 4	MH 11	5	66.5	24"	003
9	08/09/2001	Ravenna Army	Load Line 4	5	7	14.91	24"	003
10	08/09/2001	Ravenna Army	Load Line 4	11	12	100.4	24"	003
11	08/09/2001	Ravenna Army	Load Line 2	D.A. 12	B-3	173.77	15"	004
12	08/09/2001	Ravenna Army	Load Line 2	D.B. 12	B-3	254.49	24"	004
13	08/09/2001	Ravenna Army	Load Line 3	E.H. 5	E.H. 4	117.7	12"	005
14	08/09/2001	Ravenna Army	Load Line 3	E.H. 4	E.H. 3	102.59	12"	005
15	08/09/2001	Ravenna Army	Load Line 3	E.H. 5	E.H. 6	102.79	12"	005
16	08/09/2001	Ravenna Army	Load Line 3	E.H. 6	E.H.7	2.88	12"	005
17	08/09/2001	Ravenna Army	Load Line 3	409	West	46.03	10"	005
18	08/09/2001	Ravenna Army	Load Line 3	409	East	13.72	10"	005
19	08/09/2001	Ravenna Army	Load Line 4	W6	W5	213.33	8"	003
20	08/09/2001	Ravenna Army	Load Line 4	W5	W4	30.52	8"	003
21	08/09/2001	Ravenna Army	Load Line 4	W3-1	North	4	8"	003
22	08/09/2001	Ravenna Army	Load Line 4	E4	Southwest	144.54	8"	003
23	08/09/2001	Ravenna Army	Load Line 4	E4	North	113.03	8"	003

N-4

2138.21 FT



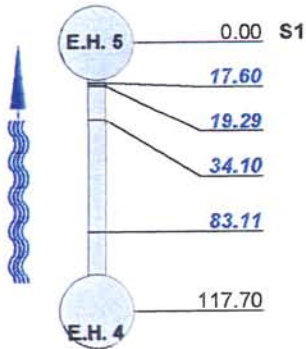
INSPECTION REPORT

DATE: 08/09/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 69	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 0

CITY: Ravenna	MAP #1:	TV'D LGTH: 117.7 FT
STREET: Load Line 3	MAP #2:	MH: E.H. 5
LOCALE: EASEMENT	TAPE #: 005	MH: E.H. 4
INSPECT REASON: OTHER	PIPE SIZE: 12"	MATERIAL: VCP JT LGTH:
SECTION TYPE: STORMWATER	LINING:	RSRVD:
AREA: Ravenna Army Ammunition Plant		

REMARK:

1:1000 POSITION



OBSERVATION

inspection begins at downstream manhole, START
Longitudinal Crack, at 02 o'clock
Longitudinal Crack, at 08 o'clock
Longitudinal Crack, at 09 o'clock
Multiple Cracks, from 02 to 05 o'clock
 inspection ends at upstream manhole, END



17.6 FT //



19.29 FT //



34.1 FT //



83.11 FT //



INSPECTION REPORT

DATE: 08/09/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 70	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 310

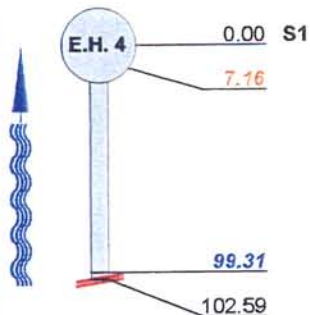
CITY: Ravenna	MAP #1:	TV/D LGTH: 102.59 FT
STREET: Load Line 3	MAP #2:	MH: E.H. 4
LOCALE: EASEMENT	TAPE #: 005	MH: E.H. 3

INSPECT REASON: OTHER	PIPE SIZE: 12"
SECTION TYPE: STORMWATER	MATERIAL: VCP JT LGTH:
AREA: Ravenna Army Ammunition Plant	LINING:
	RSRVD:

REMARK:

1:1000 POSITION

OBSERVATION

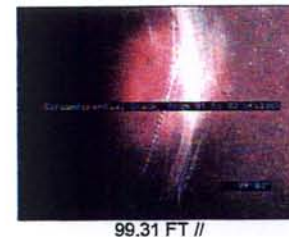
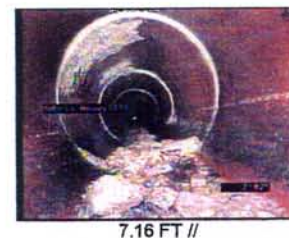
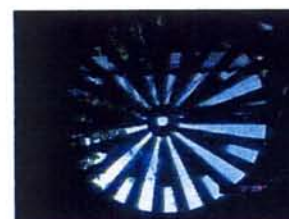


inspection begins at downstream manhole, START

debris Heavy!!!!

Circumferential Crack, from 01 to 02 o'clock

camera blocked, inspection abandoned, END Heavy Rocks!!!!!!!





INSPECTION REPORT

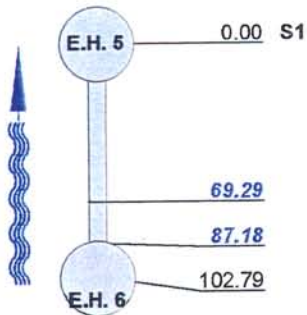
DATE: 08/09/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 71	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 0

CITY: Ravenna	MAP #1:	TV'D LGTH: 102.79 FT
STREET: Load Line 3	MAP #2:	MH: E.H. 5
LOCALE: EASEMENT	TAPE #: 005	MH: E.H. 6
INSPECT REASON: OTHER	PIPE SIZE: 12"	PIPE MATERIAL: VCP
SECTION TYPE: STORMWATER	LINING:	JT LGTH:
AREA: Ravenna Army Ammunition Plant	RSRVD:	

REMARK:

1:1000 POSITION

OBSERVATION



inspection begins at downstream manhole, START

Longitudinal Crack, at 10 o'clock

Longitudinal Crack, at 02 o'clock

inspection ends at upstream manhole, END



69.29 FT //



87.18 FT //



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 7611 EASY ST
 MASON OH, 45040
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INSPECTION REPORT

DATE: 08/09/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 72	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 310

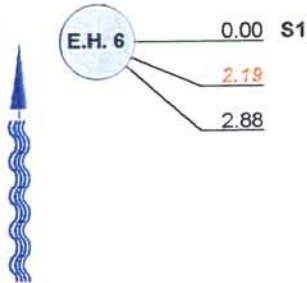
CITY: Ravenna	MAP #1:	TV'D LGTH: 2.88 FT
STREET: Load Line 3	MAP #2:	MH: E.H. 6
LOCALE: EASEMENT	TAPE #: 005	MH: E.H.7

INSPECT REASON: OTHER	PIPE SIZE: 12"
SECTION TYPE: STORMWATER	MATERIAL: VCP JT LGTH:
AREA: Ravenna Army Ammunition Plant	LINING:
	RSRVD:

REMARK:

1:1000 POSITION

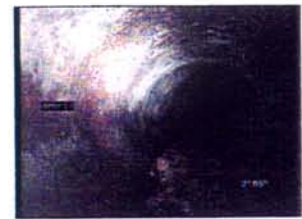
OBSERVATION



inspection begins at downstream manhole, START

debris

camera blocked, inspection abandoned, END Debris too heavy!!!



2.19 FT //



INSPECTION REPORT

DATE: 08/09/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 73	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 230

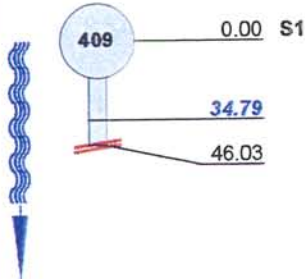
CITY: Ravenna	MAP #1:	TV D LGTH: 46.03 FT
STREET: Load Line 3	MAP #2:	MH: 409
LOCALE: EASEMENT	TAPE #: 005	MH: West

INSPECT REASON: OTHER	PIPE SIZE: 10"
SECTION TYPE: STORMWATER	MATERIAL: VCP JT LGTH:
AREA: Ravenna Army Ammunition Plant	LINING:
	RSRVD:

REMARK:

1:1000 POSITION

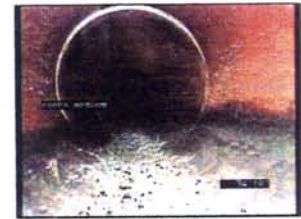
OBSERVATION



inspection begins at upstream manhole, START

roots medium

camera blocked, inspection abandoned, END Roots too heavy!!!!!!



34.79 FT //



46.03 FT //



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INSPECTION REPORT

DATE: 08/09/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 74	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 740

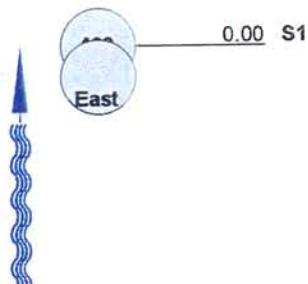
CITY: Ravenna	MAP #1:	TV'D LGTH: 13.72 FT
STREET: Load Line 3	MAP #2:	MH: 409
LOCALE: EASEMENT	TAPE #: 005	MH: East

INSPECT REASON: OTHER	PIPE SIZE: 10"
SECTION TYPE: STORMWATER	MATERIAL: VCP JT LGTH:
AREA: Ravenna Army Ammunition Plant	LINING:
	RSRVD:

REMARK:

1:1000 POSITION

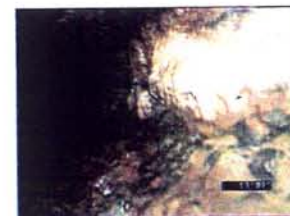
OBSERVATION



inspection begins at downstream manhole, START



15.71 FT //



15.71 FT //

	DATE	AREA	STREET	FROM MANHOLE	TO MANHOLE	SECTION	PIPE SIZE	TAPE #
1	08/08/2001	Ravenna Army	Load Line 3	E.B. 20	North	53.08	12"	002
2	08/08/2001	Ravenna Army	Load Line 3	E.B. 20	East	27.34	12"	002
3	08/08/2001	Ravenna Army	Load Line 3	E.B. 21	North	50.3	12"	002
4	08/08/2001	Ravenna Army	Load Line 3	E.B. 21	South	8.45	12"	002
5	08/08/2001	Ravenna Army	Load Line 3	E.B. 21	East	53.48	12"	002
6	08/08/2001	Ravenna Army	Load Line 3	E.H. 13	North	52.99	12"	002
7	08/08/2001	Ravenna Army	Load Line 3	E.H. 13	South	52.19	12"	002
8	08/08/2001	Ravenna Army	Load Line 3	E.H. 13	East	51.49	12"	002
9	08/08/2001	Ravenna Army	Load Line 3	E.H. 13	East	9.64	24"	002
10	08/08/2001	Ravenna Army	Load Line 3	E.H. 13	West	12.43	24"	002
11	08/08/2001	Ravenna Army	Load Line 3	E.B. 4	North	8.65	12"	002
12	08/08/2001	Ravenna Army	Load Line 3	E.B. 4	South	52.69	12"	002
13	08/08/2001	Ravenna Army	Load Line 3	419	South	54.87	8"	002
14	08/08/2001	Ravenna Army	Load Line 3	419	East	51.39	8"	002
15	08/08/2001	Ravenna Army	Load Line 3	424	West	39.47	8"	002
16	08/08/2001	Ravenna Army	Load Line 3	424	South	51.39	8"	002
17	08/08/2001	Ravenna Army	Load Line 3	404	West	51.79	10"	002
18	08/08/2001	Ravenna Army	Load Line 3	404	East	51.2	10"	002
19	08/08/2001	Ravenna Army	Load Line 3	427	West	177.05	8"	002
20	08/08/2001	Ravenna Army	Load Line 3	427	North	26.44	8"	002
21	08/08/2001	Ravenna Army	Load Line 4	E2	Northeast	1	8"	003
22	08/08/2001	Ravenna Army	Load Line 4	E6	South	51	8"	003
23	08/08/2001	Ravenna Army	Load Line 4	E6	East	10.44	8"	003
24	08/08/2001	Ravenna Army	Load Line 4	C/B 13	West	25.85	8"	003
25	08/08/2001	Ravenna Army	Load Line 4	C/B 13	East	52.19	8"	003

11-11

1076.81 FT



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INSPECTION REPORT

DATE: 08/08/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 32	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 0

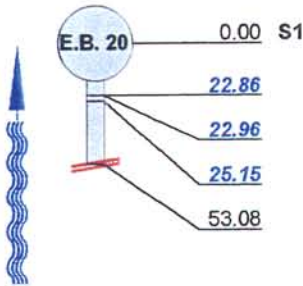
CITY: Ravenna	MAP #1:	TV'D LGTH: 53.08 FT
STREET: Load Line 3	MAP #2:	MH: E.B. 20
LOCALE: EASEMENT	TAPE #: 002	MH: North

INSPECT REASON: OTHER	PIPE SIZE: 12"
SECTION TYPE: STORMWATER	MATERIAL: VCP JT LGTH:
AREA: Ravenna Army Ammunition Plant	LINING:
	RSRVD:

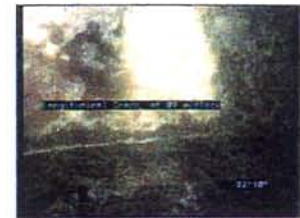
REMARK:

1:1000 POSITION

OBSERVATION



inspection begins at downstream manhole, START
Longitudinal Crack, at 09 o'clock
Longitudinal Crack, at 03 o'clock
Longitudinal Crack, at 10 o'clock
 inspection abandoned, END Seen Enough!!!!





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INSPECTION REPORT

DATE: 08/08/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 33	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 310

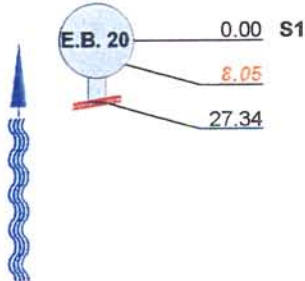
CITY: Ravenna	MAP #1:	TVD LGTH: 27.34 FT
STREET: Load Line 3	MAP #2:	MH: E.B. 20
LOCALE: EASEMENT	TAPE #: 002	MH: East

INSPECT REASON: OTHER	PIPE SIZE: 12"
SECTION TYPE: STORMWATER	MATERIAL: STEEL JT LGTH:
AREA: Ravenna Army Ammunition Plant	LINING:
	RSRVD:

REMARK:

1:1000 POSITION

OBSERVATION



inspection begins at downstream manhole, START
debris Heavy!!!!!!
 camera blocked, inspection abandoned, END too dirty to pass



8.05 FT //



INSPECTION REPORT

DATE: 08/08/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 34	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 310

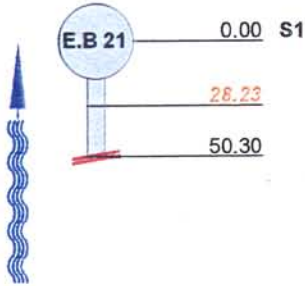
CITY: Ravenna	MAP #1:	TVD LGTH: 50.3 FT
STREET: Load Line 3	MAP #2:	MH: E.B 21
LOCALE: EASEMENT	TAPE #: 002	MH: North

INSPECT REASON: OTHER	PIPE SIZE: 12"
SECTION TYPE: STORMWATER	MATERIAL: STEEL JT LGTH:
AREA: Ravenna Army Ammunition Plant	LINING:
	RSRVD:

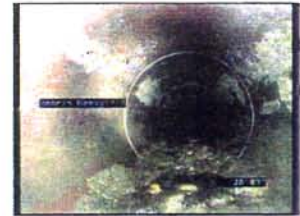
REMARK:

1:1000 POSITION

OBSERVATION



inspection begins at upstream manhole, START
debris Heavy!!!!
 inspection abandoned, END Seen Eough!!!!!!!



28.23 FT //



INSPECTION REPORT

DATE: 08/08/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 35	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 310

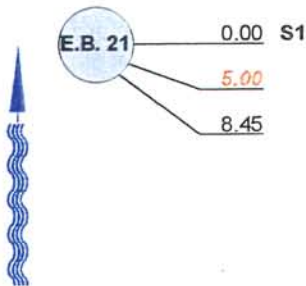
CITY: Ravenna	MAP #1:	TV'D LGTH: 8.45 FT
STREET: Load Line 3	MAP #2:	MH: E.B. 21
LOCALE: EASEMENT	TAPE #: 002	MH: South

INSPECT REASON: OTHER	PIPE SIZE: 12"
SECTION TYPE: STORMWATER	MATERIAL: STEEL JT LGTH:
AREA: Ravenna Army Ammunition Plant	LINING:
	RSRVD:

REMARK:

1:1000 POSITION

OBSERVATION



inspection begins at upstream manhole, START

debris Heavy!!!!

camera blocked, inspection abandoned, END Rock to large!!!!





INSPECTION REPORT

DATE: 08/08/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 36	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 0

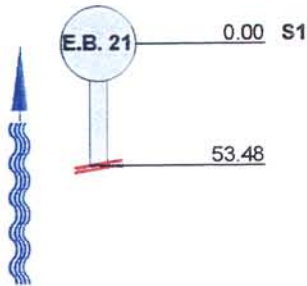
CITY: Ravenna	MAP #1:	TV'D LGTH: 53.48 FT
STREET: Load Line 3	MAP #2:	MH: E.B. 21
LOCALE: EASEMENT	TAPE #: 002	MH: East

INSPECT REASON: OTHER	PIPE SIZE: 12"
SECTION TYPE: STORMWATER	MATERIAL: STEEL JT LGTH:
AREA: Ravenna Army Ammunition Plant	LINING:
	RSRVD:

REMARK:

1:1000 POSITION

OBSERVATION



inspection begins at downstream manhole, START

inspection abandoned, END Seen Enough



INSPECTION REPORT

DATE: 08/08/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 37	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 0

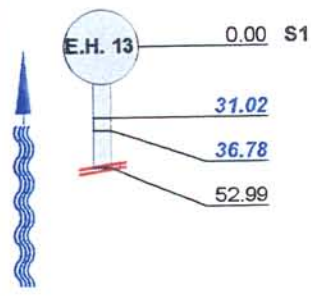
CITY: Ravenna	MAP #1:	TV'D LGTH: 52.99 FT
STREET: Load Line 3	MAP #2:	MH: E.H. 13
LOCALE: EASEMENT	TAPE #: 002	MH: North

INSPECT REASON: OTHER	PIPE SIZE: 12"
SECTION TYPE: STORMWATER	MATERIAL: VCP JT LGTH:
AREA: Ravenna Army Ammunition Plant	LINING:
	RSRVD:

REMARK:

1:1000 POSITION

OBSERVATION



inspection begins at downstream manhole, START

Longitudinal Crack, at 10 o'clock

Longitudinal Crack, at 04 o'clock

inspection abandoned, END Seen Enough!!!!



31.02 FT //



36.78 FT //



INSPECTION REPORT

DATE: 08/08/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 38	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 310

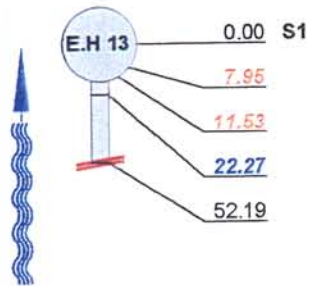
CITY: Ravenna	MAP #1:	TV'D LGTH: 52.19 FT
STREET: Load Line 3	MAP #2:	MH: E.H 13
LOCALE: EASEMENT	TAPE #: 002	MH: South

INSPECT REASON: OTHER	PIPE SIZE: 12"
SECTION TYPE: STORMWATER	MATERIAL: VCP JT LGTH:
AREA: Ravenna Army Ammunition Plant	LINING:
	RSRVD:

REMARK:

1:1000 POSITION

OBSERVATION



inspection begins at downstream manhole, START
Longitudinal Fracture at 09 o'clock
debris Big Boft
Longitudinal Crack, at 02 o'clock
inspection abandoned, END Seen Enough!





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INSPECTION REPORT

DATE: 08/08/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 39	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 0

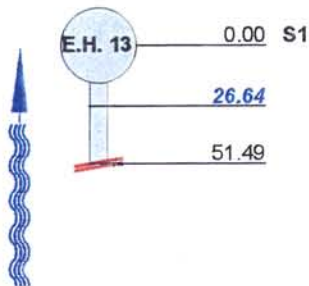
CITY: Ravenna	MAP #1:	TV'D LGTH: 51.49 FT
STREET: Load Line 3	MAP #2:	MH: E.H. 13
LOCALE: EASEMENT	TAPE #: 002	MH: East

INSPECT REASON: OTHER	PIPE SIZE: 12"
SECTION TYPE: STORMWATER	MATERIAL: VCP JT LGTH:
AREA: Ravenna Army Ammunition Plant	LINING:
	RSRVD:

REMARK:

1:1000 POSITION

OBSERVATION



inspection begins at downstream manhole, START

Longitudinal Crack, at 02 o'clock

inspection abandoned, END Seen Enough!!!



26.64 FT //



INSPECTION REPORT

DATE: 08/08/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 40	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 310

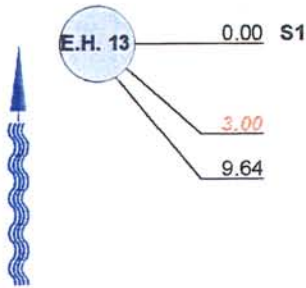
CITY: Ravenna	MAP #1:	TV'D LGTH: 9.64 FT
STREET: Load Line 3	MAP #2:	MH: E.H. 13
LOCALE: EASEMENT	TAPE #: 002	MH: East

INSPECT REASON: OTHER	PIPE SIZE: 24"
SECTION TYPE: STORMWATER	MATERIAL: STEEL JT LGTH:
AREA: Ravenna Army Ammunition Plant	LINING:
	RSRVD:

REMARK:

1:1000 POSITION

OBSERVATION



inspection begins at downstream manhole, START

debris Heavy!!!!

camera blocked, inspection abandoned Debris too heavy to pass!!!



3 FT //



9.64 FT //



INSPECTION REPORT

DATE: 08/08/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 41	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 310

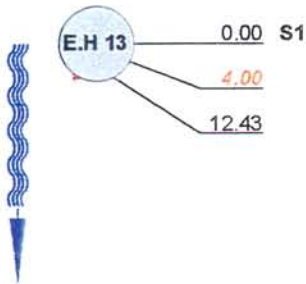
CITY: Ravenna	MAP #1:	TV'D LGTH: 12.43 FT
STREET: Load Line 3	MAP #2:	MH: E.H 13
LOCALE: EASEMENT	TAPE #: 002	MH: West

INSPECT REASON: OTHER	PIPE SIZE: 24"
SECTION TYPE: STORMWATER	MATERIAL: STEEL JT LGTH:
AREA: Ravenna Army Ammunition Plant	LINING:
	RSRVD:

REMARK:

1:1000 POSITION

OBSERVATION



inspection begins at upstream manhole, START

debris Heavy!!!!!!!!

camera blocked, inspection abandoned, END Debris too heavy to pass!!!



4 FT //



12.43 FT //



INSPECTION REPORT

DATE: 08/08/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 42	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 310

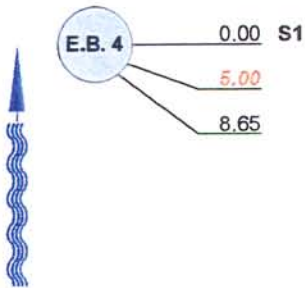
CITY: Ravenna	MAP #1:	TV'D LGTH: 8.65 FT
STREET: Load Line 3	MAP #2:	MH: E.B. 4
LOCALE: EASEMENT	TAPE #: 002	MH: North

INSPECT REASON: OTHER	PIPE SIZE: 12"
SECTION TYPE: STORMWATER	MATERIAL: VCP JT LGTH:
AREA: Ravenna Army Ammunition Plant	LINING:
	RSRVD:

REMARK:

1:1000 POSITION

OBSERVATION



inspection begins at downstream manhole, START

debris Heavy!!!!!!!

camera blocked, inspection abandoned, END Debris too heavy!!!!!!



5 FT //



8.65 FT //



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INSPECTION REPORT

DATE: 08/08/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 43	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 0

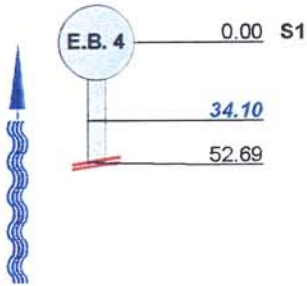
CITY: Ravenna	MAP #1:	TV'D LGTH: 52.69 FT
STREET: Load Line 3	MAP #2:	MH: E.B. 4
LOCALE: EASEMENT	TAPE #: 002	MH: South

INSPECT REASON: OTHER	PIPE SIZE: 12"
SECTION TYPE: STORMWATER	MATERIAL: VCP JT LGTH:
AREA: Ravenna Army Ammunition Plant	LINING:
	RSRVD:

REMARK:

1:1000 POSITION

OBSERVATION



inspection begins at downstream manhole, START

Longitudinal Crack, at 03 o'clock

inspection abandoned, END Seen Enough!!



34.1 FT //



INSPECTION REPORT

DATE: 08/08/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 44	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 0

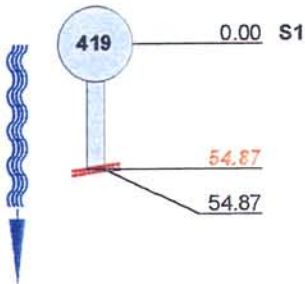
CITY: Ravenna	MAP #1:	TV'D LGTH: 54.87 FT
STREET: Load Line 3	MAP #2:	MH: 419
LOCALE: EASEMENT	TAPE #: 002	MH: South

INSPECT REASON: OTHER	PIPE SIZE: 8"
SECTION TYPE: WASTEWATER	MATERIAL: VCP JT LGTH:
AREA: Ravenna Army Ammunition Plant	LINING:
	RSRVD:

REMARK:

1:1000 POSITION

OBSERVATION



inspection begins at upstream manhole, START

Hole in pipe at 02 o'clock Pipe collapsed

inspection abandoned, END Seen Enough!!!!



54.87 FT //



INSPECTION REPORT

DATE: 08/08/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 45	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 0

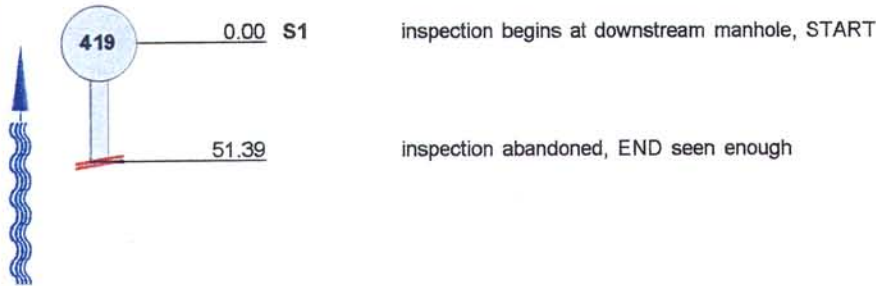
CITY: Ravenna	MAP #1:	TV'D LGTH: 51.39 FT
STREET: Load Line 3	MAP #2:	MH: 419
LOCALE: EASEMENT	TAPE #: 002	MH: East

INSPECT REASON: OTHER	PIPE SIZE: 8"
SECTION TYPE: WASTEWATER	MATERIAL: VCP JT LGTH:
AREA: Ravenna Army Ammunition Plant	LINING:
	RSRVD:

REMARK:

1:1000 POSITION

OBSERVATION



inspection begins at downstream manhole, START

inspection abandoned, END seen enough



INSPECTION REPORT

DATE: 08/08/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 46	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 0

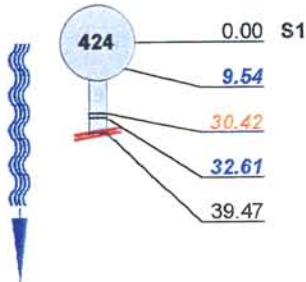
CITY: Ravenna	MAP #1:	TV/D LGTH: 39.47 FT
STREET: Load Line 3	MAP #2:	MH: 424
LOCALE: EASEMENT	TAPE #: 002	MH: West

INSPECT REASON: OTHER	PIPE SIZE: 8"
SECTION TYPE: WASTEWATER	MATERIAL: VCP JT LGTH:
AREA: Ravenna Army Ammunition Plant	LINING:
	RSRVD:

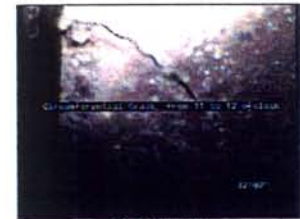
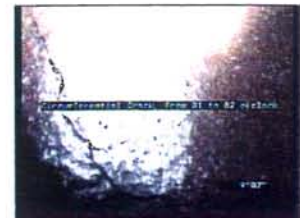
REMARK:

1:1000 POSITION

OBSERVATION



inspection begins at upstream manhole, START
Circumferential Crack, from 01 to 02 o'clock
Longitudinal Fracture at 10 o'clock
Circumferential Crack, from 11 to 12 o'clock
 camera blocked, inspection abandoned, END too much debris!!!!!!!





INSPECTION REPORT

DATE: 08/08/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 47	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 0

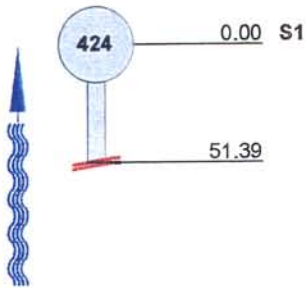
CITY: Ravenna	MAP #1:	TV'D LGTH: 51.39 FT
STREET: Load Line 3	MAP #2:	MH: 424
LOCALE: EASEMENT	TAPE #: 002	MH: South

INSPECT REASON: OTHER	PIPE SIZE: 8"
SECTION TYPE: WASTEWATER	MATERIAL: VCP JT LGTH:
AREA: Ravenna Army Ammunition Plant	LINING:
	RSRVD:

REMARK:

1:1000 POSITION

OBSERVATION



inspection begins at downstream manhole, START

inspection abandoned, END Seen Enough!!!!



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INSPECTION REPORT

DATE: 08/08/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 48	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 330

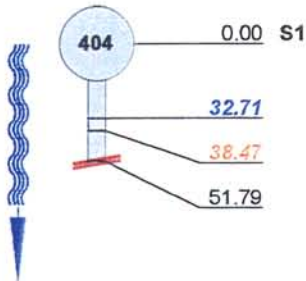
CITY: Ravenna	MAP #1:	TV'D LGTH: 51.79 FT
STREET: Load Line 3	MAP #2:	MH: 404
LOCALE: EASEMENT	TAPE #: 002	MH: West

INSPECT REASON: OTHER	PIPE SIZE: 10"
SECTION TYPE: WASTEWATER	MATERIAL: VCP JT LGTH:
AREA: Ravenna Army Ammunition Plant	LINING:
	RSRVD:

REMARK:

1:1000 POSITION

OBSERVATION

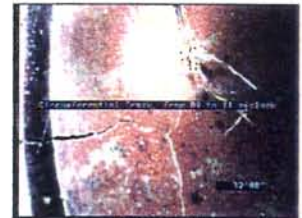


inspection begins at upstream manhole, START

Circumferential Crack, from 09 to 11 o'clock

roots heavy

inspection abandoned, END Seen Enough!



32.71 FT //



38.47 FT //



INSPECTION REPORT

DATE: 08/08/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 49	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 770

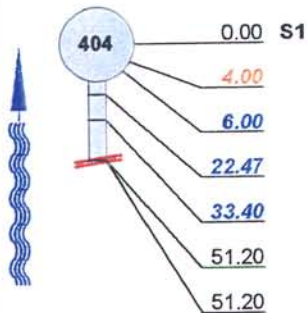
CITY: Ravenna	MAP #1:	TVD LGTH: 51.2 FT
STREET: Load Line 3	MAP #2:	MH: 404
LOCALE: EASEMENT	TAPE #: 002	MH: East

INSPECT REASON: OTHER	PIPE SIZE: 10"
SECTION TYPE: WASTEWATER	MATERIAL: STEEL JT LGTH:
AREA: Ravenna Army Ammunition Plant	LINING:
	RSRVD:

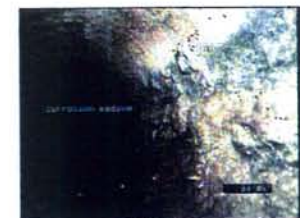
REMARK:

1:1000 POSITION

OBSERVATION



inspection begins at upstream manhole, START
debris
Longitudinal Crack, at 10 o'clock
corrosion medium
corrosion medium
pipe material changes at this point to VCP from Cast Iron
inspection abandoned, END Seen Enough





INSPECTION REPORT

DATE: 08/08/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 50	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 330

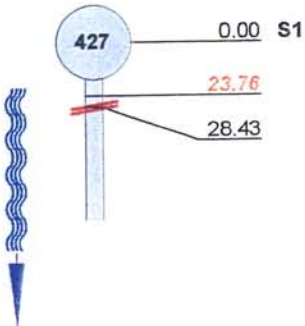
CITY: Ravenna	MAP #1:	TVD LGTH: 177.05 FT
STREET: Load Line 3	MAP #2:	MH: 427
LOCALE: EASEMENT	TAPE #: 002	MH: West

INSPECT REASON: OTHER	PIPE SIZE: 8"
SECTION TYPE: WASTEWATER	MATERIAL: STEEL JT LGTH:
AREA: Ravenna Army Ammunition Plant	LINING:
	RSRVD:

REMARK:

1:1000 POSITION

OBSERVATION



inspection begins at upstream manhole, START

roots heavy

camera blocked, inspection abandoned, END Blocked by piece of pipe



23.76 FT //



28.43 FT //



INSPECTION REPORT

DATE: 08/08/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 51	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 660

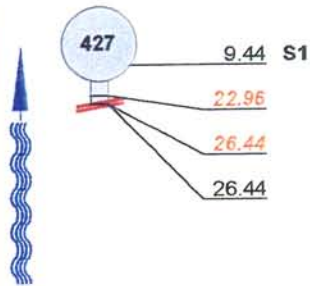
CITY: Ravenna	MAP #1:	TVD LGTH: 26.44 FT
STREET: Load Line 3	MAP #2:	MH: 427
LOCALE: EASEMENT	TAPE #: 002	MH: North

INSPECT REASON: OTHER	PIPE SIZE: 8"
SECTION TYPE: WASTEWATER	MATERIAL: STEEL JT LGTH:
AREA: Ravenna Army Ammunition Plant	LINING:
	RSRVD:

REMARK:

1:1000 POSITION

OBSERVATION

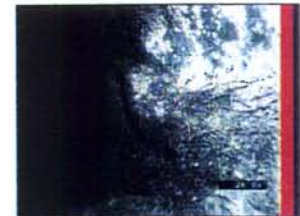
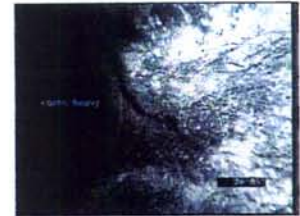


inspection begins at downstream manhole, START

roots heavy

roots heavy

camera blocked, inspection abandoned, END Roots too heavy!!!!!!



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