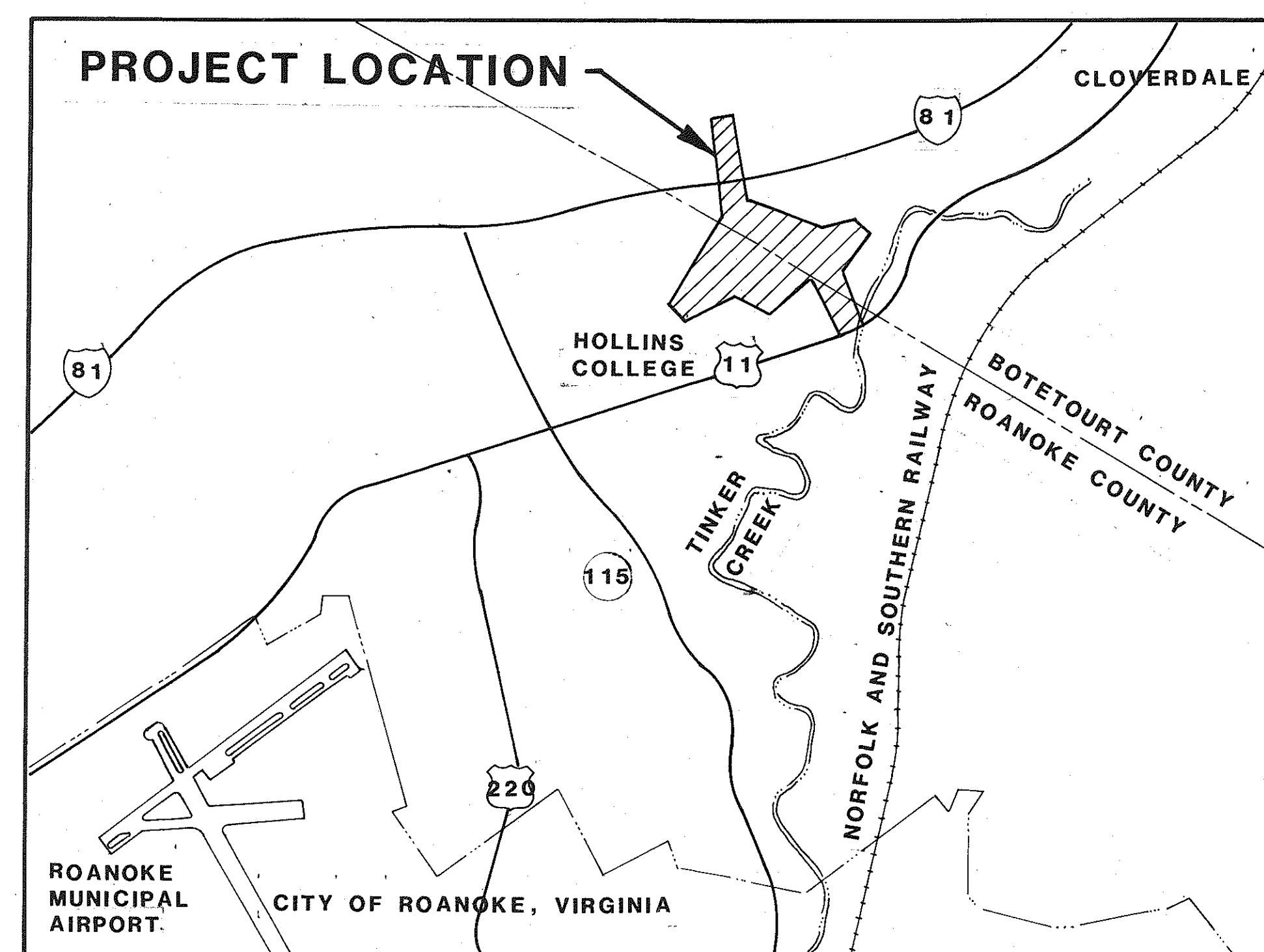


PROJECT NAME: Hollins Community Area
DATE: 12-88
TYPE: Water - Sewer Improv.
LOCATION: Pt 11
TOTAL # SHEETS: 38
A/E FIRM: Mattern & Craig
OF SETS: 1

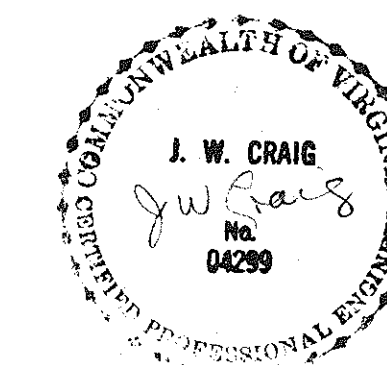
HOLLINS COMMUNITY DEVELOPMENT AREA
WATER, SEWER, AND HIGHWAY IMPROVEMENTS PROJECT

CONTRACT I - WATER AND SEWER IMPROVEMENTS

FINANCED BY THE FARMERS HOME ADMINISTRATION



MATTERN AND CRAIG
CONSULTING ENGINEERS
ROANOKE, VIRGINIA



SET NO.

ABBREVIATIONS			LEGEND		GENERAL NOTES
ABUT	ABUTMENT	PSI	POUNDS PER SQ INCH		GENERAL NOTES: 1. THE LOCATION OF EXISTING UTILITIES, INCLUDING UNDERGROUND UTILITIES, IS INDICATED ON THE DRAWINGS INSOFAR AS THEIR EXISTENCE AND LOCATION WERE KNOWN AT THE TIME OF PREPARATION OF THE DRAWINGS. HOWEVER, NOTHING IN THESE CONTRACT DOCUMENTS SHALL BE CONSTRUED AS A GUARANTEE THAT SUCH UTILITIES ARE IN THE LOCATION INDICATED OR THAT THEY ACTUALLY EXIST, OR THAT OTHER UTILITIES ARE NOT WITHIN THE AREA OF OPERATIONS. THE CONTRACTOR SHALL MAKE ALL NECESSARY INVESTIGATIONS TO DETERMINE THE EXISTENCE AND LOCATIONS OF SUCH UTILITIES. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY DAMAGE TO AND FOR MAINTENANCE AND PROTECTION OF EXISTING UTILITIES AND STRUCTURES. 2. THE CONTRACTOR IS DIRECTED TO DIG AND LOCATE ALL UTILITIES, IN ADVANCE OF THE PIPE LAYING, TO ALLOW FOR ADJUSTMENTS IN THE <u>WORK</u> DUE TO CONFLICTS WITH THE UTILITIES. THE HORIZONTAL AND VERTICAL LOCATION OF THE <u>WORK</u> ON THE FOLLOWING SHEETS SHALL BE ADJUSTED TO SUIT CONDITIONS CAUSED BY THE EXISTING UTILITIES. 3. BENCHMARKS NOTED ON DRAWINGS. 4. ALL EXST. WATER SERVICE CONNECTIONS ARE NOT SHOWN ON PLAN OR PROFILES. 5. CONTRACTOR SHALL REPLACE ALL EXST. CULVERTS AND RESTORE ALL EXST. DITCHES AS REQD DUE TO CONSTR OF NEW SANITARY AND WATERLINE, WHETHER INDICATED OR NOT. 6. SEE DETAIL SS-14 FOR SANITARY SEWER SERVICE CONNECTION, CLEANOUT, PIPE SIZE AND SLOPE. A CLEANOUT SHALL BE LOCATED AT THE PROPERTY LINE AND AT ALL BENDS IN THE SAN. SEWER SERVICE CONN. 7. SURVEY <u> </u> BY WHM ASSOCIATES, SALEM, VIRGINIA 1986. 8. CONTRACTOR SHALL RETURN ALL EXISTING GATE VALVES, BLOWOFF VALVES, METERS AND ASSOCIATED PARTS THAT ARE REMOVED FROM THE EXISTING WATER SYSTEM TO THE COUNTY OF ROANOKE. 9. EXISTING WATER LINES SHALL BE ABANDONED IN PLACE AFTER NEW WATER LINE IS IN OPERATION AND ALL SERVICE CONNECTIONS ARE MADE TO NEW WATER LINE. 10. THE DRAWINGS SHALL NOT BE SCALED AND THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS AT THE SITE PRIOR TO PROCEEDING WITH THE WORK. THE CONTRACTOR IS DIRECTED TO NOTE ALL CONNECTIONS TO EXISTING SYSTEMS INDICATED AND THE NECESSITY TO VERIFY AND/OR DETERMINE THE SIZE, THE MATERIALS AND THE HORIZONTAL AND VERTICAL LOCATION OF THE EXISTING UTILITIES PRIOR TO ORDERING ANY MATERIALS. 11. EXST GROUND LINES IN PROFILES REFLECT COMPLETED HIGHWAY CONSTRUCTION. 12. ALL EXISTING WATER SERVICE CONNECTIONS, INCLUDING METERS, YOKES, BOXES, & ETC., SHALL BE REPLACED. ALL EXISTING WATER SERVICE CUSTOMERS SHALL BE CONNECTED TO THE NEW WATER SYSTEM BY THE CONTRACTOR.
ADD	ADDITIONAL	PT	POINT OF TANGENT		
ADJ	ADJACENT	PVC	POINT OF VERTICAL CURVE		
AGGR	AGGREGATE		POLYVINYL CHLORIDE		
AHR	ANCHOR	PVI	POINT OF VERTICAL INTERSECTION		
AL	ALUMINUM	PVMT	PAVEMENT		
ALT	ALTERNATE	PVT	POINT OF VERTICAL TANGENT		
APPROX	APPROXIMATE	R	RADIUS		
AWWA	AMERICAN WATER WORKS ASSOCIATION	RT	RIGHT		
BIT	BITUMINOUS	R/W	RIGHT OF WAY		
BL	BASE LINE	RD	ROAD		
BLDG	BUILDING	RDCR	REDUCER		
BM	BENCH MARK	REINF	REINFORCE, REINFORCEMENT		
BOT	BOTTOM	REQD	REQUIRED		
B	BRICK	REV	REVISION		
BSMT	BASEMENT	S	SANITARY SEWER, SOUTH, STORY		
C/O, C/C	CENTER TO CENTER	SAN	SANITARY		
C & G	CURB & GUTTER	SCH	SCHEDULE		
CAP	CAPACITY	SD	STORM DRAIN		
CF	CUBIC FEET	SECT	SECTION		
CY	CUBIC YARD	SH	SHEET		
CI	CAST IRON	SIM	SIMILAR		
CIRC	CIRCULAR	SPEC	SPECIFICATION		
CL	CENTER LINE	SQ	SQUARE		
CLR	CLEAR	SST	STAINLESS STEEL		
CMP	CORRUGATED METAL PIPE	ST	STREET		
CND	CONDUIT	STA	STATION		
CO	CLEAN OUT	STD	STANDARD		
COL	COLUMN	STL	STEEL		
CONC	CONCRETE	SURF	SURFACE		
CONN	CONNECT, CONNECTION	SER	SERVICE		
CONT	CONTINUOUS	SUR	SURVEY		
CONTR	CONTRACTOR	TDC	TURNED DOWN CURB		
CTR	CENTER	TELE	TELEPHONE		
CULV	CULVERT	TEMP	TEMPORARY		
D	DEPTH DEGREE OF CURVE	THK	THICK		
DEPT	DEPARTMENT	TV	TELEVISION		
DET	DETAIL	TW	TOP OF WALL		
DI	DROP INLET, DUCTILE IRON	TYP	TYPICAL		
DIA	DIAMETER	UG	UNDERGROUND		
DIM	DIMENSION	V	VALVE		
DISC	DISCONNECT	VC	VERTICAL CURVE		
DMH	DROP MANHOLE	VERT	VERTICAL		
DN	DOWN	VOL	VOLUME		
DR	DRIVE	VDHT	VIRGINIA DEPT OF HIGHWAYS AND TRANSPORTATION		
DWL	DWELLING				
DWG	DRAWING	W/O	WITHOUT		
E	EAST	WD	WOOD		
EA	EACH	WL	WATER LINE		
EF	EACH FACE	WS	WATER SURFACE		
EJ	EXPANSION JOINT	WT	WATERTIGHT		
ELEV	ELEVATION	WWF	WELDED WIRE FABRIC		
ELEC	ELECTRIC, ELECTRICAL	WVDH	WEST VIRGINIA DEPT OF HIGHWAYS		
ENGR	ENGINEER	FR	FRAME		
ENR	ENTRANCE	CVR	COVER		
EOL	END OF LINE				
EP	EDGE OF PAVEMENT				
EQ	EQUAL				
EQPT	EQUIPMENT				
EW	EACH WAY, ENDWALL				
EXST	EXISTING				
EXT	EXTERIOR				
F	FRAME				
FD	FLOOR DRAIN				
FDN	FOUNDATION				
FES	FLARED END SECTION				
FIG	FIGURE				
FIN	FINISH				
FL	FLOOR				
FLEX	FLEXIBLE				
FLG	FLANGE				
FT	FOOT				
FTG	FOOTING				
GAL	GALLON				
GALV	GALVANIZED				
GND	GROUND				
GOVT	GOVERNMENT				
GPM	GALLONS PER MINUTE				
GV	GATE VALVE				
HB	HOSE BIBB				
HORZ	HORIZONTAL				
HP	HORSEPOWER				
HPT	HIGH POINT				
HYD	HYDRANT				
ID	INSIDE DIAMETER				
IN	INCH				
INVT	INVERT				
JB	JUNCTION BOX				
L	LENGTH				
LF	LINEAL FOOT				
LP	LOW POINT				
LT	LEFT				
MATL	MATERIAL				
MAX	MAXIMUM				
MFR	MANUFACTURER				
MH	MANHOLE				
MIN	MINIMUM				
MISC	MISCELLANEOUS				
MON	MONUMENT				
N & C	NAIL & CAP				
NIC	NOT IN CONTRACT				
NO	NUMBER				
NTS	NOT TO SCALE				
OC	ON CENTER				
OD	OUTSIDE DIAMETER				
OPNG	OPENING				
OPP	OPPOSITE				
PC	POINT OF CURVE				
PCC	POINT OF COMPOUND CURVE				
PI	POINT OF INTERSECTION				
PIV	POST INDICATOR VALVE				
PL	PLATE, PROPERTY LINE				
POT	POINT ON TANGENT				
PERF	PERFORATED				
POL	POINT ON LINE				
PRC	POINT OF REVERSE CURVE				

REVISION	DATE	DESCRIPTION	BY	APP.

DATE

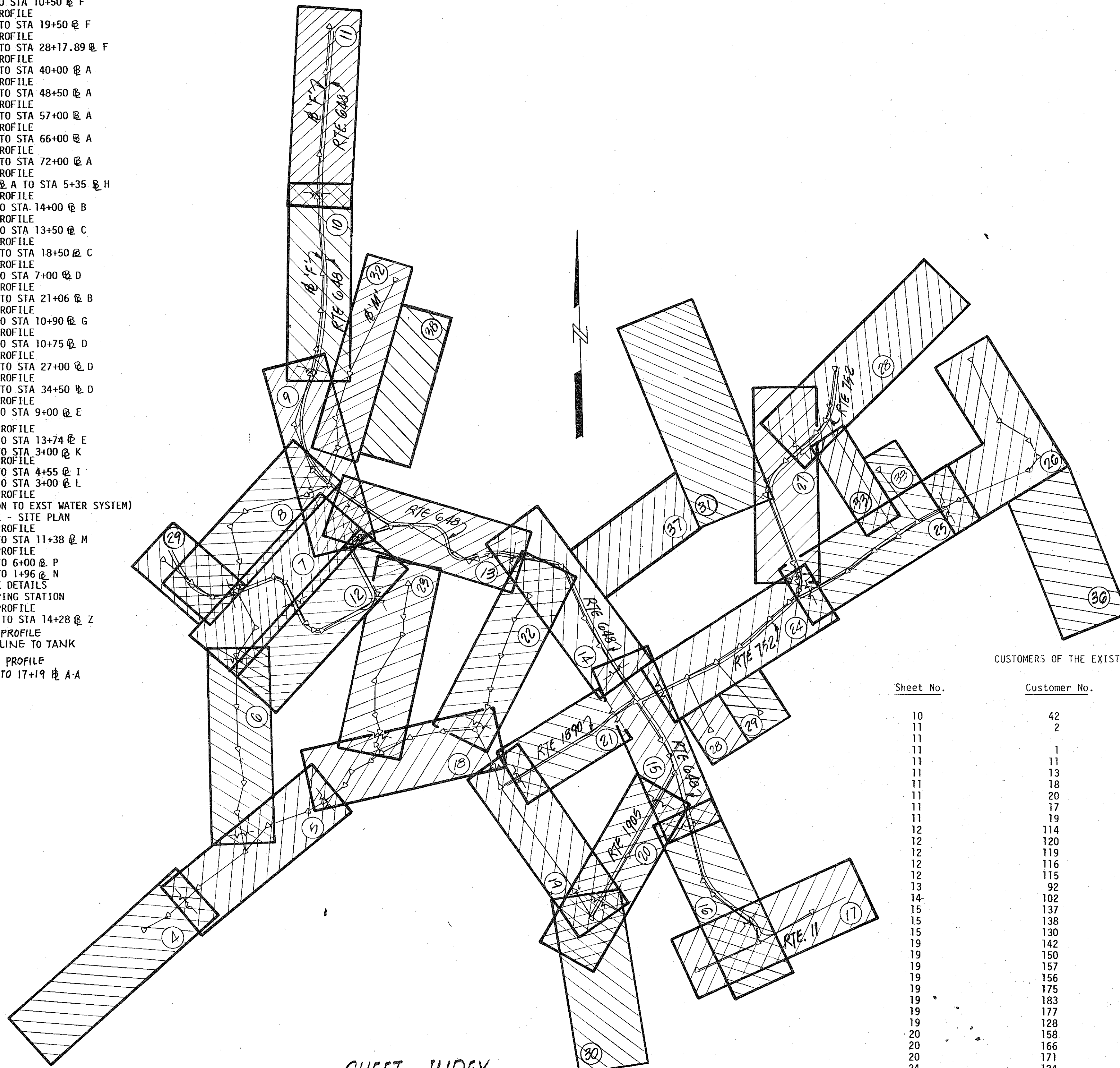
COMM.

491

SHT NO.

TITLE

1. COVER
2. ABBREVIATIONS, LEGEND AND GENERAL NOTES
3. INDEX MAP
4. PLAN AND PROFILE
5. STA 0+00 TO STA 9+00 @ A
6. PLAN AND PROFILE
7. STA 9+00 @ A TO STA 5+00 @ B
8. PLAN AND PROFILE
9. STA 14+00 TO STA 23+00 @ A
10. PLAN AND PROFILE
11. STA 23+00 TO STA 31+00 @ A
12. PLAN AND PROFILE
13. STA 0+20 TO STA 8+00 @ J
14. PLAN AND PROFILE
15. STA 2+50 TO STA 10+50 @ F
16. PLAN AND PROFILE
17. STA 10+50 TO STA 19+50 @ F
18. PLAN AND PROFILE
19. STA 19+50 TO STA 28+17.89 @ F
20. PLAN AND PROFILE
21. STA 31+00 TO STA 40+00 @ A
22. PLAN AND PROFILE
23. STA 40+00 TO STA 48+50 @ A
24. PLAN AND PROFILE
25. STA 48+00 TO STA 57+00 @ A
26. PLAN AND PROFILE
27. STA 57+00 TO STA 66+00 @ A
28. PLAN AND PROFILE
29. STA 66+00 TO STA 72+00 @ A
30. PLAN AND PROFILE
31. STA 72+00 @ A TO STA 5+35 @ H
32. PLAN AND PROFILE
33. STA 5+00 TO STA 14+00 @ B
34. PLAN AND PROFILE
35. STA 1+00 TO STA 13+50 @ C
36. PLAN AND PROFILE
37. STA 13+50 TO STA 18+50 @ C
38. PLAN AND PROFILE
39. STA 1+00 TO STA 7+00 @ D
40. PLAN AND PROFILE
41. STA 14+00 TO STA 21+06 @ B
42. PLAN AND PROFILE
43. STA 1+00 TO STA 10+90 @ G
44. PLAN AND PROFILE
45. STA 9+75 TO STA 10+75 @ D
46. PLAN AND PROFILE
47. STA 10+75 TO STA 27+00 @ D
48. PLAN AND PROFILE
49. STA 27+00 TO STA 34+50 @ D
50. PLAN AND PROFILE
51. STA 1+50 TO STA 9+00 @ E
52. PLAN AND PROFILE
53. STA 9+00 TO STA 13+74 @ E
54. STA 1+00 TO STA 3+00 @ K
55. PLAN AND PROFILE
56. STA 0+30 TO STA 4+55 @ I
57. STA 1+50 TO STA 3+00 @ L
58. PLAN AND PROFILE
59. (CONNECTION TO EXIST WATER SYSTEM)
60. WATER TANK - SITE PLAN
61. PLAN AND PROFILE
62. STA 2+00 TO STA 11+38 @ M
63. PLAN AND PROFILE
64. STA 1+00 TO 6+00 @ P
65. STA 1+00 TO 1+96 @ N
66. WATER TANK DETAILS
67. WATER PUMPING STATION
68. PLAN AND PROFILE
69. STA 10+80 TO STA 14+28 @ Z
70. PLAN AND PROFILE
71. 8" WATER LINE TO TANK
72. PLAN AND PROFILE
73. STA 11+50 TO 17+19 @ A-A



SHEET INDEX

NO SCALE

NOTES: 1. WATER SERVICE TO THE EXISTING WATER CUSTOMERS SHALL NOT BE INTERRUPTED. THIS LIST REPRESENTS THE BEST INFORMATION AVAILABLE REGARDING THE CUSTOMERS SERVED BY THE EXST. WATER SYSTEM. HOWEVER, THIS SHALL NOT BE CONSIDERED TO BE A COMPLETE LIST OF ALL CUSTOMERS. ALL CUSTOMERS OF THE EXST. WATER SYSTEM SHALL BE CONNECTED TO THE NEW WATER SYSTEM.

CUSTOMERS OF THE EXISTING WATER SYSTEM (SEE NOTE 1)

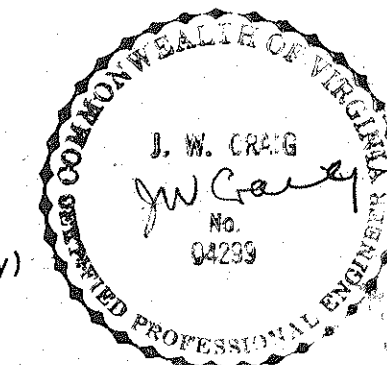
Sheet No.	Customer No.	Name of Customer
10	42	James E. & Stella M. Carpenter
11	2	Mason Haynesworth et als
11		James Robinson
11	1	Richard Chubb
11	11	Edward Stafford
11	13	William & Sybil Johnson
11	18	Isiah & Virginia Sweetenberg
11	20	Lenora Morton
11	17	Mildred Morton
11	19	James Robertson, Jr.
12	114	Doris Crowder (FHA)
12	120	Edward & Francis Mitchell
12	119	James H. Johnson
12	116	James & Cora Lewis
12	115	Harry & Mary Smith
13	92	First Baptist Church of Hollins
13	102	Larry Stuart
15	137	Wendel Bruce
15	138	Willie Hunt
15	130	Monroe & Shirley Johnson
19	142	George & Celestine Bruce
19	150	Lorine Harris
19	157	Charles & Viola Johnson
19	156	George & Mattie Johnson
19	175	Edward & Francis Mitchell
19	183	Alice Garrison
19	177	Paul Garrison heirs
19	128	William & Carrie Gaither Heirs
20	158	George Garrison
20	166	Fred & Maggie Anderson
20	171	William & Maggie Hunt Heirs
24	124	Emma Bruce
24	125	Archie Bruce
24	111	Brion & Rene Croan
24	95	Elizabeth Jones
24	85	(Pearl Jackson)
25	71	(Theodore Harriston)
25	64	Harry Smith
25	69C	Margaret Crowder
27	69-A,B,D	Frank & Gertrude Johnson
27	61	Frank & Jamie Johnson
27	69	Anita Hines
27	69	Leon Smith
27	54	Julia McDowell
28	131	Constance Crowder
28	132	Gertie Crowder
29	118	Melissa Meade
32	49	Nettie Johnson
33	51	Solomon Hunt
33	70	Florence Edwards
33	46	William & Susanna Hunt
33	55	Fred Anderson Estate (Betty)
38	59	Andrew & Beatrice Lawson

NEW CUSTOMERS INDEX

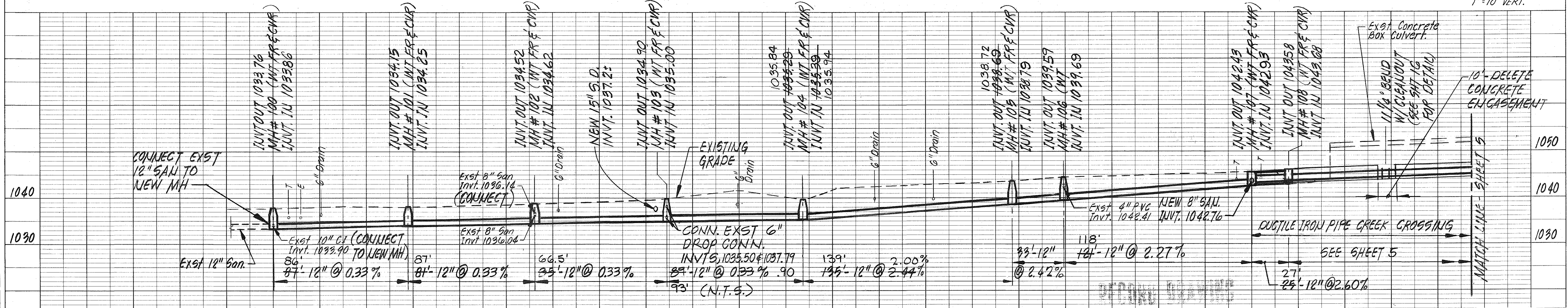
NO.	
1	Richard L. Chubb
2	Mason Haynesworth, Richard Chubb, John Powell
3	U. S. Finance, Ida Mae Banks
6	U. S. Finance, David Hunt & Mary Ellen Hunt
9	Mason Haynesworth
11	Edward L. Stafford
12	Joseph & Mary Keaton
13	William & Sybil Johnson
17	Mildred Morton
18	Isaiah & Virginia Sweetenberg
19	James Robertson, Jr.
20	Leona Morton
32	Milburn R. Smith
33	Nettie Johnson (Terry Coleman)
36	Rutrough-Mack (Ernest Bolden)
39	Sandra Callender
44	Thomas & Elizabeth Noell
45	Robert & Amy Burger
46	William & Susanna Hunt
49	Nettie Johnson
51	Solomon Hunt
53	Moses & Mary Anderson
54	Julia McDowell
55	Fred Anderson Estate
58	Frank & Marie Johnson
59	Andrew & Beatrice Lawson
64	Margaret Crowder
69	Leon Smith
70	Florence Edwards
71	Harry Smith
77B	
79	William, Sr. & Francis Bolden
80	Monroe & Rosalie Johnson
85	Pearl Jackson, Theodore Jackson
87	Thomas Noell
88	Lottie Bolden
92	First Baptist Church
96	Ruth S. King, Mary K. Knowles
100	William & Helen Megginson
104	Wade H. Minnis
105	Wade H. Minnis
111	Brion & Rene Croan
114	Doris Crowder
115	Harry & Mary Smith
116	James E. Lewis
118	Melissa Neade
119	James H. Johnson
120	Edward & Francis Mitchell
123	Leona Hunt (Uriss Hunt HRS)
124	Emma Bruce
125	Archie Bruce
127	Olivia Jean Smith
130	Shirley & Monroe Johnson
131	Constance Crowder
132	Gertie Crowder
135	Esther B. Sadler
136	Esther B. Sadler
137	Wendell & Betty Bruce
139	Mattie Craighead
140	Dollie Smith
142	George & Celeste Bruce
149	Rosalia Hunt (HRS) Zacariah Hunt
150	Lorine Harris
151	Mary Elizabeth Wright
153	Webb's Oil
157	Charles & Viola Johnson
158	George Garrison
162	Dave Bruce
166	Fred & Maggie Anderson
167	Louise J. Harris
171	William & Mary Hunt HRS - Maggie S. Hunt
173	Susanna (Mrs. Julian) Morton
175	Ed Mitchell
176	Ruth Wilson Hunt, Jamie Loflar, occupant)
177	Paul Garrison HRS
178	Cecil Garrison
183	Alice Garrison
184	Louis McFallis
185	Robert & Annie Milton
186	George & Mattie Johnson
42	James E. & Stella M. Carpenter
42A	J.L. Francis
61	Anita Hines
138	Willie Hunt
97	Ira Womack
128	William M. & Carrie Gaither Hrs. - Ethel Bonds
95	ELIZABETH JONES
59	ANDREW & BEATRICE LAWSON
37	LEONARD BUTLER
34	George Mead

◻ DENOTES CUSTOMERS INDEX NO. FOR IDENTIFICATION OF SERVICE CONNECTIONS

REVISION	DATE	DESCRIPTION	BY	APP.
DESIGNED	CAT	INDEX MAP		
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CHECKED	JWC			
APPROVED				
SUBMITTED				
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		DATE: AUG 86	SHEET 3	



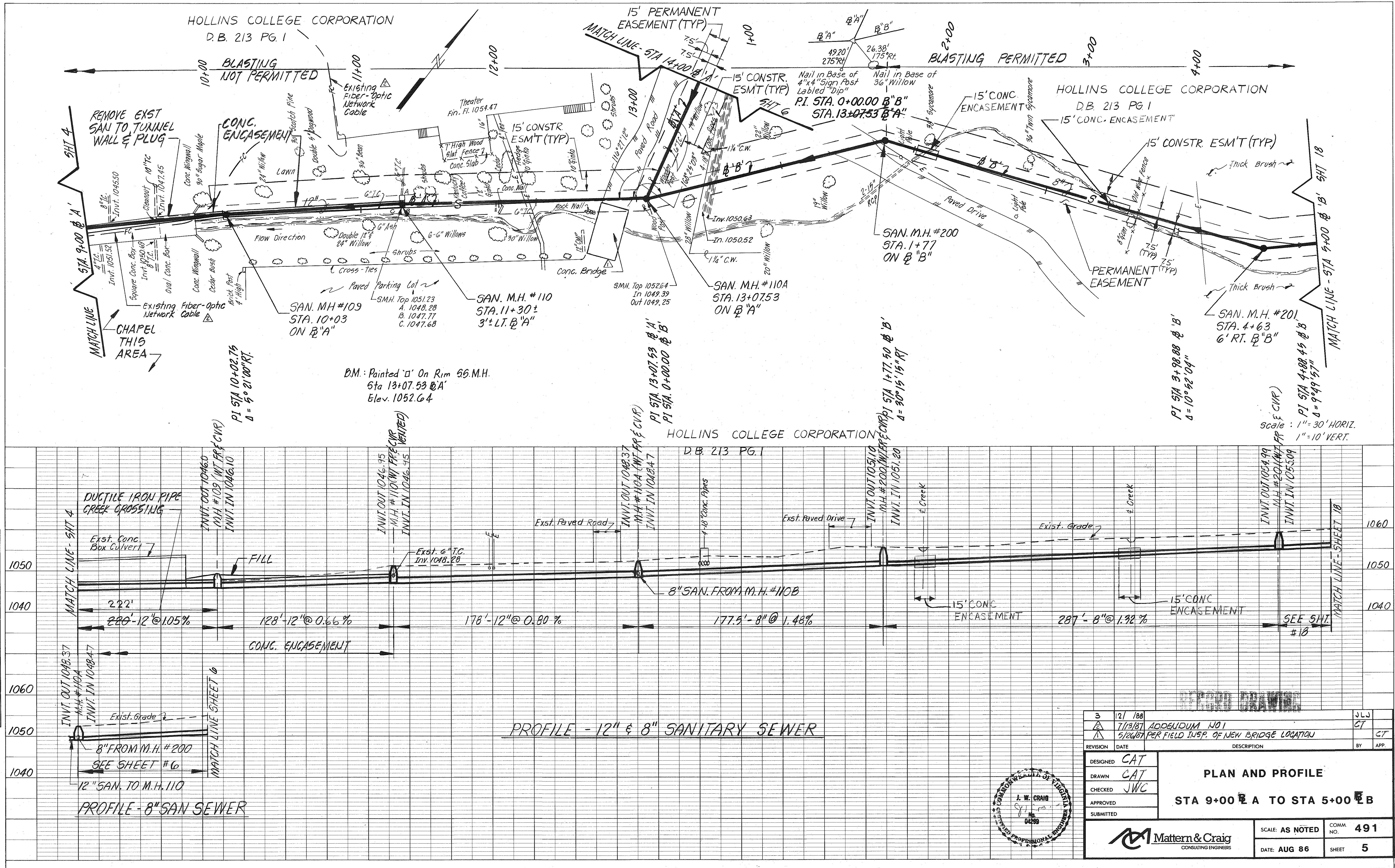
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CHECKED	JWC		
APPROVED			
SUBMITTED			
 Mattern & Craig CONSULTING ENGINEERS		SCALE: AS NOTED	COMM. NO. 491
		DATE: AUG 86	SHEET 4

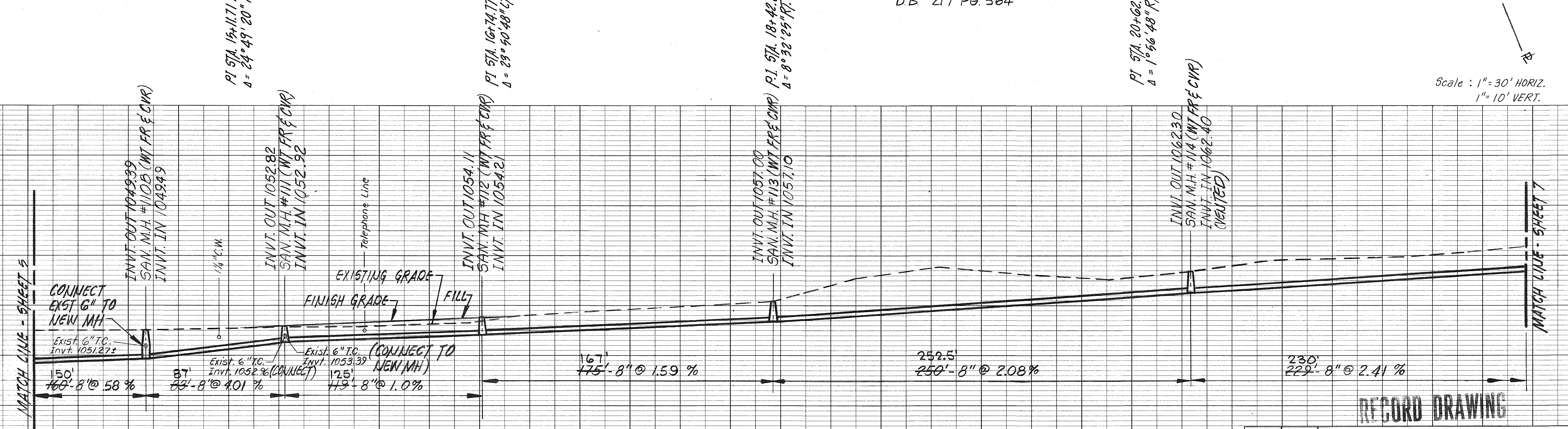
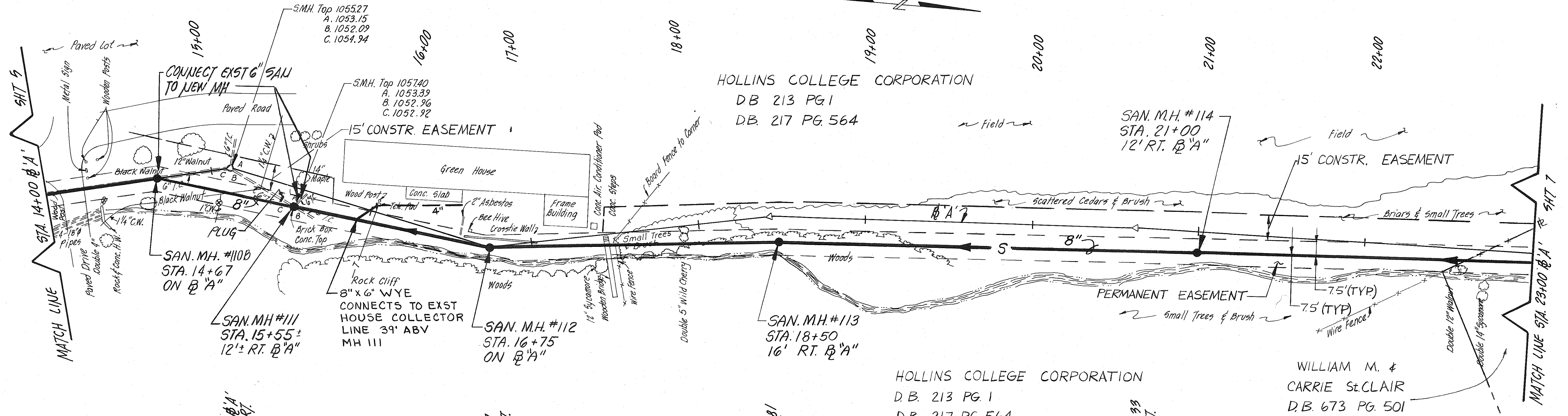
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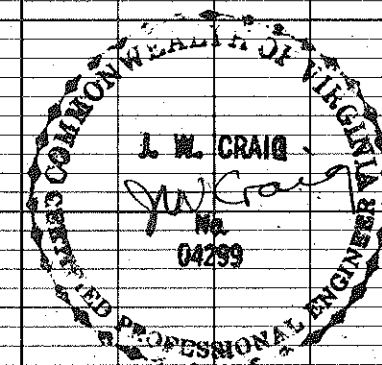


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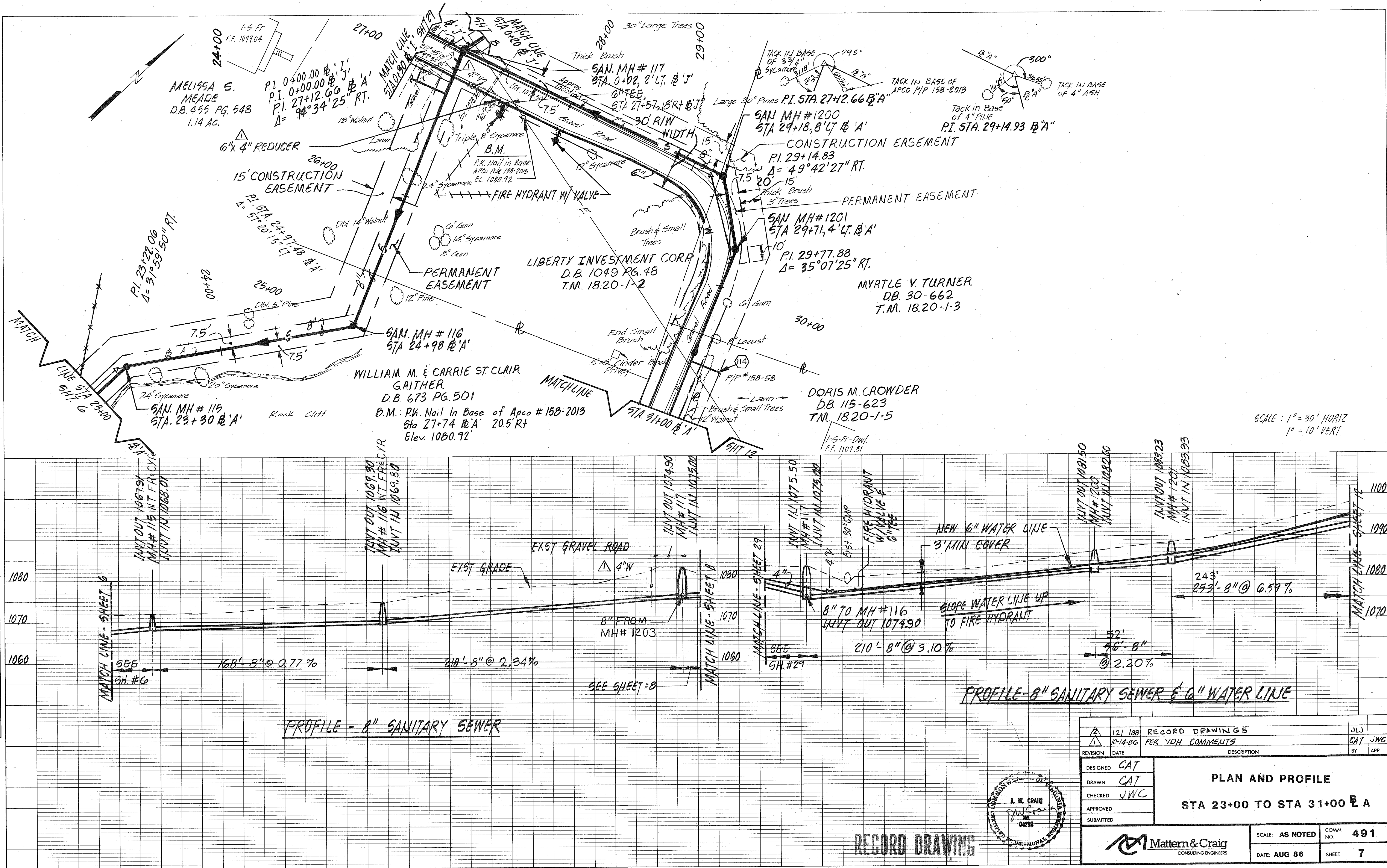
PROFILE - 8" SANITARY SEWER



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SUBMITTED				
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				SHEET 6
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SURVEYED		
NOTED		
ALIGNED		
CHECKED		
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SURVEYED		
NOTED		
GRADES		
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STRUCTURE		
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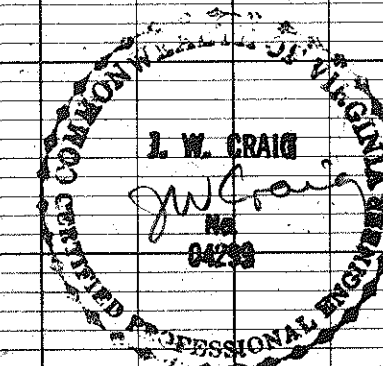


SCALE: 1" = 30' HORIZ.
1" = 10' VERT.

PROFILE - 8" SANITARY SEWER & 6" WATER LINE

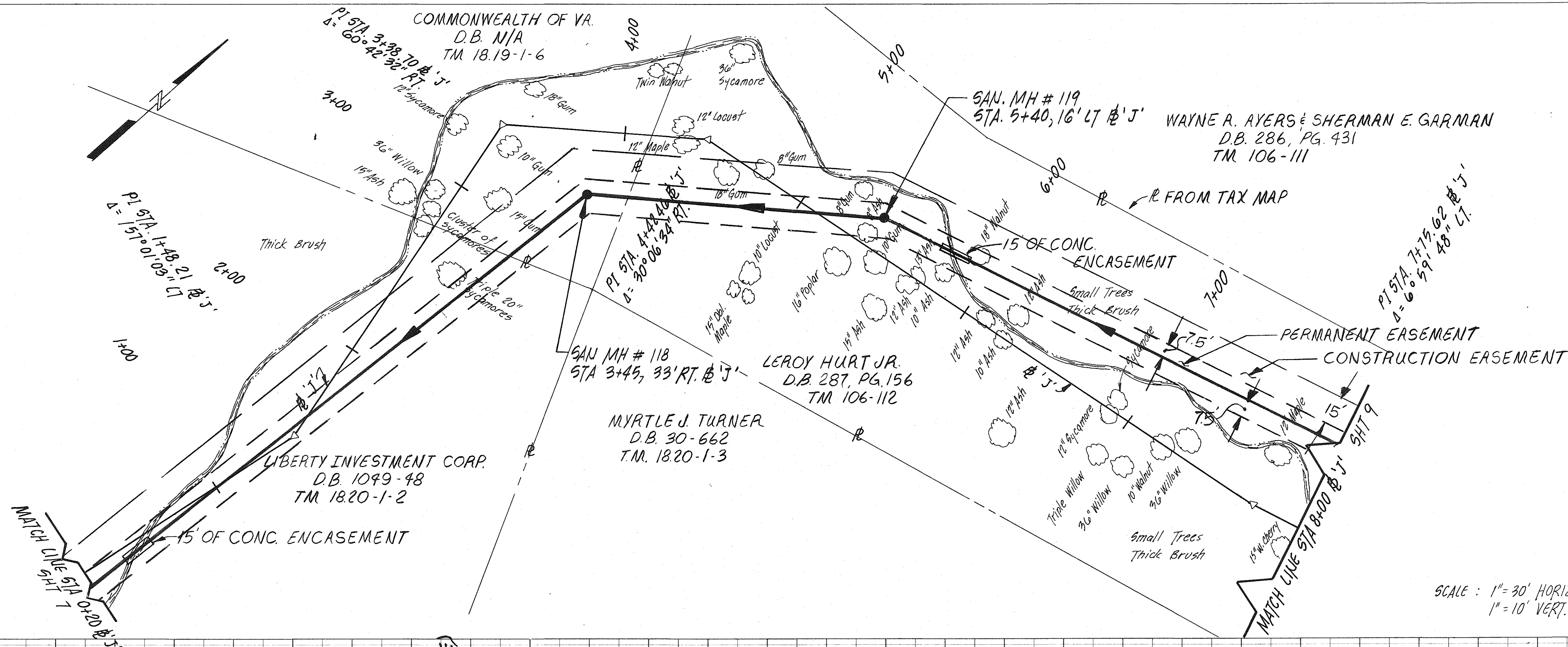
PROFILE - 8" SANITARY SEWER

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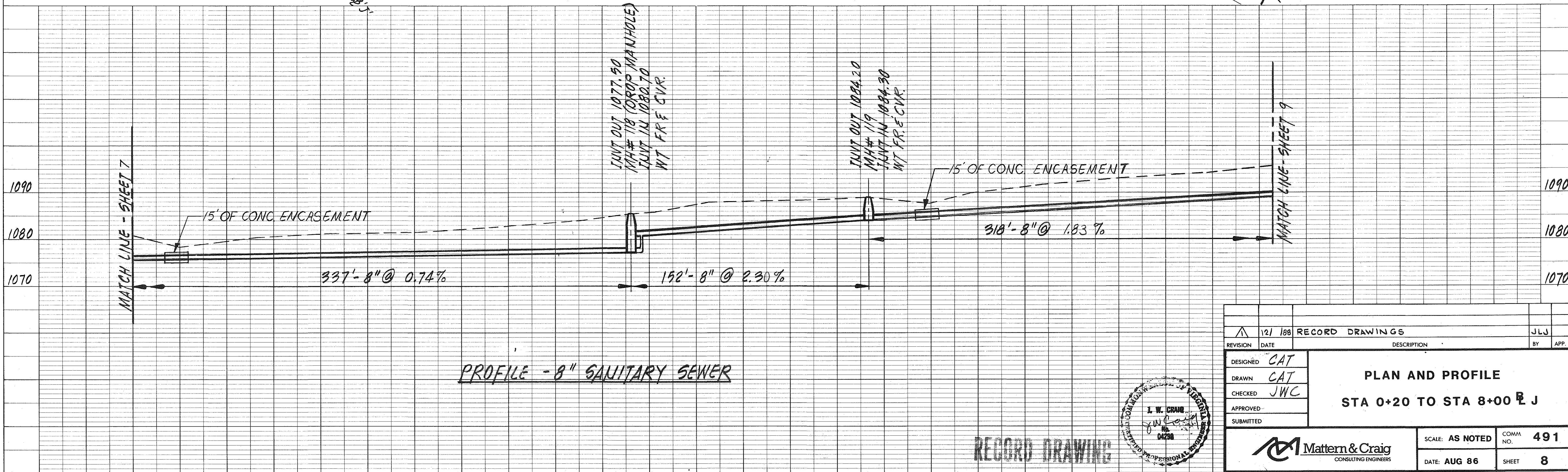
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NOTE BOOK	PLOTTED	BY
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	RT. OF WAY CHECKED	



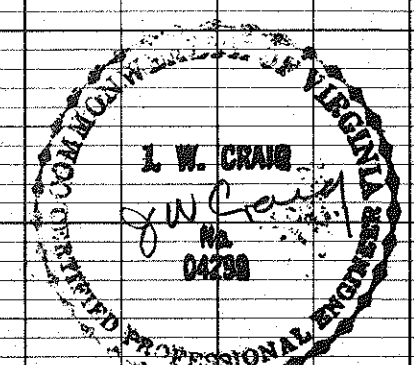
SCALE: 1" = 30' HORIZ.
1" = 10' VERT.

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NOTE BOOK	PLOTTED	BY
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	STRUCTURE NOTATIONS CHKD	



PROFILE - 8" SANITARY SEWER

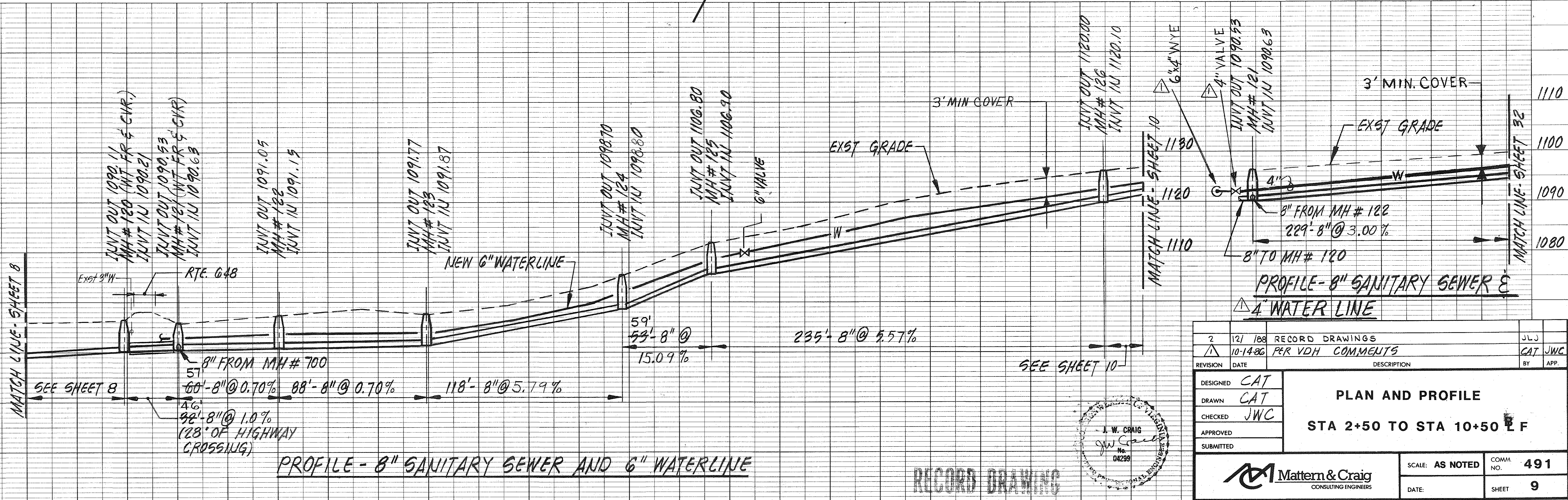
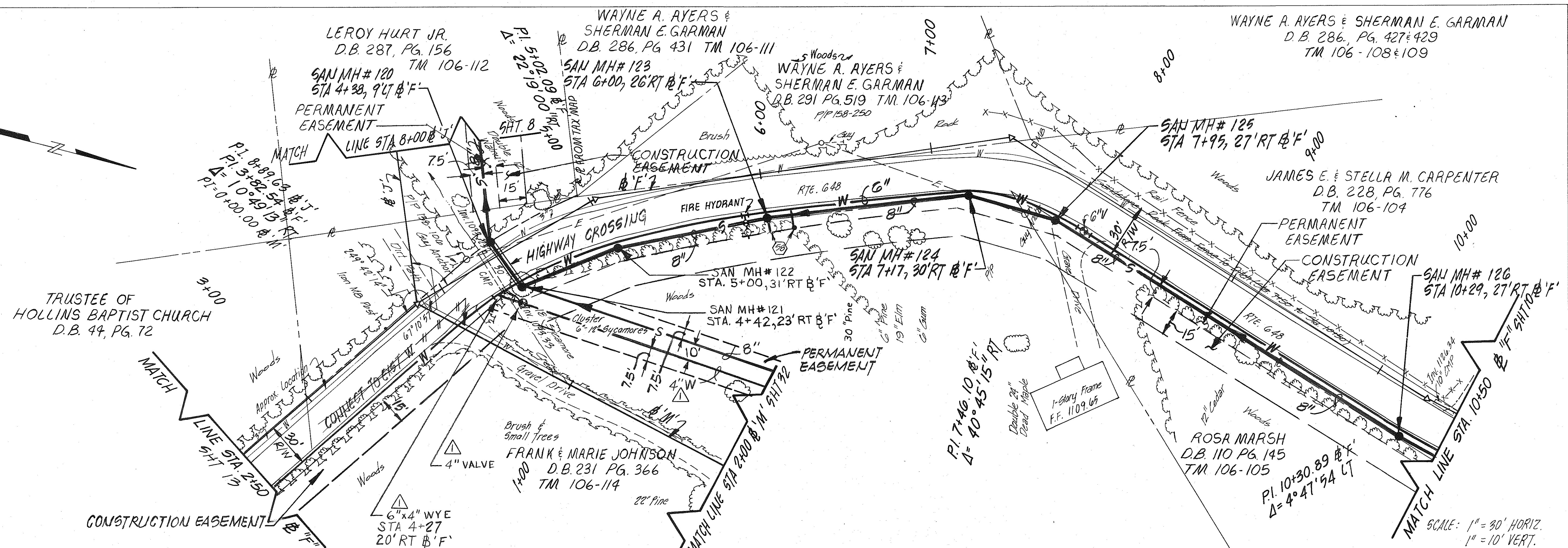
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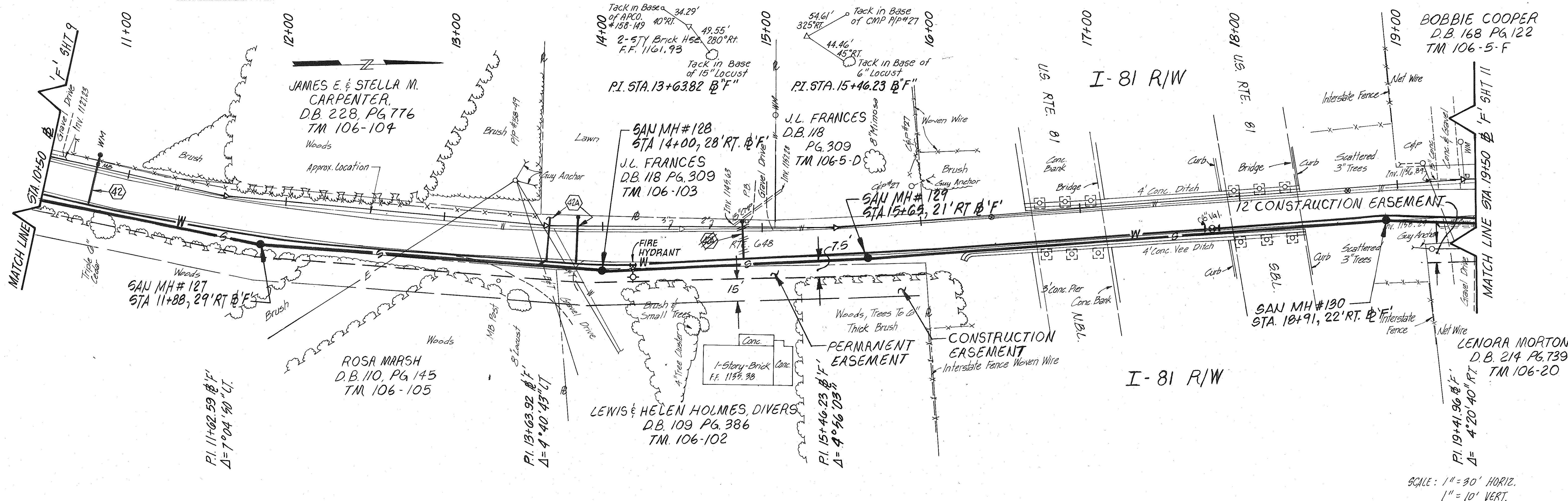
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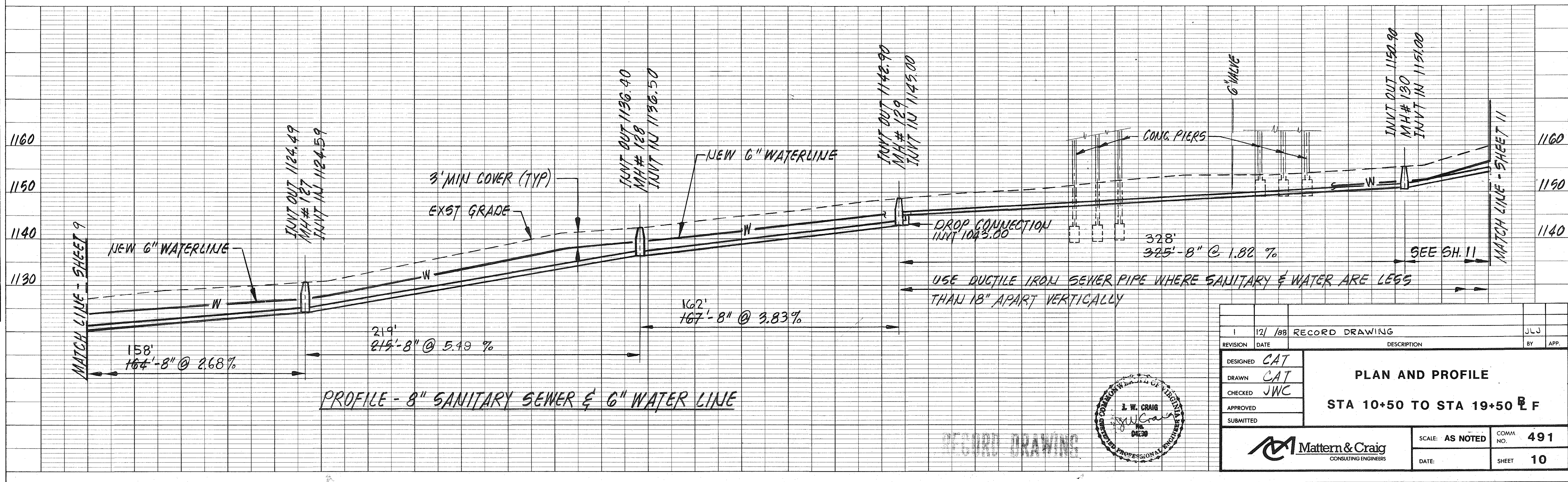


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APPROVED			
SUBMITTED			
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STA 2+50 TO STA 10+50 & F			
SCALE: AS NOTED		COMM. NO.	491
DATE:		SHEET	9

PLAN	DATE	BY
SURVEYED		
NOTED		
GRADES CHECKED		
RT. OF WAY CHECKED		
NOTE BOOK NO.		



PROFILE	DATE	BY
SURVEYED		
NOTED		
GRADES CHECKED		
STRUCTURE NOTING CHKD		
NOTE BOOK NO.		



1 12/1/98 RECORD DRAWING		JLJ
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SUBMITTED		

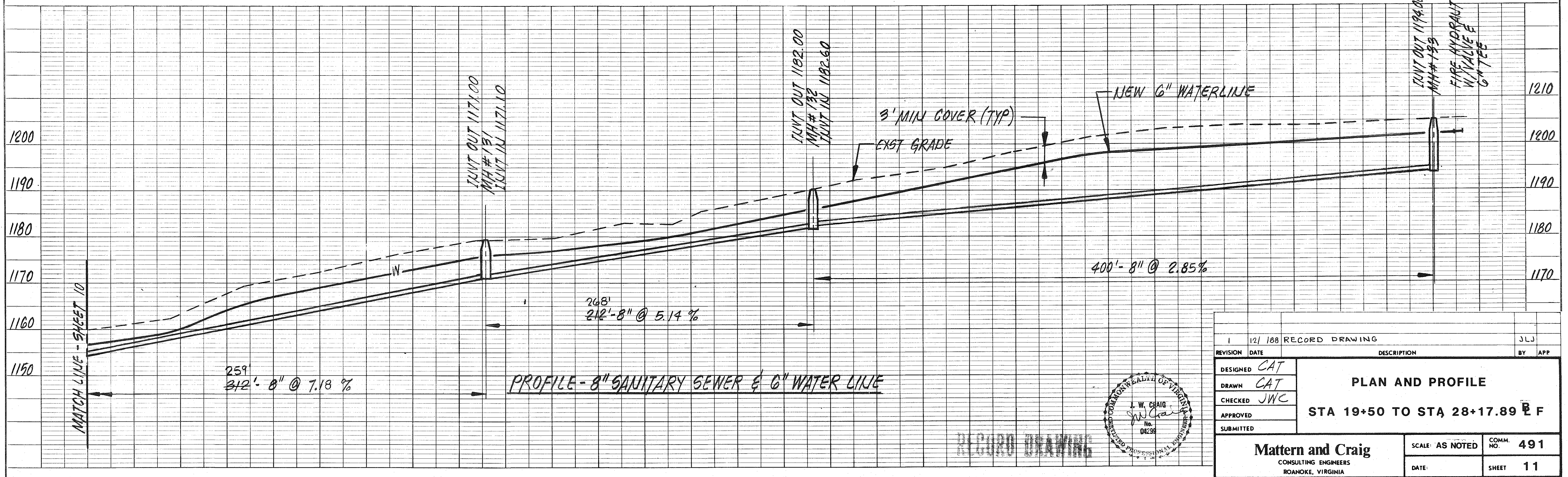
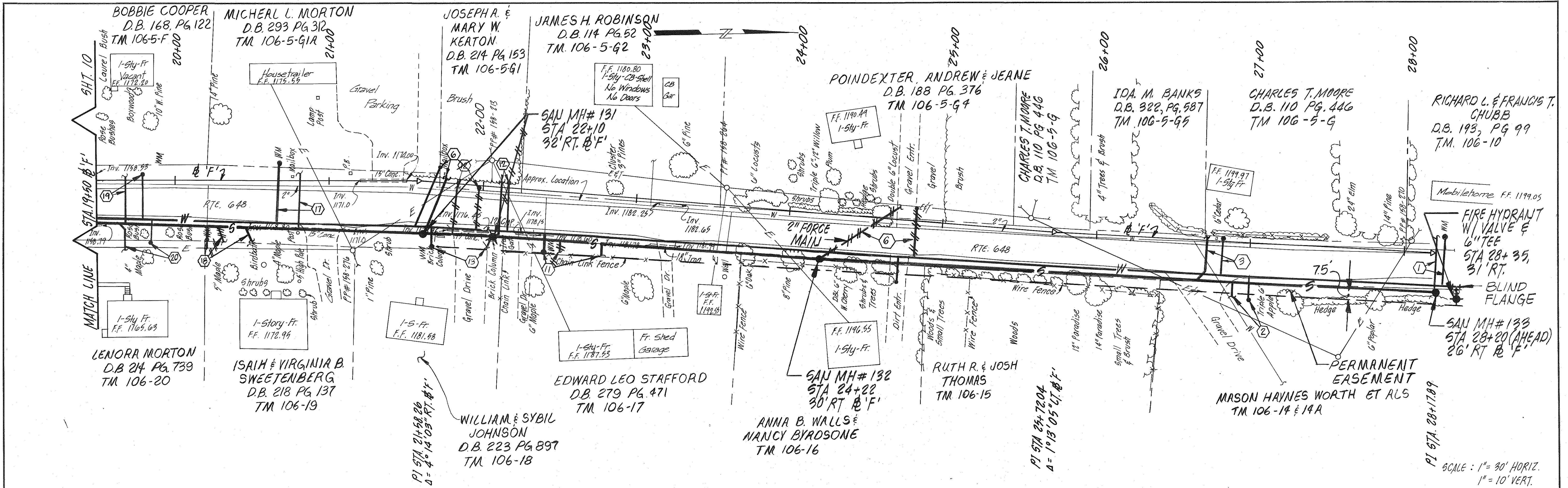
PLAN AND PROFILE

STA 10+50 TO STA 19+50 R/W

Mattern & Craig CONSULTING ENGINEERS	SCALE: AS NOTED DATE:	COMMA NO. 491 SHEET 10
--	--------------------------	---

PLAN	DATE	
	BY	
	NOTED	
	NOTED	

PROFILE	DATE	
	BY	
	NOTED	
	NOTED	



12/1/88 RECORD DRAWING		BY	APP
DESIGNED	CAT	PLAN AND PROFILE	
DRAWN	CAT	STA 19+50 TO STA 28+17.89 E F	
CHECKED	JWC		
APPROVED			
SUBMITTED			
Mattern and Craig		SCALE: AS NOTED	COMM. NO. 491
CONSULTING ENGINEERS		DATE:	SHEET 11
ROANOKE, VIRGINIA			

PLAN	DATE	BY	DATE
DESIGNED			
DRAWN			
CHECKED			
APPROVED			
NO.			

PROFILE	DATE	BY	DATE
DESIGNED			
DRAWN			
CHECKED			
APPROVED			
NO.			

B.M.
CHISELED 'D' ON N.E. CORNER OF BRICK
FLOWER BED ON EAST SIDE OF BRICK
"FIRST BAPTIST CHURCH OF HOLLINS" SIGN.
EL. 1126.31

WILLIAM M. & CARRIE ST. CLAIR
GAITHER
D.B. 673 PG. 501
T.M. 1820-1-1

PI STA. 32+19.94 B'A'
Δ = 22°28'06" LT.
SAN. MH # 1202
STA 32+23
2' LT B'A'

PI STA. 32+10.43 B'A'
Δ = 47°40'46" LT.
HOLLINS COLLEGE
CORP

PI STA. 33+00.77
Δ = 22°54'35" LT.
EDWARD & FRANCIS F
MITCHELL
D.B. 1153 PG. 471
T.M. 1820-1-9

DORIS M. CROWDER
D.B. 1155 PG. 623
T.M. 1820-1-8

JAME H. JOHNSON
D.B. 968 PG. 306
T.M. 1820-1-8

HARRY JR. & MARY I
SMITH (HRS)
D.B. 348 PG. 137
T.M. 1820-1-6

JAMES EDWARD &
CORA LEE LEWIS
D.B. 453 PG. 317
T.M. 1820-1-1

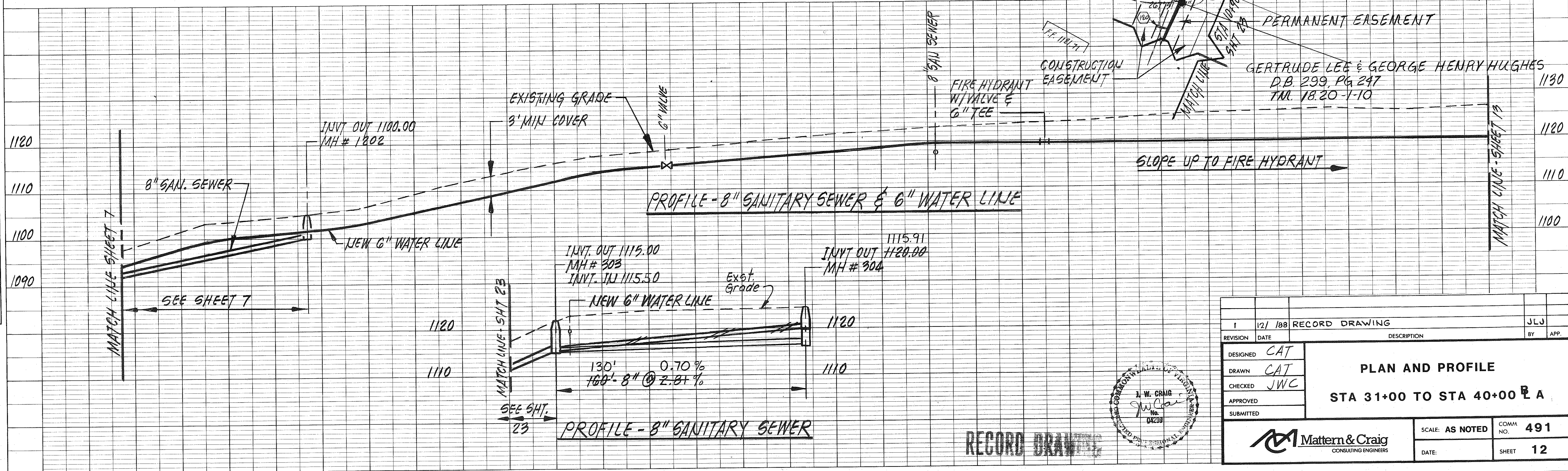
SAN. MH # 303
STA 36+19
15' RT B'A'

PI STA. 39+38.89 B'A'
Δ = 17°14'58" RT.
MYRTLE Y. TURNER
D.B. 30 PG. 662
T.M. 1820-1-3

HOLLINS
First Baptist Church
TRUSTEES OF
HOLLINS FIRST BAPTIST
CHURCH
D.B. 44 PG. 72 (BOTETOURT CO)
T.M. 106-118 38+00

PI STA. 39+38.89 B'A'
SCALE: 1" = 30' HORIZ.
1" = 10' VERT.
PI STA. 10+97.47 B'G'
PI STA 36+36.80 B'A'
Δ = 88°08'35" LT.

GERTRUDE LEE & GEORGE HENRY HUGHES
D.B. 299 PG. 247
T.M. 1820-1-10



1	12/1/88	RECORD DRAWING	JLU
REVISION	DATE	DESCRIPTION	BY
DESIGNED	CAT		
DRAWN	CAT		
CHECKED	JWC		
APPROVED			
SUBMITTED			

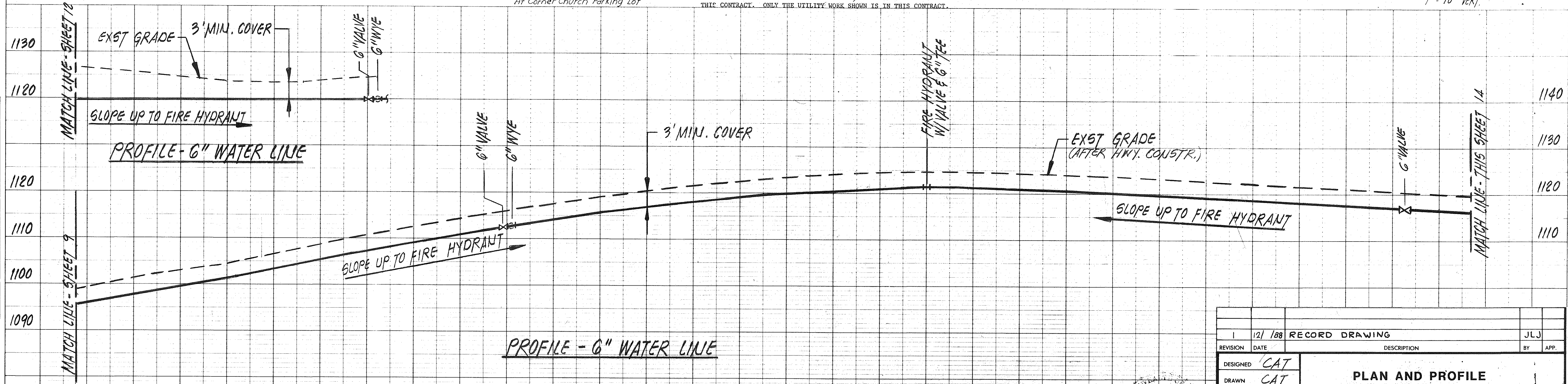
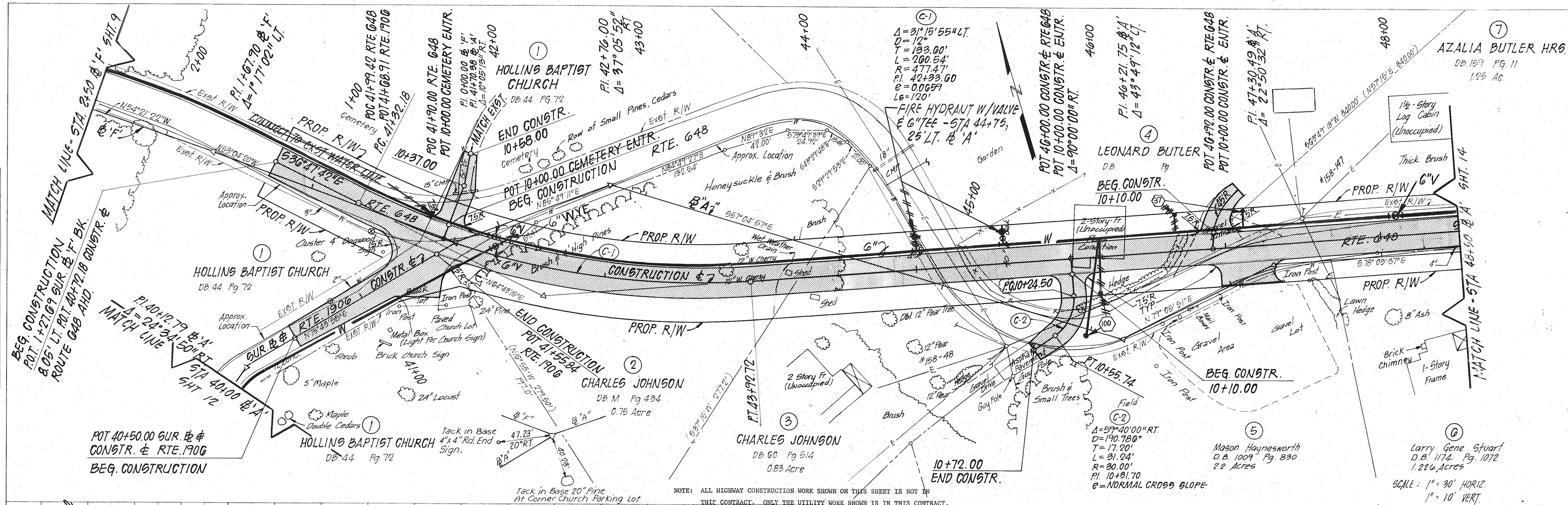
PLAN AND PROFILE
STA 31+00 TO STA 40+00 B'A'

SCALE: AS NOTED
DATE: 12/1/88
SHEET 12

491
COWM NO.
Mattern & Craig
CONSULTING ENGINEERS

PLAN	DATE	BY
SURVEYED		
NOTE BOOK		
ALIGNMENT CHECKED		
RT OF WAY CHECKED		

PROFILE	DATE	BY
SURVEYED		
NOTE BOOK		
GRADES CHECKED		
STRUCTURE NOTATIONS CHKD		



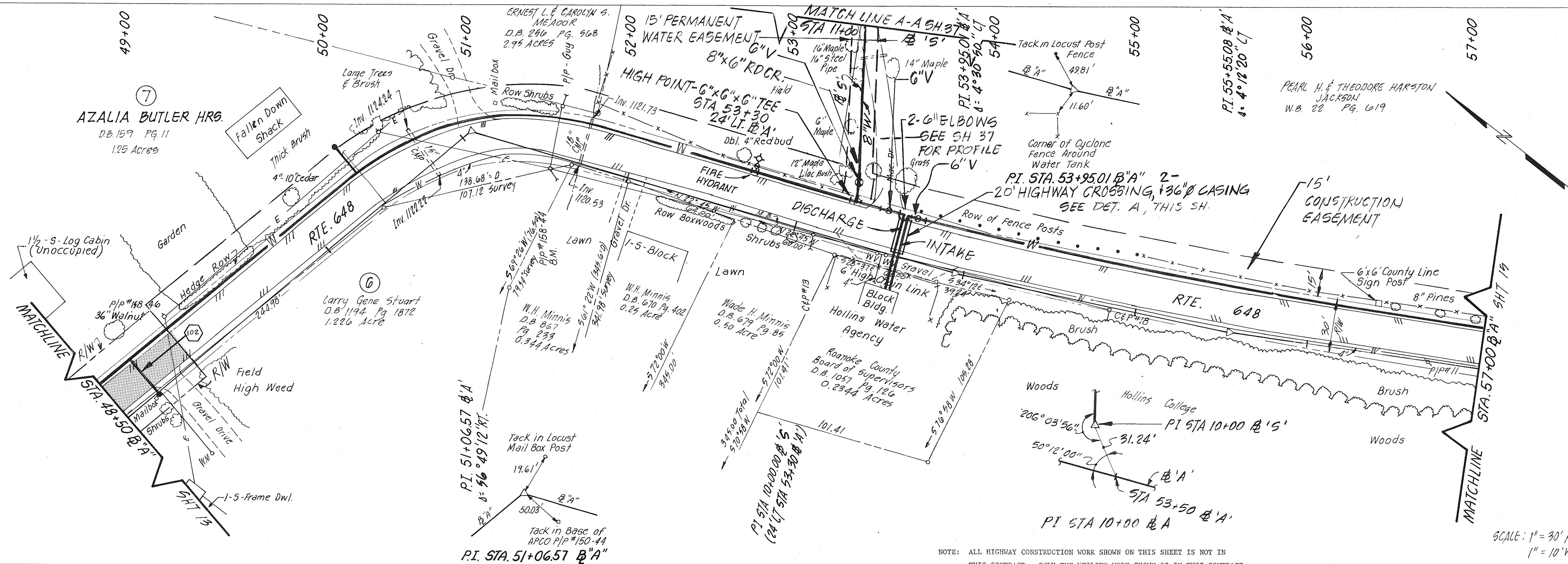
RECORD DRAWING

DESIGNED	CAT	DATE	12/1/88	RECORD DRAWING	BY	JLJ
DRAWN	CAT	DATE		DESCRIPTION	APP.	
CHECKED	JWC	DATE				
APPROVED		DATE				
SUBMITTED		DATE				

PLAN AND PROFILE	
STA 40+00 TO STA 48+50 E A	
SCALE: HORIZ: 1"=30'	COMM. NO. 491
VERT: 1"=10'	DATE: APRIL 86
SHEET 13	

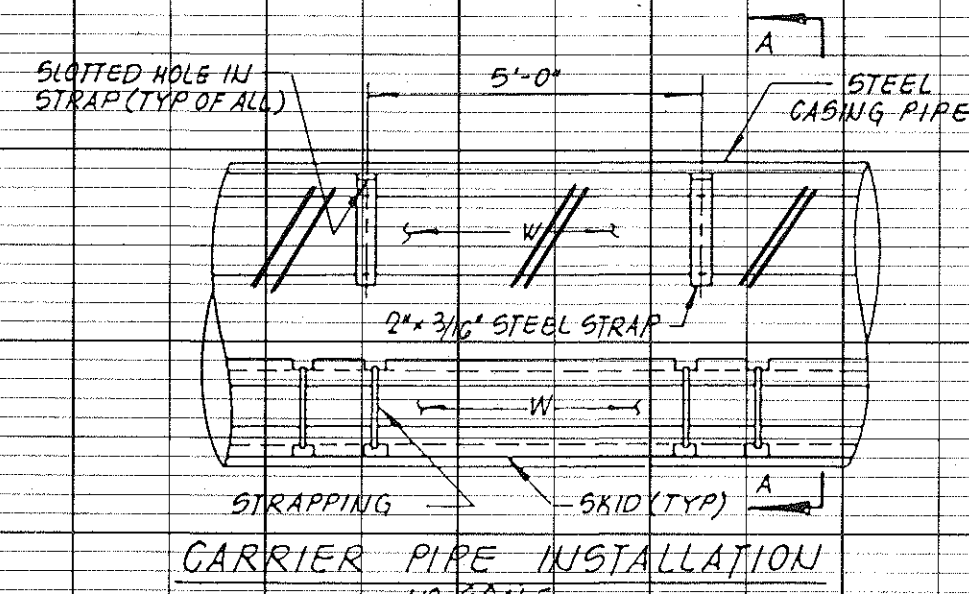
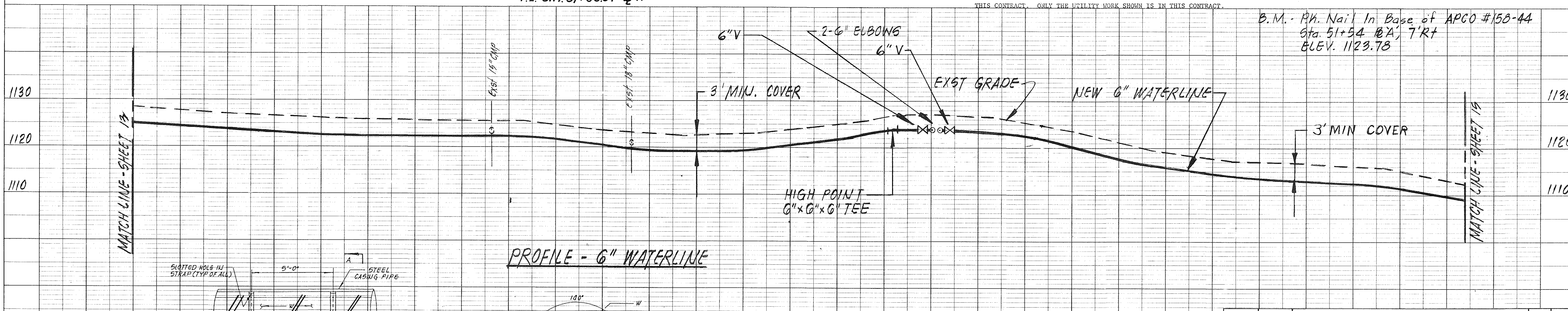
PLAN	DATE	BY
SURVEYED		
PLOTTED		
ALIGNED		
CHECKED		
NO.		

PROFILE	DATE	BY
SURVEYED		
PLOTTED		
GRADES CHECKED		
NO.		



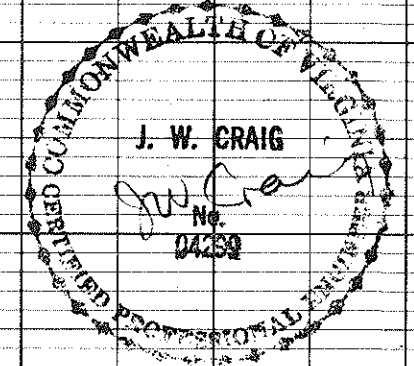
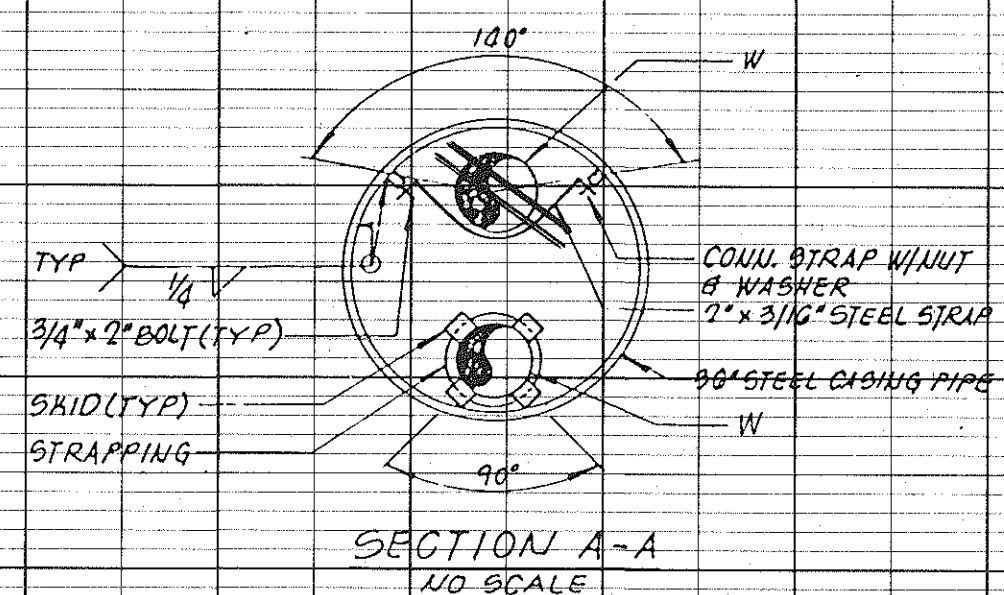
NOTE: ALL HIGHWAY CONSTRUCTION WORK SHOWN ON THIS SHEET IS NOT IN THIS CONTRACT. ONLY THE UTILITY WORK SHOWN IS IN THIS CONTRACT.

SCALE: 1" = 30' HORIZ.
1" = 10' VERT.



NOTES:
1) SHIMS SHALL BE CUT IN CISING PIPE EXCEPT FOR PIPE BELLS.
2) WOOD FOR SHIMS SHALL BE PRESSURE TREATED.
3) LUBRICANT FOR SHIMS SHALL BE FLAX SEED OIL OR DRILLERS LUB. L.C.
PETROLEUM PRODUCTS SHALL BE USED.

PROFILE - 6" WATERLINE



DESIGNED	CAT
DRAWN	CAI
CHECKED	JWC
APPROVED	
SUBMITTED	

1	12/1/88	RECORD DRAWING	JLS
REVISION	DATE	DESCRIPTION	BY

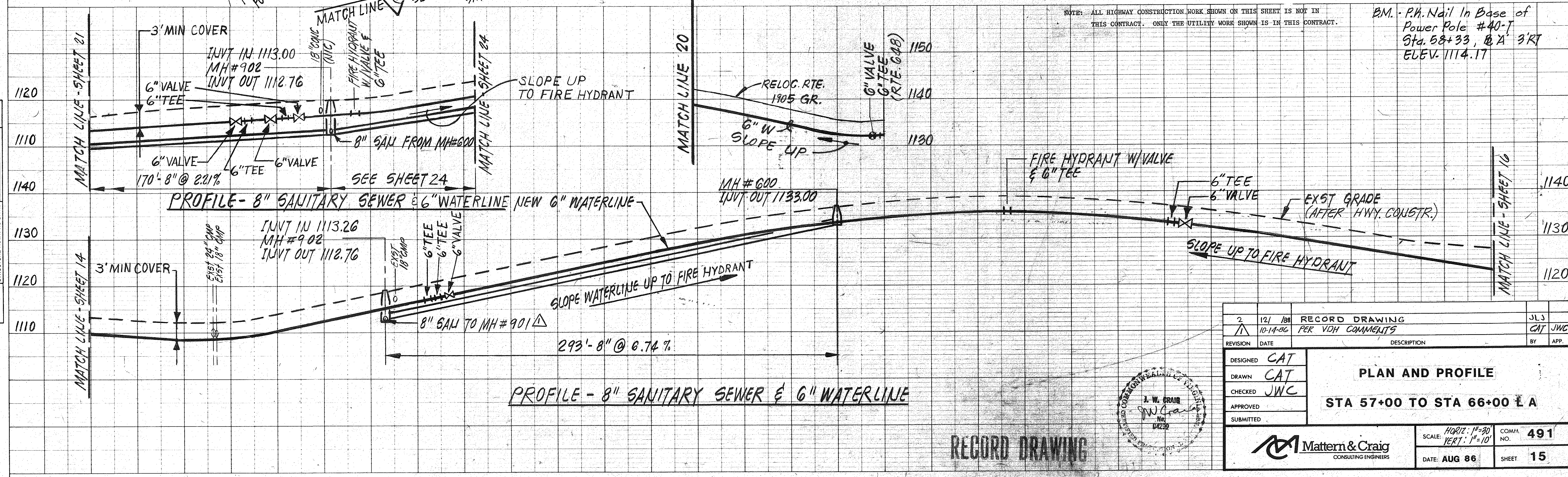
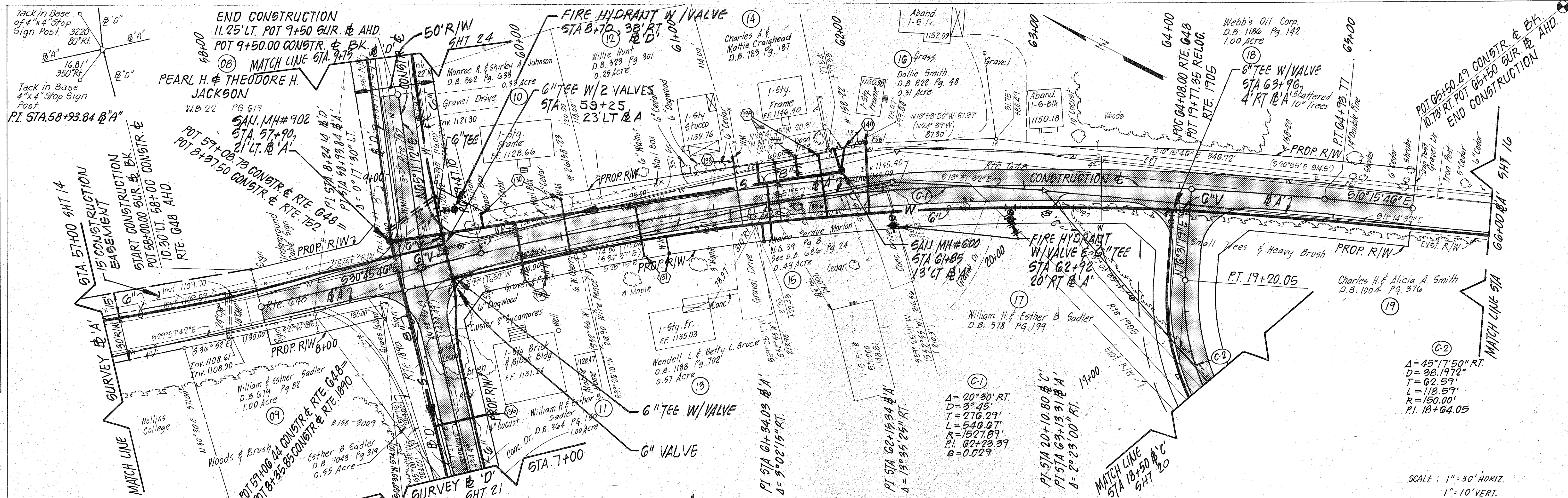
PLAN AND PROFILE	
STA 48+00 TO STA 57+00 E A	

SCALE: AS NOTED	COMM. NO. 491
DATE: AUG 86	SHEET 14

Mattern & Craig
CONSULTING ENGINEERS

PLAN	DATE	BY
SURVEYED		
PLOTTED		
CHECKED		
NO.		

PROFILE	DATE	BY
SURVEYED		
PLOTTED		
CHECKED		
NO.		



NOTE: ALL HIGHWAY CONSTRUCTION WORK SHOWN ON THIS SHEET IS NOT IN THIS CONTRACT. ONLY THE UTILITY WORK SHOWN IS IN THIS CONTRACT.

B.M. - P.H. Nail In Base of Power Pole #40-T Sta. 58+33, B.A. 3' RT ELEV. 1114.17

2	12/1/88	RECORD DRAWING	JLS
10-14-86	PER VOH COMMENTS	CAT	JWC
REVISION	DATE	DESCRIPTION	BY
DESIGNED	CAT		
DRAWN	CAT		
CHECKED	JWC		
APPROVED			
SUBMITTED			

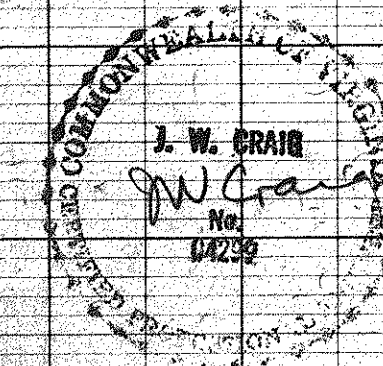
PLAN AND PROFILE

STA 57+00 TO STA 66+00 E.A.

SCALE: HORIZ. 1"=30' VERT. 1"=10' COMM. NO. 491

DATE: AUG 86 SHEET 15

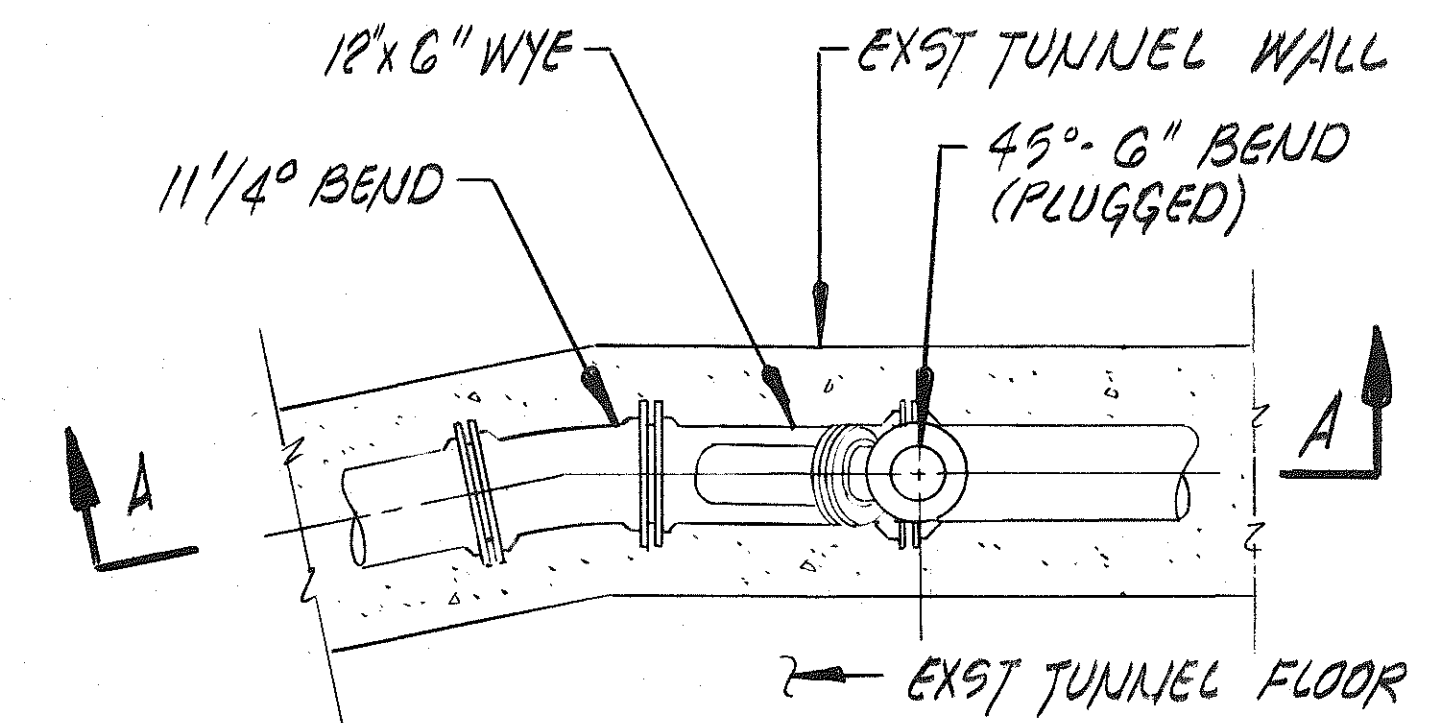
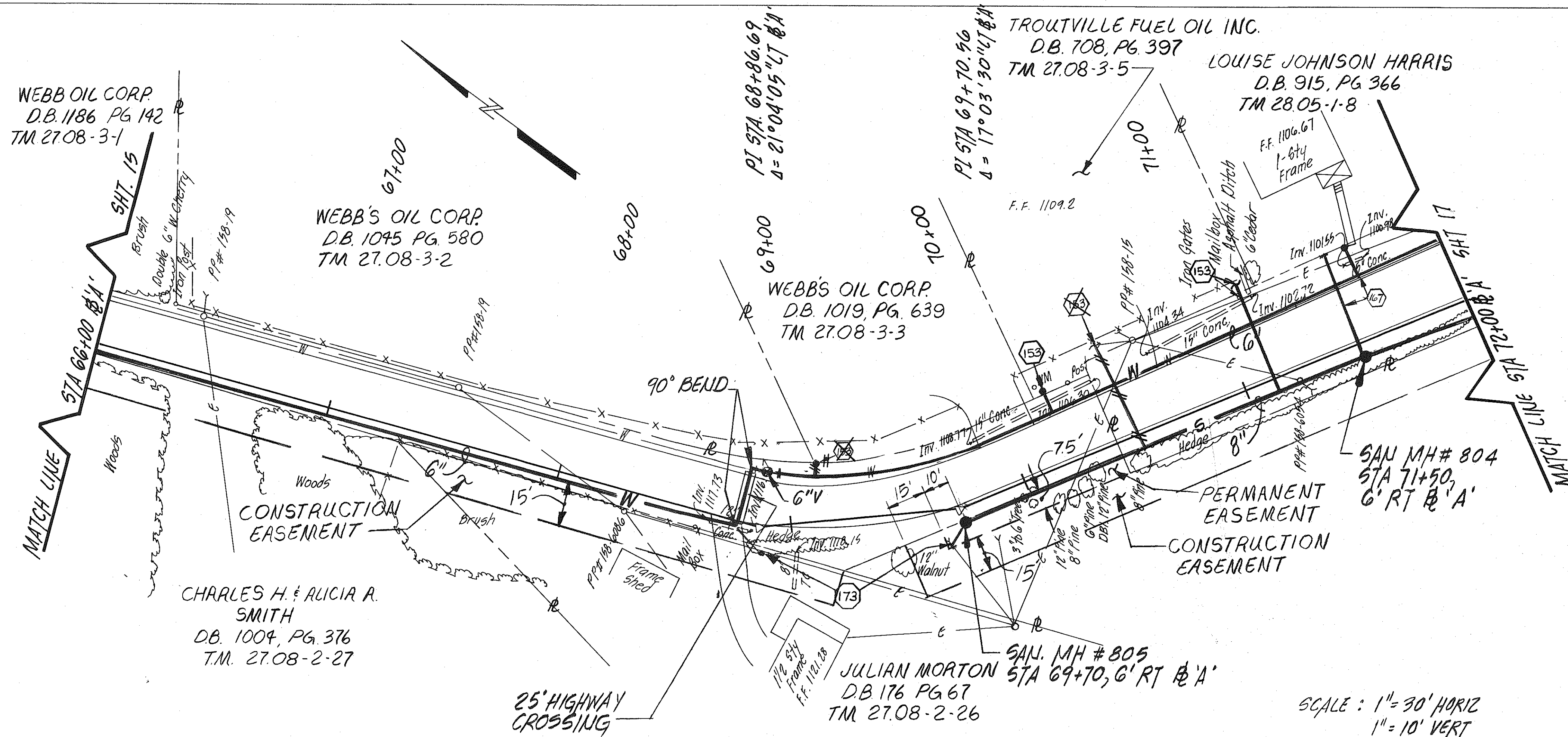
RECORD DRAWING



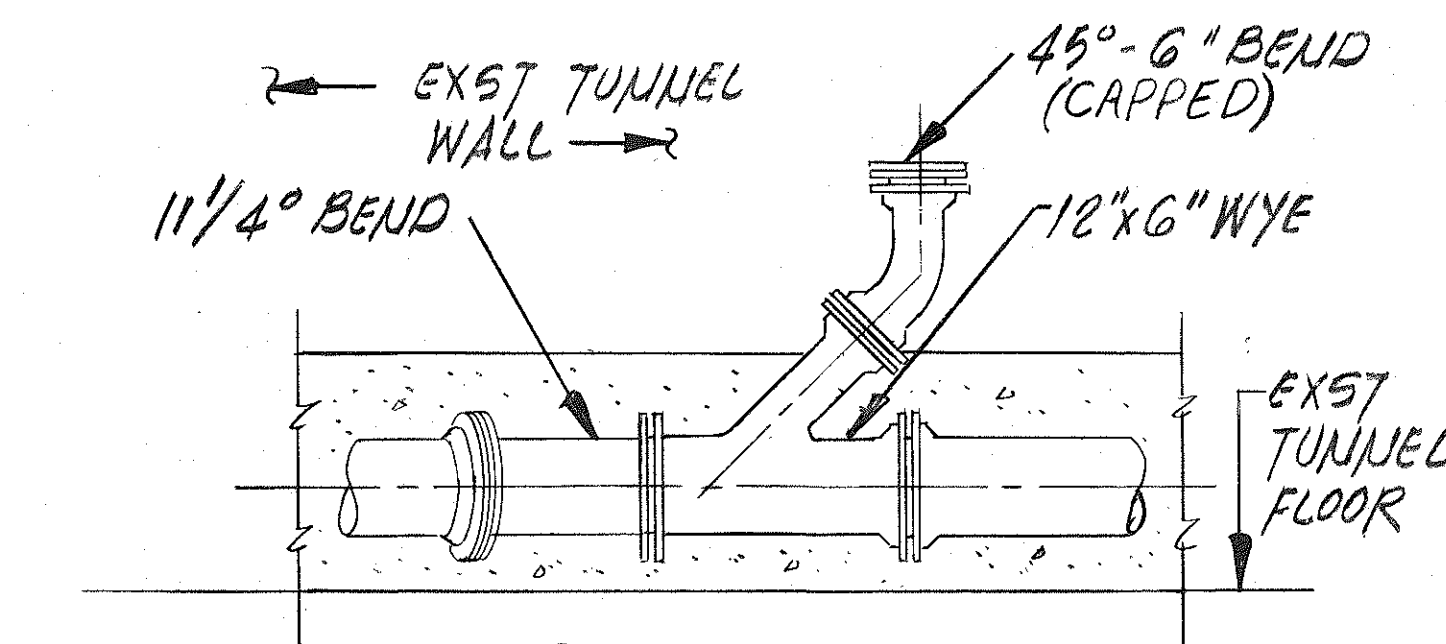
Mattern & Craig
CONSULTING ENGINEERS

PLAN	DATE	BY
SURVEYED		
NOTED		
ALIGNED		
CHECKED		
RT. OF WAY		
CHECKED		
NO.		

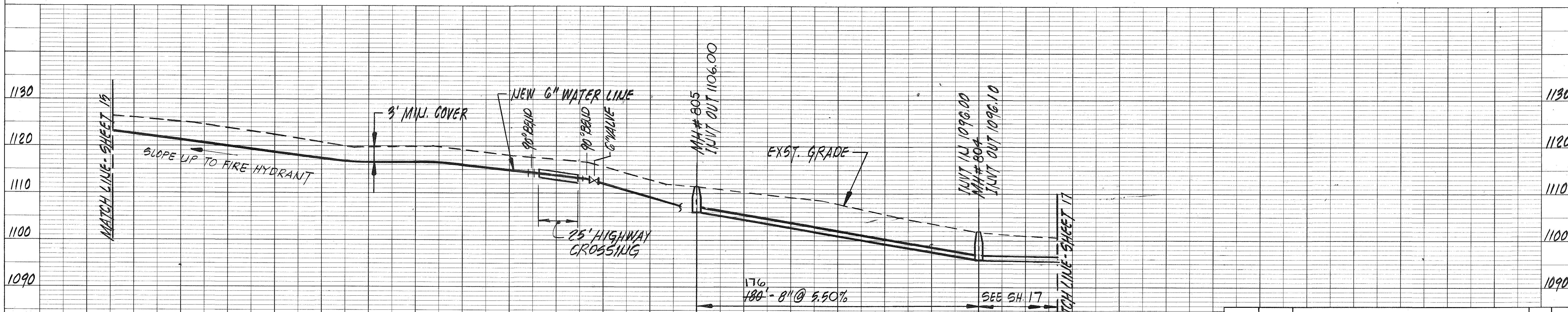
PROFILE	DATE	BY
SURVEYED		
GRADES		
CHECKED		
B.M. NOTED		
STATION		
NO.		



PLAN - 11 1/4° BEND
SCALE: 1/2" = 1'-0"

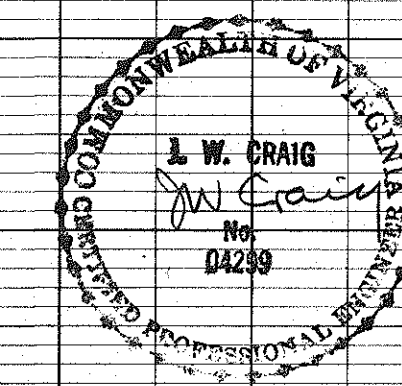


SECTION A-A
SCALE: 1/2" = 1'-0"



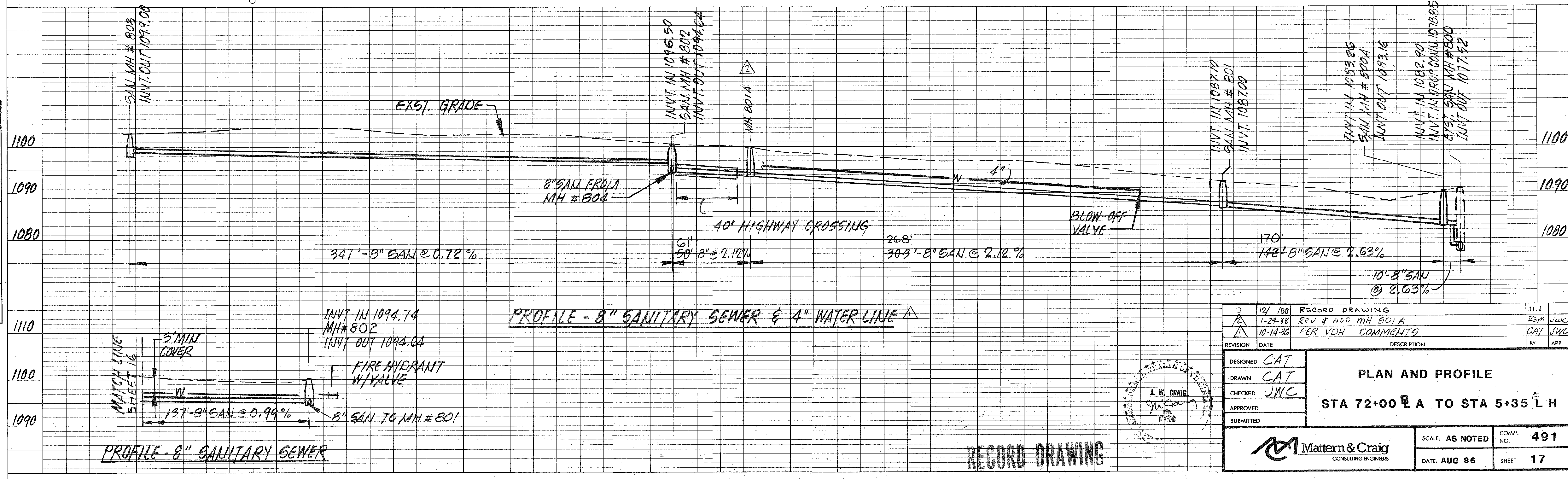
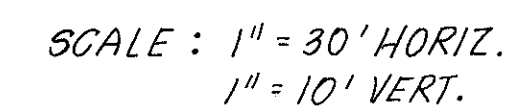
PROFILE - 8" SANITARY SEWER & 6" WATER LINE

RECORD DRAWING



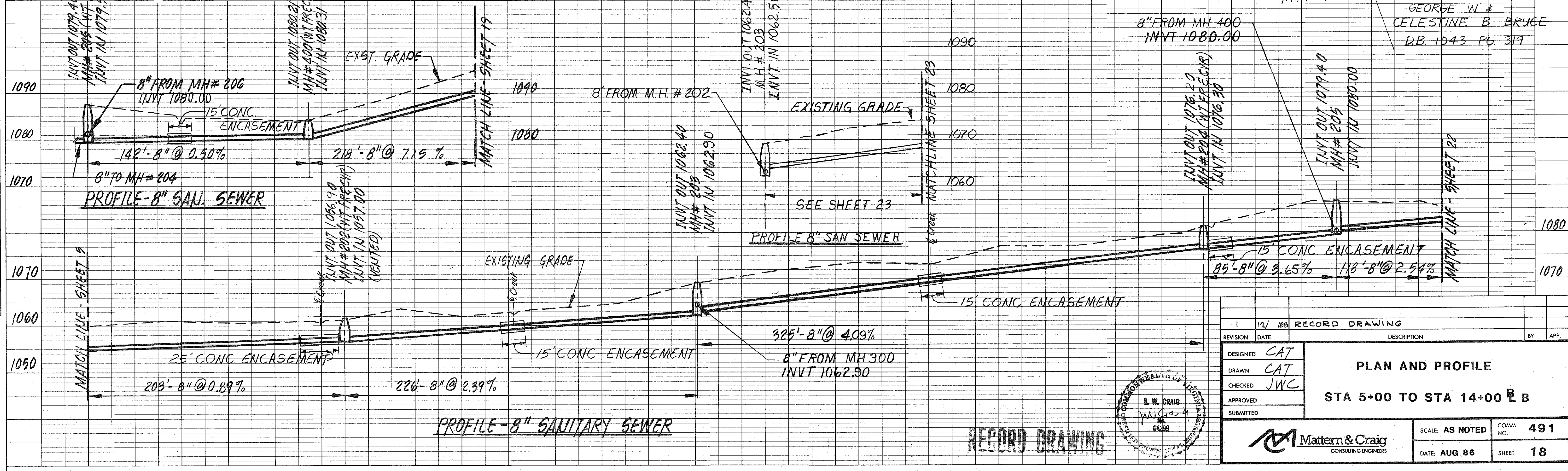
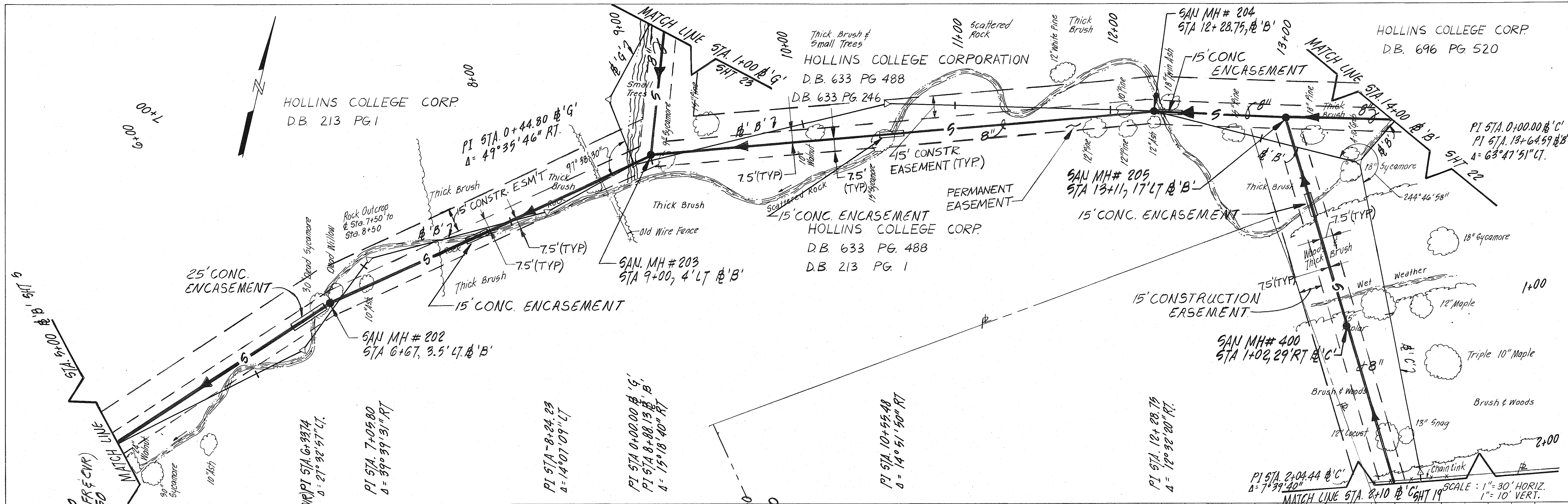
1	12/ 88	RECORD DRAWING	JLJ
REVISION	DATE	DESCRIPTION	BY APP.
DESIGNED	CAT		
DRAWN	CAT		
CHECKED	JWC		
APPROVED			
SUBMITTED			
PLAN AND PROFILE STA 66+00 TO STA 72+00 & A			
SCALE: AS NOTED		COMM. NO. 491	
DATE: AUG 86		SHEET 16	

PROFILE	SURVEYED	BY	DATE
	PLOTTED NOTE BOOK GRADES CHECKED B. M.s NOTED NO. _____ STRUCTURE NOTATING CUMNO		



PLAN	DATE	BY
SURVEYED		
DESIGNED		
DRAWN		
CHECKED		
APPROVED		
NO.		

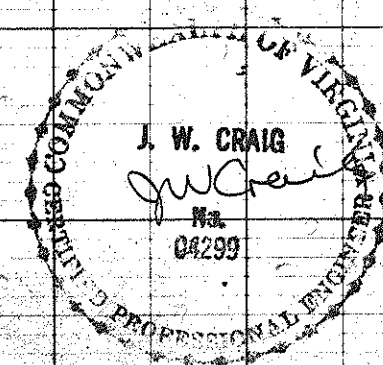
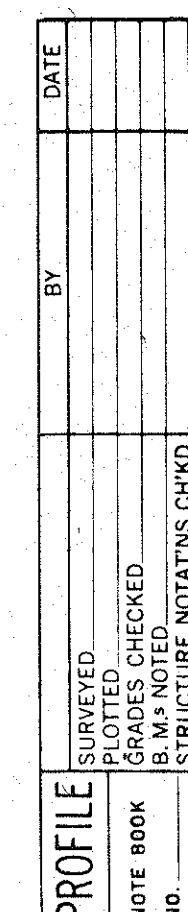
PROFILE	DATE	BY
SURVEYED		
DESIGNED		
DRAWN		
CHECKED		
APPROVED		
NO.		



1		12/10/88	RECORD DRAWING	BY	APP.
DESIGNED	CAT				
DRAWN	CAT				
CHECKED	JWC				
APPROVED					
SUBMITTED					
PLAN AND PROFILE					
STA 5+00 TO STA 14+00 E.B.					
Mattern & Craig CONSULTING ENGINEERS		SCALE: AS NOTED DATE: AUG 86		COMM. NO. 491 SHEET 18	

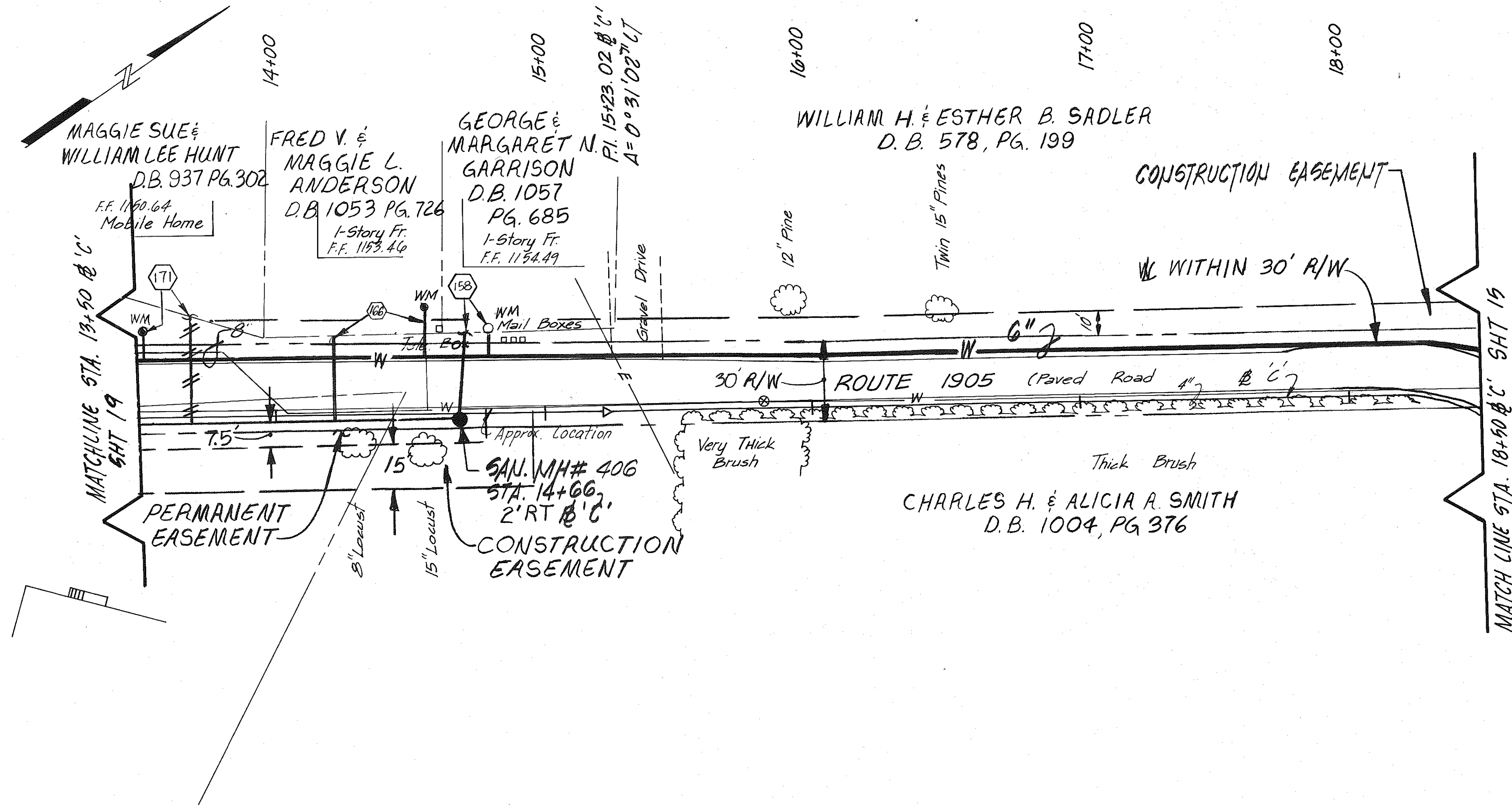
RECORD DRAWING

PLAN	SURVEYED PLOTTED ALIGNMENT CHECKED RT OF WAY CHECKED	BY	DATE



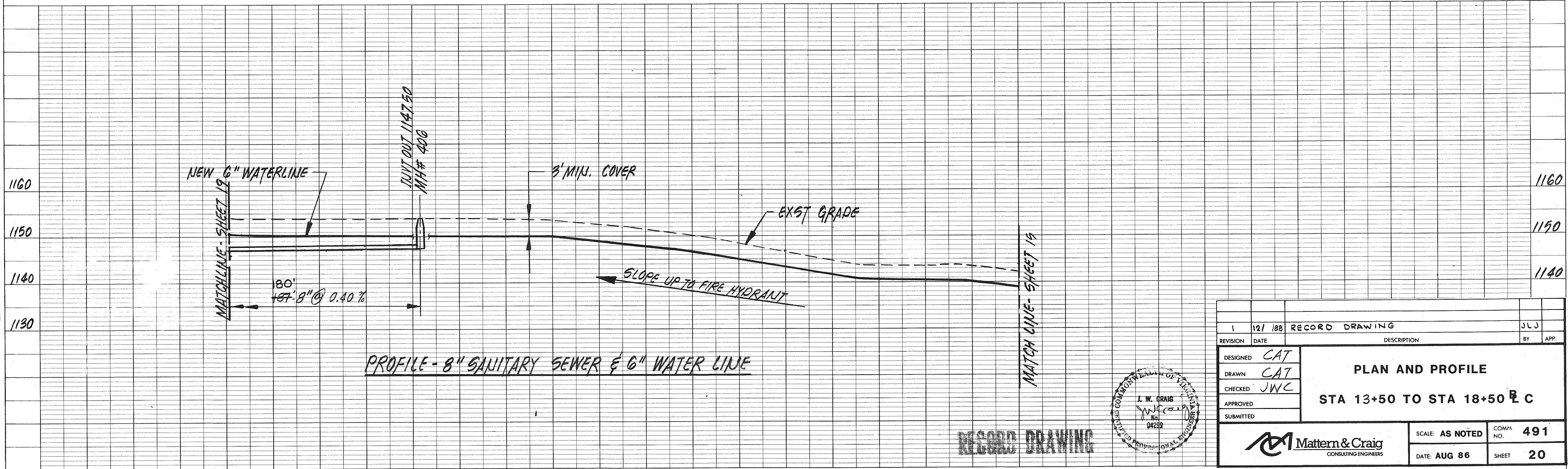
1	12/188	RECORD DRAWING	JLJ
REVISION	DATE	DESCRIPTION	BY APP.
DESIGNED	CAT	PLAN AND PROFILE STA 1+00 TO STA 13+50 ± C	
DRAWN	CAT		
CHECKED	JWC		
APPROVED			
SUBMITTED			
 Mattern & Craig CONSULTING ENGINEERS		SCALE: <i>HORIZ: 1"=30'</i> <i>VERT: 1"=10'</i>	COMM NO. 491
		DATE: AUG 86	SHEET 19

PLAN	DATE	BY
SURVEYED		
PLOTTED		
ALIGNMENT CHECKED		
RT. OF WAY CHECKED		
NOTE BOOK NO.		



SCALE 1" = 30' HORIZ.
1" = 10' VERT.

PROFILE	DATE	BY
SURVEYED		
GRADES CHECKED		
B.M. NOTED		
STRUCTURE NOTATIONS CHK'D		
NOTE BOOK NO.		



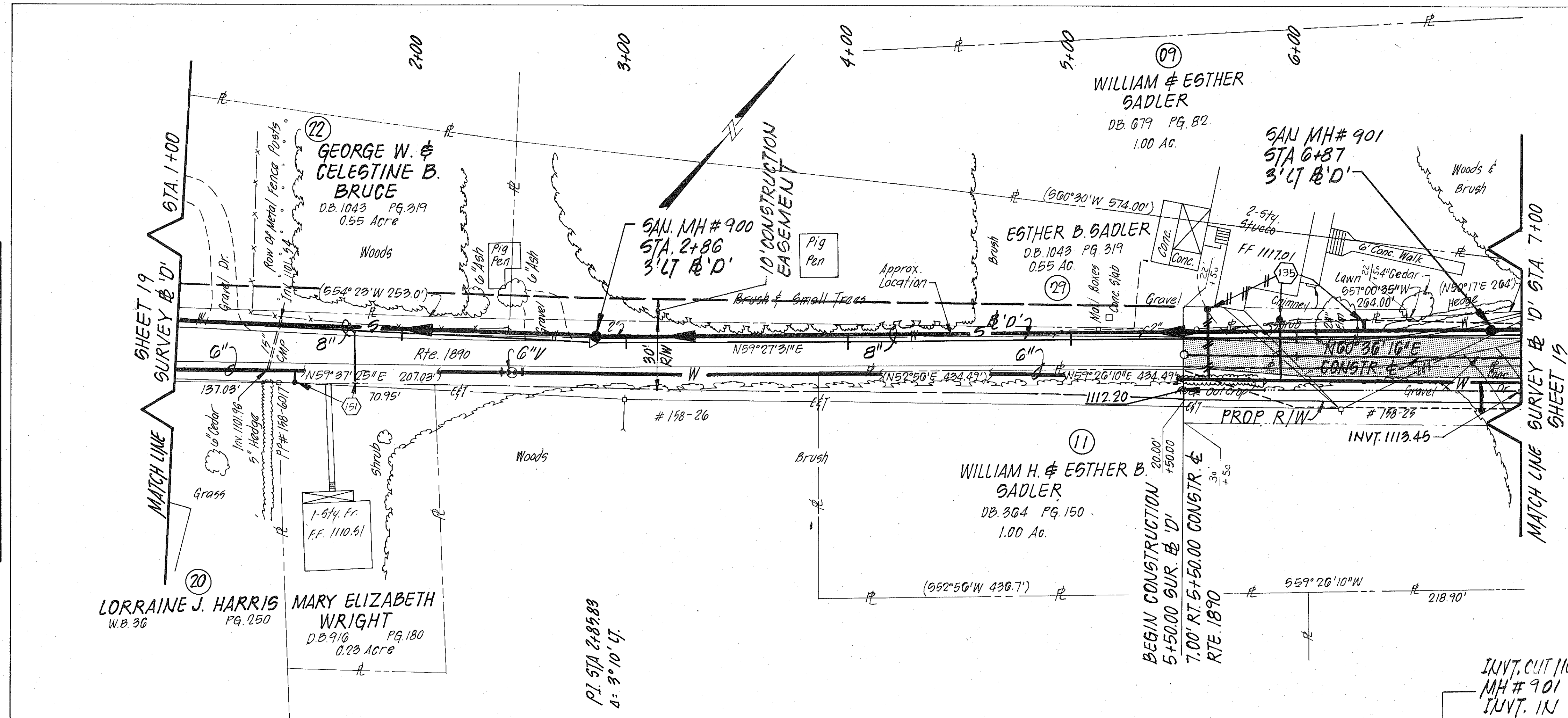
1	12/1/88	RECORD DRAWING	JLJ
REVISION	DATE	DESCRIPTION	BY
DESIGNED	CAT	PLAN AND PROFILE STA 13+50 TO STA 18+50 E C	491 20
DRAWN	CAT		
CHECKED	JWC		
APPROVED			
SUBMITTED			

SCALE: AS NOTED
DATE: AUG 86

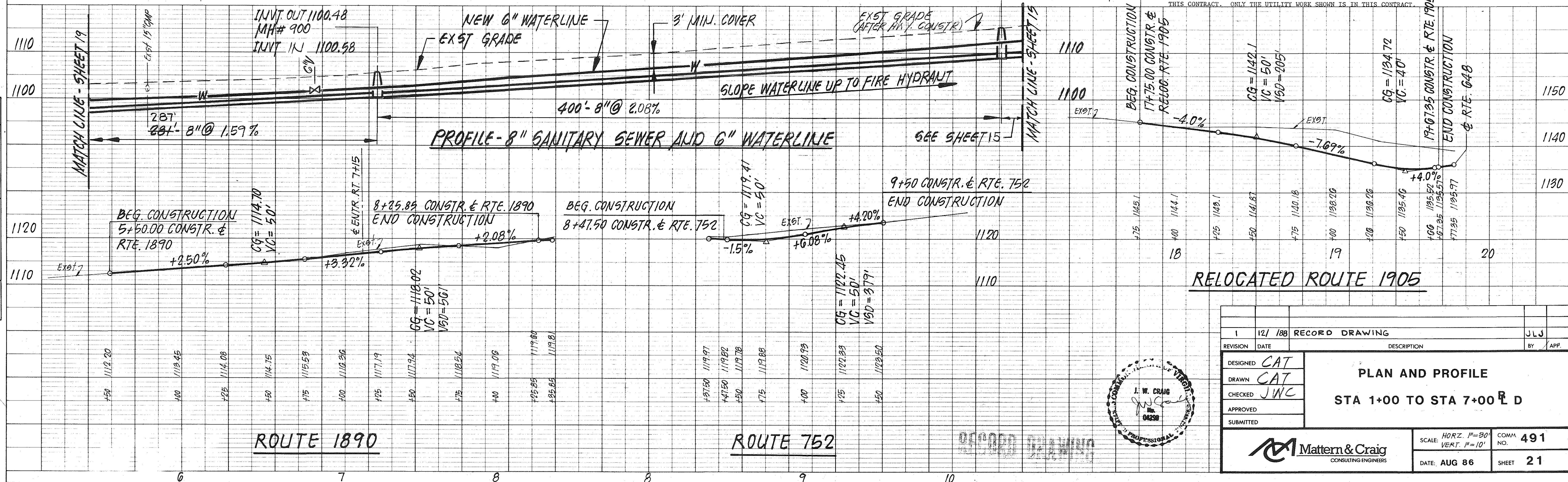
Mattern & Craig
CONSULTING ENGINEERS

PLAN	DATE	BY
DESIGNED		
DRAWN		
CHECKED		
APPROVED		
NO.		

PROFILE	DATE	BY
DESIGNED		
DRAWN		
CHECKED		
APPROVED		
NO.		



LEGEND
 ----- TEMPORARY CONSTRUCTION EASEMENT



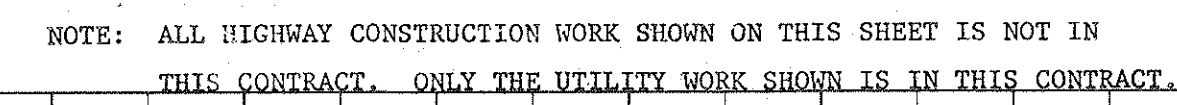
1	12/188	RECORD DRAWING	JLS
REVISION	DATE	DESCRIPTION	BY
DESIGNED	CAT		
DRAWN	CAT		
CHECKED	JNC		
APPROVED			
SUBMITTED			

PLAN AND PROFILE
 STA 1+00 TO STA 7+00 R.D.

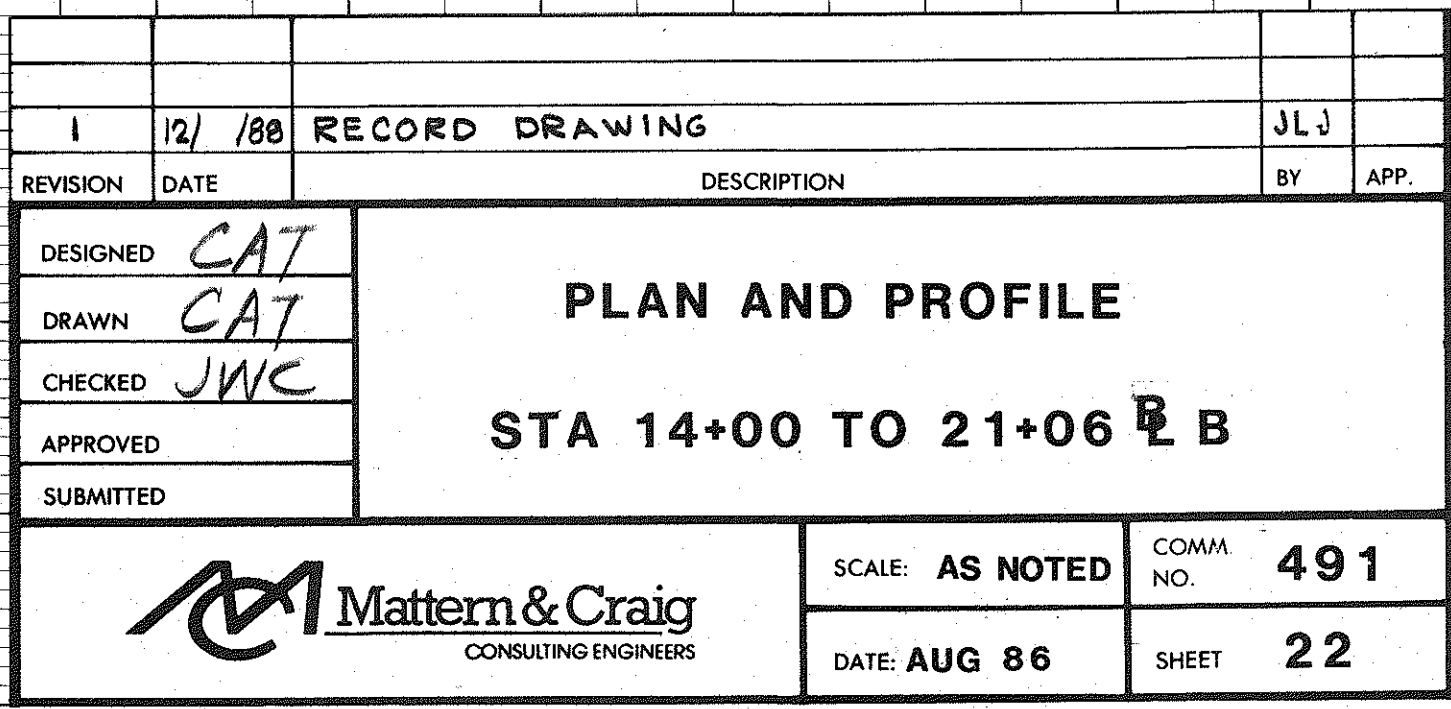
Mattern & Craig
 CONSULTING ENGINEERS

SCALE: HORIZ. 1"=20'
 VERT. 1"=10'
 DATE: AUG 86
 SHEET 21

PROFILE	SURVEYED _____		BY _____	DATE _____
	PLOTTED _____			
NOTE BOOK	GRADES CHECKED _____			
NO. _____	B. M.'s NOTED _____			
	STRUCTURE NOTATIONS CHOWN _____			

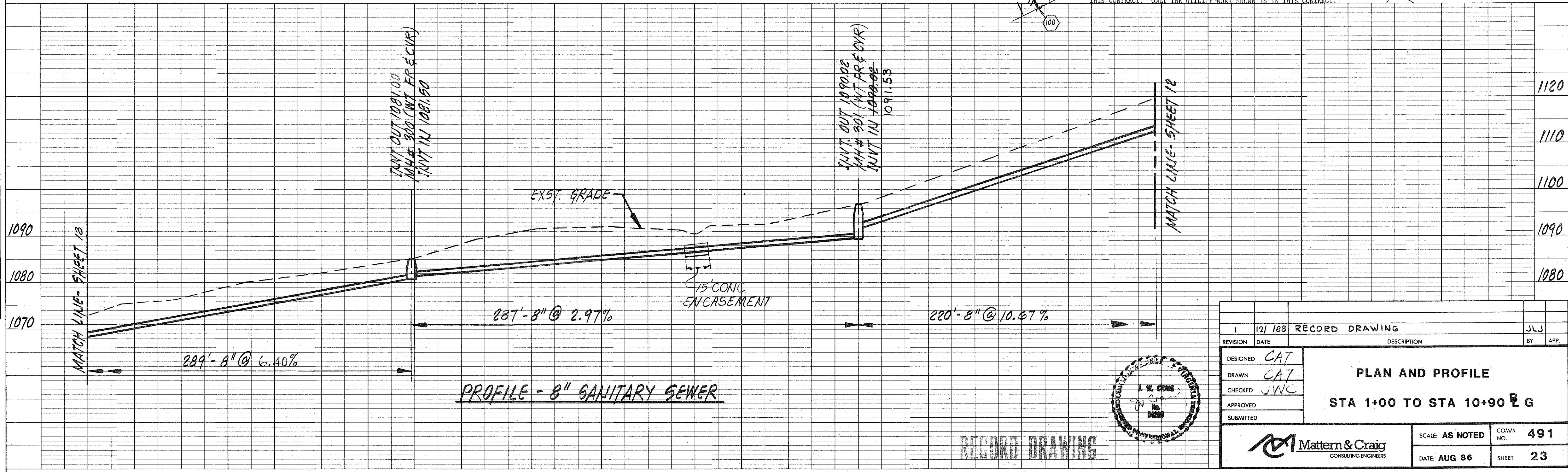
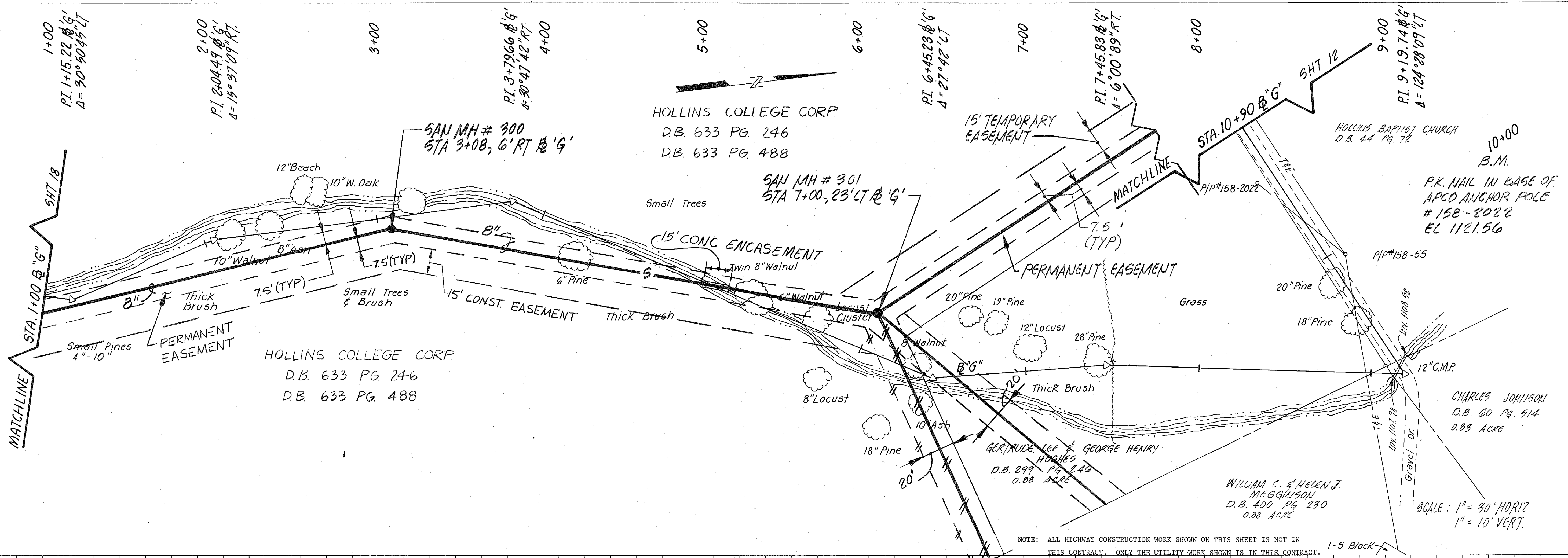


Scale : 1" = 30' HORIZ.
1" = 10' VERT.



PLAN	DATE	BY
SURVEYED		
PLOTTED		
ALIGNMENT CHECKED		
RT. OF WAY CHECKED		
NOTE BOOK NO.		

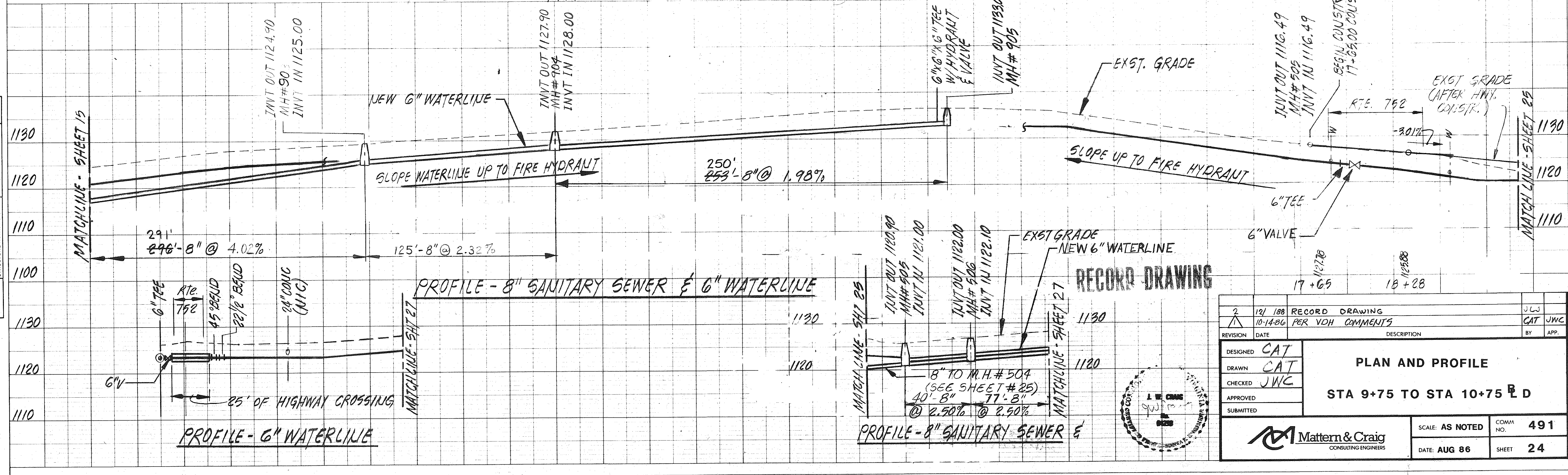
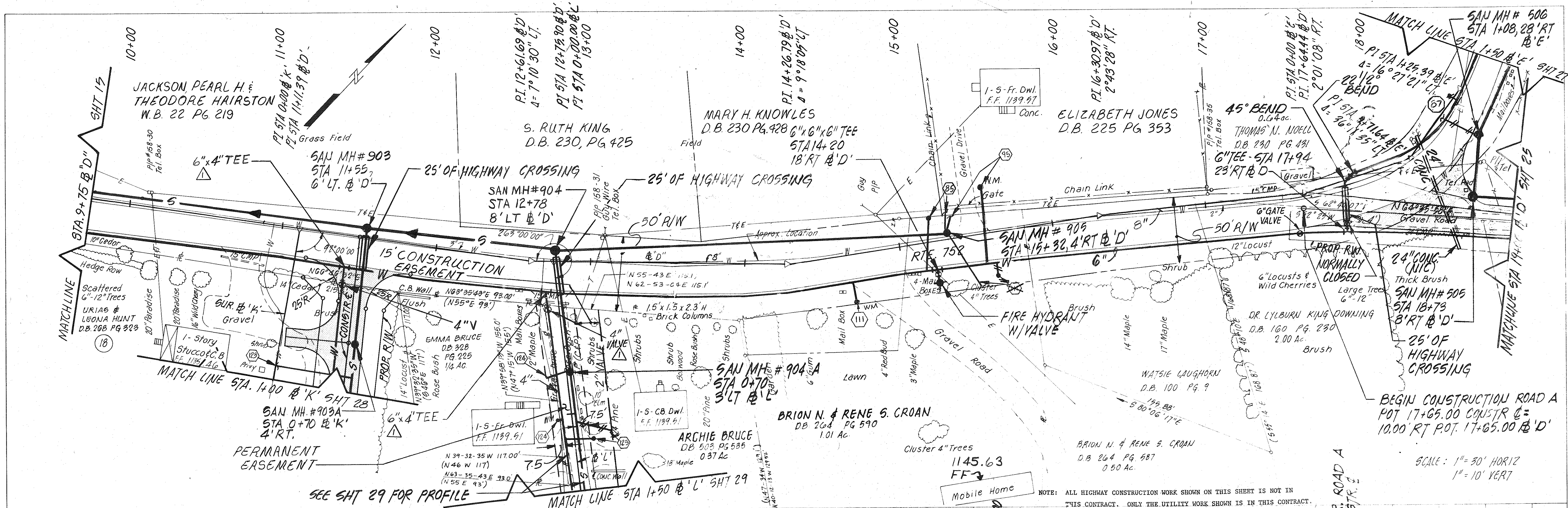
PROFILE	DATE	BY
SURVEYED		
PLOTTED		
GRADES CHECKED		
STRUCTURE NOTATIONS CHKD		
NOTE BOOK NO.		



1	12/1/88	RECORD DRAWING	JLJ
REVISION	DATE	DESCRIPTION	BY APP.
DESIGNED	CAT	PLAN AND PROFILE STA 1+00 TO STA 10+90 E G	SCALE: AS NOTED DATE: AUG 86
DRAWN	CAT		
CHECKED	JWC		
APPROVED			
SUBMITTED			COMM. NO. 491 SHEET 23

PLAN	DATE	BY	DATE
SURVEYED			
ALIGNED			
CHECKED			
NOTE BOOK			
NO.			

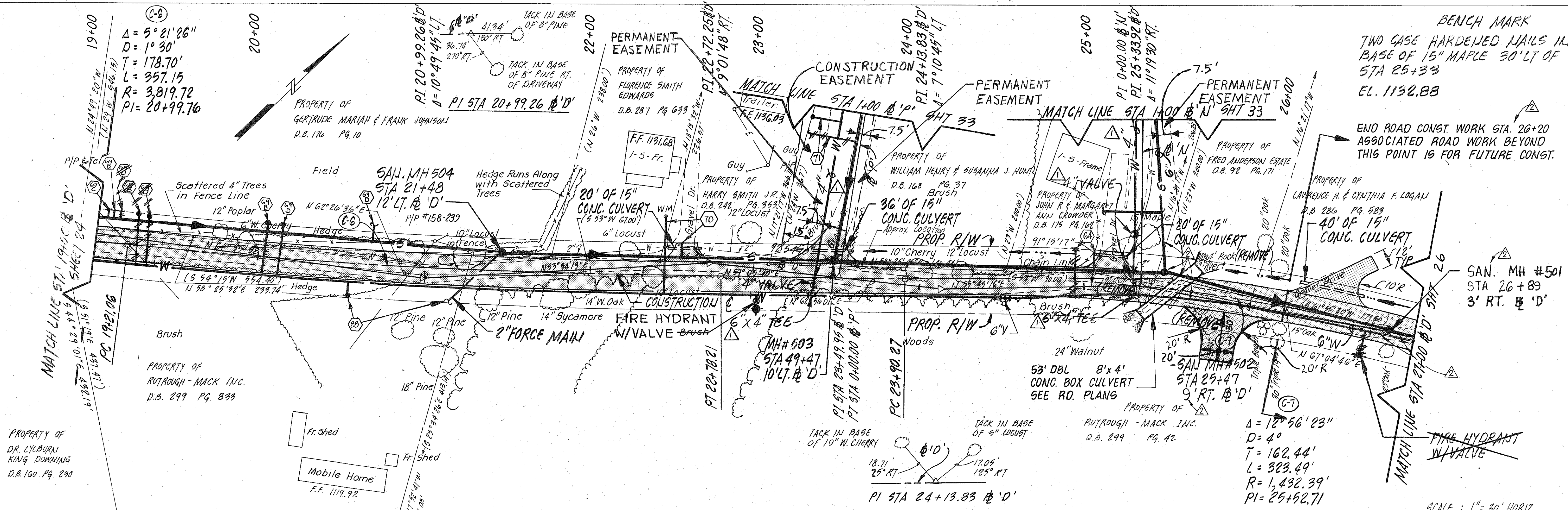
PROFILE	DATE	BY	DATE
SURVEYED			
PLOTTED			
CHECKED			
NOTE BOOK			
NO.			



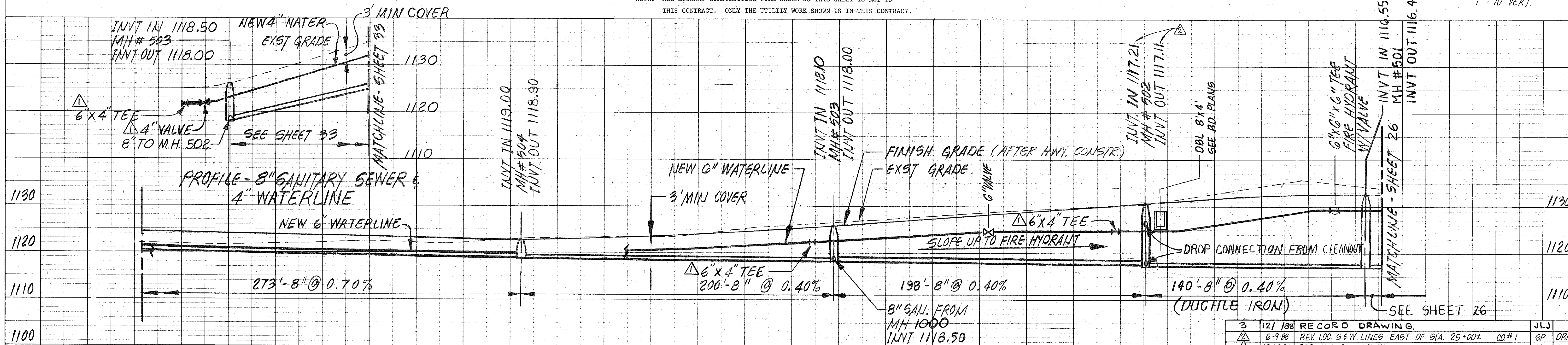
2	12/1/88	RECORD DRAWING	JWC
1	10-14-86	PER VOH COMMENTS	CAT JWC
REVISION	DATE	DESCRIPTION	BY
DESIGNED	CAT		
DRAWN	CAT		
CHECKED	JWC		
APPROVED			
SUBMITTED			
PLAN AND PROFILE			
STA 9+75 TO STA 10+75 E.D.			
Mattern & Craig		SCALE: AS NOTED	COMMA NO. 491
CONSULTING ENGINEERS		DATE: AUG 86	SHEET 24

PLAN	DATE	BY
SURVEYED		
GRADES CHECKED		
NOTE BOOK		
RT. OF WAY CHECKED		
NO.		

PROFILE	DATE	BY
SURVEYED		
GRADES CHECKED		
NOTE BOOK		
STRUCTURE NOTATIONS CHVD		
NO.		

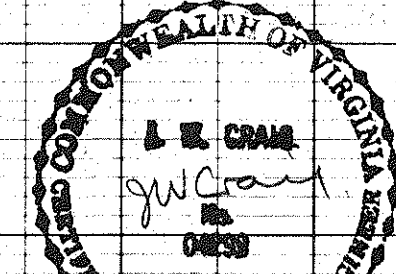


NOTE: ALL HIGHWAY CONSTRUCTION WORK SHOWN ON THIS SHEET IS NOT IN THIS CONTRACT. ONLY THE UTILITY WORK SHOWN IS IN THIS CONTRACT.



PROFILE - 6" WATERLINE AND 8" SANITARY SEWER

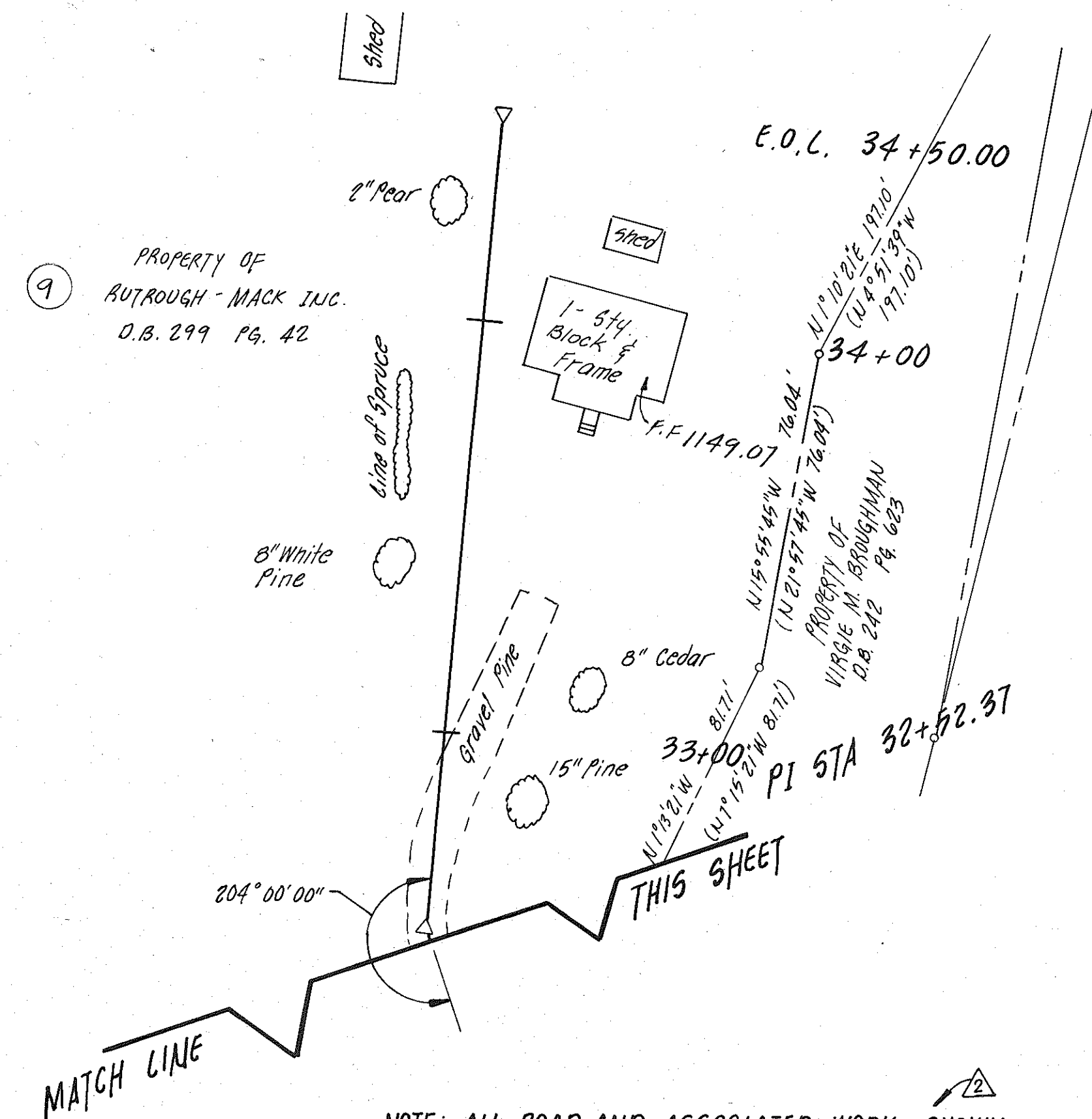
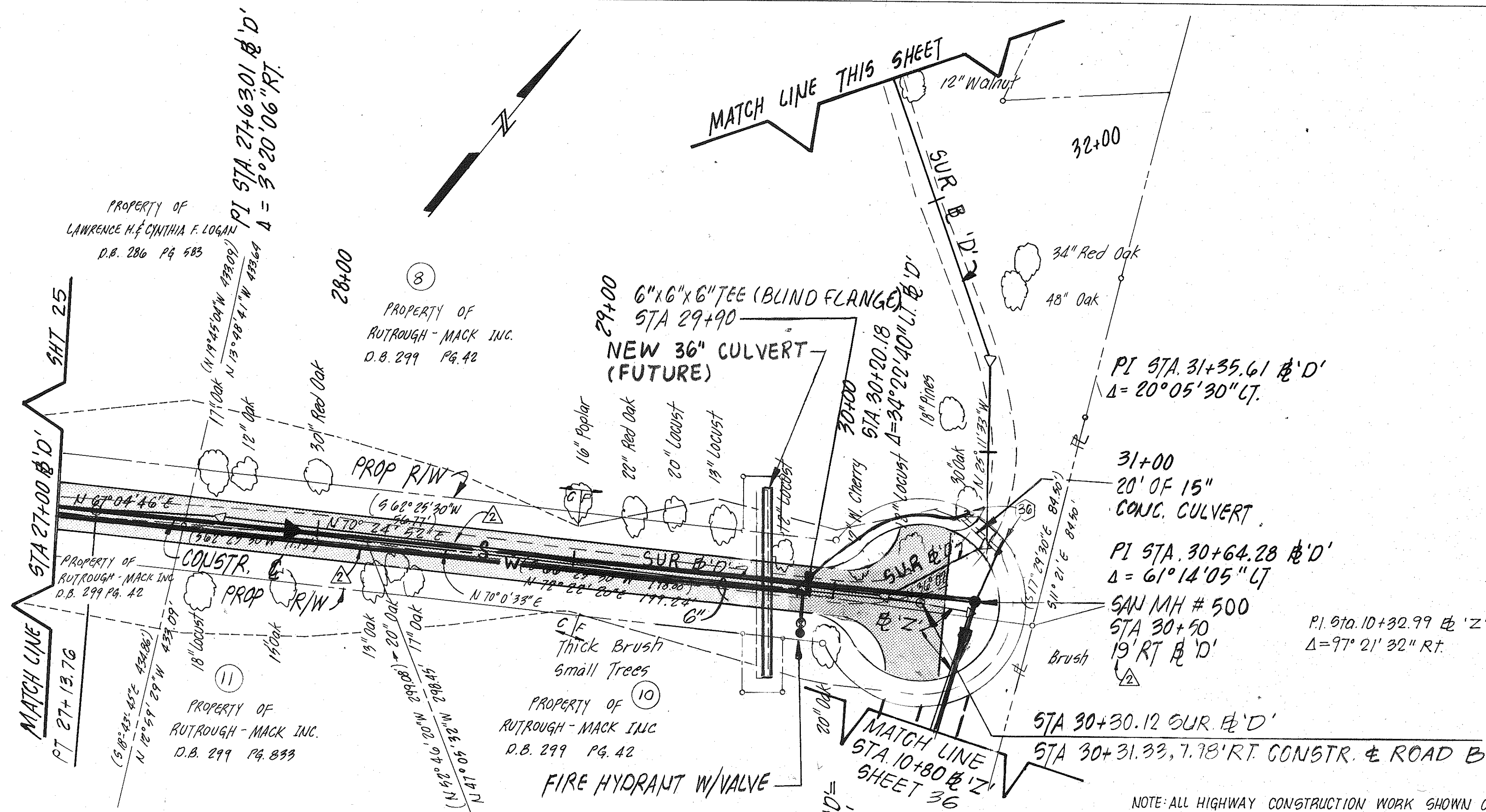
RECORD DRAWING



3	12/ /88	RECORD DRAWING	JLJ
1	6-9-88	REV LOC. S&W LINES EAST OF STA. 25+00±	GP
2	10-14-86	PER VDH COMMENTS	CAT
REVISION	DATE	DESCRIPTION	BY
DESIGNED	CAT	PLAN AND PROFILE STA 18+75 TO STA 27+00 E.D.	
DRAWN	CAT		
CHECKED	JWC		
APPROVED			
SUBMITTED			
		SCALE: AS NOTED	COMM. NO. 491
		DATE: AUG 86	SHEET 25

PLAN	DATE	BY	DATE
SURVEYED			
NOTED			
ALIGNED			
CHECKED			
RT. OF WAY			
NO.			

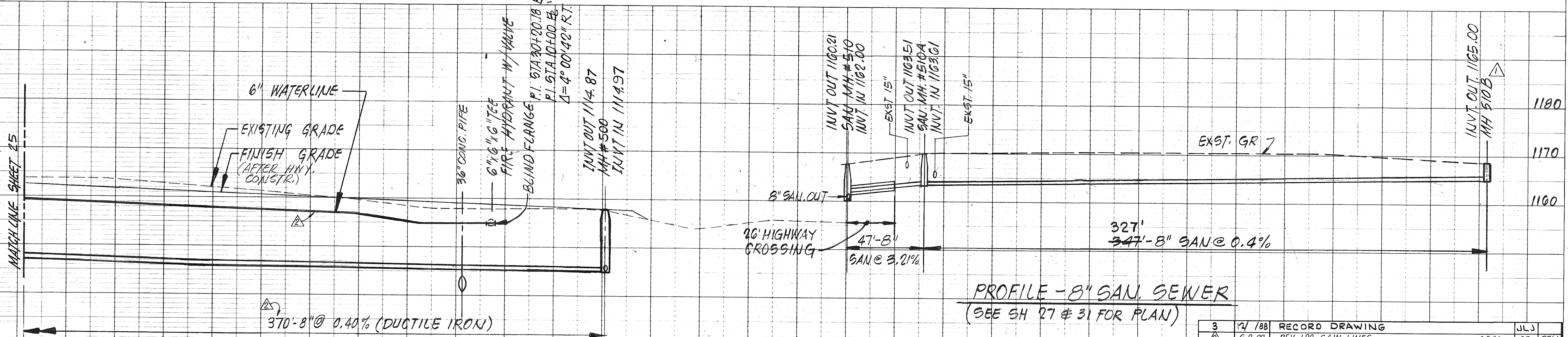
PROFILE	DATE	BY	DATE
SURVEYED			
NOTED			
GRADES			
CHECKED			
STRUCTURE			
NOTES			
NO.			



NOTE: ALL ROAD AND ASSOCIATED WORK SHOWN ON THIS SHEET IS PROPOSED FOR FUTURE DEVELOPMENT.

SCALE: 1" = 30' HORIZ
1" = 10' VERT

NOTE: ALL HIGHWAY CONSTRUCTION WORK SHOWN ON THIS SHEET IS NOT IN THIS CONTRACT. ONLY THE UTILITY WORK SHOWN IS IN THIS CONTRACT.

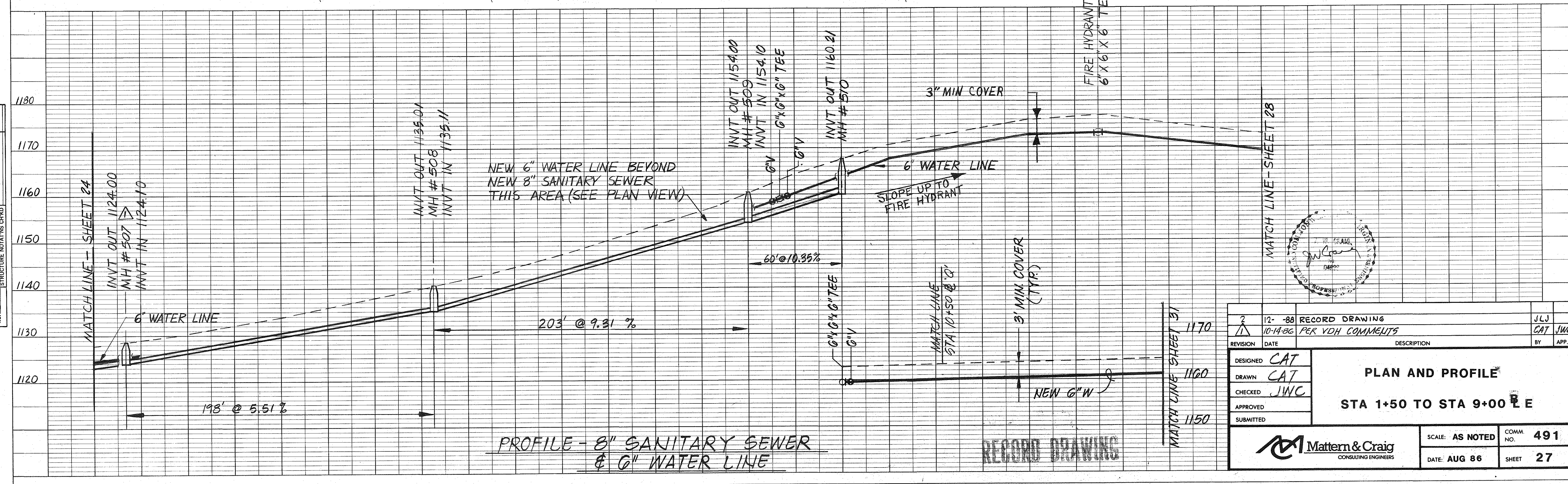


PROFILE - 8" SANITARY SEWER & 6" WATERLINE

PROFILE - 8" SAN. SEWER
(SEE SH 27 & 31 FOR PLAN)

3	10/188	RECORD DRAWING	JLS	SP	DRM
10-14-86	REV. LOC. 8 & W LINES	CD #1	CAT	JWC	
REVISION	DATE	DESCRIPTION	BY	APP.	
DESIGNED	CAT				
DRAWN	CAT				
CHECKED	JWC				
APPROVED					
SUBMITTED					
PLAN AND PROFILE: STA 27+00 TO STA 34+50 L D					
Mattern & Craig CONSULTING ENGINEERS				SCALE: AS NOTED	COMM. NO. 491
				DATE: AUG 86	SHEET 26

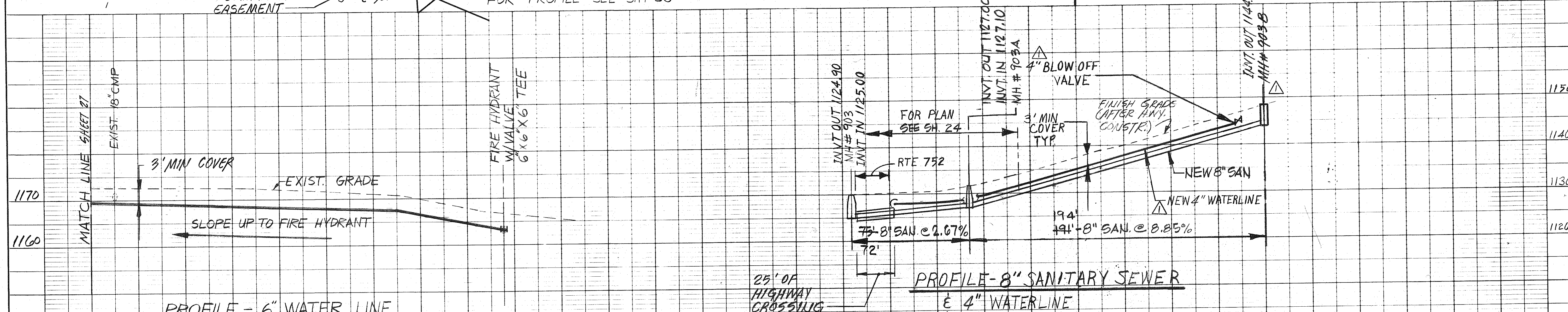
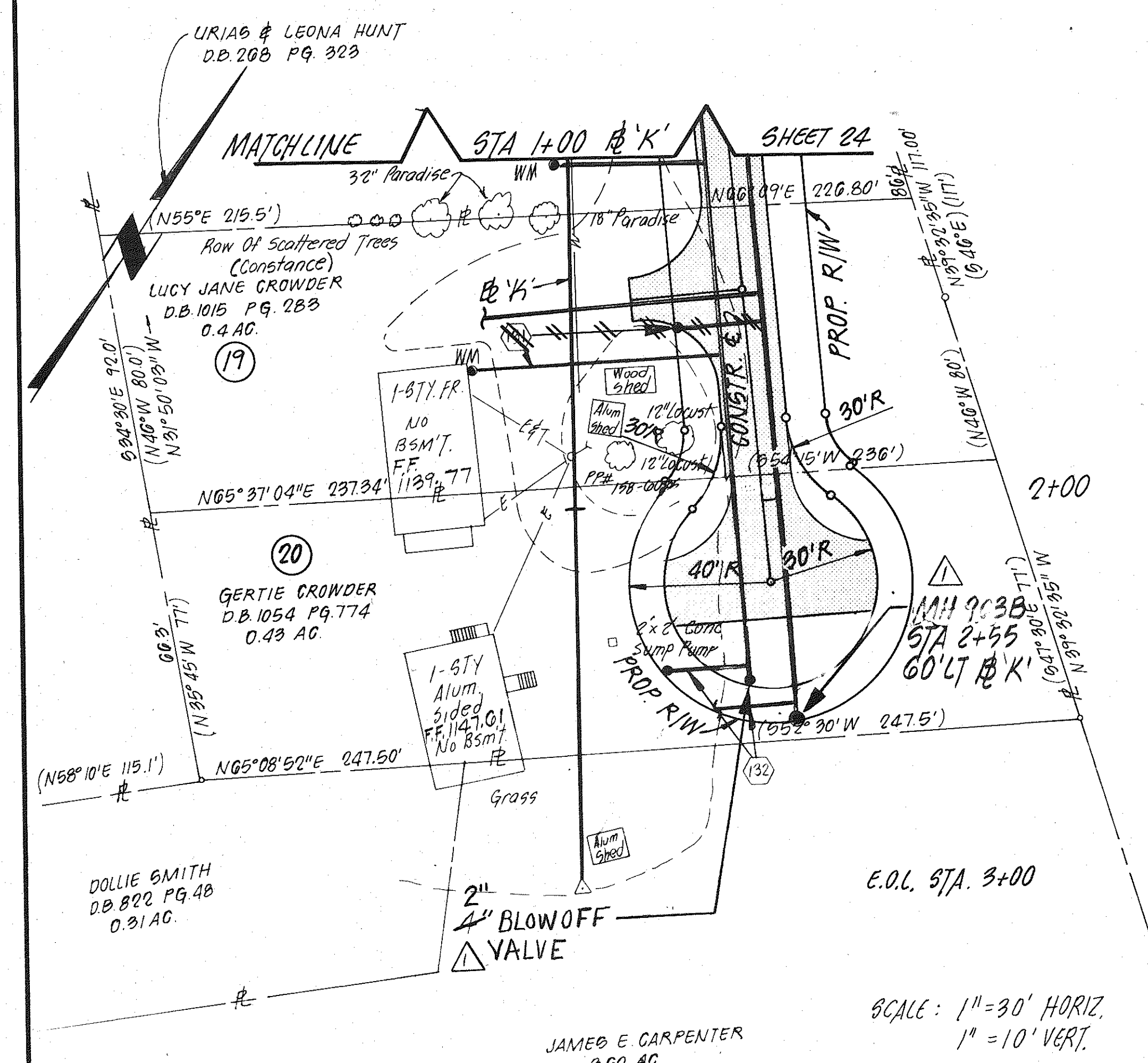
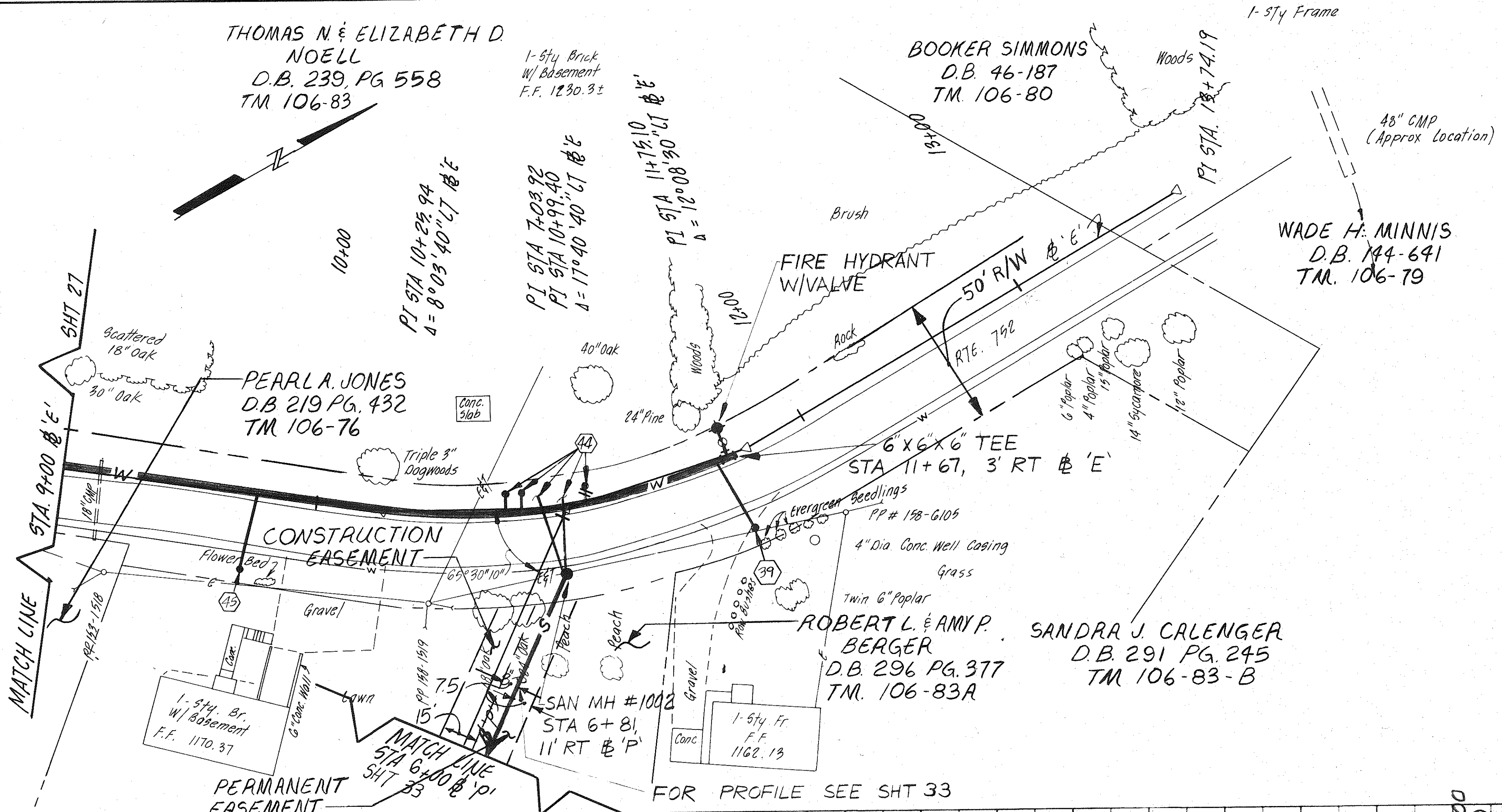
PROFILE	SURVEYED	BY	DATE
	PLOTTED		
	GRADES CHECKED		
	B. M.'s NOTED		
NOTE BOOK NO.			



2	12- -88	RECORD DRAWING	SLJ
△	10-14-86	PER VDH COMMENTS	CAT JWC
REVISION	DATE	DESCRIPTION	BY
DESIGNED	CAT	PLAN AND PROFILE STA 1+50 TO STA 9+00 E	
DRAWN	CAT		
CHECKED	JWC		
APPROVED			
SUBMITTED			
 Mattern & Craig CONSULTING ENGINEERS		SCALE: AS NOTED	COMM. NO. 491
		DATE: AUG 86	SHEET 27

PLAN	DATE	BY	DATE	BY
SURVIVED				
NOTED				
NOTE BOOK				
NO.				

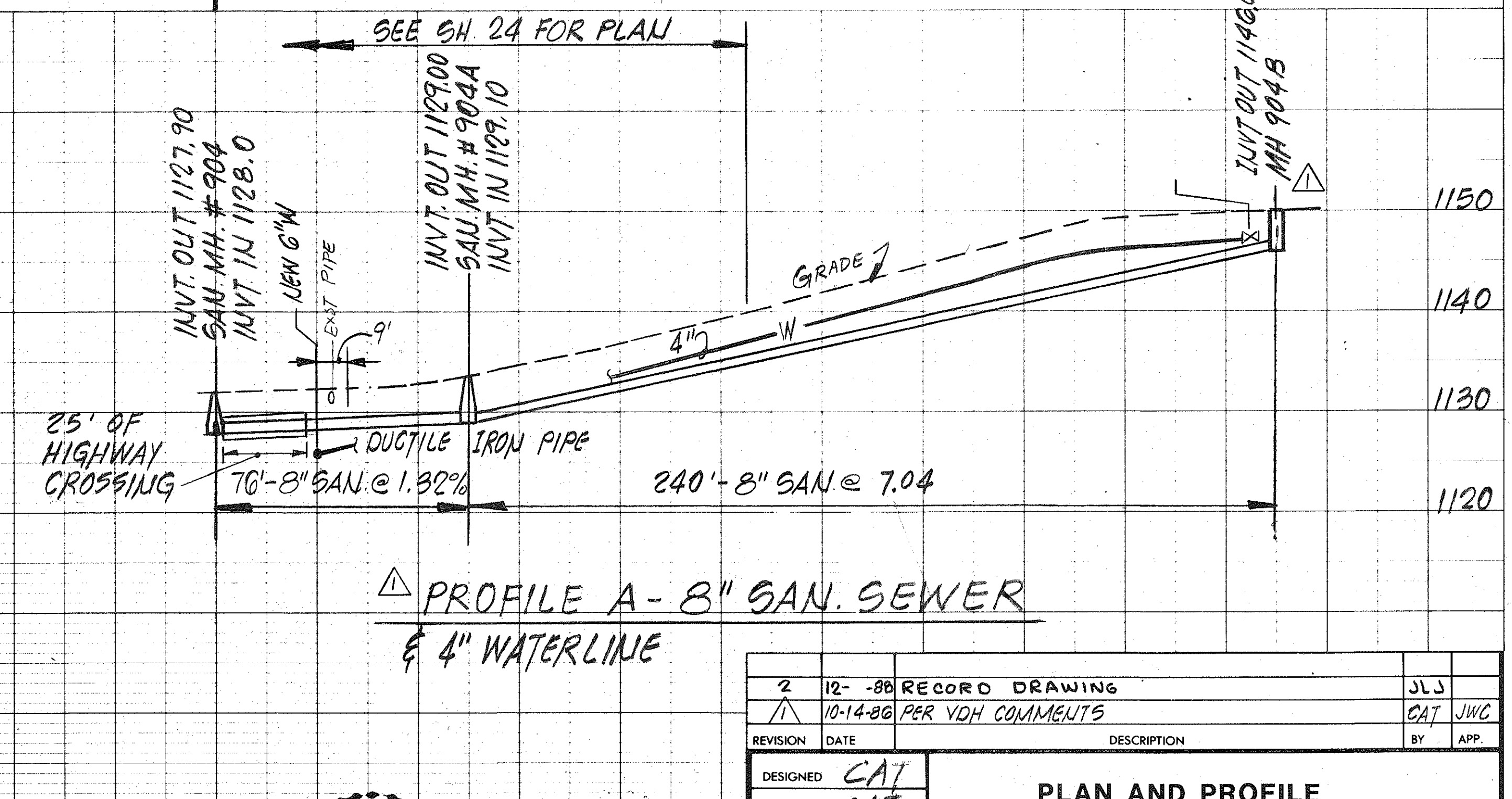
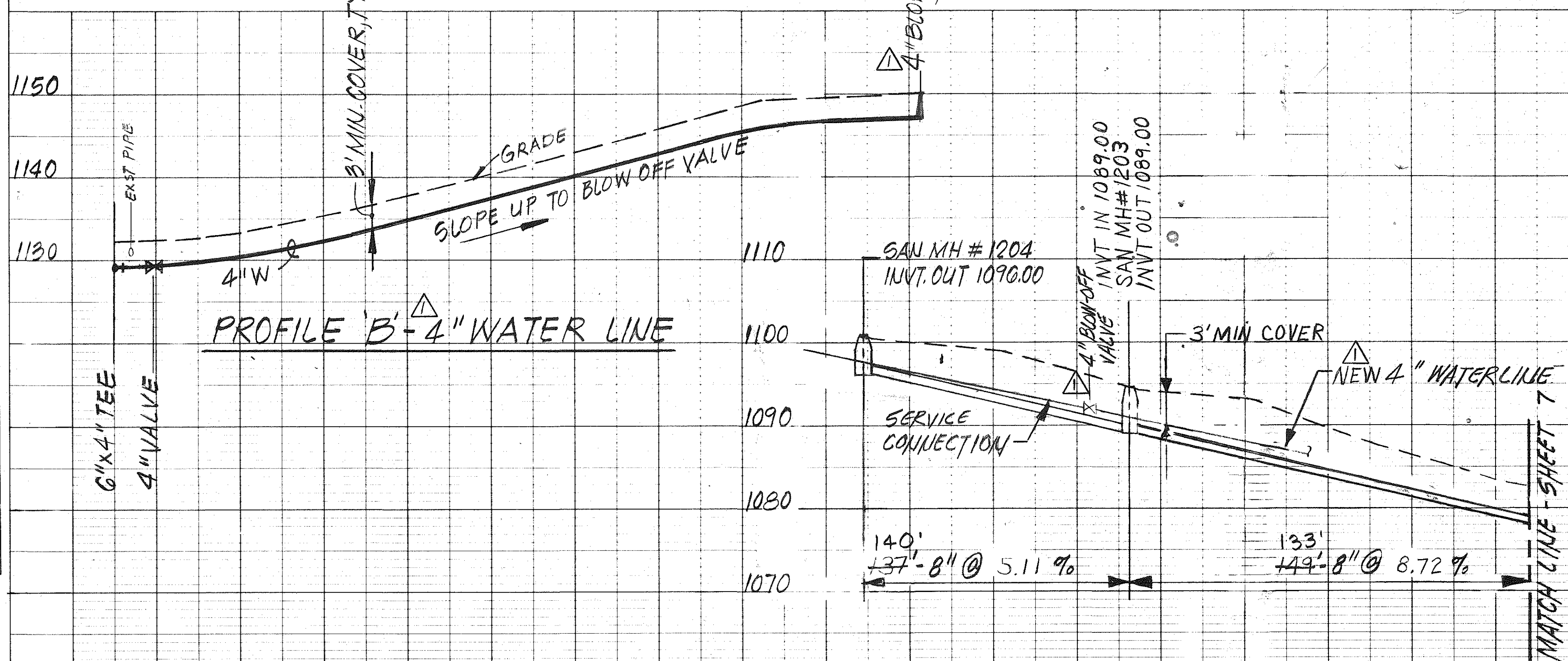
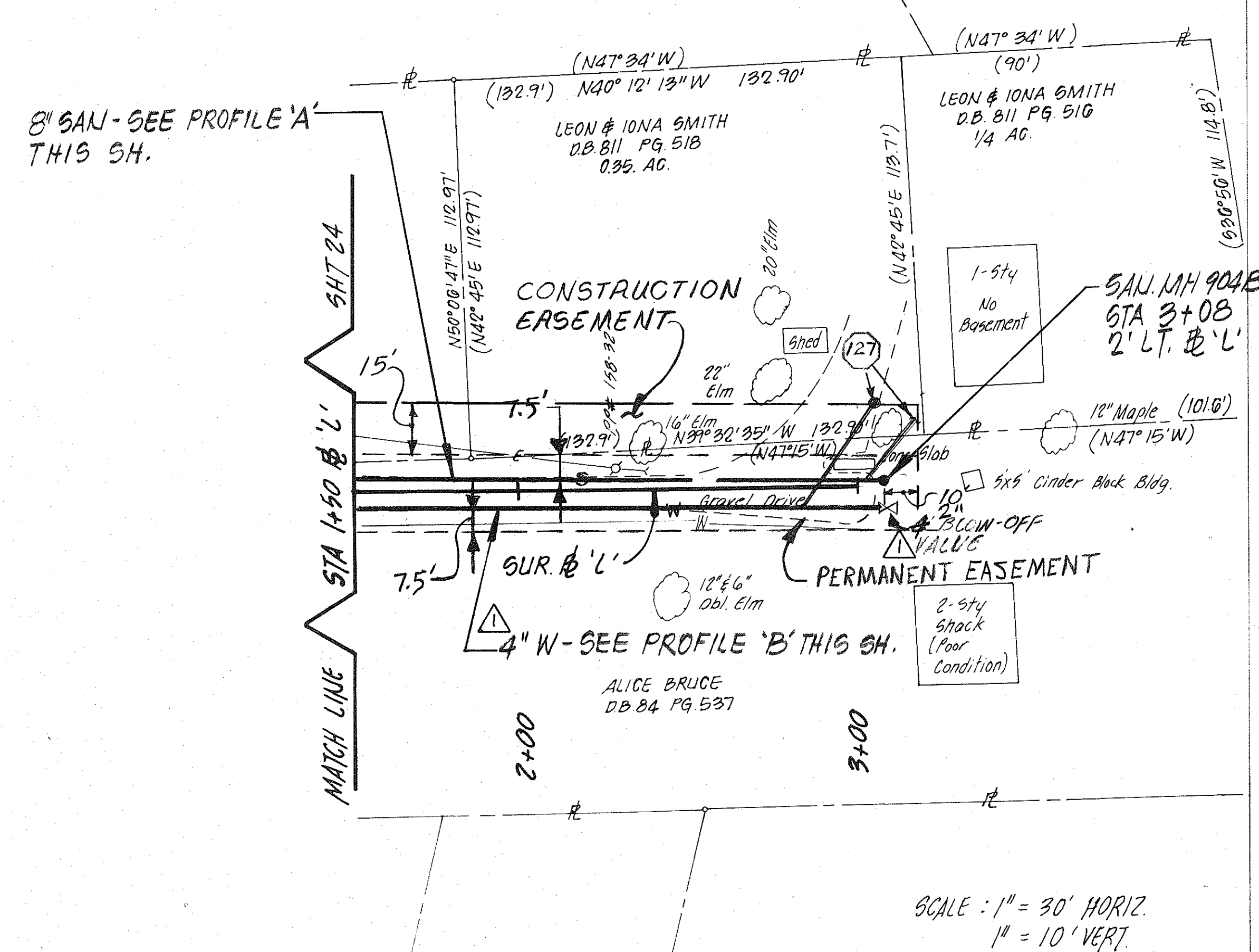
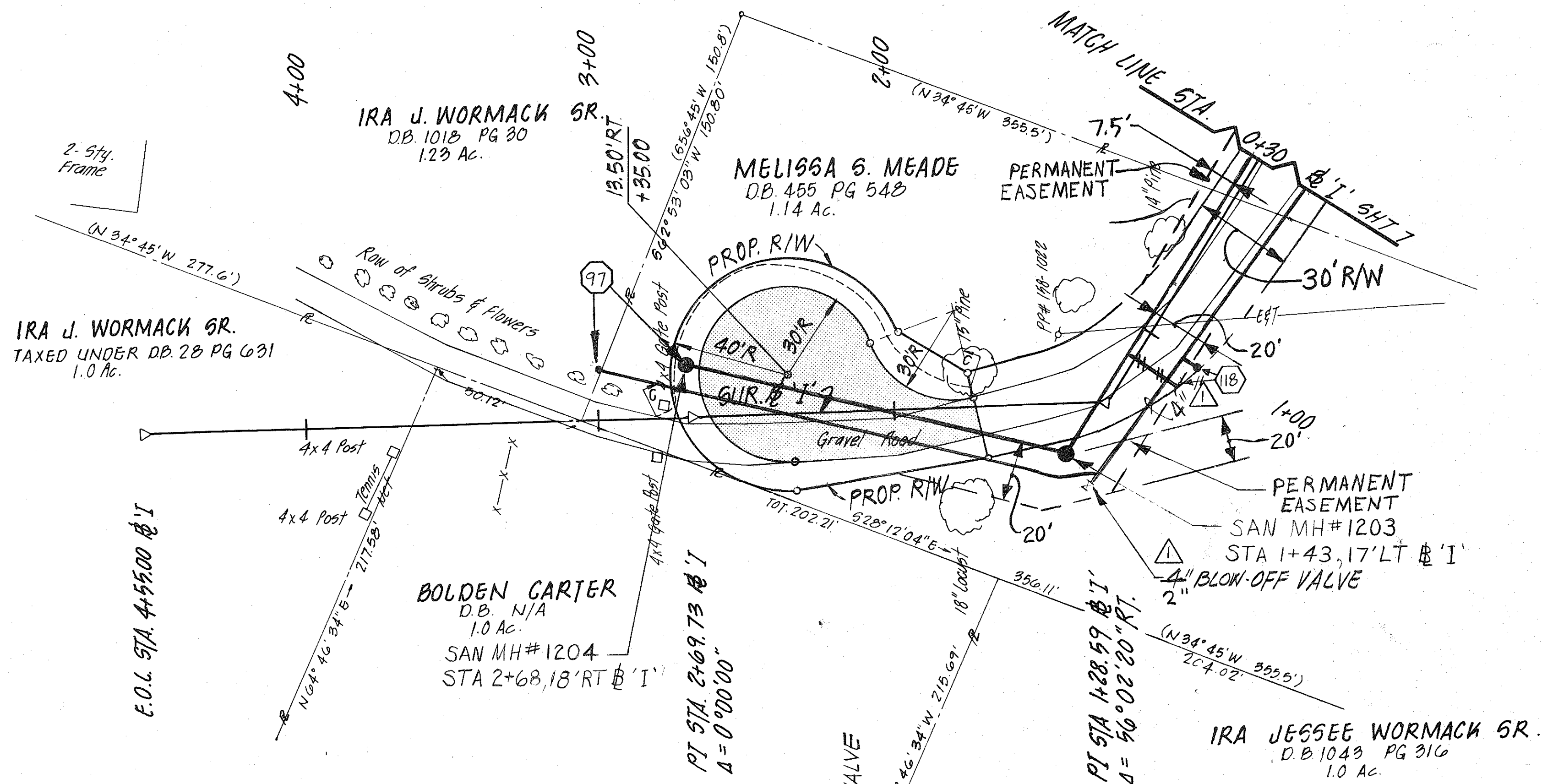
PROFILE	DATE	BY	DATE	BY
SURVIVED				
NOTED				
NOTE BOOK				
NO.				



2	12/1/88	RECORD DRAWING	JLJ
1	10-14-86	PER VOH COMMENTS	CAT JWC
REVISION	DATE	DESCRIPTION	BY
DESIGNED	CAT		
DRAWN	CAT		
CHECKED	JWC		
APPROVED			
SUBMITTED			
Mattern and Craig			491
CONSULTING ENGINEERS			28
ROANOKE, VIRGINIA			
SCALE: AS NOTED			
DATE: AUG 86			

PLAN	DATE	BY
SURVEYED		
DESIGNED		
DRAWN		
CHECKED		
APPROVED		
NO.		

PROFILE	DATE	BY
SURVEYED		
DESIGNED		
DRAWN		
CHECKED		
APPROVED		
NO.		



2	12-88	RECORD DRAWING	JLJ	
1	10-14-88	PER VDH COMMENTS	CAT JWC	
REVISION	DATE	DESCRIPTION	BY	APP.
DESIGNED	CAT	PLAN AND PROFILE STA 0+30 TO STA 4+55 RL STA 1+50 TO STA 3+00 RL		
DRAWN	CAT			
CHECKED	JWC			
APPROVED				
SUBMITTED				
 Mattern & Craig CONSULTING ENGINEERS		SCALE: AS NOTED	COMM. NO.	491
		DATE: AUG 86	SHEET	29

Mattern & Craig
CONSULTING ENGINEERS

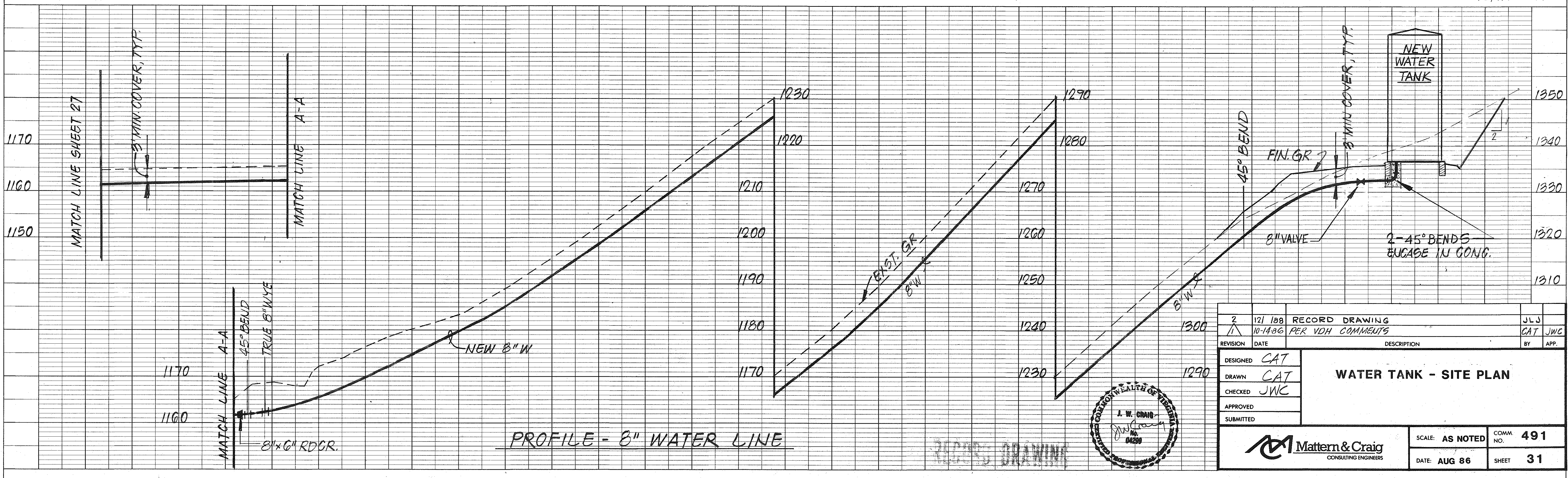
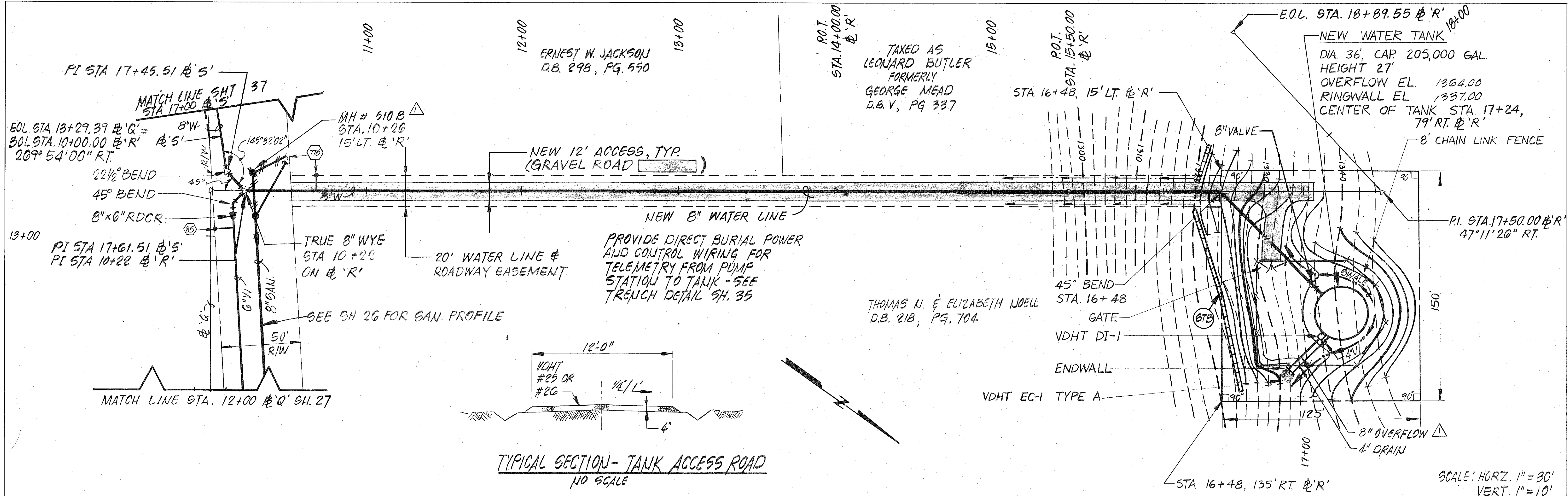
SCALE: AS NOTED
DATE: AUG 86
SHEET: 29



PROFILE	SURVEYED	BY	DATE
	PIOTTED		
	GRADES CHECKED		
	B. M.'s NOTED		

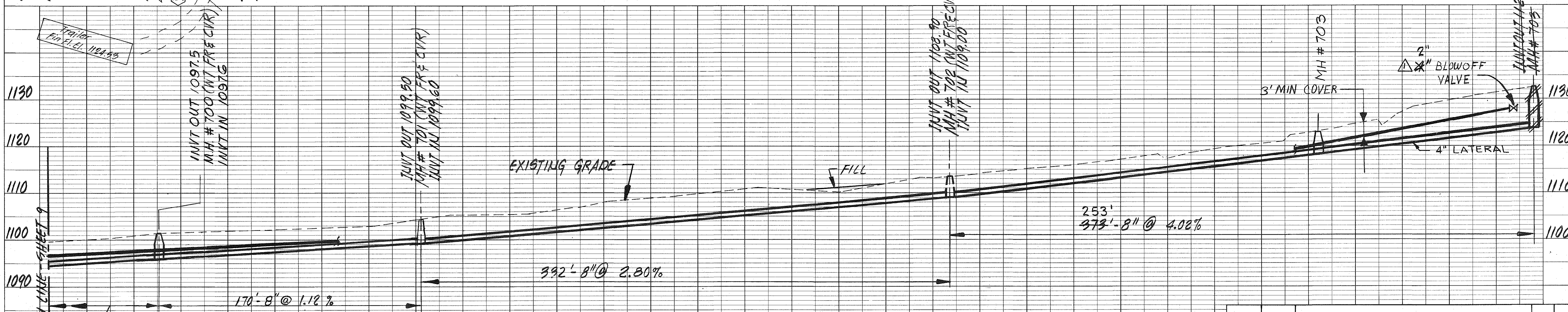
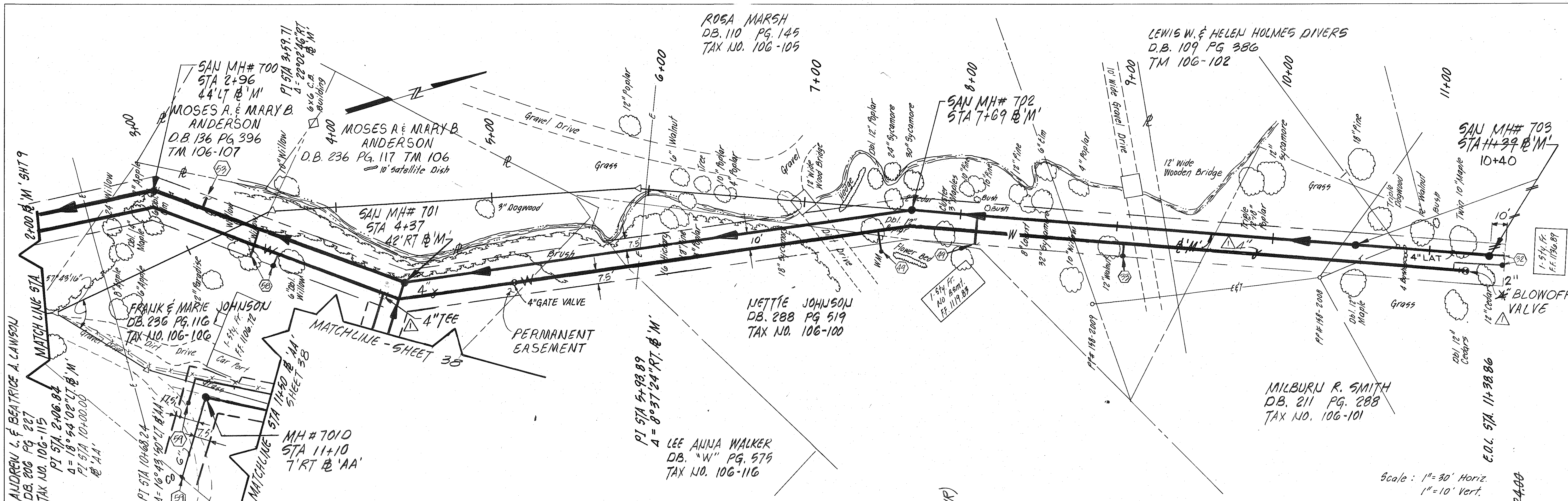
PLAN	DATE	BY
DESIGNED		
DRAWN		
CHECKED		
APPROVED		
SUBMITTED		

PROFILE	DATE	BY
DESIGNED		
DRAWN		
CHECKED		
APPROVED		
SUBMITTED		



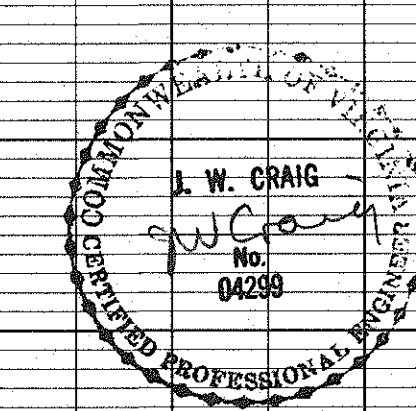
PLAN	DATE
SURVEYED	BY
PLOTTED	
NOTE BOOK	
NO.	

PROFILE	DATE
SURVEYED	BY
GRADES CHECKED	
NOTE BOOK	
NO.	



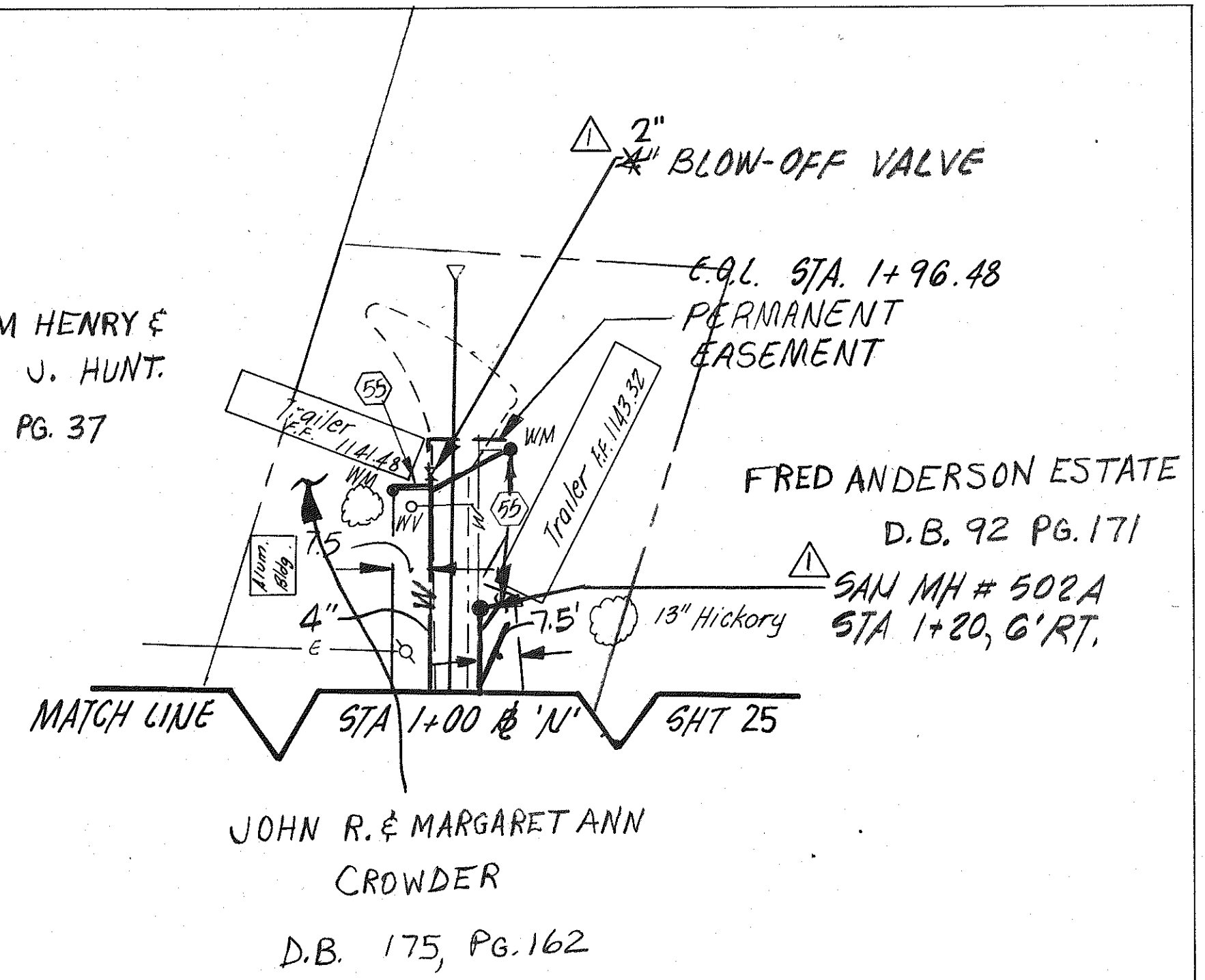
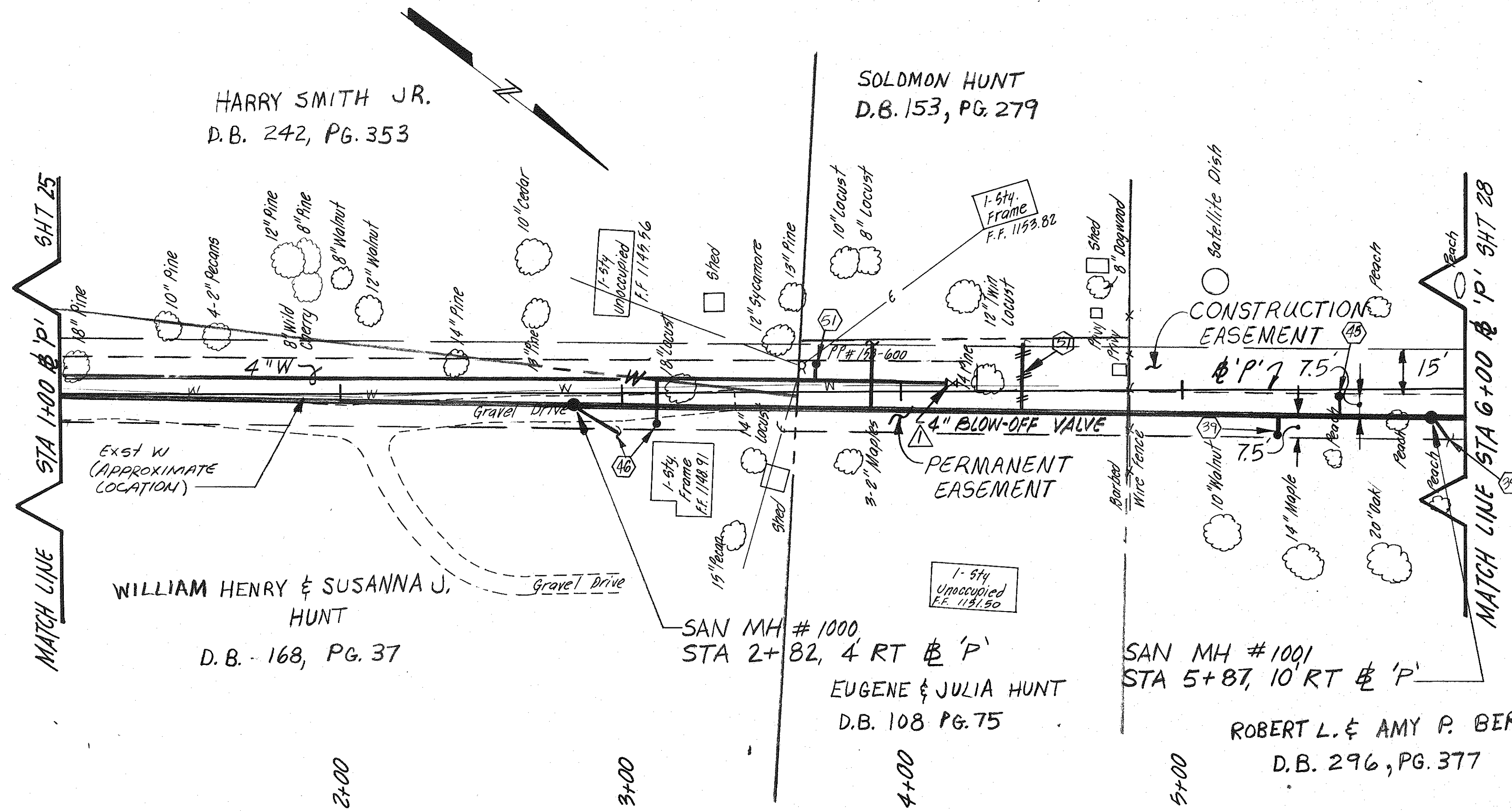
PROFILE - 8" SANITARY SEWER & 4" WATER

2	12-88	RECORD DRAWING	JLJ
10-1486	PER VDH COMMENTS	CAT	JWC
REVISION	DATE	DESCRIPTION	BY
DESIGNED	CAT		
DRAWN	CAT		
CHECKED	JWC		
APPROVED			
SUBMITTED			
PLAN AND PROFILE			
STA 2+00 TO STA 11+38 E.M.			
SCALE: AS NOTED		COMM. NO.	491
DATE: AUG 86		SHEET	32

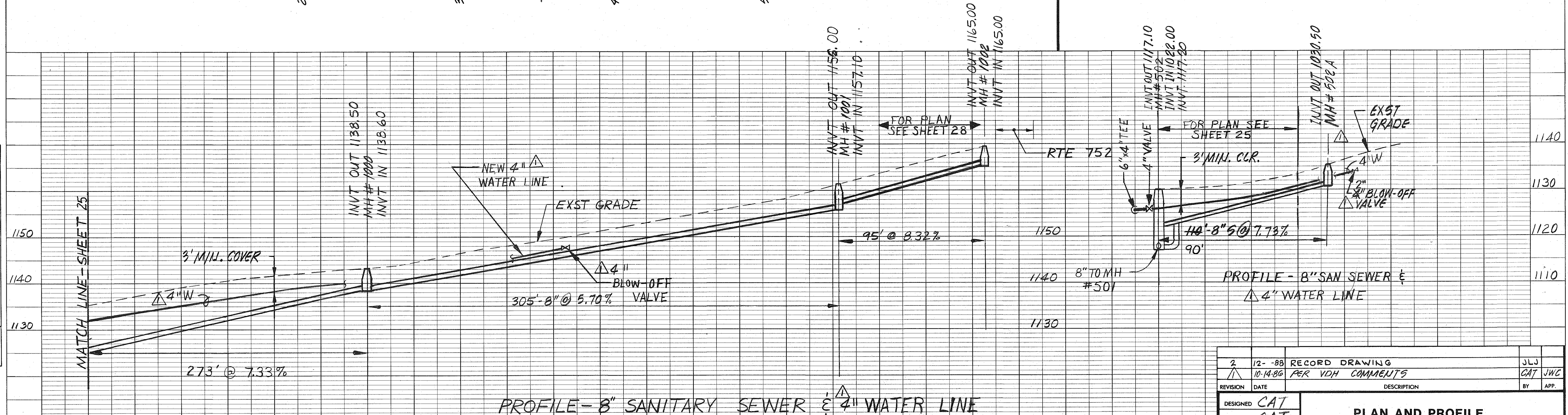


RECORD DRAWING

PLAN	DATE	BY
SURVEYED		
GRADES CHECKED		
ALIGNMENT CHECKED		
NOTE BOOK		
NO.		

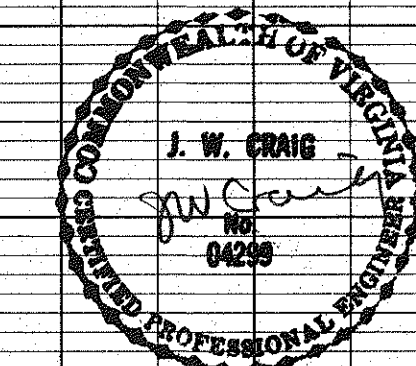


PROFILE	DATE	BY
SURVEYED		
GRADES CHECKED		
NOTE BOOK		
NO.		



DESIGNED	CAT	PLAN AND PROFILE
DRAWN	CAT	STA 1+00 TO STA 6+00 P
CHECKED	JWC	STA 1+00 TO STA 1+96 N
APPROVED		
SUBMITTED		
REVISION	DATE	DESCRIPTION
2	12-88	RECORD DRAWING
1	10-14-86	PER VDH COMMENTS
SCALE	AS NOTED	COMM. NO. 491
DATE	AUG 86	SHEET 3

RECORD DRAWING



2	12- -88	RECORD DRAWING	JLJ		
△	10-20-86	PER VDA COMMENTS	CAT JW		
REVISION	DATE	DESCRIPTION	BY APP		
DESIGNED	CAT	WATER TANK DETAILS			
DRAWN	CAT				
CHECKED	JWC				
APPROVED					
SUBMITTED					
Mattern and Craig CONSULTING ENGINEERS ROANOKE, VIRGINIA		SCALE	AS NOTED	COMM NO.	491
		DATE	AUG 86	SHEET	34

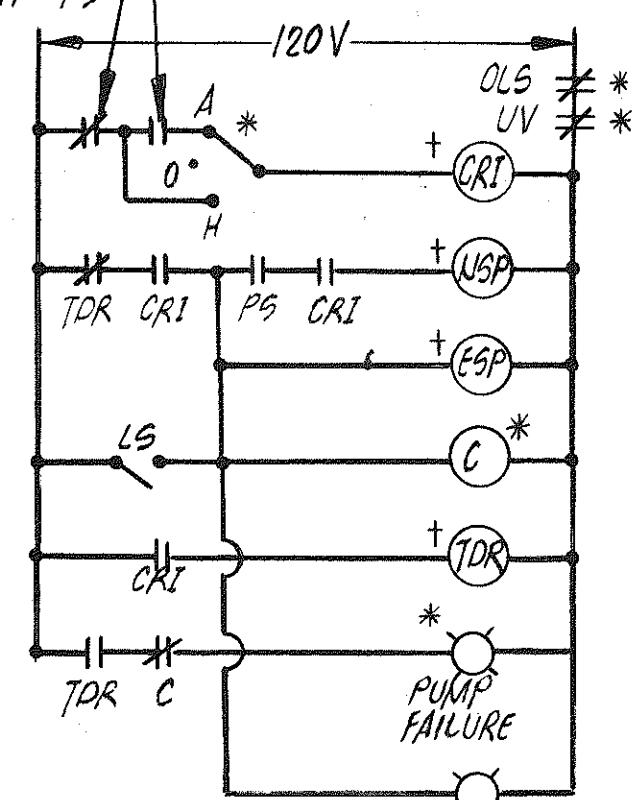
DEMOLITION NOTES

1. DISCONNECT EXISTING PUMPS, PUMP CONTROLLERS, ELECTRIC HEATERS, AND REMOVE WIRING BACK TO EXISTING PANELBOARD.
2. REMOVE EXISTING ELECTRIC METER, AFTER NEW SERVICE IS INSTALLED AND NEW PUMPS ARE OPERATING, AND TURN OVER TO APCO.
3. PUMPING SYSTEM MUST BE KEPT IN OPERATION AT ALL TIMES. NEW INSTALLATION AND DEMOLITION MUST BE COORDINATED WITH OPERATIONS.
4. EXISTING LIGHTING AND RECEPTACLES TO REMAIN.

ELECTRICAL NOTES

1. INSTALL NEW 3 PHASE, 4 WIRE, 240/120 V. METER, FURNISHED BY APCO, BESIDE EXISTING METER. INSTALL 4 #2 IN 1 1/4" CND; UP EXISTING SERVICE MAST, WITH SERVICE HEAD AND 3' OF CONDUCTORS EXTENDING FOR CONNECTION BY APCO. INSTALL 4 #2 IN 1 1/4" CND. FROM LOAD SIDE OF METER TO NEW PANEL 'A' MAINS.
2. PROVIDE CONTROL WIRING, IN CONDUIT, AS REQUIRED BETWEEN MAGNETIC STARTER AND PUMP DIRECTOR, PUMP DIRECTOR AND ELECTRIC CHECK VALVE, PUMP CONTROLLER AND PUMP DIRECTOR, AND LOW PRESSURE CUT-OFF SWITCH AND PUMP DIRECTOR.
3. PROVIDE CONTROL WIRING, IN CONDUIT, AS REQUIRED BETWEEN MAGNETIC STARTER AND PUMP DIRECTOR, BETWEEN PUMP DIRECTOR AND ELECTRIC CHECK VALVES AND BETWEEN TANK LEVEL INDICATOR / PUMP CONTROLLER.

- (1) PUMP ON CONTACT
(1) HIGH LEVEL (PUMP OFF CONTACT)



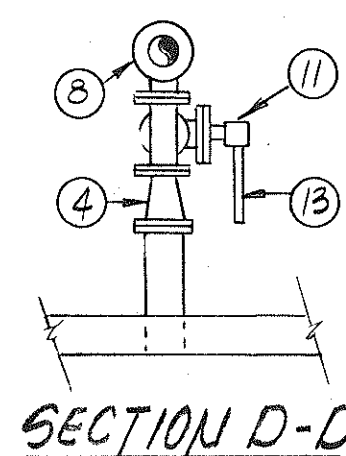
PUMPS (TYP FOR EACH)

SCHEMATIC CONTROL WIRING DIAGRAM
NO SCALE

CONTROL WIRING LEGEND

- * NORMALLY CLOSED CONTACT
- /- NORMALLY OPENED CONTACT
- 0-0 HAND-OFF AUTO SELECTOR SWITCH
- C STARTER COIL
- R RELAY
- OLS STARTER OVERLOAD CONTACTS
- UV STARTER UNDERVOLTAGE CONTACTS
- CRI CONTACT RELAY
- TDR TIME DELAY RELAY
- NSP NORMAL SOLENOID PILOT (3 WAY)
- ESP EMERGENCY SOLENOID PILOT
- LS LIMIT SWITCH
- * LOCATED IN STARTER
- + LOCATED IN PUMP DIRECTOR
- (1) LOCATED IN TANK LEVEL INDICATOR, RECORDER AND RECEIVER

LOW PRESSURE CUT OFF SWITCH
SQUARE D GNG-5
RANGE 3-150 POUNDS
NEMA 1 ENCLOSURE

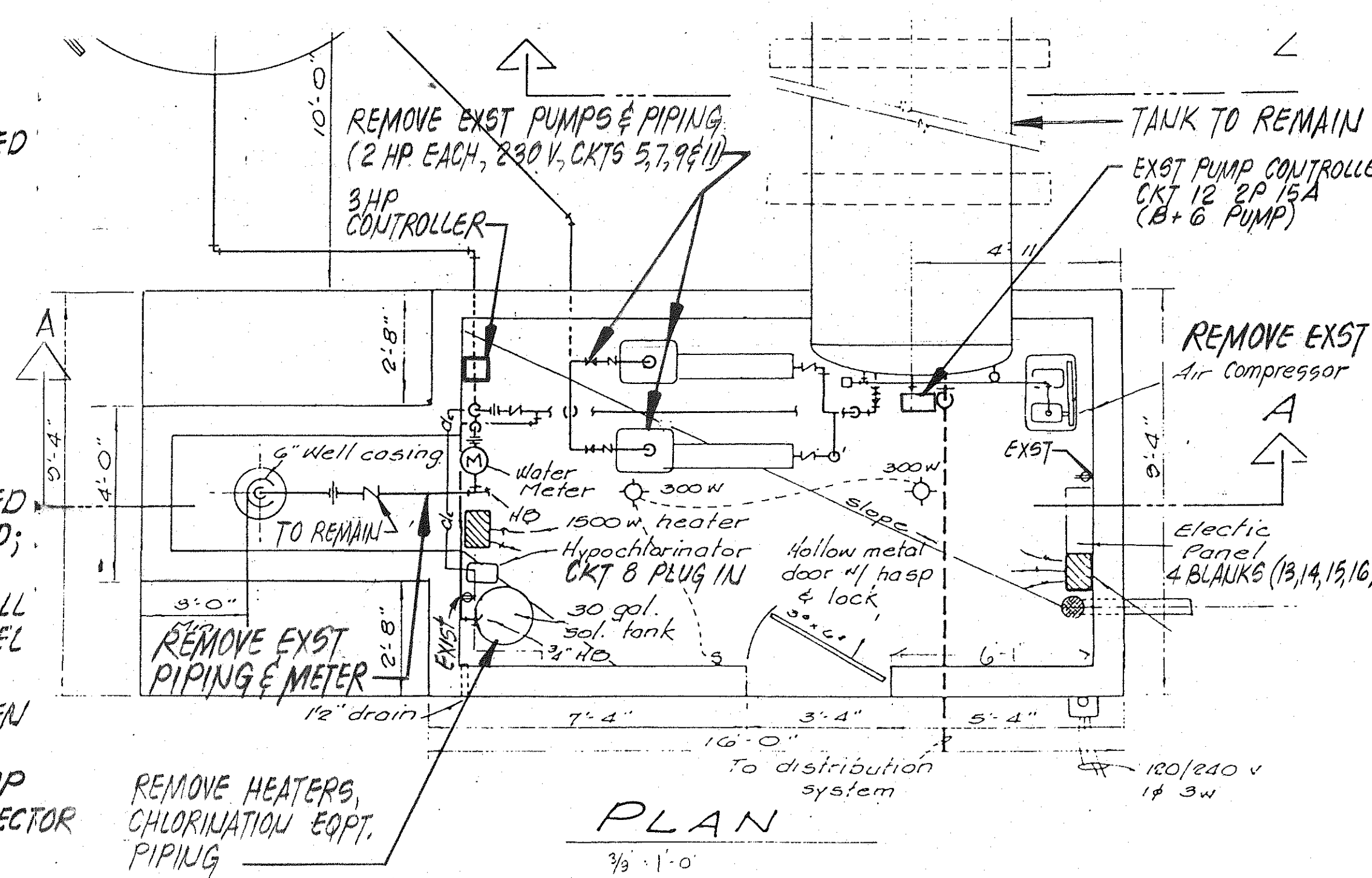


SECTION D-D

SECTION C-C

PIPING LEGEND

- ① 6"x6"x6" TEE
- ② 6" GATE VALVE
- ③ 6" 90° BEND
- ④ 6"x4" REDUCER
- ⑤ 4" GATE VALVE
- ⑥ 4"xREDUCER
- ⑦ 4" ANGLE BODY ELEC. CHECK
- ⑧ 4"x4"x4" TEE
- ⑨ 6" SPOOL PIECE
- ⑩ FLEX. CONN. (RESTRAINED)
- ⑪ 2" SURGE RELIEF VALVE (ANGLE BODY-THREADED)
- ⑫ PIPE SUPPORT UNDER
- ⑬ 2" PIPE (THREADED)
- ⑭ 1/2" SPACER FLANGE
- ⑮ 3/4" HOSE BIBB
- ⑯ PRESSURE GAUGE (0-100 PSI)
- ⑰ PRESSURE GAUGE



PLAN
3/8" = 1'-0"

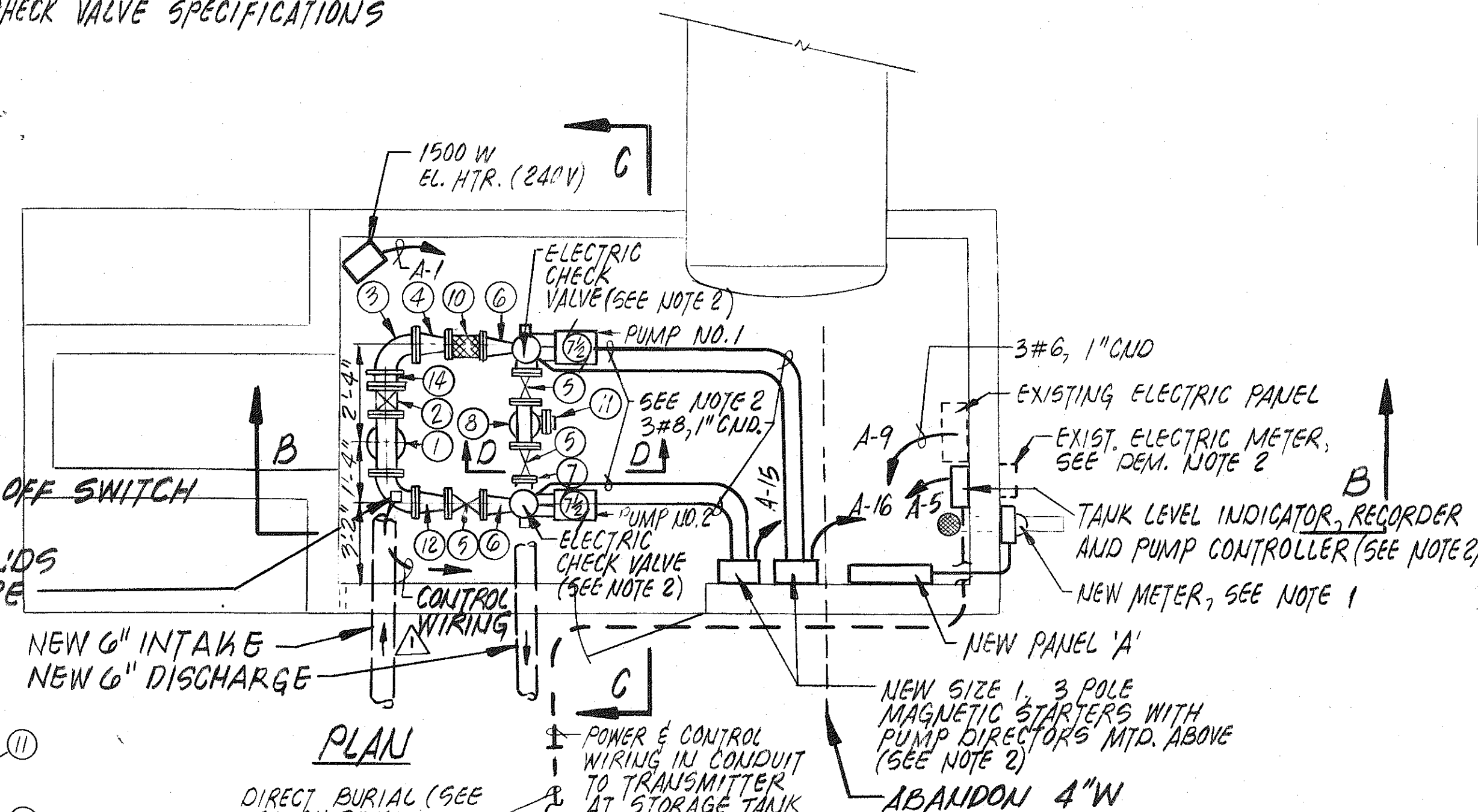
EXISTING WATER SUPPLY STATION

Scale: 3/8" = 1'-0"

NOTE: FOR STATION CURVE
SEE SH. 36

NOTE: ALL EQUIPMENT & VALVES REMOVED
SHALL BE TURNED OVER TO THE OWNER.

NOTE: ADDITIONAL INDICATOR LIGHTS SHALL
BE INSTALLED TO INDICATE OPERATIONS
AS OUTLINED IN PUMP DIRECTOR AND
CHECK VALVE SPECIFICATIONS



PLAN

NEW WATER SUPPLY STATION

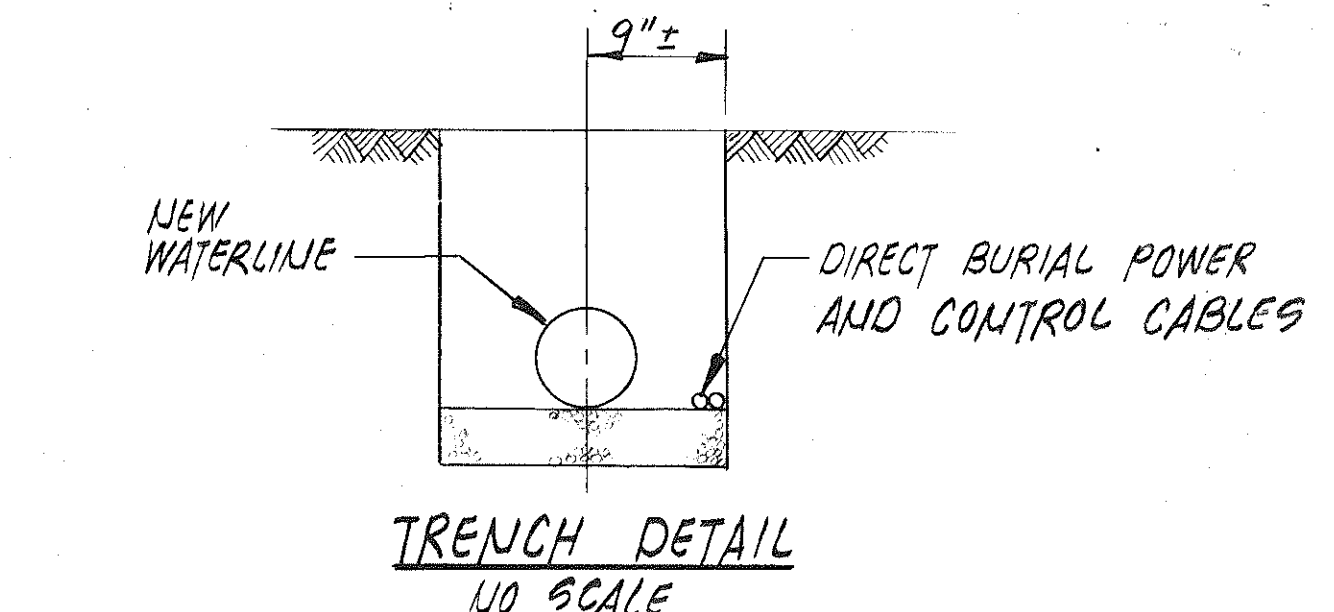
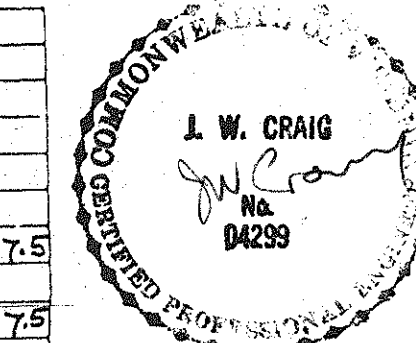
RECORD DRAWING

JOHN B. OBENCHAIN
CONSULTING ENGINEER

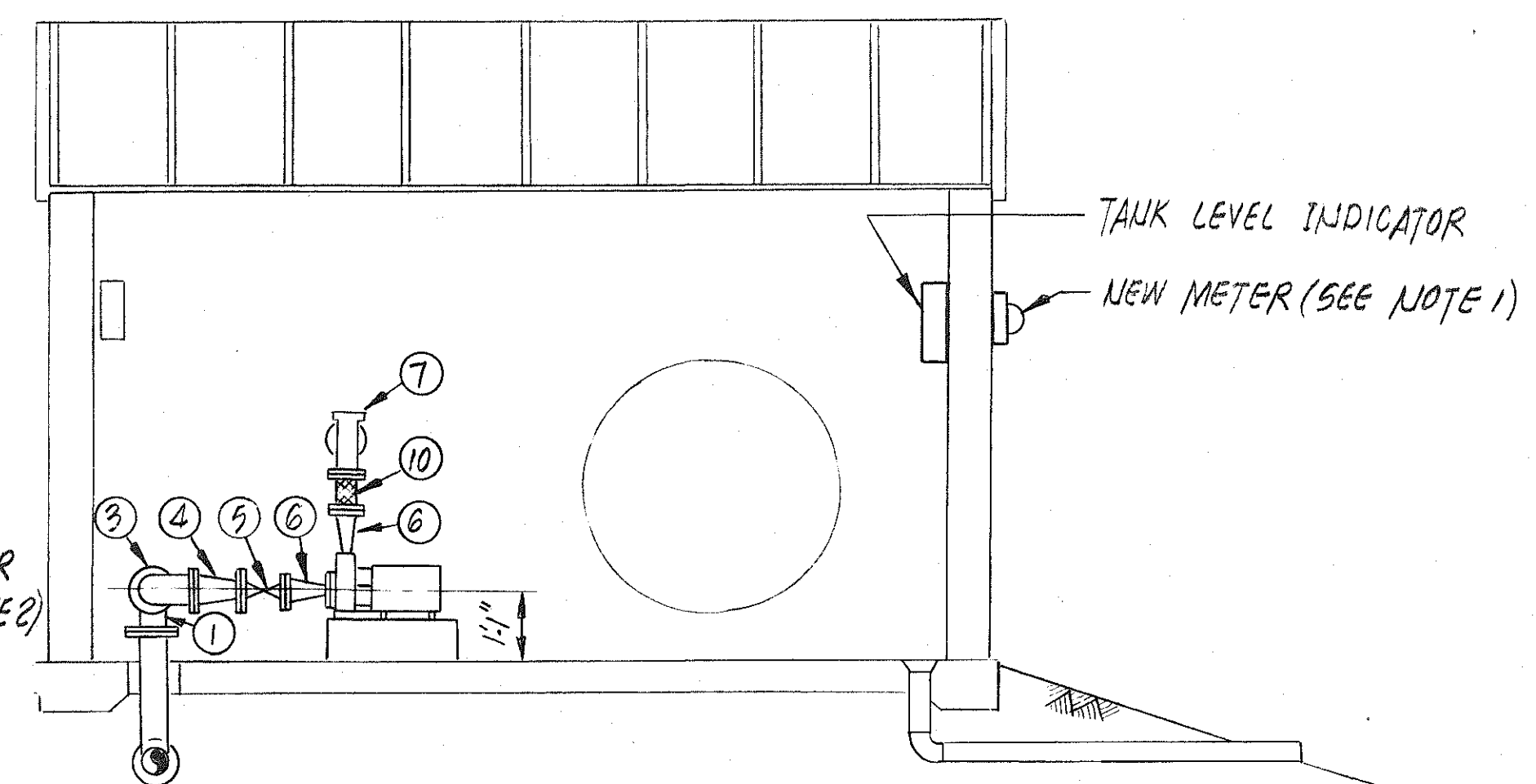
SCHEDULE - PANELBOARD A

JOHN B. OBENCHAIN PUMP STATION									
DATE: 5-26-86					CHECKED BY: JBO				
CALCULATIONS BY: JBO					COMMISSIONING:				
NO.	WIRE	NO.	WIRE	NO.	WIRE	NO.	WIRE	NO.	WIRE
1	20	12	12	12	12	12	12	12	12
LOAD DESCRIPTION					LOAD DESCRIPTION				
UNIT HEATER					SPACE ONLY				
PUMP CONTROLS					SPACE ONLY				
EXISTING PANEL					SPACE ONLY				
PUMP					PUMP				
TOTAL					TOTAL				
8252875					8252875				

VOLTAGE 120/240 3 PHASE 4 WIRE MOUNTING SURFACE
BUS AMPS 100 MAIN BREAKER AMPS 100 SUBFEED LUGS NA



TRENCH DETAIL
NO SCALE

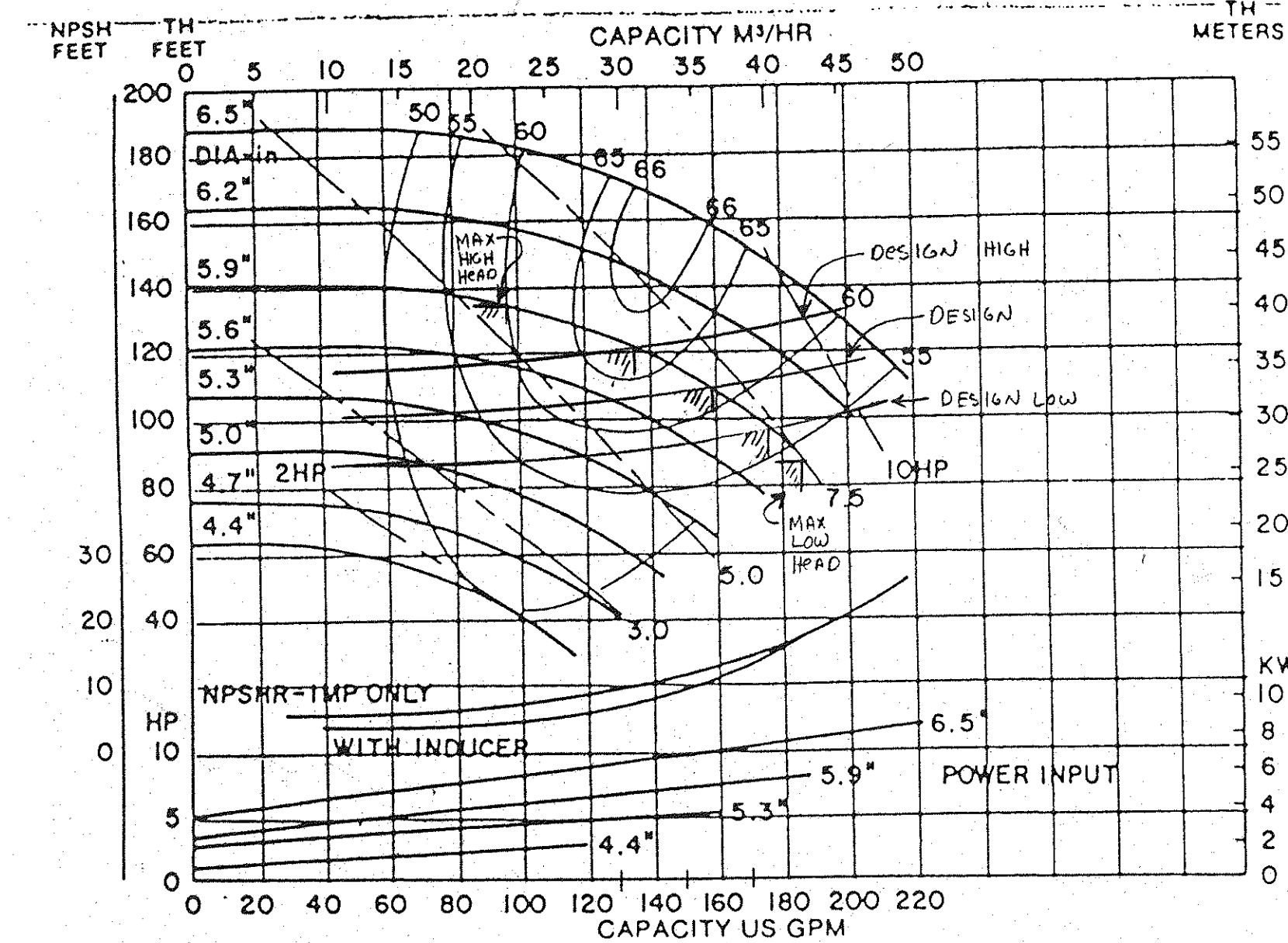
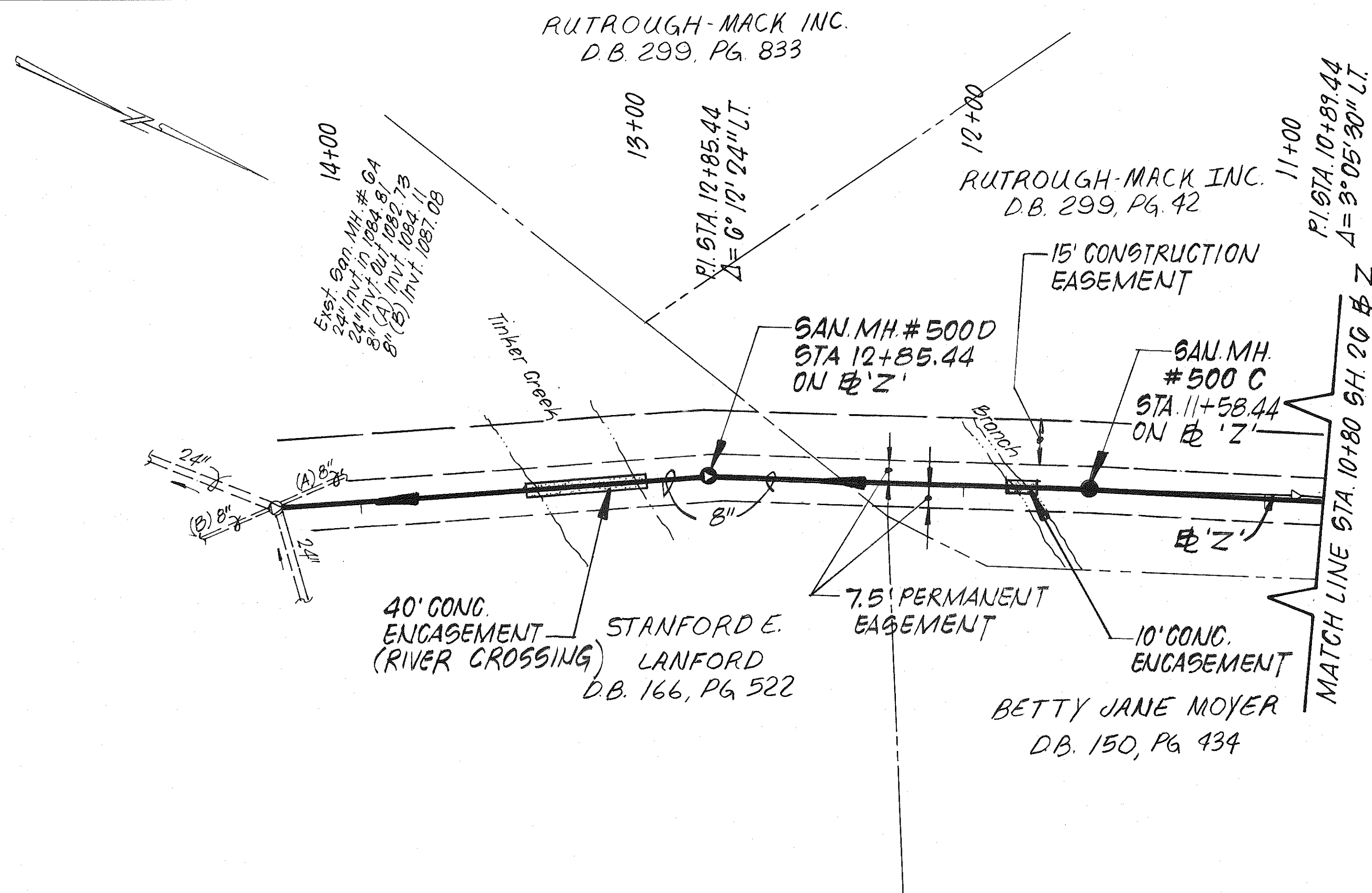


SECTION B-B

NOTE: EXISTING FLOOR SHALL BE SAW CUT FOR INSTALLATION
OF NEW PIPES & TRENCH BACKFILLED WITH VDOT #21A,
COMPACTED & CONC. SLAB REPLACED WITH WWF
AND DOWELS INTO EXISTING CONC. SLAB.

2	12-88	RECORD DRAWING	JLB	
1	10-14-86	PER VDH COMMENTS	CAT	JWC
REVISION	DATE	DESCRIPTION	BY	APP.
DESIGNED	JBO	WATER PUMPING STATION		
DRAWN	CAT			
CHECKED	JWC			
APPROVED				
SUBMITTED				
		SCALE: AS NOTED	COMM. NO.	491
Mattern & Craig CONSULTING ENGINEERS		DATE: AUG 86	SHEET	35

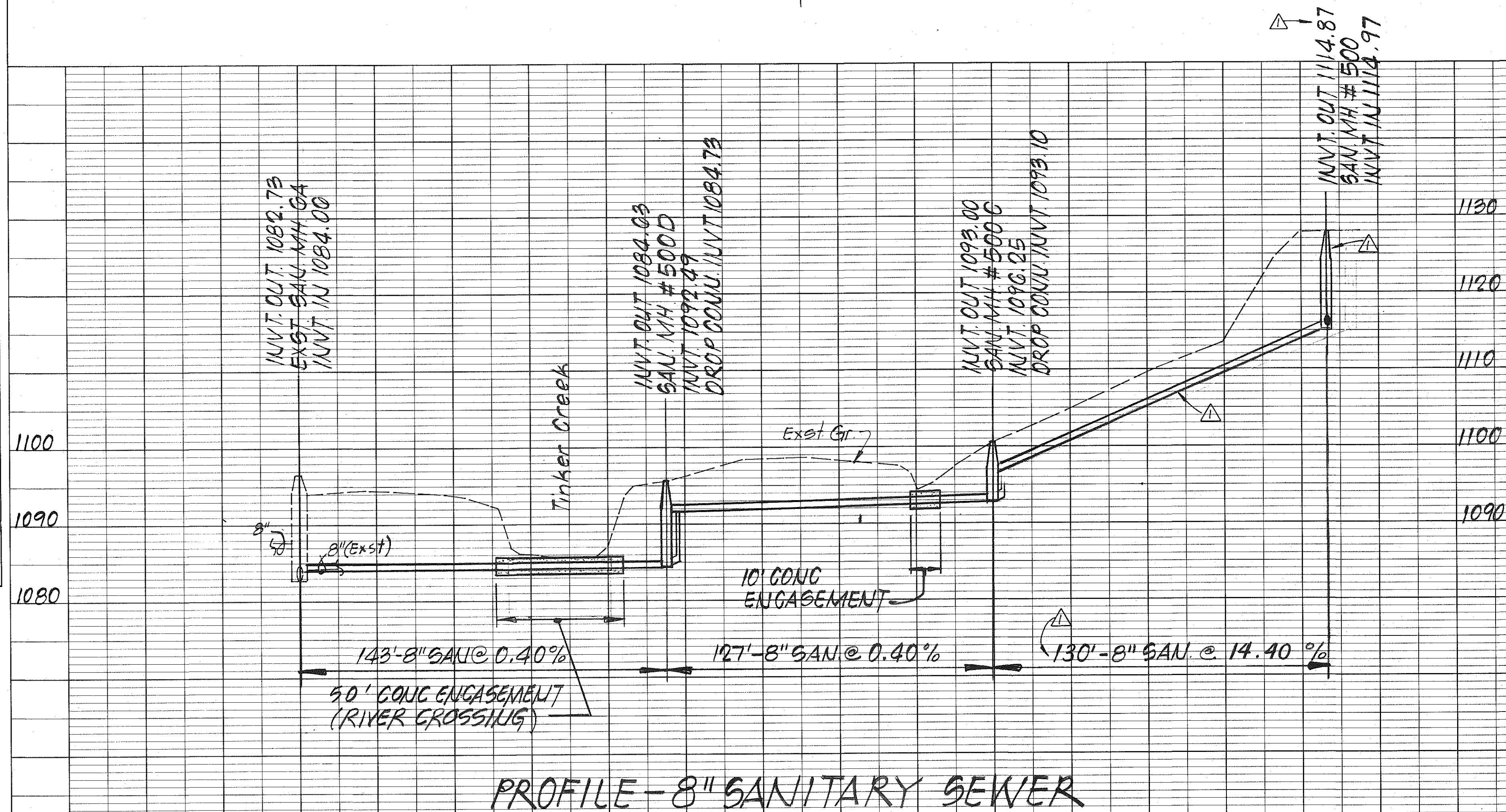
PLAN	DATE	BY	DATE	BY
SURVEYED				
ALIGNED				
CHECKED				
RT. OF WAY				
CHECKED				
NO.				



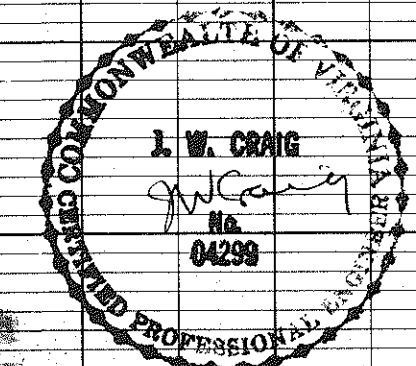
STATION CURVE

SCALE: HORIZ. 1" = 30'
VERT. 1" = 10'

PROFILE	DATE	BY	DATE	BY
SURVEYED				
GRADES				
CHECKED				
B.M. NOTED				
STRUCTURE NOTATIONS				
CHECKED				
NO.				



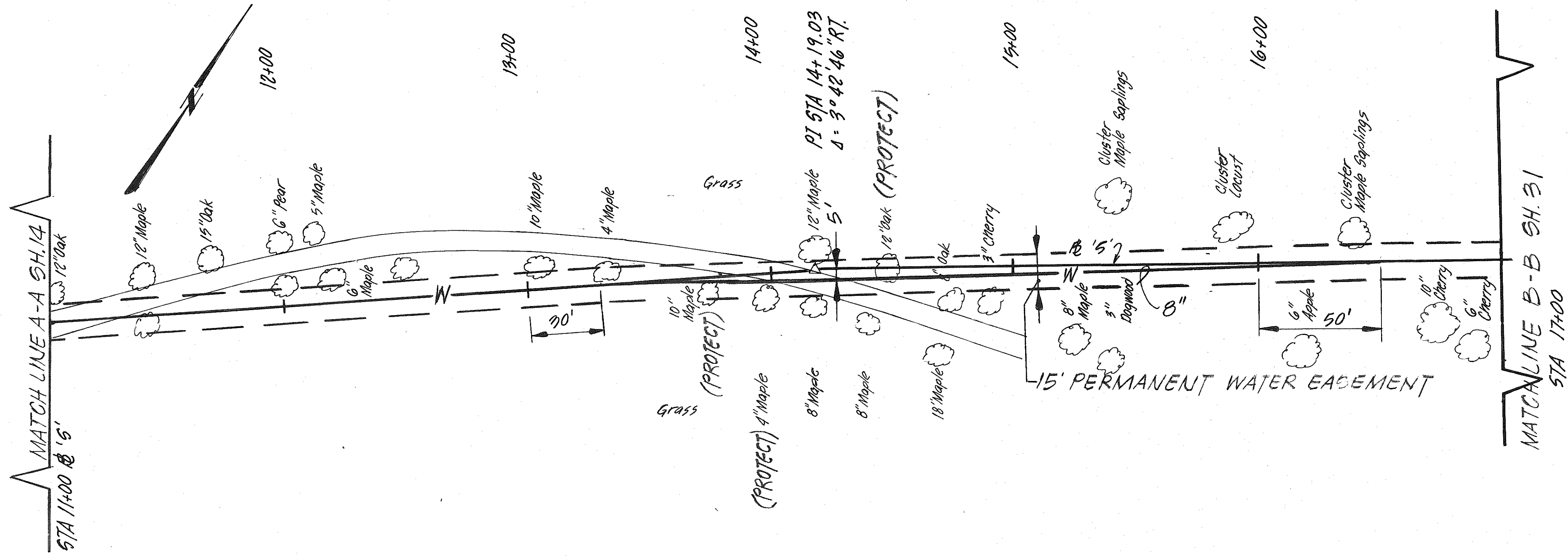
PROFILE-8" SANITARY SEWER



DESIGNED	CAT	RECORD DRAWING	JLJ
DRAWN	CAT	REV. SEWER PROFILE & MANHOLE LOCATION CO.#1	GP
CHECKED	JWC		APP.
APPROVED			
SUBMITTED			

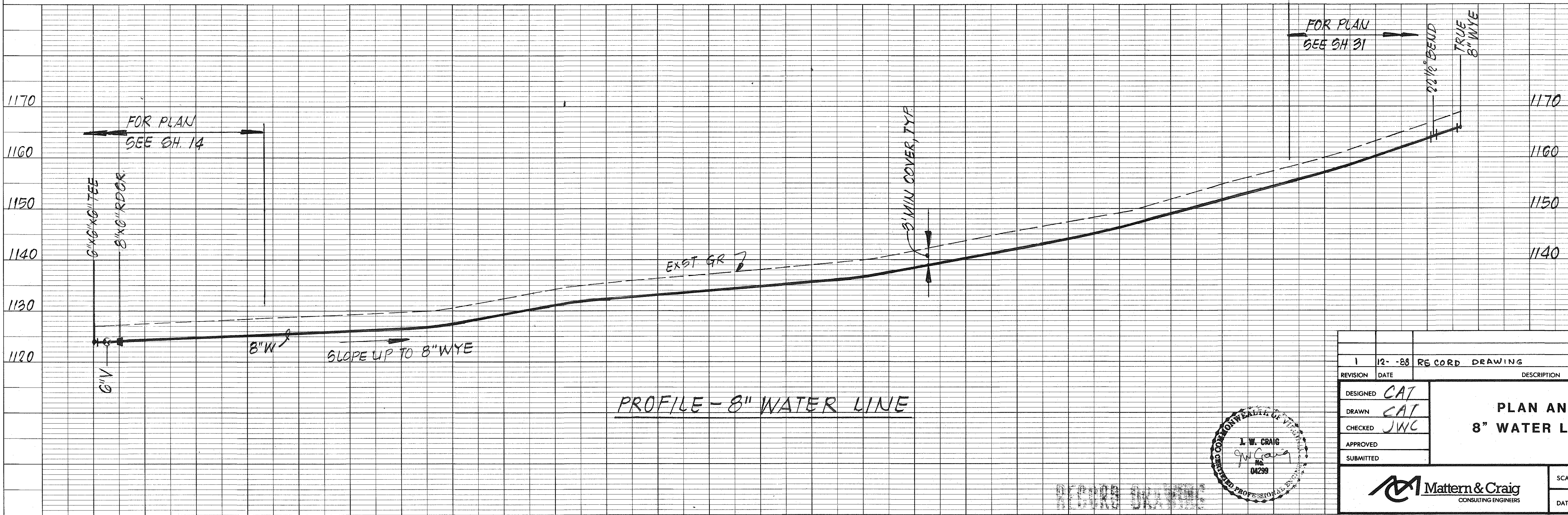
PLAN AND PROFILE		SCALE: AS NOTED	COMM. NO. 491
STA 10+80 TO STA 14+28 R Z		DATE: AUG 86	SHEET 36

PLAN	SURVEYED	BY	DATE
NOTE BOOK NO.	PLOTTED		
	CHECKED		
	RT. OF WAY CHECKED		



SCALE. HORZ. 1" = 30'
VERT. 1" = 10'

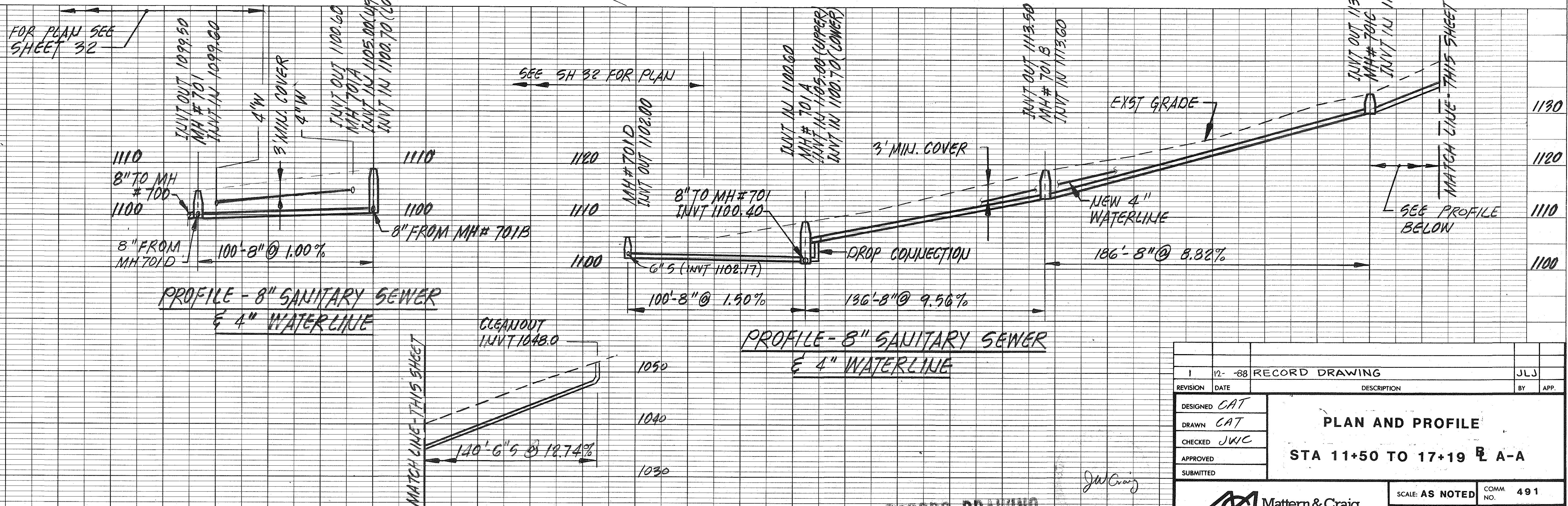
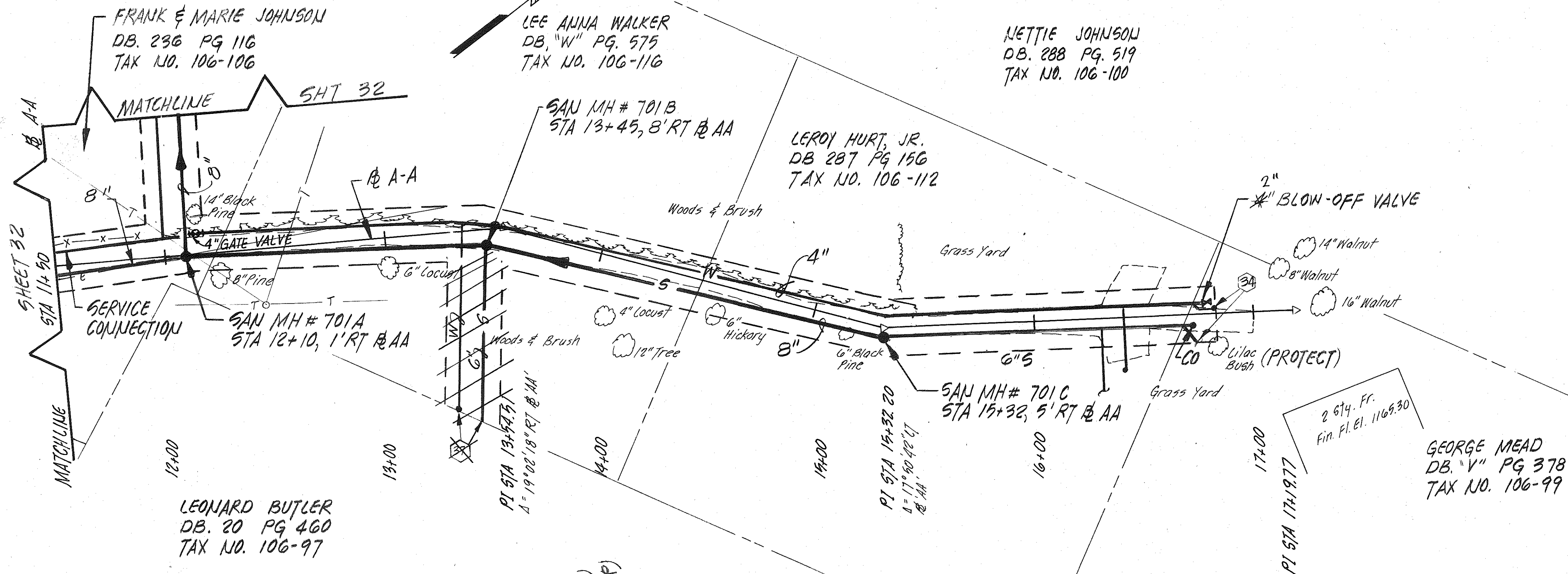
PROFILE	SURVEYED	BY	DATE
NOTE BOOK NO.	PLOTTED		
	CHECKED		
	STRUCTURE NOTATIONS OHVD		



DESIGNED	CAT	PLAN AND PROFILE 8" WATER LINE TO TANK
DRAWN	CAT	
CHECKED	JWC	
APPROVED		
SUBMITTED		
Mattern & Craig CONSULTING ENGINEERS		SCALE: AS NOTED DATE: AUG 86
		COMM. NO. 491 SHEET 37

PLAN	DATE	BY
SURVEYED		
DESIGNED		
ALIGNMENT CHECKED		
RT OF WAY CHECKED		
NOTE BOOK NO.		

PROFILE	DATE	BY
SURVEYED		
GRADES CHECKED		
S.M. NOTED		
STATIONING NOTATIONS CHKO		
NOTE BOOK NO.		



1	12-88	RECORD DRAWING	JLJ
REVISION	DATE	DESCRIPTION	BY APP.
DESIGNED	CAT	PLAN AND PROFILE STA 11+50 TO 17+19 E A-A	SCALE: AS NOTED DATE: AUG 86 SHEET 38
DRAWN	CAT		
CHECKED	JWC		
APPROVED			
SUBMITTED			
			COMM. NO. 491 DATE: AUG 86 SHEET 38