



GEORGE M. STOCK E-25116
Civil Engineer

**STOCK & ASSOCIATES
CONSULTING ENGINEERS, INC.**
257 CHESTERFIELD BUSINESS PARKWAY
ST. LOUIS, MO. 63005
PH. (636) 530-9100
FAX (636) 530-9130
e-mail: general@stocksaac.com

- Architect: **Forum Studio Incorporated**
- Structural Engineer: **Alper Audi**
- Fire Protection Engineer: **Bi-State Fire Protection**
- Plumbing Engineer: **G & W Engineering**
- Mechanical Engineer: **C & R Mechanical**
- Electrical Engineer: **PayneCrest Electric**
- Communications: **Kaemmerlen Comm. Co.**
- Food Service Consultant: **The Geiger Group**



CLAYCO CONSTRUCTION COMPANY
2199 Innerbelt Business Center Dr.
St. Louis, MO 63114
Ph 314.429.5100 Fx 314.429.3165



TRISTAR BUSINESS COMMUNITIES
13397 Lakefront Drive
St. Louis, MO. 63045
Ph 314.291.0814

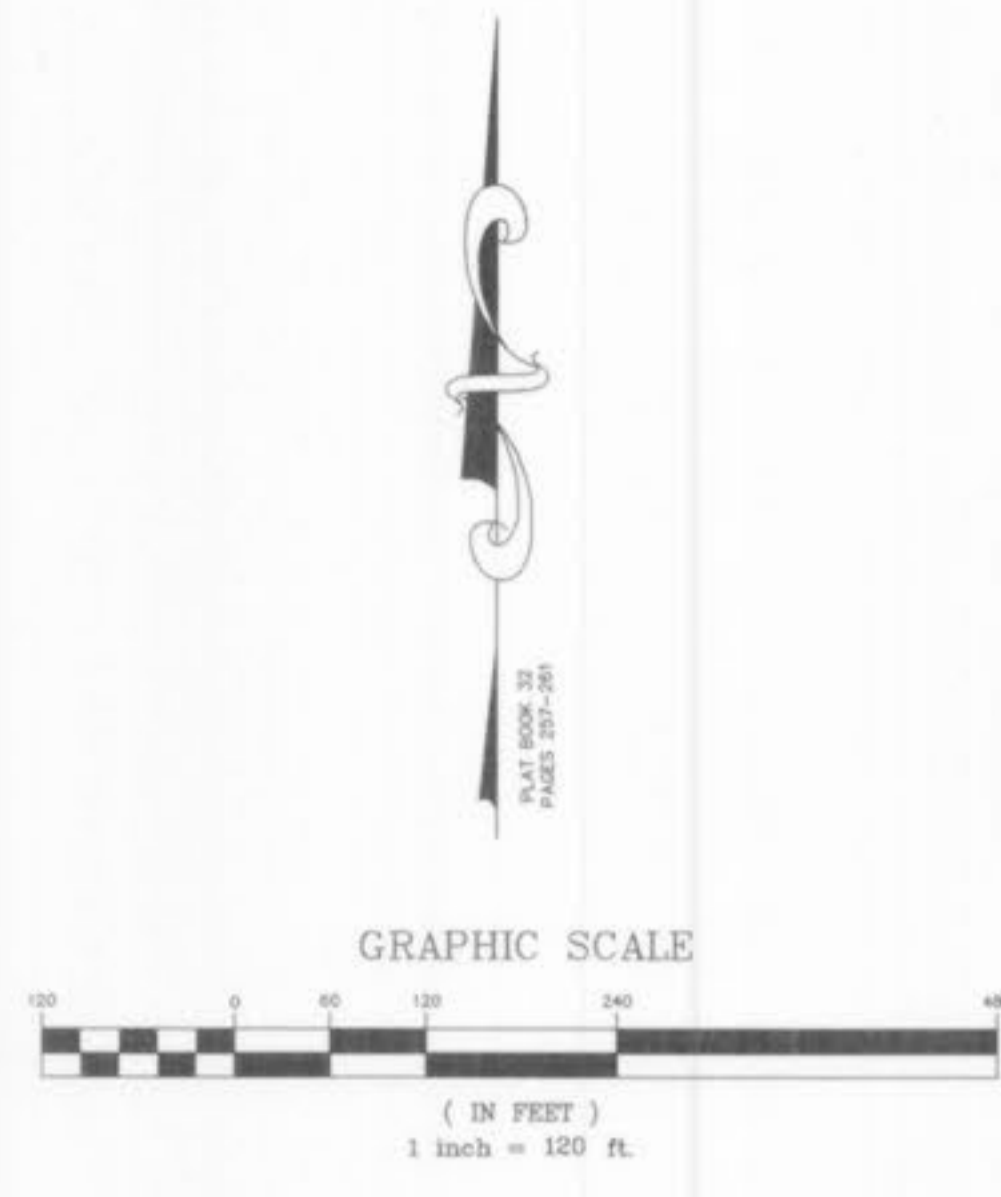
citimortgage
Progress Point O'Fallon, MO

Rev. No.	Description	Date
01-07-02	PROGRESS SET 1	01-07-02
01-18-02	FOR BID/PERMIT PKG (INFORMATION ONLY)	01-18-02
01-31-02	ISSUE	01-31-02
03-15-02	PROGRESS SET 3	03-15-02
04-16-02	CITY COMMENTS	04-16-02
04-25-02	CITY COMMENTS	04-25-02
05-13-02	REV. PER LANDSCAPE	05-13-02
05-29-02	PROGRESS SET 4	05-29-02
07-22-02	CONSTRUCTION SET	07-22-02
12-03-02	REVISED PARKING LAYOUT AT WELL	12-03-02
03-12-03	REV. FOR H.C. ACCESSIBILITY	03-12-03
05-24-05	ASBUILTS	05-24-05

Drawing Title
OVERALL SITE PLAN

Drawing No.
C3

Scale	1"=120'
Drawn By	JTR
Checked By	GMS
Client Job No.	1-191-03
Consult Job No.	200-2188-1

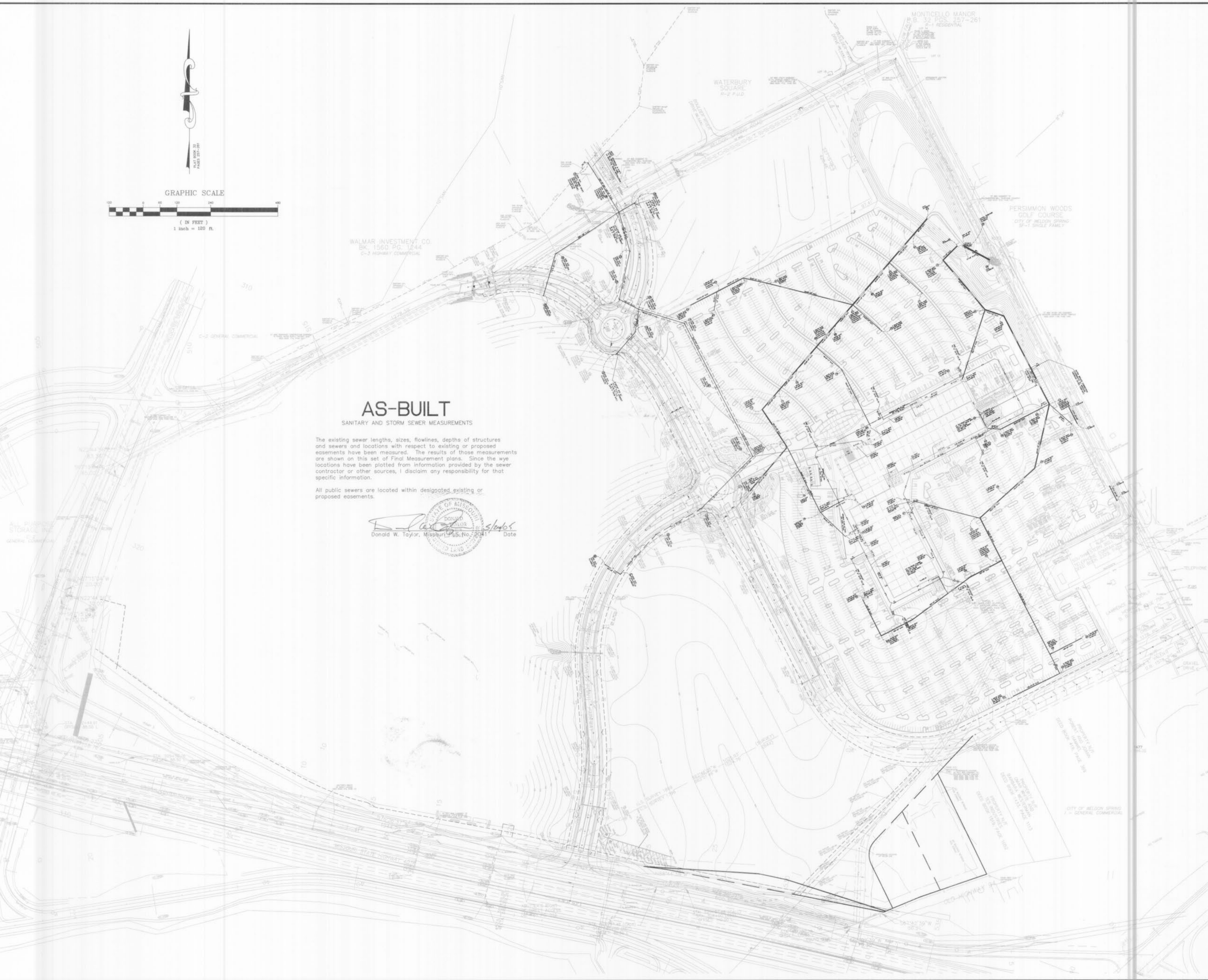


AS-BUILT SANITARY AND STORM SEWER MEASUREMENTS

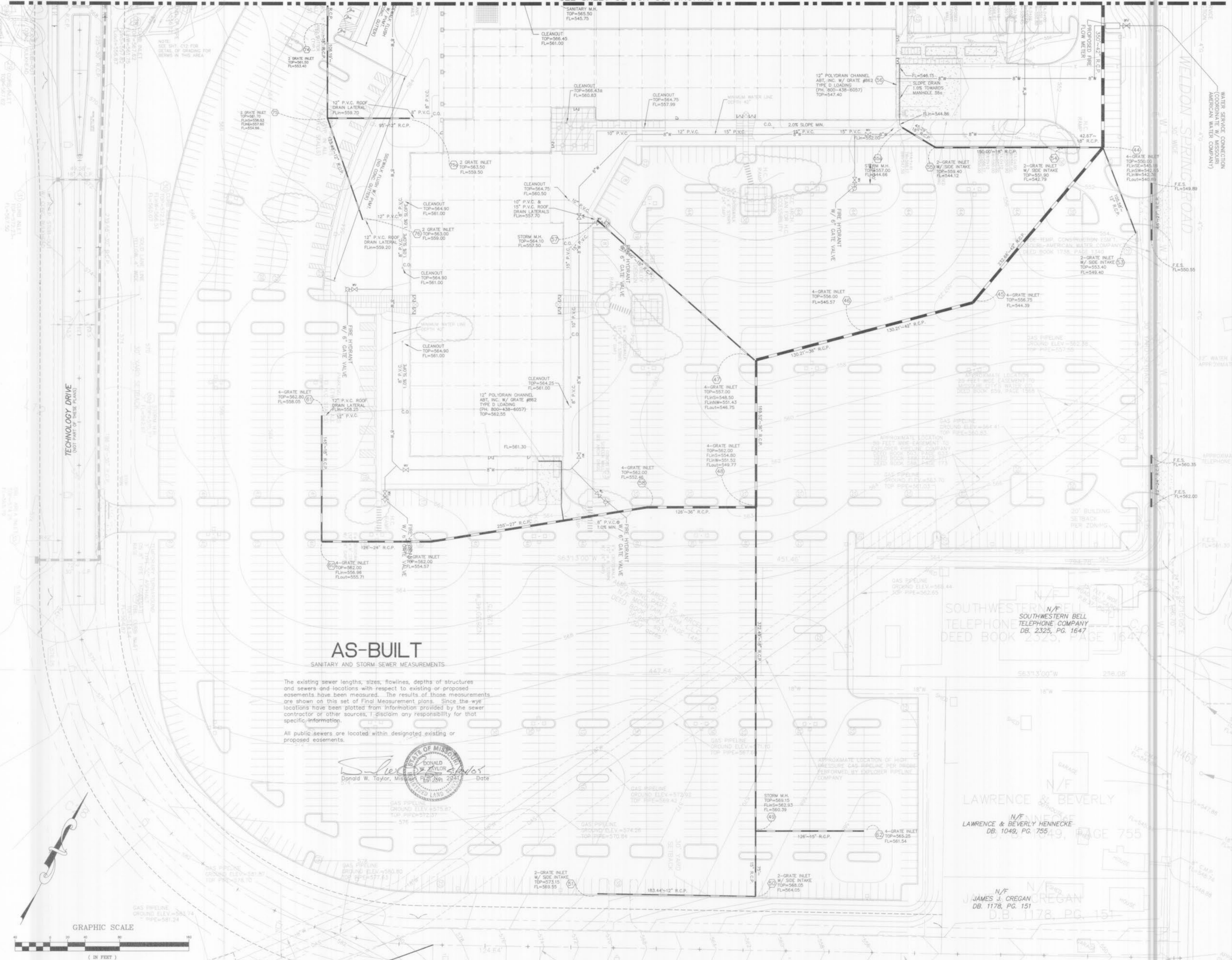
The existing sewer lengths, sizes, flowlines, depths of structures and sewers and locations with respect to existing or proposed easements have been measured. The results of those measurements are shown on this set of Final Measurement plans. Since the wye locations have been plotted from information provided by the sewer contractor or other sources, I disclaim any responsibility for that specific information.

All public sewers are located within designated existing or proposed easements.

Donald W. Taylor
 Donald W. Taylor, Missouri PLS. No. 2021 Date 5/24/05



SEE SHEET C5 FOR CONTINUATION



GEORGE M. STOCK E-25116
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257 CHESTERFIELD BUSINESS PARKWAY
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CLAYCO
CLAYCO CONSTRUCTION COMPANY
2199 Innerbelt Business Center Dr.
St. Louis, MO 63114
Ph 314.429.5100 Fx 314.429.3165

TRISTRAR
BUSINESS COMMUNITIES
TRISTRAR BUSINESS COMMUNITIES
13397 Lakefront Drive
St. Louis, MO. 63045
Ph 314.291.0814

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Progress Point O'Fallon, MO

DRAWING ISSUE / REVISION

Rev. No.	Description	Date
PROGRESS SET 1		01-07-02
FDN. BID/PERMIT PKG (INFORMATION ONLY)		01-16-02
ISSUE		01-31-02
PROGRESS SET 3		03-19-02
CITY COMMENTS		04-18-02
CITY COMMENTS		04-25-02
REV. PER LANDSCAPE		05-13-02
PROGRESS SET 4		05-29-02
CONSTRUCTION SET		07-22-02
REVISED PARKING LAYOUT AT WELL		12-03-02
REV. FOR H.C. ACCESSIBILITY		03-12-03
ASBUILTS		05-24-05

Drawing Title
SITE AND GRADING PLAN

Drawing No.
C4

Scale: 1"=40'
 Desg. By: JTR
 Check By: GMS
 Date: 1-10-03
 Job No.: 200-2180-1

GRAPHIC SCALE



NOTES

- 1.) MASS GRADING OF SITE IS NOT PART OF THIS SCOPE OF WORK...
2.) CONSTRUCTION OF TECHNOLOGY DRIVE AND PROGRESS POINT PARKWAY...

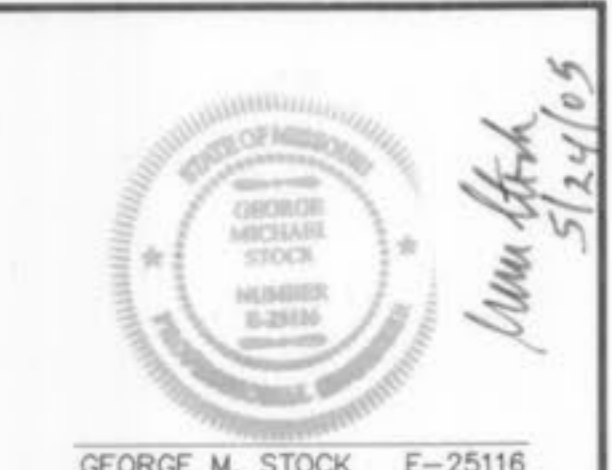
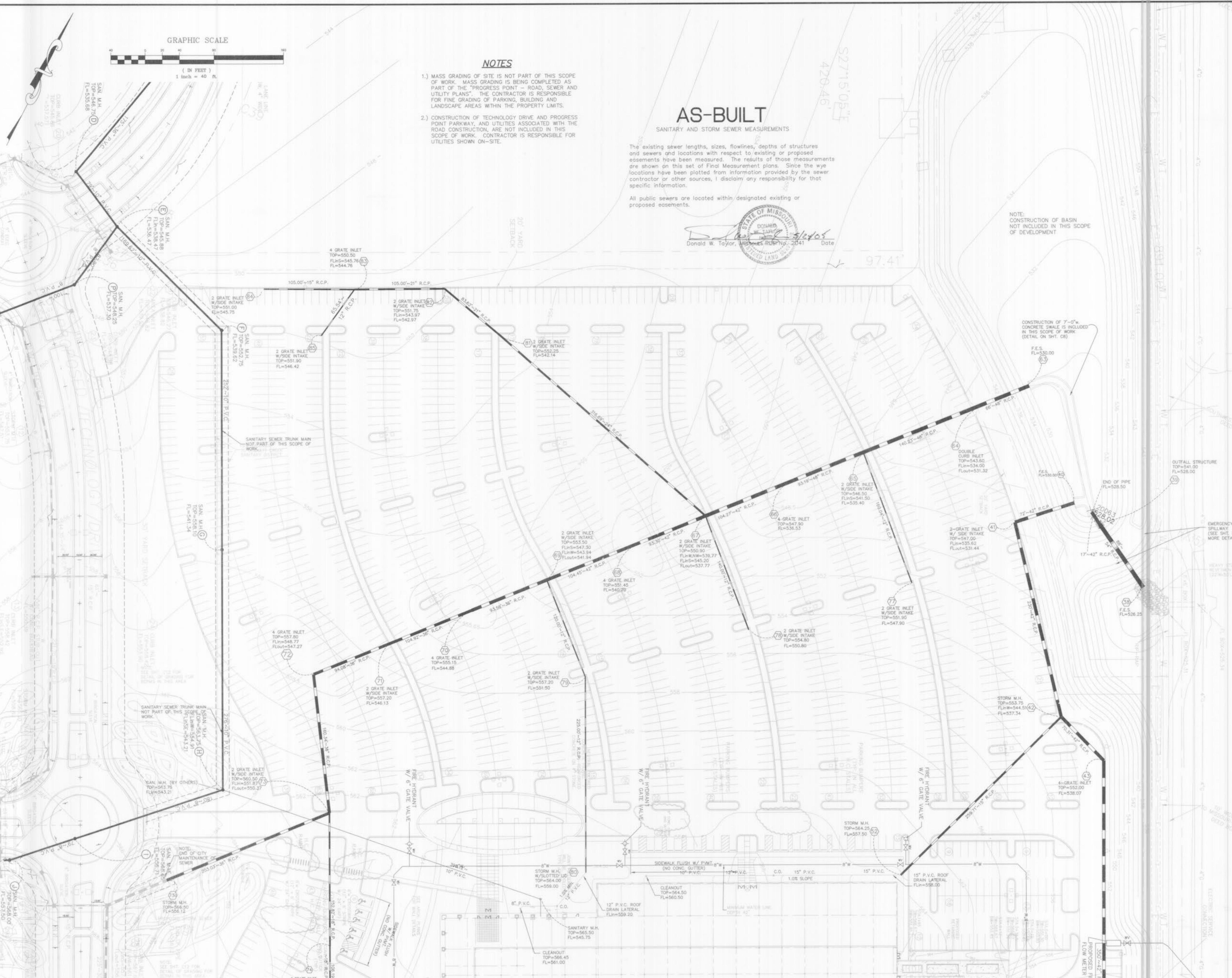
AS-BUILT

SANITARY AND STORM SEWER MEASUREMENTS

The existing sewer lengths, sizes, flowlines, depths of structures and sewers and locations with respect to existing or proposed easements have been measured...

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Professional Engineer Seal for Donald W. Taylor, Missouri License No. 2041

NOTE: CONSTRUCTION OF BASIN NOT INCLUDED IN THIS SCOPE OF DEVELOPMENT



GEORGE M. STOCK E-25116
Stock & Associates Consulting Engineers, Inc.
257 CHESTERFIELD BUSINESS PARKWAY
ST. LOUIS, MO. 63005

- Forum Studio Incorporated
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CLAYCO
CLAYCO CONSTRUCTION COMPANY
2199 Innerbelt Business Center Dr.
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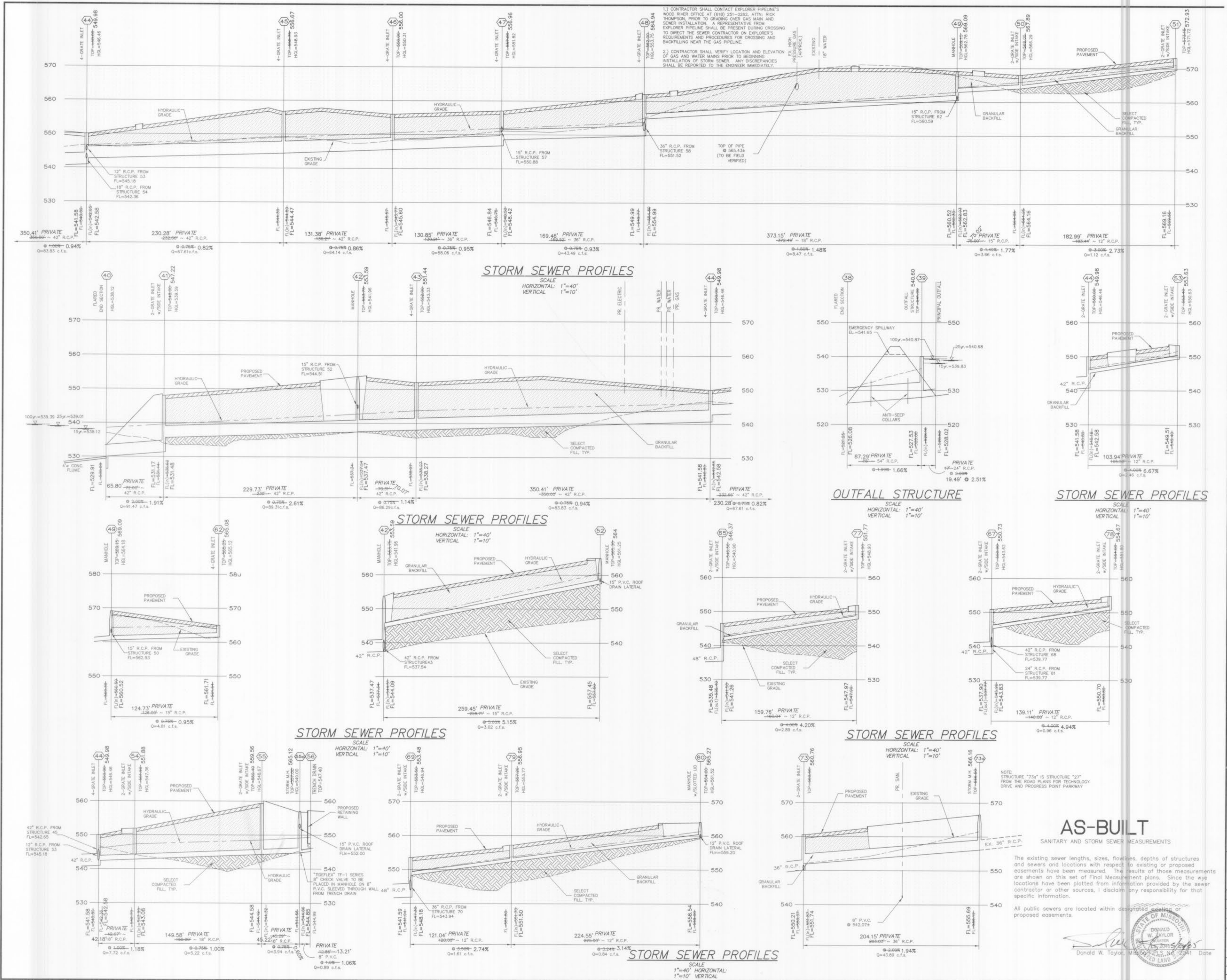
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TRISTAR BUSINESS COMMUNITIES
13397 Lakefront Drive
St. Louis, MO. 63045

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Progress Point O'Fallon, MO

Table with 3 columns: Rev. No., Description, Date. Contains revision history for Progress Set 1 through 4.

Site and Grading Plan
C5
Scale: 1"=40'
Prepared by: JTR, Checked by: GMS, Date: 1-10-03

SEE SHEET C4 FOR CONTINUATION



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CLAYCO
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 St. Louis, MO 63114
 Ph 314.429.5100 Fx 314.429.3165

TRISTAR
 BUSINESS COMMUNITIES
 TRISTAR BUSINESS COMMUNITIES
 13397 Lakefront Drive
 St. Louis, MO 63045
 Ph 314.291.0814

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3	ISSUE	01-31-02
4	PROGRESS SET 3	03-15-02
5	CITY COMMENTS	04-18-02
6	QTY COMMENTS	04-25-02
7	REV. PER LANDSCAPE	05-13-02
8	PROGRESS SET 4	05-29-02
9	CONSTRUCTION SET	07-22-02
10	REVISED PARKING LAYOUT AT WELL	12-03-02
11	REV. FOR H.C. ACCESSIBILITY	03-12-03
12	ASBUILTS	05-24-05

Drawing Title
STORM AND SANITARY SEWER PROFILES
 Drawing No.
C6
 Scale 1"=40'
 Desig By JTR
 Check By GMS
 Date

NOTE:
 STRUCTURE "73a" IS STRUCTURE "27"
 FROM THE ROAD PLANS FOR TECHNOLOGY
 DRIVE AND PROGRESS POINT PARKWAY

AS-BUILT
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Donald W. Taylor, Missouri Professional Engineer, No. 2241
 State of Missouri Seal



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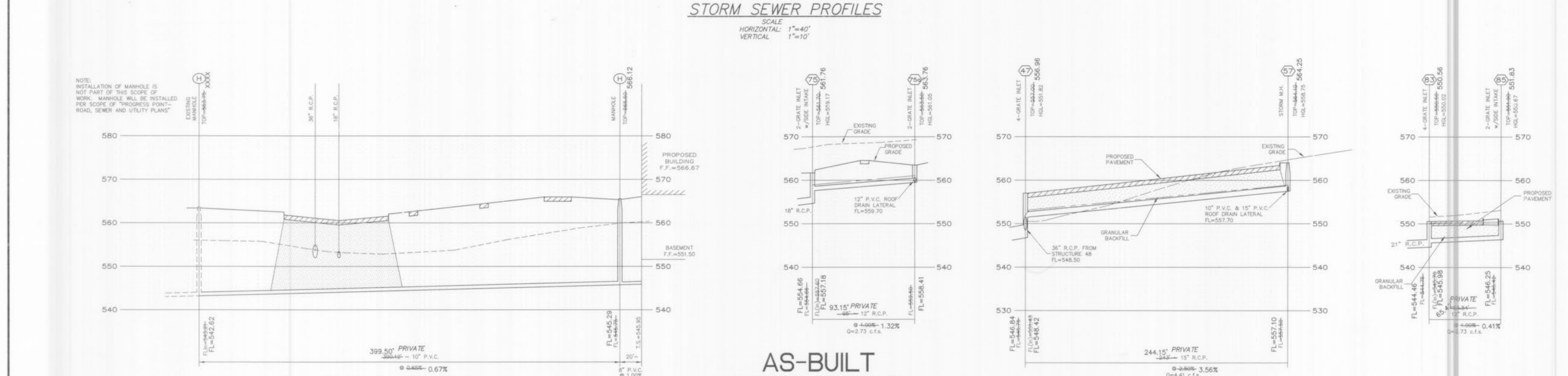
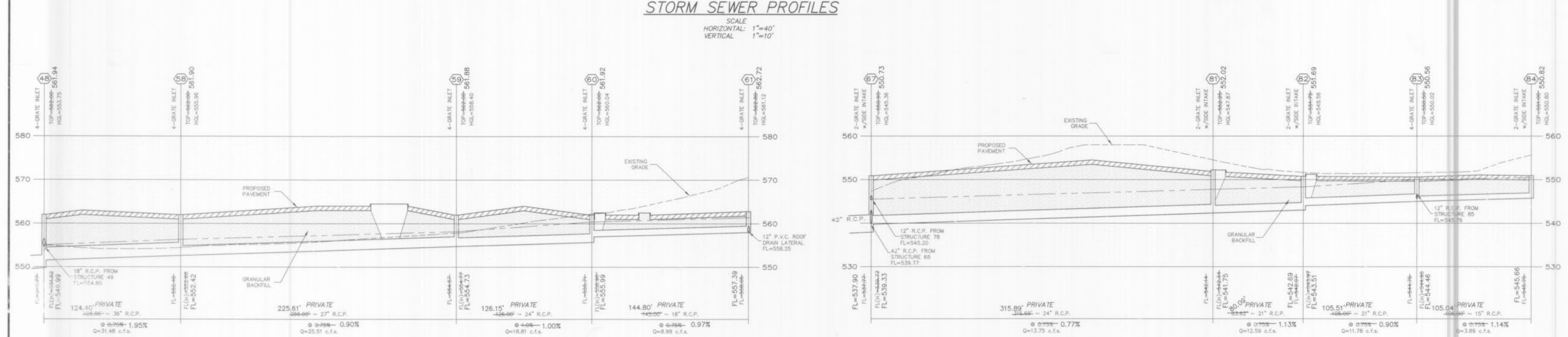
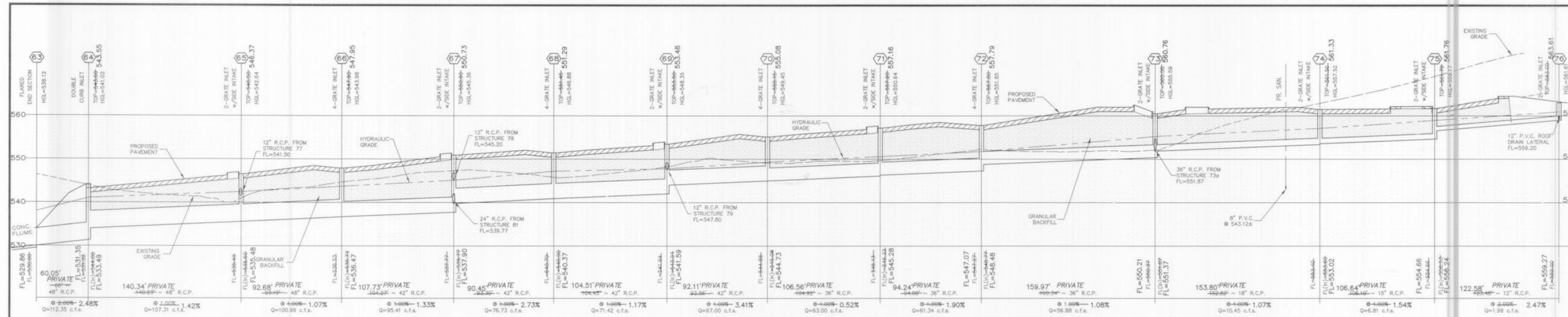


TRISTAR BUSINESS COMMUNITIES
 13397 Lakefront Drive
 St. Louis, MO 63045
 Ph 314.291.0814

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04-18-02	CITY COMMENTS	04-18-02
04-25-02	CITY COMMENTS	04-25-02
05-13-02	REV. PER LANDSCAPE	05-13-02
05-29-02	PROGRESS SET 4	05-29-02
07-22-02	CONSTRUCTION SET	07-22-02
12-03-02	REVISED PARKING LAYOUT AT WELL	12-03-02
03-12-03	REV. FOR H.C. ACCESSIBILITY	03-12-03
05-24-03	ASBUILTS	05-24-03

Drawing Title
STORM AND SANITARY SEWER PROFILES
 Drawing No.
C7
 Scale
 1"=40'
 Drawn By
 JTR
 Check By
 GMS
 Date
 1-10-03
 Project No.
 200-2100-1



AS-BUILT

SANITARY AND STORM SEWER MEASUREMENTS

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Donald W. Taylor, Missouri Professional Engineer
 License No. 200-2100-1
 Date

STORM SEWER PROFILES

SCALE
 HORIZONTAL: 1"=40'
 VERTICAL: 1"=10'

AS-BUILT

SANITARY AND STORM SEWER MEASUREMENTS

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Donal W. Taylor, P.E., License No. 2041
 State of Missouri
 Professional Engineer
 1000 N. Grand Blvd., Suite 100
 St. Louis, MO 63103

PIPE HYDRAULICS - PARTIAL FLOW CALCULATIONS

check for multiple incoming lines and

check for multiple outgoing lines and

structure number	line reach	inflow elevation	length	slope	pipe size	drainage	coeff	flow	flow vel	hydraulic head	vel head	Q x Vh	friction losses	structure losses		hydraulic elevations		existing HGL	entering HGL	top of structure	freeboard	roughness	pipe capacity
														minor	major	upper	lower						
51	51	508.55	556.86	145	0.0075	18	x	8.96	5.87	5.48	0.54	4.80	1.08	0.00	0.00	559.55	561.12	560.04	561.12	562.80	1.68	0.013	9.13
59	59	554.57	552.66	255	0.0075	24	x	18.81	7.10	7.29	0.78	14.72	0.94	0.00	0.00	557.71	559.34	558.40	559.34	562.00	2.60	0.013	19.59
58	58	552.44	551.52	104	0.0075	18	x	25.51	7.88	8.19	0.92	23.36	1.00	0.45	0.09	554.46	555.46	554.52	555.46	557.00	1.54	0.013	26.88
48	48	549.77	548.50	199	0.0075	36	x	31.48	8.17	9.00	1.04	32.63	0.94	0.39	0.11	550.55	551.49	549.52	550.55	552.00	1.48	0.013	57.76
47	47	546.75	545.77	130	0.0075	36	x	64.14	9.90	10.35	1.25	64.14	0.90	0.47	0.00	552.77	553.39	551.82	552.77	554.00	1.23	0.013	57.88
46	46	545.57	544.59	130	0.0075	42	x	54.05	9.31	10.95	1.35	78.14	0.97	0.54	0.00	549.75	549.90	548.93	549.90	551.00	1.10	0.013	58.02
45	45	544.38	543.40	232	0.0075	42	x	67.61	10.00	12.06	1.52	87.01	0.97	0.40	0.00	547.89	548.50	546.93	547.89	549.00	1.11	0.013	87.52
44	44	543.20	542.22	350	0.0075	42	x	83.30	10.32	12.78	1.65	138.10	2.60	0.53	0.00	545.71	546.32	544.75	545.71	547.00	1.29	0.013	87.24
43	43	538.07	537.34	70	0.0075	42	x	86.29	13.32	12.78	1.65	140.70	0.52	0.07	0.00	543.00	543.52	541.95	543.00	544.50	1.50	0.013	87.28
42	42	537.34	536.62	230	0.0075	42	x	89.31	13.31	12.78	1.65	141.71	0.72	0.07	0.00	540.54	541.06	539.49	540.54	542.00	1.46	0.013	87.54
41	41	531.44	530.60	72	0.0075	42	x	91.47	11.85	12.66	2.18	199.45	1.72	0.76	0.00	538.50	538.84	537.27	538.50	540.00	1.50	0.013	142.68

PIPE BEDDING

(MODIFIED FOR REINFORCED)

PIPE BEDDING

(FOR ALL PIPE EXCEPT REINFORCED CONC. PIPE)

CONCRETE ENCASEMENT DETAIL

(N.E.A.)

MANHOLE BASE PLAN

BASE SECTION

PRECAST MANHOLE

FLARED END SECTION

4 GRATE INLET DETAIL

CONCRETE FLUME IN BASIN

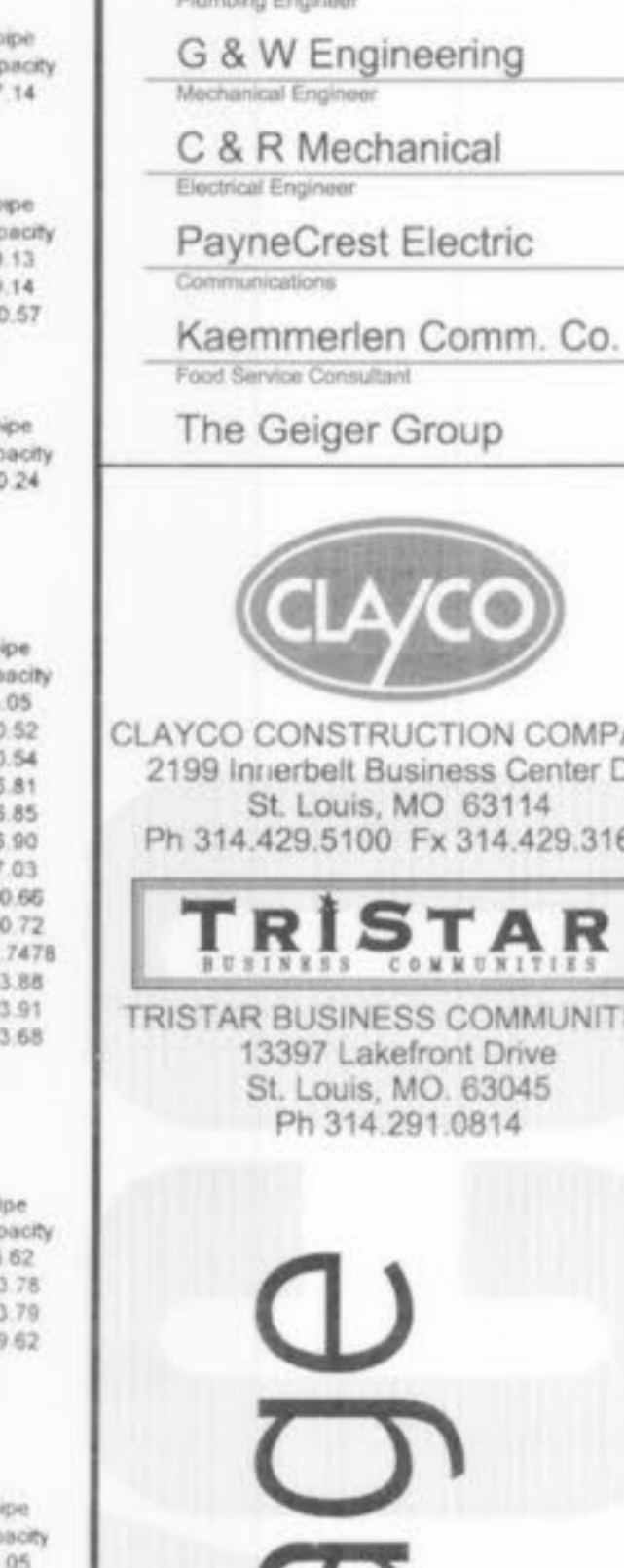
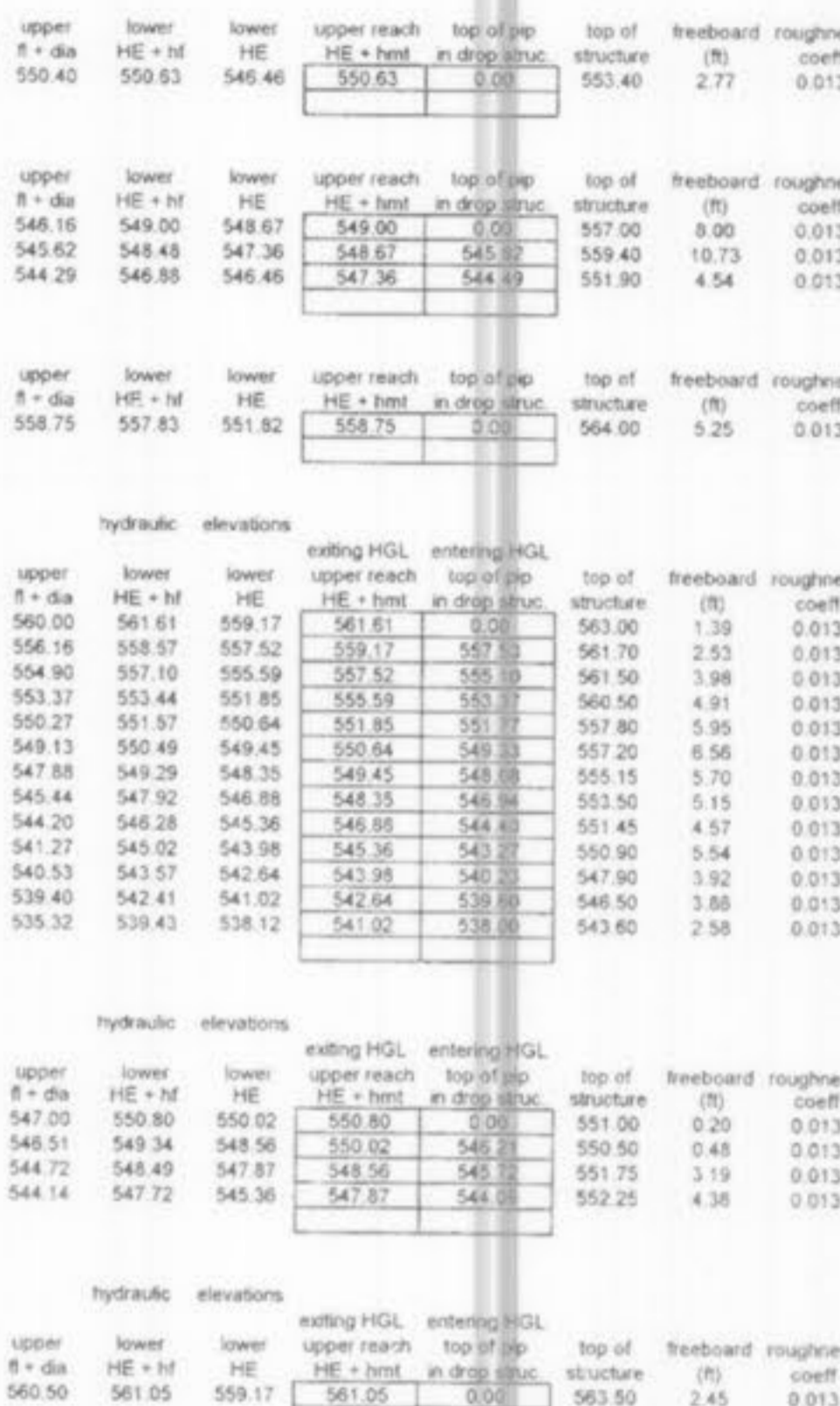
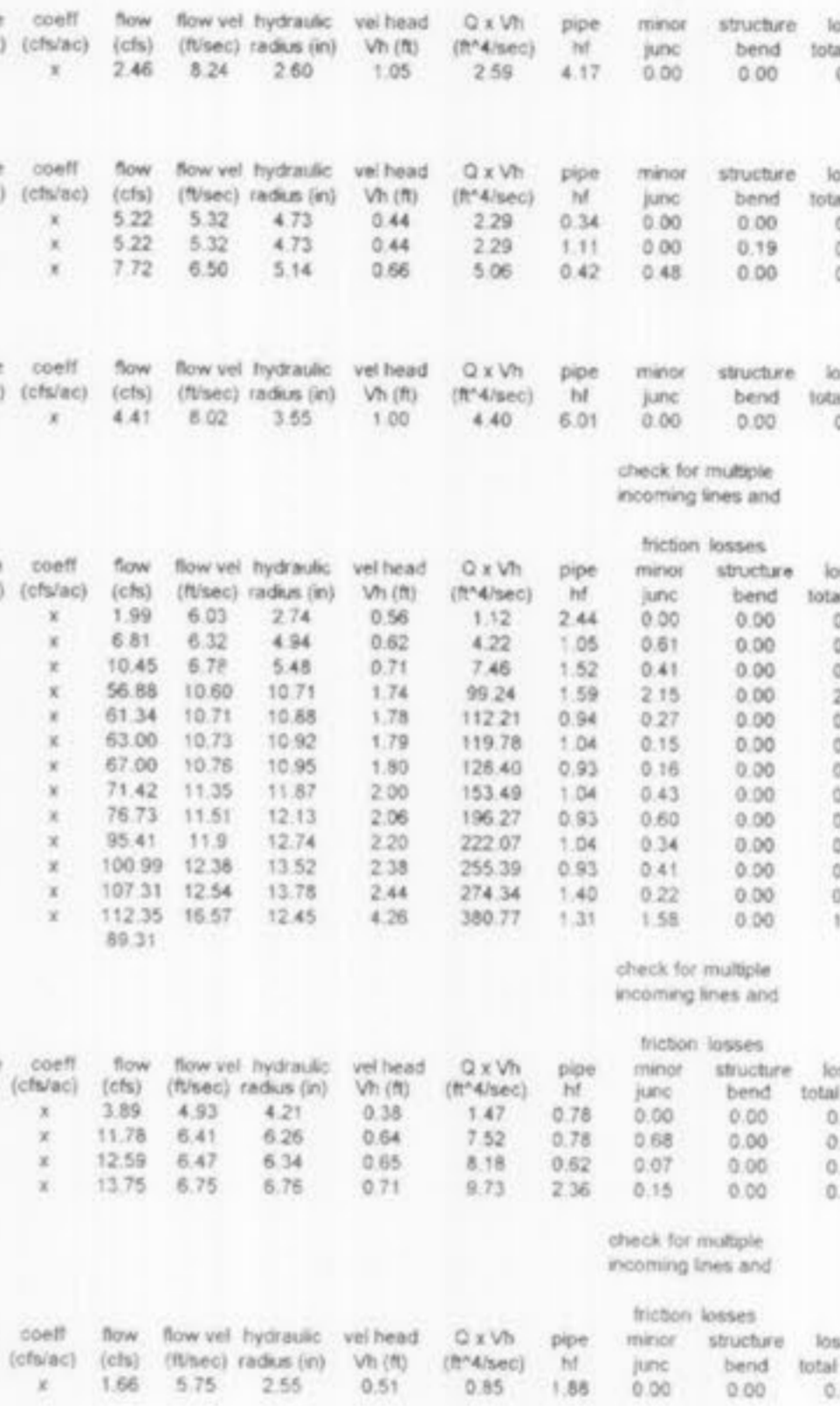
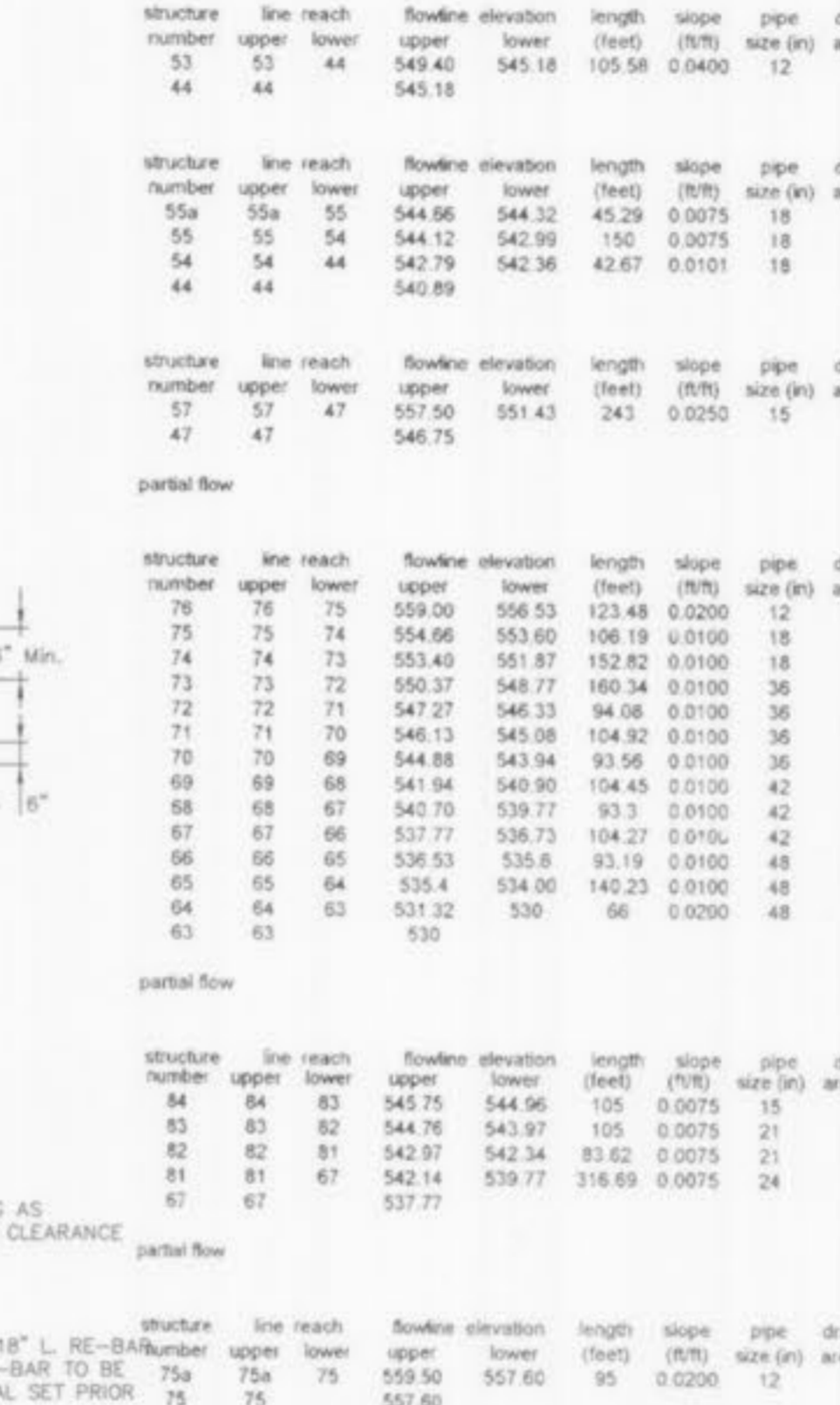
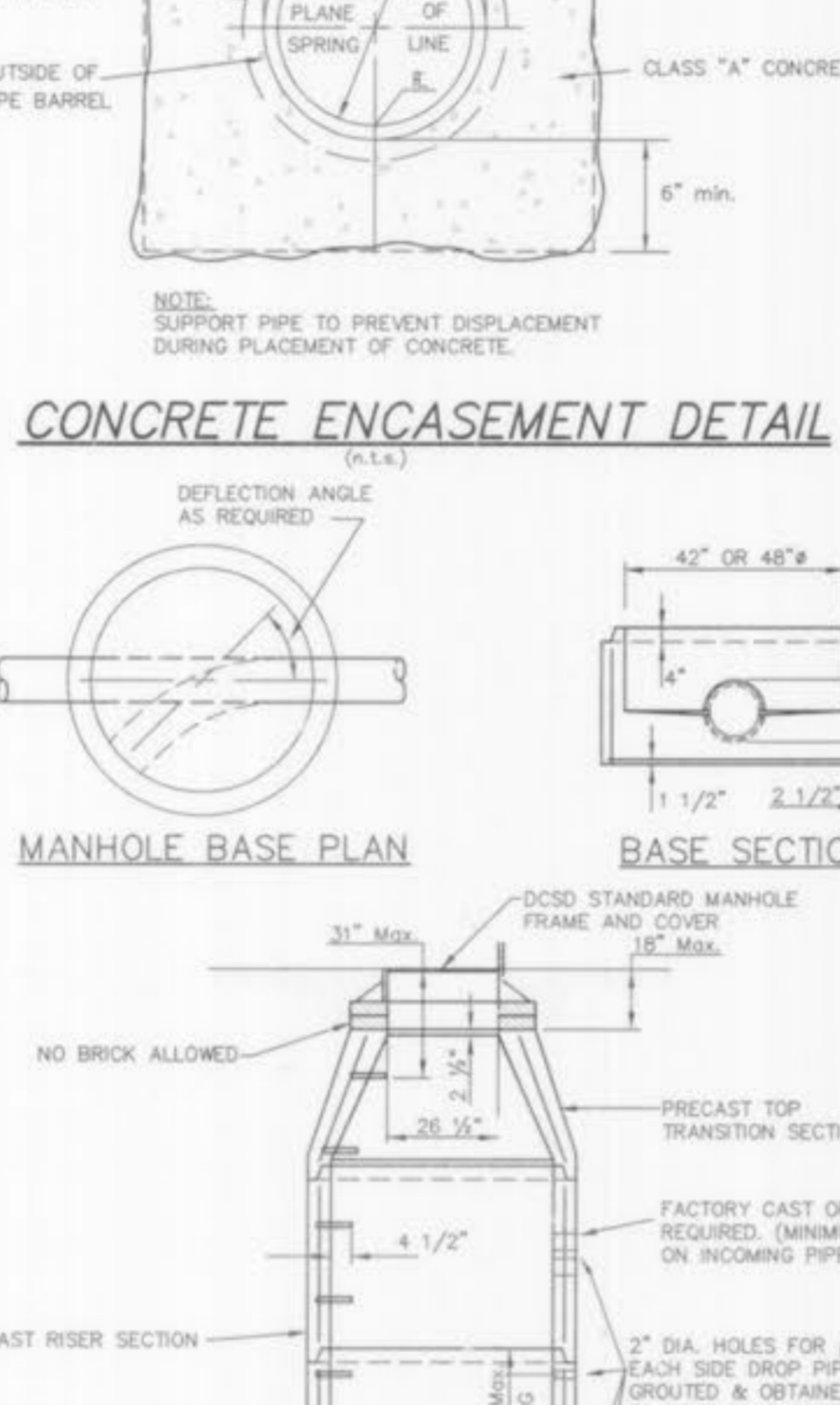
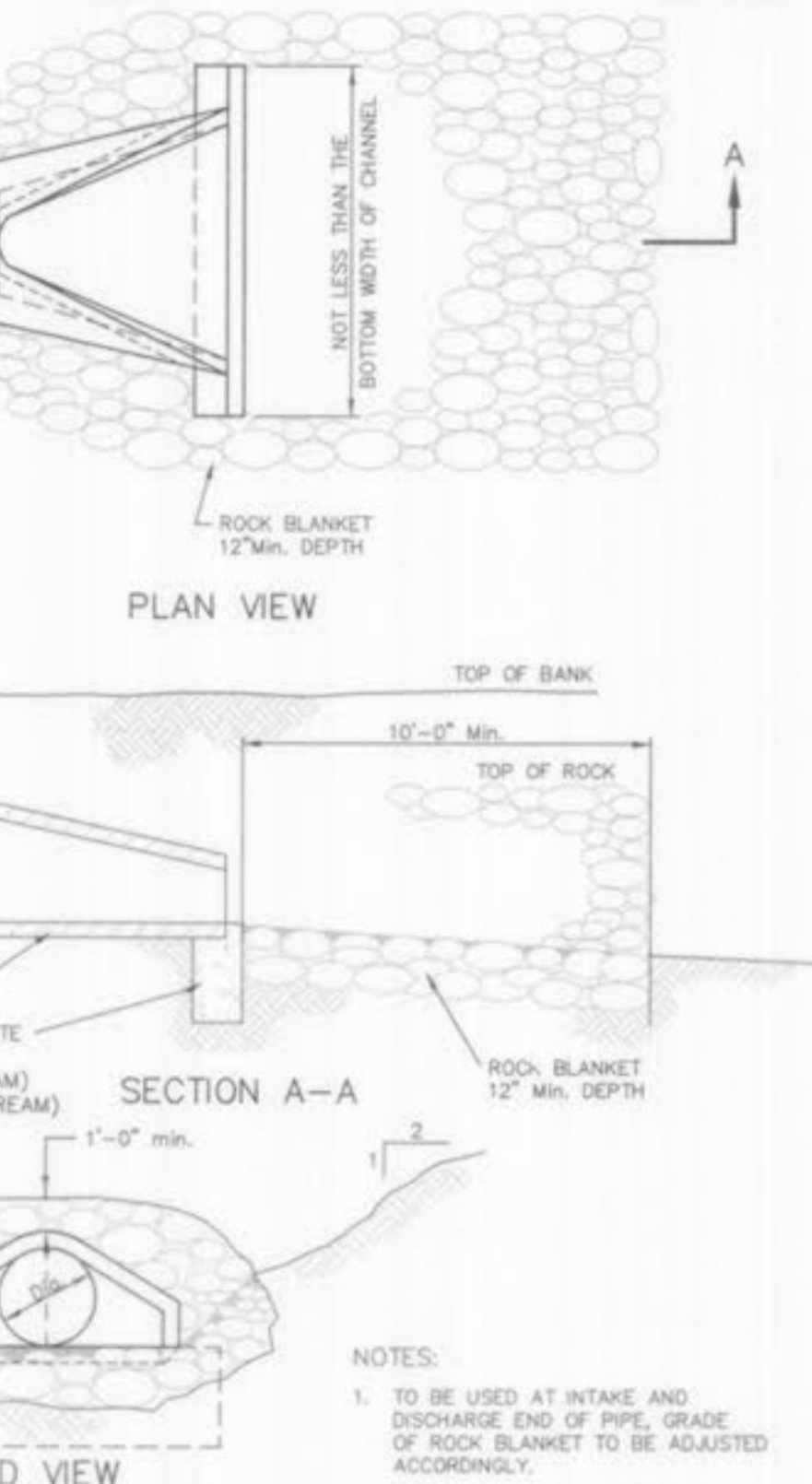
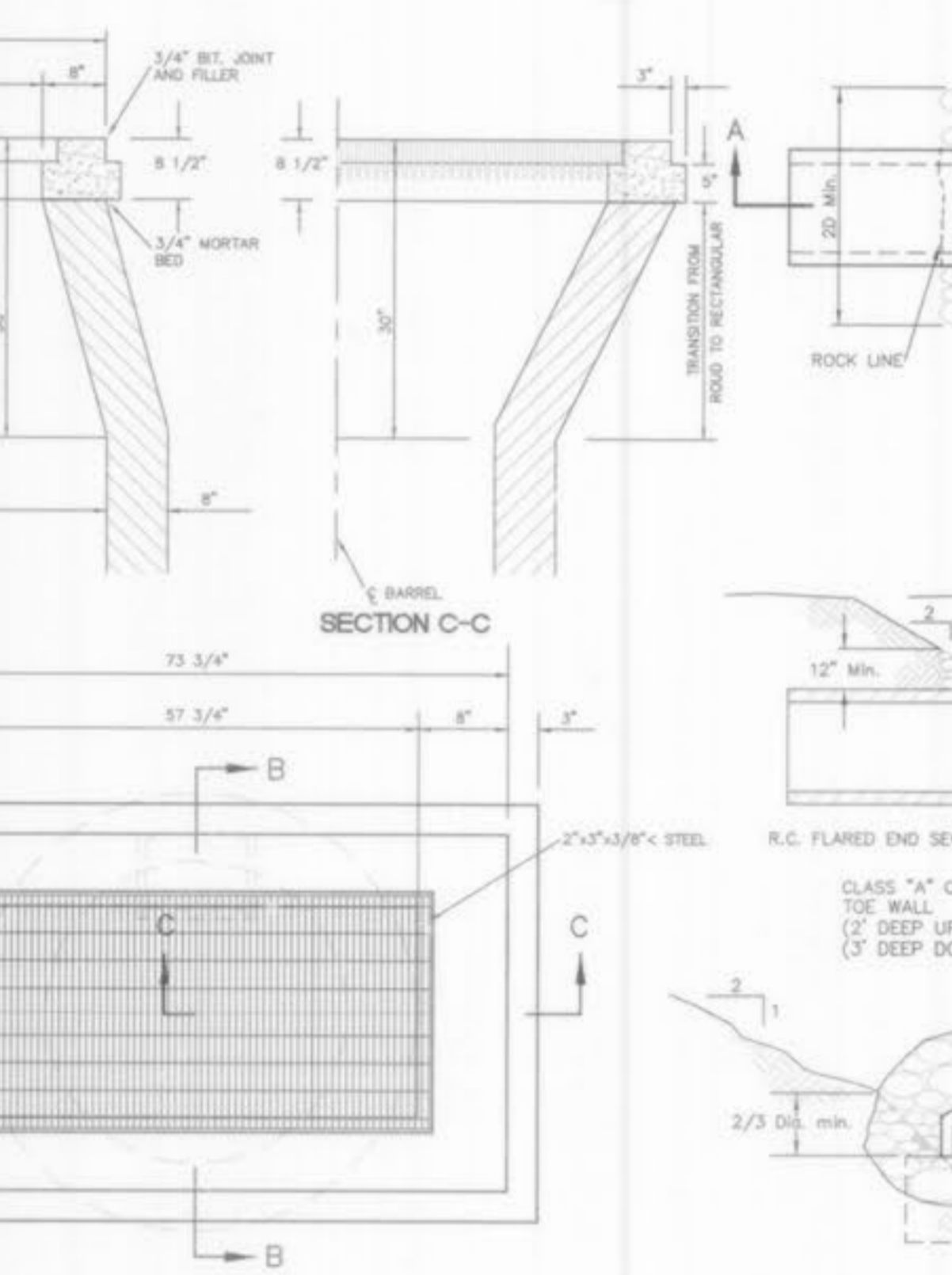
OUTFALL STRUCTURE #39

REINFORCING @ DISCHARGE PIPES

HEAVY/LIGHT STONE REVETMENT LETDOWN DETAIL

STRUCTURE 55A

2 GRATE INLET / SIDE INTAKE DETAIL



FLUME HYDRAULICS

(PIPE OUTFALL AT STRUCTURE #53)

Q (2-year)	= 15 cfs x 0.6751	= 10.13 c.f.s.
N	= 0.013	
S	= 1%	
DEPTH	= 1.01'	
VELOCITY	= 9.96 ft/s.	

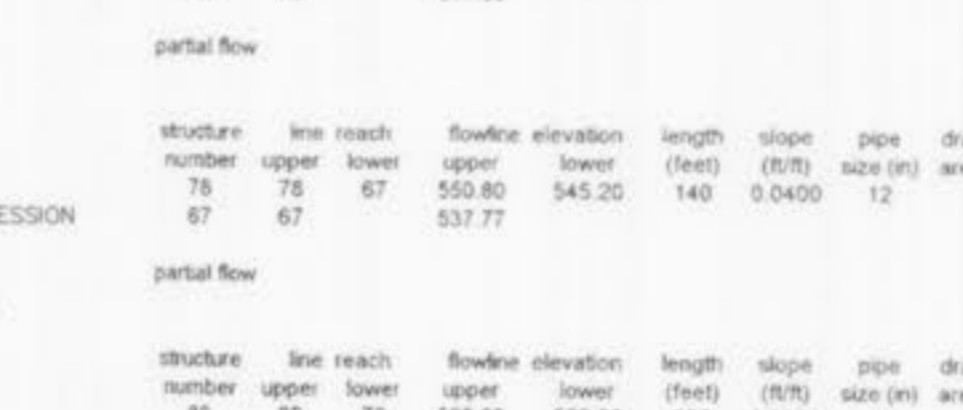
FLUME HYDRAULICS

(COMBINED OUTFALL AT STRUCTURE #40)

Q (2-year)	= 15 cfs x 0.6751	= 10.13 c.f.s.
N	= 0.013	
S	= 1%	
DEPTH	= 1.44'	
VELOCITY	= 12.04 ft/s.	

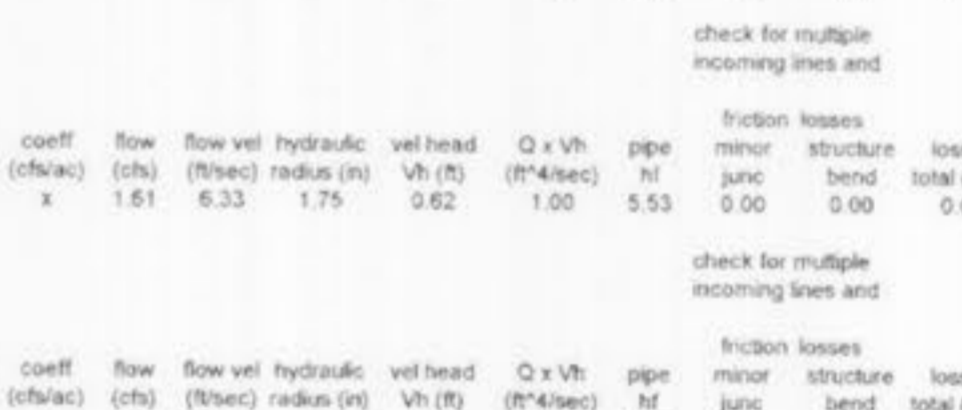
BERM - EMERGENCY SPILLWAY

(SEE DETAIL THIS SHEET)



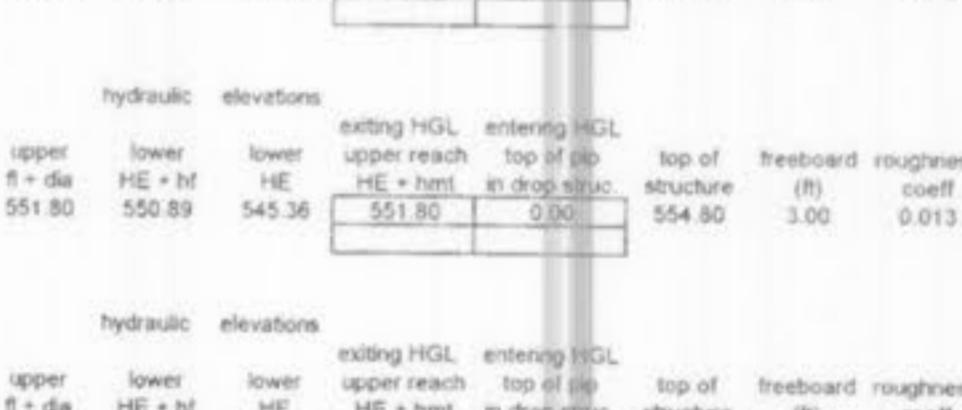
STRUCTURE 55A

PRECAST STRUCTURE (LARGE)



2 GRATE INLET / SIDE INTAKE DETAIL

(N.E.A.)



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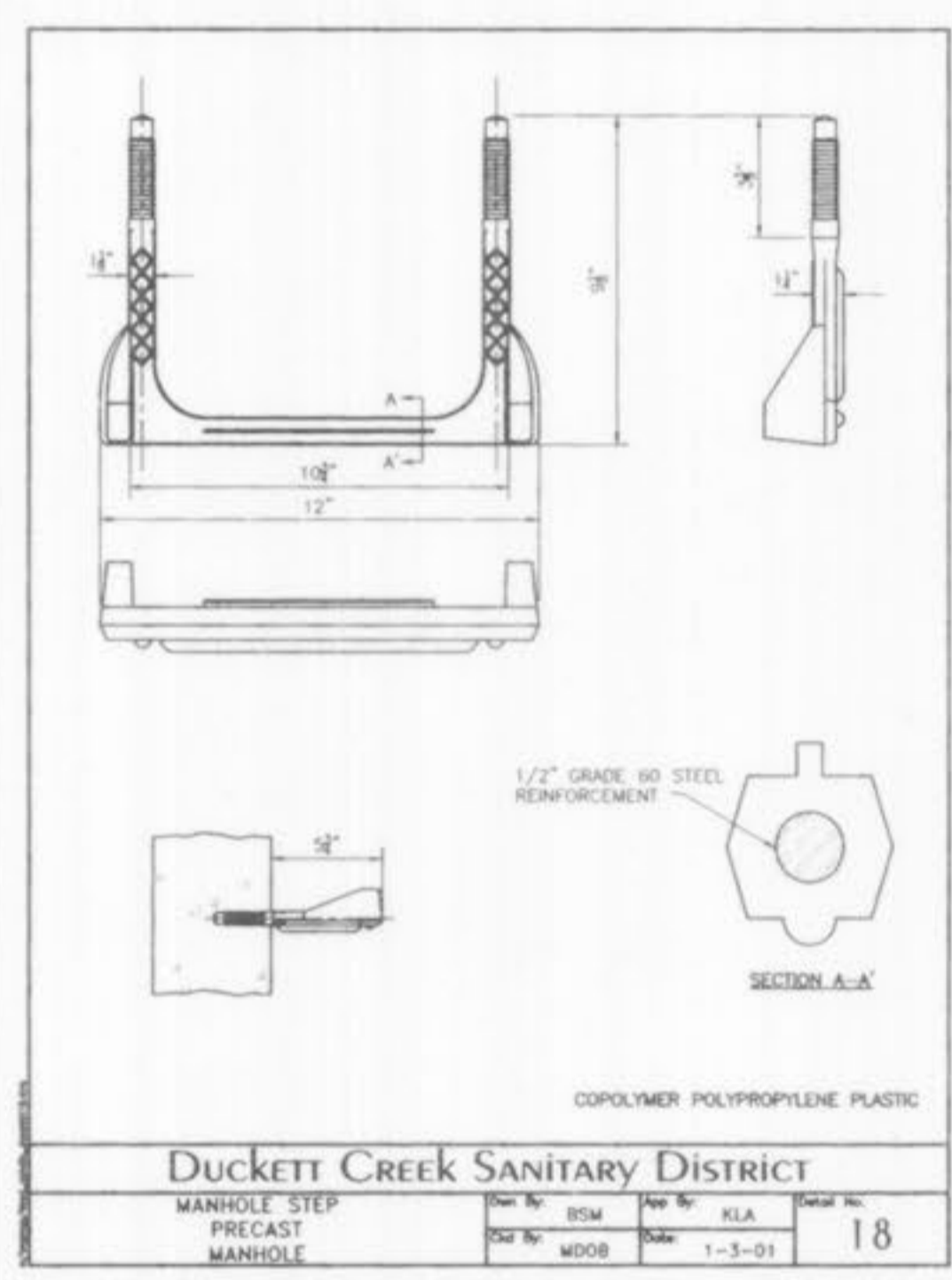
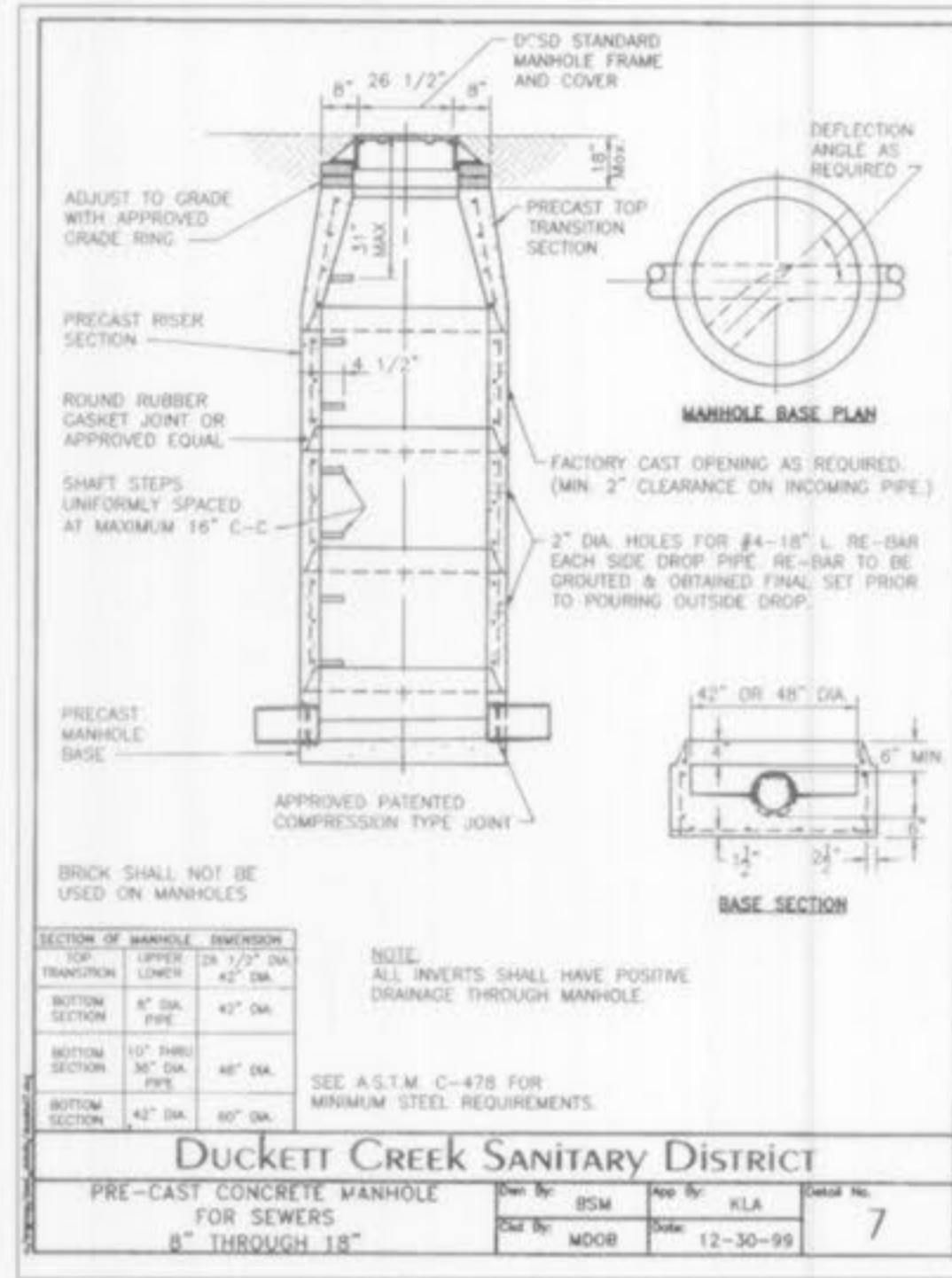
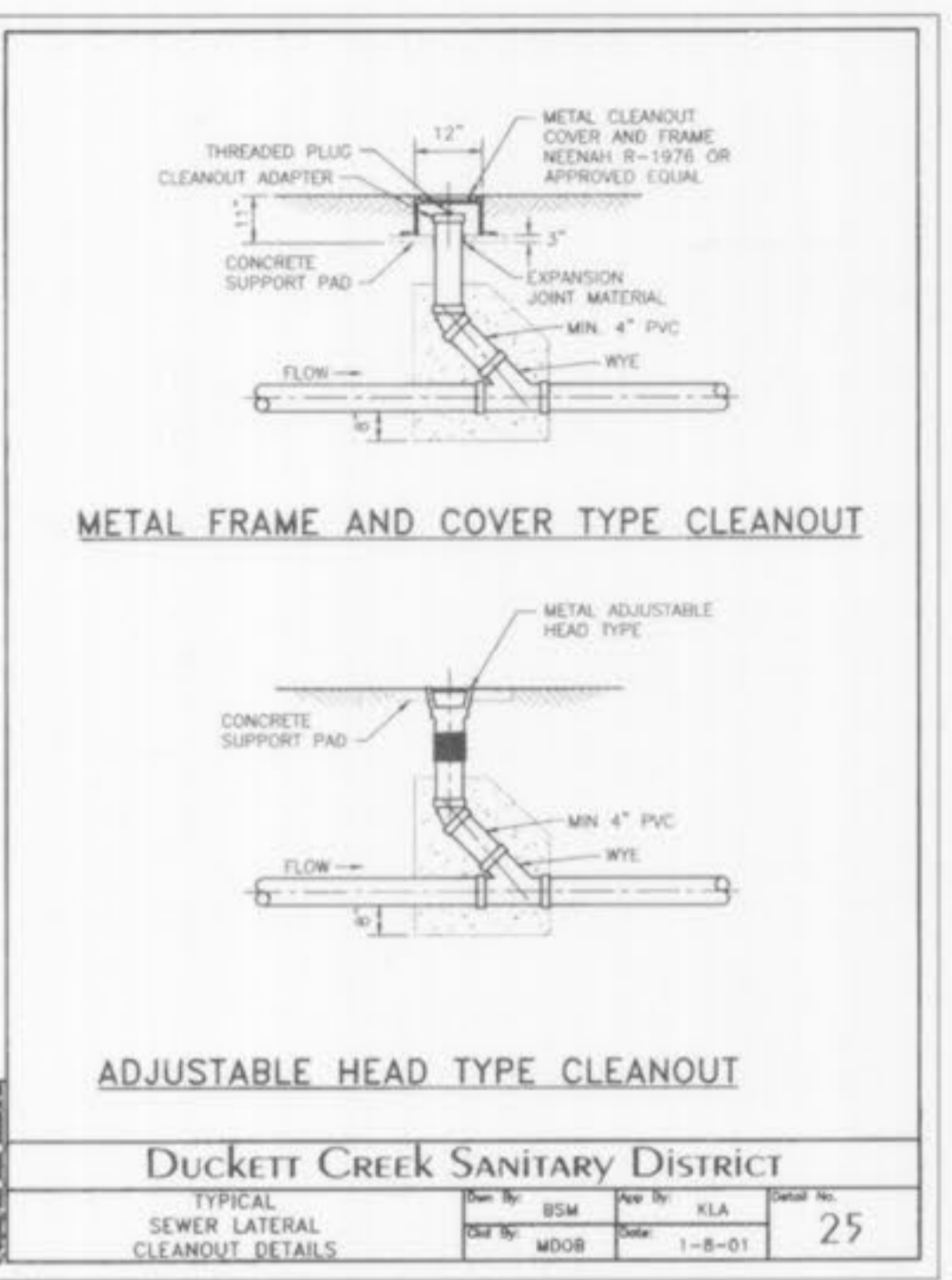
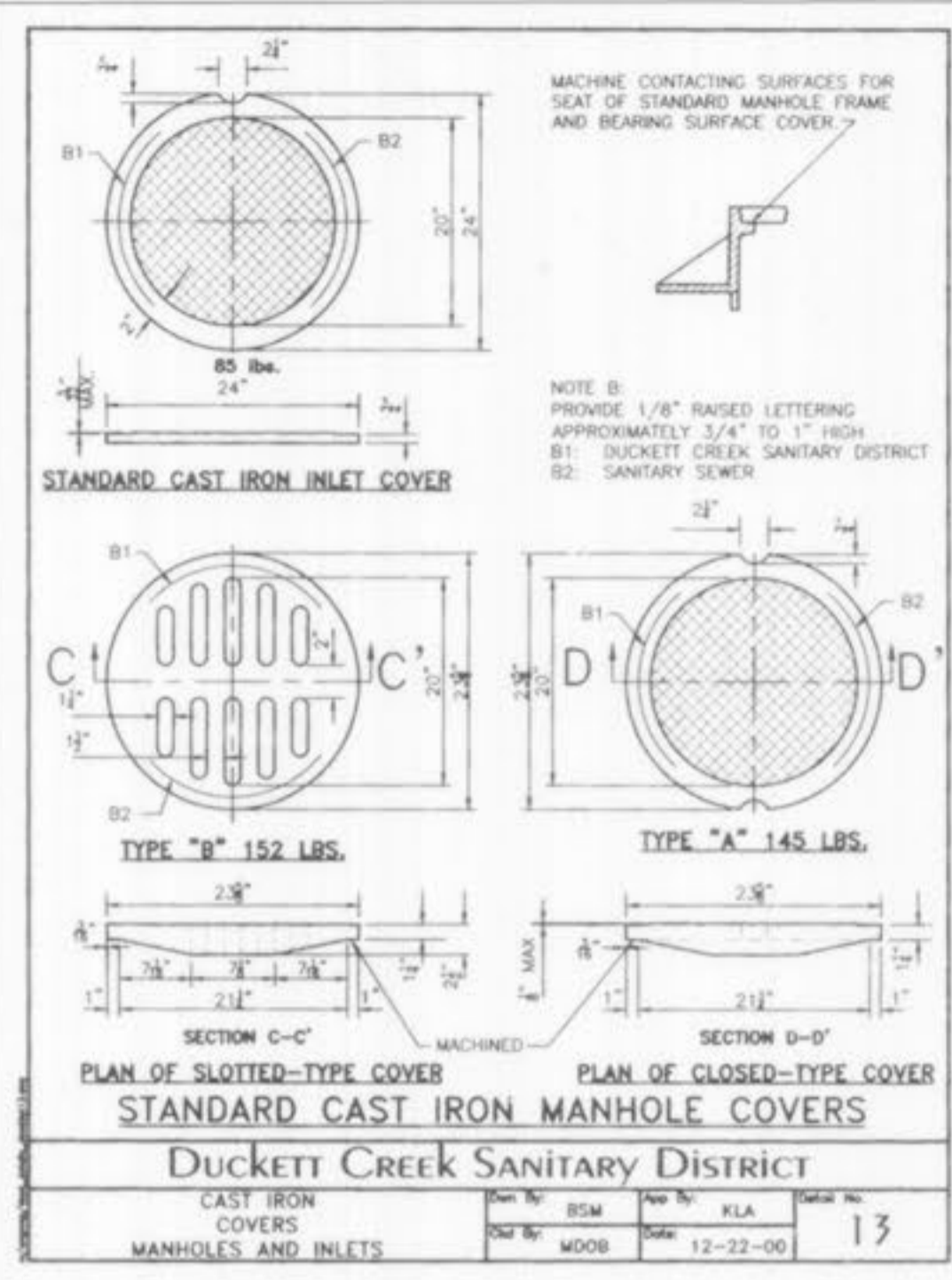
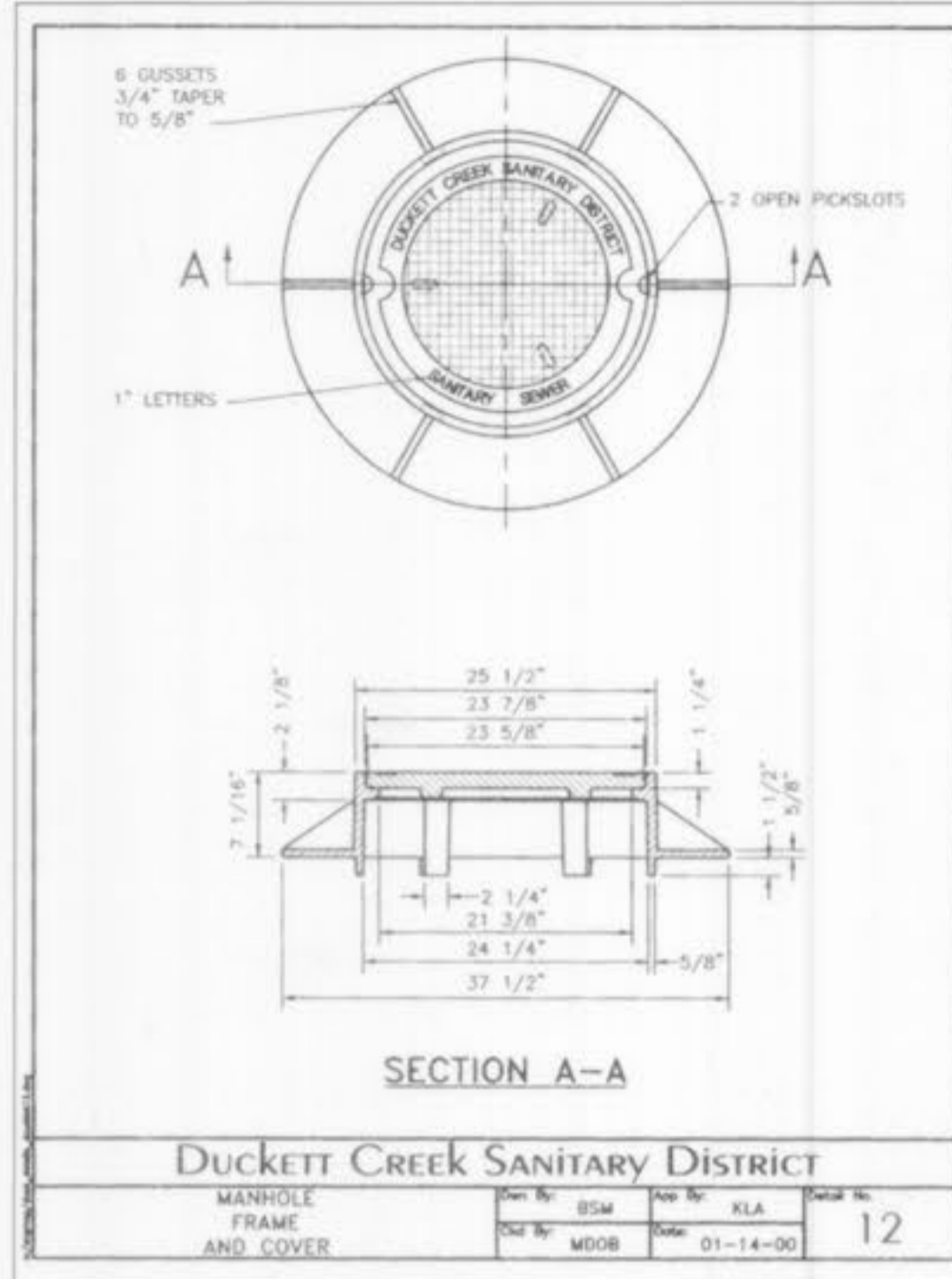
Progress Point O'Fallon, MO

Rev No.	Description	Date
1	PROGRESS SET 1	01-07-02
2	FON BD/PERMIT PKG (INFORMATION ONLY)	01-18-02
3	ISSUE	01-31-02
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11	REV. FOR H.C. ACCESSIBILITY	03-12-03
12	ASBUILTS	05-24-05

Drawing Title: STORM SEWER DETAILS AND HYDRAULIC CALCULATIONS

Scale: 1"=40'

Drawn By: JTR
 Check By: GMS
 Date: 1-10-03



AS-BUILT

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Donald W. 15404, Missouri EDS No. 2041 Date 5/20/05



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10	REVISED PARKING LAYOUT AT WELL	12-03-02
11	REV. FOR H.C. ACCESSIBILITY	03-12-03
12	ASBUILTS	05-24-05

Drawing Title
SANITARY SEWER DETAILS

Drawing No.
C9

Scale 1"=40'

Drawn By JTR Check By GMS
Design No. 1-101-021 Contract Job No. 200-2180-1