

LABOURE' CENTRE

ALL OF LOT 4 OF WILLIAM H. ERKER SUBDIVISION, PLAT BOOK 40 PAGE 150,
IN U.S. SURVEY 1669, TOWNSHIP 46 NORTH, RANGE 3 EAST
CITY OF O'FALLON, ST. CHARLES COUNTY, MISSOURI

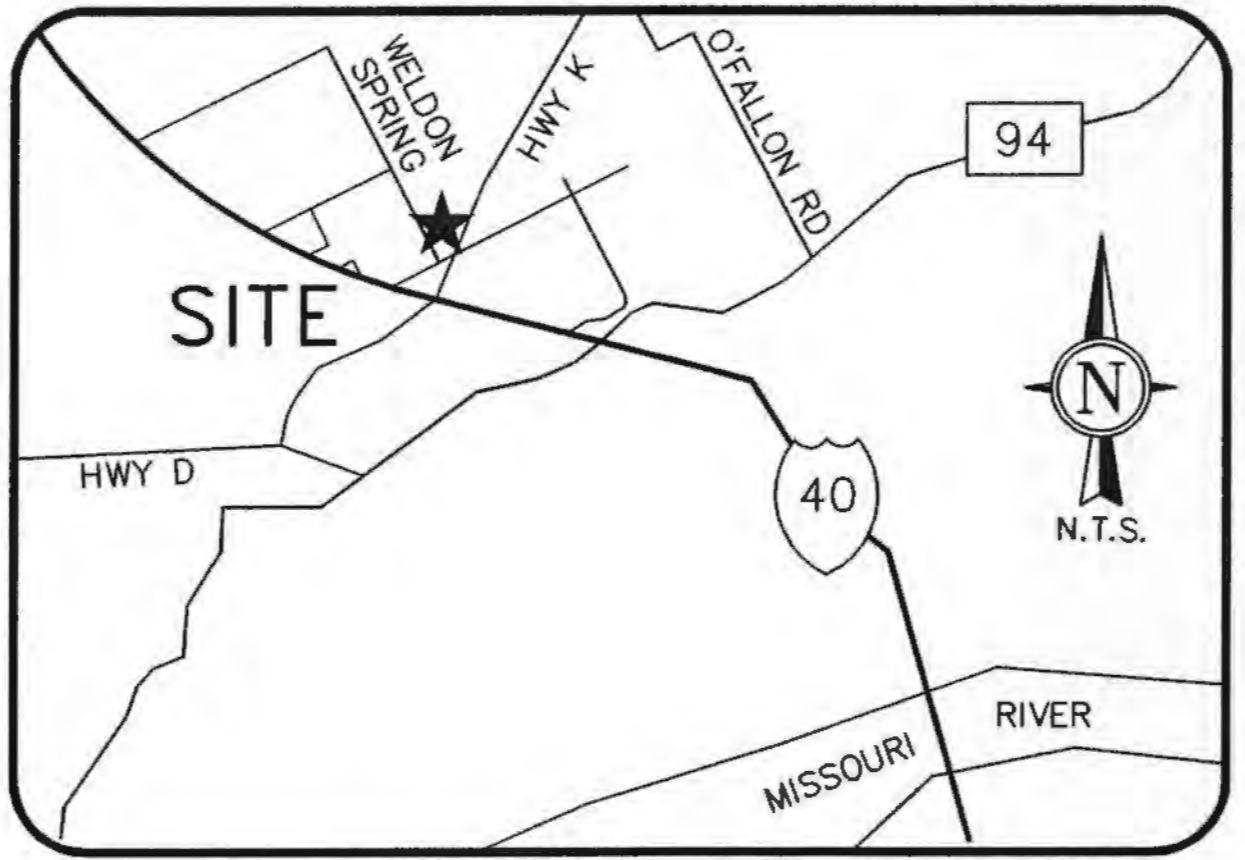
SITE IMPROVEMENT PLANS

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LEGEND

EXISTING		PROPOSED
	UTILITY POLE	
	GUY WIRE	
	LIGHT STANDARD	
	ELECTRIC BOX	
	ELECTRIC METER	
	ELECTRIC MANHOLE	
	OVERHEAD ELECTRIC LINE	
	UNDERGROUND ELECTRIC LINE	
	TELEPHONE BOX	
	TELEPHONE MANHOLE	
	UNDERGROUND TELEPHONE LINE	
	FIRE HYDRANT	
	WATER METER	
	WATER VALVE	
	WATER MANHOLE	
	WATER LINE	
	GAS METER	
	GAS VALVE	
	GAS DRIP	
	GAS LINE	
	STREET SIGN	
	BOLLARD OR POST	
	MAILBOX	
	SANITARY SEWER	
	STORM SEWER	
	STORM DRAIN GRATE INLET	
	STORM DRAIN AREA INLET	
	STORM DRAIN MANHOLE	
	SANITARY SEWER MANHOLE	
	FLARED END SECTION	
	FENCE: 6' WHITE VINYL	
	FENCE: WOOD CONSTRUCTION	
	GUARDRAIL	
	MINOR CONTOUR INTERVAL	
	MAJOR CONTOUR INTERVAL	
	SPOT ELEVATION	
	BUSH OR SHRUB	
	TREE W/APPROXIMATE DIAMETER SIZE	
	FOUND SURVEY MONUMENT AS NOTED	
	SET SURVEY MONUMENT AS NOTED	
	CLEAN-OUT/DOWN-SPOUT	
	SWALE	
	UTILITY EASEMENT	



LOCATOR MAP

PROPERTY OWNER WILLIAM ERKER
35 N. CENTRAL, STE 400
ST. LOUIS, MO. 63105

EXISTING ZONING C-2

SITE ACREAGE 15.52 Ac.

SITE ADDRESS 4601 STATE HIGHWAY K
O'FALLON, MO 63304

SITE BENCHMARK:
(553.29) - CHISELED SQUARE AT THE SOUTHWEST CORNER OF THE CONCRETE BASE OF THE QUIK TRIP SIGN LOCATED AT THE SOUTHWEST CORNER OF THE QUIK TRIP PROPERTY.

BENCHMARK:
RM 57: (548.01 PER FLOOD INSURANCE MAP COMMUNITY PANEL NO. 29183C 0430 E) - (AUGUST 2, 1996) CHISELED SQUARE ON SOUTHWEST END OF SOUTH HEADWALL OF CULVERT LOCATED AT JUNCTION OF U.S. HIGHWAY 40 AND COUNTY HIGHWAY K

UTILITIES

WATER DISTRICT	PUBLIC WATER DISTRICT NO. 2 100 WATER DR., BOX 967 O'FALLON, MO 63303
SEWER DISTRICT	DUCKETT CREEK 3550 HIGHWAY K O'FALLON, MO 63304-8616
GAS SERVICE	LACLEDE GAS CO. 1999 TRADE CENTER DRIVE EAST ST. PETERS, MO 63376
ELECTRIC SERVICE	AMEREN UE 200 N. CALLAHAN RD. WENTZVILLE, MO 63385-1999
PHONE SERVICE	SOUTHWESTERN BELL 402 N. 3RD ST. GRND FLOOR ST. CHARLES, MO 63301
CABLE SERVICE	CHARTER COMMUNICATIONS 4160 OLD MILL PARKWAY ST. PETERS, MO 63576

NOTE-FIBER OPTICS ARE PRESENT WITHIN THE LIMITS OF THIS PROJECT

Call Before you DIG
TOLL FREE
1-314-340-4100
NO-DIG UNDERGROUND FACILITY LOCATE

Call Before you DIG
TOLL FREE
1-800-344-7483
MISSOURI ONE-CALL SYSTEM INC.

Underground facilities, structures & utilities have been plotted from available surveys, records & information, and therefore, do not necessarily reflect the actual existence, nonexistence, size, type, number of, or location of these facilities, structures, & utilities. The Contractor shall be responsible for verifying the actual location of all underground facilities, structures, & utilities, either shown or not shown on these plans. The underground facilities, structures, & utilities shall be located in the field prior to any grading, excavation or construction of improvements. These provisions shall in no way absolve any party from complying with the Underground Facility Safety and Damage Prevention Act, Chapter 319, RSMo.

J. R. GRIMES CONSULTING ENGINEERS, INC. AND THE UNDERSIGNED ENGINEER HAVE NO RESPONSIBILITY FOR SERVICES PROVIDED BY OTHERS TO IMPLEMENT THE IMPROVEMENTS SHOWN ON THIS PLAN AND ALL OTHER DRAWINGS WHERE THE UNDERSIGNED ENGINEER'S SEAL APPEARS. THE CONSTRUCTION MEANS AND METHODS ARE THE SOLE RESPONSIBILITY OF THE OWNER AND CONTRACTOR. J. R. GRIMES CONSULTING ENGINEERS, INC. HAS NO RESPONSIBILITY TO VERIFY FINAL IMPROVEMENTS AS SHOWN ON THIS PLAN UNLESS SPECIFICALLY ENGAGED AND AUTHORIZED TO DO SO BY THE OWNER OR CONTRACTOR.

FLOOD NOTE

NOTE: THE ENTIRE SURVEYED TRACT AS SHOWN HEREON LIES WITHIN FLOOD ZONE X. AREAS DETERMINED TO BE OUTSIDE THE 500-YEAR FLOOD PLAN AS SHOWN ON FLOOD INSURANCE RATE MAP 29183C0430 E. EFFECTIVE DATE: AUGUST 2, 1996

PARKING CALCULATIONS

RETAIL A: PARKING: 5.5 PER 1,000 S.F. 17,780 S.F. = 98 SPACES TOTAL REQUIRED = 98 SPACES TOTAL PROPOSED = 98 SPACES	RETAIL A: LOADING: 1 FOR FIRST 5,000 S.F. AND 1 FOR ADDITIONAL 20,000 S.F. 17,780 S.F. = 2 SPACES TOTAL REQUIRED = 2 SPACES TOTAL PROPOSED = 2 SPACES	RETAIL A: BICYCLE: 1 FOR 15 PARKING SPACES 98 P.S. = 7 SPACES TOTAL REQUIRED = 7 SPACES TOTAL PROPOSED = 7 SPACES
H.C. ACCESSIBLE: TOTAL REQUIRED = 4 SPACES TOTAL PROPOSED = 4 SPACES	RETAIL B: LOADING: 1 FOR FIRST 5,000 S.F. AND 1 FOR ADDITIONAL 20,000 S.F. 58,250 S.F. = 4 SPACES TOTAL REQUIRED = 4 SPACES TOTAL PROPOSED = 4 SPACES	RETAIL B: BICYCLE: 1 FOR 15 PARKING SPACES 322 P.S. = 21 SPACES TOTAL REQUIRED = 21 SPACES TOTAL PROPOSED = 21 SPACES
RETAIL B: PARKING: 5.5 PER 1,000 S.F. 58,250 S.F. = 320 SPACES TOTAL REQUIRED = 320 SPACES TOTAL PROPOSED = 322 SPACES	H.C. ACCESSIBLE: TOTAL REQUIRED = 8 SPACES TOTAL PROPOSED = 8 SPACES	

NOTE: IN ACCORDANCE WITH THE FEB. 19, 2004 APPROVAL OF THE CURRENT SITE PLAN BY THE CITY OF O'FALLON PLANNING AND ZONING COMMISSION, THE OWNER/DEVELOPER UNDERSTANDS THAT IF PART OF SITE IS TO BE UTILIZED FOR A RESTAURANT OR BAR WITH DINE-IN SERVICE, THE OWNER/DEVELOPER MUST OBTAIN APPROVAL FROM THE PLANNING AND ZONING COMMISSION OF AN AMENDED SITE PLAN, WHICH WILL MEET THE CITY'S CURRENT PARKING REQUIREMENTS.

PREPARED FOR:
WILLIAM H. ERKER
35 N. CENTRAL, STE 400
ST. LOUIS, MO 63105
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FAX: (314) 863-6146

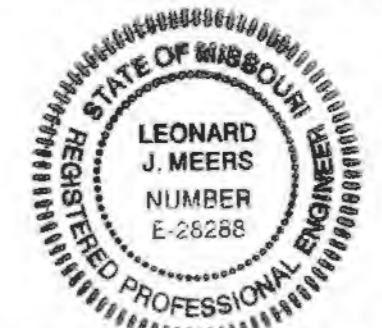
"AS-BUILT"

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.

P.E./L.S. *[Signature]*
Date 7/26/05



P&Z FILE # 0704/0704.01

GENERAL CONTRACTOR	ARCHITECT	CIVIL ENGINEER	MECHANICAL ENGINEER	ELECTRICAL ENGINEER	FIRE PROTECTION
STRUCTURAL ENGINEER	GEOTECHNICAL ENGINEER	PLUMBING ENGINEER			
ARCO CONSTRUCTION CO., INC.	THOMAS ROOF INC. ARCHITECTS	J.R. GRIMES CONSULTING ENGINEERS	JARRELL MECHANICAL CONTRACTORS	SYSTEMAIRE, INC.	PAYNE CREST ELECTRIC
IBRAHIM ENGINEERING CORP.	GEOTECHNOLOGY				BI-STATE FIRE PROTECTION



LABOURE' CENTRE

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O'FALLON, MISSOURI



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63105
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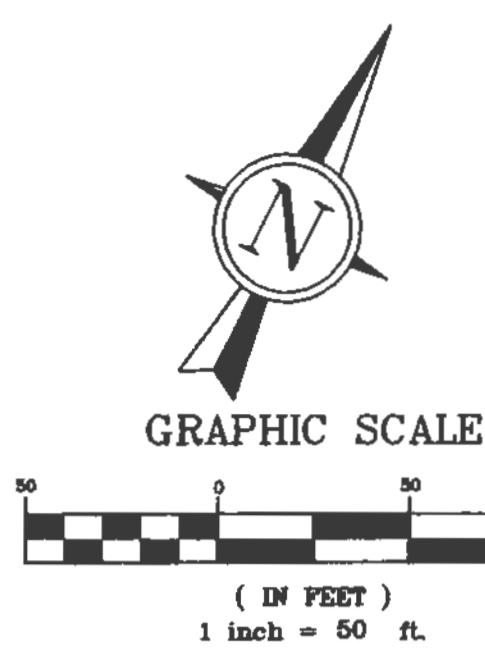
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REVISIONS

PER CITY, DUCKETT CREEK	
& MODOT COMMENTS	04/06/04
PER CITY COMMENTS	04/28/04
PER MODOT COMMENTS	05/13/04
PER MODOT COMMENTS	05/26/04

DWG. BY J.L.W.
PROJECT NO. 10048
SHEET NO.

C0.0
TITLE SHEET



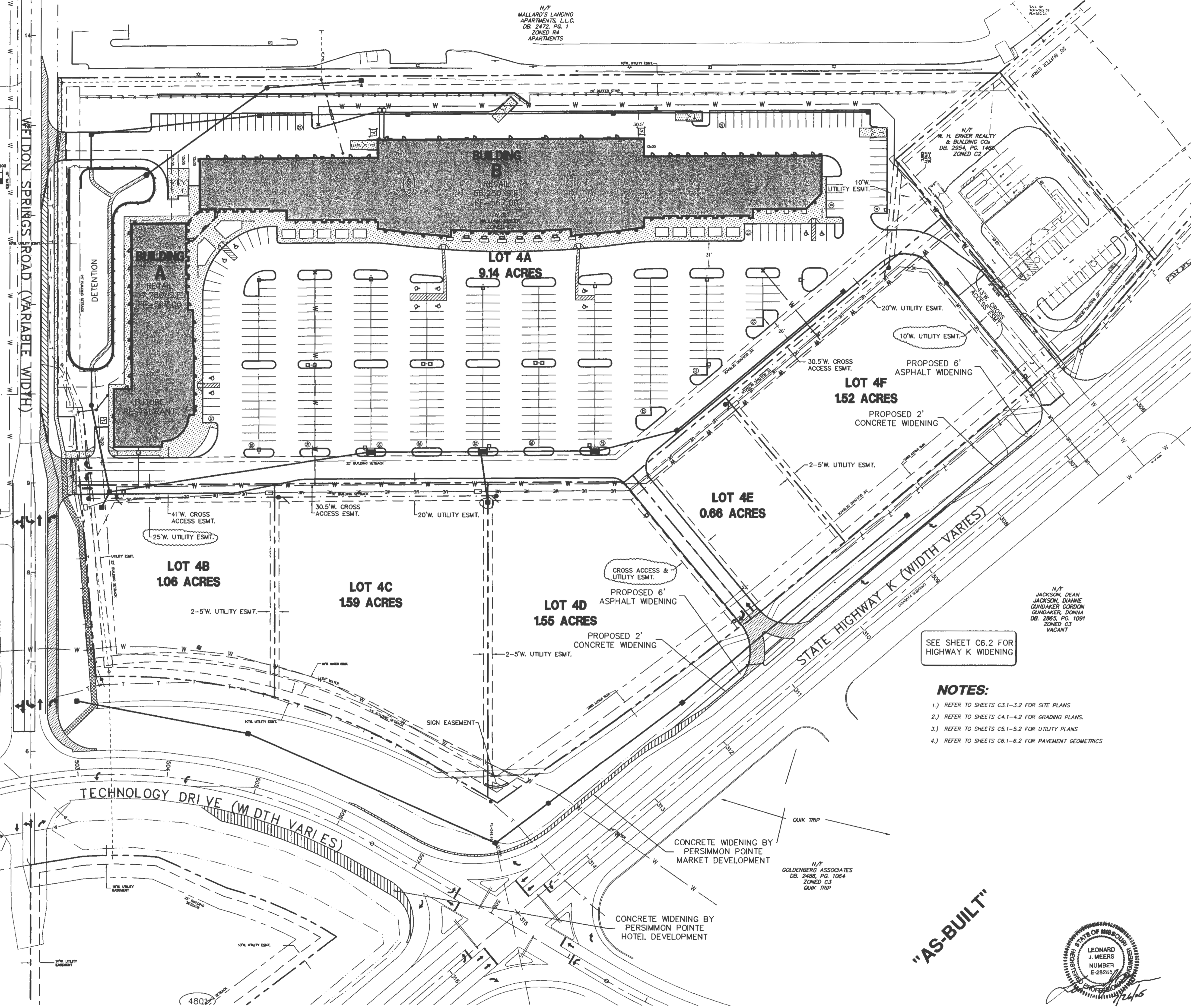
N/F
MALLARD'S LANDING
APARTMENTS, L.L.C.
DB. 2472, PG. 1
ZONED R4
APARTMENTS

N/F
KELLEN-BECK
PROPERTIES, LLC
DB. 2476, PG. 1717
ZONED HTCD
VACANT

N/F
W. H. ERKER REALTY
& BUILDING CO.
DB. 2954, PG. 1468
ZONED C2

N/F
JACKSON, DEAN
JACKSON, DIANNE
GUNDAKER, GORDON
GUNDAKER, DONNA
DB. 2865, PG. 1091
ZONED C3
VACANT

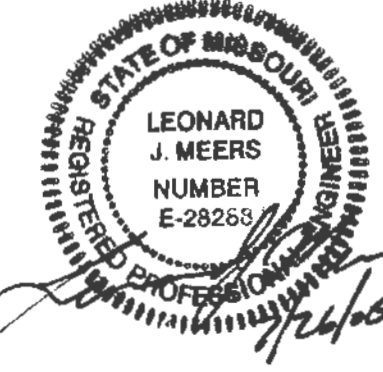
N/F
GOLDBERG ASSOCIATES
DB. 2486, PG. 1064
ZONED C3
QUICK TRIP



SEE SHEET C6.2 FOR
HIGHWAY K WIDENING

- NOTES:**
- 1.) REFER TO SHEETS C3.1-3.2 FOR SITE PLANS
 - 2.) REFER TO SHEETS C4.1-4.2 FOR GRADING PLANS.
 - 3.) REFER TO SHEETS C5.1-5.2 FOR UTILITY PLANS
 - 4.) REFER TO SHEETS C6.1-6.2 FOR PAVEMENT GEOMETRICS

"AS-BUILT"



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- | | |
|---------------------|-------------------|
| GENERAL CONTRACTOR | ARCHITECT |
| STRUCTURAL ENGINEER | CIVIL ENGINEER |
| MECHANICAL ENGINEER | PLUMBING ENGINEER |
| ELECTRICAL ENGINEER | FIRE PROTECTION |
-
- | | |
|--------------------------------|----------------------------------|
| ARCO CONSTRUCTION CO., INC. | THOMAS ROOF INC. ARCHITECTS |
| IBRAHIM ENGINEERING CORP. | IBRAHIM ENGINEERING CORP. |
| GEOTECHNOLOGY | J.R. GRIMES CONSULTING ENGINEERS |
| JARRELL MECHANICAL CONTRACTORS | SYSTEM AIRE, INC. |
| PAYNE CREST ELECTRIC | BI-STATE FIRE PROTECTION |

ARCO
Construction Company, Inc.

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DATE: 02/13/04

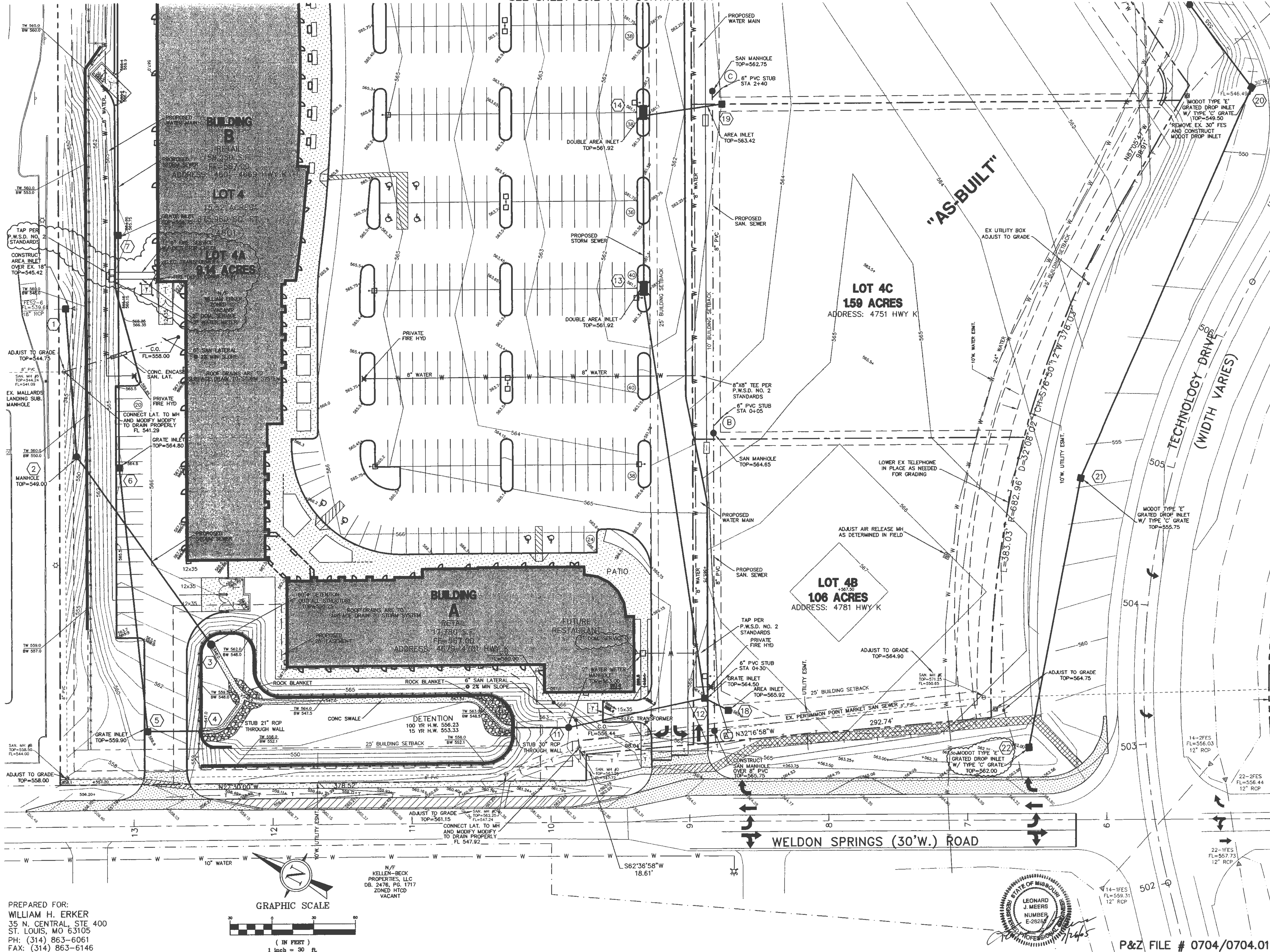
REVISIONS

NO.	DESCRIPTION	DATE
1	PER CITY, DUCKETT CREEK & MODOT COMMENTS	04/06/04

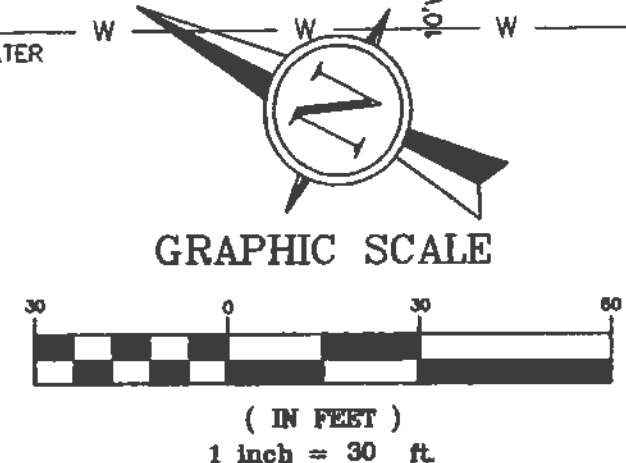
DWG. BY: J.L.W.
PROJECT NO.: 1004B
SHEET NO.:

C2.1
OVERALL SITE PLAN

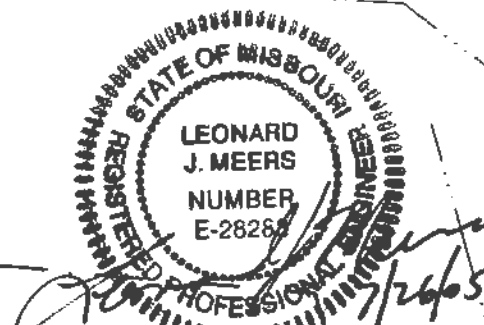
SEE SHEET C5.2 FOR CONTINUATION



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N/F
 KELLEN-BECK
 PROPERTIES, LLC
 DB. 2476, PG. 1717
 ZONED HTCD
 VACANT



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- GENERAL CONTRACTOR: ARCO CONSTRUCTION CO., INC.
- ARCHITECT: THOMAS ROOF INC. ARCHITECTS
- STRUCTURAL ENGINEER: IBRAHIM ENGINEERING CORP.
- GEOTECHNICAL ENGINEER: GEOTECHNOLOGY
- CIVIL ENGINEER: J.R. GRIMES CONSULTING ENGINEERS
- MECHANICAL ENGINEER: JARRELL MECHANICAL CONTRACTORS
- PLUMBING ENGINEER: SYSTEM AIRE, INC.
- ELECTRICAL ENGINEER: PAYNE CREST ELECTRIC
- FIRE PROTECTION: BI-STATE FIRE PROTECTION



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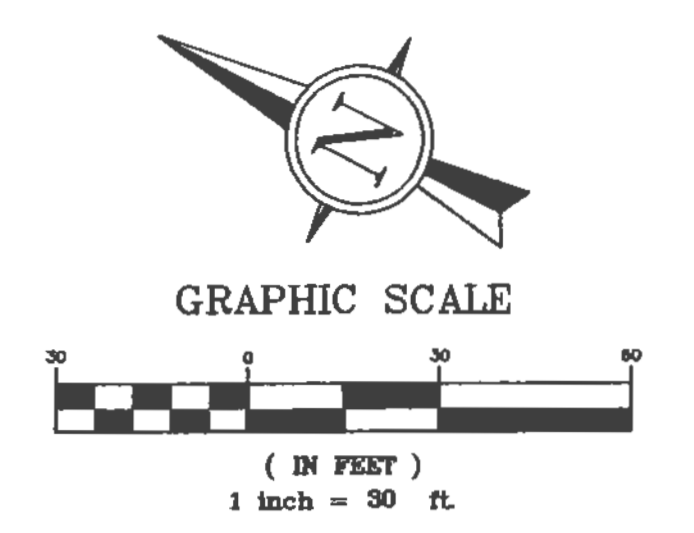
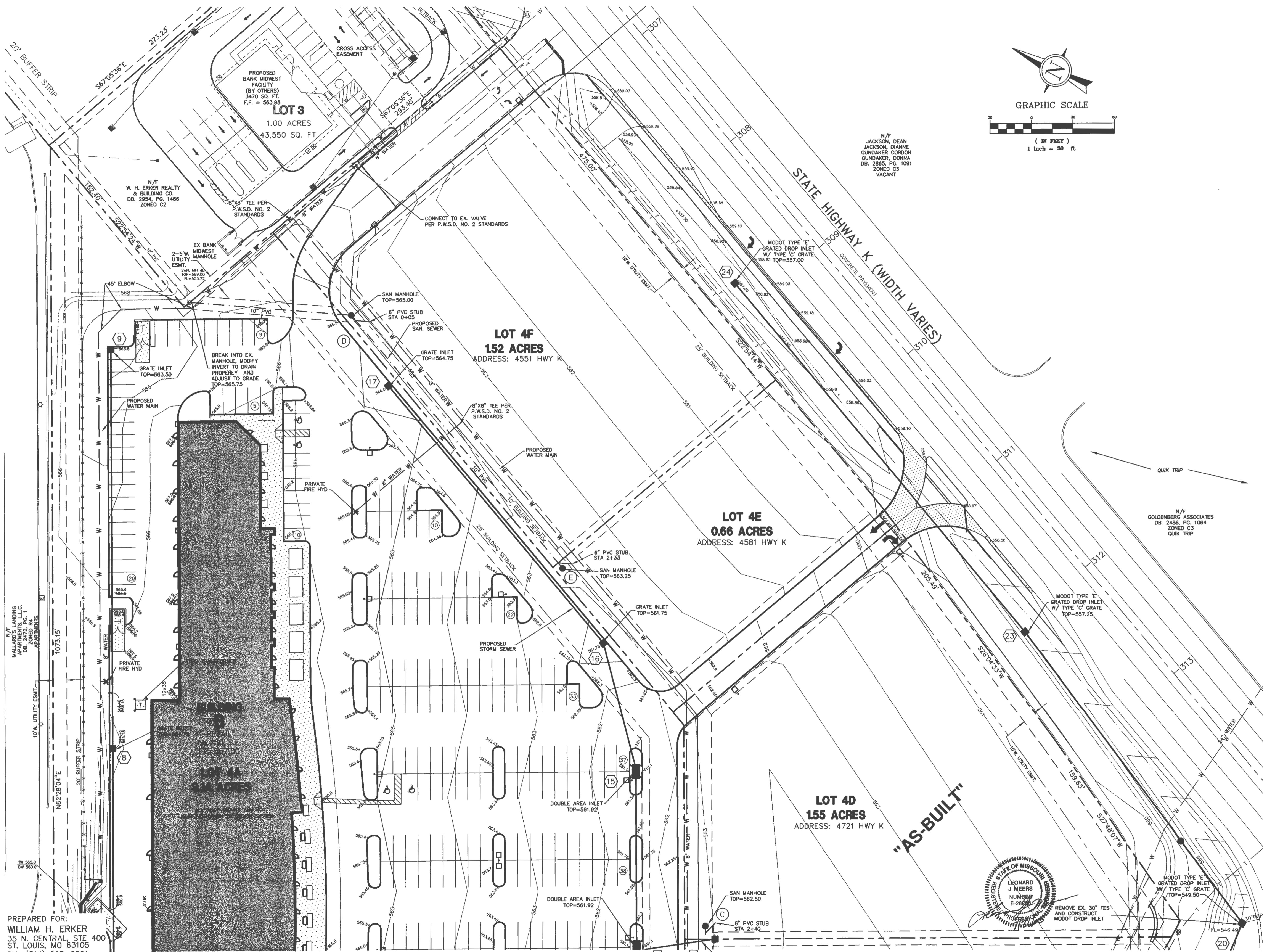


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DATE: 02/13/04
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 OWNER & FIRE COMMENTS 2/26/04
 PER CITY, DUCKETT CREEK
 & MODOT COMMENTS 04/06/04

DWG. BY: J.W.
 PROJECT NO.: 10048
 SHEET NO.:

C5.1
 UTILITY PLAN



N/F JACKSON, DEAN
 JACKSON, DIANNE
 GUNDAKER, GORDON
 GUNDAKER, DONNA
 DB. 2865, PG. 1091
 ZONED C3
 VACANT

N/F GOLDENBERG ASSOCIATES
 DB. 2486, PG. 1064
 ZONED C3
 QUIK TRIP

PREPARED FOR:
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SEE SHEET C5.1 FOR CONTINUATION

P&Z FILE # 0704/0704.01



REMOVE EX. 30' FES
 AND CONSTRUCT
 MODOT DROP INLET

- GENERAL CONTRACTOR: ARCO CONSTRUCTION CO., INC.
- ARCHITECT: THOMAS ROOF INC. ARCHITECTS
- STRUCTURAL ENGINEER: IBRAHIM ENGINEERING CORP.
- GEOTECHNICAL ENGINEER: GEOTECHNOLOGY
- CIVIL ENGINEER: J.R. GRIMES CONSULTING ENGINEERS
- MECHANICAL ENGINEER: JARRELL MECHANICAL CONTRACTORS
- PLUMBING ENGINEER: SYSTEMAIRE INC.
- ELECTRICAL ENGINEER: PAYNE CREST ELECTRIC
- FIRE PROTECTION: BI-STATE FIRE PROTECTION

ARCO
 Construction Company, Inc.

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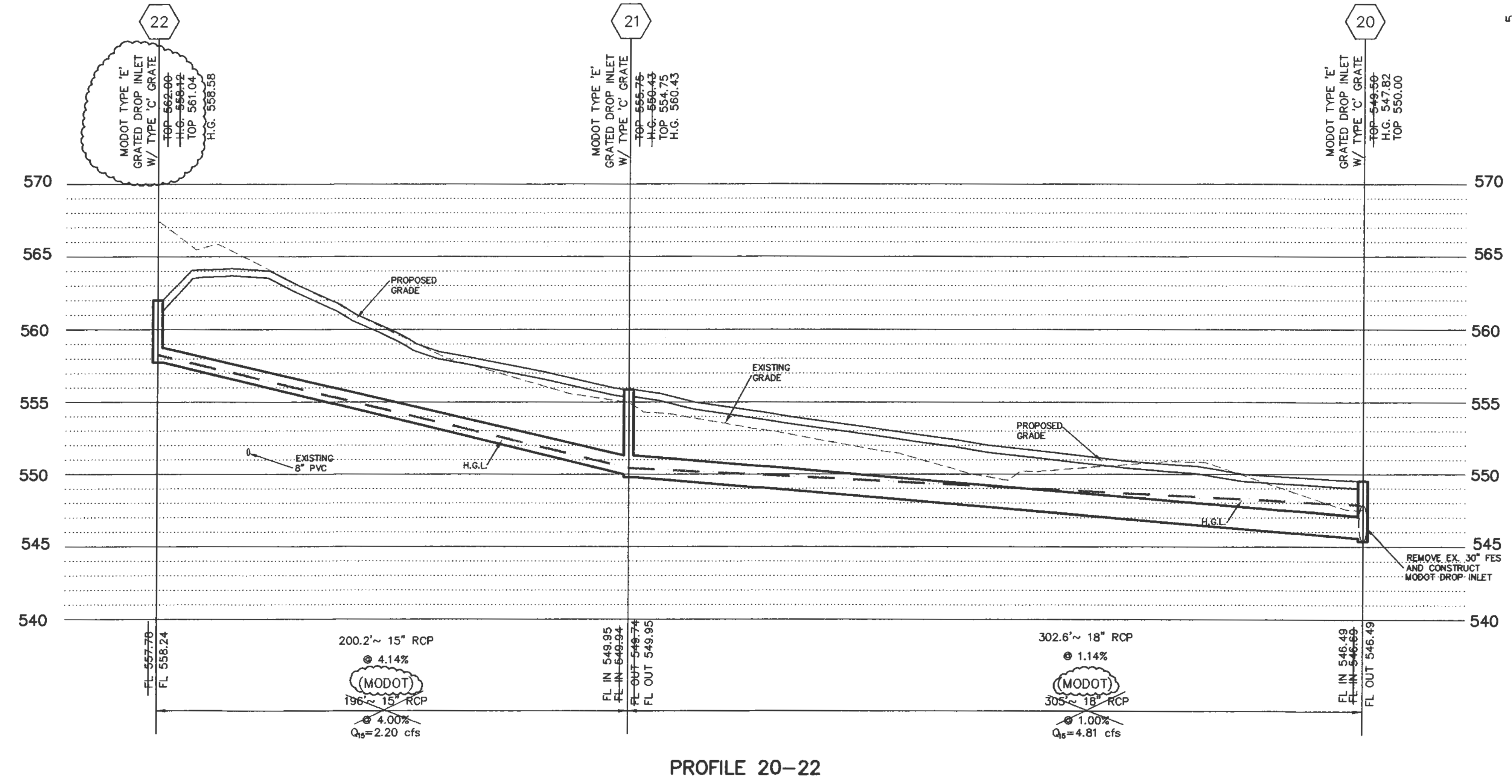
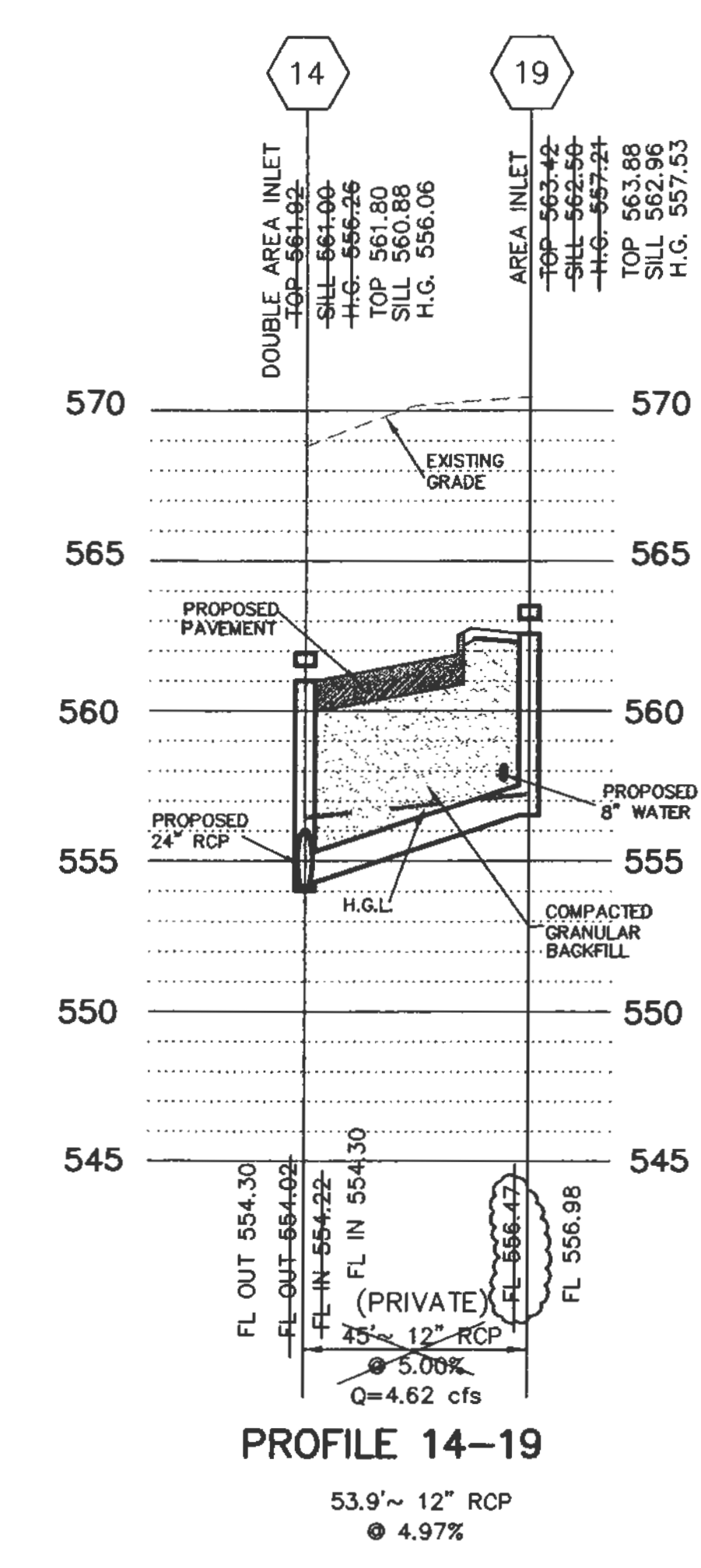
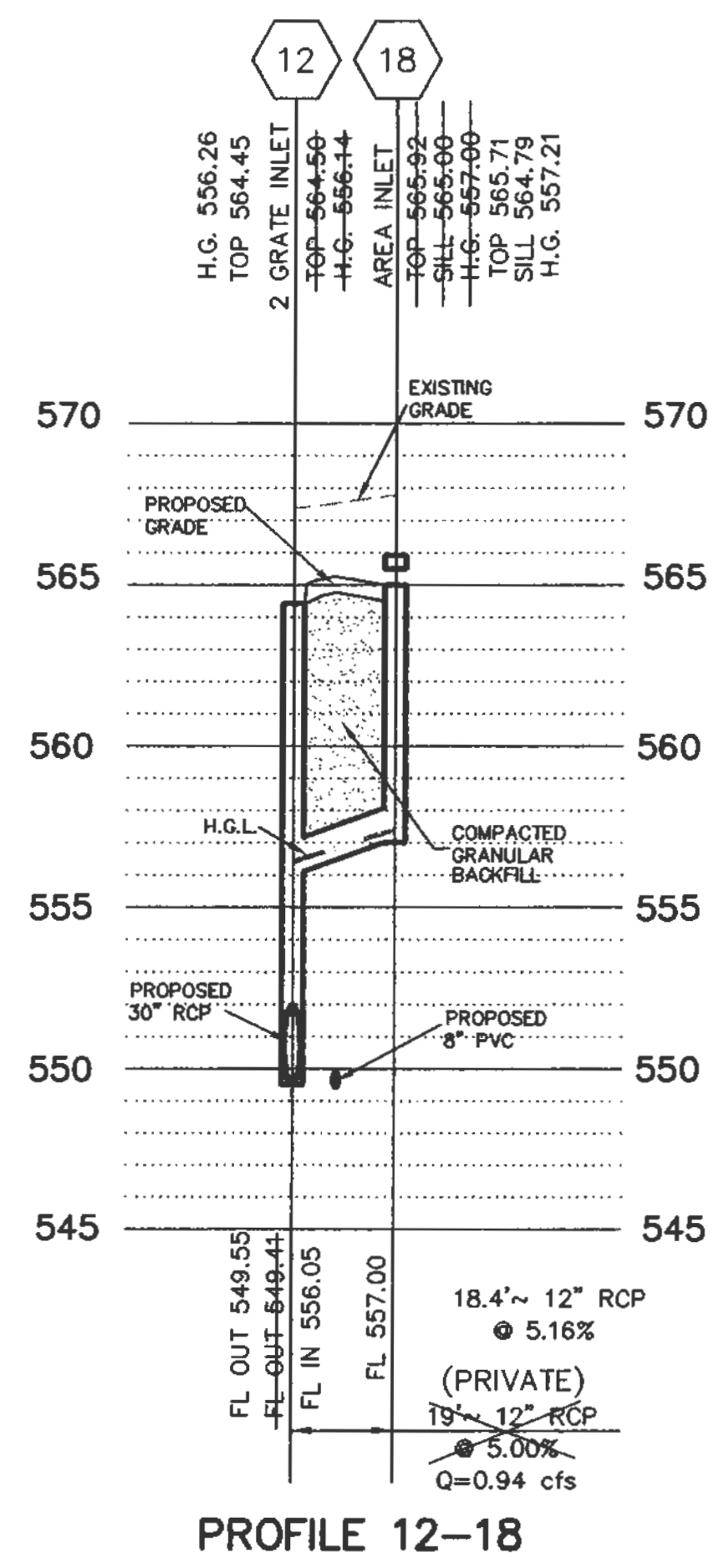
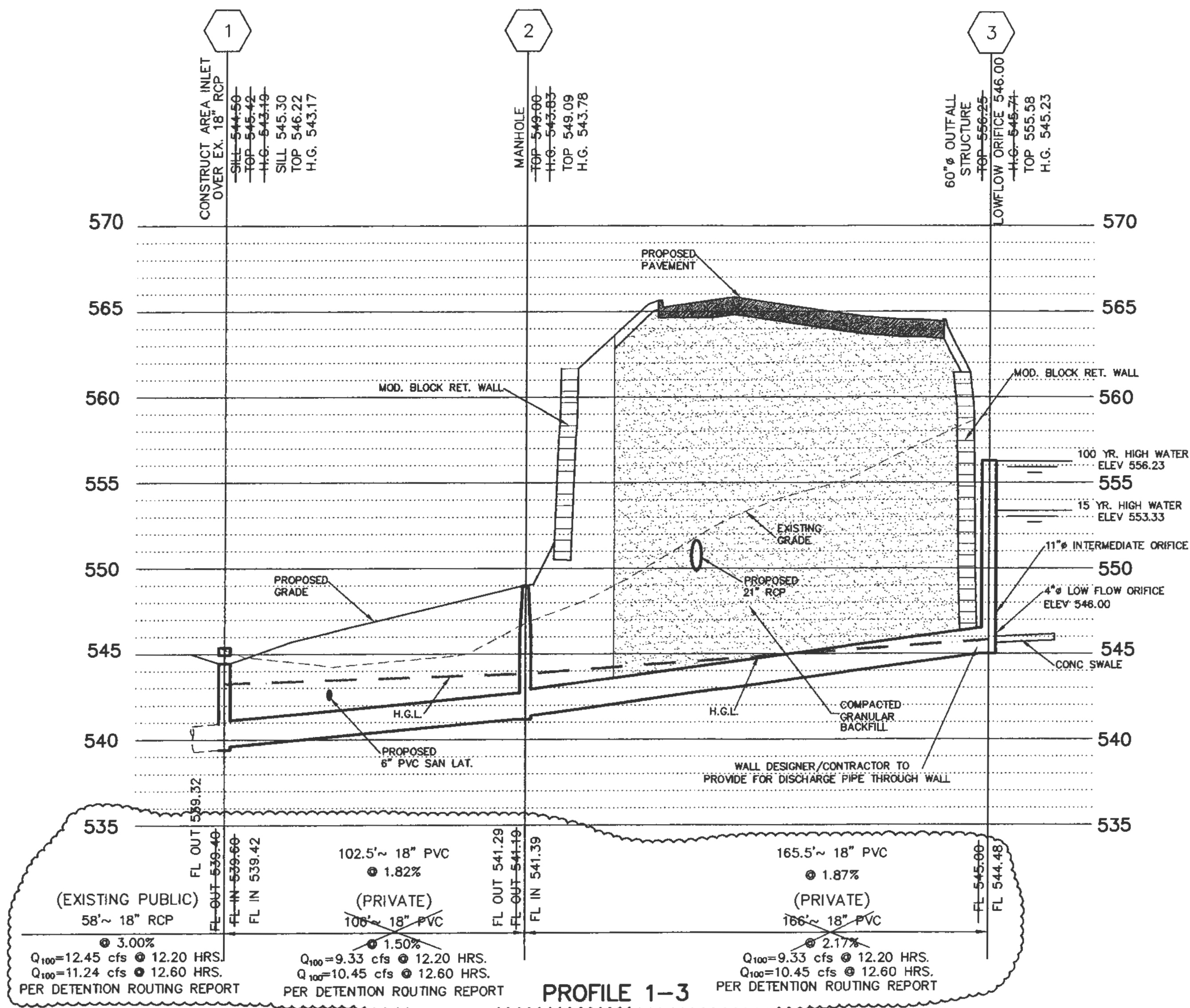
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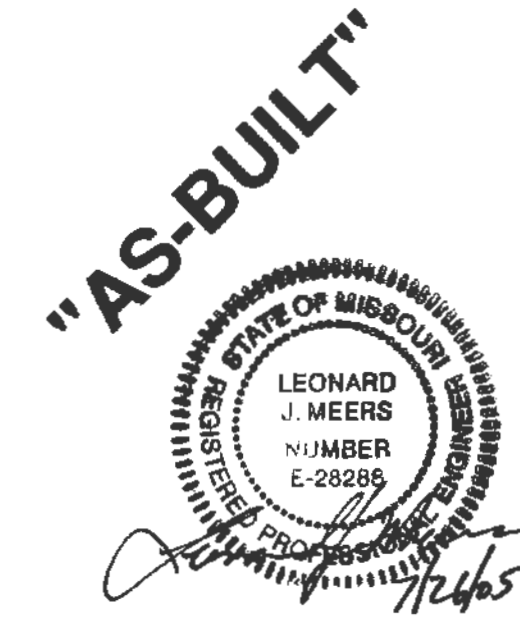
NO.	DESCRIPTION	DATE
1	PER CITY, DUCKETT CREEK & MODOT COMMENTS	04/06/04

DWG. BY: J.L.W.
 PROJECT NO.: 10048
 SHEET NO.:

C5.2
 UTILITY PLAN



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- GENERAL CONTRACTOR: ARCO CONSTRUCTION CO., INC.
- ARCHITECT: THOMAS ROOF INC. ARCHITECTS
- STRUCTURAL ENGINEER: IBRAHIM ENGINEERING CORP.
- GEOTECHNICAL ENGINEER: GEOTECHNOLOGY
- CIVIL ENGINEER: J.R. GRIMES CONSULTING ENGINEERS
- MECHANICAL ENGINEER: JARRELL MECHANICAL CONTRACTORS
- PLUMBING ENGINEER: SYSTEM AIRE, INC.
- ELECTRICAL ENGINEER: PAYNE CREST ELECTRIC
- FIRE PROTECTION: BISTATE FIRE PROTECTION



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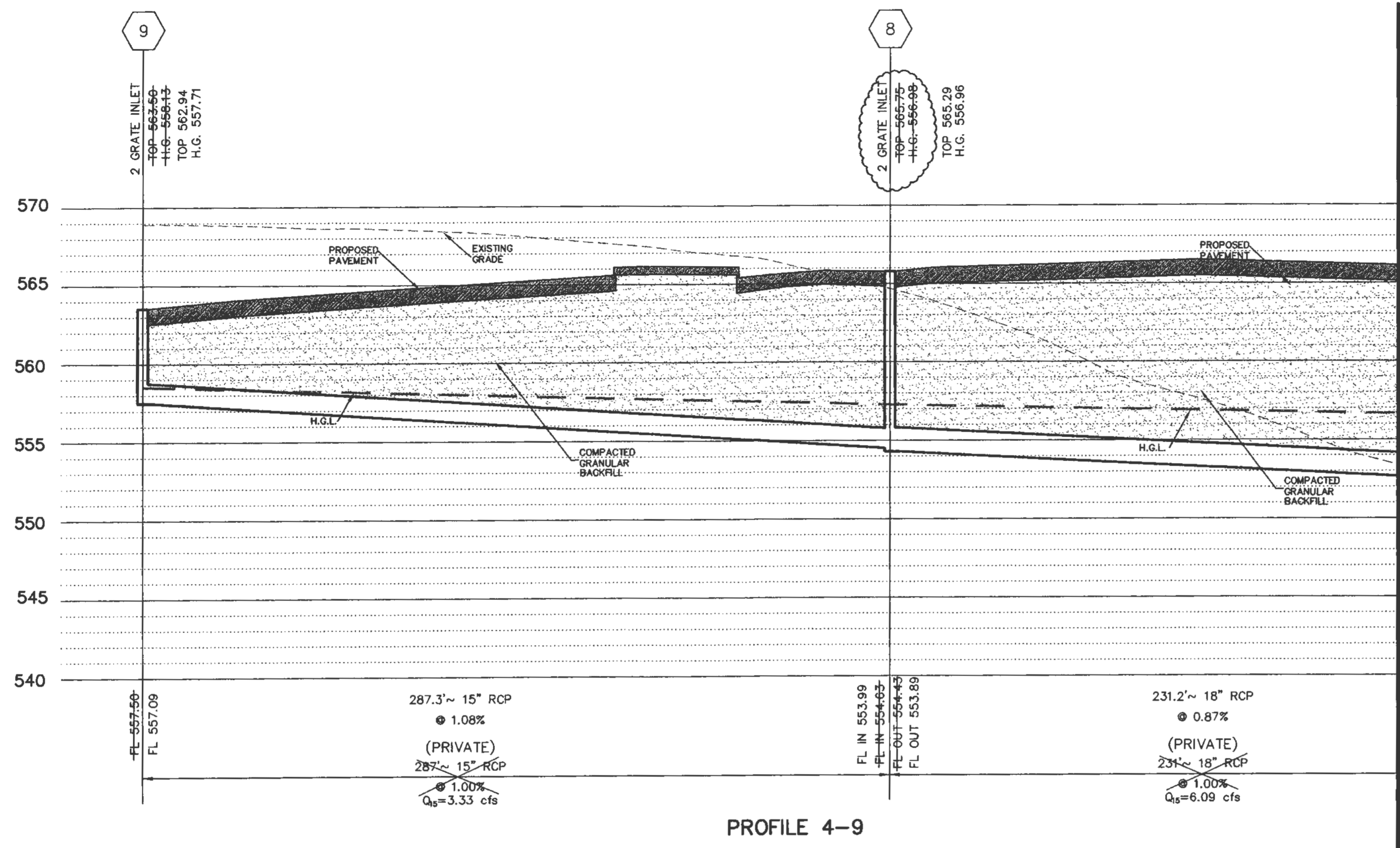
DATE: 02/13/04

REVISIONS

PER CITY, DUCKETT CREEK	
& MODOT COMMENTS	04/06/04
PER CITY COMMENTS	04/28/04

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 PROJECT NO.: 1004B
 SHEET NO.:

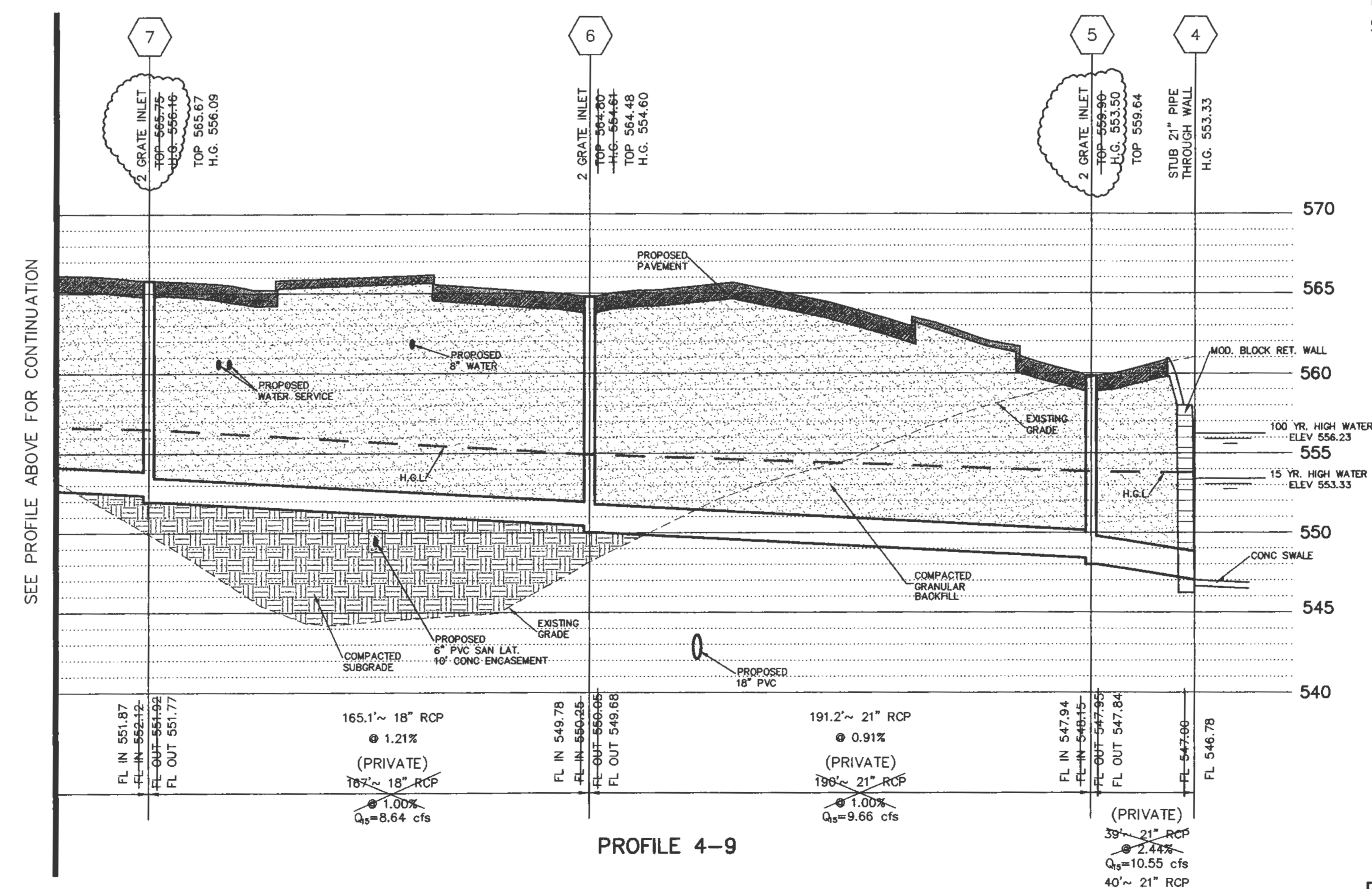
C8.1
 STORM SEWER PROFILES



SEE PROFILE BELOW FOR CONTINUATION

PROFILE 4-9

5 VERT.
30 HORIZ.
SCALE:



PROFILE 4-9

"AS-BUILT"

LEONARD J. MEERS
REGISTERED PROFESSIONAL ENGINEER
STATE OF MISSOURI
NUMBER E-28788
11/21/2004

PREPARED FOR:
WILLIAM H. ERKER
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P&Z FILE # 0704/0704.01

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- FIRE PROTECTION: BI-STATE FIRE PROTECTION



LABOURÉ CENTRE
4601 HIGHWAY K
O'FALLON, MISSOURI



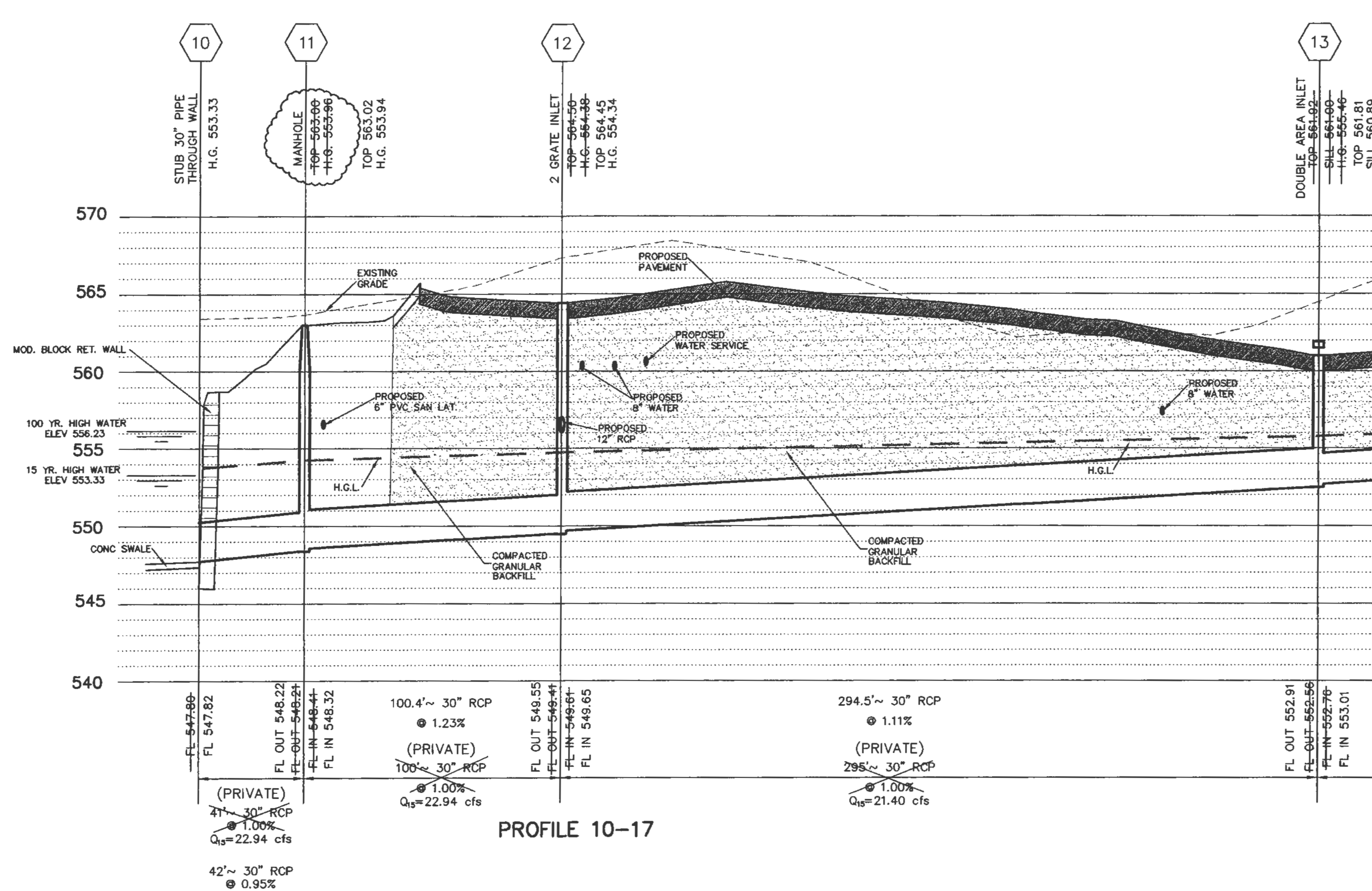
THOMAS ROOF INC - ARCHITECTS
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Phone: 728-9881
www.thomasroof.com
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DATE: 02/13/04

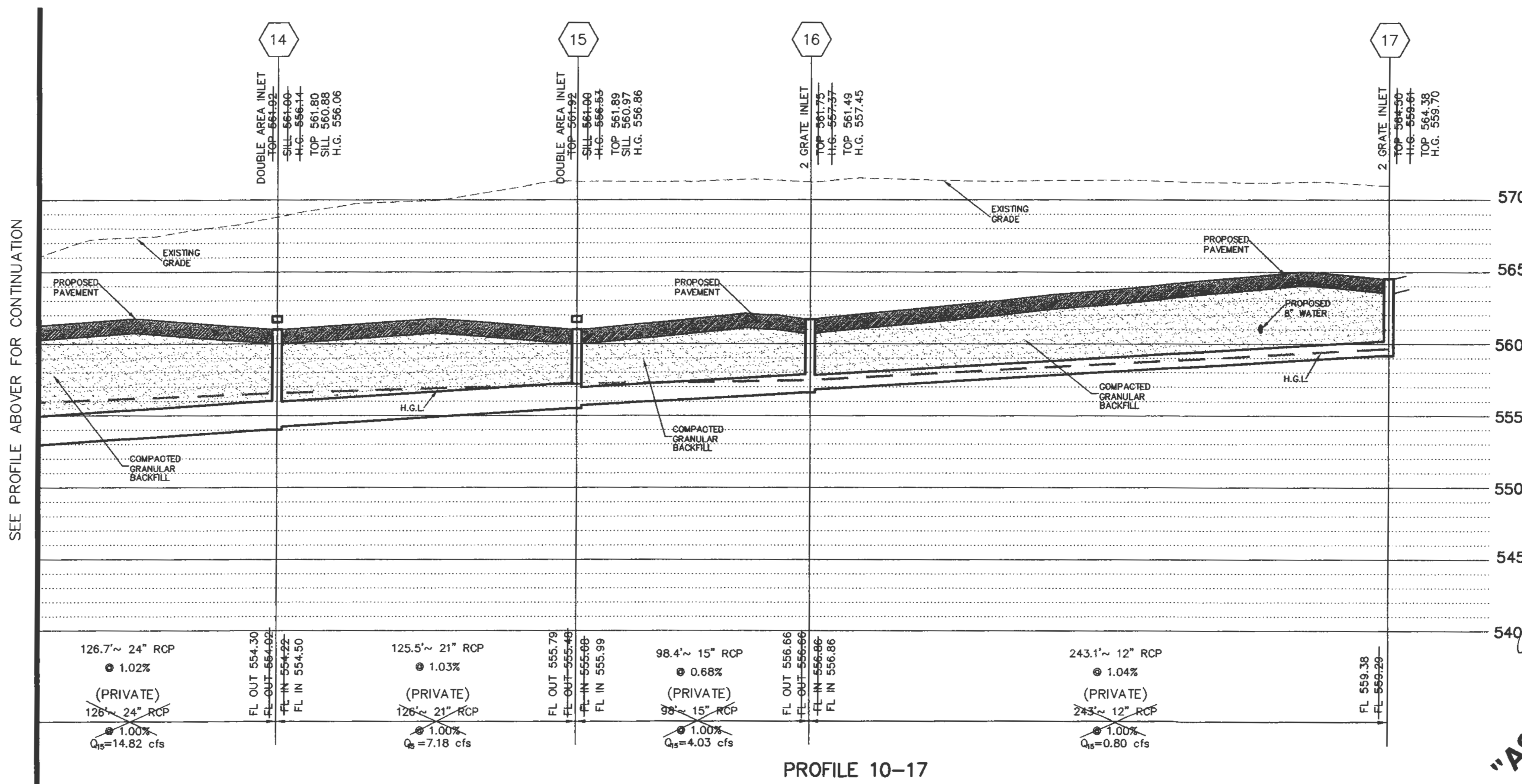
REVISIONS	DATE
PER CITY, DUCKETT CREEK	04/06/04
& MODOT COMMENTS	08/18/04
REVISED GRADING	08/18/04

DWG. BY: JLW
PROJECT NO.: 1004B
SHEET NO.:

C8.2
STORM SEWER PROFILES



SEE PROFILE BELOW FOR CONTINUATION



PROFILE 10-17

PREPARED FOR:
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 ST. LOUIS, MO 63105
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"AS-BUILT" 7/26/05

- GENERAL CONTRACTOR: ARCO CONSTRUCTION CO., INC.
- ARCHITECT: THOMAS ROOF INC. ARCHITECTS
- STRUCTURAL ENGINEER: IBRAHIM ENGINEERING CORP.
- GEOTECHNICAL ENGINEER: GEOTECHNOLOGY
- CIVIL ENGINEER: J.R. GRIMES CONSULTING ENGINEERS
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DATE: 02/13/04

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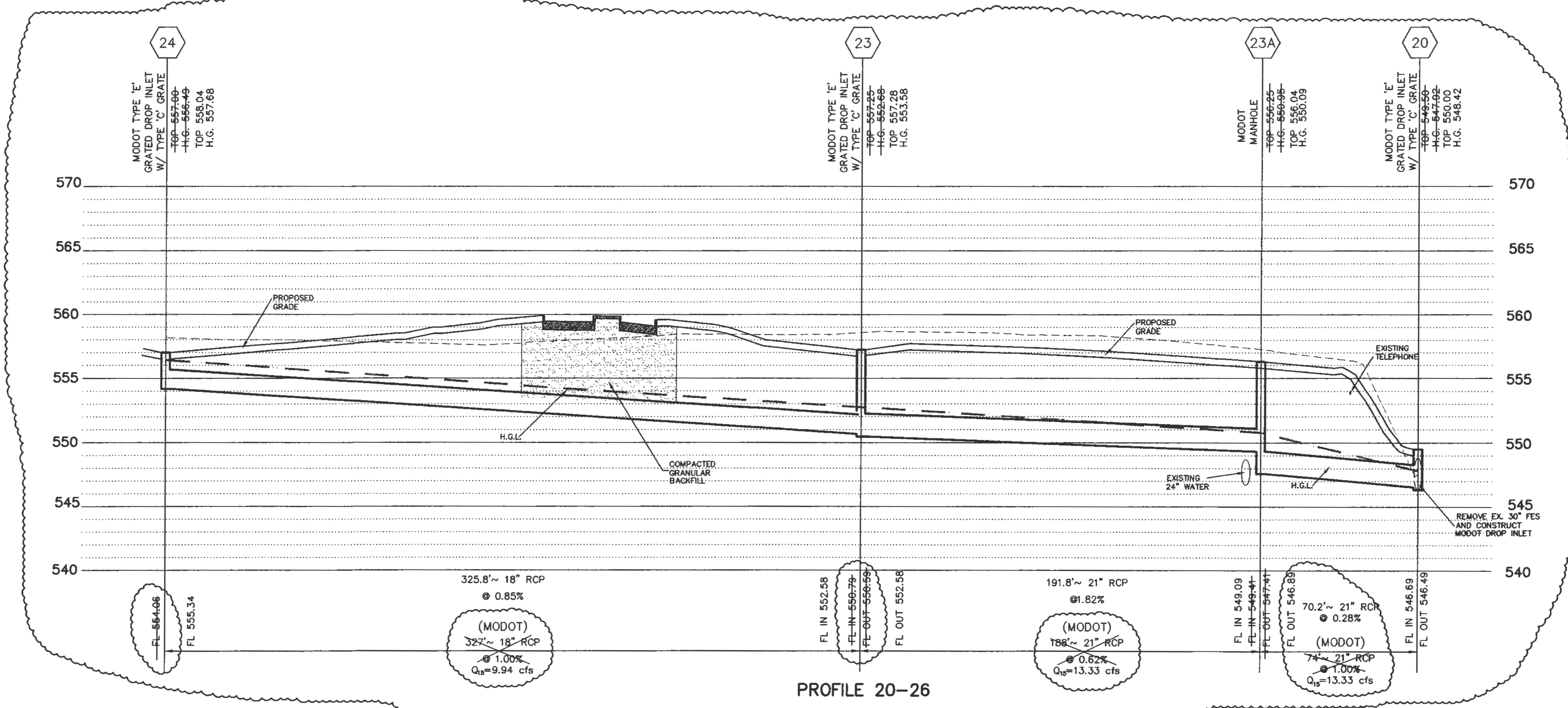
NO.	DATE	DESCRIPTION
1	04/06/04	PER CITY, DUCKETT CREEK & MODOT COMMENTS

DWG. BY: JLW
 PROJECT NO.: 1004B
 SHEET NO.:

C8.3

STORM SEWER PROFILES

P&Z FILE # 0704/0704.01



J.R. GRIMES
CONSULTING ENGINEERS, INC. LABOURÉ CENTRE

CALC. BY: J. WHISLER
DATE: 02/09/2004
REVISED: 08/24/2004

VER. 2.0

STRUCTURE	UPR	LOWER	FLOWLINE	LENGTH	GRADE	PIPE	"n"	Q	TOTAL	V	W _s	FRICT.	CURVE	TOTAL PIPE	STRUCTURE LOSSES (FL)			HYD. ELEV	HYD	LOWEST	PIPE	FULL FLOW	GIVEN				
															LOSS	BEND	TOTAL STRUC.							UPPER	LOWER	FL / FT.	OPENING
HYDRAULIC DATA 100 YEAR STORM PER DETENTION ROUTING REPORT																											
CB 2-2	FES 2-	530.68	530.38	30	0.0100	30	0.013	1.37	24.91	5.33	0.44	0.12	0.00	0.12	0.24	0.07	0.31	534.22	533.79	0.00407	537.61	3.39	41.02	0.61	1.39	5.07	533.79
MH 2-3	CB 2-	2531.18	530.68	50	0.0100	24	0.013	0.00	23.54	8.58	1.14	0.71	0.00	0.71	0.00	0.17	0.17	535.10	534.22	0.01420	538.31	3.21	22.62	1.04	1.70	7.49	
CB 2-4	MH 2-	3534.33	531.18	105	0.0300	24	0.013	6.03	23.54	7.87	0.96	1.25	0.00	1.25	1.36	0.00	1.36	536.80	535.10	0.01194	544.61	7.81	39.18	0.60	1.11	7.49	
MH 2-5	CB 2-	4537.66	534.33	111	0.0300	18	0.013	5.06	17.51	11.35	2.00	4.04	0.00	4.04	0.83	0.16	0.79	541.64	536.80	0.03643	551.61	9.97	18.19	0.96	1.18	9.91	
1	MH 2-	5539.32	537.66	58	0.0286	18	0.013	3.12	12.45	7.61	0.90	0.95	0.00	0.95	0.29	0.29	0.58	543.17	541.64	0.01839	545.30	2.13	17.77	0.70	0.92	7.05	
2	1	541.29	539.42	103	0.0182	18	0.01	0.00	9.33	5.28	0.43	0.48	0.00	0.48	0.00	0.13	0.13	543.78	543.17	0.00467	549.09	5.31	18.44	0.51	0.75	5.28	
3	2	544.48	541.39	166	0.0187	18	0.01	9.33	9.33	5.28	0.43	0.77	0.00	0.77	0.00	0.00	0.00	545.23	543.78	0.00467	546.00	0.77	18.66	0.50	0.75	5.28	
HYDRAULIC DATA 15 YEAR STORM PER DETENTION ROUTING REPORT @ 12.20 HRS. WHEN HYDROGRAPHS COMBINES FOR MAXIMUM OUTFALL																											
5	4	547.84	546.78	40	0.0265	21	0.013	0.89	10.55	4.12	0.26	0.16	0.00	0.16	0.00	0.02	0.02	553.50	553.33	0.00392	559.64	6.14	25.79	0.41	0.77	4.39	553.33
6	5	549.68	547.94	191	0.0091	21	0.013	1.02	9.66	4.24	0.28	0.79	0.00	0.79	0.30	0.00	0.30	554.60	553.50	0.00414	564.48	9.88	15.12	0.64	1.00	4.02	
7	6	551.77	549.78	165	0.0121	18	0.013	2.55	8.64	5.38	0.45	1.35	0.00	1.35	0.14	0.00	0.14	556.09	554.60	0.00819	565.67	9.58	11.53	0.75	0.95	4.89	
8	7	553.89	551.87	231	0.0087	18	0.013	2.76	6.09	3.64	0.21	0.86	0.00	0.86	0.00	0.00	0.00	556.96	556.09	0.00374	565.29	8.33	9.82	0.62	0.86	3.45	
9	8	557.09	553.99	287	0.0108	15	0.013	3.33	3.33	2.69	0.11	0.75	0.00	0.75	0.00	0.00	0.00	557.71	556.96	0.00260	562.94	5.23	6.71	0.50	0.61	2.71	
11	10	548.22	547.82	42	0.0095	30	0.013	0.00	22.94	4.77	0.35	0.14	0.00	0.14	0.25	0.23	0.48	553.94	553.33	0.00325	563.02	9.08	40.03	0.57	1.30	4.67	
12	11	549.55	548.32	100	0.0123	30	0.013	0.80	22.94	4.67	0.34	0.31	0.00	0.31	0.05	0.03	0.08	554.34	553.94	0.00313	564.45	10.11	45.40	0.51	1.25	4.67	
13	12	552.91	549.65	295	0.0111	30	0.013	6.58	21.40	4.32	0.29	0.79	0.00	0.79	0.27	0.00	0.27	555.39	554.34	0.00267	560.89	5.50	43.16	0.50	1.21	4.36	
14	13	554.30	553.01	127	0.0102	24	0.013	3.02	14.82	5.02	0.39	0.62	0.00	0.62	0.04	0.02	0.06	556.06	555.39	0.00487	560.88	4.82	22.83	0.65	1.16	4.72	
15	14	555.79	554.50	126	0.0103	21	0.013	3.15	7.18	2.88	0.13	0.24	0.00	0.24	0.20	0.06	0.26	556.86	556.06	0.00191	560.97	4.11	16.06	0.45	0.81	2.99	
16	15	556.66	555.99	98	0.0068	15	0.013	3.23	4.03	3.61	0.20	0.46	0.00	0.46	0.00	0.00	0.00	557.45	556.86	0.00471	561.49	4.04	5.33	0.76	0.79	3.28	
17	16	559.38	556.86	243	0.0104	12	0.013	0.80	0.80	0.81	0.01	0.08	0.00	0.08	0.00	0.00	0.00	559.70	557.45	0.00032	564.38	4.68	3.63	0.22	0.32	1.02	
18	12	557.00	556.05	18	0.0516	12	0.013	0.94	0.94	0.75	0.01	0.01	0.00	0.01	0.00	0.00	0.00	557.21	556.26	0.00028	564.79	7.58	8.10	0.12	0.21	1.20	
19	14	556.98	554.30	54	0.0497	12	0.013	4.62	4.62	6.12	0.58	0.98	0.00	0.98	0.00	0.00	0.00	557.53	556.06	0.01819	562.96	5.44	7.94	0.58	0.55	5.88	
20	15-FES2	546.49	542.48	186	0.0216	30	0.013	10.92	29.06	5.86	0.53	0.92	0.00	0.92	0.10	0.02	0.11	547.82	544.98	0.00492	549.50	1.68	60.23	0.48	1.21	5.92	
21	20	549.95	546.49	303	0.0114	18	0.013	2.61	4.81	2.60	0.10	0.58	0.00	0.58	0.00	0.00	0.00	550.63	547.82	0.00191	555.75	5.13	11.23	0.43	0.68	2.72	
22	21	558.24	549.95	200	0.0414	15	0.013	2.20	2.20	1.30	0.03	0.12	0.00	0.12	0.00	0.00	0.00	558.58	550.63	0.00061	563.75	5.17	13.15	0.17	0.34	1.79	
23A	20	546.89	546.69	70	0.0028	21	0.013	0.00	13.33	5.54	0.48	0.50	0.00	0.50	0.05	0.00	0.05	548.97	548.42	0.00708	556.04	7.07	8.46	1.58	1.73	5.54	
23	23A	552.58	549.09	192	0.0182	21	0.013	3.39	13.33	5.85	0.53	1.51	0.00	1.51	0.00	0.00	0.00	553.58	550.09	0.00788	557.28	3.70	21.37	0.62	1.00	5.54	
24	23	555.34	552.58	326	0.0085	18	0.013	9.94	9.94	6.47	0.65	3.86	0.00	3.86	0.00	0.00	0.00	557.68	553.83	0.01184	558.04	0.36	9.67	1.03	1.25	5.62	

"AS-BUILT"

- GENERAL CONTRACTOR: ARCO CONSTRUCTION CO., INC.
- ARCHITECT: THOMAS ROOF INC.
- STRUCTURAL ENGINEER: IBRAHIM ENGINEERING CORP.
- GEOTECHNICAL ENGINEER: GEOTECHNOLOGY
- CIVIL ENGINEER: J.R. GRIMES CONSULTING ENGINEERS
- MECHANICAL ENGINEER: JARRELL MECHANICAL CONTRACTORS
- PLUMBING ENGINEER: SYSTEM AIRE, INC.
- ELECTRICAL ENGINEER: PAYNE CREST ELECTRIC
- FIRE PROTECTION: BI-STATE FIRE PROTECTION



LABOURÉ CENTRE
4601 HIGHWAY K
O'FALLON, MISSOURI



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581 Maryland Ave. Suite 300
St. Louis, Missouri 63105
Tel: 728-9900 Fax: 728-9901
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DATE: 02/13/04

REVISIONS

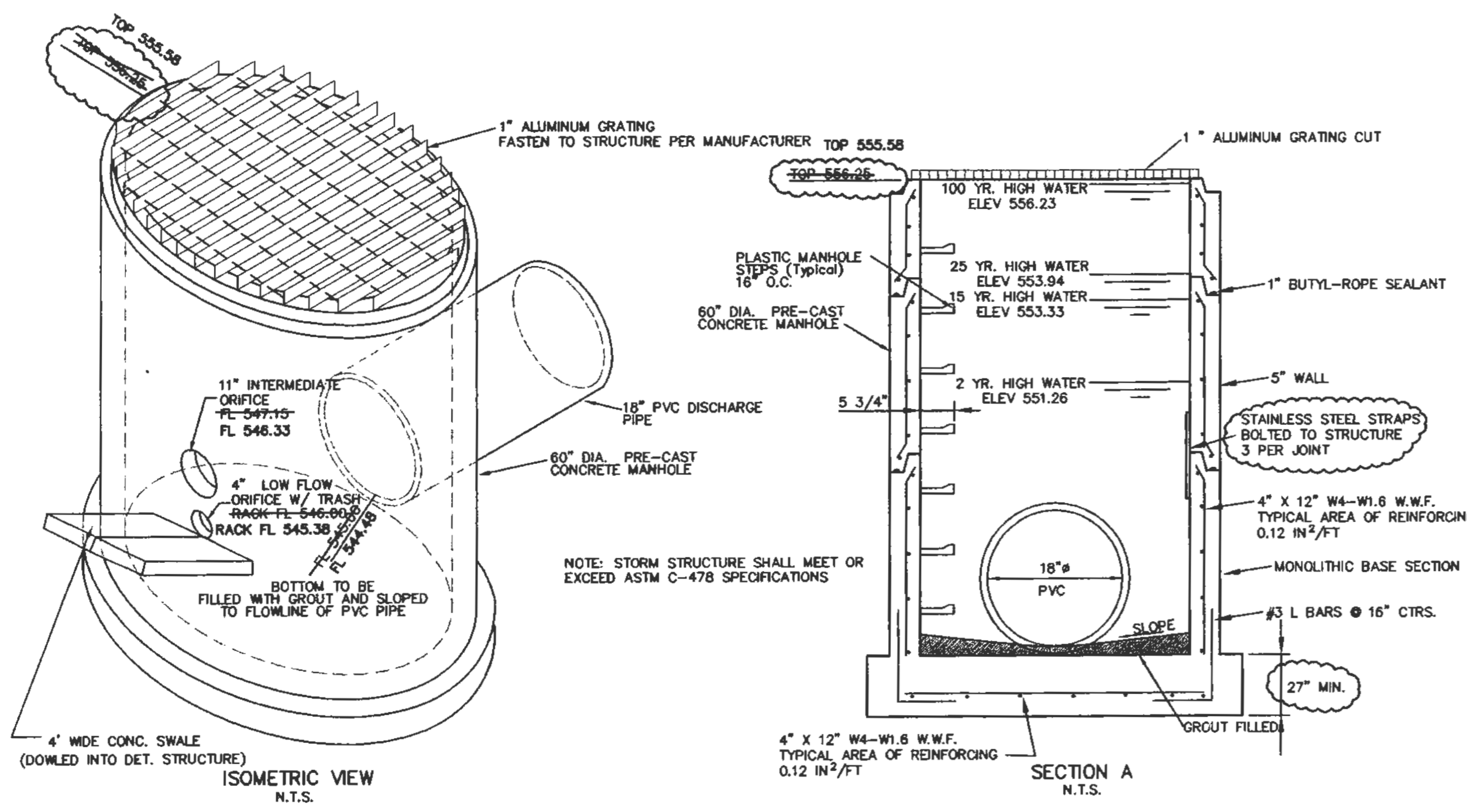
PER CITY, DUCKETT CREEK	
& MODOT COMMENTS	04/06/04
PER CITY COMMENTS	04/28/04
PER SEWER CONFLICT	08/24/04
PER MODOT COMMENTS	9/02/04

DWCL BY: J.W
PROJECT NO.: 10048
SHEET NO.:

C8.4
STORM SEWER PROFILES

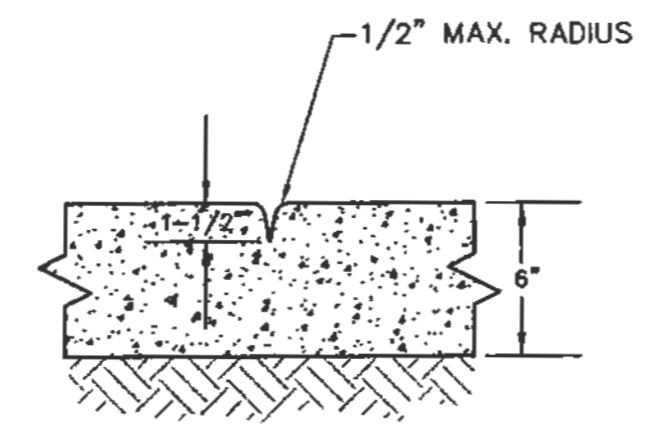
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35 N. CENTRAL, STE 400
ST. LOUIS, MO 63105
PH: (314) 863-6061
FAX: (314) 863-6146

P&Z FILE # 0704/0704.01

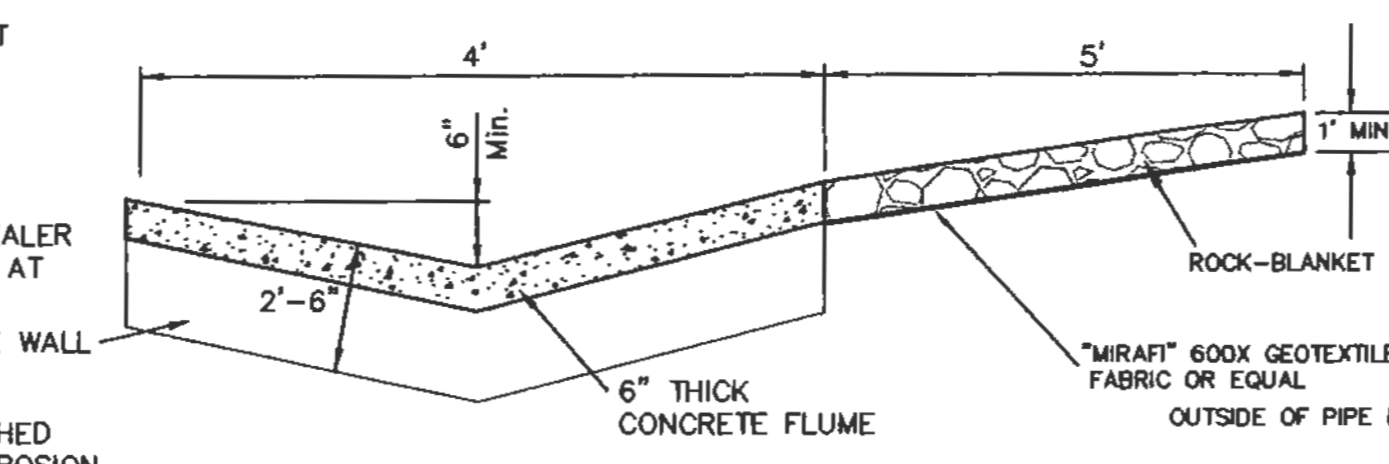


DETENTION STRUCTURE DETAIL

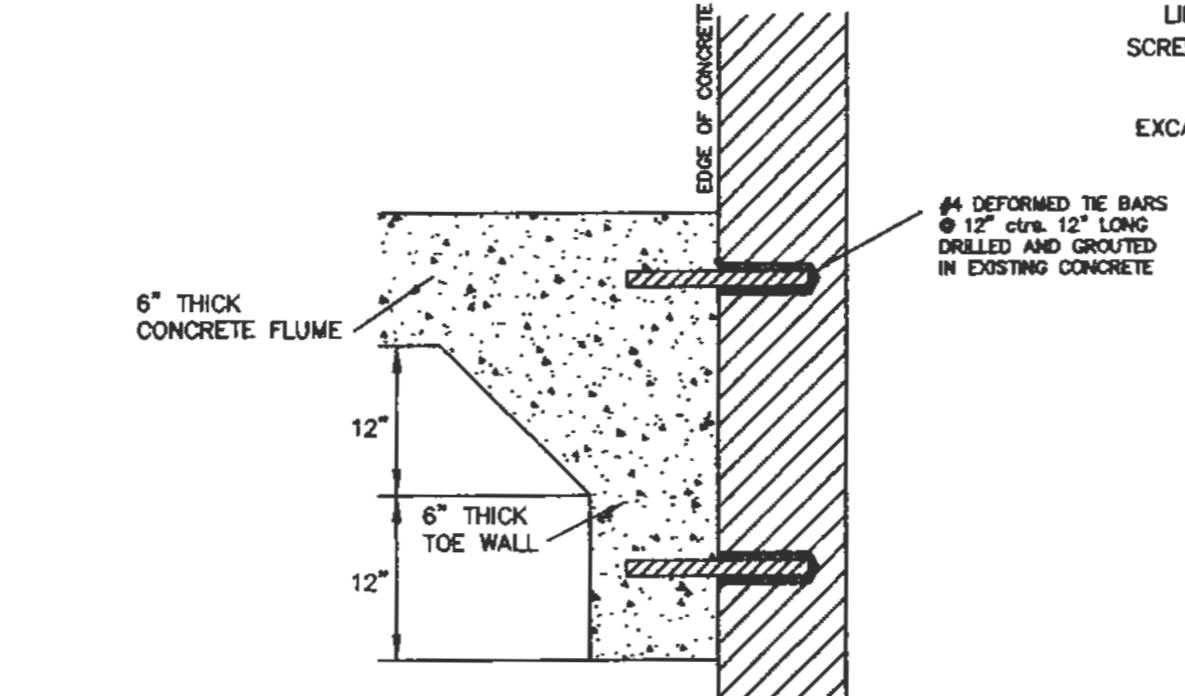
- NOTES:**
1. CONCRETE SHALL BE 3000 p.s.i. STRENGTH AT 28 DAYS.
 2. TOE WALL SHALL BE CONSTRUCTED AT BOTH UPSTREAM AND DOWNSTREAM ENDS.
 3. 1/2" PREFORMED FIBER JOINT WITH JOINT SEALER TO BE CONSTRUCTED AS TRANSVERSE JOINT AT 50' INTERVALS.
 4. MINIMUM CHANNEL SLOPE TO BE 0.5%.
 5. DISTURBED AREAS TO BE SEEDED AND MULCHED UPON COMPLETION OF CONSTRUCTION AND EROSION CONTROL DEVICES INSTALLED PER DIRECTION OF OWNER OR ENGINEER.
 6. CONCRETE SWALE TO BE DOWLED INTO THE DETENTION STRUCTURE USING #4 DOWELS.
 7. CONTROL JOINTS SHALL BE HAND-TOOLED OR SAWCUT AT A MAXIMUM OF 15' o.c. AND AT ANY/ALL P.C.'S AND P.T.'S.



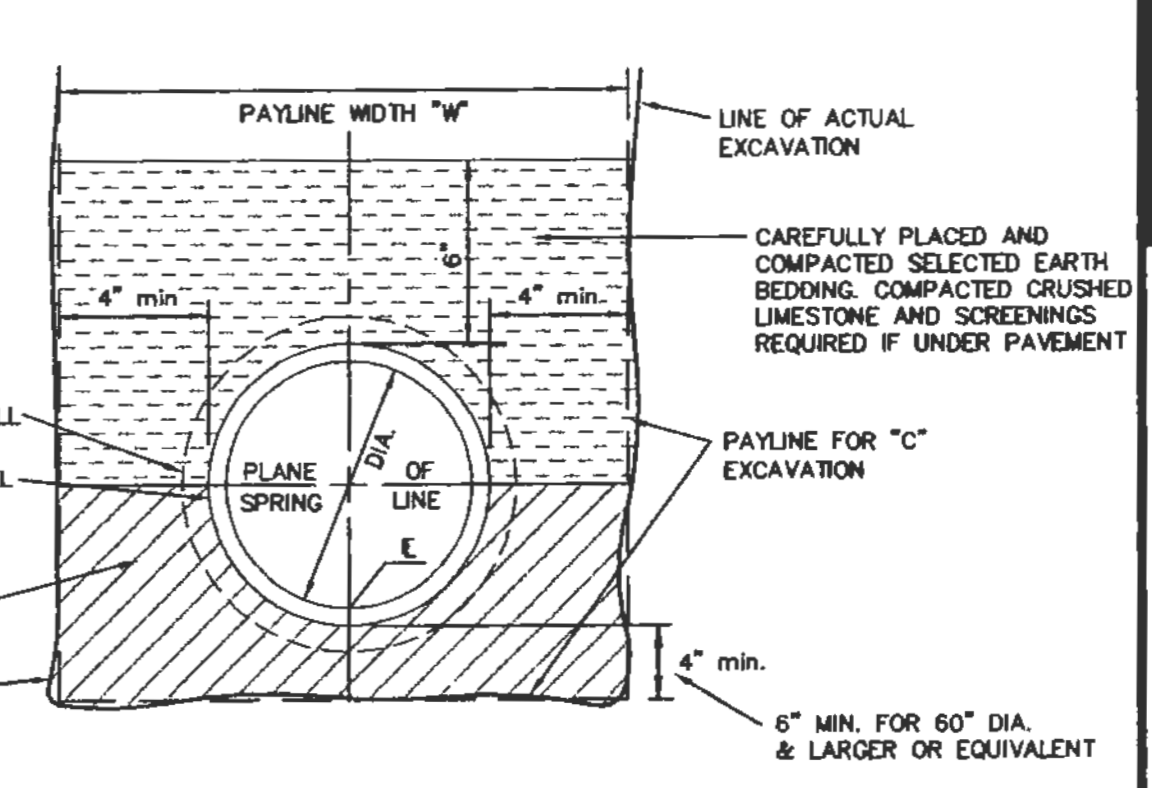
CONTROL JOINT DETAIL
DETENTION BASIN CONC. SWALE



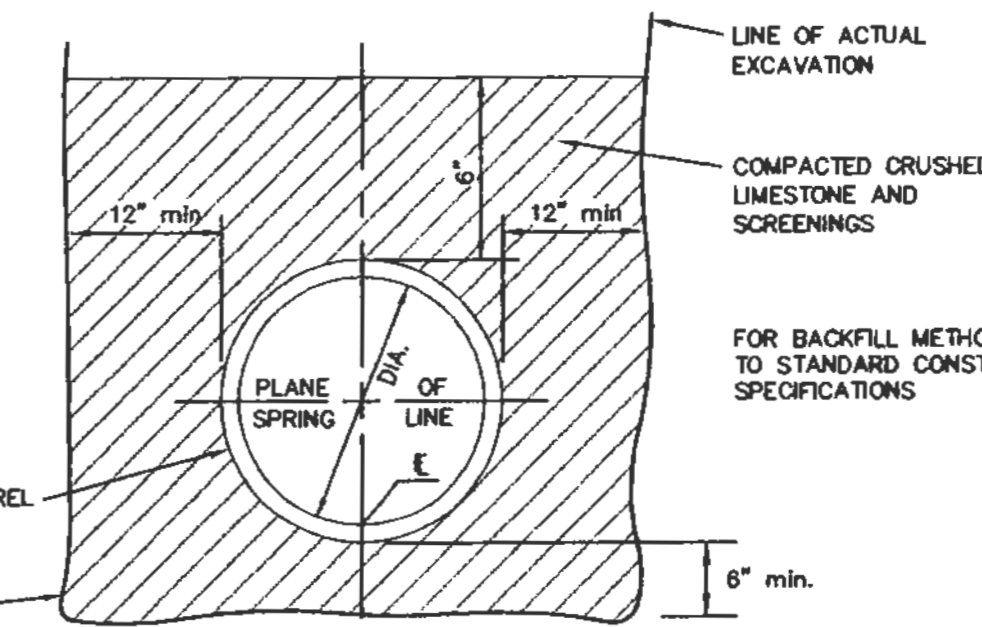
CONCRETE SWALE DETAIL



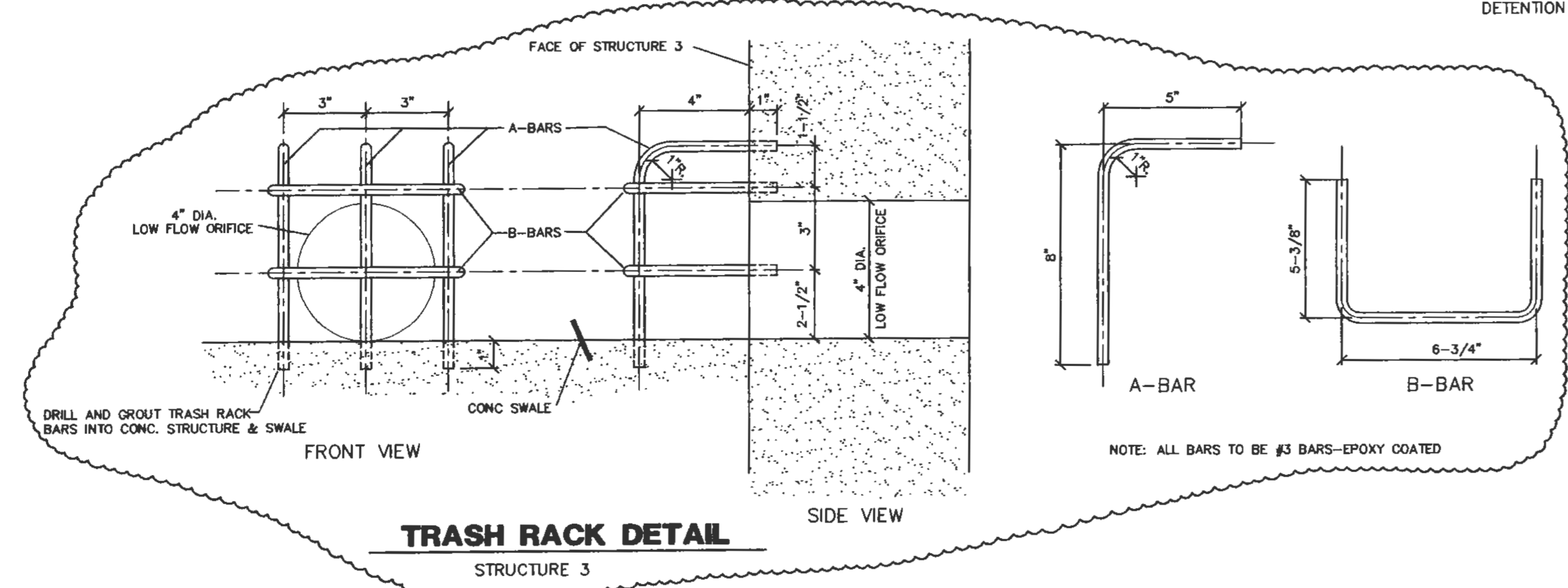
DOWELLED FLUME CONNECTION



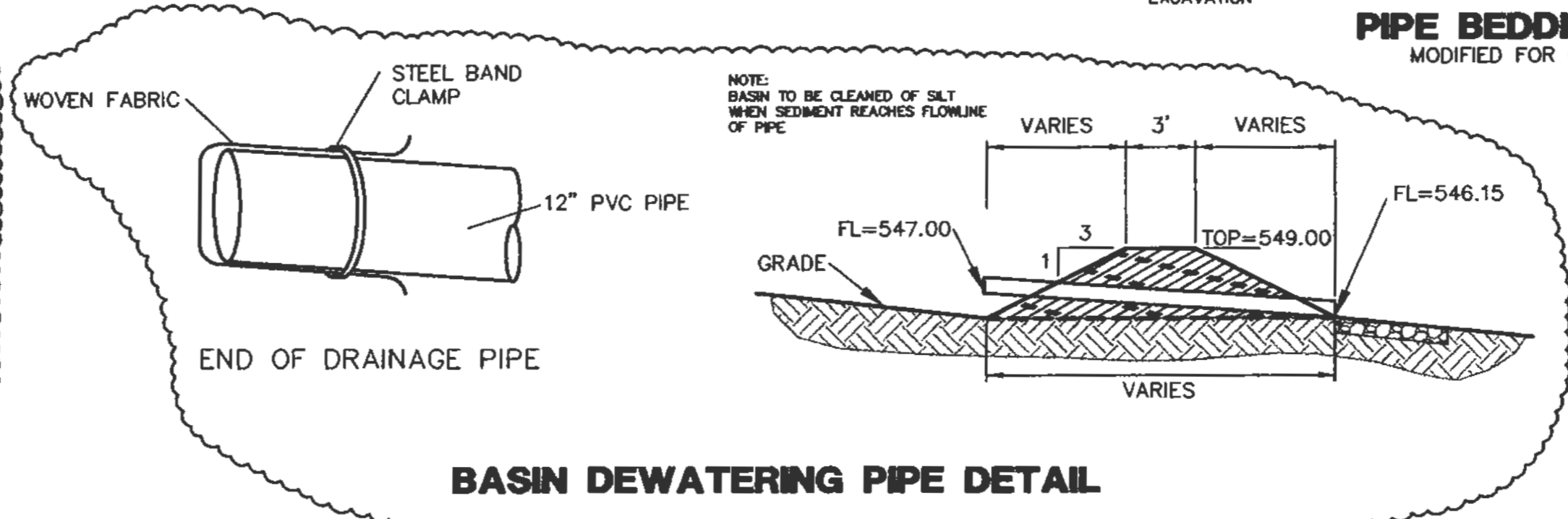
PIPE BEDDING CLASS "C"
MODIFIED FOR REINFORCED CONCRETE PIPE



PIPE BEDDING CLASS "C"
MODIFIED FOR CORRUGATED METAL PIPE

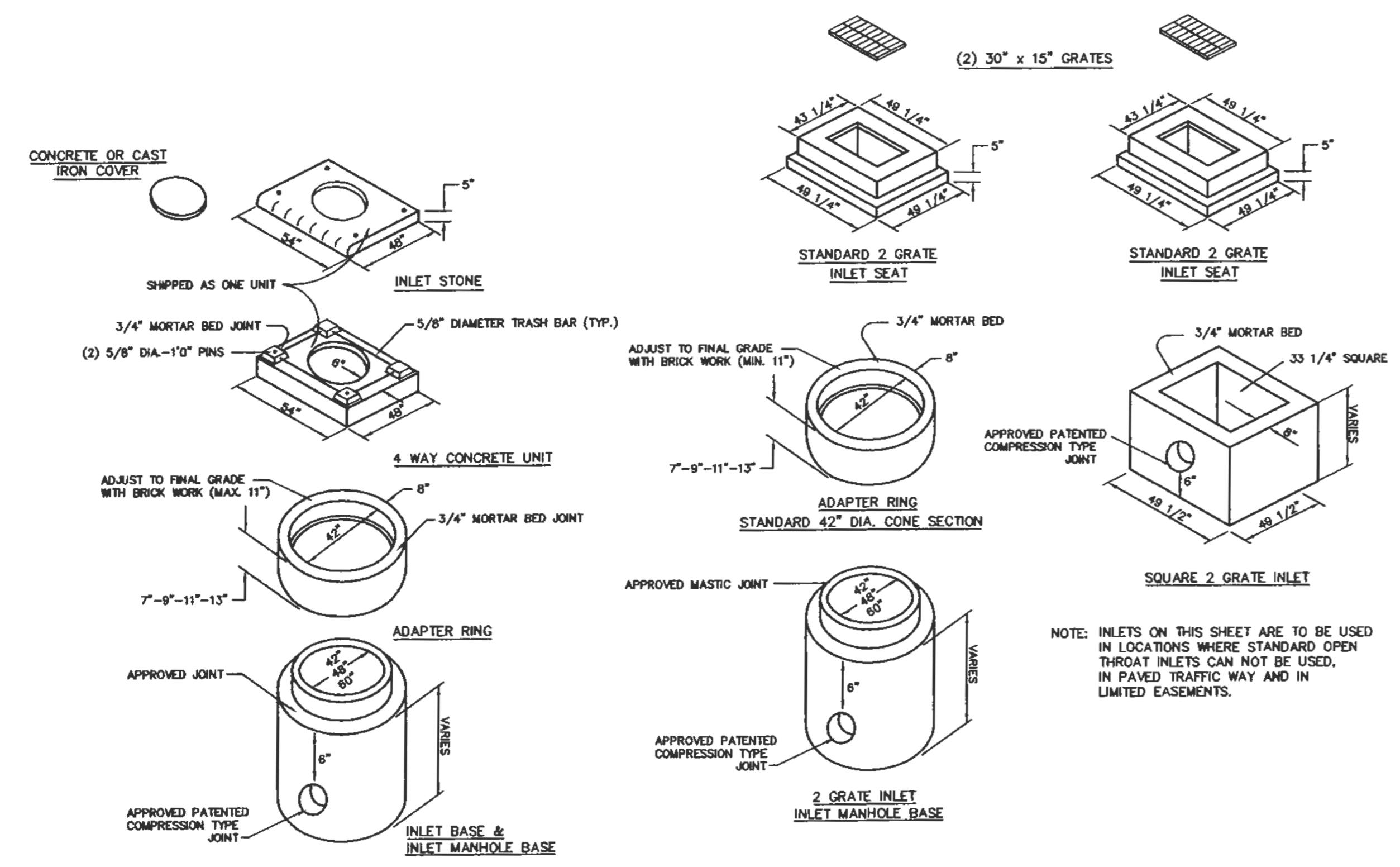


TRASH RACK DETAIL



BASIN DEWATERING PIPE DETAIL

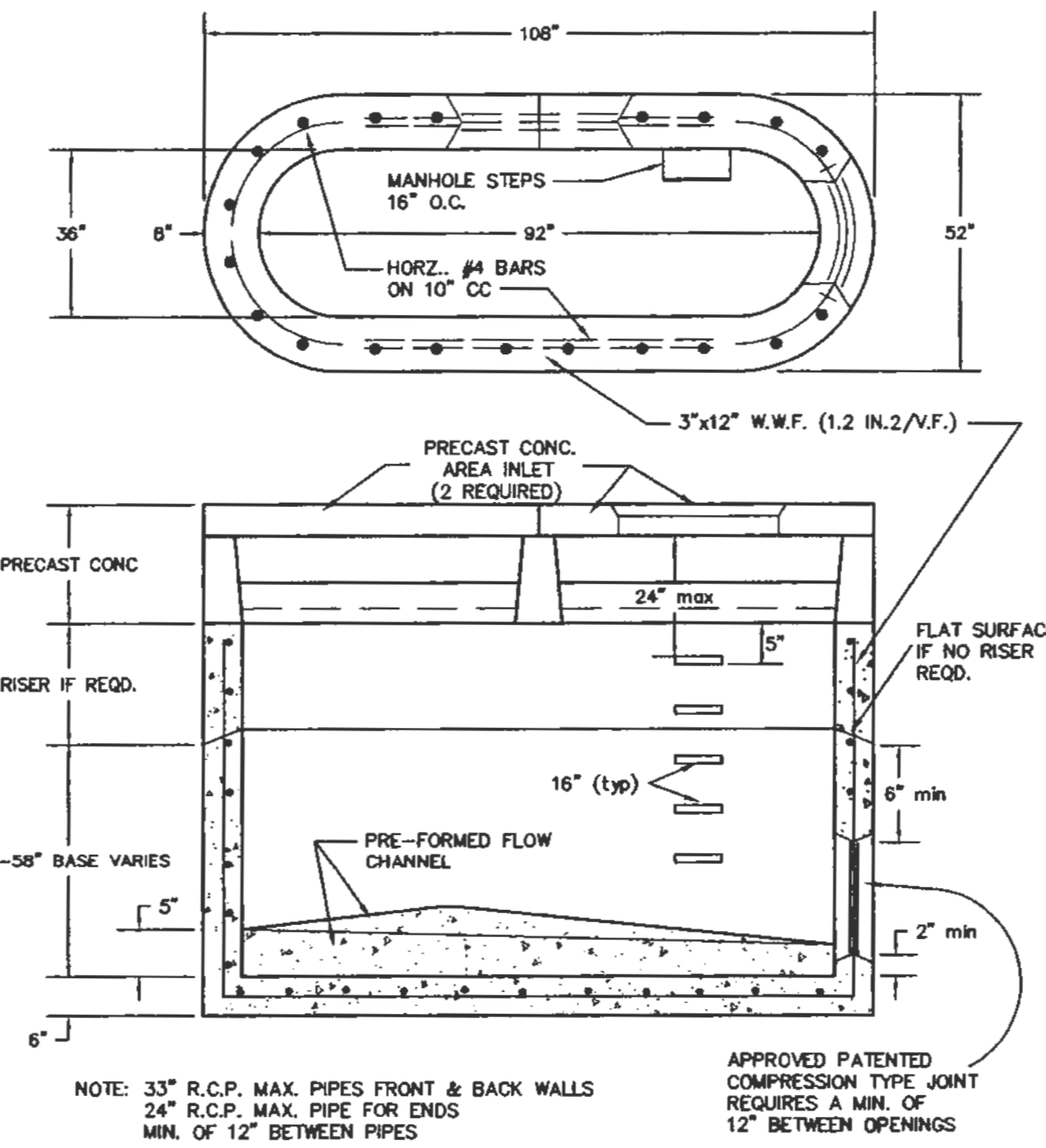
"AS-BUILT"



AREA INLET PRECAST CONCRETE

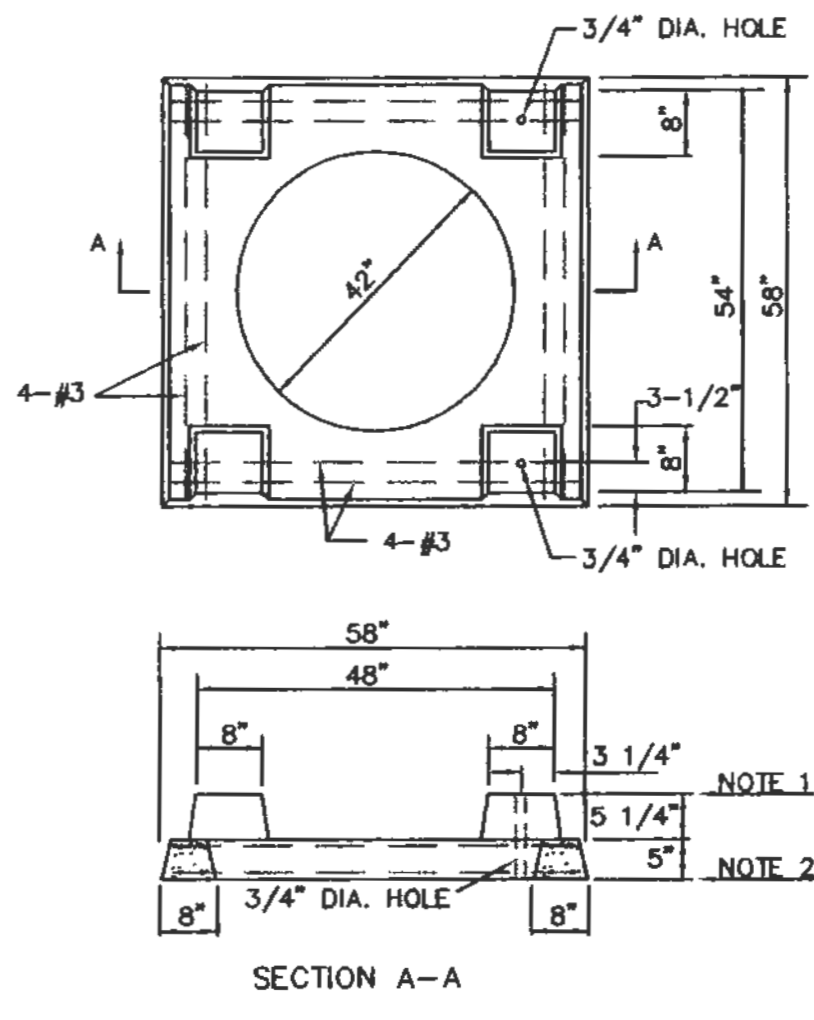
PREPARED FOR:
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ST. LOUIS, MO 63105
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FAX: (314) 863-6146

2 GRATE INLETS
PRE-CAST CONCRETE



DOUBLE AREA INLET
PRECAST CONCRETE

NOTE: COMPACTED ROCK BACKFILL SHALL BE PLACED AROUND THE DISTURBED GROUND AT DROP STRUCTURES



- NOTES:**
1. SET STANDARD INLET STONE IN 3/4" MORTAR BED AND DOWEL WITH 5/8" 1'-0" LONG PINS AND GROUT.
 2. RAISE TO FINAL GRADE WITH COURSES OF BRICK AND SET THE UNIT TO BASE WITH 3/4" MORTAR BED.
 3. THIS UNIT TO BE USED WITH 42" I.D. BASE.
 4. 4000 P.S.I. CONCRETE IS REQUIRED.

PRECAST CONCRETE
UNIT FOR 4-WAY AREA INLET

- GENERAL CONTRACTOR**
ARCO CONSTRUCTION CO., INC.
- ARCHITECT**
THOMAS ROOF INC. ARCHITECTS
IBRAHIM ENGINEERING CORP.
- STRUCTURAL ENGINEER**
GEOTECHNOLOGY
- CIVIL ENGINEER**
J.R. GRIMES CONSULTING ENGINEERS
- MECHANICAL ENGINEER**
JARRELL MECHANICAL CONTRACTORS
- PLUMBING ENGINEER**
SYSTEM AIRE, INC.
- ELECTRICAL ENGINEER**
PAYNE CREST ELECTRIC
- FIRE PROTECTION**
BI-STATE FIRE PROTECTION



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8251 Maryland Ave. Suite 300
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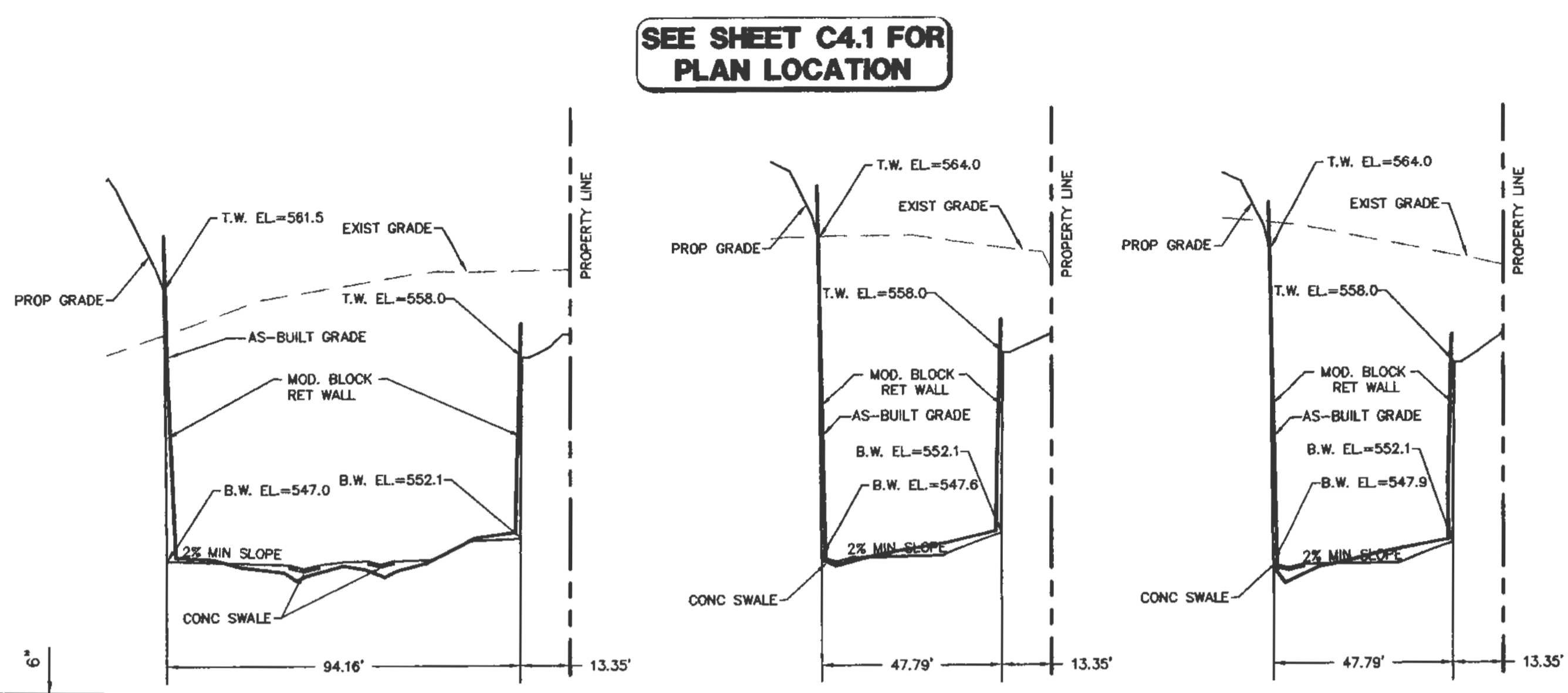
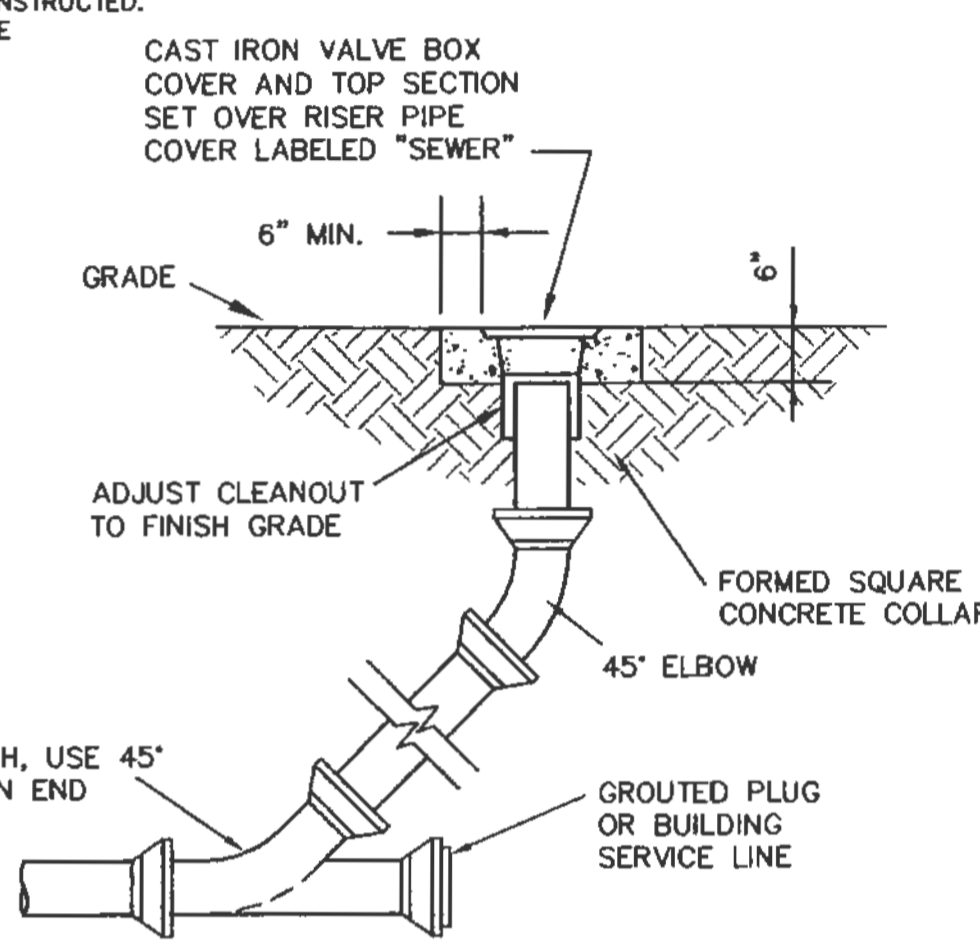
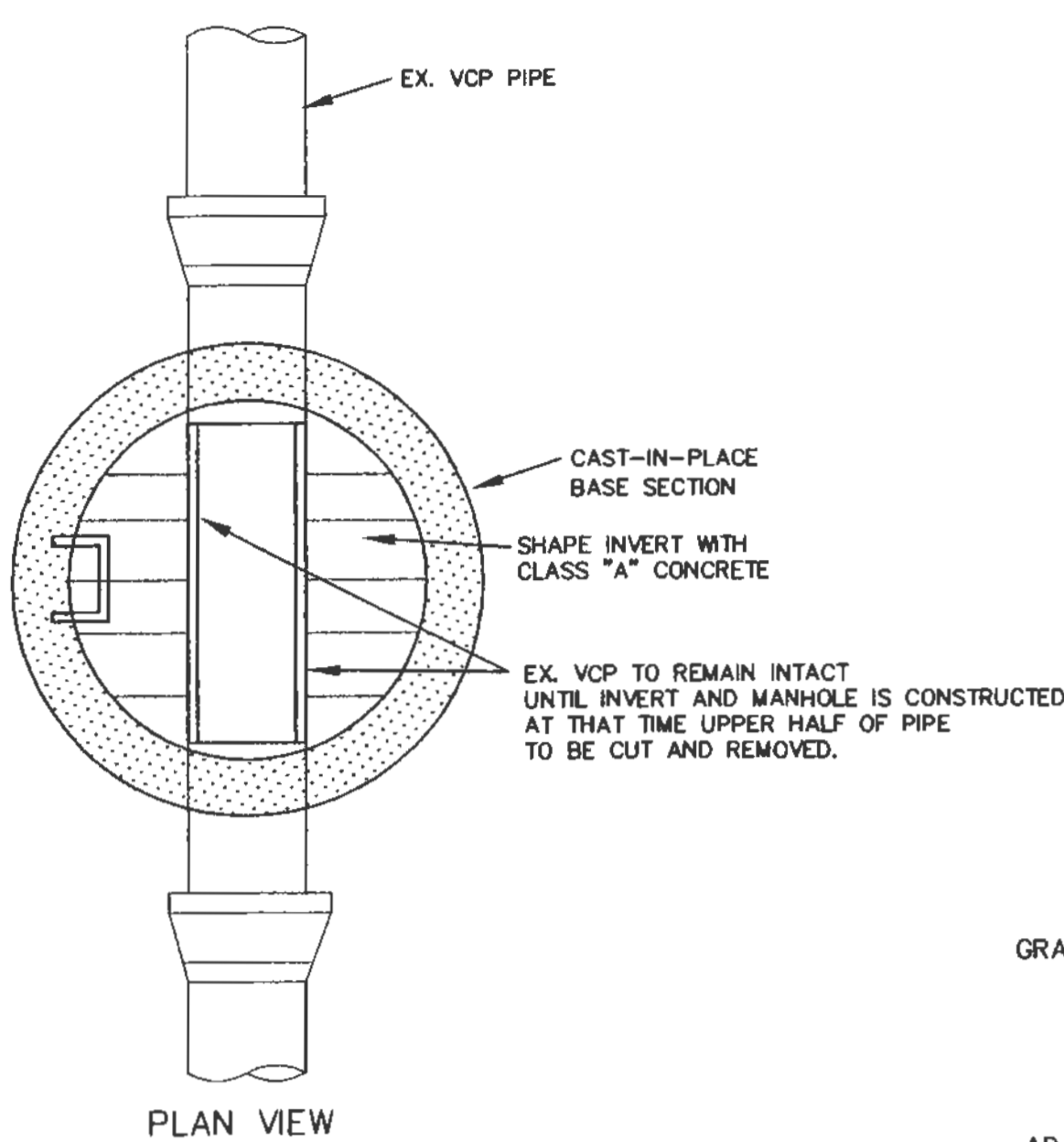
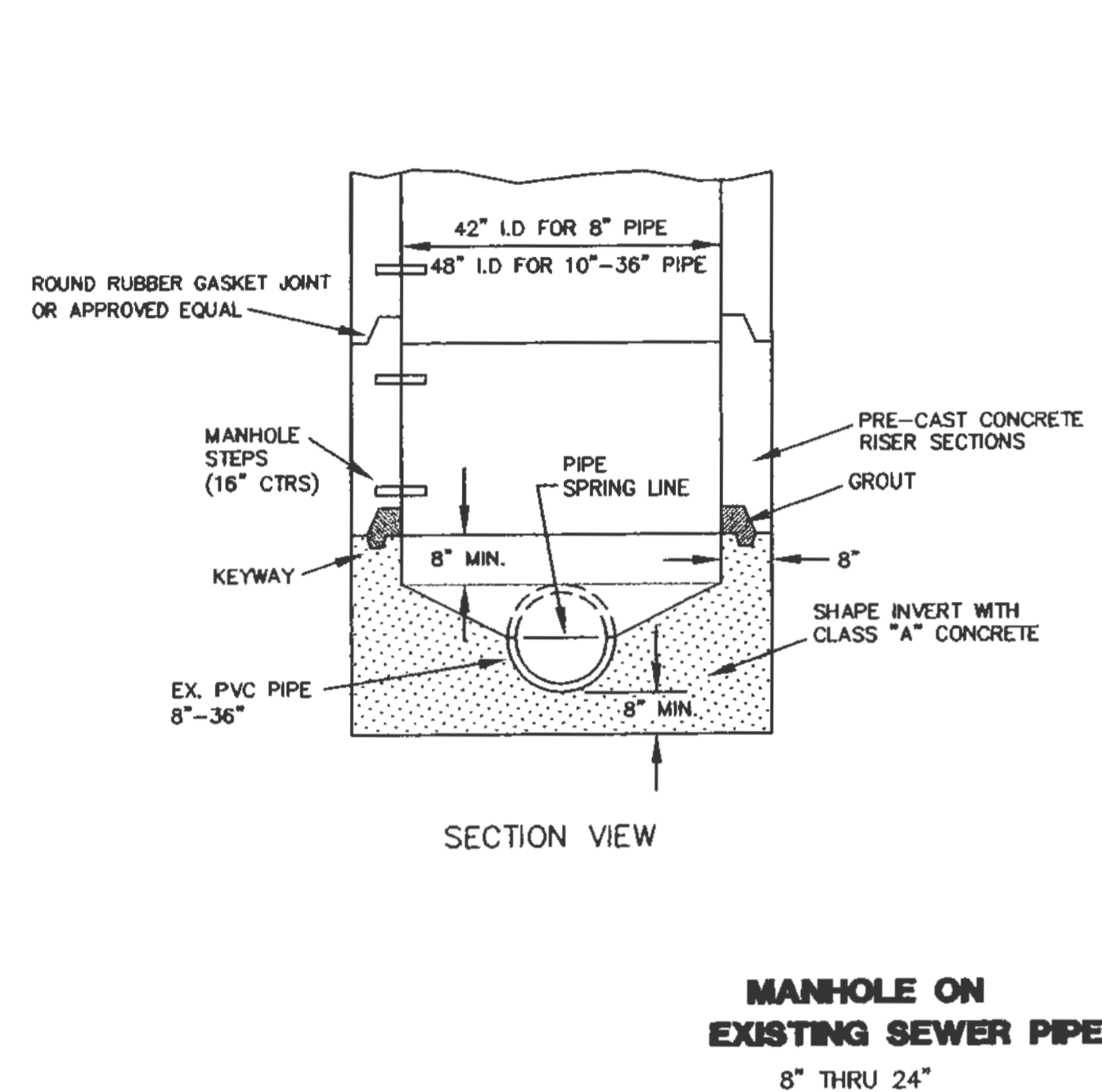
DATE: 02/19/04

REVISIONS:
PER CITY, DUCKETT CREK & MODOT COMMENTS 04/06/04
PER CITY COMMENTS 04/28/04

DWG. BY: J.W.
PROJECT NO.: 10048
SHEET NO.:

C8.5
STORM SEWER DETAILS

P&Z FILE # 0704/0704.01



SEE SHEET C4.1 FOR PLAN LOCATION

- GENERAL CONTRACTOR: ARCO CONSTRUCTION CO., INC.
- ARCHITECT: THOMAS ROOF INC. ARCHITECTS
- STRUCTURAL ENGINEER: IBRAHIM ENGINEERING CORP.
- GEOTECHNICAL ENGINEER: GEOTECHNOLOGY
- CIVIL ENGINEER: J.R. GRIMES CONSULTING ENGINEERS
- MECHANICAL ENGINEER: JARRELL MECHANICAL CONTRACTORS
- PLUMBING ENGINEER: SYSTEM AIRE, INC.
- ELECTRICAL ENGINEER: PAYNE CREST ELECTRIC
- FIRE PROTECTION: BI-STATE FIRE PROTECTION

ARCO
Construction Company, Inc.

LABOURÉ CENTRE
4601 HIGHWAY K
O'FALLON, MISSOURI

MANHOLE		SEWER CLEANOUT		TYPICAL INVERTS	
SECTION B-B	SECTION A-A	SECTION B-B	SECTION A-A	PLAN	SIDE VIEW
SECTION B-B	SECTION A-A	SECTION B-B	SECTION A-A	END VIEW	
PLAN (WITHOUT COVER OR SPILLWAY)	PLAN (PRECAST CONCRETE SLAB COVER)	PLAN (1/4" STEEL PLATE COVER)	PLAN (GRATE AND BEARING PLATE)	TYPICAL INVERTS	
TYPE A COVER AND SPILLWAY DETAILS		TYPE B COVER AND SPILLWAY DETAILS		TYPE C COVER	

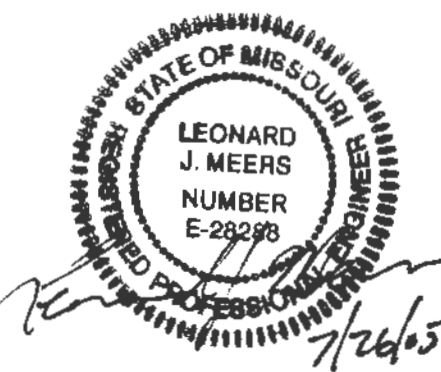
MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION

DROP INLET TYPE E

DATE: _____ EFFECTIVE: 08-11-10 604.23B 1/1

PREPARED FOR:
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ST. LOUIS, MO 63105
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"AS-BUILT"



P&Z FILE # 0704/0704.01

THOMAS ROOF INC. ARCHITECTS
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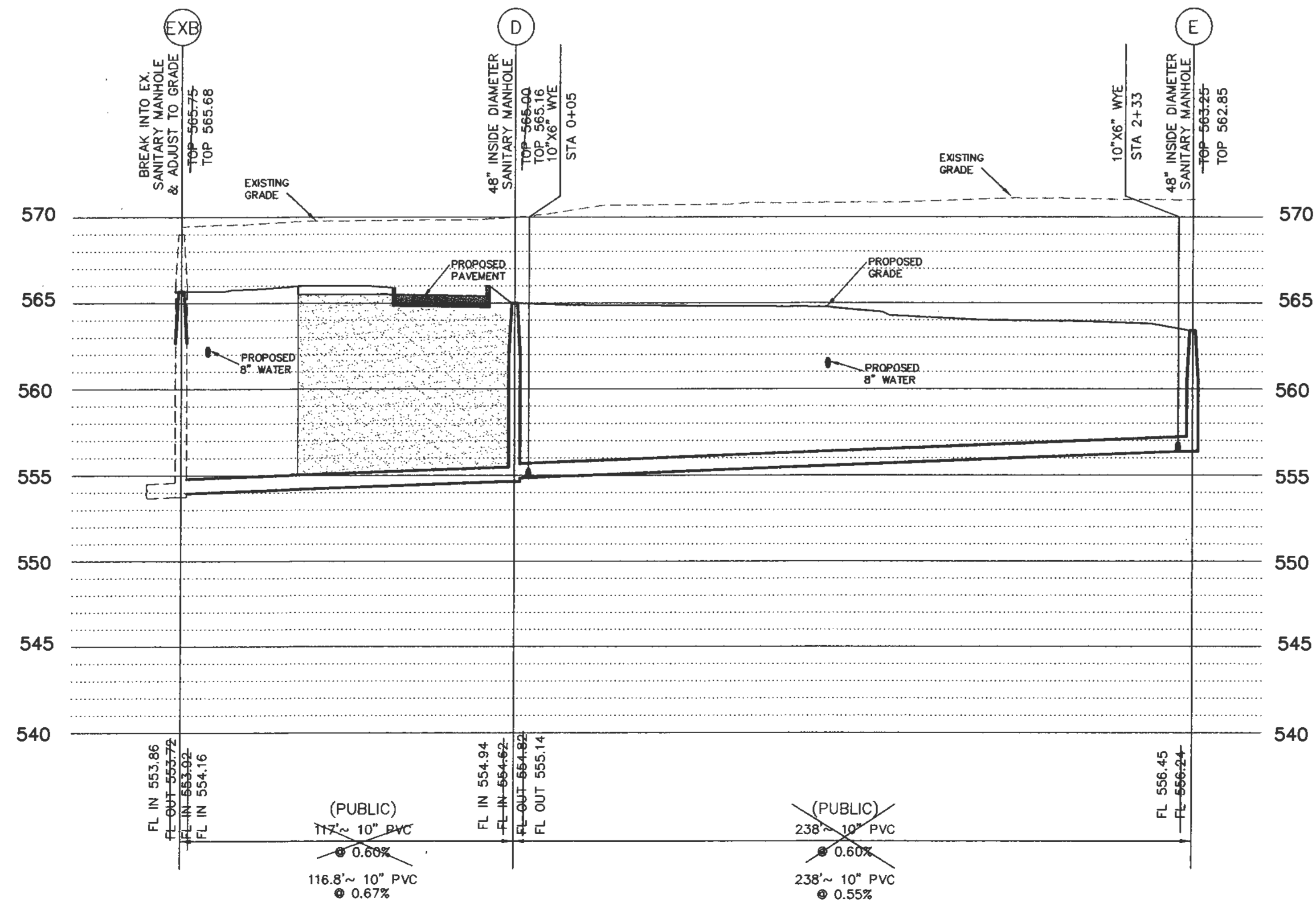
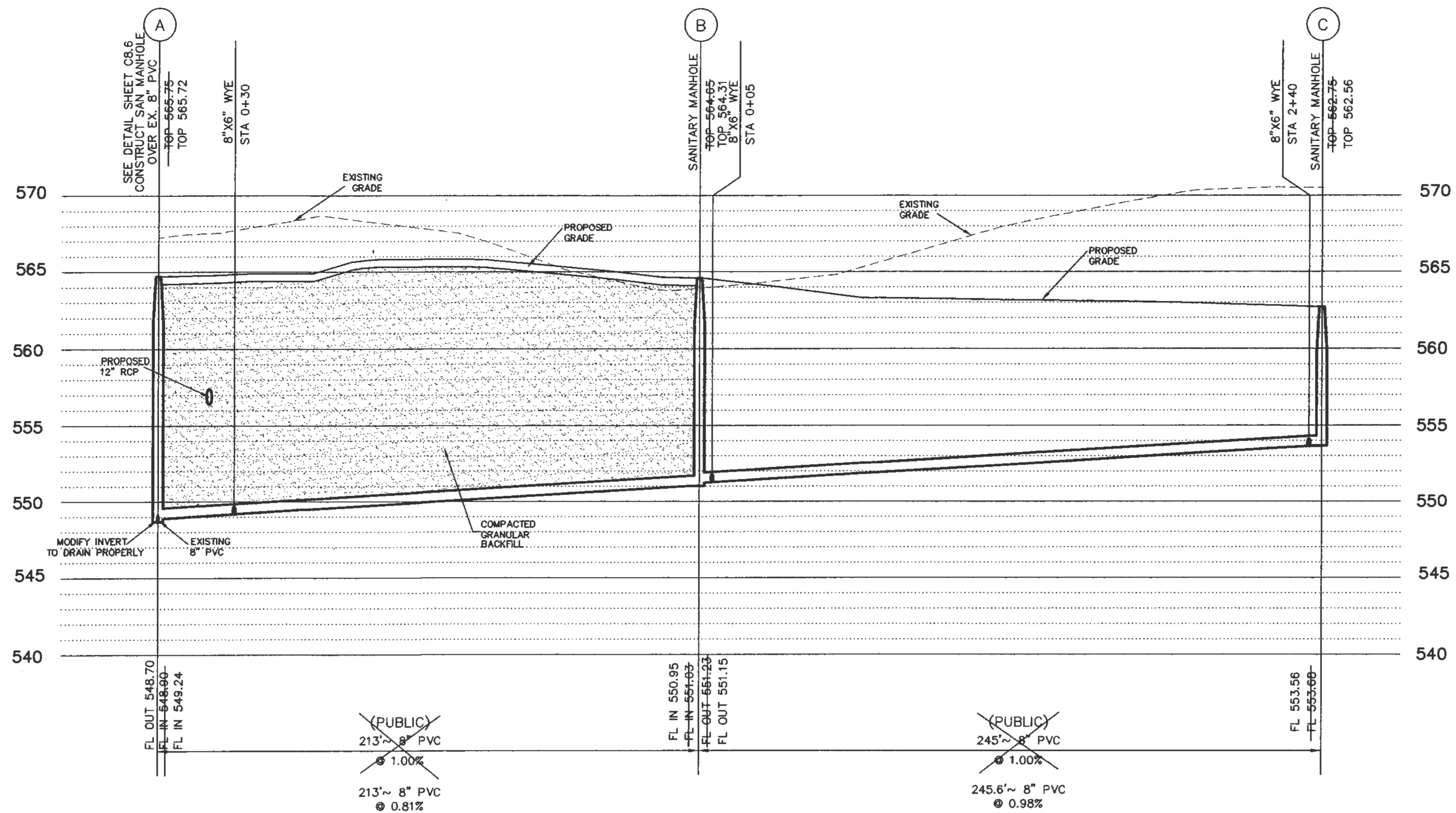
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PER CITY, DUCKETT CREEK & MODOT COMMENTS 04/06/04

DWG. BY: J.W. PROJECT NO.: 10048 SHEET NO.:

C8.6
STORM SEWER DETAILS



AS THE OUTLOTS ARE DEVELOPED ANY MANHOLE THAT FALLS WITHIN A PAVED AREA SHALL HAVE THE LID CONVERTED TO A LOCK-TYPE "N" LID

5
VERT.
30
HORIZ.
SCALE:

"AS-BUILT"

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GENERAL CONTRACTOR
ARCHITECT
STRUCTURAL ENGINEER
GEOTECHNICAL ENGINEER
CIVIL ENGINEER
MECHANICAL ENGINEER
PLUMBING ENGINEER
ELECTRICAL ENGINEER
FIRE PROTECTION

ARCO CONSTRUCTION CO., INC.
THOMAS ROOF INC. ARCHITECTS
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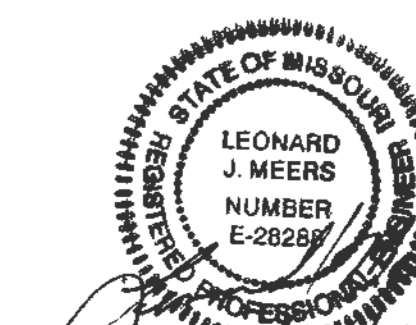
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REVISIONS

PER CITY, DUCKETT CREEK
& MODOT COMMENTS 04/06/04

DWG. BY J.W
PROJECT NO. 10048
SHEET NO.



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C9.1
SANITARY SEWER PROFILES