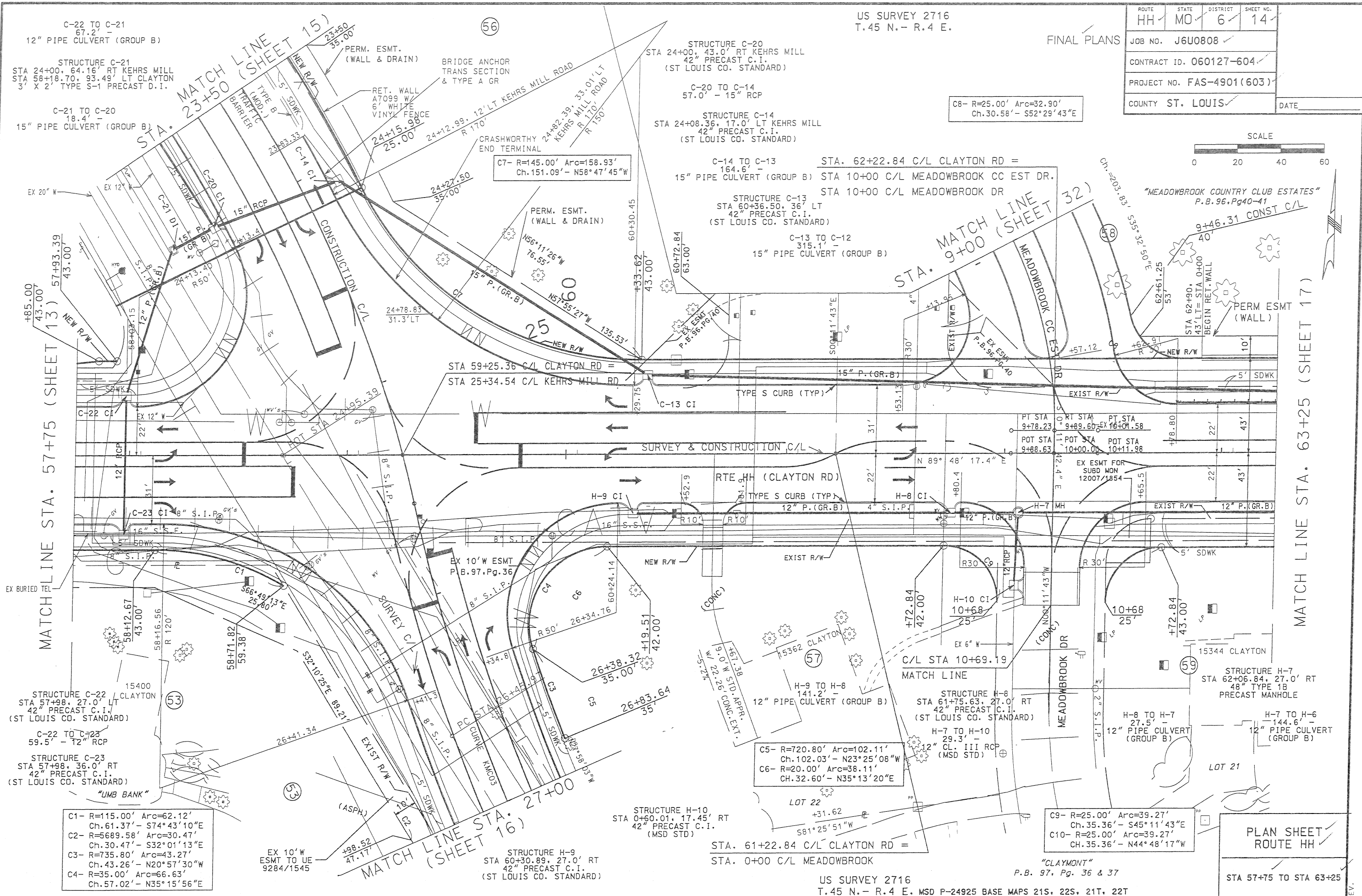
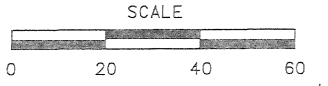


US SURVEY 2716  
T.45 N. - R.4 E.

ROUTE	STATE	DISTRICT	SHEET NO.
HH	MO	6	14
JOB NO. J6U0808			
CONTRACT ID. 060127-604			
PROJECT NO. FAS-4901(603)			
COUNTY ST. LOUIS			
			DATE

FINAL PLANS



C-22 TO C-21  
67.2' -  
12" PIPE CULVERT (GROUP B)

STRUCTURE C-21  
STA 24+00, 64.16' RT KEHRS MILL  
STA 58+16.70, 93.49' LT CLAYTON  
3' X 2' TYPE S-1 PRECAST D.I.

C-21 TO C-20  
18.4' -  
15" PIPE CULVERT (GROUP B)

STRUCTURE C-20  
STA 24+00, 43.0' RT KEHRS MILL  
42" PRECAST C.I.  
(ST LOUIS CO. STANDARD)

C-20 TO C-14  
57.0' - 15" RCP

STRUCTURE C-14  
STA 24+08.36, 17.0' LT KEHRS MILL  
42" PRECAST C.I.  
(ST LOUIS CO. STANDARD)

C8- R=25.00' Arc=32.90'  
Ch.30.58' - S52°29'43"E

C-14 TO C-13  
164.6' -  
15" PIPE CULVERT (GROUP B)

STRUCTURE C-13  
STA 60+36.50, 36' LT  
42" PRECAST C.I.  
(ST LOUIS CO. STANDARD)

C-13 TO C-12  
315.1' -  
15" PIPE CULVERT (GROUP B)

MATCH LINE STA. 57+75 (SHEET 13)

MATCH LINE STA. 63+25 (SHEET 17)

- C1- R=115.00' Arc=62.12'  
Ch.61.37' - S74°43'10"E
- C2- R=5689.58' Arc=30.47'  
Ch.30.47' - S32°01'13"E
- C3- R=735.80' Arc=43.27'  
Ch.43.26' - N20°57'30"W
- C4- R=35.00' Arc=66.63'  
Ch.57.02' - N35°15'56"E

EX 10' W  
ESMT TO UE  
9284/1545

STRUCTURE H-9  
STA 60+30.89, 27.0' RT  
42" PRECAST C.I.  
(ST LOUIS CO. STANDARD)

STRUCTURE H-10  
STA 0+60.01, 17.45' RT  
42" PRECAST C.I.  
(MSD STD)

STA. 61+22.84 C/L CLAYTON RD =  
STA. 0+00 C/L MEADOWBROOK

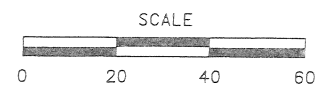
US SURVEY 2716  
T.45 N. - R.4 E. MSD P-24925 BASE MAPS 21S, 22S, 21T, 22T

"CLAYMONT"  
P.B. 97, Pg. 36 & 37

PLAN SHEET  
ROUTE HH

STA 57+75 TO STA 63+25

ROUTE	STATE	DISTRICT	SHEET NO.
HH	MO	6	15
JOB NO. J6U0808			
CONTRACT ID. 060127-604			
PROJECT NO. FAS-4901(603)			
COUNTY ST. LOUIS			DATE



U.S. SURVEY 2716  
T.45 N.-R.4 E.  
"MEADOWBROOK COUNTRY CLUB ESTATES"  
P.B. 96, Pg 40-41

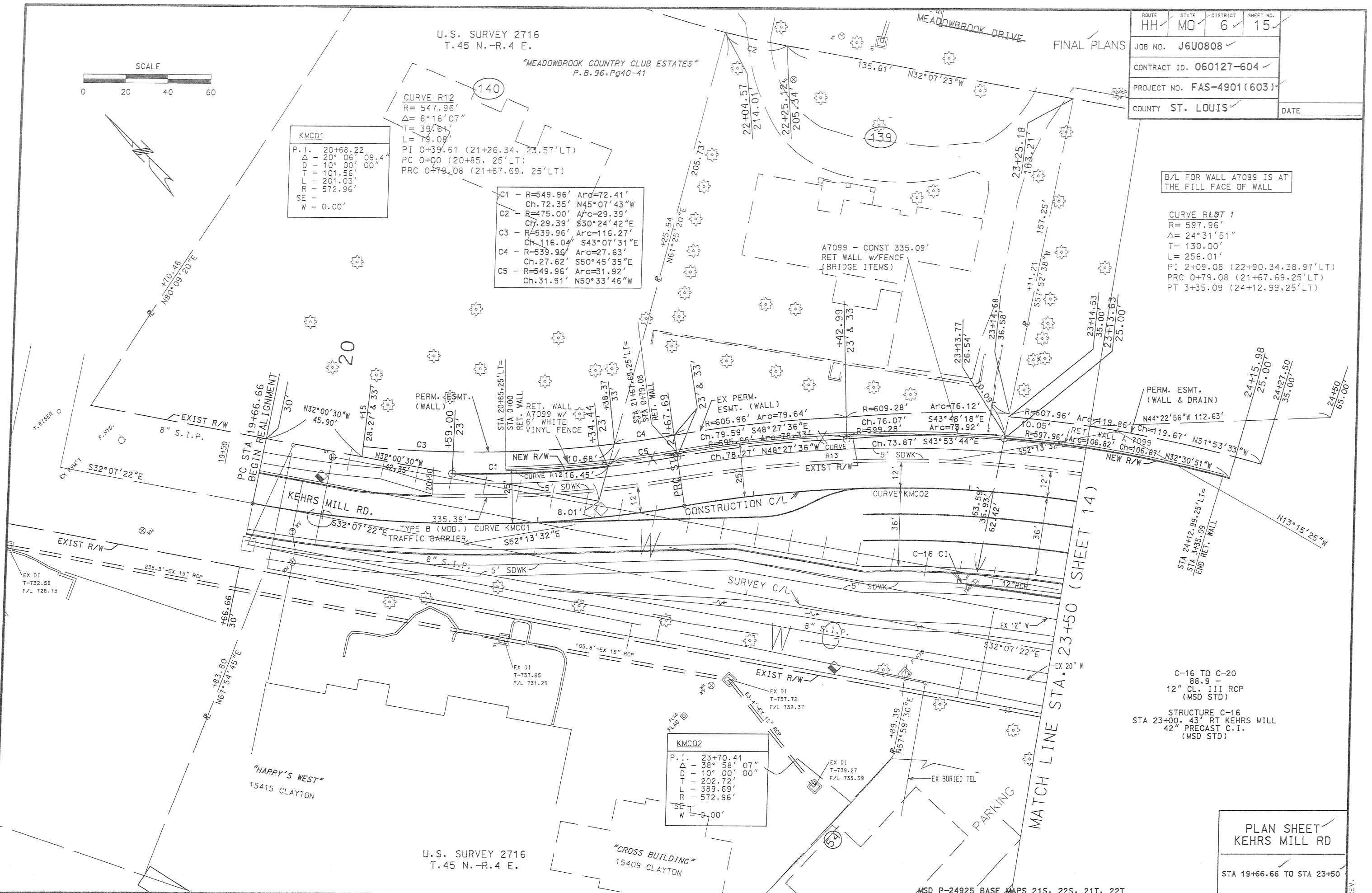
KMCO1	
P. I.	20+68.22
Δ	20° 06' 09.4"
D	10' 00' 00"
T	101.55'
L	201.03'
R	572.96'
SE	-
W	0.00'

CURVE R12  
R=547.96'  
Δ=8°16'07"  
T=39.67'  
L=79.08'  
PI 0+39.61 (21+26.34, 23.57'LT)  
PC 0+00 (20+85.25'LT)  
PRC 0+79.08 (21+67.69, 25'LT)

- C1 - R=549.96' Arc=72.41'  
Ch. 72.35' N45°07'43"W
- C2 - R=475.00' Arc=29.39'  
Ch. 29.39' S30°24'42"E
- C3 - R=539.96' Arc=116.27'  
Ch. 116.04' S43°07'31"E
- C4 - R=539.96' Arc=27.63'  
Ch. 27.62' S50°45'35"E
- C5 - R=549.96' Arc=31.92'  
Ch. 31.91' N50°33'46"W

B/L FOR WALL A7099 IS AT THE FILL FACE OF WALL

CURVE R187 1  
R=597.96'  
Δ=24°31'51"  
T=130.00'  
L=256.01'  
PI 2+09.08 (22+90.34, 38.97'LT)  
PRC 0+79.08 (21+67.69, 25'LT)  
PT 3+35.09 (24+12.99, 25'LT)



KMCO2	
P. I.	23+70.41
Δ	38° 58' 07"
D	10' 00' 00"
T	202.72'
L	389.69'
R	572.96'
SE	-
W	0.00'

MATCH LINE STA. 23+50 (SHEET 14)

C-16 TO C-20  
88.9 -  
12" CL. III RCP  
(MSD STD)  
STRUCTURE C-16  
STA 23+00, 43' RT KEHRS MILL  
42" PRECAST C.I.  
(MSD STD)

PLAN SHEET  
KEHRS MILL RD  
STA 19+66.66 TO STA 23+50

U.S. SURVEY 2716  
T.45 N.-R.4 E.

# FINAL PLANS

ROUTE	STATE	DISTRICT	SHEET NO.
HH	MO	6	B-3
JOB NO.		J6U0806	
CONTRACT ID.		080127-604	
PROJECT NO.		FAS-4901(603)	
COUNTY	ST. LOUIS	DATE	

## GENERAL NOTES:

Design Specifications:  
 2002 - AASHTO 17th Edition  
 Load Factor Design  
 Seismic Performance Category A  
 Acceleration Coefficient = 0.12

All concrete for leveling pad and coping shall be Class B or B-1 with  $f'c = 4000$  psi.

The MSE wall system shall be built vertical.

The MSE wall system shall be a large block wall system in accordance with Sec 720.

Factor of safety shall be 2.0 for overturning, 1.5 for sliding and 2.0 for bearing.

For seismic design the factor of safety shall be 1.5 for overturning and 1.1 for sliding.

$\phi = 27^\circ$  for backfill material to be retained by the mechanically stabilized earth wall system.

$\phi = 27^\circ$  for foundation material the wall is to rest on.

$\phi \geq 34^\circ$  for the select granular backfill for structural systems.

Design  $\phi = 34^\circ$  for the select granular backfill for structural systems.

Allowable Bearing Pressure for foundation materials = 1.9 tsf.

The boring logs or other factual records of subsurface data and investigations performed by the department for the design of this project is available from the Project Contact upon written request.

Panel reinforcement shall be epoxy coated.

Anchorage reinforcement shall be spaced to avoid roadway drop inlet, pipes, fence posts and guardrail posts behind wall.

A filter cloth meeting the requirements for a Separation Geotextile material shall be placed between the select granular backfill for structural systems and the backfill being retained by the mechanically stabilized earth wall system.

Coping shall be required on this structure. Bond breaker (roofing felt or other approved alternate) between wall panel and coping required if coping is cast in place.

The contractor shall be solely responsible to coordinate construction of the wall with roadway construction and ensure that the roadway construction, resulting or existing obstructions, shall not impact the construction or performance of the wall. Soil reinforcement shall be designed and placed to avoid damage by fence post placement, guardrail post installation, utility and sign foundations. (See Roadway plans.)

For Developed Elevation and Plan Views, see Sheets No. 1 & 2.

For Estimated Quantities Table and MSE Wall Systems Data Table, see Sheet No. 2.

Sacrificial graffiti protective coating shall be applied on all exposed concrete and stone areas in accordance with Sec 711.

The following is a list of form liner manufacturers and types which may be used. All form liner patterns depth of relief shall vary up to  $1\frac{1}{2}$ ". The height of any single stone shall be 15" maximum.

Scott System, Inc.: Form liner pattern #167 "Ashlar Stone".

Fitzgerald Formliners: Form liner pattern #16986 "Ashlar Stone".

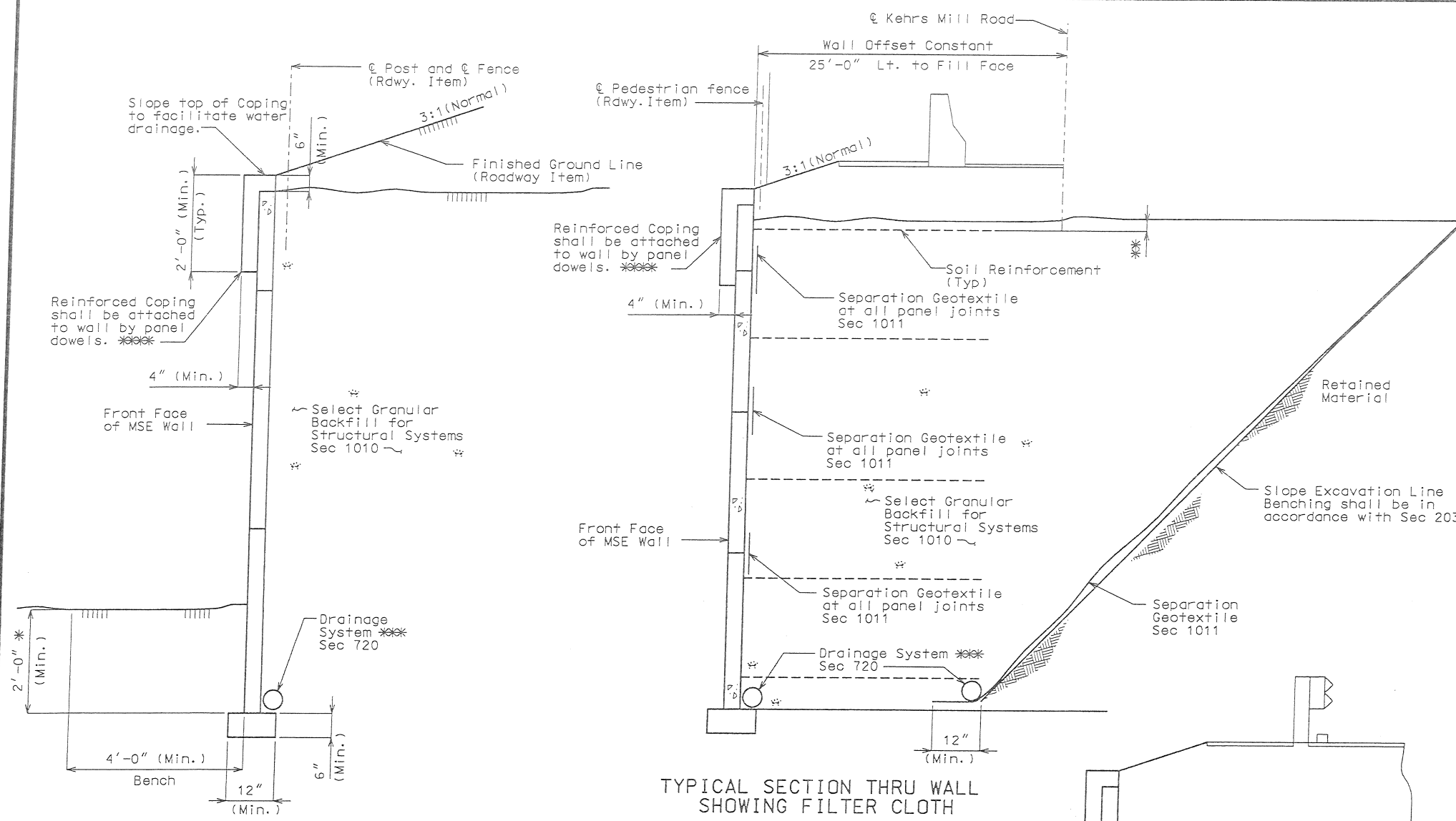
Dayton Superior/Symons: Form liner pattern #1515 "Ashlar Stone".

Final color of the wall shall be sand. (See Special Provisions).

The wall system used shall match that of wall A7094.

The form liner and final color used shall match that of walls A7094, A7096 and A7097.

"Sec" refers to the sections in the standard and supplemental specifications unless specified otherwise.



TYPICAL SECTION THRU WALL

TYPICAL SECTION THRU WALL SHOWING FILTER CLOTH

TYPICAL SECTION SHOWING GUARDRAIL

\*\*\*\* See Roadway Plans for Details and Installation Specifications for Pedestrian Fence.

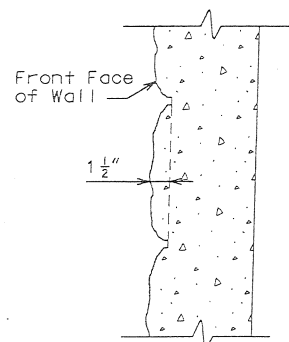
\* For minimum embedment, see AASHTO 5.8.1.

\*\* Topmost layer of reinforcement shall be fully covered with select granular backfill for structural systems, as approved by the wall manufacturer, before placement of the Separation Geotextile.

\*\*\* Adjustment in the vertical alignment of the drainage pipes from that depicted in the plans may be necessary to ensure positive flow out of the drainage system.

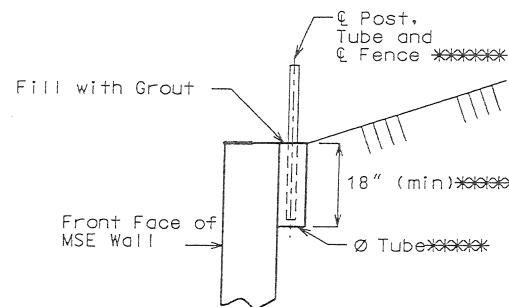
Outlet ends of pipes shall be located to avoid clogging or flow into the drainage system.

\*\*\*\* Inverted U-shape reinforced capstone may be used in lieu of coping. Panel dowels for capstone as required by manufacturer.



FORM LINER DETAIL

Note: All front face surfaces of MSE wall shall have form liner finish.



RAIL POST CONNECTION BEHIND WALL

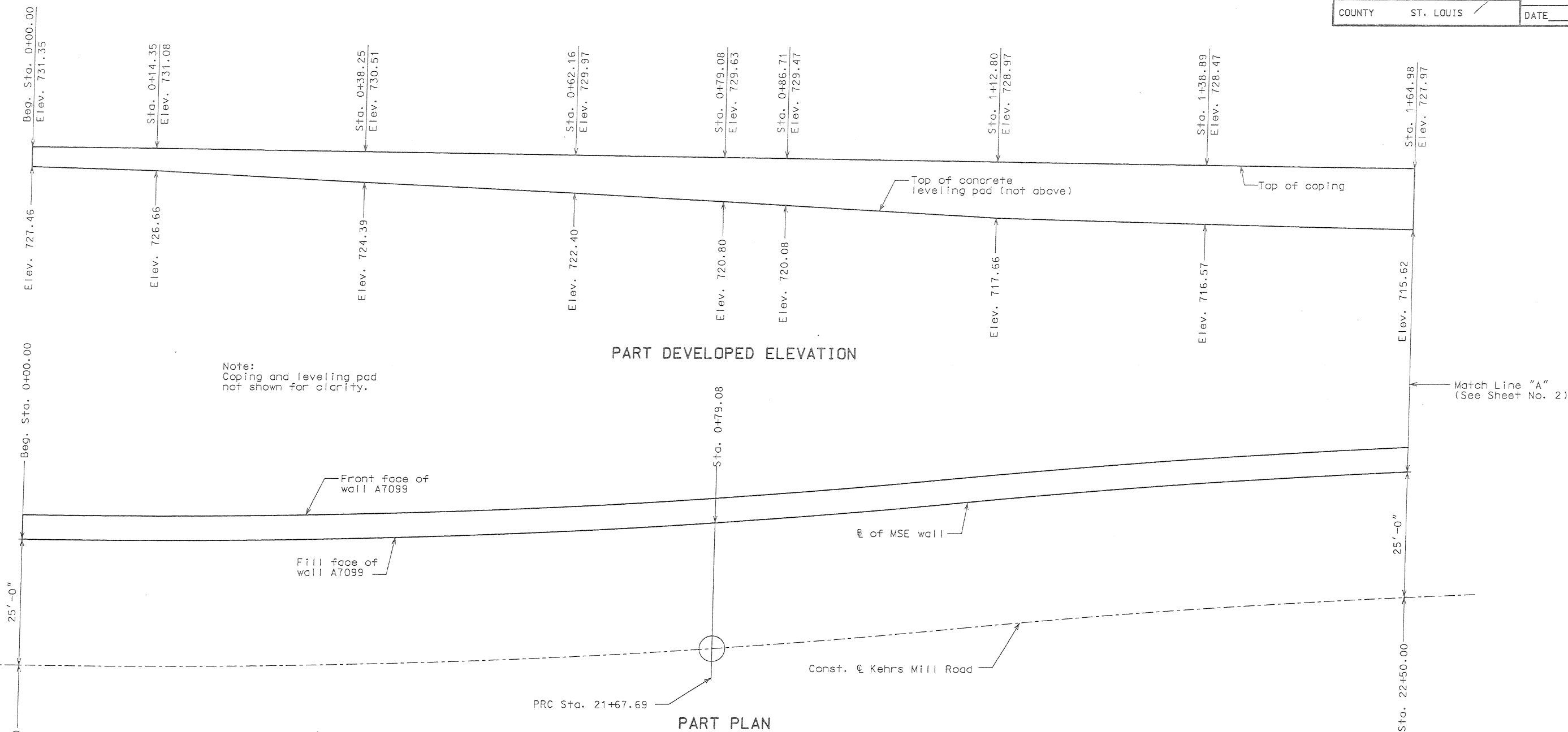
## DETAILS FOR MSE WALL

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION

FINAL PLANS

ROUTE	STATE	DISTRICT	SHEET NO.
HH	MO	6	B-1
JOB NO.		J6U0806	
CONTRACT ID.		080127-604	
PROJECT NO.		FAS-4901(603)	
COUNTY	ST. LOUIS	DATE	



Note:  
For General Notes, see Sheet No. 3.  
For Final Quantities Table and MSE Wall Systems Data Table, see Sheet No. 2.

Wall Curve Data (R12)

R = 547.96'  
 $\Delta = 8^{\circ}16'07''$  Lt.  
 T = 39.61'  
 L = 79.08'  
 PI 0+39.61 (21+26.34, 23.57' Lt.)  
 PC 0+00 (20+85.00, 25' Lt.)  
 PRC 0+79.08 (21+67.69, 25' Lt.)

Kehrs Mill Road Curve Data (KMC01)

P.I. = 20+68.22  
 $\Delta = 20^{\circ}06'09.4''$  Lt.  
 D = 10^{\circ}00'00"  
 T = 101.56'  
 L = 201.03'  
 R = 572.96'  
 SE = N/A  
 W = 0.00'

B.M. 4-99 / 699.12 (RECORD) 699.09 (FIELD) 80d IN BASE OF PP 11' ± S. OF EP RTE. HH ACROSS RTE. HH FROM MAYFAIR DR.

RETAINING WALL ALONG THE EAST SIDE OF KEHRS MILL ROAD

STATE ROAD FROM RTE. HH TO RTE. 340  
 N.W. OF RTE. HH  
 PROJECT NO. STA. 20+85.00 (KEHRS MILL ROAD)  
 JOB NO. J6U0808 RTE. HH

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 1 of 3

Date: / /

ST. LOUIS COUNTY

A7099

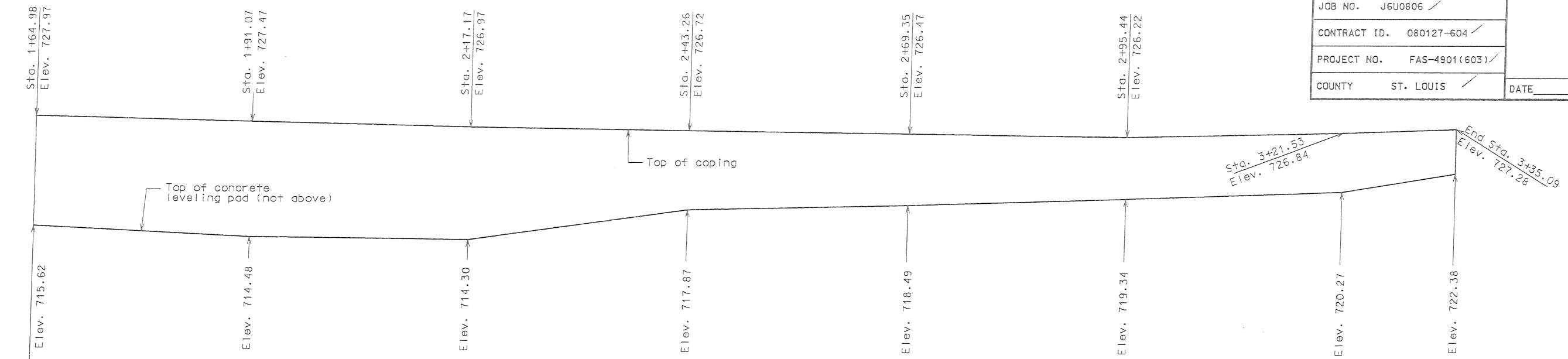
Designed July 2005  
 Detailed Aug. 2005  
 Checked Sep. 2005

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Note:  
Coping and leveling pad  
not shown for clarity.

FINAL PLANS

ROUTE	STATE	DISTRICT	SHEET NO.
HH	MO	6	B-2
JOB NO. J6U0806			
CONTRACT ID. 080127-604			
PROJECT NO. FAS-4901(603)			
COUNTY	ST. LOUIS	DATE	



Wall Curve Data (R13)

R = 597.96'  
 $\Delta = 24^\circ 31' 51''$  Rt.  
 T = 130.00'  
 L = 256.01'  
 PI 2+09.08 (22+90.34, 38.97' Lt.)  
 PRC 0+79.08 (21+67.69, 25' Lt.)  
 PT 3+35.09 (24+12.99, 25' Lt.)

PART DEVELOPED ELEVATION

Note:  
For General Notes, see Sheet No. 3.  
Elevations given are taken from the top of coping and to top of leveling pad. Dimensions in plan view are taken from the baseline of MSE Wall. Baseline of MSE Wall is at the fill face of the wall. Stationing of MSE Wall is along baseline of wall.

Kehrs Mill Road Curve Data (KCM02)

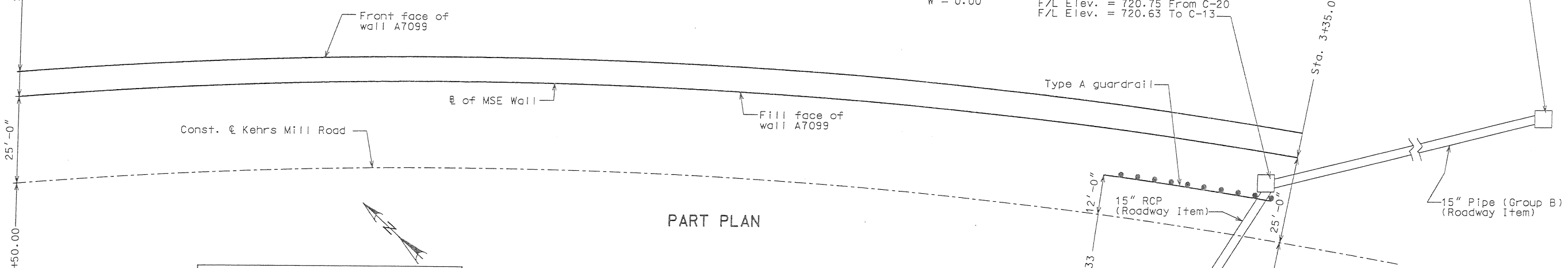
P.I. = 23+70.41  
 $\Delta = 38^\circ 58' 07''$  Rt.  
 D = 10°00'00"  
 T = 202.72'  
 L = 389.69'  
 R = 572.96'  
 SE = N/A  
 W = 0.00'

C-14 CI  
 Sta. 24+10.00 Kehrs Mill Road 19.0' Lt.  
 Top Elev. = 727.92  
 F/L Elev. = 720.75 From C-20  
 F/L Elev. = 720.63 To C-13

C-13 CI  
 Sta. 60+36.50 Rte. HH, 36' Lt.  
 Top Elev. = 719.68  
 F/L Elev. = 712.19 From C-14

Match Line "A"  
(See Sheet No. 1)

Sta. 1+64.98 Elev. 727.97  
 Elev. 715.62  
 Sta. 1+64.96  
 25'-0"  
 Sta. 22+50.00



PART PLAN

MSE Wall Systems Data Table	
Proprietary Wall Systems	
MANUFACTURER	SYSTEM
McCann Concrete Products, Inc.	Retained Soil Precast Walls

Final Quantities For MSE Wall		
Sacrificial Graffiti Protection System	lump sum	1
Aesthetic Concrete Stain	lump sum	1
Mechanically Stabilized Earth Wall Systems	sq. foot	3,060
Form Liners for MSE Wall Systems	sq. yard	340

C-20 CI  
 Sta. 24+00.00 Kehrs Mill Road 43.0' Rt.  
 TOP Elev. = 727.64  
 F/L Elev. = 721.92 To C-14

Detailed Aug. 2005  
 Checked Sep. 2005

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 2 of 3

ST. LOUIS COUNTY A7099

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