

INDEX OF SHEETS

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SHEETS NOT INCLUDED IN TOTAL SHEETS: R20 - R2f, R17a, R19a, R30a - R30d

STANDARD DRAWINGS

NUMBER	DESCRIPTION
RBI-001-09	RG5-001-06
RBI-002-06	RGX-001-05
RR-001-11	RGX-002-05
RR-005-10	RGX-003-05
RR-010-05	RGX-200
RR-015-04	RPM-110-05
RR-016-04	TPM-115-01
RR-035-08	TPM-145-01
RB-004-09	TPM-145-01
RB-005-04	TTC-100-01
RB-007-03	TTC-135-01
RB-105-05	TTP-100-01
RB-106-04	TTP-120-01
RD-040-04	TTP-125
RD-005-02	RFW-001-04
RD-020-03	RFW-005-06
RD-030-03	
RDH-110-02	
RDH-210-03	
RDH-220-02	
RDH-310-04	
RDH-350-03	

DESIGN CRITERIA

CLASS OF HIGHWAY	RURAL MAJOR COLLECTOR
TYPE OF TERRAIN	ROLLING
DESIGN SPEED	35 MPH
REQUIRED NPSD	
REQUIRED PSD	1,280'
LEVEL OF SERVICE	
ADT PRESENT (2008)	1,610
ADT FUTURE (2028)	2,600
DHV (2028)	290
D % 50%	
T % (2031)	42.3%

GEOGRAPHIC COORDINATES

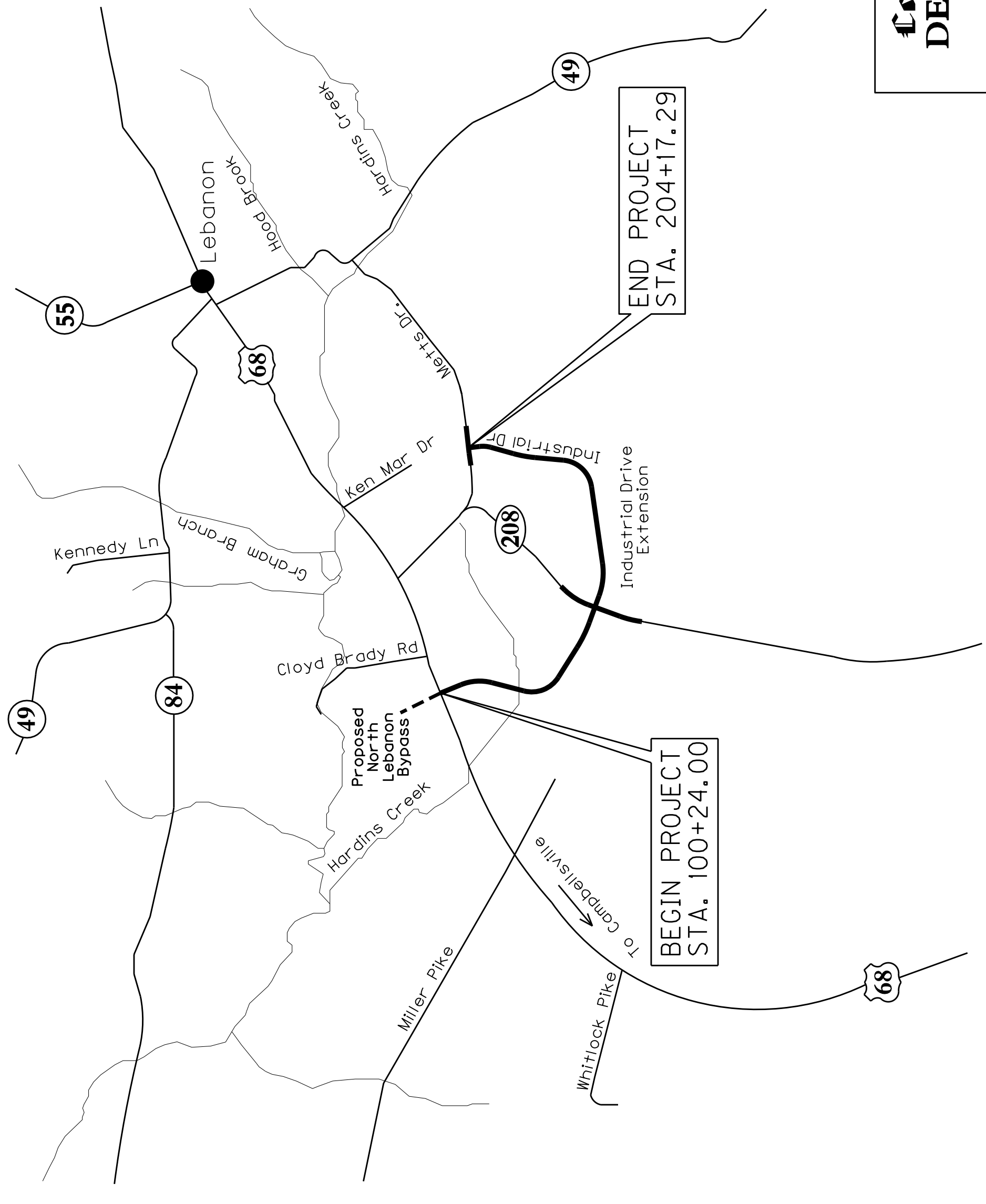
LATITUDE 37 DEGREES 32.833 MINUTES NORTH
 LONGITUDE 85 DEGREES 16.549 MINUTES WEST

DESIGNED

% RESTRICTED SD _____
 LEVEL OF SERVICE _____
 MAX. DISTANCE W/O PASSING _____

Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS

PLANS OF PROPOSED PROJECT MARION COUNTY INDUSTRIAL DRIVE EXTENSION FD04 078 NEW ROUTE THESE PLANS ARE FOR GRADE, DRAIN, & SURFACING



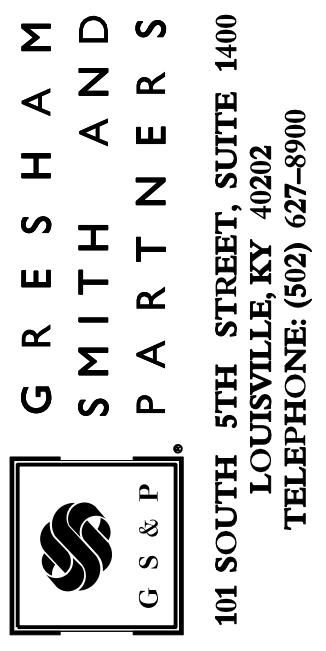
SCALE: 1" = 2,000'

LAYOUT MAP

THIS PROJECT IS OFF THE NH SYSTEM

THESE PLANS ARE FOR
GRADE, DRAIN, AND SURFACING

THIS PROJECT IS A PARTIALLY
CONTROLLED ACCESS HIGHWAY.
ACCESS SHALL BE PROVIDED ONLY
WHERE SPECIFICALLY SHOWN ON THE
PLANS. MINIMUM SPACING IS 600 FEET.



Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS
COUNTY OF

MARION

ITEM NO. 4-138.00
 PROJECT NUMBER: FD04 078 NEW ROUTE
 LETTING DATE: _____
 RECOMMENDED BY: _____ PROJECT MANAGER
 DATE: _____
 PLAN APPROVED BY: _____ STATE HIGHWAY ENGINEER
 DATE: _____

LENGTH	MILES	LENGTH	MILES	LENGTH	MILES
10.393.29	10.393				
FOR EQUALITIES	FOR EQUALITIES	FOR EQUALITIES	FOR EQUALITIES	FOR EQUALITIES	FOR EQUALITIES
NOT INCLUDED	NOT INCLUDED	NOT INCLUDED	NOT INCLUDED	NOT INCLUDED	NOT INCLUDED
RAILROAD CROSSINGS NO.	RAILROAD CROSSINGS NO.	RAILROAD CROSSINGS NO.	RAILROAD CROSSINGS NO.	RAILROAD CROSSINGS NO.	RAILROAD CROSSINGS NO.
BRIDGES	BRIDGES	BRIDGES	BRIDGES	BRIDGES	BRIDGES

NO. SETS	DATE

RECORD PLANS	CONSTRUCTION PLANS

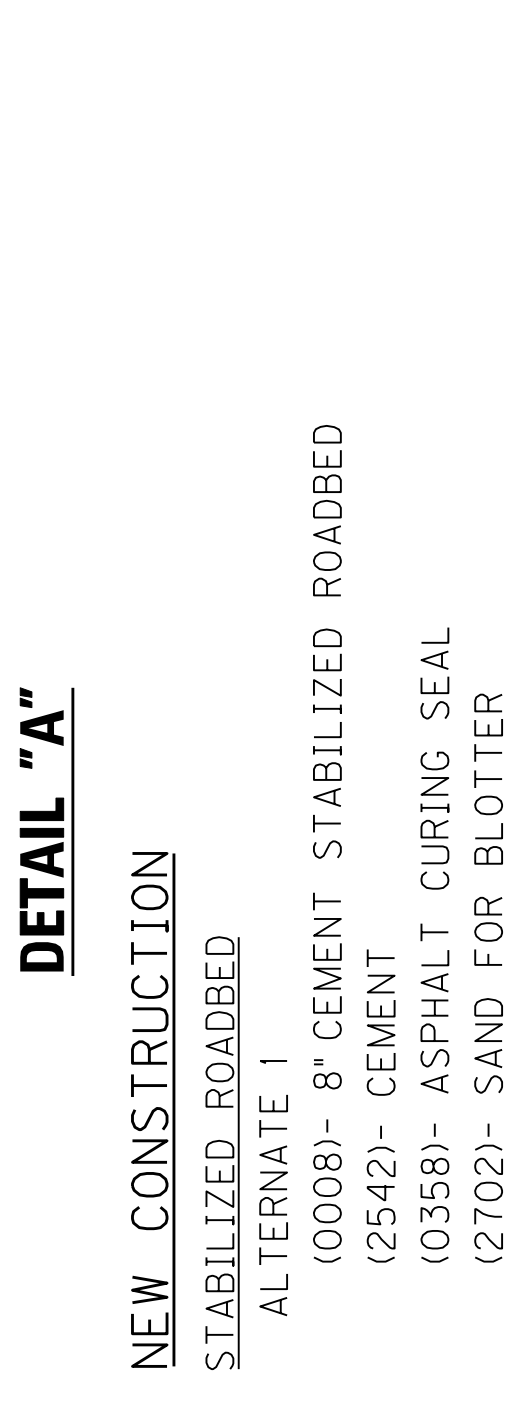
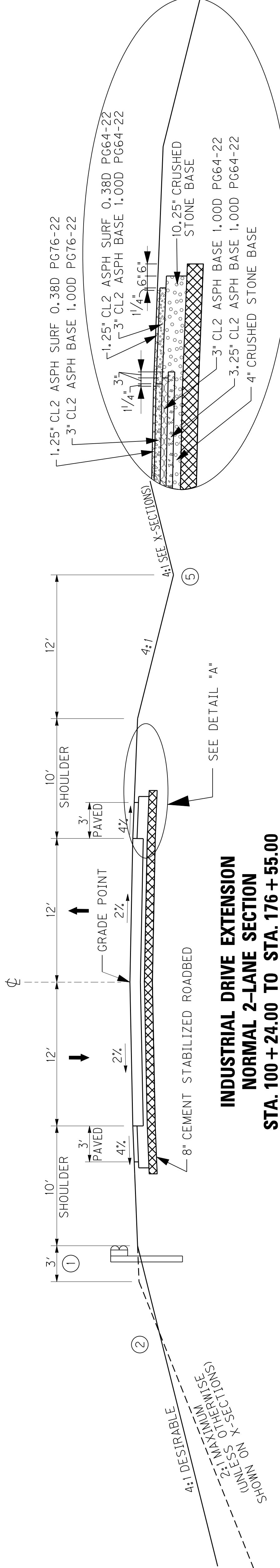
REVIEWED BY	DIVISION OF CONSTRUCTION

USER: \$\$\$USER\$\$\$
 FILE NAME: \$\$\$DATE\$\$\$
 E-SHEET NAME: \$\$\$DESIGN\$\$\$

TYPICAL SECTIONS

COUNTY OF	ITEM NO.	SHEET NO.
MARION	4-138-00	R2

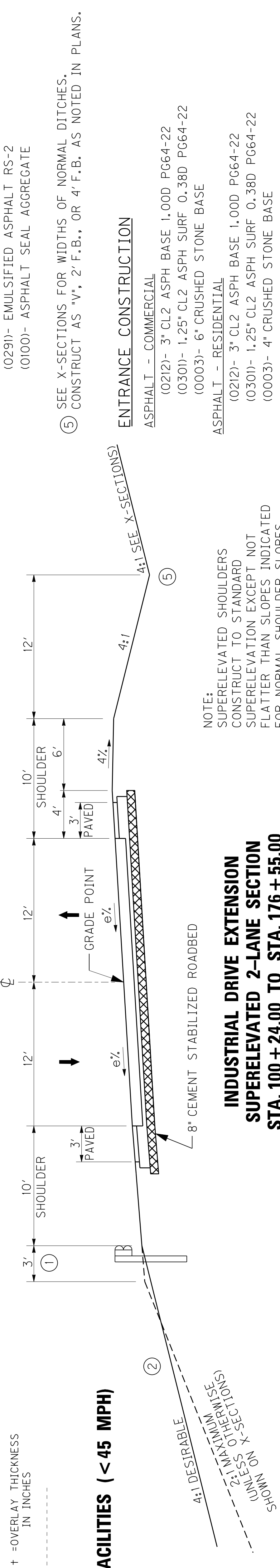
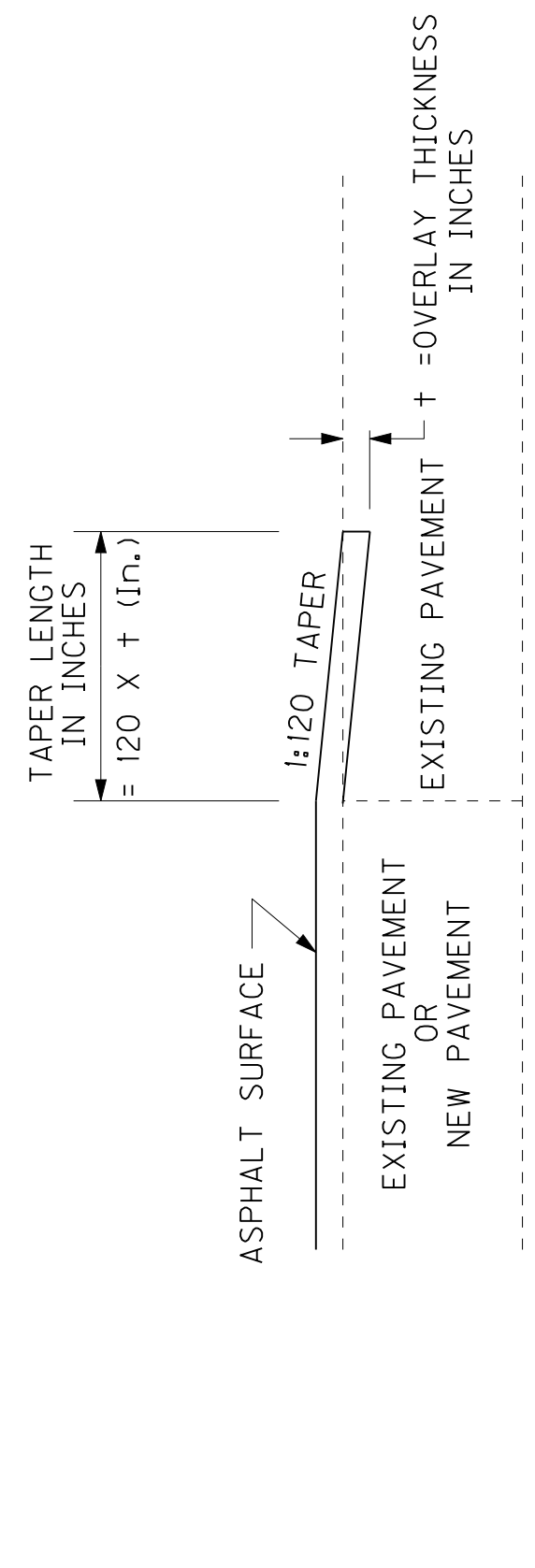
- ① WIDEN SHOULDER 3' FOR GUARDRAIL.
- ② SEE CROSS SECTIONS FOR SLOPES OUTSIDE THE LIMITS OF THE SHOULDER.



- NEW CONSTRUCTION**
- STABILIZED ROADBED**
- ALTERNATE 1
 (0008)- 8" CEMENT STABILIZED ROADBED
 (2542)- CEMENT
 (0358)- ASPHALT CURING SEAL
 (2702)- SAND FOR BLOTTER
- TRAFFIC LANES**
- (0003)- 4" CRUSHED STONE BASE
 (0212)- 3.25" CL2 ASPH BASE 1,000 PG64-22
 (0212)- 3" CL2 ASPH BASE 1,000 PG64-22
 (20696ES403)- 3" CL2 ASPH BASE 1,000 PG76-22
 (0340)- 1.25" CL2 ASPH SURF 0.38D PG76-22

- SHOULDERS**
- (0003)- 10.25" CRUSHED STONE BASE
 (0212)- 3" CL2 ASPH BASE 1,000 PG64-22
 (0301)- 1.25" CL2 ASPH SURF 0.38D PG64-22
 ASPHALT SEAL COAT (TWO APPLICATIONS)
 (0291)- EMULSIFIED ASPHALT RS-2
 (0100)- ASPHALT SEAL AGGREGATE
- ⑤ SEE X-SECTIONS FOR WIDTHS OF NORMAL DITCHES, CONSTRUCT AS "V", 2' F.B., OR 4' F.B. AS NOTED IN PLANS.

TAPERING OF OVERLAYS ON LOW SPEED FACILITIES (<45 MPH)



- ENTRANCE CONSTRUCTION**
- ASPHALT - COMMERCIAL
 (0212)- 3" CL2 ASPH BASE 1,000 PG64-22
 (0301)- 1.25" CL2 ASPH SURF 0.38D PG64-22
 (0003)- 6" CRUSHED STONE BASE
- ASPHALT - RESIDENTIAL
 (0212)- 3" CL2 ASPH BASE 1,000 PG64-22
 (0301)- 1.25" CL2 ASPH SURF 0.38D PG64-22
 (0003)- 4" CRUSHED STONE BASE
- CONCRETE - RESIDENTIAL/COMMERCIAL**
- (2101)- CEMENT CONCRETE ENTRANCE PAVEMENT-8"
 (0003)- 4" CRUSHED STONE BASE
TRAFFIC BOUND BASE
 (0020)- 4" TRAFFIC BOUND BASE

- SHOULDERS**
- (0003)- 10.25" CRUSHED STONE BASE
 (0212)- 3" CL2 ASPH BASE 1,000 PG64-22
 (0301)- 1.25" CL2 ASPH SURF 0.38D PG64-22
 ASPHALT SEAL COAT (TWO APPLICATIONS)
 (0291)- EMULSIFIED ASPHALT RS-2
 (0100)- ASPHALT SEAL AGGREGATE
- ⑤ SEE X-SECTIONS FOR WIDTHS OF NORMAL DITCHES, CONSTRUCT AS "V", 2' F.B., OR 4' F.B. AS NOTED IN PLANS.

NOTE:
SUPERELEVATED SHOULDERS
CONSTRUCT TO STANDARD
SUPERELEVATION EXCEPT NOT
FLATTER THAN SLOPES INDICATED
FOR NORMAL SHOULDER SLOPES.

SCALE: 1"=5'

TYPICAL SECTION
INDUSTRIAL DRIVE EXTENSION

PREPARED BY GRESHAM SMITH AND PARTNERS DATE 09-DEC-2008
 CHECKED BY DATE
 APPROVED BY DATE



GRESHAM
SMITH
AND
PARTNERS

USER: \$\$\$USER\$\$\$
 DATE: \$\$\$DATE\$\$\$
 FILE NAME: \$\$\$design\files\specification\$\$\$
 E-SHEET NAME:

TYPICAL SECTIONS

② SEE CROSS SECTIONS FOR SLOPES OUTSIDE THE LIMITS OF THE SHOULDER.

③ ASPHALT SEAL REQUIRED FROM PAVED SHOULDER TO A POINT 2 FEET DOWN THE DITCH OR FILL SLOPE.

④ MILLED 12" KEY - DEPTH EQUAL TO TOP BASE COURSE.

NEW CONSTRUCTION

STABILIZED ROADBED

- ALTERNATE 1
 (0008)- 8" CEMENT STABILIZED ROADBED
 (2542)- CEMENT
 (0358)- ASPHALT CURING SEAL
 (2702)- SAND FOR BLOTTER

TRAFFIC LANES

- (0003)- 4" CRUSHED STONE BASE
 (0212)- 3.25" CL2 ASPH BASE 1,000 PG64-22
 (0212)- 3" CL2 ASPH BASE 1,000 PG64-22
 (20696ES403)- 3" CL2 ASPH BASE 1,000 PG76-22
 (0340)- 1.25" CL2 ASPH SURF 0.38D PG76-22

SHOULDERS

- (0003)- FULL-DEPTH CRUSHED STONE BASE (FROM STA. 182+50 AHEAD)
 (0003)- 10.25" CRUSHED STONE BASE (FROM STA. 182+50 BACK)
 (0212)- 3" CL2 ASPH BASE 1,000 PG64-22
 (0301)- 1.25" CL2 ASPH SURF 0.38D PG64-22
 ASPHALT SEAL COAT (TWO APPLICATIONS)
 (0291)- EMULSIFIED ASPHALT RS-2
 (0100)- ASPHALT SEAL AGGREGATE

OVERLAY

- (0340)- 1.25" CL2 ASPH SURF 0.38D PG76-22
 (0190)- LEVELING & WEDGING PG64-22

STABILIZED ROADBED

ALTERNATE 2 STABILIZATION WHERE CHEMICAL MODIFICATION IS IMPRACTICAL AND IN AREAS WHERE EXIST. PAVEMENT IS BEING REMOVED. WRAP WITH FABRIC GEOTEXTILE TYPE IV PER GEOTECHNICAL REPORT NOTE NO. 14 ON PAGE R47.
 (0078)- 12" CRUSHED AGGREGATE SIZE NO. 2

⑤ SEE X-SECTIONS FOR WIDTHS OF NORMAL DITCHES. CONSTRUCT AS 'V', 2' F.B., OR 4' F.B. AS NOTED IN PLANS.

ENTRANCE CONSTRUCTION

ASPHALT - COMMERCIAL

- (0212)- 3" CL2 ASPH BASE 1,000 PG64-22
 (0301)- 1.25" CL2 ASPH SURF 0.38D PG64-22
 (0003)- 6" CRUSHED STONE BASE

ASPHALT - RESIDENTIAL

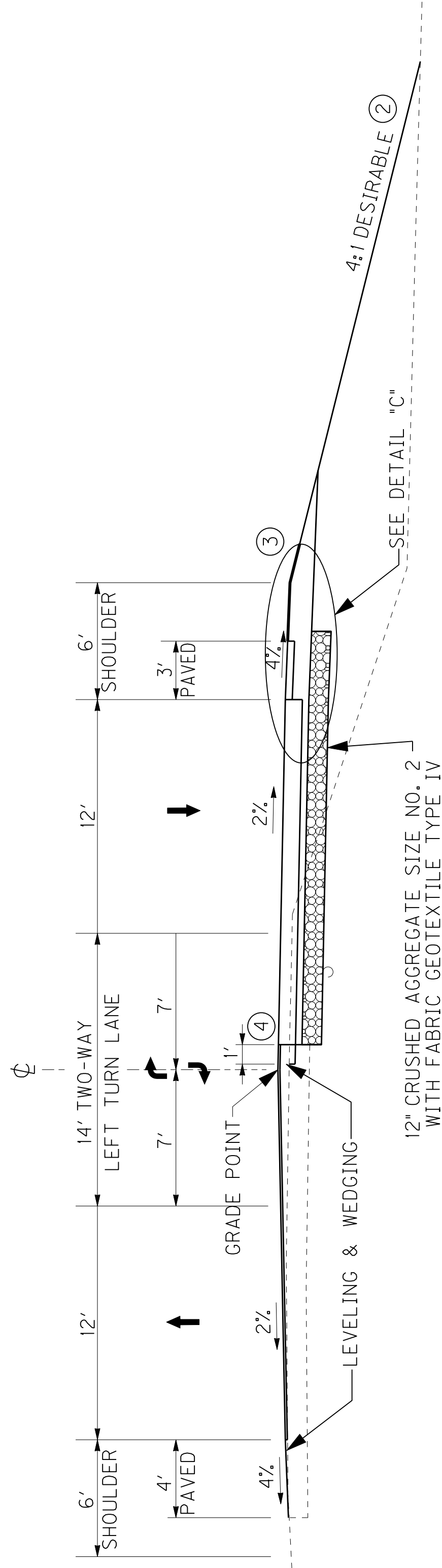
- (0212)- 3" CL2 ASPH BASE 1,000 PG64-22
 (0301)- 1.25" CL2 ASPH SURF 0.38D PG64-22
 (0003)- 4" CRUSHED STONE BASE

CONCRETE - RESIDENTIAL/COMMERCIAL

- (2101)- CEMENT CONCRETE ENTRANCE PAVEMENT-8"
 (0003)- 4" CRUSHED STONE BASE

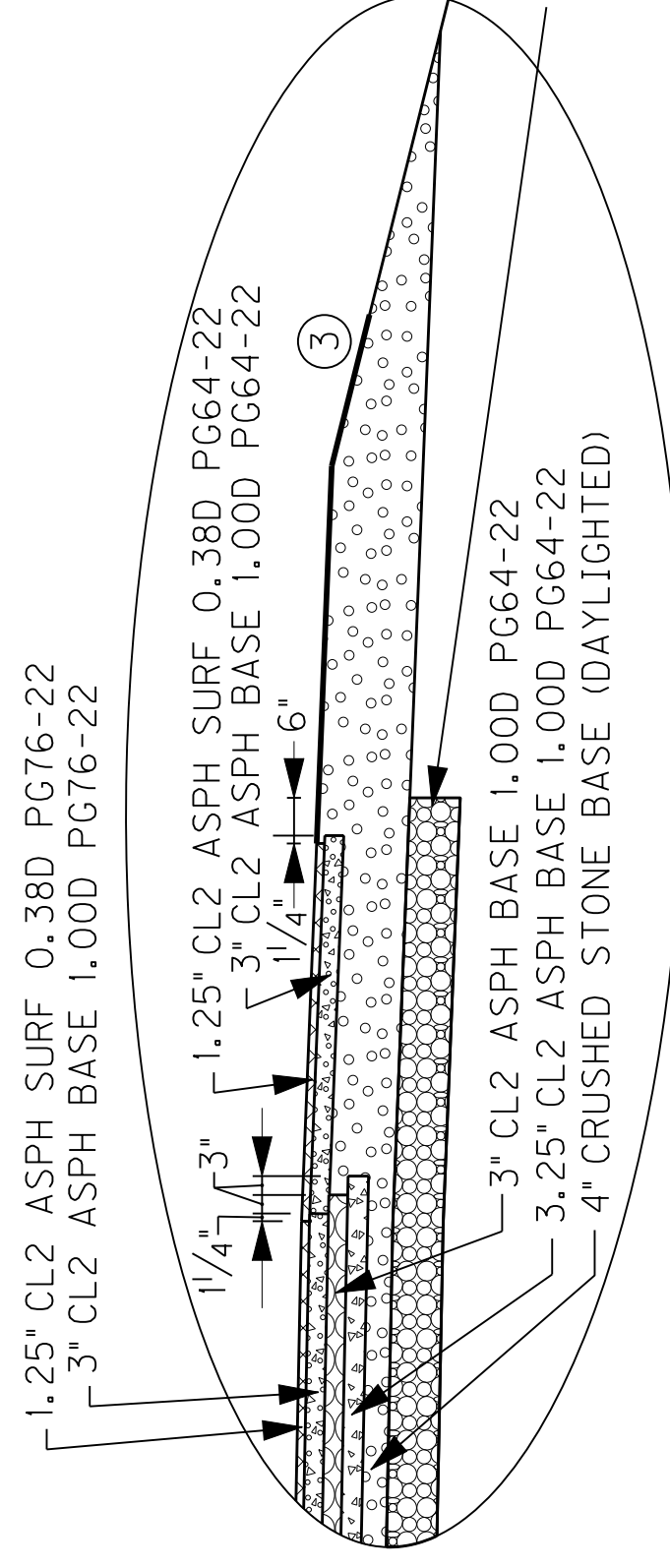
TRAFFIC BOUND BASE

- (0020)- 4" TRAFFIC BOUND BASE

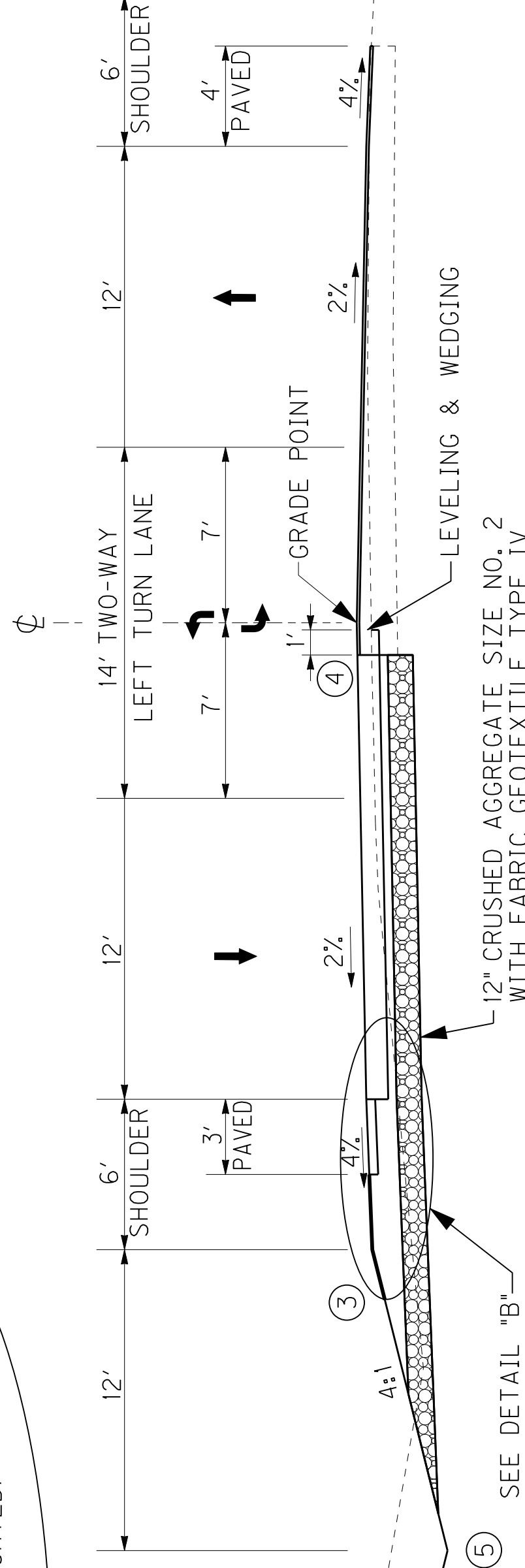


INDUSTRIAL DRIVE EXTENSION NORMAL 3-LANE SECTION

LT. STA. 194 + 50.00 TO STA. 204 + 02.12
 RT. STA. 190 + 50.00 TO STA. 204 + 02.12

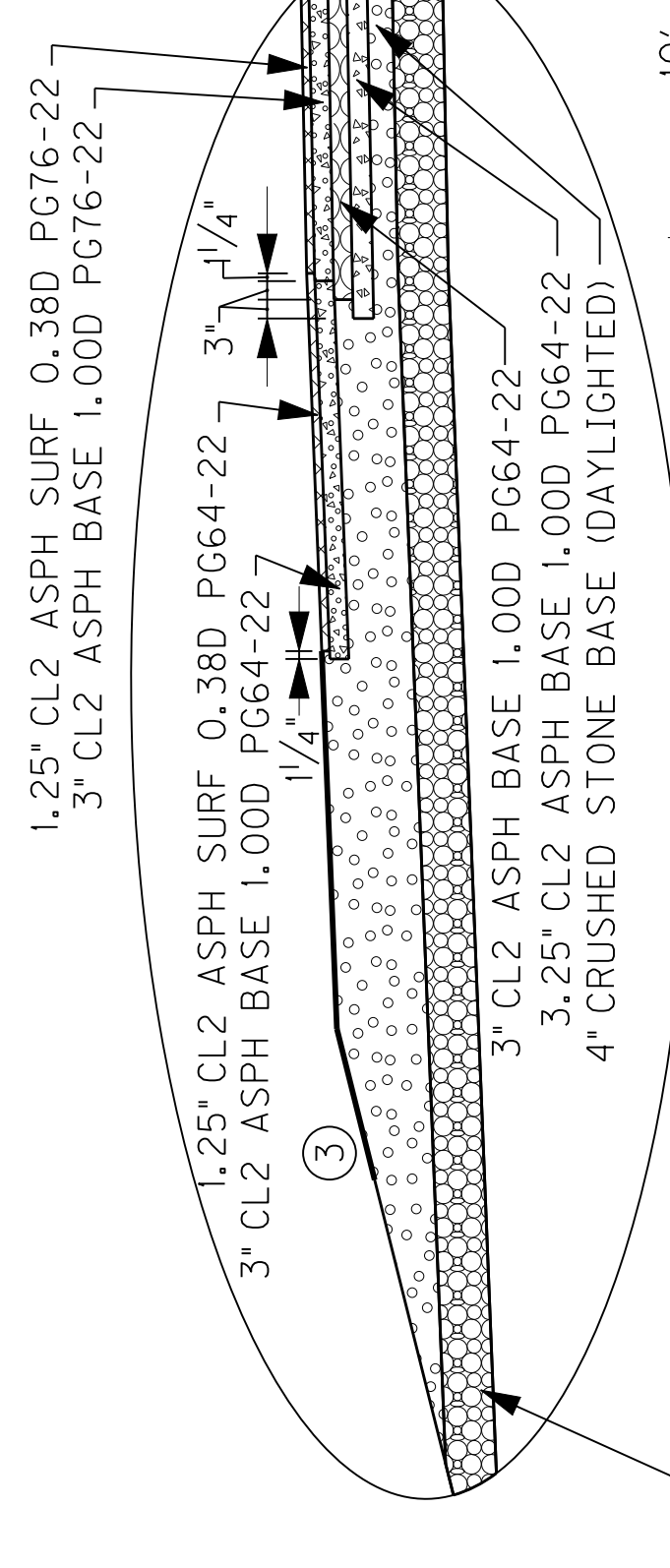


12" CRUSHED AGGREGATE SIZE NO. 2 WITH FABRIC GEOTEXTILE TYPE IV



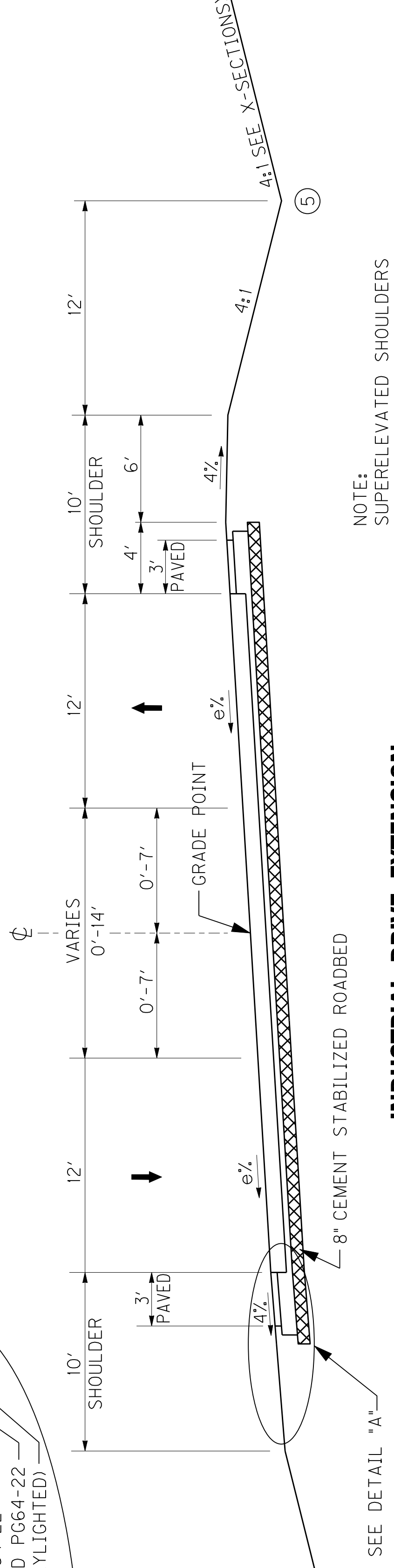
INDUSTRIAL DRIVE EXTENSION NORMAL 3-LANE SECTION

LT. STA. 182 + 50.00 TO STA. 194 + 50.00
 RT. STA. 182 + 50.00 TO STA. 190 + 50.00



DETAIL "B"

12" CRUSHED AGGREGATE SIZE NO. 2 WITH FABRIC GEOTEXTILE TYPE IV



SEE DETAIL "A"

NOTE:
 SUPERELEVATED SHOULDERS CONSTRUCT TO STANDARD SUPERELEVATION EXCEPT NOT FLATTER THAN SLOPES INDICATED FOR NORMAL SHOULDER SLOPES.

INDUSTRIAL DRIVE EXTENSION SUPERELEVATED 3-LANE SECTION STA. 176 + 55.00 TO STA. 182 + 50.00

SCALE: 1"=5'

TYPICAL SECTION
 INDUSTRIAL DRIVE EXTENSION

PREPARED BY GRESHAM SMITH AND PARTNERS
 CHECKED BY _____
 APPROVED BY _____
 DATE _____
 DATE 09-DEC-2008

GRESHAM SMITH AND PARTNERS

USER: \$\$\$USER\$\$\$
 DATE: \$\$\$DATE\$\$\$
 FILE NAME: \$\$\$design\$file\$specification\$\$\$

E-SHEET NAME:

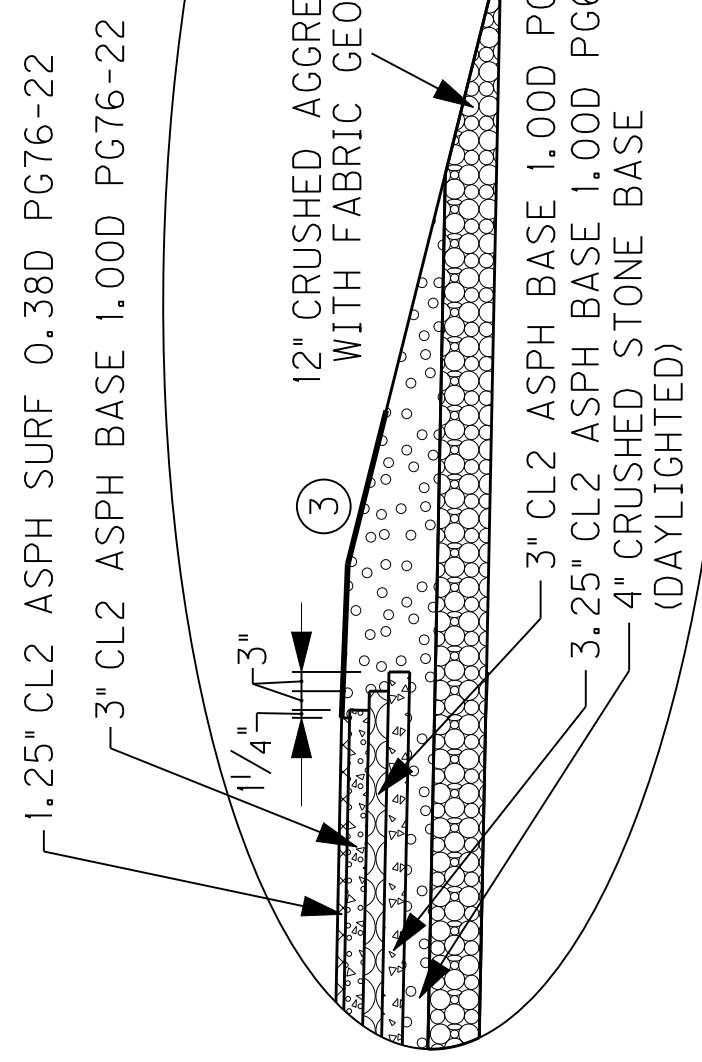
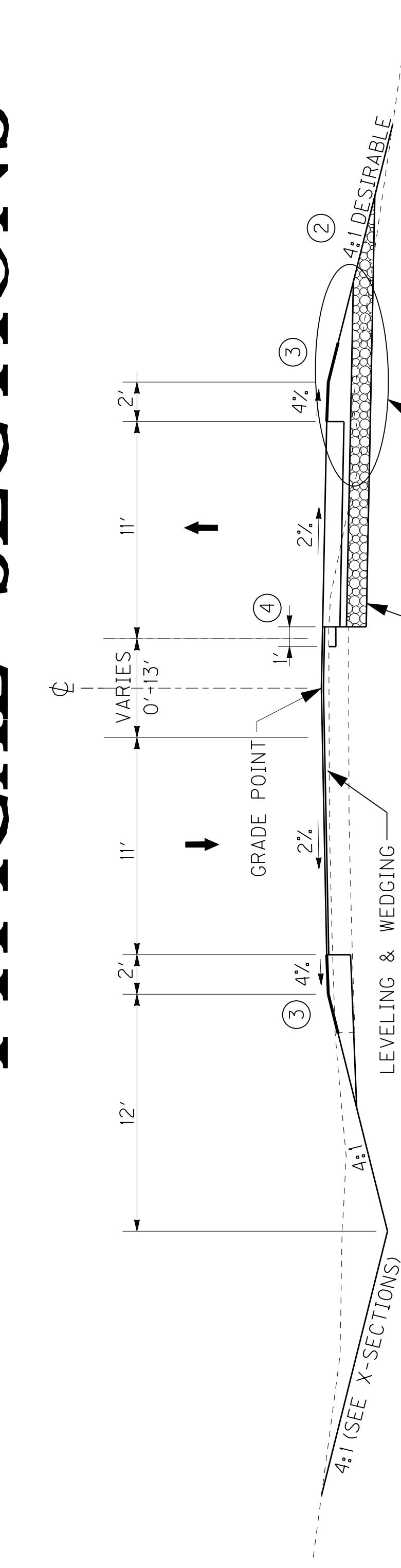
TYPICAL SECTIONS

PREPARED BY GRESHAM SMITH AND PARTNERS DATE 09-DEC-2008
 CHECKED BY _____ DATE _____
 APPROVED BY _____ DATE _____

GRESHAM
 SMITH
 AND
 PARTNERS

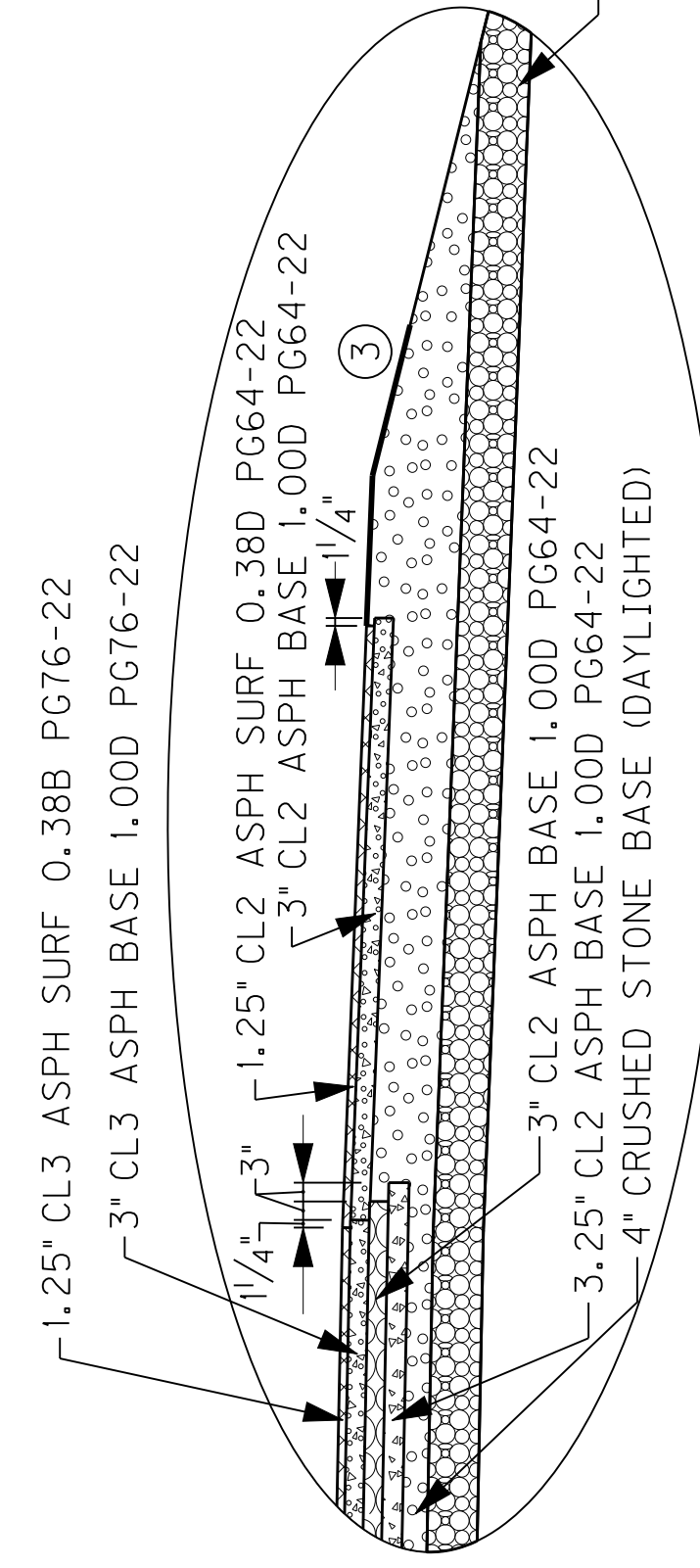
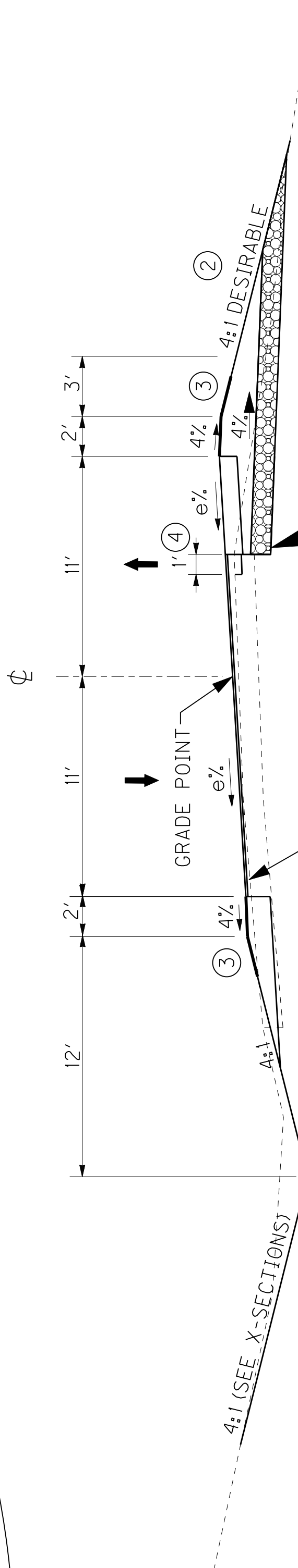


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 FILE NAME: \$\$\$DATE\$\$\$
 E-SHEET NAME: \$\$\$design\file\$specification\$\$\$



DETAIL "E"

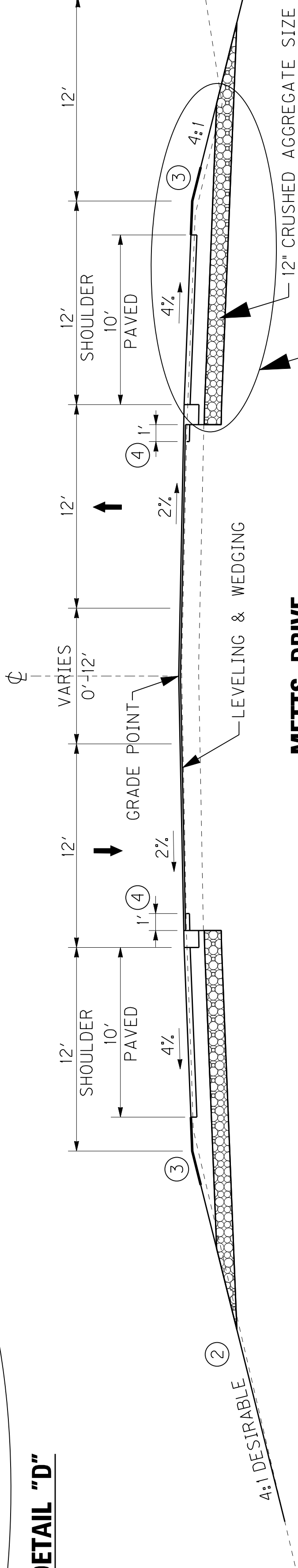
KY 208
NORMAL 2-LANE SECTION
STA. 41 + 00.00 TO STA. 60 + 50.00



DETAIL "D"

KY 208
SUPERELEVATED 2-LANE SECTION
STA. 41 + 00.00 TO STA. 60 + 50.00

NOTE:
 SUPERELEVATED SHOULDERS
 CONSTRUCT TO STANDARD
 SUPERELEVATION EXCEPT NOT
 FLATTER THAN SLOPES INDICATED
 FOR NORMAL SHOULDERS SLOPES.



METTS DRIVE
NORMAL 2-LANE SECTION
STA. 16 + 00.00 TO STA. 24 + 50.00

- ② SEE CROSS SECTIONS FOR SLOPES OUTSIDE THE LIMITS OF THE SHOULDER.
- ③ ASPHALT SEAL REQUIRED FROM PAVED SHOULDER TO A POINT 2 FEET DOWN THE DITCH OR FILL SLOPE.
- ④ MILLED 12" KEY - DEPTH EQUAL TO TOP BASE COURSE.

NEW CONSTRUCTION

STABILIZED ROADBED

ALTERNATE 2 STABILIZATION WHERE CHEMICAL MODIFICATION IS IMPRACTICAL AND IN AREAS WHERE EXIST. PAVEMENT IS BEING REMOVED. WRAP WITH FABRIC GEOTEXTILE TYPE IV PER GEOTECHNICAL REPORT NOTE NO. 14 ON PAGE R47. (0078)- 12" CRUSHED AGGREGATE SIZE NO. 2

OVERLAY

- (0340)- 1.25" CL2 ASPH SURF 0.38D PG76-22
- (0190)- LEVELING & WEDGING PG64-22

TRAFFIC LANES

- (0003)- 4" CRUSHED STONE BASE
- (0212)- 3.25" CL2 ASPH BASE 1.00D PG64-22
- (0212)- 3" CL2 ASPH BASE 1.00D PG64-22
- (20696ES403)- 3" CL2 ASPH BASE 1.00D PG76-22
- (0340)- 1.25" CL2 ASPH SURF 0.38D PG76-22

SHOULDERS

- (0003)- FULL-DEPTH CRUSHED STONE BASE
- (0212)- 3" CL2 ASPH BASE 1.00D PG64-22
- (0301)- 1.25" CL2 ASPH SURF 0.38D PG64-22
- ASPHALT SEAL COAT
- TWO APPLICATIONS OF THE FOLLOWING:
 (0291)- EMULSIFIED ASPHALT RS-2 2.40 LB/SQ YD
 (0100)- ASPHALT SEAL AGGREGATE 20 LB/SQ YD

ENTRANCE CONSTRUCTION

ASPHALT - COMMERCIAL

- (0212)- 3" CL2 ASPH BASE 1.00D PG64-22
- (0301)- 1.25" CL2 ASPH SURF 0.38D PG64-22
- (0003)- 6" CRUSHED STONE BASE

ASPHALT - RESIDENTIAL

- (0212)- 3" CL2 ASPH BASE 1.00D PG64-22
- (0301)- 1.25" CL2 ASPH SURF 0.38D PG64-22
- (0003)- 4" CRUSHED STONE BASE

CONCRETE - RESIDENTIAL/COMMERCIAL

- (2101)- CEMENT CONCRETE ENTRANCE PAVEMENT-8"
- (0003)- 4" CRUSHED STONE BASE
- TRAFFIC BOUND BASE
- (0020)- 4" TRAFFIC BOUND BASE

SCALE: 1"=5'

TYPICAL SECTION
 KY 208 & METTS DRIVE

PAVING AREAS

ITEM CODE	ITEM	INDUSTRIAL DR. EXTENSION	KY 208	METTS DRIVE	ENTRANCES	MAINTENANCE OF TRAFFIC	TOTAL PROJECT
SQUARE YARDS							
	TRAFFIC LANES						
340	1.25" CL2 ASPH SURF 0.380 PG76-22	38,050	5,557	3,032			46,639
20696E5403	3" CL2 ASPH BASE 1.00 PG76-22	31,981	2,033	0			34,014
212	3" CL2 ASPH BASE 1.00 PG64-22	32,493	2,082	0			34,575
212	3.25" CL2 ASPH BASE 1.00 PG64-22	33,058	2,129	0			35,187
3	4" CRUSHED STONE BASE	33,058	2,129	0			35,187
190	3.5" AVG. LEVELING & WEDGING PG64-22	3,640	4,485	1,945			10,070
	SHOULDERS						
301	1.25" CL2 ASPH SURF 0.380 PG64-22	6,892	0	1,293			8,185
212	3" CL2 ASPH BASE 1.00 PG64-22	6,236	0	282			6,518
3	4" (AVG.) CRUSHED STONE BASE (STA. 182+50 AHD)	5,794	9,491	2,020			17,305
3	10.25" CRUSHED STONE BASE (STA. 182+50 BK)	6,356	0	0			6,356
100	ASPHALT SEAL AGGREGATE	1,856	1,867	712			4,435
291	EMULSIFIED ASPHALT RS-2	1,856	1,867	712			4,435
	ENTRANCES						
301	1.25" CL2 ASPH SURF 0.380 PG64-22	4,948	684	791			6,423
2101	8" - CEMENT CONCRETE ENTRANCE PAVEMENT	1,361	0	0			1,361
212	3" CL2 ASPH BASE 1.00 PG64-22	4,261	394	0			4,655
3	4" CRUSHED STONE BASE	776	8	0			784
3	6" CRUSHED STONE BASE	3,485	337	0			3,822
20	4" TRAFFIC BOUND BASE	373	0	0			373
	STABILIZED ROADBED						
8	8" CEMENT STABILIZED ROADBED	31,485	0	0			31,485
2542	CEMENT	31,485	0	0			31,485
358	ASPHALT CURING SEAL	31,485	0	0			31,485
2702	SAND FOR BLOTTER	31,485	0	0			31,485
	STABILIZED ROADBED						
78	12" CRUSHED AGGREGATE SIZE NO. 2 ⑩	4,980	4,733	288			10,001
	ASPH PAVE MILLING & TEXTURING (1" AVG. DEPTH) ⑪						
2677	ASPH PAVE MILLING & TEXTURING (1" AVG. DEPTH) ⑪	1,371	124	146			1,641

PAVING AREAS

COMMON ①
60,979 C.Y. FROM CROSS SECTIONS 58 C.Y. REFILL BELOW RDZ ⑬ 3,720 C.Y. TRANVERSE BENCHING ⑭ 435 C.Y. EMB. FOUND. BENCHING
65,192 C.Y. TOTAL
EMBLEMMENT ②
39,908 C.Y. FROM CROSS SECTIONS 58 C.Y. REFILL BELOW RDZ ⑬ 3,720 C.Y. TRANVERSE BENCHING ⑭ 435 C.Y. EMB. FOUND. BENCHING
44,121 C.Y. TOTAL

THE VALUES SHOWN ARE BASED ON THE CROSS SECTION TOTALS. AUTHORIZED ADJUSTMENTS WILL CONFORM TO SECTION 204.04.02 OF THE SPECIFICATIONS.

⑬ UNDERCUT IN SHALE AREAS. SEE GEOTECHNICAL NOTE NO. 13.

⑭ PER GEOTECHNICAL REPORT. SEE PROFILE FOR LOCATIONS.

⑮ ESTIMATED AT 1,500 M.GAL./MI. FOR CONTROLLING DUST CAUSED BY MAINTAINING TRAFFIC ONLY.

⑯ APPROXIMATELY 45.9 ACRES.

⑰ ANY RELOCATION OF PORTABLE CHANGEABLE MESSAGE SIGNS WILL BE INCIDENTAL TO THE LUMP SUM BID. SIGNS TO REMAIN IN PLACE FOR 30 DAYS AFTER ROAD IS OPEN TO TRAFFIC.

⑱ USED ON SLOPES GREATER THAN 3:1.

⑲ TOTAL INCLUDES AMOUNT FOR NORMAL AND SPECIAL DITCHES, ALSO INCLUDES SLOPES THAT REQUIRE CROWN VETCH.

⑳ TOTAL INCLUDES QUANTITIES FROM THE PIPE DRAINAGE SUMMARY.

㉑ REQUIRED FOR 3:1 SAFETY WEDGES, AND TO MAINTAIN ENTRANCES DURING CONSTRUCTION.

㉒ PER GEOTECHNICAL REPORT NOTE NO. 14 ON PAGE R47.

㉓ ASPH. PAVEMENT MILLING TO BE DELIVERED TO MARION COUNTY MAINTENANCE BARN.

㉔ TOTAL INCLUDES QUANTITIES FROM THE PERFORATED PIPE DRAINAGE SUMMARY.

NOTES FOR PAVING SUMMARY
ALL ASPHALT MIXTURES SHALL BE ESTIMATED AT 110 LBS. PER SQ. YD. PER INCH OF DEPTH, UNLESS NOTED OTHERWISE.

Ⓐ ESTIMATED AT 115 LBS. PER SQ. YD. PER INCH OF DEPTH.
Ⓑ ESTIMATED AT 100 LBS. PER SQ. YD. PER INCH OF DEPTH.
Ⓒ ESTIMATED AT 2.4 LBS. PER SQ. YD. (2 APPLICATIONS)
Ⓓ ESTIMATED AT 20 LBS. PER SQ. YD. (2 APPLICATIONS)
Ⓔ ESTIMATED AT 6% OF DRY DENSITY TONNAGE OF ROADBED.
8" ROADBED ESTIMATED AT 107 LB/CU FT (AVG. DRY DENSITY).
Ⓕ ESTIMATED AT 2 LBS. PER SQ. YD. (2 APPLICATIONS)
Ⓖ ESTIMATED AT 5 LBS. PER SQ. YD.
Ⓗ ESTIMATED AT 85 LBS. PER SQ. YD. PER INCH OF DEPTH.
Ⓘ ALL ASPHALT MIXTURES (BASE AND SURFACE) IN THE DRIVING LANES ARE TO BE PLACED USING THE MATERIAL TRANSFER VEHICLE (MTV) IN ACCORDANCE WITH SPECIAL NOTE 9Y SPECIAL NOTE FOR MATERIAL TRANSFER VEHICLE (3-12-08)

① INCLUDED WITH ROADWAYS

PAVING SUMMARY

ITEM CODE	ITEM	UNIT	INDUSTRIAL DR. EXTENSION	KY 208	METTS DRIVE	ENTRANCES	MAINTENANCE OF TRAFFIC	TOTAL PROJECT
3	CRUSHED STONE BASE ⑬	TON	12,682	2,673	465	1,499	1,420 ⑯	18,739
8	CEMENT STABILIZED ROADBED	SOYD	31,485	0	0	0		31,485
20	TRAFFIC BOUND BASE ⑭	TON	0	0	0	75		75
78	12" CRUSHED AGGREGATE SIZE NO. 2 ⑩ ⑫	TON	2,540	2,414	147	0		5,106
100	ASPHALT SEAL AGGREGATE ⑮	TON	37	37	14	0		88
190	LEVELING & WEDGING PG64-22	TON	701	863	374	0		1,938
212	CL2 ASPH BASE 1.00 PG64-22 ⑰	TON	12,299	724	47	768		13,838
291	EMULSIFIED ASPHALT RS-2 ⑱	TON	4	4	2	0		10
301	CL2 ASPH SURF 0.380 PG64-22	TON	474	0	89	442		1,005
340	CL2 ASPH SURF 0.380 PG76-22 ⑰	TON	2,616	382	208	0		3,206
358	ASPHALT CURING SEAL ⑲	TON	63	0	0	0		63
2101	CEMENT CONCRETE ENTRANCE PAVEMENT-8"	SOYD	0	0	0	1,361		1,361
2542	CEMENT ⑳	TON	606	0	0	0		606
2677	MOBILIZATION FOR MILLING & TEXTURING	LS						1
2677	ASPH PAVE MILLING & TEXTURING	TON	75	7	8	0		90
2702	SAND FOR BLOTTER ㉑	TON	79	0	0	0		79
20696E5403	CL2 ASPH BASE 1.00 PG76-22 ⑰	TON	5,277	335	0	0		5,612

GENERAL SUMMARY

ITEM CODE	ITEM	UNIT	INDUSTRIAL DR. EXTENSION	KY 208	METTS DRIVE	MAINTENANCE OF TRAFFIC	TOTAL PROJECT
1791	ADJUST MANHOLE FRAME TO GRADE	EACH	2				2
2014	BARRICADE TYPE III	EACH					8
2159	TEMPORARY DITCH	LF					10,393
2200	ROADWAY EXCAVATION	CUYD	59,466	5,220	506		65,192
2242	WATER ㉓	M GAL	2,950	550	240		3,740
2262	FENCE-WOVEN WIRE TYPE I	LF	14,951	0	0		14,951
2351	GUARDRAIL-STEEL W BEAM-S FACE	LF	175	0	0		175
2391	GUARDRAIL END TREATMENT TYPE 4A	EACH	4	0	0		4
2429	RIGHT-OF-WAY MONUMENT TYPE I	EACH	17	11	13		41
2432	WITNESS POST	EACH	3	4	3		10
2483	CHANNEL LINING CLASS II ⑧	TON	1,941	30	0		1,971
2484	CHANNEL LINING CLASS III ⑧	TON	1,145	0	0		1,145
2545	CLEARING AND GRUBBING ④	LS					LS
2568	MOBILIZATION	LS					LS
2569	DEMobilIZATION	LS					LS
2585	EDGE KEY	LF	0	44	46		90
2599	FABIC GEOTEXTILE TYPE IV ⑩	SOYD	13,184	11,273	1,894		26,351
2650	MAINTAIN & CONTROL TRAFFIC	LS					LS
2671	PORTABLE CHANGEABLE MESSAGE SIGN ⑤	EACH	2				2
2701	TEMPORARY SILT FENCE	LF					6,597
2703	SILT TRAP TYPE A	EACH					47
2704	SILT TRAP TYPE B	EACH					47
2705	SILT TRAP TYPE C	EACH					47
2706	CLEAN SILT TRAP TYPE A	EACH					141
2707	CLEAN SILT TRAP TYPE B	EACH					141
2708	CLEAN SILT TRAP TYPE C	EACH					141
2709	CLEAN TEMPORARY SILT FENCE	LF					6,597
2726	STAKING	LS					LS
5950	EROSION CONTROL BLANKET ⑦	SOYD					33,250
5952	TEMPORARY MULCH	SOYD					225,544
5953	TEMP SEEDING AND PROTECTION	SOYD					11,277
5966	TOP DRESSING FERTILIZER	TON					12
5985	SEEDING AND PROTECTION	SOYD					225,544
5989	SPECIAL SEEDING CROWN VETCH ⑥	SOYD					190
6510	PAVEMENT STRIPING-TEMP PAINT-4 IN	LF					8100
6514	PAVEMENT STRIPING-PERM PAINT-4 IN	LF	51,129*	5,026	3,296		59,451
6542	PAVEMENT STRIPING - THERMO - 6 IN W	LF	0	1,056	0		1,056
6568	PAVEMENT MARKING-THERMO STOP BAR-24 IN	LF	132*	49	0		181
6574	PAVEMENT MARKING-PREF. THERMO CURVE ARROW	EACH	27*	4	4		35
6589	PAVEMENT MARKER TYPE V - MW	EACH	2				2
6591	PAVEMENT MARKER TYPE V - BY	EACH	112				112
10020NS	FUEL ADJUSTMENT	DOLL					58,744
10030NS	ASPHALT ADJUSTMENT	DOLL					61,672

* INCLUDES US 68 QUANTITY

PAVING AREAS
PAVING SUMMARY
GENERAL SUMMARY

PIPE DRAINAGE SUMMARY

Main data table with columns for SHEET NO., ITEM CODE, SKEW, COVER HEIGHT, DESIGN PH LEVEL, ENTRANCE PIPE (15", 18", 24", 30" EQUIV.), CULVERT PIPE (24", 30", 36", 42", 48", 54" EQUIV.), CLASS II CHANNEL LINING, CLASS III CHANNEL LINING, FABRIC GEOTEXTILE TYPE IV FOR PIPE, STRUCTURE EXCAVATION SOLID ROCK, FOUNDATION PREPARATION, CONCRETE CLASS #A, STEEL REINFORCEMENT, 3-SIDED CULVERT, PIPELINE VIDEO DETECTION, METAL END SECTION, and REMARKS.

TOTAL PROJECT summary row with totals for FT, M, and various quantities.

① TOTALS CARRIED OVER TO THE GENERAL SUMMARY SHEET.
② EQUALS 50% OF TOTAL CULVERT PIPE QUANTITY.

PREPARED BY, CHECKED BY, APPROVED BY, DATE fields for administrative tracking.

COUNTY OF	ITEM NO.	SHEET NO.
MARION	4-138.00	R2 f

GENERAL & SPECIAL NOTES

THIS PROJECT IS A PARTIALLY CONTROLLED ACCESS HIGHWAY. ACCESS SHALL BE PROVIDED ONLY WHERE SPECIFICALLY SHOWN ON THE PLANS. MINIMUM SPACING IS 600 FEET.

SPECIFICATIONS

THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE "KENTUCKY TRANSPORTATION CABINET/DEPARTMENT OF HIGHWAYS STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" LATEST EDITION, INCLUDING ANY CURRENT SUPPLEMENTAL SPECIFICATIONS; KYTC DOH STANDARD DRAWINGS, MANUALS, GUIDELINES; AND M.U.T.C.D.; UNLESS OTHERWISE NOTED IN THESE PLANS.

STANDARD DRAWINGS FOR HEADWALLS

STANDARD DRAWINGS FOR HEADWALLS (RDH SERIES) ARE NOT ATTACHED TO THESE PLANS BUT ARE AVAILABLE IN THE SUPPLEMENT TO THE STANDARD DRAWING BOOK, WHICH MAY BE OBTAINED FROM THE MANAGEMENT SERVICES DIVISION OF THE DEPARTMENT OF HIGHWAYS IN FRANKFORT, KENTUCKY AT A COST.

N.G.S. (U.S.G.S.) BENCH MARKS

THE CONTRACTOR IS NOT TO DISTURB N.G.S. (U.S.G.S) BENCH MARKS IN ANY MANNER UNLESS DIRECTED TO DO SO BY THE ENGINEER.

CONTROL OF WORK

THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS AND COOPERATE WITH OTHER CONTRACTORS, E.G. PUBLIC UTILITY COMPANIES, SO THAT INTERFERENCE WITH SUCH OTHER WORK WILL BE REDUCED TO A MINIMUM.

BEFORE YOU DIG

THE CONTRACTOR IS ADVISED THAT HE CAN CALL "811" TOLL FREE A MINIMUM OF TWO AND NO MORE THAN TEN BUSINESS DAYS PRIOR TO EXCAVATION FOR INFORMATION ON THE LOCATION OF EXISTING UNDERGROUND UTILITIES WHICH SUBSCRIBE TO THE BEFORE-U-DIG (BUD) SERVICE. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE EXCAVATION WITH ALL UTILITY OWNERS, INCLUDING THOSE WHO DO NOT SUBSCRIBE TO BUD. ALL UTILITIES AND A CONTACT PERSON FOR EACH COMPANY ARE SHOWN ON SHEET NO. 3 OF THE PLANS.

UTILITIES (HAZARDOUS OR FLAMMABLE MATERIALS)

THE CONTRACTOR IS ADVISED TO EXERCISE CAUTION IN HIS OPERATIONS IN AREAS WHERE PLANS INDICATE THE PRESENCE OF A GAS LINE OR OTHER LINES CARRYING HAZARDOUS MATERIAL.

EDGE KEY

WORK UNDER THIS ITEM SHALL INCLUDE CUTTING OUT THE EXISTING ASPHALT SURFACE ON KY 208 AND METTS DRIVE TO A MINIMUM DEPTH AND WIDTH AS DETAILED ON THE TYPICAL SECTIONS SO THAT THE NEW SURFACE MAY HEEL INTO THE EXISTING SURFACE. THE CONTRACT UNIT PRICE BID PER LINEAR FOOT FOR "EDGE KEY" SHALL INCLUDE ALL NECESSARY MATERIALS, LABOR AND EQUIPMENT NECESSARY TO PERFORM THE WORK AND DISPOSE OF THE ASPHALT MATERIAL REMOVED. ASPHALT PAVEMENT MILLINGS TO BE DELIVERED TO THE MARION COUNTY MAINTENANCE BARN.

PAVEMENT MARKERS TYPE IV

RAISED PAVEMENT MARKERS TYPE IV SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR IN ACCORDANCE WITH SECTION 712 STANDARD SPECIFICATIONS.

PROPOSAL ATTACHMENTS

SPECIAL NOTE FOR MATERIAL TRANSFER VEHICLE
SPECIAL NOTE FOR PORTABLE CHANGEABLE MESSAGE SIGNS

COMPACTION OF ASPHALT MIXTURES

THE CONTRACTOR IS ADVISED THAT THE COMPACTION OF ASPHALT MIXTURES FURNISHED FOR MAINLINE USAGE ON THIS PROJECT WILL BE ACCEPTED BY OPTION A ACCORDING TO SUBSECTIONS 402.03.02 AND 403.03.10 OF THE STANDARD SPECIFICATIONS. THE COMPACTION OF ALL OTHER ASPHALT MIXTURES WILL BE ACCEPTED BY OPTION B.

CONCRETE

ENSURE CLASS "A" CONCRETE IS USED THROUGHOUT.

PERMANENT PAVEMENT STRIPING AND MARKINGS

FURNISH AND APPLY STRIPING PAINT FOR LANE LINES AS SHOWN IN THE PLANS. FURNISH AND APPLY THERMOPLASTIC DIRECTIONAL ARROW MARKINGS, CROSS-WALKS, AND MEDIAN CROSS-HATCH STRIPING AS SHOWN IN THE PLANS.

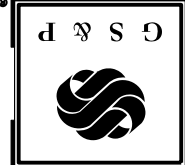
CEMENT STABILIZED ROADBED

STABILIZE THE TOP 8 INCHES OF THE FINISHED ROADBED WITH PORTLAND CEMENT IN ACCORDANCE WITH SECTION 208 OF THE STANDARD SPECIFICATIONS. USE SELECTED SOILS WITH A MINIMUM CBR VALUE OF 7, FOR THIS PURPOSE.

THE PORTLAND CEMENT CONTENT IS 6 PERCENT BY WEIGHT, AND THE ESTIMATED PLAN QUANTITY USES AN AVERAGE DRY DENSITY OF 107 LBS/CUBIC FEET. HOWEVER, ADJUST THE QUANTITY AFTER CONSTRUCTING THE ROADBED AND SUBMITTING THE SAMPLES FOR TESTING. THIS TAKES APPROXIMATELY TWO WEEKS.

PREPARED BY GRESHAM SMITH AND PARTNERS
CHECKED BY _____ DATE _____
APPROVED BY _____ DATE _____

G R E S H A M
S M I T H
A N D
P A R T N E R S



DATE 09-DEC-2008

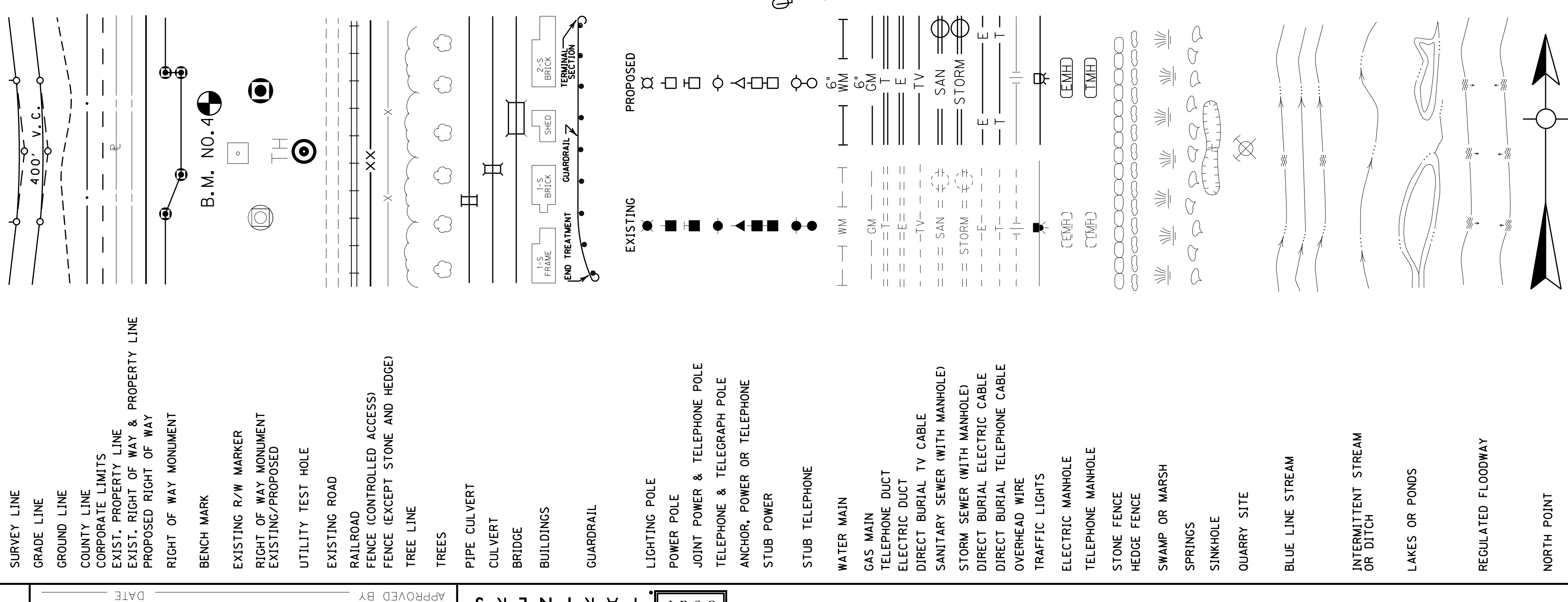
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GENERAL & SPECIAL NOTES

△ CP 1
IPC SET ALONG US 68
STA. 54+39.91, 60.90' LT.
ELEV. 793.08

CONVENTIONAL SIGNS



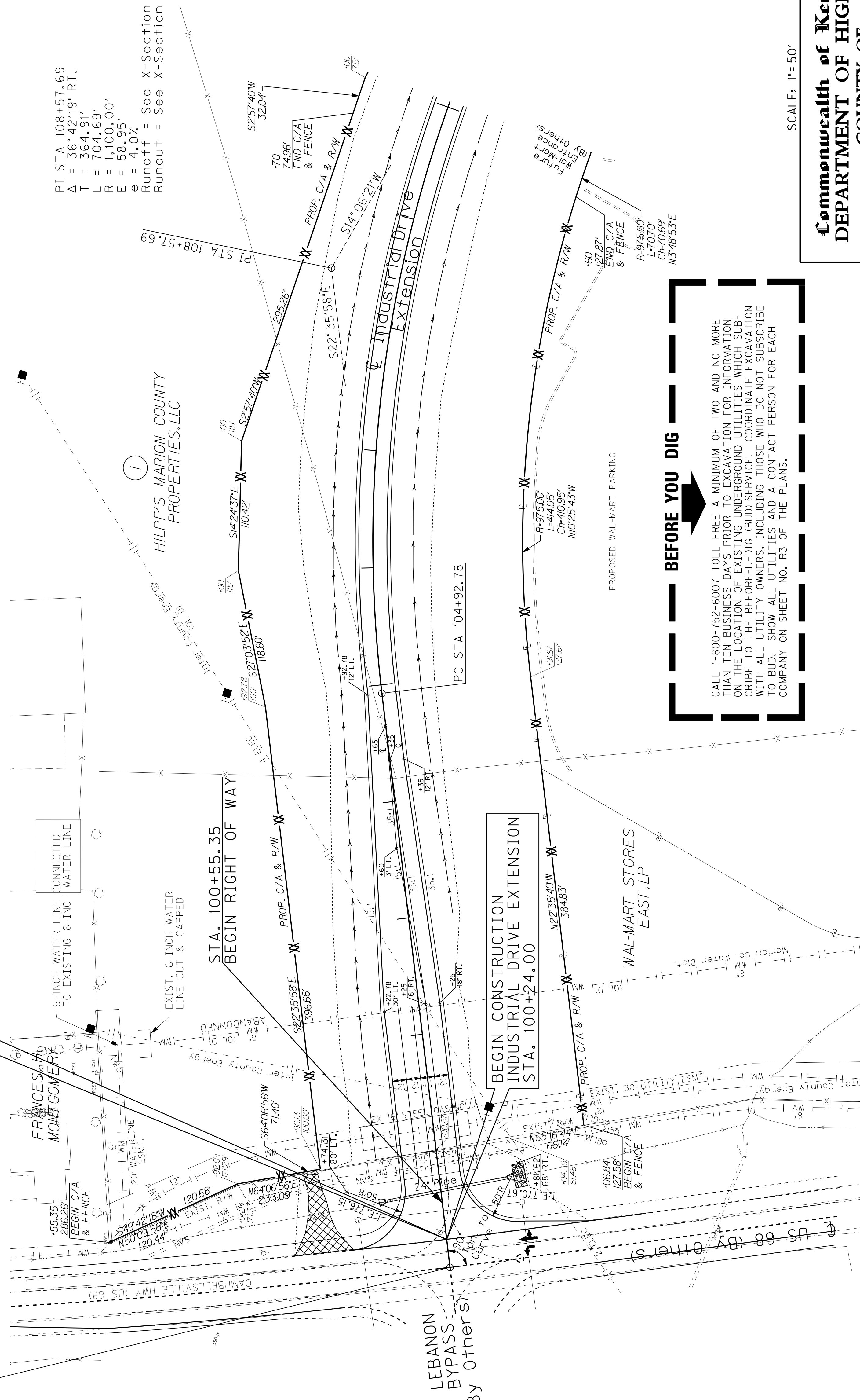
INDUSTRIAL DRIVE EXTENSION C/ STA. 100+00.00=
US 68 C/ STA. 50+00.00 (By Others)=
LEBANON BYPASS C/ STA. 50+00.77 (By Others)=

BEGIN PROJECT
STA. 100+24.00

100+00

105+00

110+00



BEFORE YOU DIG

CALL 1-800-752-6007 TOLL FREE A MINIMUM OF TWO AND NO MORE THAN TEN BUSINESS DAYS PRIOR TO EXCAVATION FOR INFORMATION ON THE LOCATION OF EXISTING UNDERGROUND UTILITIES WHICH SUBSCRIBE TO THE BEFORE-U-DIG (BUD) SERVICE. COORDINATE EXCAVATION WITH ALL UTILITY OWNERS, INCLUDING THOSE WHO DO NOT SUBSCRIBE TO BUD. SHOW ALL UTILITIES AND A CONTACT PERSON FOR EACH COMPANY ON SHEET NO. R3 OF THE PLANS.

SCALE: 1"= 50'

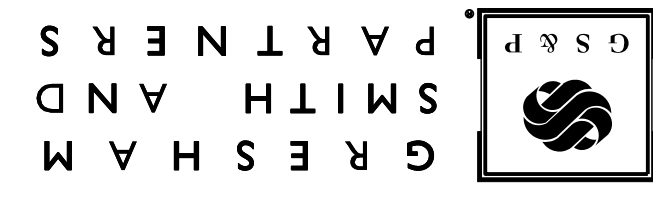
Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS
COUNTY OF MARION

PROJECT: FD04 078 NEW ROUTE

INDUSTRIAL DRIVE EXTENSION
STA. 100+00 TO STA. 110+00

UTILITY CONTACTS	
ELECTRIC	SEWER
Inter-County RECC Bud Griffith 1009 Hustonville Road Danville, KY 40423 859-236-4561 859-516-3329	City of Lebanon Sewer Dept. John O. Thomas P.O. Box 840 Lebanon, KY 40033 270-692-6272
Kentucky Utilities Larry Gipin 101 Old Greensburg Road Campbellsville, KY 42718 270-465-7721	Marion County Water District James L. Mudd P.O. Box 528 Lebanon, KY 40033 270-692-2004
GAS	WATER
Atmos Energy Earl Taylor 449 Whirlaway Drive Danville, KY 40422 859-236-2300	Lebanon Water Works Co. John Thomas 120 S. Proctor Knott Lebanon, KY 40033 270-692-2491
TELEPHONE	CABLE TELEVISION
Windstream Comm. Richard Sadler 1715 East Broadway Campbellsville, KY 42718 606-875-7816	Time Warner Cable Thomas Anness 108 N. Greenville Street Harrordsburg, KY 40330 859-265-0215

PREPARED BY GRESHAM SMITH AND PARTNERS
CHECKED BY
DATE
APPROVED BY
DATE

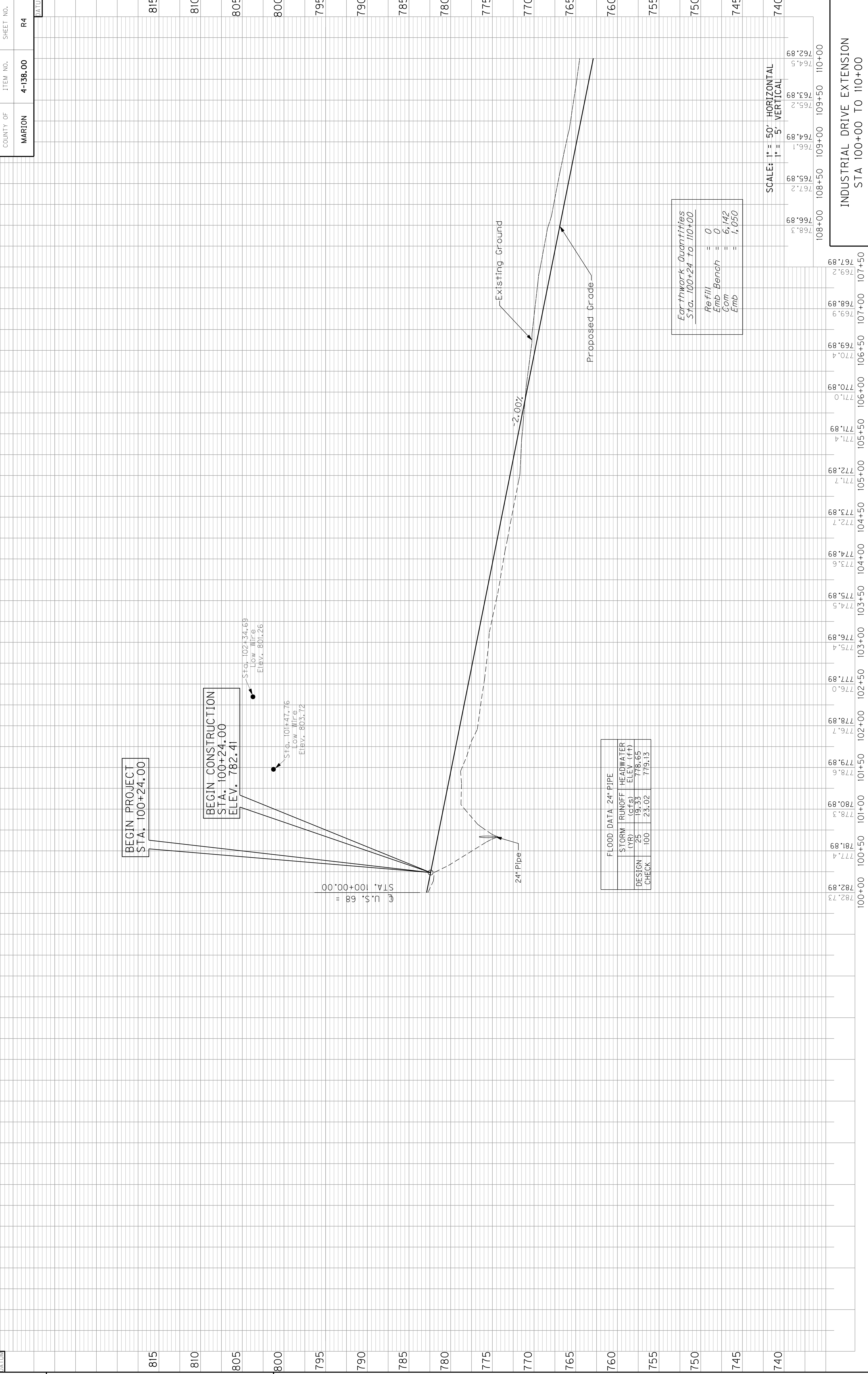


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PREPARED BY GRESHAM SMITH AND PARTNERS
 CHECKED BY _____
 APPROVED BY _____
 DATE 09-DEC-2008



GRESHAM
 SMITH
 AND
 PARTNERS



BEGIN PROJECT
 STA. 100+24.00

BEGIN CONSTRUCTION
 STA. 100+24.00
 ELEV. 782.41

Sta. 102+34.69
 Low Wire
 Elev. 801.26

Sta. 101+47.76
 Low Wire
 Elev. 803.72

U.S. 68 =
 STA. 100+00.00

24" Pipe

Existing Ground

Proposed Grade

-2.00%

FLOOD DATA 24" PIPE		
STORM (YR)	RUNOFF (CFS)	HEADWATER ELEV. (FT)
DESIGN 25	19.33	778.65
CHECK 100	23.02	779.13

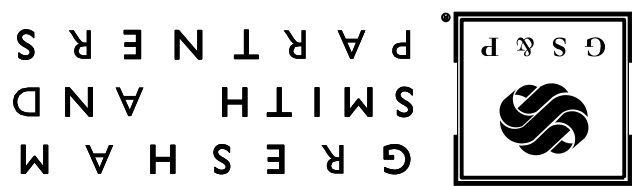
Earthwork Quantities Sta. 100+24 To 110+00	
Refill	= 0
Emb Bench	= 0
Com	= 6,142
Emb	= 1,050

SCALE: 1" = 50' HORIZONTAL
 1" = 5' VERTICAL

Station	Elevation
108+00	768.3
108+50	767.2
109+00	764.89
109+50	763.89
110+00	762.89

INDUSTRIAL DRIVE EXTENSION
 STA 100+00 TO 110+00

PREPARED BY GRESHAM SMITH AND PARTNERS DATE 09-DEC-2008
 CHECKED BY DATE
 APPROVED BY DATE



FILE NAME: \$\$\$design\files\specification\$\$\$
 DATE: \$\$\$DATE\$\$\$
 USER: \$\$\$USER\$\$\$

E-SHEET NAME: INDUSTRIAL DRIVE EXTENSION STA. 110+00 TO STA. 125+00

110+00

PI STA 108+57.69
 $\Delta = 36^\circ 42' 19''$ RT.
 T = 364.91'
 L = 704.69'
 R = 1,100.00'
 E = 58.95'
 $e = 4.0\%$
 Runoff = See X-Section
 Runout = See X-Section

(1)
 HILPP'S MARION COUNTY PROPERTIES, LLC

DITCH CONSTRUCTION

STATION TO STATION	TYPE OF DITCH	LINING TYPE	QUANTITY	D	T
111+50 to 114+00	2' F.B. Sp. Dt.	ECB			
114+00 to 118+00	2' F.B. Surf. Dt.	ECB	41 TONS	2'	2'
118+31.7 to 118+50	4' F.B. Surf. Dt.	CLASS III			
118+50 to 121+67	4' F.B. Surf. Dt.	ECB			
121+67 to 121+77	4' F.B. Surf. Dt.	CLASS II	13 TONS	2'	1.5'
122+15 to 125+00	4' F.B. Surf. Dt.	ECB			

• ECB - EROSION CONTROL BLANKET

115+00

ENTRANCES LEFT

STATION	WIDTH	ENTRANCE PAVEMENT (SQ YD)	PIPE SIZE	PIPE LENGTH
122+00	16'	171 Asphalt	48" EQ.	31'

Lt. Sta. 117+75 to Sta. 119+37.5 Const. 87.5 L.F. Steel "W" Beam Guardrail (SF) w/ 2 - Guardrail End Treatment Type 4A

(2)
 CHARLES R. GOODIN

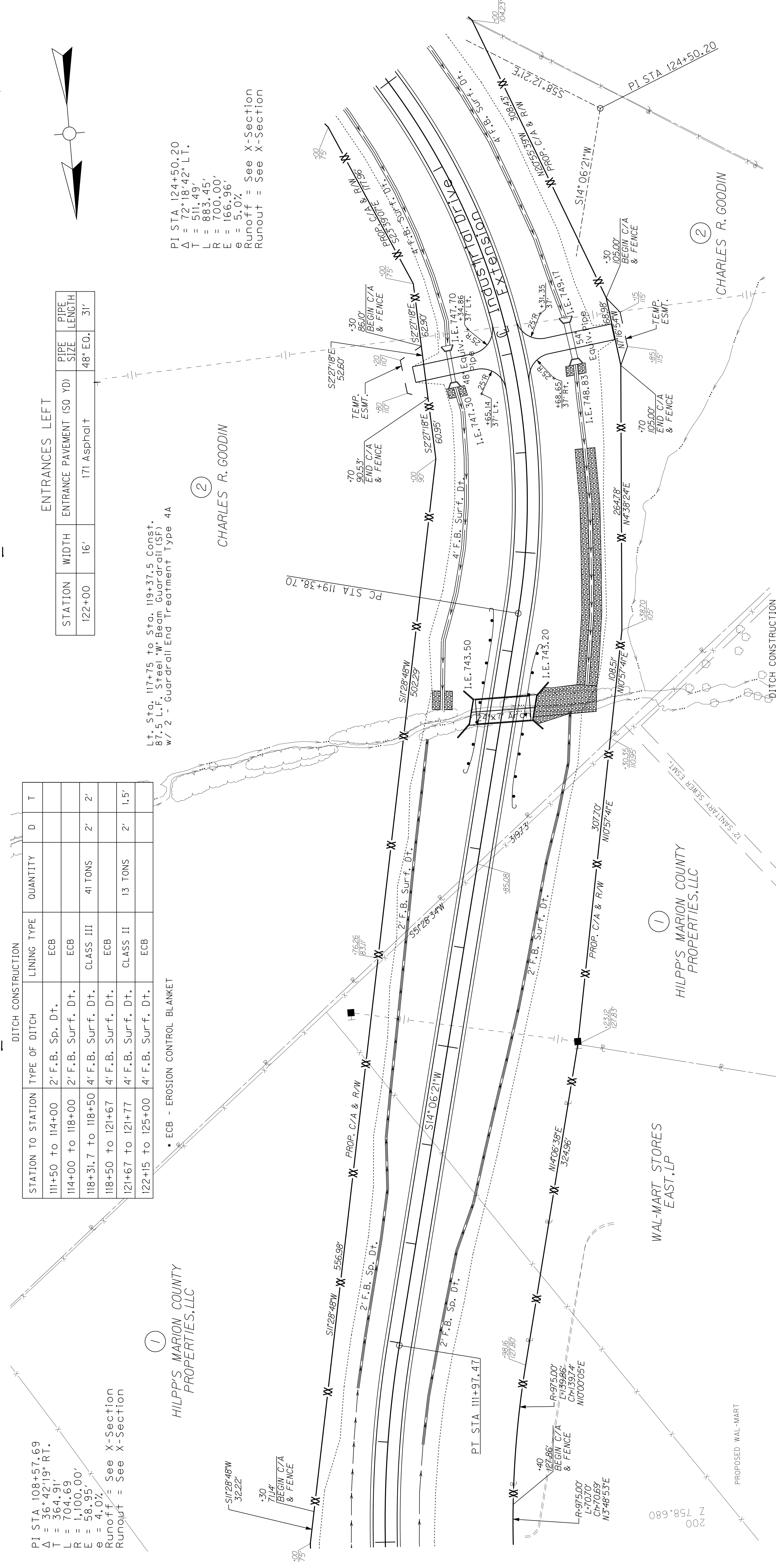
120+00

ENTRANCES RIGHT

STATION	WIDTH	ENTRANCE PAVEMENT (SQ YD)	PIPE SIZE	PIPE LENGTH
122+00	16'	175 Asphalt	54" EQ.	37'

PI STA 124+50.20
 $\Delta = 72^\circ 18' 42''$ LT.
 T = 511.49'
 L = 883.45'
 R = 700.00'
 E = 166.96'
 $e = 5.0\%$
 Runoff = See X-Section
 Runout = See X-Section

125+00



STATION TO STATION	TYPE OF DITCH	LINING TYPE	QUANTITY	D	T
111+00 to 113+50	2' F.B. Sp. Dt.	ECB			
113+50 to 118+50	2' F.B. Surf. Dt.	ECB			
118+78.7 to 121+00	4' F.B. Surf. Dt.	CLASS III	530 TONS	2'	2'
121+00 to 121+68	4' F.B. Surf. Dt.	ECB			
121+68 to 121+78	4' F.B. Surf. Dt.	CLASS II	20 TONS	2'	1.5'
122+15 to 125+00	4' F.B. Surf. Dt.	ECB			

• ECB - EROSION CONTROL BLANKET

Lt. Sta. 117+47.50 to Sta. 119+10 Const. 87.5 L.F. Steel "W" Beam Guardrail (SF) w/ 2 - Guardrail End Treatment Type 4A

SCALE: 1"=50'

INDUSTRIAL DRIVE EXTENSION STA. 110+00 TO STA. 125+00

USER: \$\$\$USER\$\$\$

DATE: \$\$\$DATE\$\$\$

FILE NAME: \$\$\$design\$\$\$.specification\$\$\$

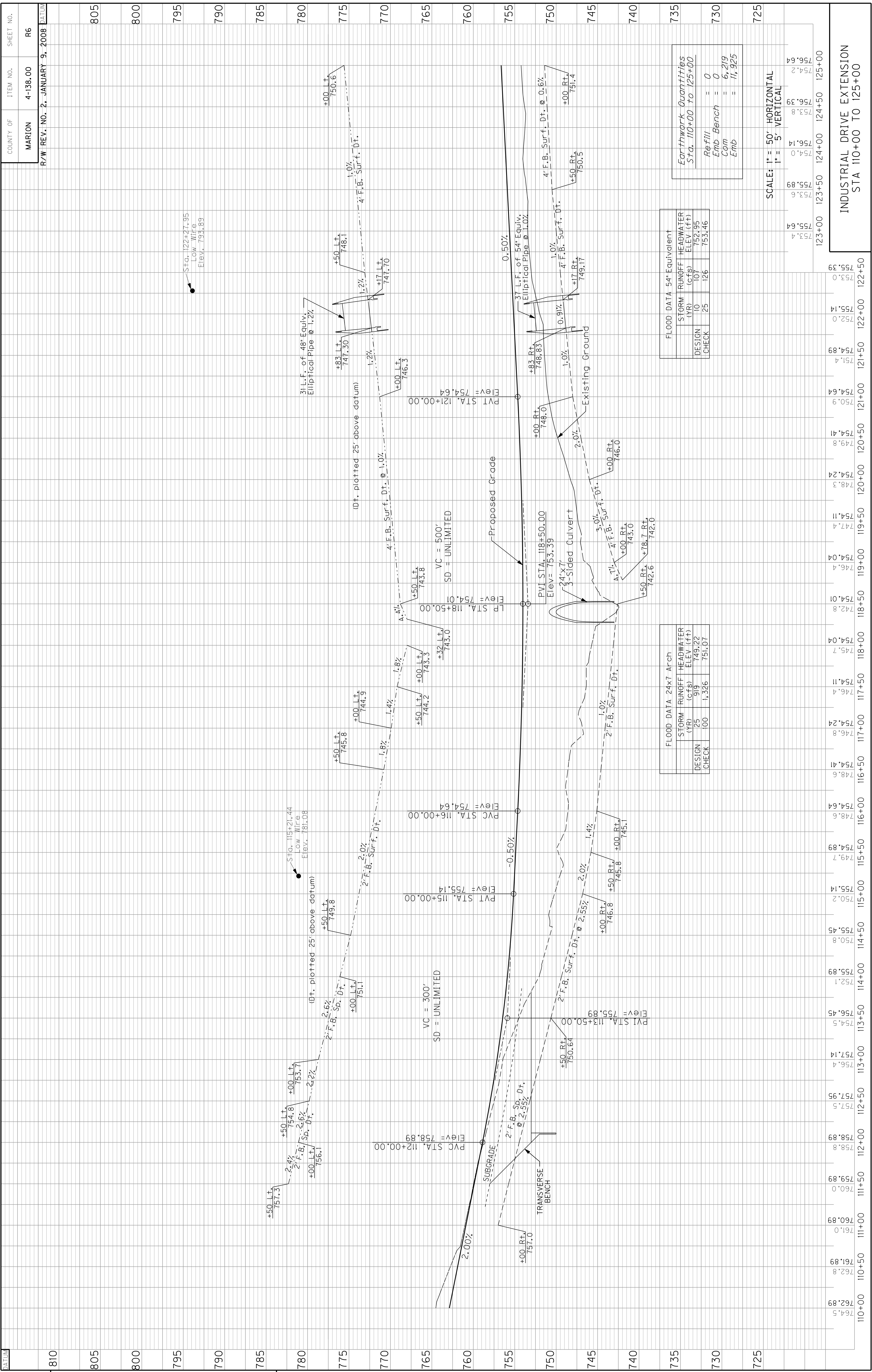
E-SHEET NAME:



GRESHAM SMITH AND PARTNERS

PREPARED BY GRESHAM SMITH AND PARTNERS DATE 09-DEC-2008
CHECKED BY DATE
APPROVED BY DATE

DATUM



FLOOD DATA 24x7 Arch

DESIGN	CHECK	STORM (YR)	RUNOFF (cfs)	HEADWATER ELEV (ft)
25	100	919	749.22	751.07
107	126	126	752.95	753.46

FLOOD DATA 54" Equivalent

DESIGN	CHECK	STORM (YR)	RUNOFF (cfs)	HEADWATER ELEV (ft)
10	25	107	752.95	753.46
107	126	126	752.95	753.46

Earthwork Quantities
Sta. 110+00 to 125+00

Refill	=	0
Emb. Bench	=	0
Com Emb	=	6,219
Emb	=	11,925

SCALE: 1" = 50' HORIZONTAL
1" = 5' VERTICAL

753.4	753.6	753.8	754.0	754.2
123+00	123+50	124+00	124+50	125+00

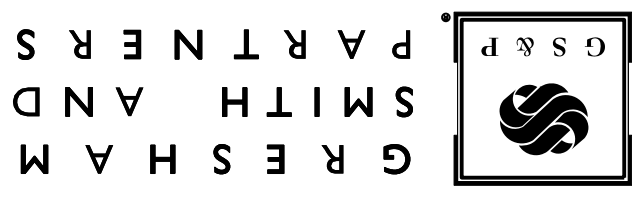
INDUSTRIAL DRIVE EXTENSION
STA 110+00 TO 125+00

COUNTY OF MARION
ITEM NO. 4-136.00
SHEET NO. R6

R/W REV. NO. 2, JANUARY 9, 2008
DATE

DATUM

PREPARED BY GRESHAM SMITH AND PARTNERS DATE 09-DEC-2008
 CHECKED BY DATE
 APPROVED BY DATE



USER: \$\$\$USER\$\$\$
 FILE NAME: \$\$\$design\the\$specification\$\$\$
 E-SHEET NAME:
 DATE: \$\$\$DATE\$\$\$
 SCALE: 1"=50'

125+00

130+00

135+00

140+00

REPARIED BY GRESHAM SMITH AND PARTNERS DATE 09-DEC-2008
 CHECKED BY DATE
 APPROVED BY DATE

STATION TO STATION	TYPE OF DITCH	LINING TYPE	QUANTITY	D	T
125+00 to 130+00	4' F.B. Surf. Dt.	ECB			
130+00 to 131+00	4' F.B. Sp. Dt.	ECB			
137+50 to 138+00	2' F.B. Sp. Dt.	ECB			
138+00 to 140+00	Sp. "V" Dt.	ECB			

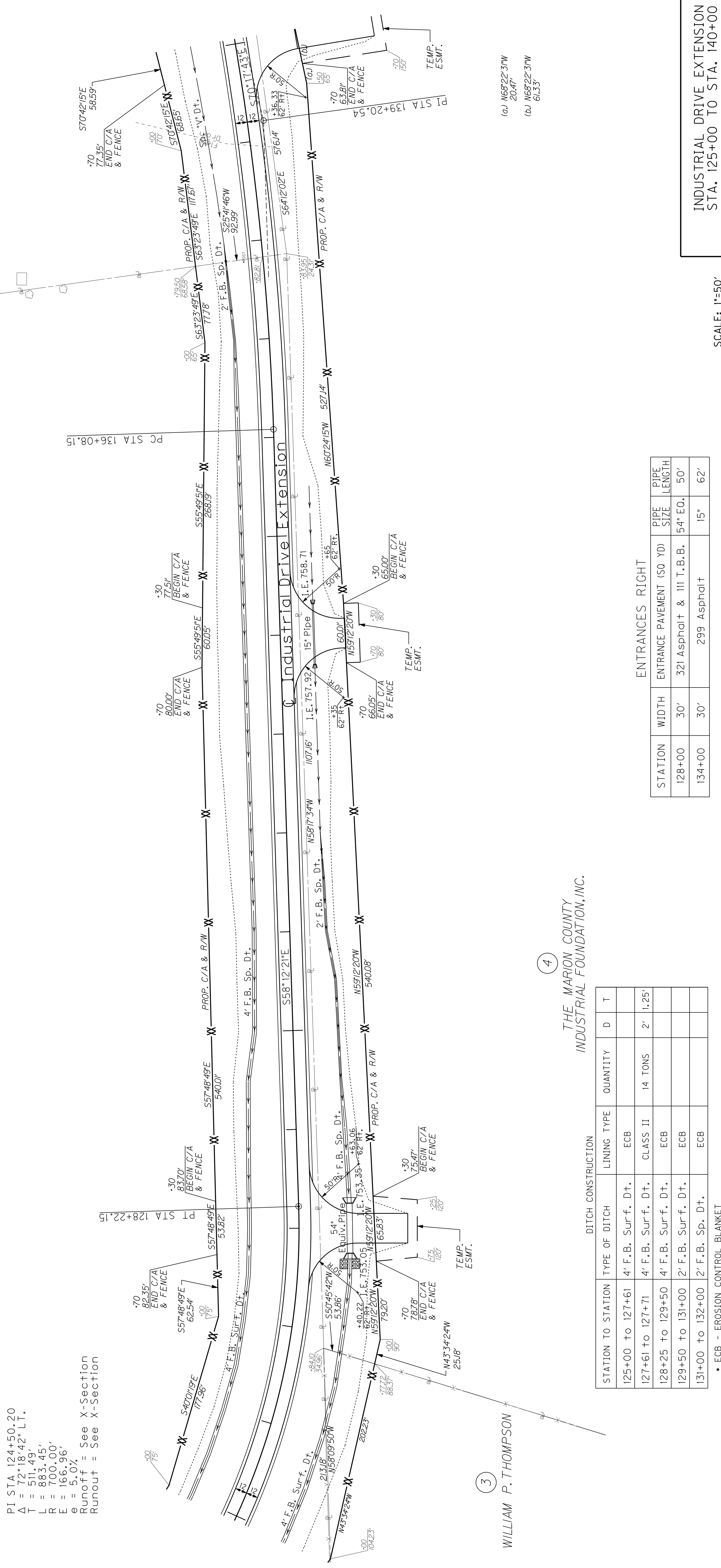
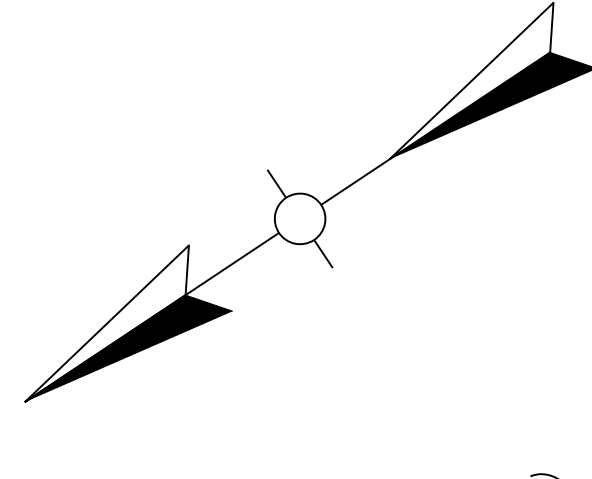
• ECB - EROSION CONTROL BLANKET

PI STA. 124+50.20
 Δ = 72°18'42" L.T.
 T = 511.49'
 L = 883.45'
 R = 700.00'
 E = 166.96'
 e = 5.0%
 Runoff = See X-Section
 Runout = See X-Section

(2)
 CHARLES R. GOODWIN

PI STA. 139+20.54
 Δ = 12°05'22" L.T.
 T = 312.39'
 L = 622.45'
 R = 2,950.00'
 E = 16.49'
 e = R.C.
 Runoff = See X-Section
 Runout = See X-Section

(7)
 SAMUEL E. LEE, III
 MARY SUSAN LEE (WF.)



(3)
 WILLIAM P. THOMPSON

(4)
 THE MARION COUNTY
 INDUSTRIAL FOUNDATION, INC.

STATION TO STATION	TYPE OF DITCH	LINING TYPE	QUANTITY	D	T
125+00 to 127+61	4' F.B. Surf. Dt.	ECB			
127+61 to 127+71	4' F.B. Surf. Dt.	CLASS II	14 TONS	2'	1.25'
128+25 to 129+50	4' F.B. Surf. Dt.	ECB			
129+50 to 131+00	2' F.B. Surf. Dt.	ECB			
131+00 to 132+00	2' F.B. Sp. Dt.	ECB			

• ECB - EROSION CONTROL BLANKET

STATION	WIDTH	ENTRANCE PAVEMENT (SO YD)	PIPE SIZE	PIPE LENGTH
128+00	30'	321 Asphalt & 111 T.B.B.	54" EO.	50'
134+00	30'	299 Asphalt	15"	62'

SCALE: 1"=50'

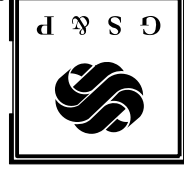
INDUSTRIAL DRIVE EXTENSION
 STA. 125+00 TO STA. 140+00

(a) N68°22'37W
 20.47'
 (b) N68°22'37W
 61.53'

USER: \$\$\$USER\$\$\$

DATE: \$\$\$DATE\$\$\$

FILE NAME: \$\$\$design\$filespecification\$\$\$



GRESHAM
SMITH
AND
PARTNERS

PREPARED BY GRESHAM SMITH AND PARTNERS
DATE 12-DEC-2008
CHECKED BY _____
DATE _____
APPROVED BY _____
DATE _____

125+00	754.2	125+00	756.64	125+00	754.5	125+00	756.89	126+00	754.6	126+00	757.14	126+00	754.5	126+00	757.39	127+00	755.2	127+00	757.64	127+00	754.7	127+00	757.89	128+00	754.7	128+00	758.14	128+00	754.7	128+00	758.39	129+00	755.0	129+00	758.64	129+00	756.1	129+00	758.89	130+00	756.8	130+00	759.14	130+00	759.39	131+00	759.3	131+00	759.64	131+00	759.1	131+00	759.89	132+00	759.9	132+00	760.14	132+00	760.9	132+00	760.9	132+00	760.44	133+00	761.7	133+00	760.83	133+00	762.4	133+00	761.31	134+00	762.9	134+00	761.89	134+00	762.9	134+00	761.14	134+00	761.56	134+00	763.2	135+00	763.7	135+00	763.32	135+00	764.3	135+00	764.18	136+00	764.5	136+00	765.13	136+00	764.5	136+00	765.13	137+00	765.0	137+00	765.13	137+00	765.13	138+00	766.8	138+00	769.12	138+00	766.8	139+00	770.12	139+00	771.12	139+00	772.12	140+00	773.12	140+00	773.12
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SCALE: 1" = 50' HORIZONTAL
1" = 5' VERTICAL

Earthwork Quantities	
Sta. 125+00 To 140+00	
Refill	= 0
Emb Bench	= 0
Com	= 6,793
Emb	= 4,549



COUNTY OF MARION
ITEM NO. 4-136.00
SHEET NO. R8

R/W REV. NO. 2, JANUARY 9, 2008
DATE

DATUM

STATION TO STATION	TYPE OF DITCH	LINING TYPE	QUANTITY	D	T
140+00 to 142+00	Sp. "V" Dt.	ECB			
142+00 to 144+50	Sp. "V" Dt.	CLASS II	299 TONS	1.5'	1.5'
144+50 to 145+35	Normal Dt.	CLASS II	113 TONS	1.5'	1.5'
146+40.2 to 147+50	2' F.B. Sp. Dt.	CLASS II	170 TONS	1.5'	1.5'
147+50 to 149+62	2' F.B. Surf. Dt.	CLASS II	317 TONS	1.5'	1.5'
149+62 to 150+50	2' F.B. Surf. Dt.	CLASS II	143 TONS	1.5'	1.5'
150+50 to 153+00	Normal Dt.	CLASS II	320 TONS	1.5'	1.5'
153+77 to 155+00	4' F.B. Sp. Dt.	CLASS III	216 TONS	1.5'	2'

PI STA 139+20.54
 Δ = 12°05'22" LT.
 T = 312.39'
 L = 622.45'
 R = 2,950.00'
 E = 16.49'
 e = RC
 Runoff = See X-Section
 Runout = See X-Section

PI STA 152+45.57
 Δ = 28°14'28" LT.
 T = 377.35'
 L = 739.35'
 R = 1,500.00'
 E = 46.74'
 e = 3.47'
 Runoff = See X-Section
 Runout = See X-Section

PI STA 148+68.22
 Δ = 11°53'44" E
 T = 191.86'
 L = 455.65'
 R = 39.01'
 Runoff = See X-Section
 Runout = See X-Section

PI STA 148+68.22
 Δ = 11°53'44" E
 T = 191.86'
 L = 455.65'
 R = 39.01'
 Runoff = See X-Section
 Runout = See X-Section

PI STA 152+45.57
 Δ = 28°14'28" LT.
 T = 377.35'
 L = 739.35'
 R = 1,500.00'
 E = 46.74'
 e = 3.47'
 Runoff = See X-Section
 Runout = See X-Section

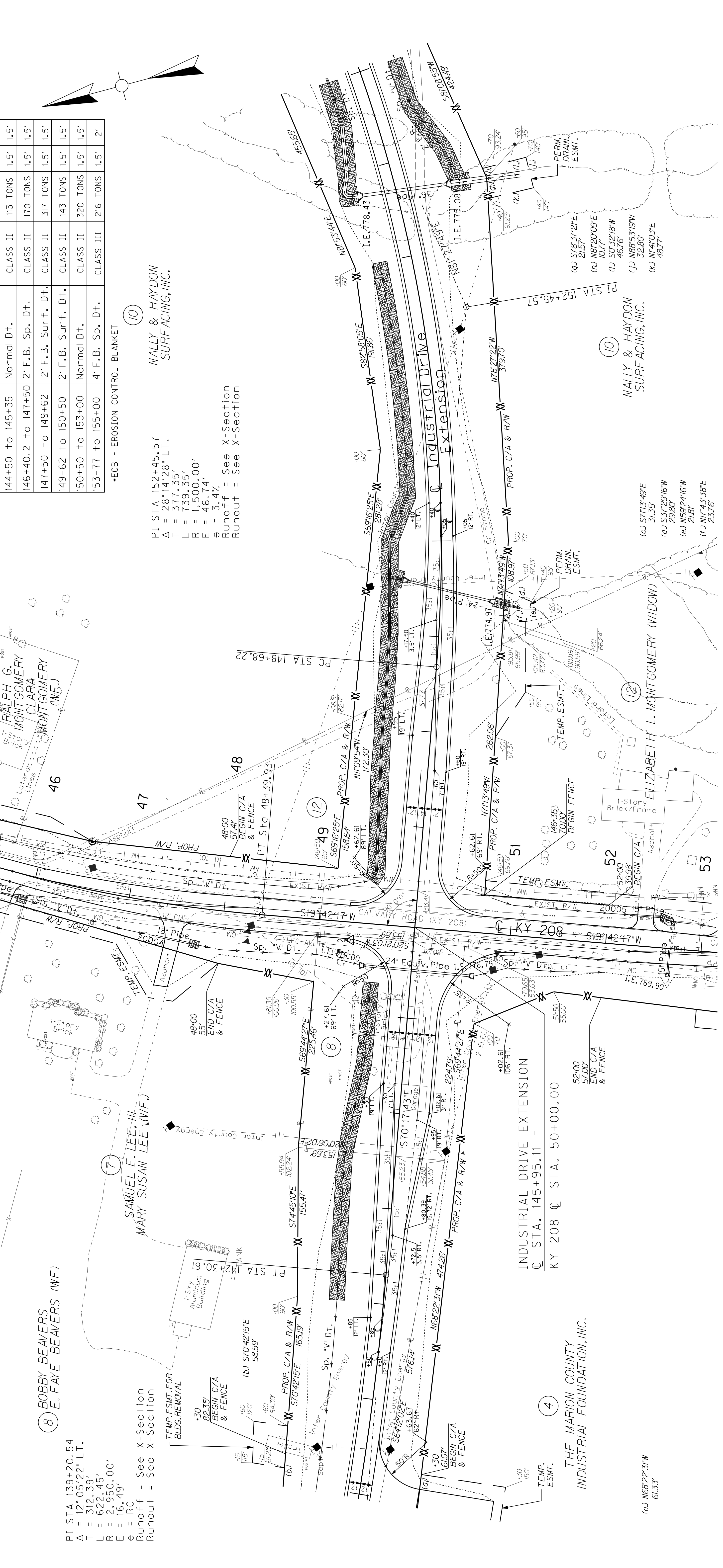
PI STA 152+45.57
 Δ = 28°14'28" LT.
 T = 377.35'
 L = 739.35'
 R = 1,500.00'
 E = 46.74'
 e = 3.47'
 Runoff = See X-Section
 Runout = See X-Section

PI STA 152+45.57
 Δ = 28°14'28" LT.
 T = 377.35'
 L = 739.35'
 R = 1,500.00'
 E = 46.74'
 e = 3.47'
 Runoff = See X-Section
 Runout = See X-Section

PI STA 152+45.57
 Δ = 28°14'28" LT.
 T = 377.35'
 L = 739.35'
 R = 1,500.00'
 E = 46.74'
 e = 3.47'
 Runoff = See X-Section
 Runout = See X-Section

PI STA 152+45.57
 Δ = 28°14'28" LT.
 T = 377.35'
 L = 739.35'
 R = 1,500.00'
 E = 46.74'
 e = 3.47'
 Runoff = See X-Section
 Runout = See X-Section

PI STA 152+45.57
 Δ = 28°14'28" LT.
 T = 377.35'
 L = 739.35'
 R = 1,500.00'
 E = 46.74'
 e = 3.47'
 Runoff = See X-Section
 Runout = See X-Section



STATION	WIDTH	ENTRANCE PAVEMENT (50 YD)	PIPE SIZE	PIPE LENGTH
140+00	30'	279 Asphalt & 262 T.B.B.	-	-

STATION TO STATION	TYPE OF DITCH	LINING TYPE	QUANTITY	D	T
153+52 to 154+50	2' F.B. Sp. Dt.	CLASS II	185 TONS	1.5'	1.5'
154+50 to 155+00	Sp. "V" Dt.	CLASS II	83 TONS	1.5'	1.5'

ENTRANCES RIGHT

DITCH CONSTRUCTION

SCALE: 1"=50'

INDUSTRIAL DRIVE EXTENSION
 STA. 140+00 TO STA. 155+00

NALLY & HAYDON SURFACING, INC.

THE MARION COUNTY INDUSTRIAL FOUNDATION, INC.

BOBBY BEAVERS (WF)
 E. FAYE BEAVERS (WF)

SAMUEL E. LEE, III
 MARY SUSAN LEE (WF)

RALPH G. MONTGOMERY
 CLARA MONTGOMERY (WF)

ELIZABETH L. MONTGOMERY (WIDOW)

INDUSTRIAL DRIVE EXTENSION

TEMP. ESMT.

PERM. DRAIN. ESMT.

PROP. C/A & R/W

EXIST. R/W

EXIST. PIPE

TEMP. ESMT.

PERM. DRAIN. ESMT.

PROP. C/A & R/W

EXIST. R/W

EXIST. PIPE

TEMP. ESMT.

PERM. DRAIN. ESMT.

PROP. C/A & R/W

EXIST. R/W

EXIST. PIPE

TEMP. ESMT.

PERM. DRAIN. ESMT.

PROP. C/A & R/W

EXIST. R/W

EXIST. PIPE

TEMP. ESMT.

PERM. DRAIN. ESMT.

PROP. C/A & R/W

EXIST. R/W

EXIST. PIPE

TEMP. ESMT.

PERM. DRAIN. ESMT.

PROP. C/A & R/W

EXIST. R/W

EXIST. PIPE

TEMP. ESMT.

PERM. DRAIN. ESMT.

PROP. C/A & R/W

EXIST. R/W

EXIST. PIPE

TEMP. ESMT.

PERM. DRAIN. ESMT.

PROP. C/A & R/W

EXIST. R/W

EXIST. PIPE

TEMP. ESMT.

PERM. DRAIN. ESMT.

PROP. C/A & R/W

EXIST. R/W

EXIST. PIPE

TEMP. ESMT.

PERM. DRAIN. ESMT.

PROP. C/A & R/W

EXIST. R/W

EXIST. PIPE

TEMP. ESMT.

PERM. DRAIN. ESMT.

PROP. C/A & R/W

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EXIST. PIPE

TEMP. ESMT.

PERM. DRAIN. ESMT.

PROP. C/A & R/W

EXIST. R/W

EXIST. PIPE

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PERM. DRAIN. ESMT.

PROP. C/A & R/W

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PERM. DRAIN. ESMT.

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PERM. DRAIN. ESMT.

PROP. C/A & R/W

EXIST. R/W

EXIST. PIPE

TEMP. ESMT.

PERM. DRAIN. ESMT.

PROP. C/A & R/W

EXIST. R/W

EXIST. PIPE

TEMP.

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FILE NAME: \$\$\$design\file\$specification\$\$\$

DATE: \$\$\$DATE\$\$\$

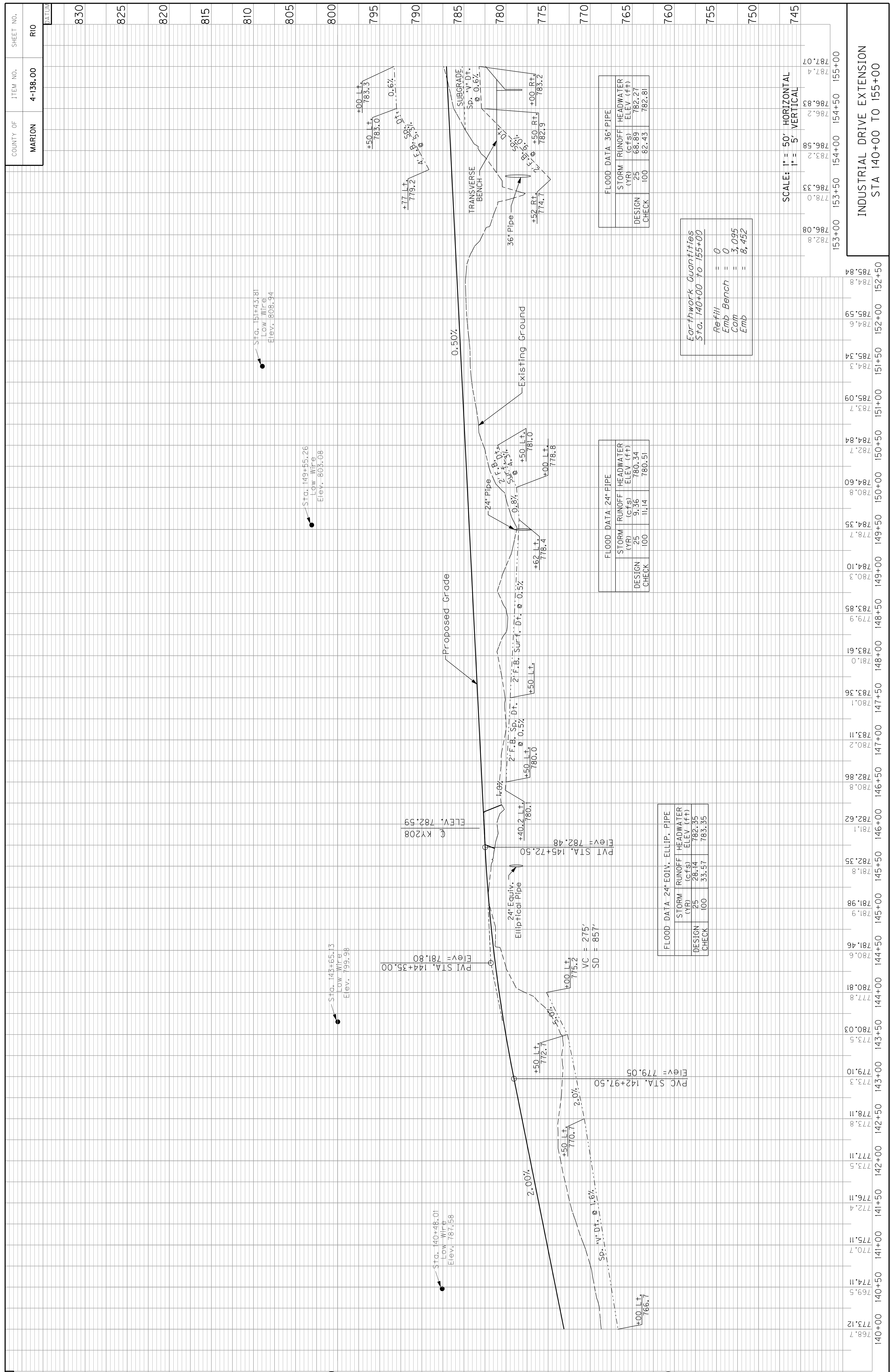
E-SHEET NAME:

PREPARED BY GRESHAM SMITH AND PARTNERS
DATE 09-DEC-2008
CHECKED BY
DATE
APPROVED BY



GRESHAM
SMITH
AND
PARTNERS

DATUM 835 830 825 820 815 810 805 800 795 790 785 780 775 770 765 760 755 750 745 740



FLOOD DATA 24" EQUIV. ELLIP. PIPE

STORM (YR)	RUNOFF (GFS)	HEADWATER ELEV (FT)
DESIGN 25	28.14	782.35
CHECK 100	33.57	783.35

FLOOD DATA 24" PIPE

STORM (YR)	RUNOFF (GFS)	HEADWATER ELEV (FT)
DESIGN 25	9.36	780.34
CHECK 100	11.14	780.51

FLOOD DATA 36" PIPE

STORM (YR)	RUNOFF (GFS)	HEADWATER ELEV (FT)
DESIGN 25	68.89	782.27
CHECK 100	82.43	782.81

Earthwork Quantities
Sta. 140+00 to 155+00

Refill	=	0
Emb. Bench	=	0
Com	=	3,095
Emb	=	8,452

SCALE: 1" = 50' HORIZONTAL
1" = 5' VERTICAL

COUNTY OF MARION ITEM NO. 4-136.00 SHEET NO. RIO

INDUSTRIAL DRIVE EXTENSION
STA 140+00 TO 155+00

STATION	ELEVATION
140+00	768.7
140+50	769.5
141+00	770.7
141+50	772.4
142+00	773.5
142+50	773.8
143+00	773.3
143+50	773.5
144+00	777.8
144+50	780.03
145+00	780.81
145+50	780.6
146+00	781.46
146+50	781.9
147+00	781.98
147+50	781.8
148+00	782.35
148+50	781.1
149+00	782.62
149+50	780.8
150+00	782.86
150+50	780.2
151+00	783.11
151+50	781.0
152+00	783.61
152+50	779.9
153+00	783.85
153+50	780.3
154+00	784.10
154+50	783.7
155+00	785.09
155+50	784.3
156+00	785.34
156+50	784.6
157+00	785.59
157+50	784.8
158+00	785.94

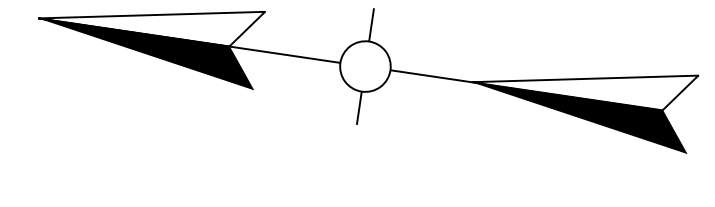
GRESHAM SMITH AND PARTNERS
 PREPARED BY GRESHAM SMITH AND PARTNERS DATE 09-DEC-2008
 CHECKED BY _____ DATE _____
 APPROVED BY _____ DATE _____

ENTRANCES LEFT

STATION	WIDTH	ENTRANCE PAVEMENT (SQ YD)	PIPE SIZE	PIPE LENGTH
158+00	16'	146 Asphalt	24"	30'

DITCH CONSTRUCTION

STATION TO STATION	TYPE OF DITCH	LINING TYPE	QUANTITY	D	T
157+70 to 157+80	2' F.B. Dt.	CLASS II	7 TONS	1'	1.5'
165+63 to 168+50	Sp. "V" Dt.	ECB			
169+39 to 170+00	6' F.B. Sp. Dt.	ECB			

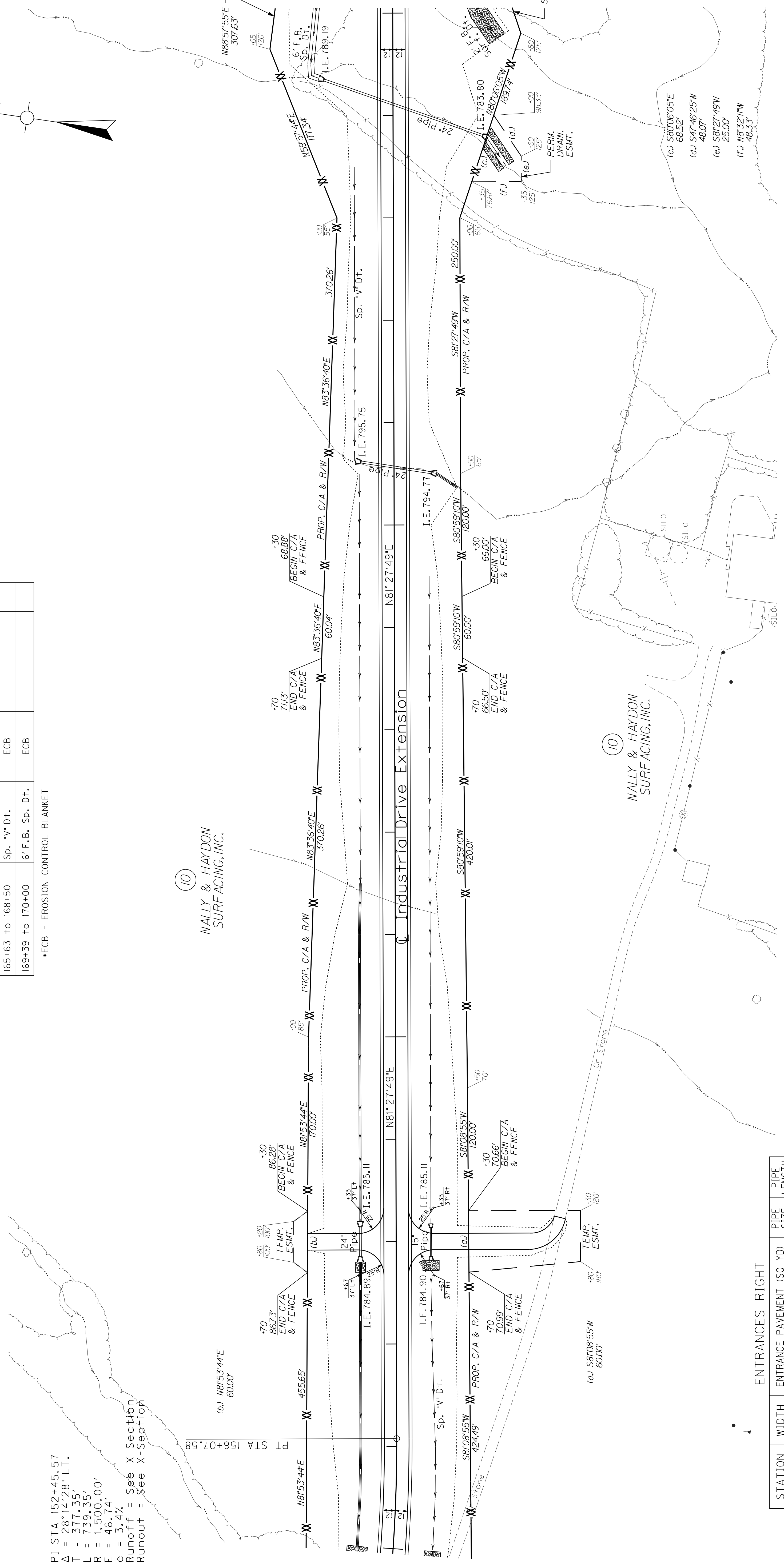


155+00

160+00

165+00

170+00



ENTRANCES RIGHT

STATION	WIDTH	ENTRANCE PAVEMENT (SQ YD)	PIPE SIZE	PIPE LENGTH
158+00	16'	284 Asphalt	15"	29'

DITCH CONSTRUCTION

STATION TO STATION	TYPE OF DITCH	LINING TYPE	QUANTITY	D	T
155+00 to 157+50	Sp. "V" Dt.	ECB			
157+72 to 157+82	Normal Dt.	CLASS II	4 TONS	1'	1.5'
169+75 to 170+00	2' F.B. Surf. Dt.	CLASS II	38 TONS	2'	1.25'

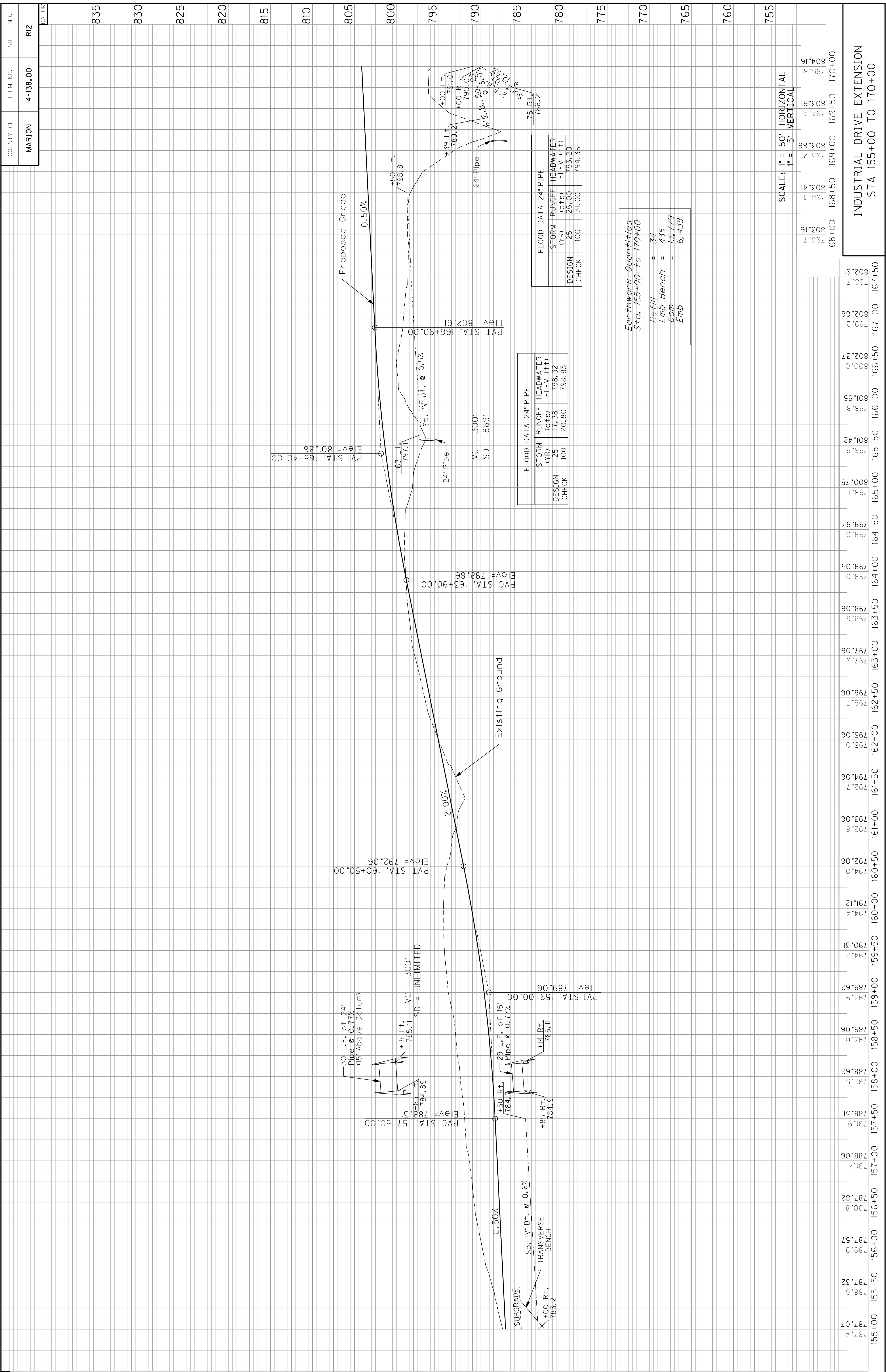
*ECB - EROSION CONTROL BLANKET

SCALE: 1"=50'

INDUSTRIAL DRIVE EXTENSION
 STA. 155+00 TO STA. 170+00



DATUM 840 835 830 825 820 815 810 805 800 795 790 785 780 775 770 765 760 755 750



FLOOD DATA 24" PIPE			
DESIGN (YR)	STORM (YR)	RUNOFF (cfs)	HEADWATER ELEV (FT)
25	25	17.38	798.32
100	100	20.80	798.83

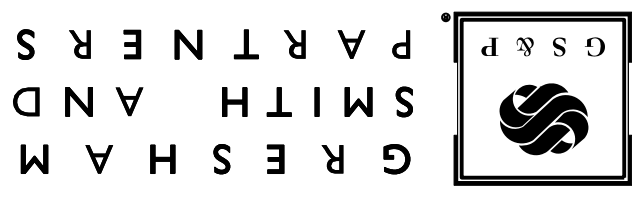
FLOOD DATA 24" PIPE			
DESIGN (YR)	STORM (YR)	RUNOFF (cfs)	HEADWATER ELEV (FT)
25	25	26.00	793.20
100	100	31.00	794.36

Earthwork Quantities
Sta. 155+00 to 170+00
Refill = 34
Emb. Bench = 435
Gom = 13,779
Emb = 6,439

SCALE: 1" = 50' HORIZONTAL
1" = 5' VERTICAL

Station	Elevation
155+00	787.4
155+50	788.6
156+00	789.9
156+50	790.8
157+00	791.4
157+50	791.9
158+00	792.5
158+50	793.0
159+00	793.9
159+50	794.3
160+00	794.4
160+50	794.0
161+00	792.7
161+50	794.06
162+00	795.0
162+50	796.7
163+00	797.9
163+50	798.6
164+00	799.0
164+50	799.05
165+00	799.0
165+50	799.97
166+00	800.75
166+50	801.42
167+00	801.95
167+50	802.37
168+00	802.66
168+50	802.91
169+00	803.16
169+50	803.41
170+00	803.66
170+50	803.91
171+00	804.16

PREPARED BY GRESHAM SMITH AND PARTNERS DATE 09-DEC-2008
 CHECKED BY DATE
 APPROVED BY DATE



USER: \$\$\$USER\$\$\$
 FILE NAME: \$\$\$design\file\$specification\$\$\$
 E-SHEET NAME:

COUNTY OF	ITEM NO.	SHEET NO.
MARION	4-138-00	R13

STATION TO STATION	TYPE OF DITCH	LINING TYPE	QUANTITY	D	T
170+00 to 171+50	6' F.B. Sp. Dt.	ECB			
171+50 to 172+70	4' F.B. Surf. Dt.	ECB			
173+30 to 174+00	2' F.B. Sp. Dt.	ECB			
181+50 to 182+00	Sp. "V" Dt.	ECB			

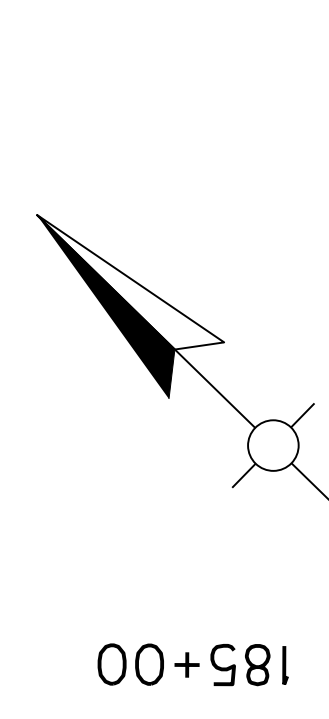
*ECB - EROSIAN CONTROL BLANKET

STATION	WIDTH	ENTRANCE PAVEMENT (SQ YD)	PIPE SIZE	PIPE LENGTH
173+00	24'	200 Asphalt	30" EQ.	44'
*179+42	20'	727 Asphalt	18" EQ.	28' 28'
182+72	24'	267 Asphalt	-	-
184+03	24'	129 Asphalt	15"	40'

* - Includes 12' Entrance Rt. Sta. 8+75 (Coop Entr.)

STATION TO STATION	TYPE OF DITCH	LINING TYPE	QUANTITY	D	T
170+00 to 170+50	2' F.B. Surf. Dt.	CLASS II	67 TONS	2'	1.25'
170+50 to 172+50	2' F.B. Surf. Dt.	ECB			
174+50 to 175+00	Sp. "V" Dt.	ECB			
180+00 to 182+10	Sp. "V" Dt.	ECB			

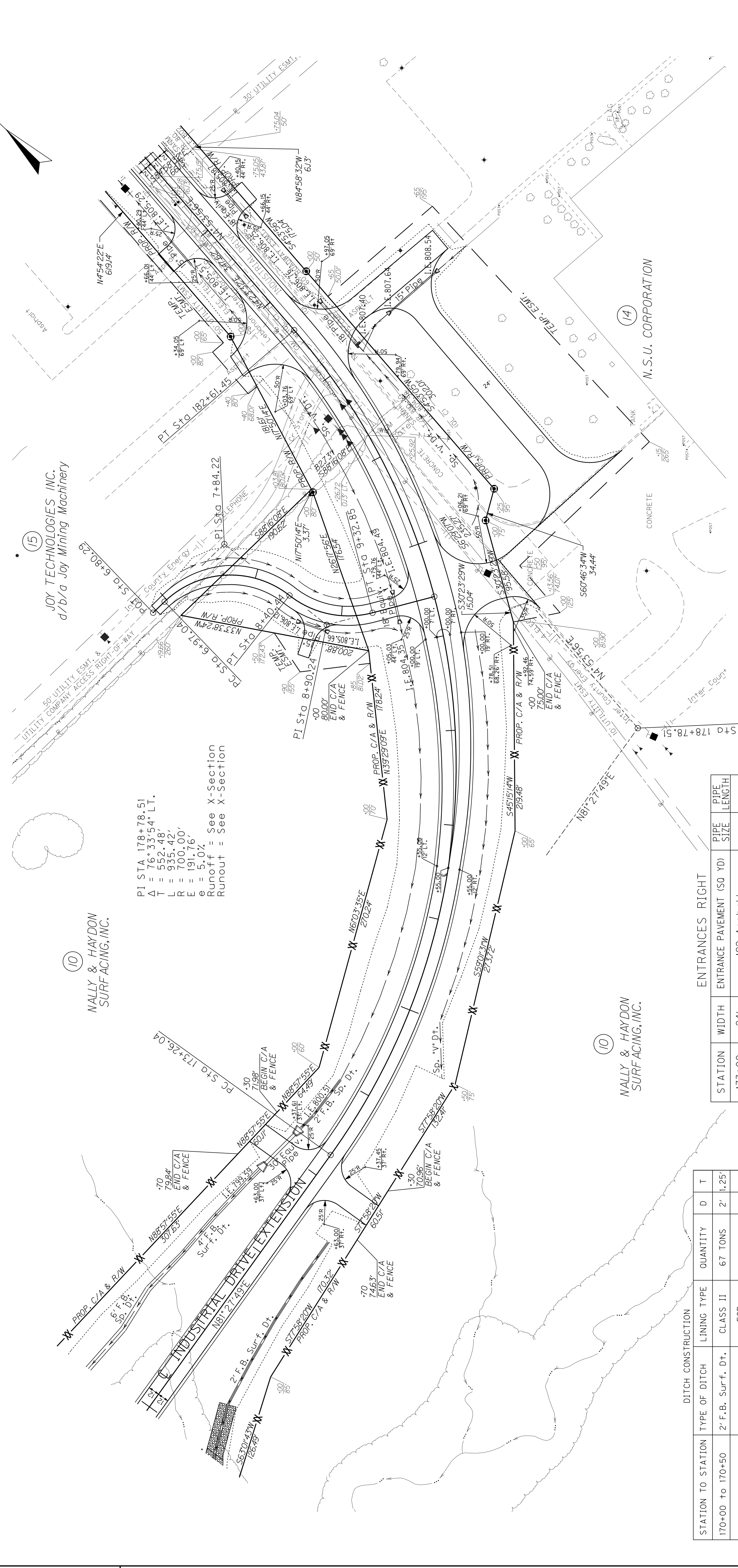
*ECB - EROSIAN CONTROL BLANKET



175+00
180+00
185+00

ENTRANCES LEFT

ENTRANCES RIGHT



INDUSTRIAL DRIVE EXTENSION
 STA. 170+00 TO STA. 185+00
 SCALE: 1"=50'
 Sta 179+78 to Sta 182+29 Const. 24' Connector
 w/ 960 SY Concrete Pavement

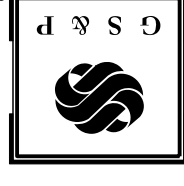
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DATE: \$\$\$DATE\$\$\$

FILE NAME: \$\$\$design\file\$specification\$\$\$

E-SHEET NAME:

GRESHAM PARTNERS



PREPARED BY GRESHAM SMITH AND PARTNERS

DATE

CHECKED BY

DATE

APPROVED BY

DATE 09-DEC-2008

765

770

775

780

785

790

795

800

805

810

815

820

825

830

835

840

845

850

855

DATUM

765

770

775

780

785

790

795

800

805

810

815

820

825

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185+31

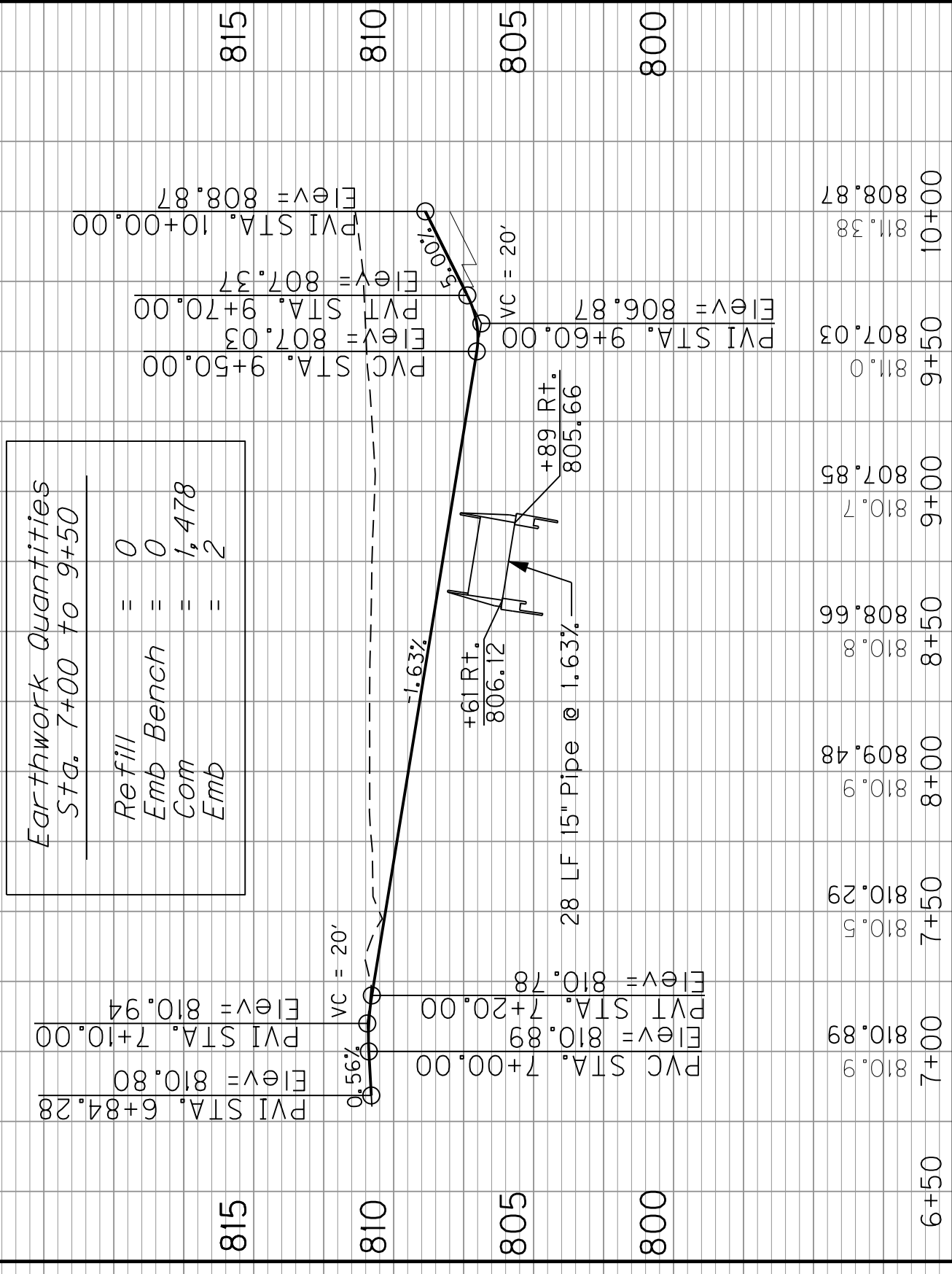
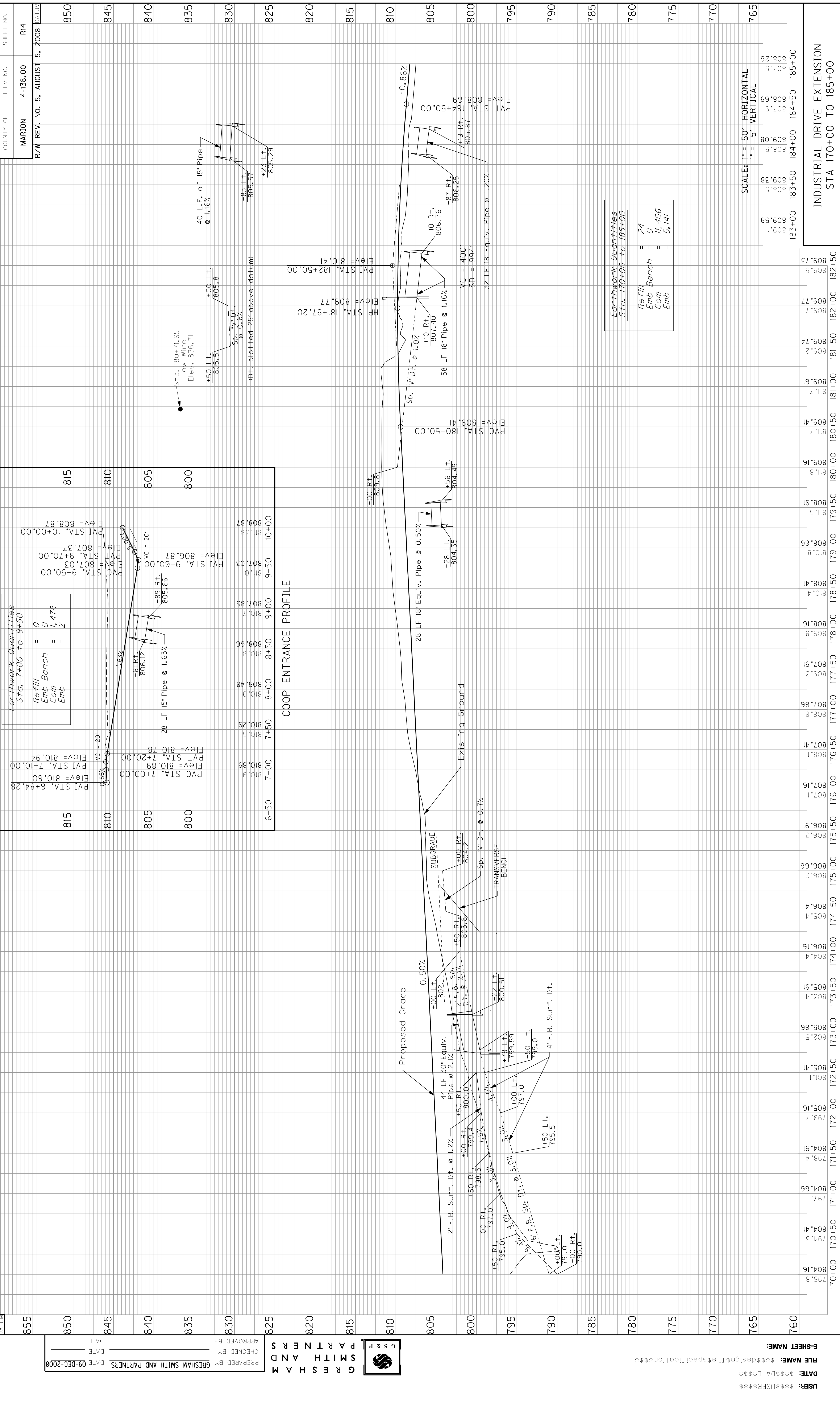
185+41

185+50

SCALE: 1" = 50' HORIZONTAL
1" = 5' VERTICAL

Earthwork Quantities	
Sta. 170+00 to 185+00	
Refill	= 24
Emb Bench	= 0
Com	= 11,406
Emb	= 5,141

COOP ENTRANCE PROFILE



INDUSTRIAL DRIVE EXTENSION
STA 170+00 TO 185+00

PREPARED BY GRESHAM SMITH AND PARTNERS DATE 09-DEC-2008
 CHECKED BY DATE
 APPROVED BY DATE

GRESHAM SMITH AND PARTNERS



USER: \$\$\$USER\$\$\$
 DATE: \$\$\$DATE\$\$\$
 FILE NAME: \$\$\$designfile\$specification\$\$\$
 E-SHEET NAME:

ENTRANCES LEFT

STATION	WIDTH	ENTRANCE PAVEMENT (SQ YD)	PIPE SIZE	PIPE LENGTH
192+50	18'	232 Asphalt	30" EQUIV.	58'
195+02	20'	208 Asphalt	30"	43'

DITCH CONSTRUCTION

STATION TO STATION	TYPE OF DITCH	LINING TYPE	QUANTITY	D	T
189+00 to 189+16	Sp. 'V' Dt.	ECB			
189+80 to 192+13	Sp. 'V' Dt.	ECB			
192+71 to 193+50	Sp. 'V' Dt.	ECB			

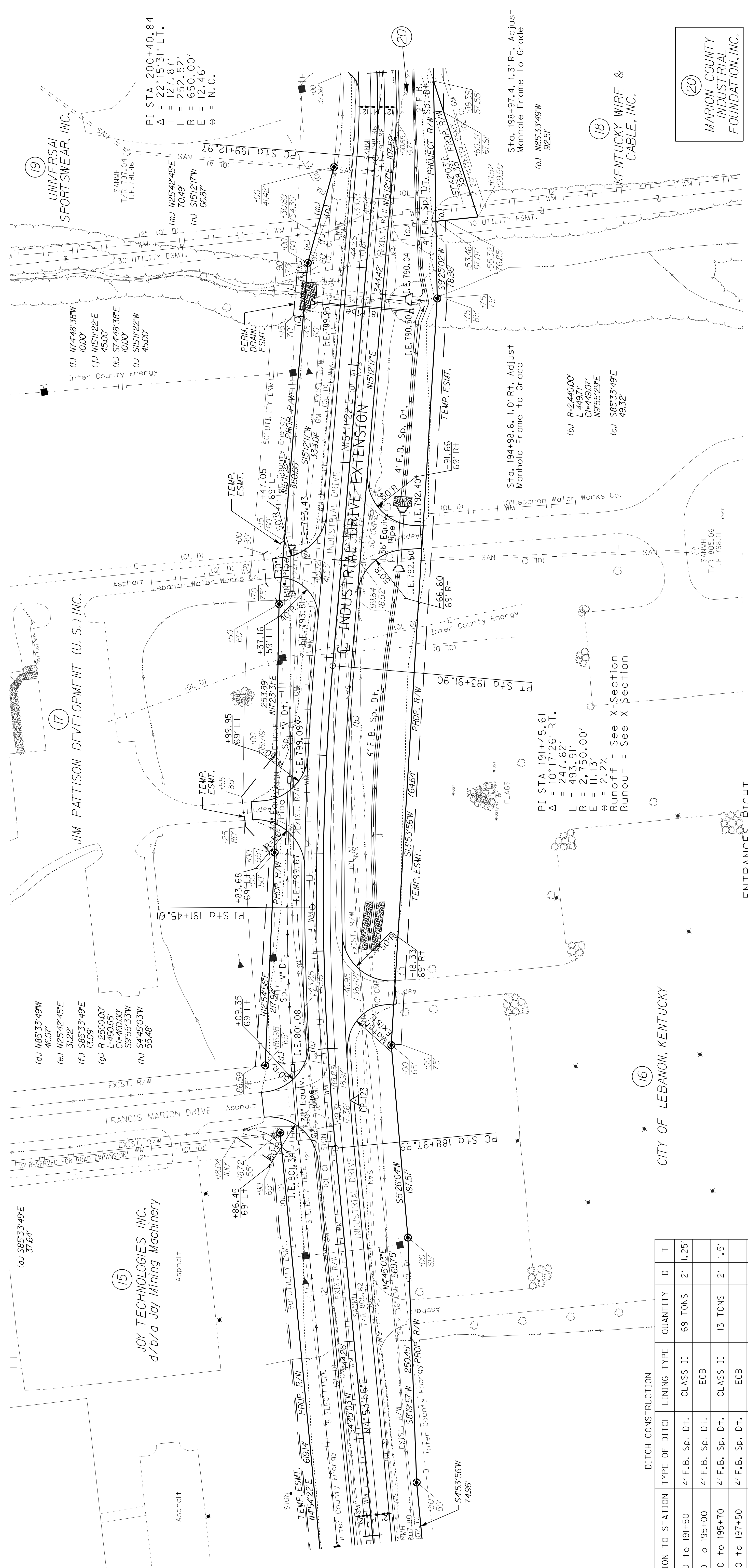
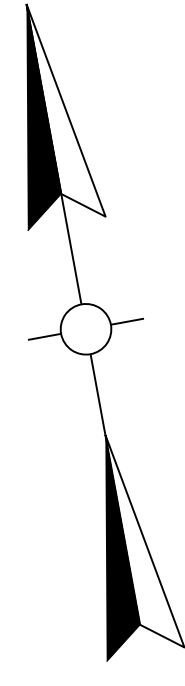
*ECB - EROSION CONTROL BLANKET

185+00

190+00

195+00

200+00



DITCH CONSTRUCTION

STATION TO STATION	TYPE OF DITCH	LINING TYPE	QUANTITY	D	T
191+00 to 191+50	4' F.B. Sp. Dt.	CLASS II	69 TONS	2'	1.25'
191+50 to 195+00	4' F.B. Sp. Dt.	ECB			
195+60 to 195+70	4' F.B. Sp. Dt.	CLASS II	13 TONS	2'	1.5'
195+70 to 197+50	4' F.B. Sp. Dt.	ECB			
197+50 to 197+73	6' F.B. Sp. Dt.	ECB			
197+73 to 199+50	4' F.B. Sp. Dt.	ECB			
199+50 to 200+00	2' F.B. Sp. Dt.	ECB			

*ECB - EROSION CONTROL BLANKET

△ CP 123
 MONUMENT SET ALONG
 INDUSTRIAL DRIVE
 STA. 189+45.28, 24.86' RT.
 ELEV. 804.28

ENTRANCES RIGHT

STATION	WIDTH	ENTRANCE PAVEMENT (SQ YD)	PIPE SIZE	PIPE LENGTH
190+50	24'	256 Asphalt	Ex. 30"	-
195+20	23'	284 Asphalt	48"	42'

SCALE: 1"=50'

INDUSTRIAL DRIVE EXTENSION
 STA. 185+00 TO STA. 200+00

(20)
 MARION COUNTY
 INDUSTRIAL
 FOUNDATION, INC.

(18)
 KENTUCKY WIRE &
 CABLE, INC.

(16)
 CITY OF LEBANON, KENTUCKY

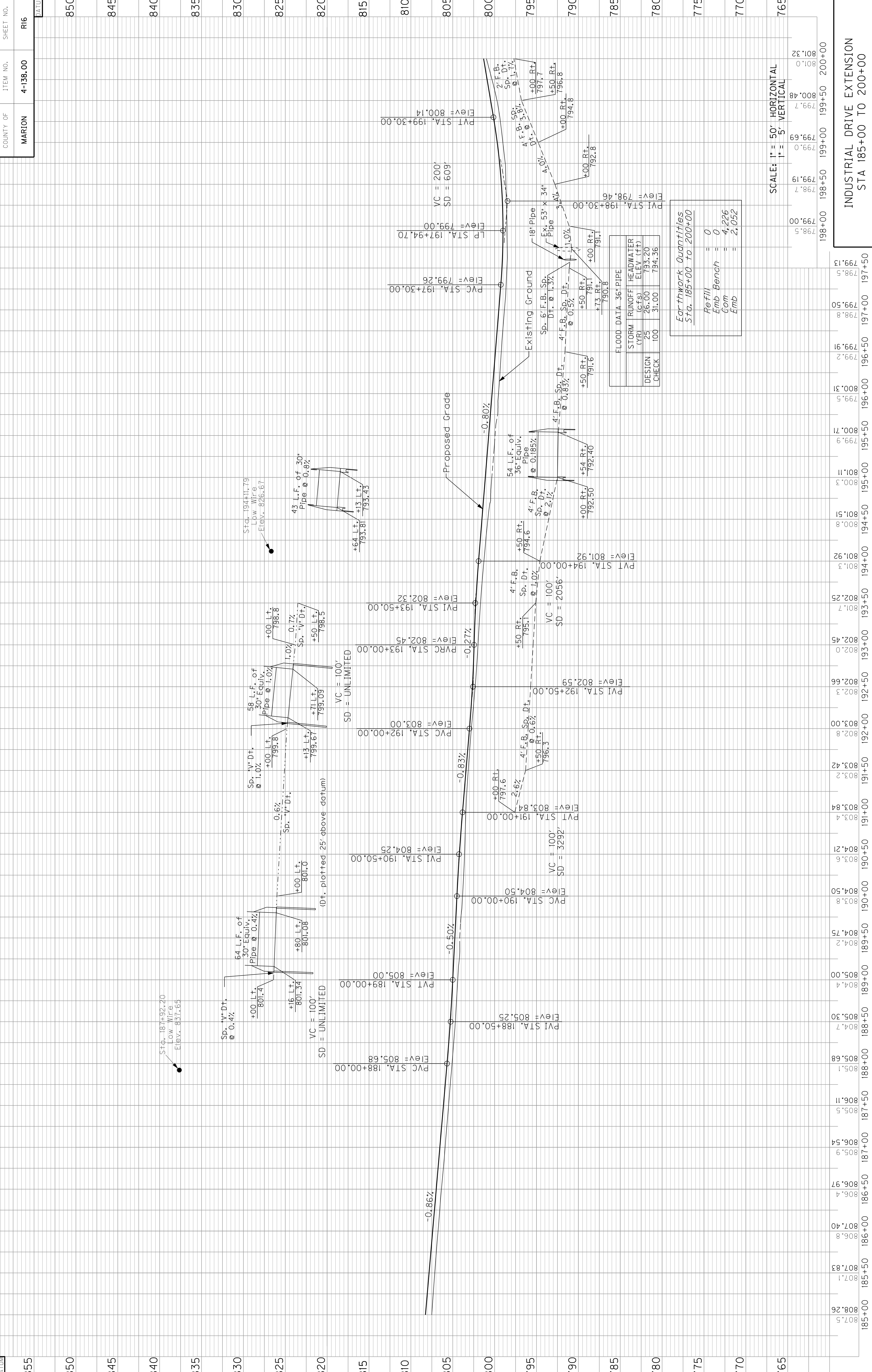
(17)
 JIM PATTISON DEVELOPMENT (U.S.) INC.

(15)
 JOY TECHNOLOGIES INC.
 d/b/a Joy Mining Machinery

(19)
 UNIVERSAL
 SPORTSWEAR, INC.



GRESHAM SMITH AND PARTNERS



Earthwork Quantities
 Sta. 185+00 to 200+00

Refill	=	0
Emb Bench	=	0
Com	=	4,226
Emb	=	2,052

FLOOD DATA 36" PIPE

DESIGN CHECK	STORM (YR)	RUNOFF (C.F.S)	HEADWATER ELEV (FT)
100	25	26.00	793.20
100	100	31.00	794.36

SCALE: 1" = 50' HORIZONTAL
 1" = 5' VERTICAL

INDUSTRIAL DRIVE EXTENSION
 STA 185+00 TO 200+00

ENTRANCES LEFT INDUSTRIAL DRIVE EXTENSION

STATION	WIDTH	ENTRANCE PAVEMENT (50 YD)	PIPE SIZE	PIPE LENGTH
200+24	28'	57 Asphalt	Ex. 15"	-
203+00	16'	27 Asphalt	Ex. 15"	-

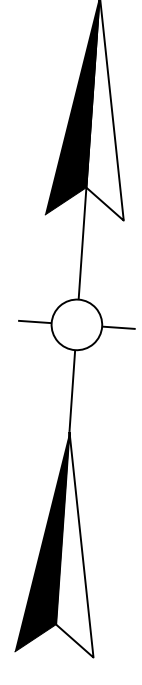
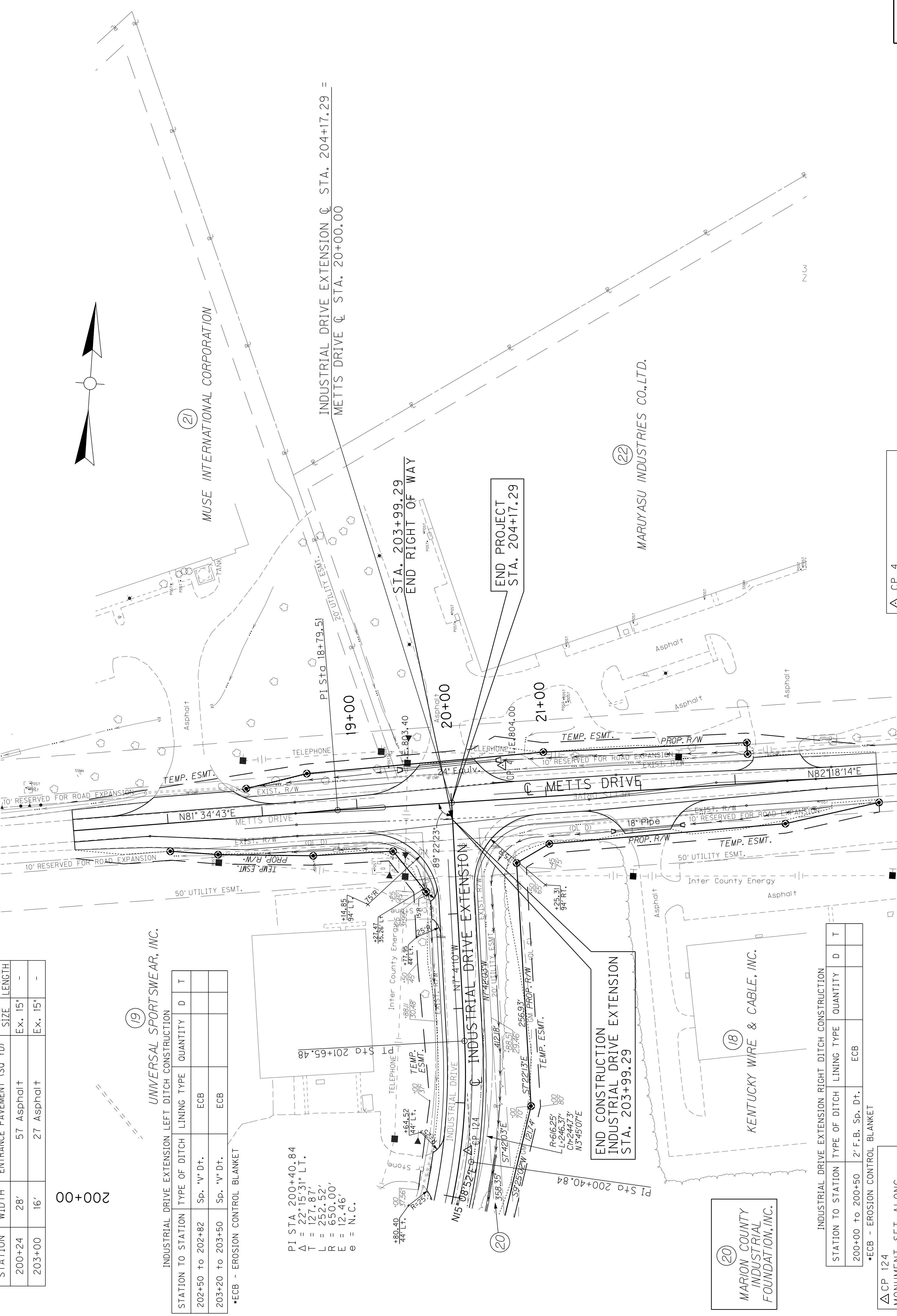
200+00

INDUSTRIAL DRIVE EXTENSION LEFT DITCH CONSTRUCTION

STATION TO STATION	TYPE OF DITCH	LINING TYPE	QUANTITY	D	T
202+50 to 202+82	Sp. "V" Dt.	ECB			
203+20 to 203+50	Sp. "V" Dt.	ECB			

*ECB - EROSION CONTROL BLANKET

PI STA. 200+40.84
 $\Delta = 22'15'31''$ LT.
 $T = 127.87'$
 $L R = 252.52'$
 $E = 650.00'$
 $e = 12.46'$
 $\theta = N.C.$



INDUSTRIAL DRIVE EXTENSION RIGHT DITCH CONSTRUCTION

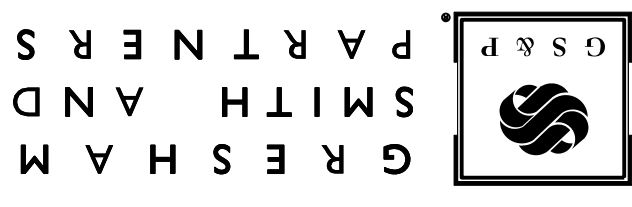
STATION TO STATION	TYPE OF DITCH	LINING TYPE	QUANTITY	D	T
200+00 to 200+50	2' F.B. Sp. Dt.	ECB			

*ECB - EROSION CONTROL BLANKET

CP 124
 MONUMENT SET ALONG INDUSTRIAL DRIVE
 STA. 200+50.91, 8.41' RT.
 ELEV. 801.85

CP 4
 IPC SET ALONG METTS DR.
 STA. 20+56.44, 35.88' LT.
 ELEV. 806.42

PREPARED BY GRESHAM SMITH AND PARTNERS DATE 09-DEC-2008
 CHECKED BY DATE
 APPROVED BY DATE

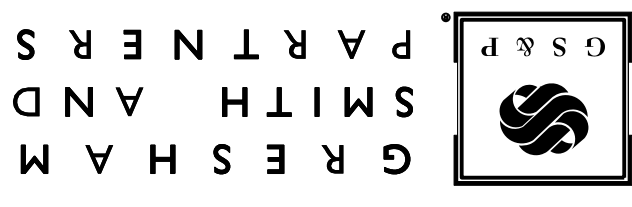


USER: \$\$\$USER\$\$\$
 DATE: \$\$\$DATE\$\$\$
 FILE NAME: \$\$\$design\files\specification\$\$\$
 E-SHEET NAME:

SCALE: 1"=50'

INDUSTRIAL DRIVE EXTENSION
 STA. 200+00 TO STA. 204+17.29

PREPARED BY GRESHAM SMITH AND PARTNERS DATE 09-DEC-2008
 CHECKED BY DATE
 APPROVED BY DATE



METTS DRIVE LEFT DITCH CONSTRUCTION

STATION TO STATION	TYPE OF DITCH	LINING TYPE	QUANTITY	D	T
18+00 to 19+50	Sp. "V" Dt.	ECB			
20+50 to 23+08	Sp. "V" Dt.	ECB			

*ECB - EROSION CONTROL BLANKET

ENTRANCES LEFT METTS DRIVE

STATION	WIDTH	ENTRANCE PAVEMENT (SO YD)	PIPE SIZE	PIPE LENGTH
17+28	30'	208 Asphalt	Ex. 18"	-
20+00	31'	265 Asphalt	24" EQUIV.	100'
23+50	44'	95 Asphalt	-	-

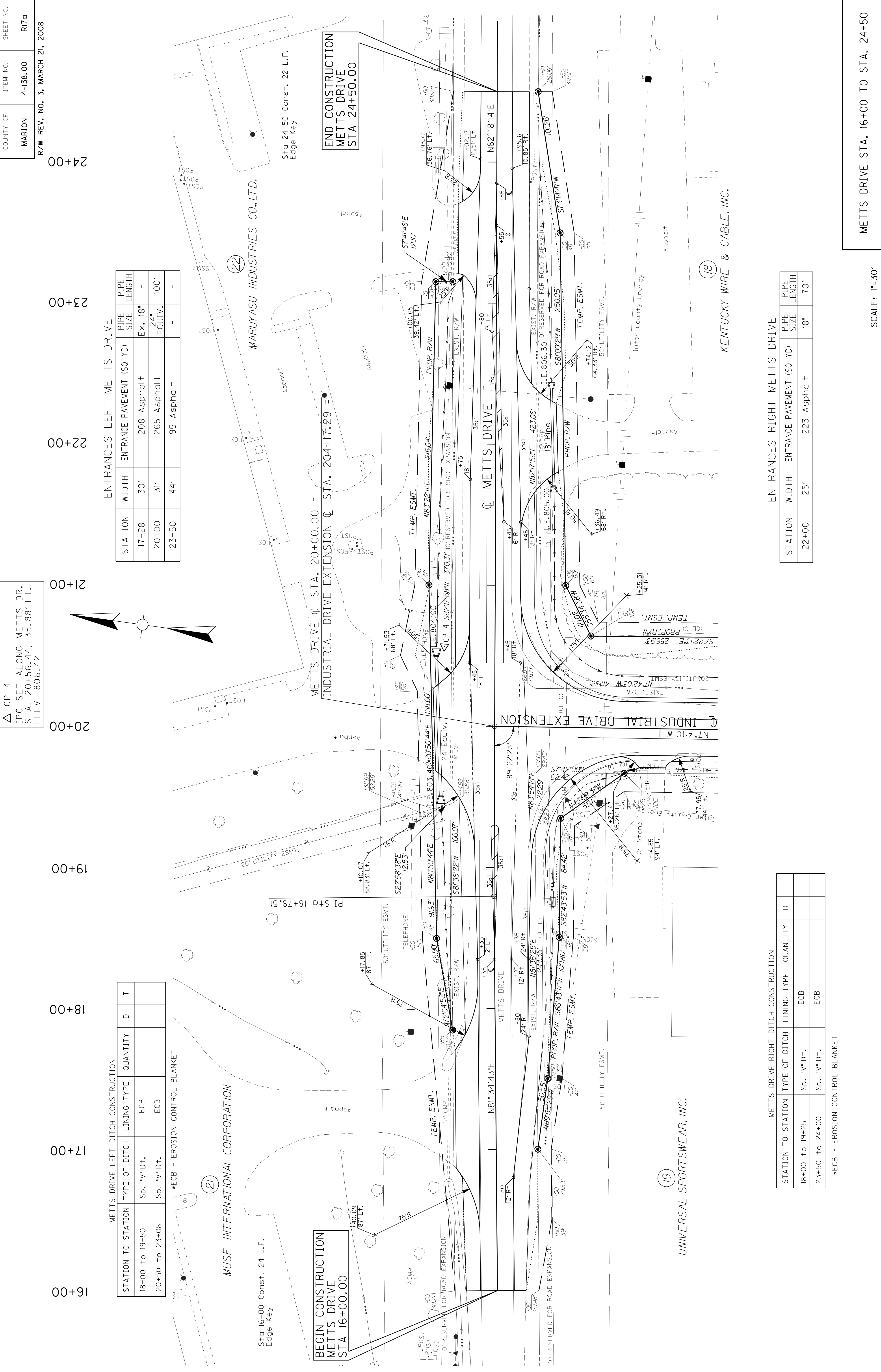
METTS DRIVE RIGHT DITCH CONSTRUCTION

STATION TO STATION	TYPE OF DITCH	LINING TYPE	QUANTITY	D	T
18+00 to 19+25	Sp. "V" Dt.	ECB			
23+50 to 24+00	Sp. "V" Dt.	ECB			

*ECB - EROSION CONTROL BLANKET

ENTRANCES RIGHT METTS DRIVE

STATION	WIDTH	ENTRANCE PAVEMENT (SO YD)	PIPE SIZE	PIPE LENGTH
22+00	25'	223 Asphalt	18"	70'



CP 4
 IPC SET ALONG METTS DR.
 STA. 20+56.44, 35.88' LT.
 ELEV. 806.42

COUNTY OF MARION
 ITEM NO. 4-138-00
 SHEET NO. R170
 R/W REV. NO. 3, MARCH 21, 2008

SCALE: 1"=30'

METTS DRIVE STA. 16+00 TO STA. 24+50

GRESHAM PARTNERS

PREPARED BY GRESHAM SMITH AND PARTNERS DATE 09-DEC-2008

CHECKED BY _____ DATE _____

APPROVED BY _____ DATE _____

Earthwork Quantities
Sta. 200+00 to 204+17.29

Refill	=	0
Emb Bench	=	0
Com	=	2.115
Emb	=	0

BEGIN CONSTRUCTION
STA. 16+00.00
ELEV. 801.86'

END CONSTRUCTION
STA. 24+50.00
ELEV. 812.29'

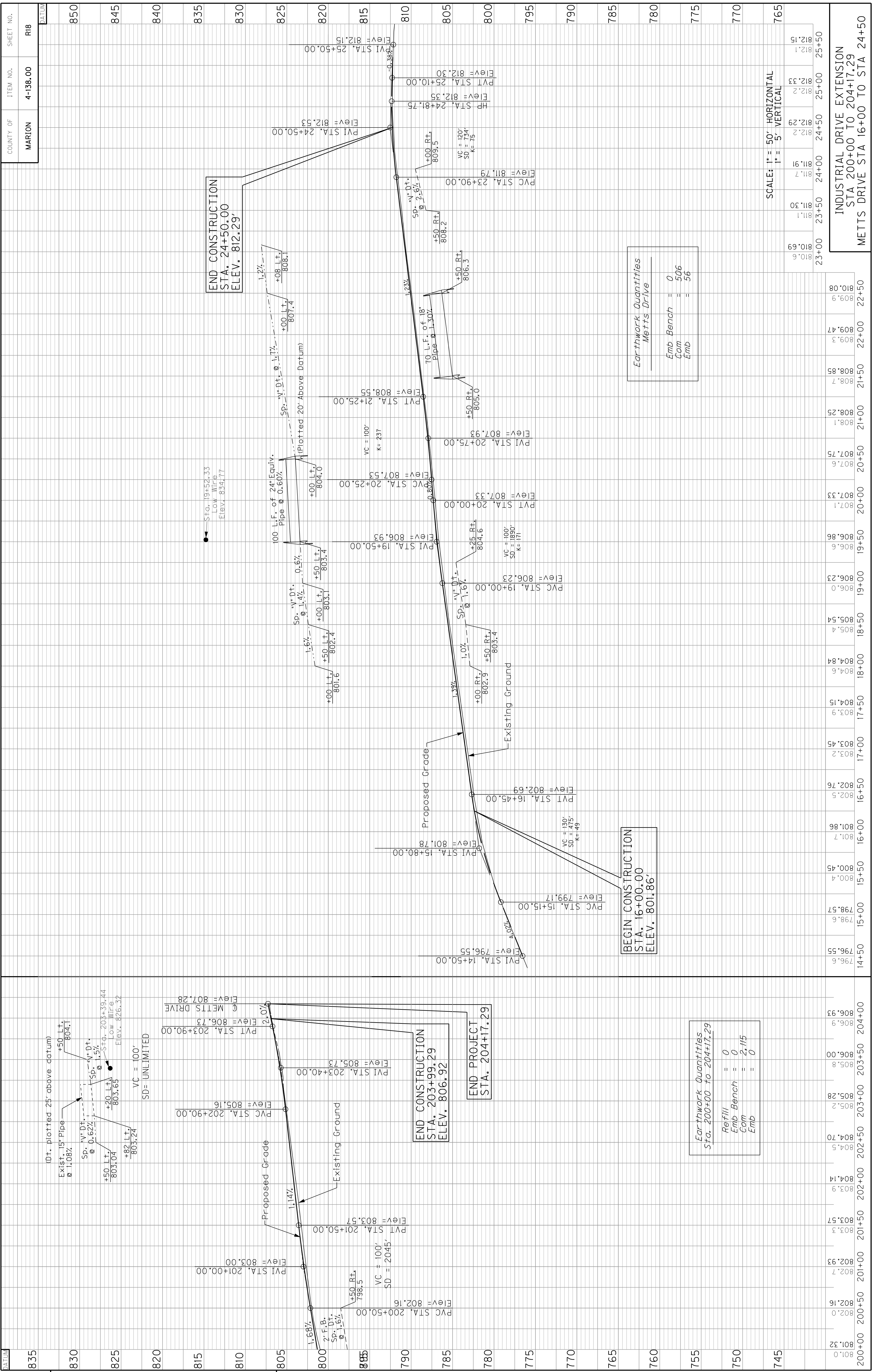
END PROJECT
STA. 204+17.29

END CONSTRUCTION
STA. 203+99.29
ELEV. 806.92

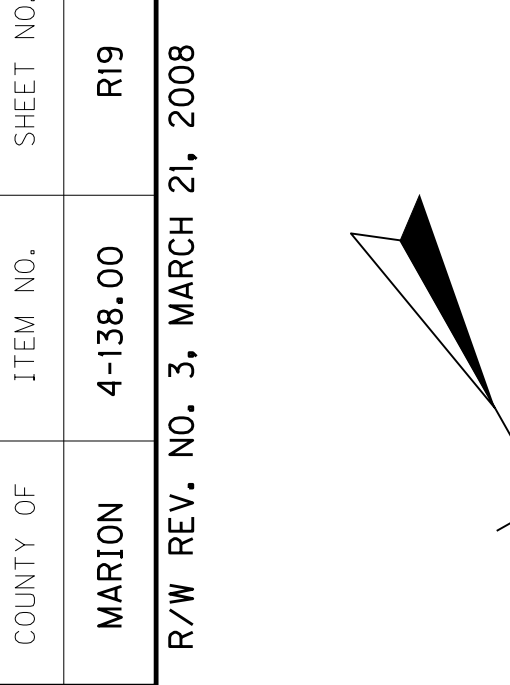
SCALE: 1" = 50' HORIZONTAL
1" = 5' VERTICAL

Earthwork Quantities
Metts Drive

Emb Bench	=	0
Com	=	506
Emb	=	56



23+00	810.6
23+50	811.1
24+00	811.7
24+50	812.2
25+00	812.33
25+50	812.15



DITCH CONSTRUCTION

STATION TO STATION	TYPE OF DITCH	LINING TYPE	QUANTITY	D	T
41+00 to 43+25	Sp. "V" Dt.	ECB			
45+10.3 to 45+20	Sp. "V" Dt.	CLASS II	7 TONS	1'	1.5'
45+20 to 48+50	Sp. "V" Dt.	ECB			
52+55 to 52+70	Sp. "V" Dt.	CLASS II	9 TONS	1'	1.5'
52+70 to 53+00	Sp. "V" Dt.	ECB			

*ECB - EROSION CONTROL BLANKET

ENTRANCES LEFT

STATION	WIDTH	ENTRANCE PAVEMENT (SQ YD)	PIPE SIZE	PIPE LENGTH
43+50	24'	113 Asphalt	-	-
44+89	20'	76 Asphalt	15"	41'
52+39	17'	47 Asphalt	15"	29'

Sta 41+00 Const. 22 L.F. Edge Key

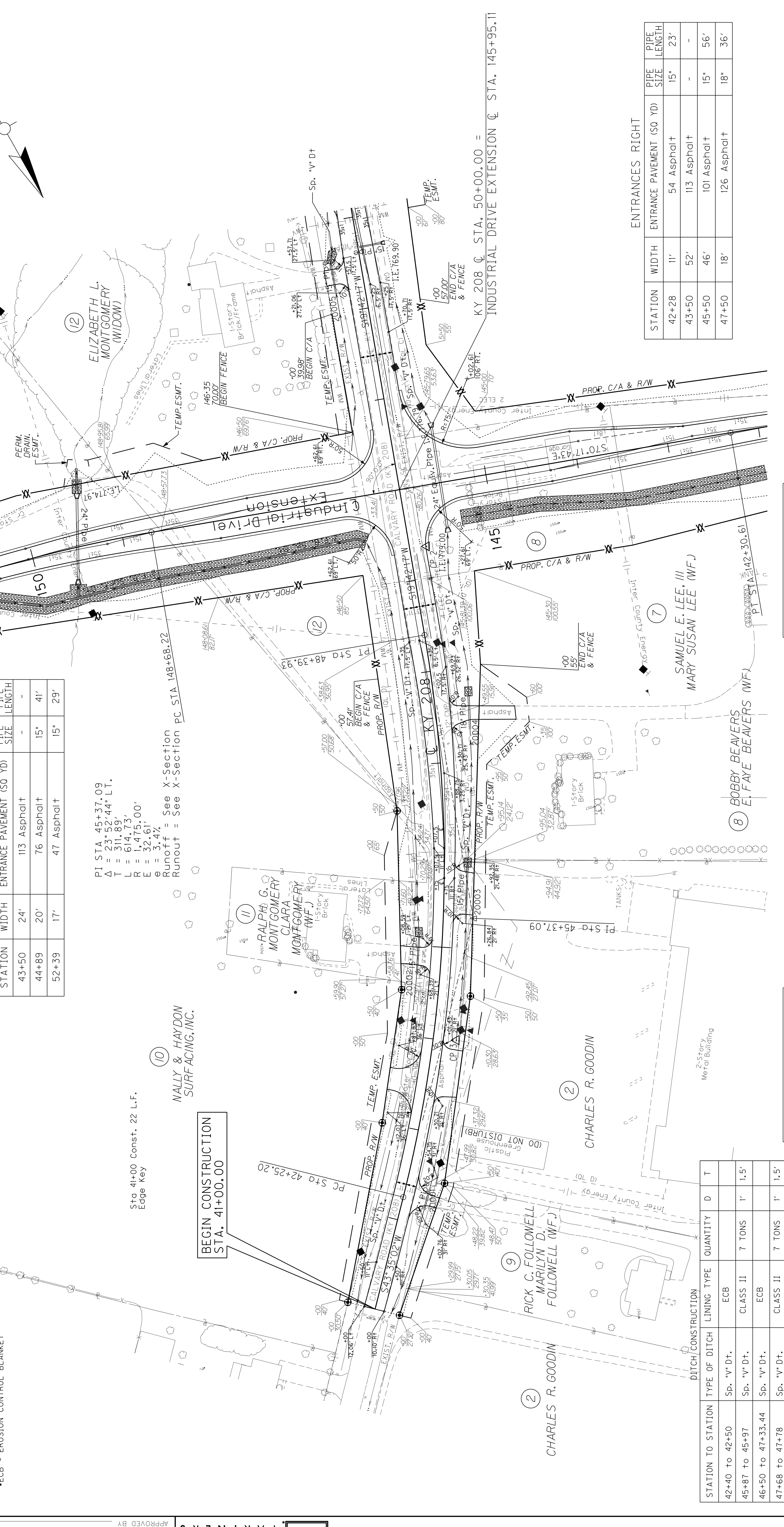
BEGIN CONSTRUCTION STA. 41+00.00

PI STA 45+37.09
 Δ = 23° 52' 44" LT.
 T = 311.89'
 LR = 614.73'
 E = 1,475.00'
 C = 32.61'
 Runoff = See X-Section
 Runout = See X-Section

DITCH/CONSTRUCTION

STATION TO STATION	TYPE OF DITCH	LINING TYPE	QUANTITY	D	T
42+40 to 42+50	Sp. "V" Dt.	ECB			
45+87 to 45+97	Sp. "V" Dt.	CLASS II	7 TONS	1'	1.5'
46+50 to 47+33.44	Sp. "V" Dt.	ECB			
47+68 to 47+78	Sp. "V" Dt.	CLASS II	7 TONS	1'	1.5'
47+78 to 49+50	Sp. "V" Dt.	ECB			
50+60 to 52+00	Sp. "V" Dt.	ECB			

*ECB - EROSION CONTROL BLANKET



ENTRANCES RIGHT

STATION	WIDTH	ENTRANCE PAVEMENT (SQ YD)	PIPE SIZE	PIPE LENGTH
42+28	11'	54 Asphalt	15"	23'
43+50	52'	113 Asphalt	-	-
45+50	46'	101 Asphalt	15"	56'
47+50	18'	126 Asphalt	18"	36'

INDUSTRIAL DRIVE EXTENSION @ STA. 145+95.11

KY 208 @ STA. 50+00.00 =

INDUSTRIAL DRIVE EXTENSION @ STA. 145+95.11

CP 2
 IPC SET ALONG KY 208
 STA. 49+34.36, 18.52' RT.
 ELEV. 781.84

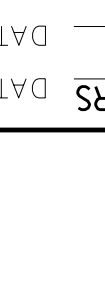
CP 3
 IPC SET ALONG KY 208
 STA. 44+01.89, 25.14' RT.
 ELEV. 796.10

CP 2
 IPC SET ALONG KY 208
 STA. 49+34.36, 18.52' RT.
 ELEV. 781.84

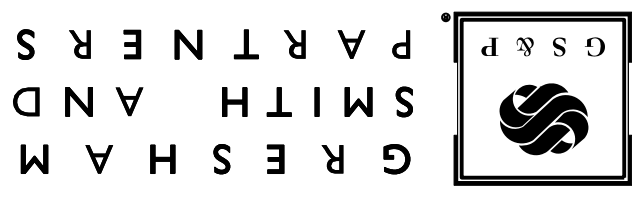
CP 3
 IPC SET ALONG KY 208
 STA. 44+01.89, 25.14' RT.
 ELEV. 796.10

CP 2
 IPC SET ALONG KY 208
 STA. 49+34.36, 18.52' RT.
 ELEV. 781.84

CP 3
 IPC SET ALONG KY 208
 STA. 44+01.89, 25.14' RT.
 ELEV. 796.10



PREPARED BY GRISHAM SMITH AND PARTNERS DATE 09-DEC-2008
 CHECKED BY DATE
 APPROVED BY DATE



USER: \$\$\$USER\$\$\$
 DATE: \$\$\$DATE\$\$\$
 FILE NAME: \$\$\$design\file\$specification\$\$\$
 E-SHEET NAME:

△ CP 3
 IPC SET ALONG KY 208
 STA. 44+01.89, 25.14' RT.
 ELEV. 796.10

△ CP 2
 IPC SET ALONG KY 208
 STA. 49+34.36, 18.52' RT.
 ELEV. 781.84

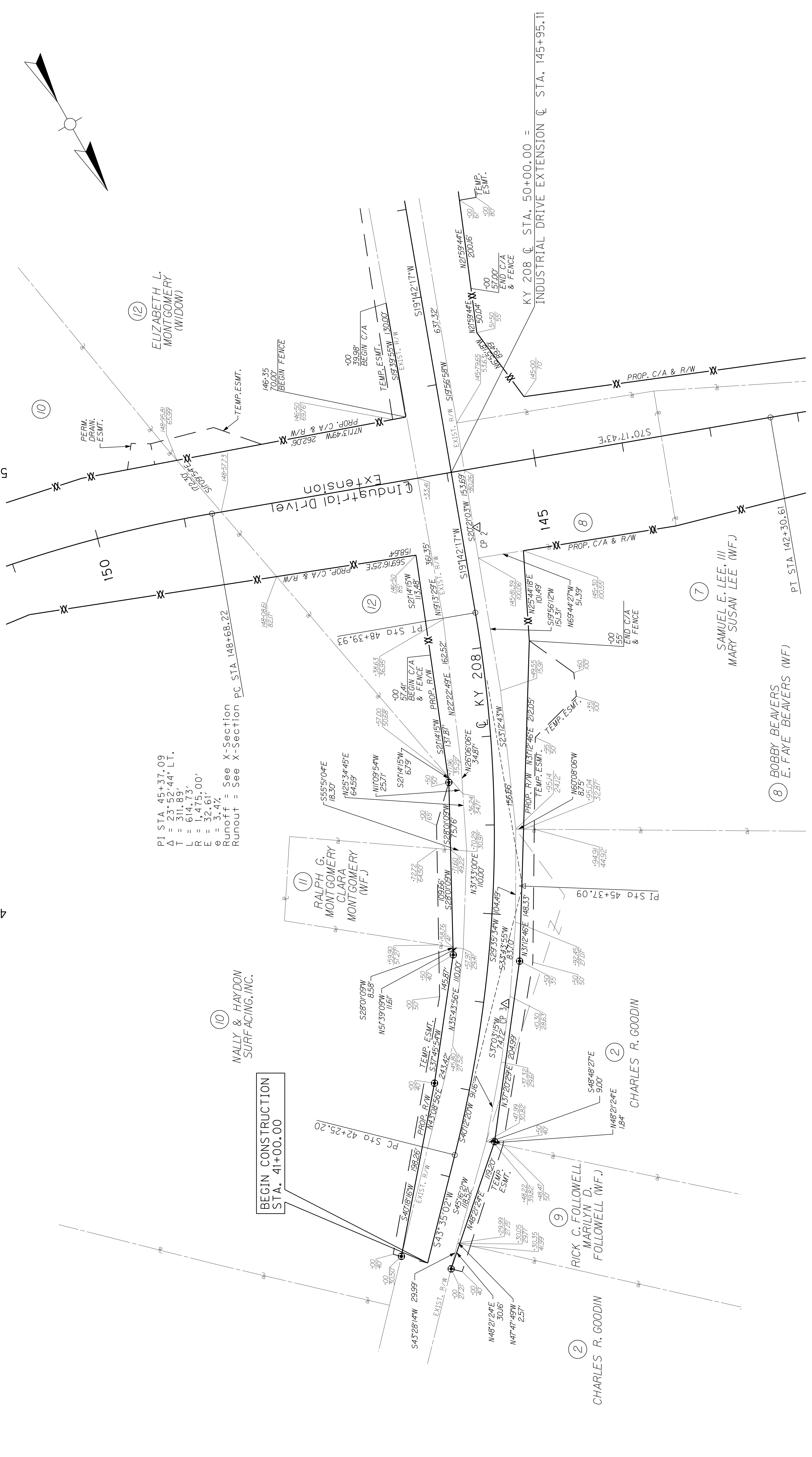
SCALE: 1"=50'

STA. 41+00 TO STA. 53+00
 KY 208

45+00

50+00

COUNTY OF MARION
 ITEM NO. 4-138.00
 SHEET NO. R190



PI STA 45+37.09
 Δ = 23° 52' 44" LT.
 T = 311.89'
 LR = 614.73'
 E = 1,475.00'
 C = 32.61'
 Runoff = See X-Section
 Runout = See X-Section
 PC STA 148+68.22

BEGIN CONSTRUCTION
 STA. 41+00.00

NALLY & HAYDON
 SURFACING, INC.

RALPH G.
 MONTGOMERY
 CLARA
 MONTGOMERY
 (W.F.)

ELIZABETH L.
 MONTGOMERY
 (WIDOW)

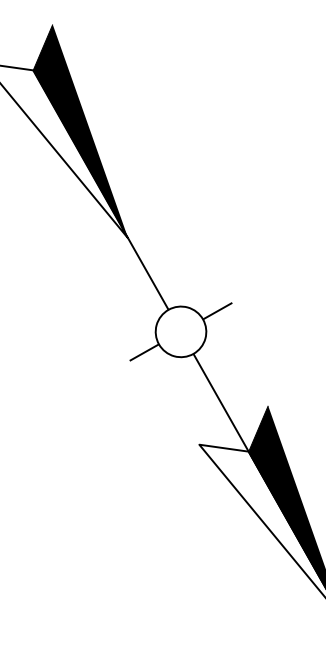
SAMUEL E. LEE, III
 MARY SUSAN LEE (W.F.)

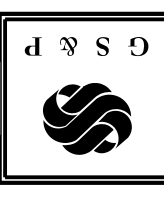
BOBBY BEAVERS
 E. FAYE BEAVERS (W.F.)

CHARLES R. GOODIN

RICK C. FOLLOWELL
 MARILYN D.
 FOLLOWELL (W.F.)

CHARLES R. GOODIN





**GRESHAM
SMITH
AND
PARTNERS**

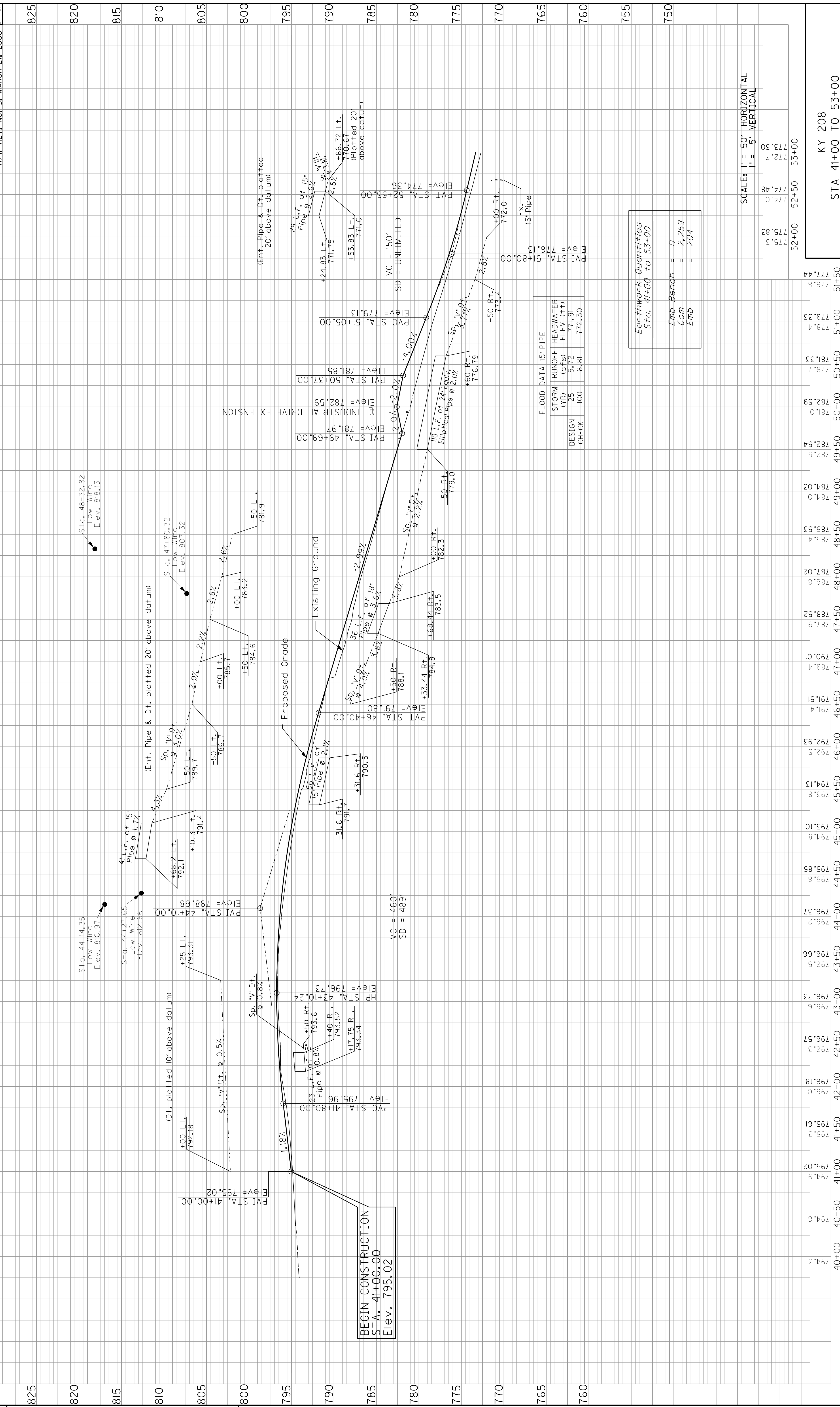
PREPARED BY GRESHAM SMITH AND PARTNERS
 CHECKED BY _____
 APPROVED BY _____
 DATE 09-DEC-2008

825
820
815
810
805
800
795
790
785
780
775
770
765
760

825
820
815
810
805
800
795
790
785
780
775
770
765
760
755
750

COUNTY OF MARION
 ITEM NO. 4-136.00
 SHEET NO. R20
 R/W REV. NO. 3, MARCH 21, 2008
 DATUM

DATUM



FLOOD DATA 15" PIPE		
STORM (CYF)	RUNOFF (CYF)	HEADWATER ELEV. (ft)
DESIGN 25	5.72	771.91
CHECK 100	6.81	772.30

*Earthwork Quantities
 Sta. 41+00 to 53+00*

Emb. Bench = 0
 Com Emb = 2,259
 Emb = 204

SCALE: 1" = 50' HORIZONTAL
 1" = 5' VERTICAL

775.3	775.83	774.0	774.48	773.30	772.7	773.30	53+00
777.44	776.8	779.33	778.4	779.33	781.33	779.7	51+50
781.0	782.59	781.0	782.54	782.5	784.03	784.0	49+50
785.4	785.53	785.4	784.03	784.0	784.03	784.0	48+50
787.02	787.02	786.8	788.52	787.9	787.9	787.9	47+50
789.4	789.4	789.4	790.01	789.4	790.01	789.4	47+00
791.51	791.51	791.4	791.51	791.4	791.51	791.4	46+50
792.93	792.93	791.4	792.93	792.5	792.93	792.5	46+00
793.8	793.8	793.8	794.13	793.8	794.13	793.8	45+50
794.8	794.8	794.8	795.10	794.8	795.10	794.8	45+00
795.6	795.6	795.6	795.85	795.6	795.85	795.6	44+50
796.2	796.2	796.2	796.37	796.2	796.37	796.2	44+00
796.5	796.5	796.5	796.66	796.5	796.66	796.5	43+50
796.6	796.6	796.6	796.73	796.6	796.73	796.6	43+00
796.3	796.3	796.3	796.57	796.3	796.57	796.3	42+50
796.0	796.0	796.0	796.18	796.0	796.18	796.0	42+00
795.3	795.3	795.3	795.61	795.3	795.61	795.3	41+50
794.9	794.9	794.9	795.02	794.9	795.02	794.9	41+00
794.6	794.6	794.6	794.6	794.6	794.6	794.6	40+50
794.3	794.3	794.3	794.3	794.3	794.3	794.3	40+00

STA 41+00 TO 53+00
 KY 208

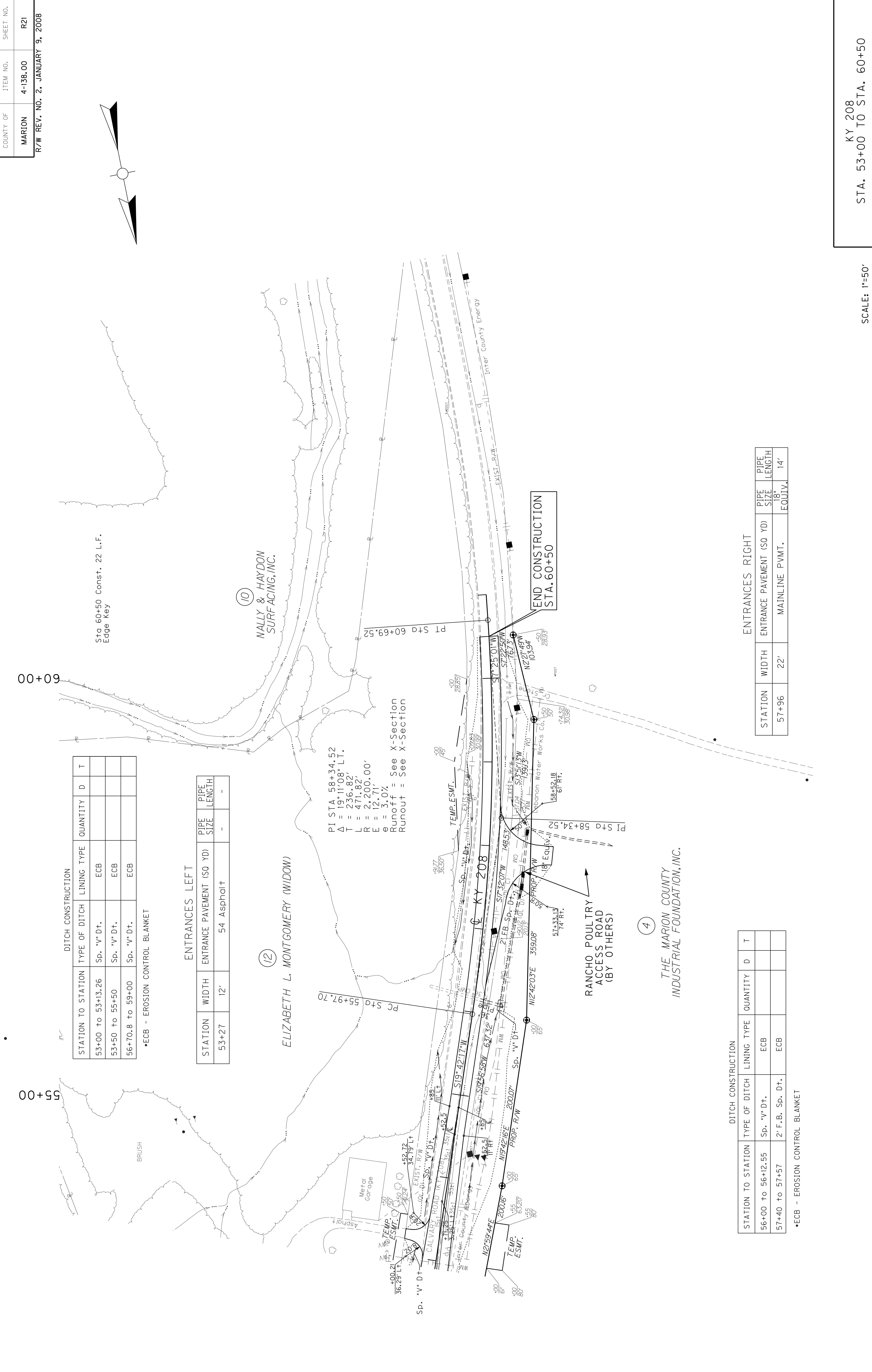
PREPARED BY GRESHAM SMITH AND PARTNERS DATE 09-DEC-2008
 CHECKED BY _____ DATE _____
 APPROVED BY _____ DATE _____

GRESHAM SMITH AND PARTNERS



COUNTY OF	ITEM NO.	SHEET NO.
MARION	4-138.00	R21

R/W REV. NO. 2, JANUARY 9, 2008



Sta 60+50 Const. 22 L.F.
Edge Key

(10) MALLY & HAYDON SURFACING, INC.

(12) ELIZABETH L. MONTGOMERY (WIDOW)

(4) THE MARION COUNTY INDUSTRIAL FOUNDATION, INC.

PI STA 58+34.52
 $\Delta = 19.1108^{\circ}$ LT.
 $T = 236.82'$
 $L R = 471.82'$
 $E = 2,200.00'$
 $e = 12.71'$
 $\theta = 3.0\%$
 Runoff = See X-Section
 Runout = See X-Section

END CONSTRUCTION STA. 60+50

DITCH CONSTRUCTION

STATION TO STATION	TYPE OF DITCH	LINING TYPE	QUANTITY	D	T
53+00 to 53+13.26	Sp. "V" Dt.	ECB			
53+50 to 55+50	Sp. "V" Dt.	ECB			
56+70.8 to 59+00	Sp. "V" Dt.	ECB			

*ECB - EROSION CONTROL BLANKET

ENTRANCES LEFT

STATION	WIDTH	ENTRANCE PAVEMENT (SQ YD)	PIPE SIZE	PIPE LENGTH
53+27	12'	54 Asphalt	-	-

DITCH CONSTRUCTION

STATION TO STATION	TYPE OF DITCH	LINING TYPE	QUANTITY	D	T
56+00 to 56+12.55	Sp. "V" Dt.	ECB			
57+40 to 57+57	2' F.B. Sp. Dt.	ECB			

*ECB - EROSION CONTROL BLANKET

ENTRANCES RIGHT

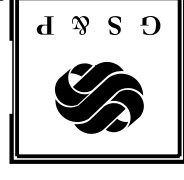
STATION	WIDTH	ENTRANCE PAVEMENT (SQ YD)	PIPE SIZE	PIPE LENGTH
57+96	22'	MAINLINE PVMT.	18" EQUIV.	14'

USER: \$\$\$USER\$\$\$

DATE: \$\$\$DATE\$\$\$

FILE NAME: \$\$\$design\file\$specification\$\$\$

E-SHEET NAME:



GRESHAM
SMITH
AND
PARTNERS

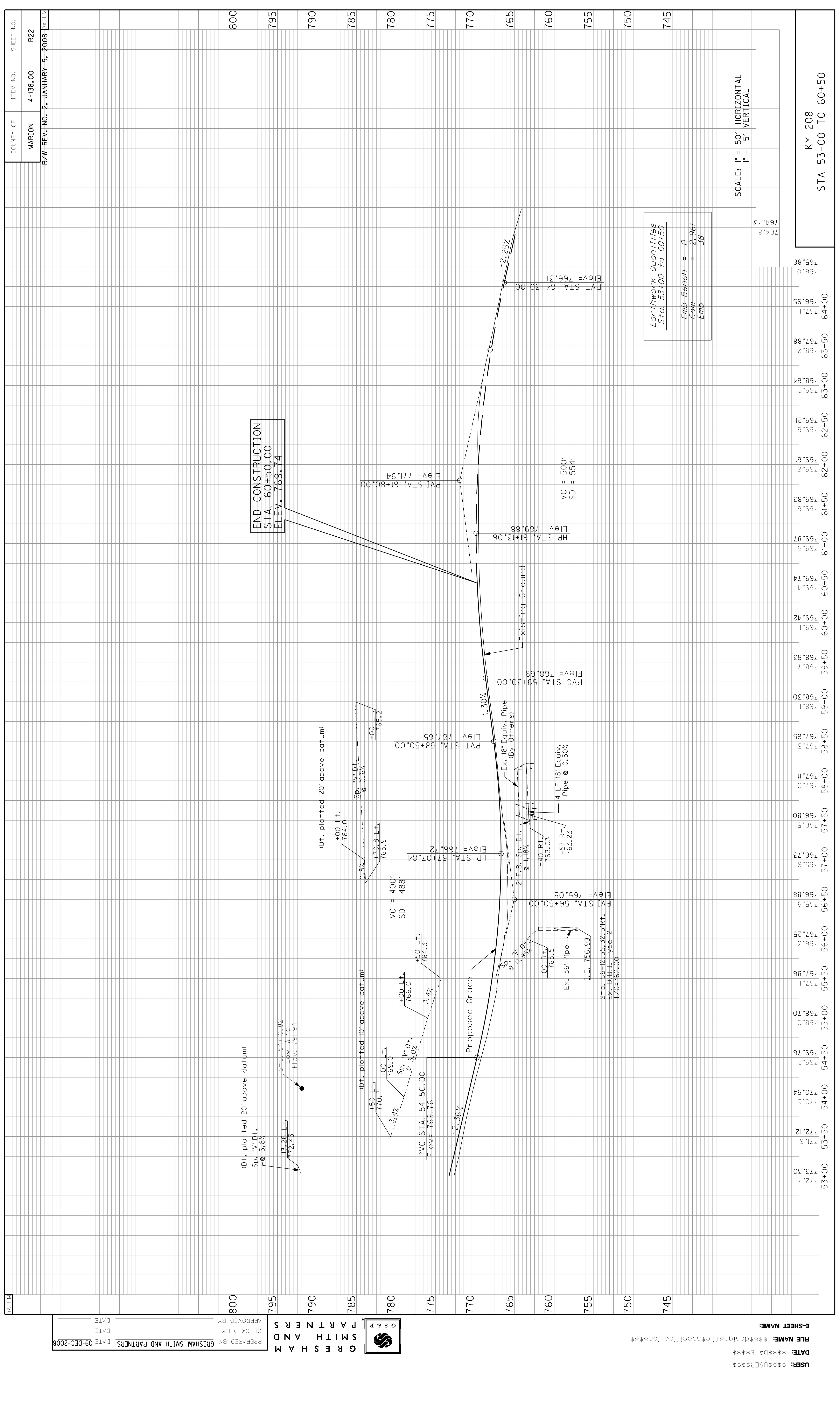
PREPARED BY GRESHAM SMITH AND PARTNERS
DATE 09-DEC-2008
CHECKED BY
DATE
APPROVED BY

KY 208
STA 53+00 TO 60+50

SCALE: 1" = 50' HORIZONTAL
1" = 5' VERTICAL

Earthwork Quantities	
Sta. 53+00 to 60+50	
Emb	= 0
Com	= 2,961
Emb	= 38

END CONSTRUCTION
STA. 60+50.00
ELEV. 769.74



772.7 773.30 771.6 772.12 770.94 769.76 768.0 768.70 767.86 767.1 766.3 767.25 765.9 766.88 765.9 PVI STA. 56+50.00 Elev = 765.9
 766.73 766.73 766.80 766.5 767.0 767.11 767.5 767.65 768.1 768.30 768.7 768.69 PVC STA. 59+30.00 Elev = 768.69
 769.4 769.74 769.87 769.87 769.6 HP STA. 61+13.06 Elev = 769.88
 769.6 769.83 769.6 PVI STA. 61+80.00 Elev = 771.94
 769.6 769.21 769.6 769.2 768.64 768.2 767.88 767.1 766.95 766.0 PVT STA. 64+30.00 Elev = 766.31
 764.73 764.8

COUNTY OF MARION R/W REV. NO. 2, JANUARY 9, 2008 DATUM
 ITEM NO. 4-136.00 R22
 SHEET NO. 800 795 790 785 780 775 770 765 760 755 750 745

RIGHT OF WAY SUMMARY

PARCEL NO.	OWNER(S)	TOTAL AREA		BASIS OF DETERMINATION	FEE SIMPLE RIGHT OF WAY		EASEMENTS				AREA(S) REMAINING				TOTAL AREA REMAINING		SOURCE OF TITLE	REMARKS
		ACRES	SO. FT.		ACRES	SO. FT.	PERMANENT	TEMPORARY	LEFT	RIGHT	ACRES	SO. FT.	ACRES	SO. FT.	ACRES	SO. FT.		
1	HILPP'S MARION COUNTY PROPERTIES, LLC	56.150		a.	7.849	341,911					9,962		38,339		48,301		D.B. 150 PG. 744 D.B. 223 PG. 669	
2	CHARLES R. GOODIN	148.617		a.	6.625	288,605					138,428		3,564		141,992		D.B. 148 PG. 90 D.B. 185 PG. 392	
3	WILLIAM P. THOMPSON & TERESA G. THOMPSON (WF.)	62.630		a.	0.125	5,430									62,505		D.B. 143 PG. 556 D.B. 145 PG. 317	
4	THE MARION COUNTY INDUSTRIAL FOUNDATION INC.	143.689		a.	2,558	111,407									141,131		D.B. 214 PG. 812	
7	SAMUEL E. LEE, III & MARY SUSAN LEE (WF.)	8.253		c.	1,703	74,179									6,550		D.B. 107 PG. 174 D.B. 173 PG. 252	Remove: 1 - Residence (Trailer) & Septic Tank
8	BOBBY BEAVERS & E. FAYE BEAVERS (WF.)	0.794	34,600	c.	0.794	34,600									0	0	D.B. 107 PG. 591 D.B. 227 PG. 689	TOTAL TAKE: (Remove: 1 - Building, 1 - Garage, & Lateral lines)
9	RICK C. FOLLOWELL & MARILYN D. FOLLOWELL (WF.)	1,000		a.	0.016	684									0,984	42,876	D.B. 142 PG. 503	
10	NALLY & HAYDON SURFACING, INC.	657,527		a.	11,556	503,395									645,971		D.B. 178 PG. 665	
11	RALPH G. MONTGOMERY & CLARA MONTGOMERY (WF.)	0.473	20,592	a.	0.037	1,631									0,436	18,961	D.B. 94 PG. 259	
12	ELIZABETH L. MONTGOMERY (WIDOW)	11,380		a.	0.876	38,143									10,504		D.B. 81 PG. 169 D.B. 173 PG. 407	
14	N.S.U. CORPORATION	40,000		a.	0.770	33,554									39,230		D.B. 219 PG. 476 PLAT CABINET 1 SLIDE 31	
15	JOY TECHNOLOGIES INC. D/B/A JOY MINING MACHINERY	13,264		a.	0.795	34,629									12,469		D.B. 178 PG. 683, D.B. 249 PG. 408 PLAT CABINET 2 SLIDE 320	
16	CITY OF LEBANON, KENTUCKY	48,610		a.	1,246	54,258									47,364		D.B. 177 PG. 390 PLAT CABINET 1 SLIDE 31	
17	JIM PATTISON DEVELOPMENT (U.S.) INC.	18,000		a.	0.417	18,185									17,583		D.B. 212 PG. 379, D.B. 216 PG. 711 PLAT CABINET 1 SLIDE 173	
18	KENTUCKY WIRE & CABLE, INC.	11,000		a.	0.445	19,405									10,555		D.B. 173 PG. 336 PLAT CABINET 1 SLIDE 27	
19	UNIVERSAL SPORTSWEAR, INC.	6,030		a.	0.105	4,557									5,925		D.B. 181 PG. 507 PLAT CABINET 1 SLIDE 31	
20	MARION COUNTY INDUSTRIAL FOUNDATION, INC.	0,266	11,587	c.	0,266	11,587									0	0	D.B. 93 PG. 127, D.B. 173 PG. 587 PLAT CABINET 1 SLIDE 31	TOTAL TAKE
21	MUSE INTERNATIONAL CORPORATION	11,650		a.	0,033	1,432									11,617		D.B. 183 PG. 290 PLAT CABINET 1 SLIDE 31	
22	MARUYASA INDUSTRIES CO., LTD	10,010		a.	0,121	5,249									9,889		D.B. 144 PG. 108 PLAT CABINET 1 SLIDE 27	

THIS PROJECT IS A PARTIALLY CONTROLLED ACCESS HIGHWAY. ACCESS SHALL BE PROVIDED ONLY WHERE SPECIFICALLY SHOWN ON THE PLANS. MINIMUM SPACING IS 600 FEET.

① BASIS FOR DETERMINATION OF AREA:
 a. DEED/PLAT
 b. P.V.A.
 c. CALCULATED
 d. OTHER

② TOTAL AREA REMAINING = TOTAL AREA - FEE SIMPLE RIGHT OF WAY

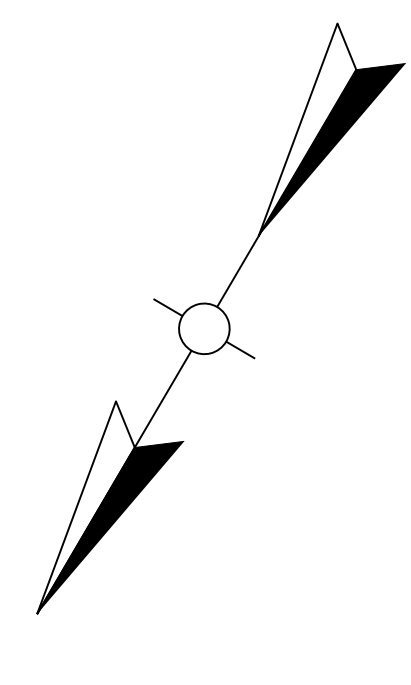
PREPARED BY _____ DATE _____
 CHECKED BY _____ DATE _____
 APPROVED BY _____ DATE _____

RIGHT OF WAY PLANS

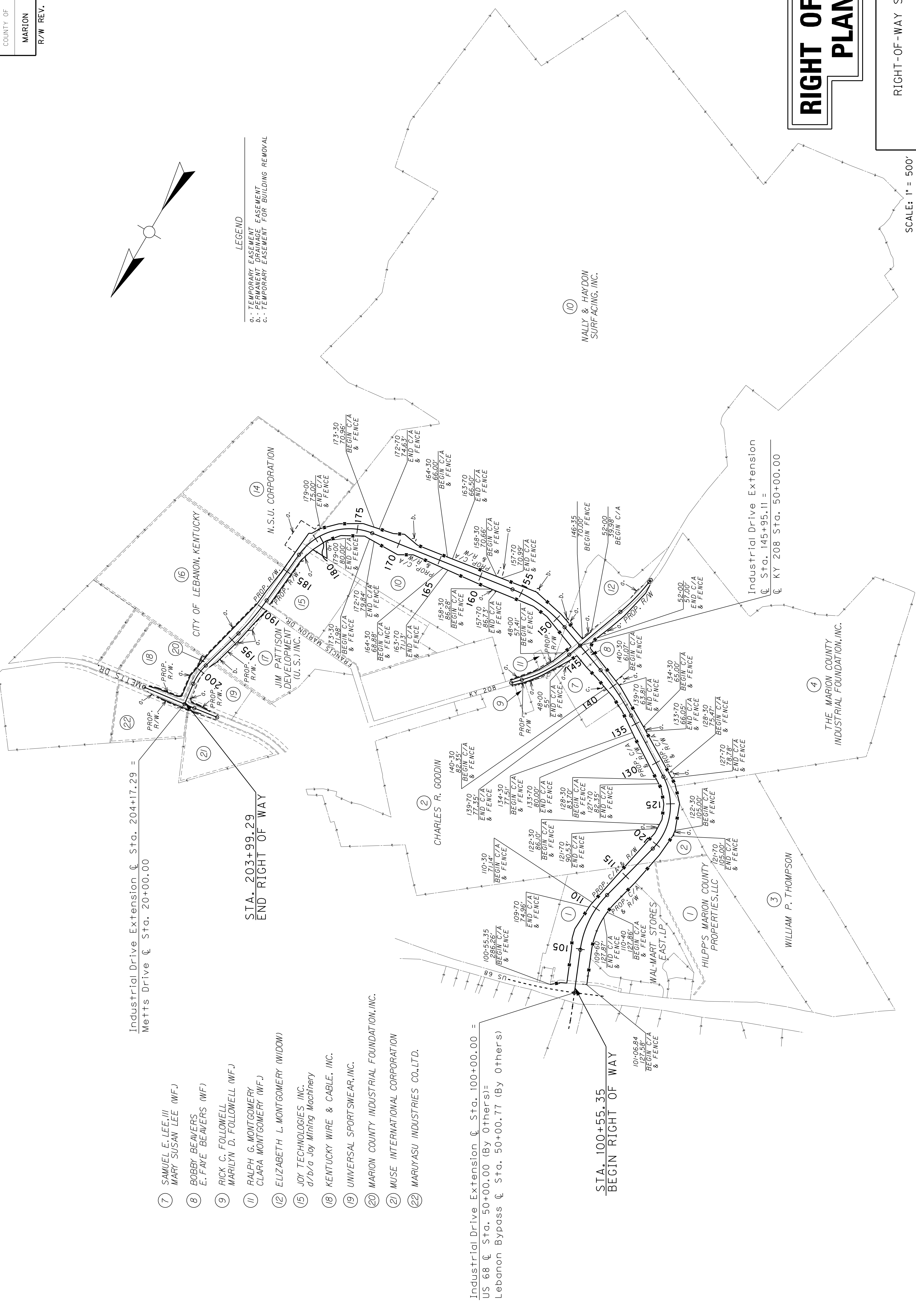
RIGHT-OF-WAY STRIP MAP

SCALE: 1" = 500'

COUNTY OF	ITEM NO.	SHEET NO.
MARION	4-138.00	R24
R/W REV. NO. 4, JULY 17, 2008		



LEGEND
 a. - TEMPORARY EASEMENT
 b. - PERMANENT DRAINAGE EASEMENT
 c. - TEMPORARY EASEMENT FOR BUILDING REMOVAL



Industrial Drive Extension $\text{C. Sta. } 204+17.29 =$
 Metts Drive $\text{C. Sta. } 20+00.00$

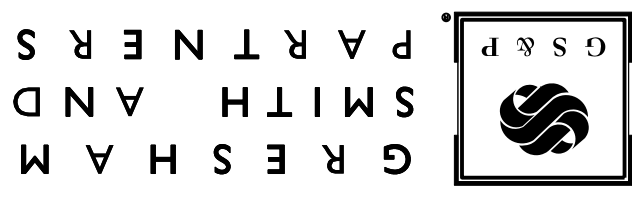
STA. 203+99.29
 END RIGHT OF WAY

Industrial Drive Extension $\text{C. Sta. } 100+00.00 =$
 US 68 $\text{C. Sta. } 50+00.00$ (By Others)=
 Lebanon Bypass $\text{C. Sta. } 50+00.77$ (By Others)

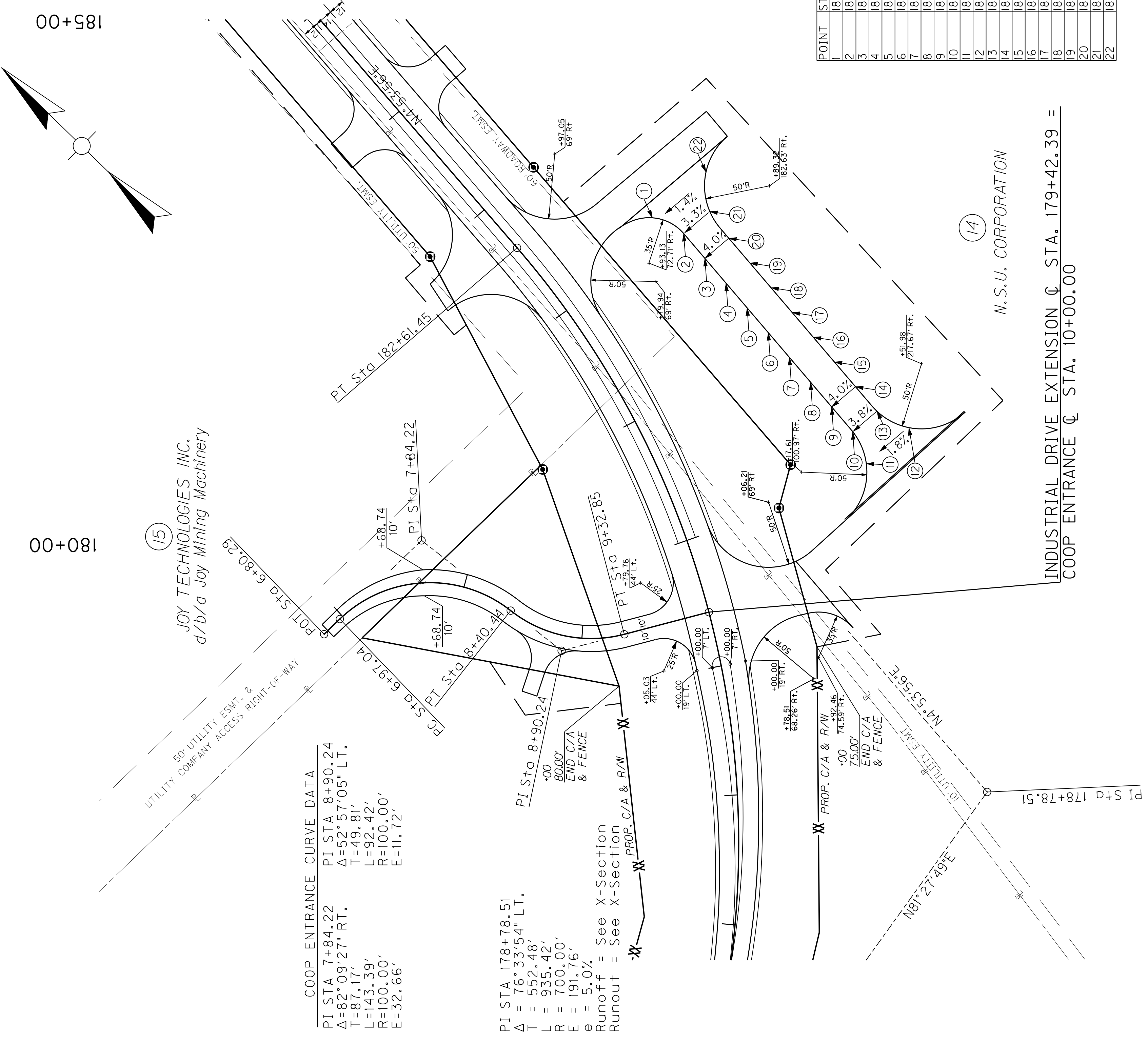
STA. 100+55.35
 BEGIN RIGHT OF WAY

- (7) SAMUEL E. LEE, III
MARY SUSAN LEE (WF.)
- (8) BOBBY BEAVERS
E. FAKE BEAVERS (WF.)
- (9) RICK C. FOLLOWELL
MARILYN D. FOLLOWELL (WF.)
- (11) RALPH G. MONTGOMERY
CLARA MONTGOMERY (WF.)
- (12) ELIZABETH L. MONTGOMERY (WIDOW)
- (15) JOY TECHNOLOGIES, INC.
d/b/a Joy Mining Machinery
- (18) KENTUCKY WIRE & CABLE, INC.
- (19) UNIVERSAL SPORTSWEAR, INC.
- (20) MARION COUNTY INDUSTRIAL FOUNDATION, INC.
- (21) MUSE INTERNATIONAL CORPORATION
- (22) MARYASU INDUSTRIES CO., LTD.

PREPARED BY GRESHAM SMITH AND PARTNERS
 CHECKED BY _____ DATE _____
 APPROVED BY _____ DATE _____



USER: \$\$\$USER\$\$\$
 DATE: \$\$\$DATE\$\$\$
 FILE NAME: \$\$\$design\file\$specification\$\$\$
 E-SHEET NAME: \$\$\$DATE\$\$\$



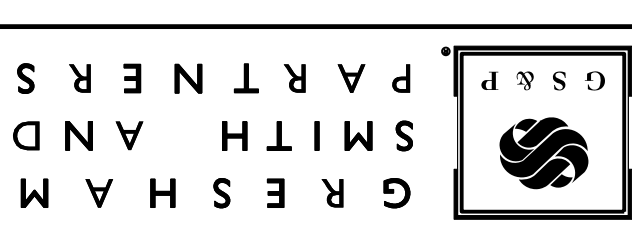
COOP ENTRANCE CURVE DATA
 PI STA 7+84.22 PI STA 8+90.24
 $\Delta = 82^{\circ}09'27''$ RT. $\Delta = 52^{\circ}57'05''$ LT.
 T = 87.17' T = 49.81'
 L = 143.39' L = 92.42'
 R = 100.00' R = 100.00'
 E = 32.66' E = 11.72'

PI STA 178+78.51
 $\Delta = 76^{\circ}33'54''$ LT.
 T = 552.48'
 L = 935.42'
 R = 700.00'
 E = 191.76'
 $e = 5.0\%$
 Runoff = See X-Section
 Runout = See X-Section

POINT	STATION	OFFSET	ELEVATION
1	182+16.95	95.37	810.34
2	181+95.98	107.57	810.54
3	181+74.39	110.15	810.90
4	181+53.02	113.48	811.24
5	181+31.85	117.57	811.51
6	181+10.91	122.39	811.69
7	180+90.23	127.94	811.80
8	180+69.85	134.21	811.84
9	180+49.78	141.17	811.79
10	180+30.04	148.73	811.76
11	180+08.09	149.16	811.86
12	180+19.69	190.15	812.66
13	180+36.25	172.00	812.69
14	180+55.40	164.17	812.75
15	180+74.97	157.40	812.80
16	180+94.83	151.30	812.76
17	181+14.97	145.90	812.65
18	181+35.34	141.21	812.47
19	181+55.93	137.23	812.20
20	181+76.70	133.99	811.86
21	181+97.77	133.71	811.33
22	182+19.53	149.42	811.10

INDUSTRIAL DRIVE EXTENSION $\text{C} \text{ STA. } 179+42.39 =$
 COOP ENTRANCE $\text{C} \text{ STA. } 10+00.00$

PREPARED BY GRESHAM SMITH AND PARTNERS DATE 09-DEC-2008
 CHECKED BY _____ DATE _____
 APPROVED BY _____ DATE _____



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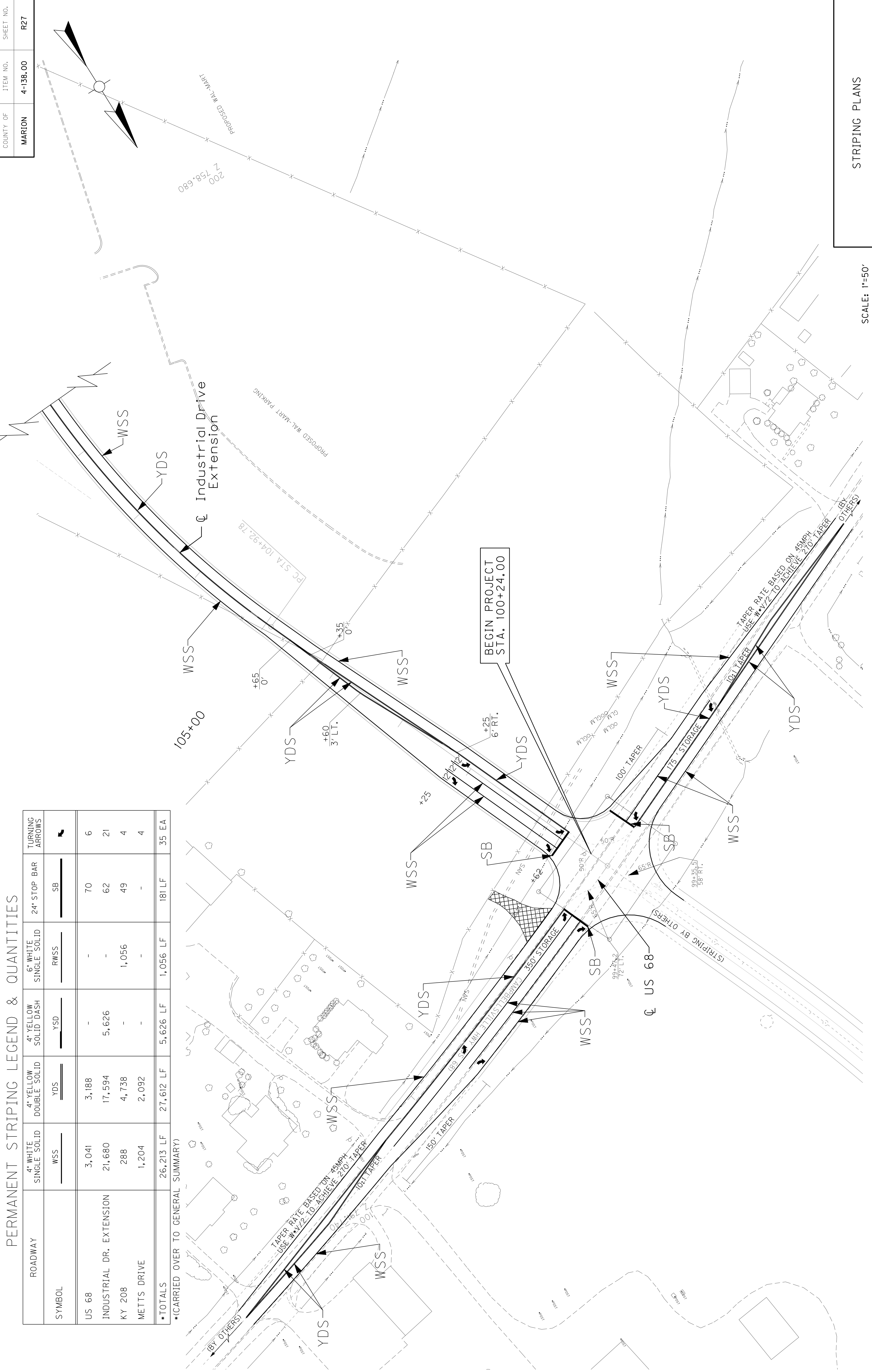


GRESHAM SMITH AND PARTNERS

PREPARED BY GRESHAM SMITH AND PARTNERS DATE 09-DEC-2008
 CHECKED BY _____ DATE _____
 APPROVED BY _____ DATE _____

PERMANENT STRIPING LEGEND & QUANTITIES

ROADWAY	4" WHITE SINGLE SOLID	4" YELLOW DOUBLE SOLID	4" YELLOW SOLID DASH	6" WHITE SINGLE SOLID	24" STOP BAR	TURNING ARROWS
SYMBOL	WSS	YDS	YSD	RWSS	SB	
US 68	3,041	3,188	-	-	70	6
INDUSTRIAL DR. EXTENSION	21,680	17,594	5,626	-	62	21
KY 208	288	4,738	-	1,056	49	4
METTS DRIVE	1,204	2,092	-	-	-	4
*TOTALS	26,213 LF	27,612 LF	5,626 LF	1,056 LF	181 LF	35 EA
*(CARRIED OVER TO GENERAL SUMMARY)						



SCALE: 1"=50'

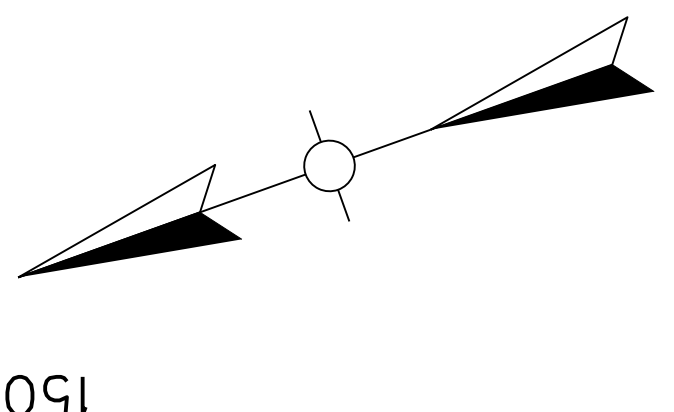
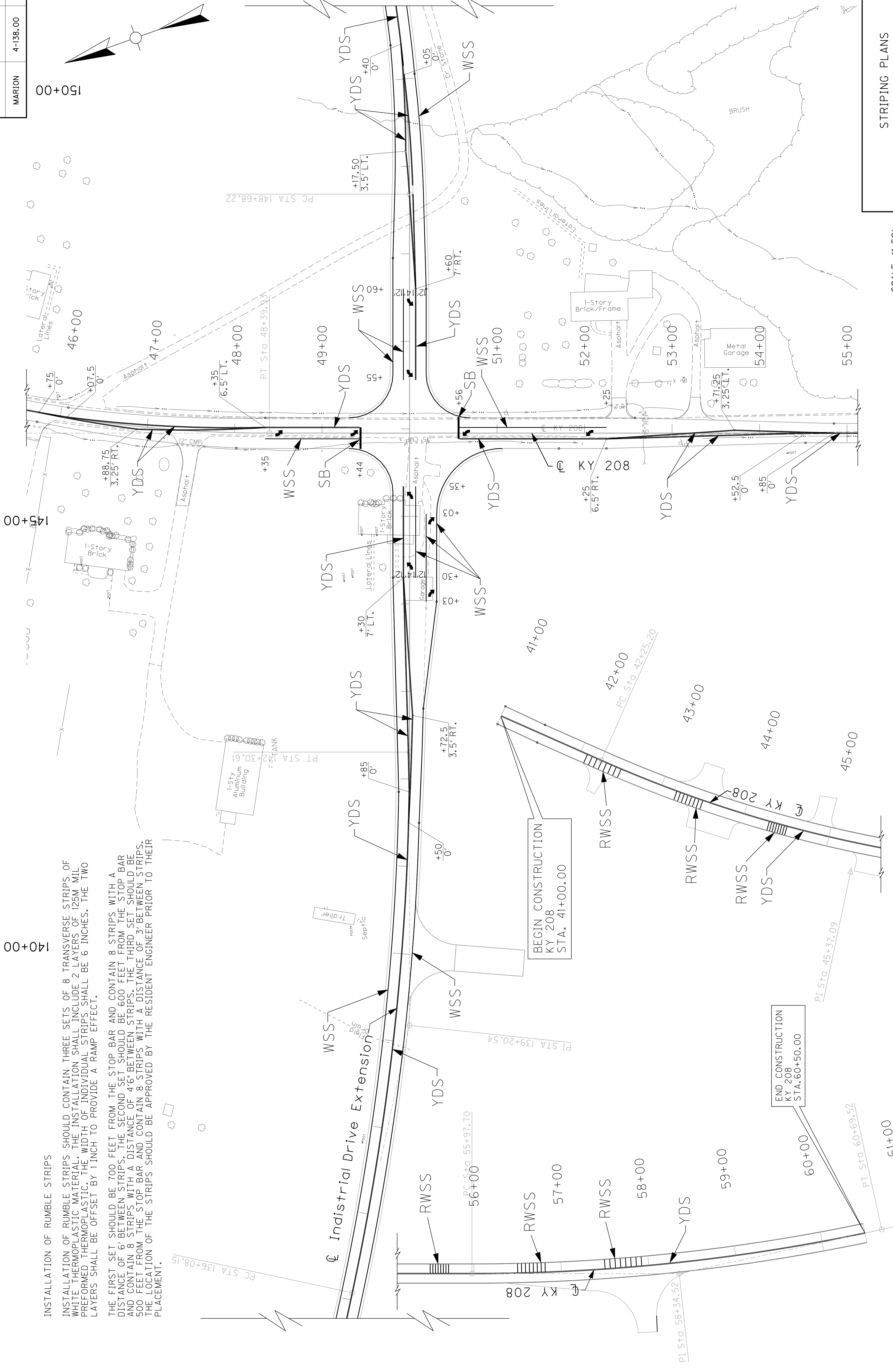
STRIPING PLANS

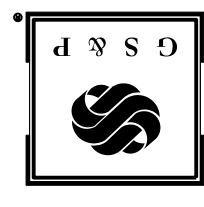


GRESHAM SMITH AND PARTNERS

PREPARED BY GRESHAM SMITH AND PARTNERS DATE 09-DEC-2008
CHECKED BY DATE
APPROVED BY DATE

INSTALLATION OF RUMBLE STRIPS
INSTALLATION OF RUMBLE STRIPS SHOULD CONTAIN THREE SETS OF 8 TRANSVERSE STRIPS OF WHITE THERMOPLASTIC MATERIAL. THE INSTALLATION SHALL INCLUDE 2 LAYERS OF 125M MIL PERFORMED THERMOPLASTIC. THE WIDTH OF INDIVIDUAL STRIPS SHALL BE 6 INCHES. THE TWO LAYERS SHALL BE OFFSET BY 1 INCH TO PROVIDE A RAMP EFFECT.
THE FIRST SET SHOULD BE 700 FEET FROM THE STOP BAR AND CONTAIN 8 STRIPS WITH A DISTANCE OF 6' BETWEEN STRIPS. THE SECOND SET SHOULD BE 600 FEET FROM THE STOP BAR AND CONTAIN 8 STRIPS WITH A DISTANCE OF 4' BETWEEN STRIPS. THE THIRD SET SHOULD BE 500 FEET FROM THE STOP BAR AND CONTAIN 8 STRIPS WITH A DISTANCE OF 3' BETWEEN STRIPS. THE LOCATION OF THE STRIPS SHOULD BE APPROVED BY THE RESIDENT ENGINEER PRIOR TO THEIR PLACEMENT.





GRESHAM SMITH AND PARTNERS

PREPARED BY GRESHAM SMITH AND PARTNERS DATE 09-DEC-2008
CHECKED BY DATE
APPROVED BY DATE

COUNTY OF	ITEM NO.	SHEET NO.
MARION	4-138.00	R29



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E-SHEET NAME:



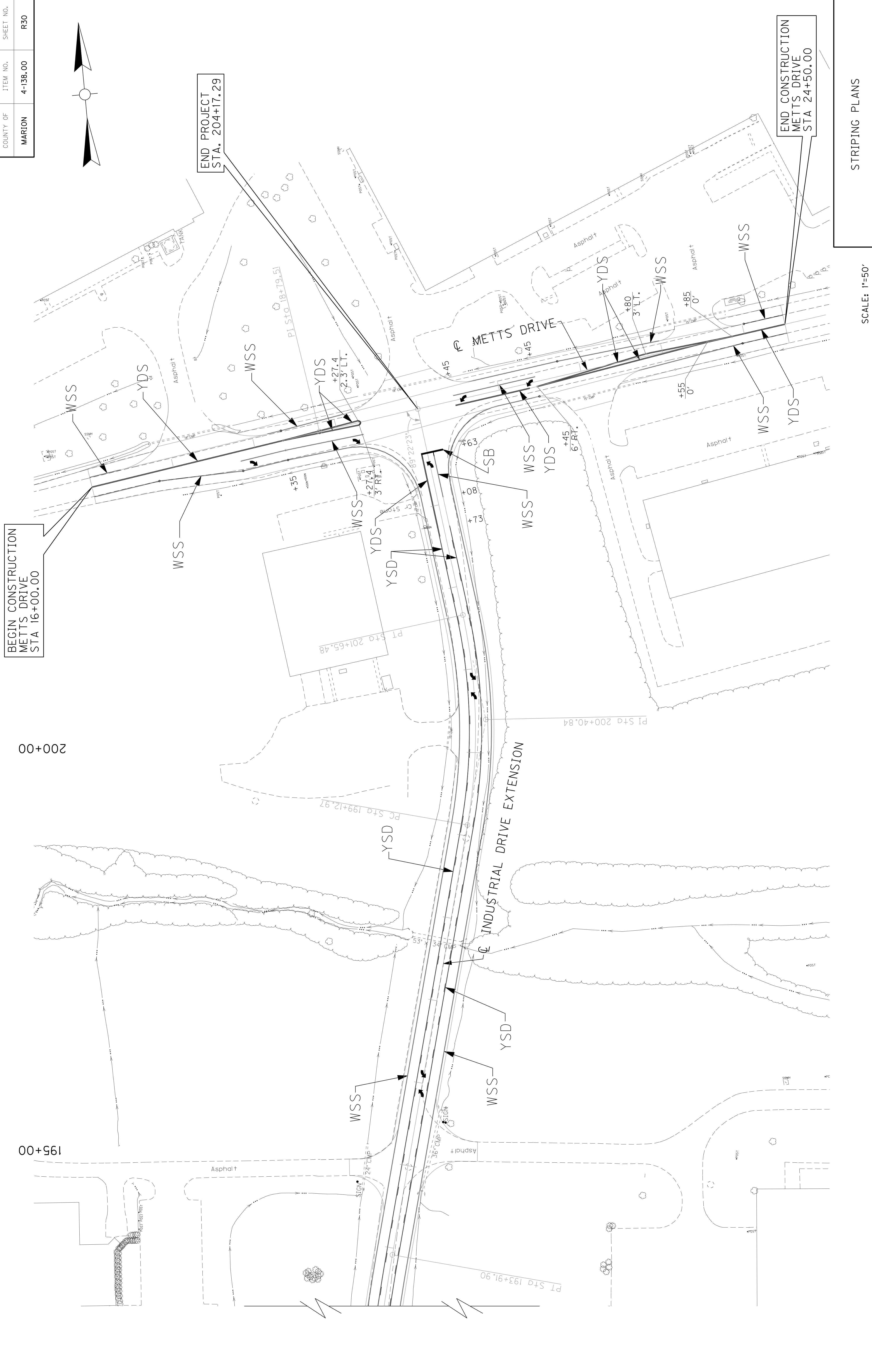
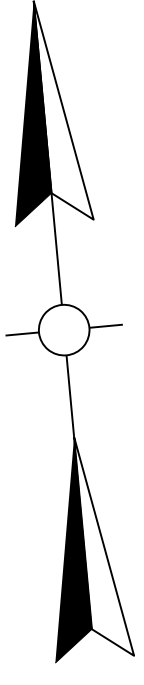
GRESHAM SMITH AND PARTNERS

PREPARED BY GRESHAM SMITH AND PARTNERS DATE 09-DEC-2008
CHECKED BY DATE
APPROVED BY DATE

SCALE: 1"=50'

STRIPING PLANS

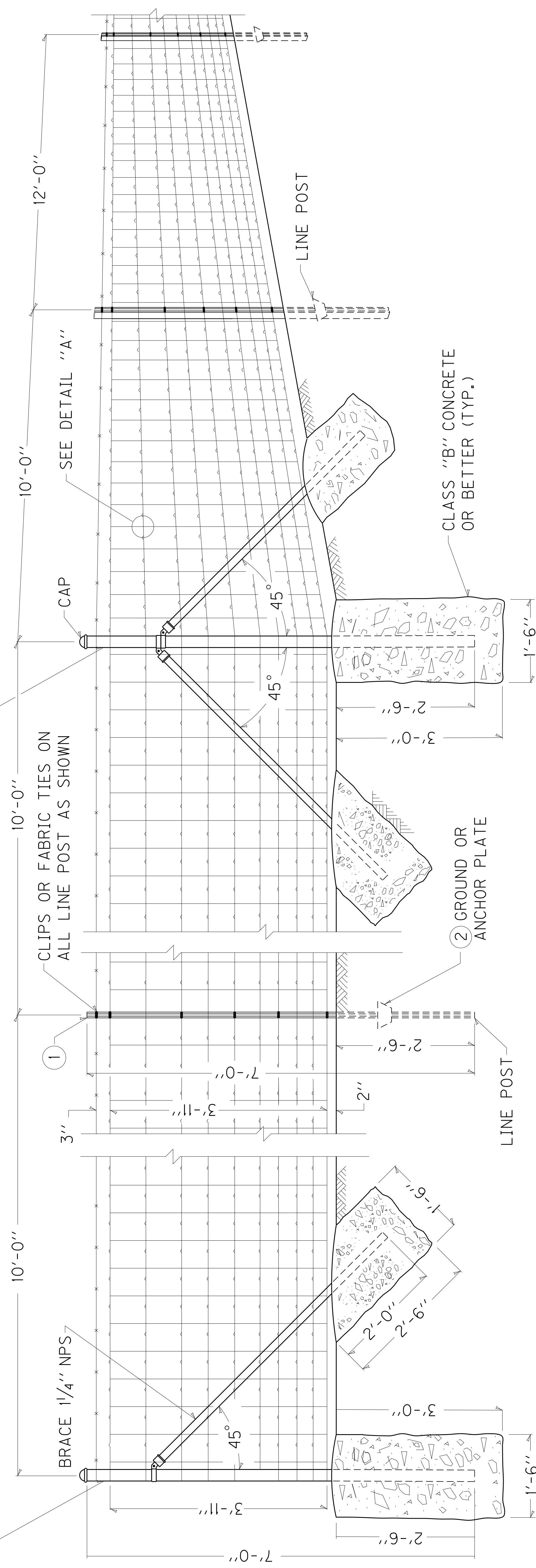
COUNTY OF	ITEM NO.	SHEET NO.
MARION	4-138-00	R30



BEGIN CONSTRUCTION
METTS DRIVE
STA 16+00.00

END PROJECT
STA. 204+17.29

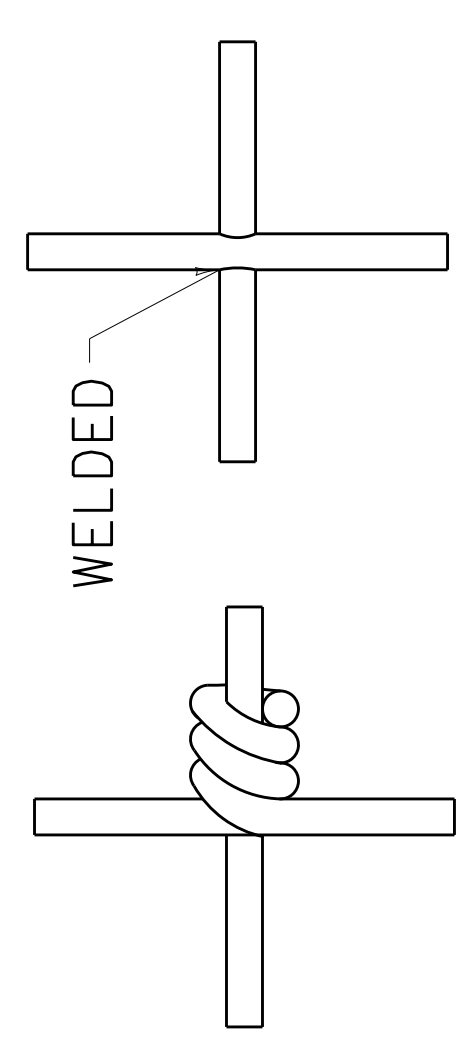
END CONSTRUCTION
METTS DRIVE
STA 24+50.00



NOTES

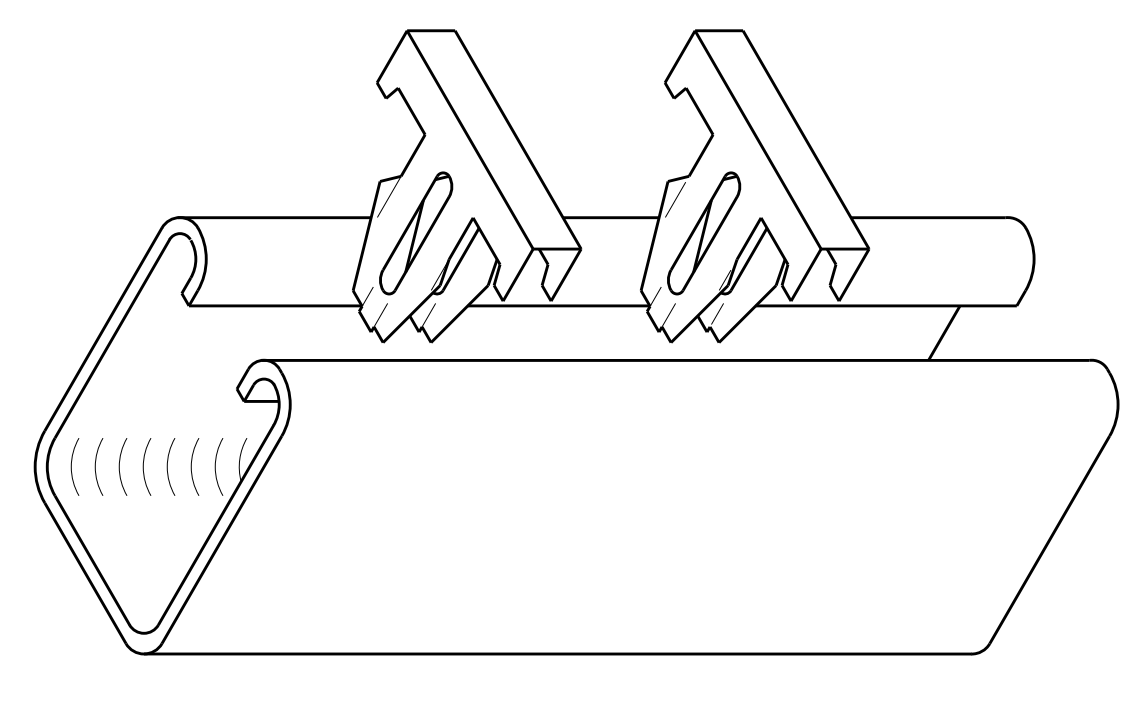
- MATERIALS:**
 WOVEN-WIRE FABRIC SHALL BE EITHER ALUMINUM-COATED STEEL NO. 1047-6-9 OR ZINC-COATED STEEL NO. 1047-6-9. ALL FENCE FITTINGS SHALL COMPLY WITH ASTM F 626.
 NPS = NOMINAL PIPE SIZE - ASTM F1083 AND F1043 (HEAVY INDUSTRIAL FENCE) SHALL GOVERN.
 ① STUDDED "T" POST SHALL COMPLY WITH ASTM A 702 AT 1.33 LBS. PER FOOT - OR -
 ROLL FORM POST AT 1.40 LBS. PER FOOT (SEE DETAIL)
 ② NOT REQUIRED FOR ROLL FORM POST.

RIGHT-OF-WAY FENCE

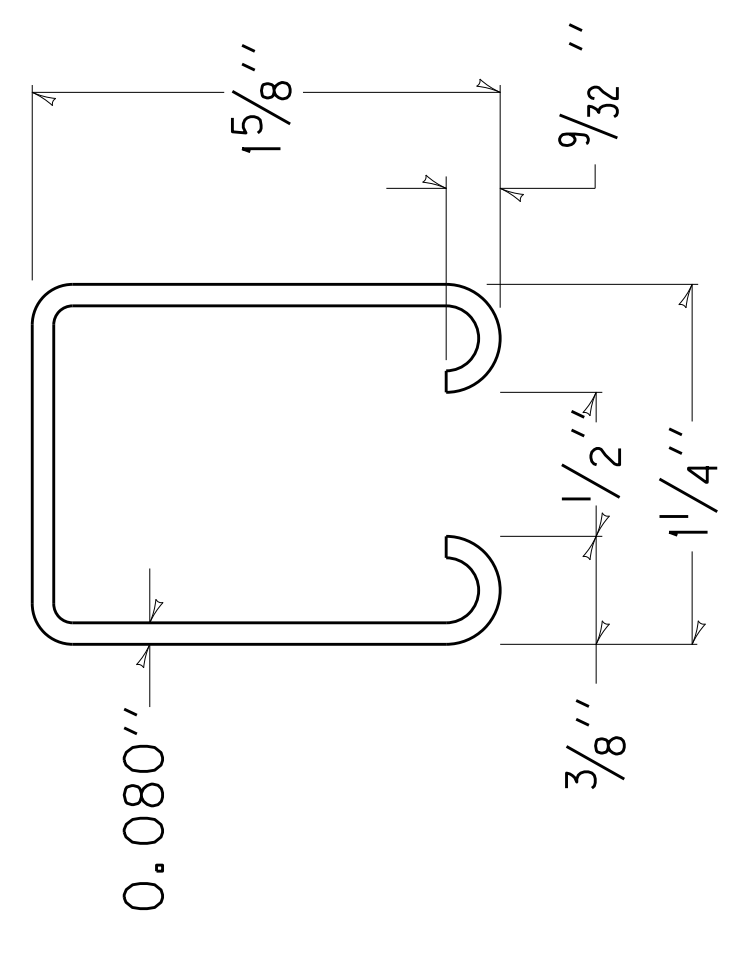


ALTERNATE METHODS OF SECURING VERTICAL STAY WIRE TO THE HORIZONTAL WIRE OF THE FABRIC.

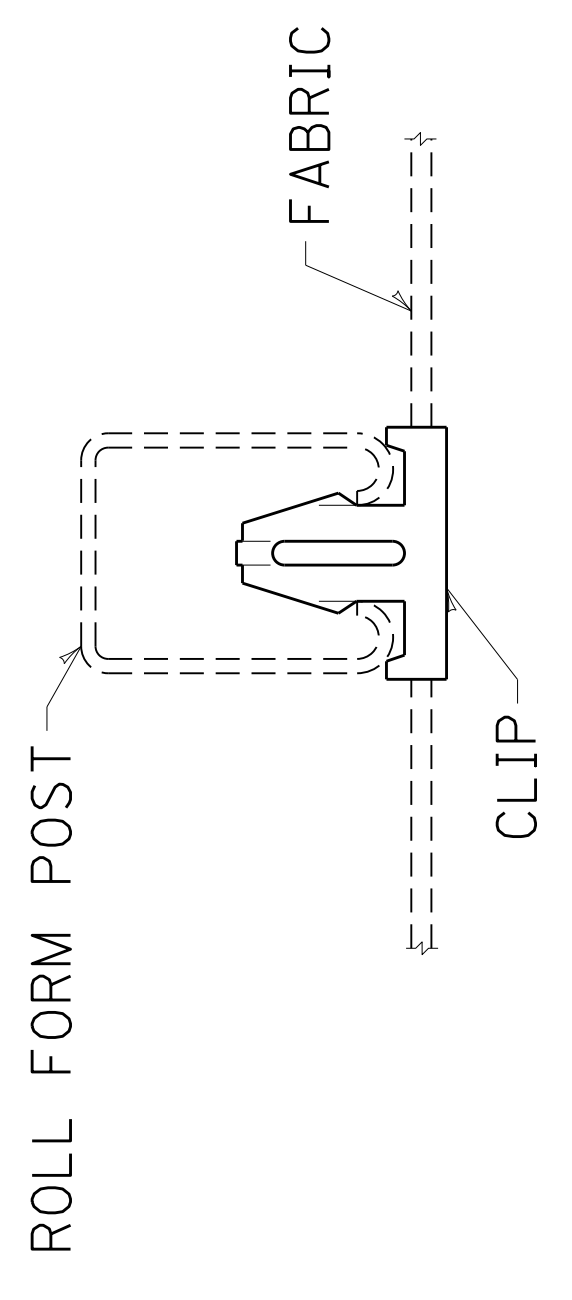
DETAIL "A"



ISOMETRIC EXPLODED VIEW OF ROLL FORM POST AND CLIPS
 CLIPS SHALL BE SPRING STEEL ALUMINUM FINISHED



PLAN VIEW OF ROLL FORM POST



PLAN VIEW OF CLIP INSTALLED IN ROLL FORM POST

PIPE DIA. (IN)	PIPE TYPE	CIRCULAR PIPE COVER HEIGHTS IN FEET				
		2-5	10-15	15-20	20-25	25-30
12 & 15	2 2/3" x 1/2" CSPHS (1)	16 GA.				
	2 2/3" x 1/2" CSPLS (1)	16 GA.				
	2 2/3" x 1/2" CAPHS	16 GA.				
	PVC	SMOOTH WALL (SOLID WALL)				
	HDPE	FF				
	RCP (11)					
18	2 2/3" x 1/2" CSPHS (1)	16 GA.				
	2 2/3" x 1/2" CSPLS (1)	16 GA.				
	2 2/3" x 1/2" CAPHS (1)	16 GA.				
	SRS (1)	16 GA.				
	SRA	16 GA.				
	PVC	RIBBED (PROFILE WALL)				
21	HDPE	FF				
	RCP (11)					
	PVC	RIBBED (PROFILE WALL)				
	SRA	16 GA.				
	SRS (1)	16 GA.				
	2 2/3" x 1/2" CAPHS	16 GA.				
24	2 2/3" x 1/2" CSPHS (1)	16 GA.				
	2 2/3" x 1/2" CSPLS (1)	16 GA.				
	2 2/3" x 1/2" CAPHS (1)	16 GA.				
	SRS (1)	16 GA.				
	SRA	16 GA.				
	PVC	RIBBED (PROFILE WALL)				
⑥	HDPE	FF				
	RCP (11)					
	2-5	10-15	15-20	20-25	25-30	

NOTES

- GAGES FOR CORRUGATED STEEL PIPE ITEMS SHOWN ARE BASED ON ALUMINUM-COATED TYPE 2 STEEL AS PER AASHTO M-274. ALUMINUM COATED TYPE 2 STEEL IS ONLY PERMITTED IN PH RANGES OF 5 TO 9
- WHEN CORRUGATED STEEL PIPE IS ZINC COATED (GALVANIZED) THE GAGE SHALL BE ONE GAGE HEAVIER THAN SHOWN IN THE TABLES.
- CSP, CAP, SRS AND SRA ARE SHOWN IN GAGE.
- MAXIMUM COVER HEIGHT MEASURED FROM TOP OF PIPE TO SUBGRADE ELEVATION SHALL GOVERN GAGE OF PIPE TO BE USED FOR ENTIRE LENGTH OF PIPE INSTALLATION.
- MINIMUM COVER HEIGHTS FOR PIPE SHALL BE 2 FEET. GAGE OF PIPE FOR COVER HEIGHTS LESS THAN 2 FEET SHALL BE THAT SHOWN FOR COVER HEIGHTS LESS THAN 2 FEET. SPECIFICATIONS FOR BACKFILL. HDPE AND PVC SHALL NOT BE PERMITTED FOR COVER HEIGHTS LESS THAN 2 FEET.
- 24" DIA. PIPE IS MINIMUM SIZE FOR COVER HEIGHTS FROM 30 FEET TO 65 FEET.
- MINIMUM COVER HEIGHT FOR ENTRANCE PIPE SHALL BE 0.5 FEET.
- GAGE OF ENTRANCE PIPE FOR COVER HEIGHTS LESS THAN 2 FEET SHALL MEET THE FOLLOWING REQUIREMENTS:
 - GAGE OF CSP SHALL BE THAT SHOWN FOR HEIGHTS OF 30 FEET.
 - GAGE OF CAP SHALL BE ONE GAGE HEAVIER THAN SHOWN IN THE TABLE.
- ALL CIRCULAR STRUCTURAL PLATE SHALL BE 5% VERTICALLY ELONGATED.
- SEE CURRENT STANDARD DRAWING RDI-035 FOR COATINGS, LININGS AND PAVINGS FOR NON-STRUCTURAL PIPE.
- SEE DETAIL SHEET "PIPE BEDDING FOR CULVERTS, ENTRANCE, AND STORM SEWER REINFORCED CONC. PIPE" AND DETAIL SHEET "PIPE BEDDING TRENCH CONDITION REINFORCED CONC. PIPE" FOR RCP COVER HEIGHT AND BEDDING REQUIREMENTS.

LEGEND

- CSPHS: CORRUGATED STEEL PIPE WITH HELICAL LOCK SEAM OR HELICAL WELDED SEAM (HELICAL CORR.)
- CSPLS: CORRUGATED STEEL PIPE WITH LONGITUDINAL RIVETED OR SPOT WELDED SEAM (ANNULAR CORR.)
- CAPHS: CORRUGATED ALUMINUM ALLOY PIPE WITH HELICAL LOCK SEAM (HELICAL CORR.)
- HDPE: HIGH DENSITY POLYETHYLENE PIPE
- PVC: POLYVINYL CHLORIDE
- SRS: SPIRAL RIB STEEL
- SRA: SPIRAL RIB ALUMINUM
- RCP: CIRCULAR REINFORCED CONCRETE PIPE
- FF: FLOWABLE FILL REQUIRED

12" PIPE - 24" PIPE

PIPE DIA. (IN)	PIPE TYPE	CIRCULAR PIPE COVER HEIGHTS IN FEET										
		2-5	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60
21	2 2/3" x 1/2" CSPHS (1)	16 GA.										
	2 2/3" x 1/2" CSPLS (1)	16 GA.										
	2 2/3" x 1/2" CAPHS	16 GA.										
	SRS (1)	16 GA.										
	SRA	16 GA.										
	PVC	RIBBED (PROFILE WALL)										
24	HDPE	FF										
	RCP (11)											
	PVC	RIBBED (PROFILE WALL)										
	SRA	16 GA.										
	SRS (1)	16 GA.										
	2 2/3" x 1/2" CAPHS	16 GA.										
⑥	2-5	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65



PIPE DIA. (IN)	PIPE TYPE	CIRCULAR PIPE COVER HEIGHTS IN FEET													
		2-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65	
27 & 30	2 2/3" x 1/2" CSPHS (1)	16 GA.													
	2 2/3" x 1/2" CSPLS (1)	16 GA.													
	2 2/3" x 1/2" CAPHS	14 GA.													
	SRS (1)	16 GA.													
	SRA	14 GA.													
	PVC	RIBBED (PROFILE WALL)													
	HDPE	FF													
	RCP (10)	FF													
		FF													
		FF													
36	2 2/3" x 1/2" CSPHS (1)	14 GA.													
	2 2/3" x 1/2" CSPLS (1)	14 GA.													
	2 2/3" x 1/2" CAPHS	14 GA.													
	SRS (1)	14 GA.													
	SRA	14 GA.													
	PVC	RIBBED (PROFILE WALL)													
	HDPE	FF													
	RCP (10)	FF													
		FF													
		FF													
42	2 2/3" x 1/2" CSPHS (1)	14 GA.													
	2 2/3" x 1/2" CSPLS (1)	14 GA.													
	2 2/3" x 1/2" CAPHS	12 GA.													
	SRS (1)	14 GA.													
	SRA	12 GA.													
	PVC	RIBBED (PROFILE WALL)													
	HDPE	FF													
	RCP (10)	FF													
		FF													
		FF													
30	2-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65		
	5	10	15	20	25	30	35	40	45	50	55	60	65		

NOTES

- GAGES FOR CORRUGATED STEEL PIPE ITEMS SHOWN ARE BASED ON ALUMINUM-COATED TYPE 2 STEEL AS PER AASHTO M-274. ALUMINUM COATED TYPE 2 STEEL IS ONLY PERMITTED IN PH RANGES OF 5 TO 9.
- WHEN CORRUGATED STEEL PIPE IS ZINC COATED (GALVANIZED) THE GAGE SHALL BE ONE GAGE HEAVIER THAN SHOWN IN THE TABLES.
- SEE CURRENT STANDARD DRAWING RDI-001 FOR EXPLANATION OF COVER HEIGHTS LESS THAN 2 FEET.
- CSP, CAP, SRS AND SRA ARE SHOWN IN GAGE.
- MAXIMUM COVER HEIGHT MEASURED FROM TOP OF PIPE TO SUB GRADE ELEVATION SHALL GOVERN GAGE OF PIPE TO BE USED FOR ENTIRE LENGTH OF PIPE INSTALLATION.
- MINIMUM COVER HEIGHT FOR ENTRANCE PIPE SHALL BE 0.5 FEET.
- ALL CIRCULAR STRUCTURAL PLATE SHALL BE 5% VERTICALLY ELONGATED.
- ENTRANCE PIPE GREATER THAN 30" DIA. SHALL BE CULVERT PIPE.
- SEE CURRENT STANDARD DRAWING RDI-035 FOR COATINGS, LININGS AND PAVINGS FOR NON-STRUCTURAL PIPE.

LEGEND

- CSPHS: CORRUGATED STEEL PIPE WITH HELICAL LOCK SEAM OR HELICAL WELDED SEAM (HELICAL CORR.)
- CSPLS: CORRUGATED STEEL PIPE WITH LONGITUDINAL RIVETED OR SPOT WELDED SEAM (ANNULAR CORR.)
- CAPHS: CORRUGATED ALUMINUM ALLOY PIPE WITH HELICAL LOCK SEAM (HELICAL CORR.)
- HDPE: HIGH DENSITY POLYETHYLENE PIPE
- PVC: POLYVINYL CHLORIDE
- SRS: SPIRAL RIB STEEL
- SRA: SPIRAL RIB ALUMINUM
- RCP: CIRCULAR REINFORCED CONCRETE PIPE
- FF: FLOWABLE FILL REQUIRED


NOTES CONTINUED

- SEE DETAIL SHEET "PIPE BEDDING FOR CULVERTS, ENTRANCE, AND STORM SEWER REINFORCED CONC. PIPE" AND DETAIL SHEET "PIPE BEDDING TRENCH CONDITION REINFORCED CONC. PIPE" FOR RCP COVER HEIGHT AND BEDDING REQUIREMENTS.

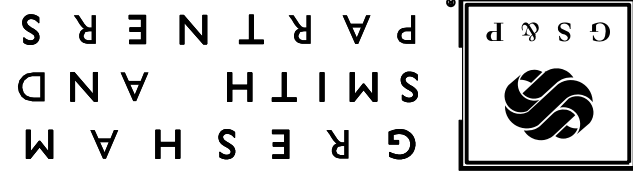
27" PIPE - 42" PIPE

KENTUCKY
DEPARTMENT OF HIGHWAYS

CULVERT, ENTRANCE &
STORM SEWER PIPE TYPES
& COVER HEIGHTS

APPROVED:  TEBU
DATE: 04-25-08

010



CIRCULAR PIPE COVER HEIGHTS IN FEET **3**

PIPE DIA. (IN)	PIPE TYPE	COVER HEIGHTS IN FEET																						
		2-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65	65-70	70-75	75-80	80-85	85-90	90-95	95-100	100-105	105-110	110-115
48	2 2/3" x 1/2" CSPHS (1)	14 GA.																						
	2 2/3" x 1/2" CSPLS (1)	14 GA.																						
	2 2/3" x 1/2" CAPHS	12 GA.																						
	SRS (1)	14 GA.																						
	SRA	12 GA.																						
	PVC	RIBBED (PROFILE WALL)																						
54	HDPE																							
	RCP (9)																							
	2 2/3" x 1/2" CSPHS (1)	14 GA.																						
	2 2/3" x 1/2" CSPLS (1)	14 GA.																						
	3" x 1" CSPHS (1)	14 GA.																						
54	3" x 1" CSPLS (1)	14 GA.																						
	5" x 1" CSPHS (1)	14 GA.																						
	2 2/3" x 1/2" CAPHS	12 GA.																						
	3" x 1" CAPHS	14 GA.																						
	SRS (1)	14 GA.																						
	SRA	12 GA.																						
7	RCP (9)	10 GA.																						
	2-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65	65-70	70-75	75-80	80-85	85-90	90-95	95-100	100-105	105-110	110-115	115-120
	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120

NOTES

- GAGES FOR CORRUGATED STEEL PIPE ITEMS SHOWN ARE BASED ON ALUMINUM-COATED TYPE 2 STEEL AS PER AASHTO M-274. ALUMINUM COATED TYPE 2 STEEL IS ONLY PERMITTED IN PH RANGES OF 5 TO 9.
- WHEN CORRUGATED STEEL PIPE IS ZINC COATED (GALVANIZED) THE GAGE SHALL BE ONE GAGE HEAVIER THAN SHOWN IN THE TABLES.
- SEE CURRENT STANDARD DRAWING RDI-001 FOR EXPLANATION OF COVER HEIGHTS LESS THAN 2 FEET.
- CSP, CAP, SRS AND SRA ARE SHOWN IN GAGE.
- MAXIMUM COVER HEIGHT MEASURED FROM TOP OF PIPE TO SUBGRADE ELEVATION SHALL GOVERN GAGE OF PIPE TO BE USED FOR ENTIRE LENGTH OF PIPE INSTALLATION.
- ALL CIRCULAR STRUCTURAL PLATE SHALL BE 5% VERTICALLY ELONGATED.
- 54" DIA. PIPE IS MINIMUM SIZE FOR COVER HEIGHTS GREATER THAN 65 FEET.
- SEE CURRENT STANDARD DRAWING RDI-035 FOR COATINGS, LININGS AND PAVINGS FOR NON-STRUCTURAL PIPE.
- SEE DETAIL SHEET "PIPE BEDDING FOR CULVERTS, ENTRANCE, AND STORM SEWER REINFORCED CONC. PIPE" AND DETAIL SHEET "PIPE BEDDING TRENCH CONDITION REINFORCED CONC. PIPE" FOR RCP COVER HEIGHT AND BEDDING REQUIREMENTS.

LEGEND

- CSPHS: CORRUGATED STEEL PIPE WITH HELICAL LOCK SEAM OR HELICAL WELDED SEAM (HELICAL CORR.)
 - CSPLS: CORRUGATED STEEL PIPE WITH LONGITUDINAL RIVETED OR SPOT WELDED SEAM (ANNULAR CORR.)
 - CAPHS: CORRUGATED ALUMINUM ALLOY PIPE WITH HELICAL LOCK SEAM (HELICAL CORR.)
 - HDPE: HIGH DENSITY POLYETHYLENE PIPE
 - PVC: POLYVINYL CHLORIDE
 - SRS: SPIRAL RIB STEEL
 - SRA: SPIRAL RIB ALUMINUM
 - RCP: CIRCULAR REINFORCED CONCRETE PIPE
- 48" PIPE - 54" PIPE

KENTUCKY
DEPARTMENT OF HIGHWAYS

CULVERT &
STORM SEWER PIPE TYPES
&
COVER HEIGHTS

MAINTENANCE OF TRAFFIC REASONABLE MEANS OF ACCESS TO FIRE HYDRANTS MUST ALSO BE MAINTAINED AT ALL TIMES. THE CONTRACTOR SHALL MAINTAIN A MINIMUM LANE WIDTH OF 10 FEET DURING NON-WORKING HOURS IN AREAS OF EXISTING TRAVELED WAYS. HOWEVER, ONE-WAY TRAFFIC MAY BE ALLOWED BETWEEN 9:00 AM AND 3:00 PM, PROVIDED THAT ADEQUATE SIGNING AND FLAGPERSONS ARE AT THE LOCATION.

PAVEMENT DROP-OFF DIFFERENCE IN ELEVATION FOR TRAVEL LANES A PAVEMENT EDGE THAT TRAFFIC IS EXPECTED TO CROSS IN A LANE CHANGE SITUATION SHOULD NOT HAVE AN ELEVATION DIFFERENCE GREATER THAN 2 INCHES. WARNING SIGNS SHOULD BE PLACED IN ADVANCE AND THROUGHOUT DROP-OFF AREA. A PAVEMENT EDGE THAT TRAFFIC IS NOT EXPECTED TO CROSS, EXCEPT ACCIDENTALLY, SHOULD BE TREATED AS FOLLOWS:

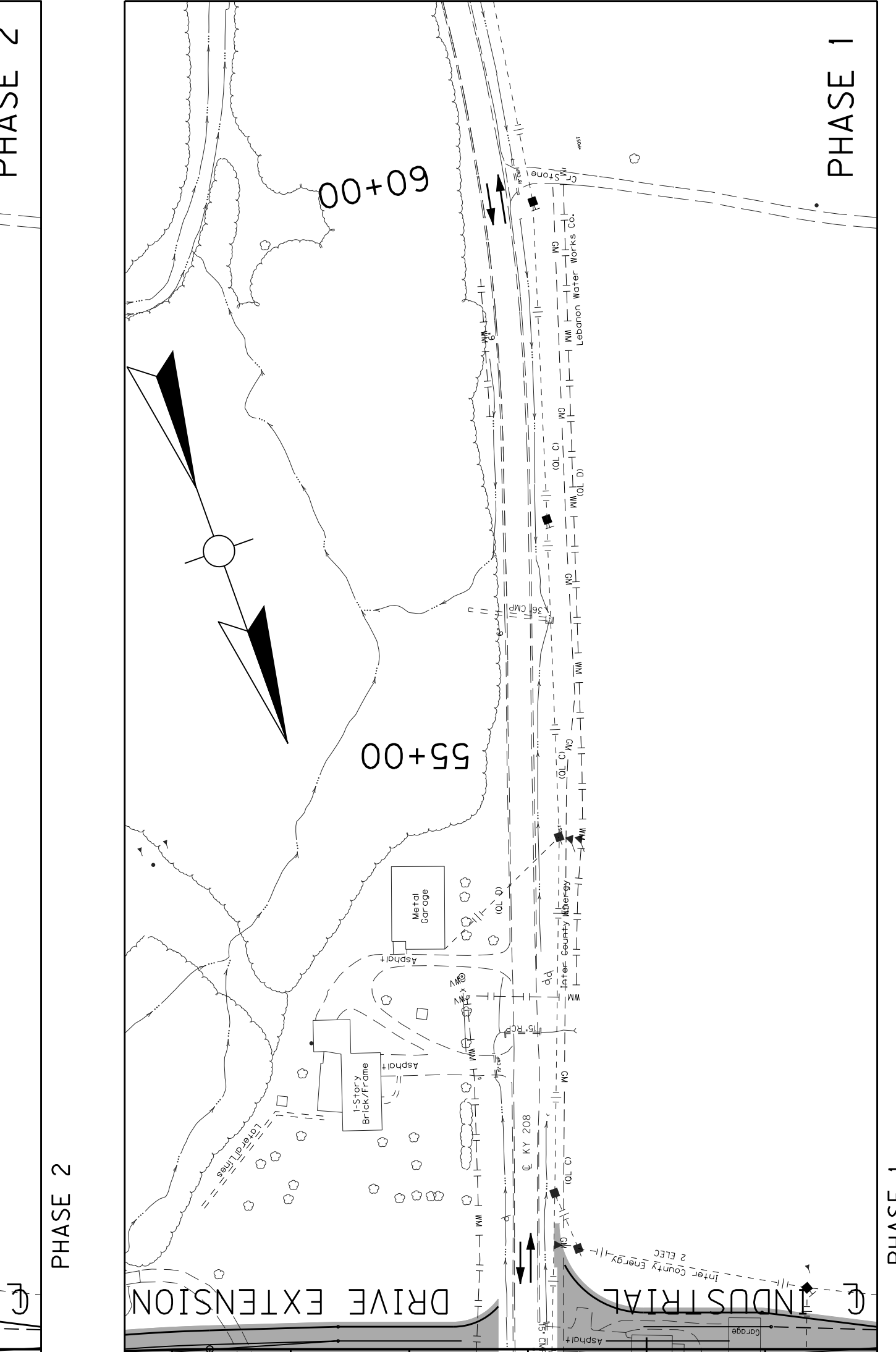
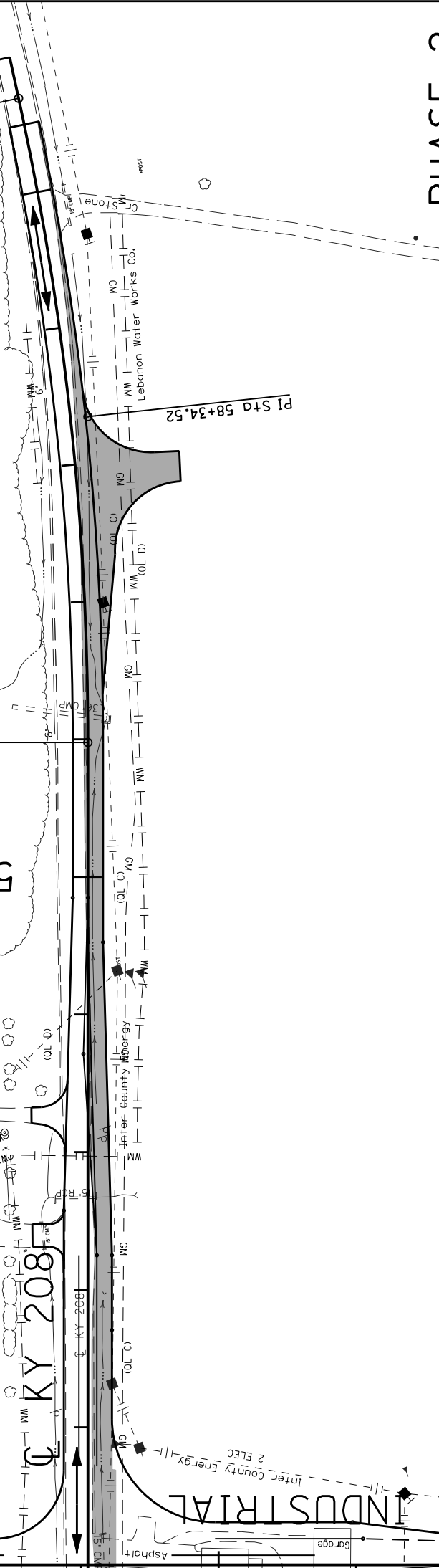
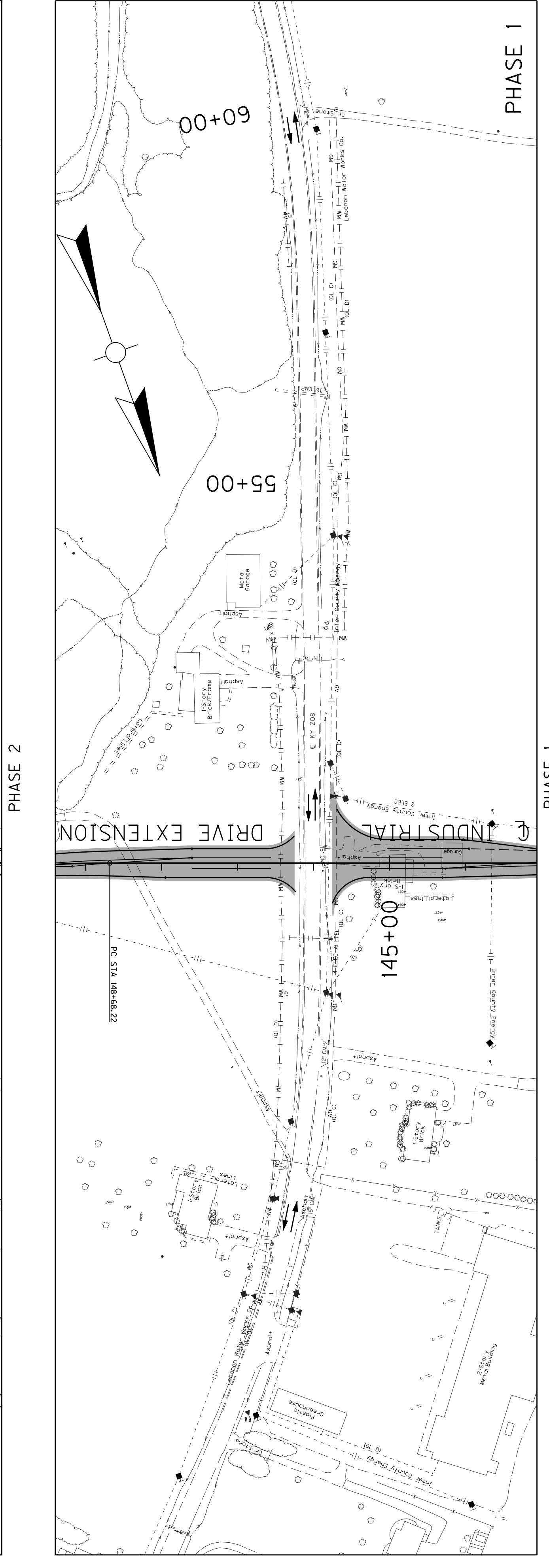
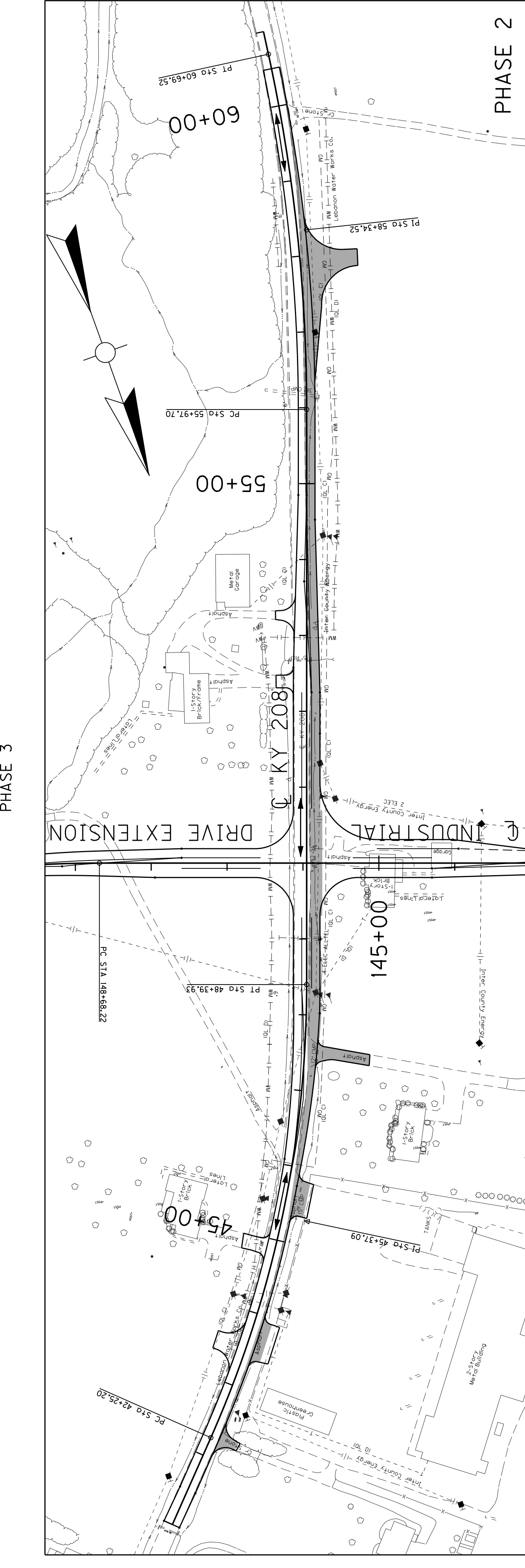
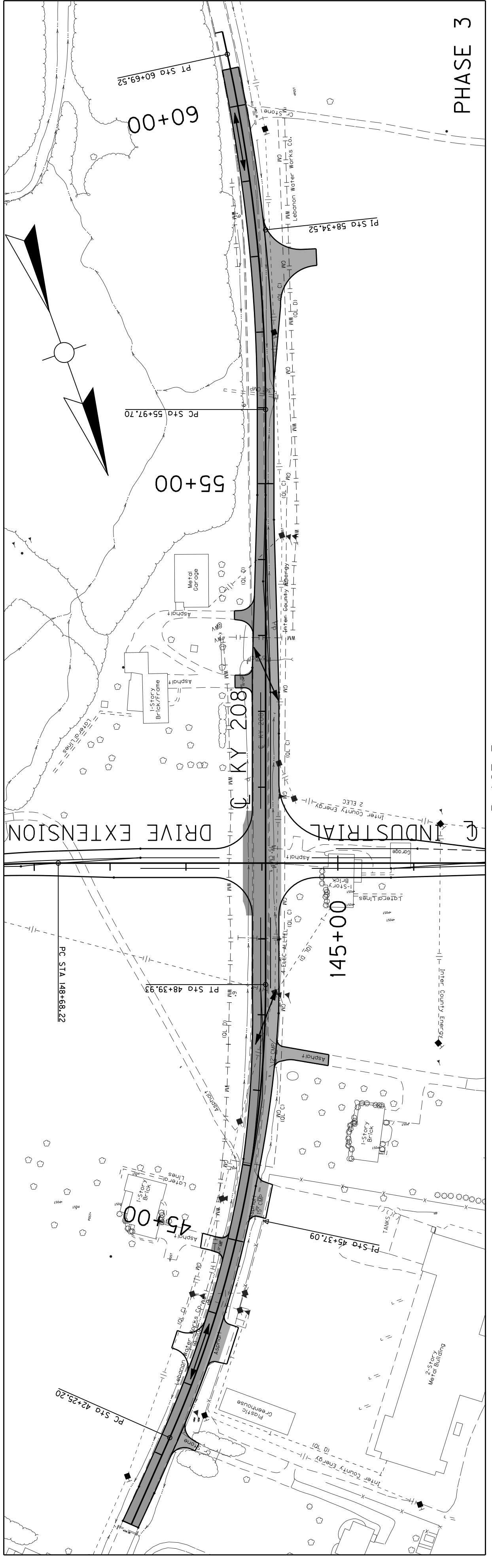
- LESS THAN 2 INCHES - NO PROTECTION REQUIRED.
- WARNING SIGNS SHOULD BE PLACED IN ADVANCE AND THROUGHOUT THE DROP-OFF AREA.
- 2 TO 4 INCHES - PLACE PLASTIC DRUMS OR GRABBER CONES EVERY 50 FEET ON TANGENT AND CURVE SECTIONS DURING DAYLIGHT HOURS. SPACING FOR TAPERS SHOULD BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- GREATER THAN 4 INCHES - POSITIVE SEPARATION OF WEDGE WITH 3:1 OR FLATTER SLOPE NEEDED. IF THERE IS 5 FEET OR MORE DISTANCE BETWEEN THE EDGE OF PAVEMENT AND DROP-OFF; DRUMS OR GRABBER CONES MAY BE USED.

FOR TEMPORARY CONDITIONS, DROP-OFFS GREATER THAN 4 INCHES MAY BE PROTECTED WITH PLASTIC DRUMS OR GRABBER CONES FOR SHORT DISTANCES DURING DAYLIGHT HOURS WHILE WORK IS BEING DONE IN THE DROP-OFF AREA. PAYMENT WILL BE NOT ALLOWED FOR DGA MATERIAL USED FOR WEDGING, BUT BE CONSIDERED INCIDENTAL TO LUMP SUM MAINTENANCE OF TRAFFIC. DURING DAYLIGHT HOURS, USING GRABBER CONES OR BARRELS, TRAFFIC SHALL BE SHIFTED AWAY FROM THE WORK ZONE FOR WIDENING AND FINAL SHOULDER CONSTRUCTION TO BE PERFORMED. BARRELS WITH WEDGING MUST BE USED DURING NIGHT-TIME HOURS IN DROP-OFF ZONES WHERE REQUIRED. SEE PHASING PLANS FOR CONSTRUCTION DETAILS FOR EACH PHASE. THE CONTRACTOR SHALL MAINTAIN ACCOMODATIONS FOR SCHOOL BUSES AND EMERGENCY VEHICLES DURING CONSTRUCTION.

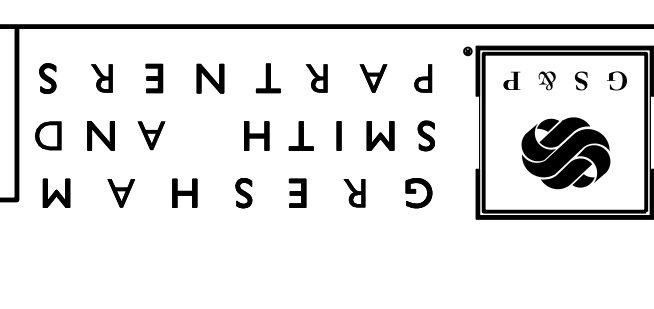
PHASE 3
Contractor to provide temporary access to the previously constructed portion of KY 208 near Sta. 48+00 and Sta. 52+50 to allow the 'build-up' construction of KY 208 between Sta. 49+00 and Sta. 51+50. Access to existing KY 208 to be restored daily.
The Contractor shall maintain a two-lane traveled way with a minimum lane width of 10 feet during non-working hours in areas of existing traveled ways. However, one-way traffic may be allowed between 9:00 AM and 3:00 PM, provided that adequate signing and flagpersons are at the location.
After 'build-up' between Sta. 49+50 and Sta. 51+50, utilize part-width construction, apply leveling and wedging and final surface course to the remaining roadway. Construct final signing and striping and open roadway to traffic.

PHASE 2
Traffic to utilize existing KY 208.
Construct the widening along the west side of existing KY 208 from Sta. 41+00 to Sta. 60+50. The Contractor shall maintain a two-lane traveled way with a minimum lane width of 10 feet during non-working hours in areas of existing traveled ways. However, one-way traffic may be allowed between 9:00 AM and 3:00 PM, provided that adequate signing and flagpersons are at the location.
Contractor to install traffic control devices per Kentucky Transportation Cabinet Specifications.

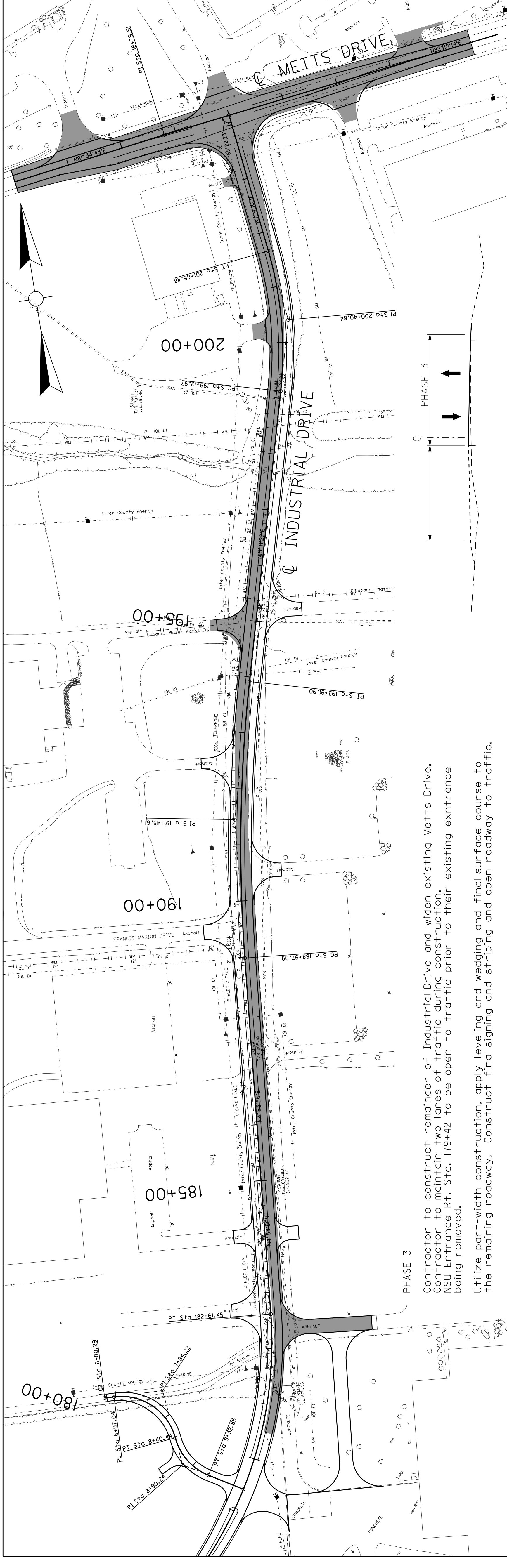
PHASE 1
Traffic to utilize existing KY 208.
Construct Industrial Drive Extension from Sta. 100+24 to Sta. 145+75 and from Sta. 146+25 to Sta. 180+50.
Contractor to install traffic control devices per Kentucky Transportation Cabinet Specifications.



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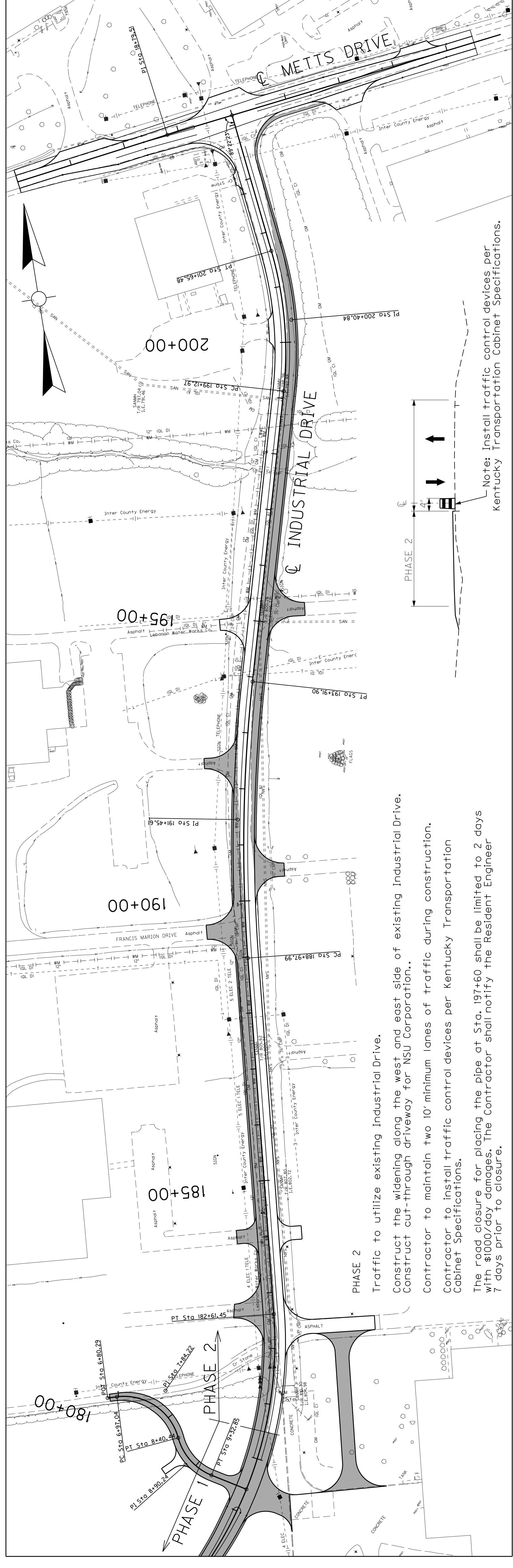
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SCALE: 1" = 100'



PHASE 3

Contractor to construct remainder of Industrial Drive and widen existing Metts Drive. Contractor to maintain two lanes of traffic during construction. NSU Entrance Rt. Sta. 179+42 to be open to traffic prior to their existing entrance being removed.

Utilize part-width construction, apply leveling and wedging and final surface course to the remaining roadway. Construct final signing and striping and open roadway to traffic.



PHASE 2

Traffic to utilize existing Industrial Drive.

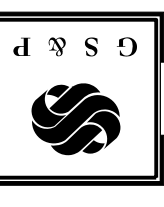
Construct the widening along the west and east side of existing Industrial Drive. Construct cut-through driveway for NSU Corporation.

Contractor to maintain two 10' minimum lanes of traffic during construction.

Contractor to install traffic control devices per Kentucky Transportation Cabinet Specifications.

The road closure for placing the pipe at Sta. 197+60 shall be limited to 2 days with \$1000/day damages. The Contractor shall notify the Resident Engineer 7 days prior to closure.

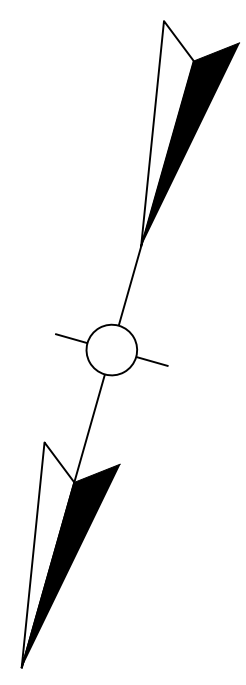
Note: Install traffic control devices per Kentucky Transportation Cabinet Specifications.


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PHASE 2

PHASE 3



100+00 105+00 110+00

EROSION CONTROL NOTES

ALL SILT CONTROL DEVICES SHALL BE SIZED TO RETAIN A VOLUME OF 3,600 CUBIC FEET PER DISTURBED CONTRIBUTING ACRE.

THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS TO MINIMIZE THE AMOUNT OF DISTURBED GROUND DURING EACH PHASE OF CONSTRUCTION. THE CONTRACTOR SHALL COMPUTE THE VOLUME NECESSARY TO CONTROL SEDIMENT DURING EACH PHASE OF CONSTRUCTION. AS WORK PROCEEDS, SILT TRAPS MAY BE ADDED OR REMOVED IN ORDER TO ACHIEVE THE BEST MANAGEMENT PLAN. THE REQUIRED VOLUME AT EACH ADDED SILT TRAP SHALL BE COMPUTED AS UP GRADIENT CONTRIBUTING AREAS ARE DISTURBED OR ARE STABILIZED TO THE SATISFACTION OF THE ENGINEER. THE REQUIRED VOLUME CALCULATION FOR EACH SILT TRAP SHALL BE DETERMINED BY THE CONTRACTOR AND VERIFIED BY THE ENGINEER. THE REQUIRED VOLUME AT EACH SILT TRAP MAY BE REDUCED BY THE FOLLOWING AMOUNTS:

- UPGRADIENT AREAS NOT DISTURBED (ACRES).
- UPGRADIENT AREAS THAT HAVE BEEN RECLAIMED AND PROTECTED BY EROSION CONTROL BLANKET OR OTHER GROUND PROTECTION MATERIAL SUCH AS TEMPORARY MULCH (ACRES).
- THE USE OF TEMPORARY MULCH IS ENCOURAGED.
- UPGRADIENT AREAS THAT HAVE BEEN PROTECTED BY SILT FENCE (ACRES).
- AREAS PROTECTED BY SILT FENCE SHALL BE COMPUTED AT A MAXIMUM RATE OF 100 SQUARE FOOT PER LINEAR FOOT OF SILT FENCE.
- UPGRADIENT AREAS THAT HAVE BEEN PROTECTED BY SILT TRAPS (ACRES).

THE EROSION CONTROL PLAN SHALL BE ANNOTATED AS THE WORK PROCEEDS BY THE CONTRACTOR TO DETAIL THE SELECTION OF EACH EROSION CONTROL DEVICE USED AND THE VOLUME PROVIDED BY EACH SILT TRAP IN ACCORDANCE WITH THE DOCUMENTATION PROCEDURES ESTABLISHED BY THE DIVISION OF CONSTRUCTION.

IF A SILT BASIN IS NOT USED, THEN ONE SILT TRAP TYPE A, ALTERNATE NUMBER 2 OR SILT TRAP TYPE B SHALL ALWAYS BE PLACED AT THE MOST REMOTE DOWNSTREAM COLLECTION POINT PRIOR TO DISCHARGING INTO A BLUE LINE STREAM OR ONTO AN ADJACENT PROPERTY OWNER. WHERE OVERLAND FLOW EXISTS, A SILT FENCE OR OTHER FILTER DEVICES MAY BE USED OR THE OVERLAND FLOW MAY BE DIVERTED TO ONE OF THE AFOREMENTIONED SILT BASINS OR TRAPS. THE EROSION CONTROL PLANS DO NOT CONSTITUTE A BMP BY THEMSELVES. THEY PROVIDE A STARTING POINT FOR THE CONTRACTOR AND RESIDENT ENGINEER TO DEVELOP THE BMP ACCORDING TO SECTION 215.03.01 OF THE STANDARD FOR ROAD AND BRIDGE CONSTRUCTION, AND THE SUPPLEMENTAL SPECS EFFECTIVE WITH THE OCTOBER, 2004 LETTING.

EROSION CONTROL MEASURES SHALL BE IN PLACE AND FUNCTIONING PRIOR TO ANY EXCAVATION OR DISTURBANCE WITHIN A DRAINAGE AREA.

THE CONTRACTOR SHALL BE REQUIRED TO CLEAN OUT (REMOVE SEDIMENT FROM) SILT TRAPS AND SILT FENCES WHENEVER THEY BECOME ONE-HALF FULL AND PROPERLY DISPOSE OF THE MATERIAL AT SITES APPROVED BY THE RESIDENT ENGINEER.

EROSION CONTROL MEASURES EMPLOYED BY THE CONTRACTOR WILL BE UNIQUE TO THE PROJECT AND WORK CONDITIONS AND SHALL BE APPROVED BY THE RESIDENT ENGINEER. THE DEVELOPMENT AND UTILIZATION OF THESE MEASURES WILL BE RECORDED AS PART OF THE BMP, KEPT ON SITE, AND AVAILABLE FOR PUBLIC INSPECTION.

PRESERVE EXISTING VEGETATION WHERE POSSIBLE.

STABILIZATION OF DISTURBED AREAS SHALL BEGIN WITHIN 14 CALENDAR DAYS ON AREAS WHERE CONSTRUCTION ACTIVITIES HAVE CEASED OR BEEN COMPLETED. STABILIZATION PRACTICES INCLUDING SEEDING, MULCHING, PLACING SOD, PLANTING TREES AND SHRUBS, AND USING GEOTEXTILE FABRICS AND OTHER APPROPRIATE MEASURES.

THE CONTRACTOR SHALL SUBMIT A SIGNED NOTICE OF INTENT (NOI) FORM TO KENTUCKY DIVISION OF WATER AT LEAST 48 HOURS BEFORE CONSTRUCTION ACTIVITY BEGINS.

THE CONTRACTOR SHALL SUBMIT A SIGNED COPY OF THE NOI TO THE CITY OF LEBANON, KENTUCKY.

INSPECT EPSC MEASURES, PERFORM MODIFICATIONS, MAINTENANCE OR REPAIRS AS NECESSARY, EVERY 7 CALENDAR DAYS OR WITHIN 24 HOURS OF EACH STORM EVENT.

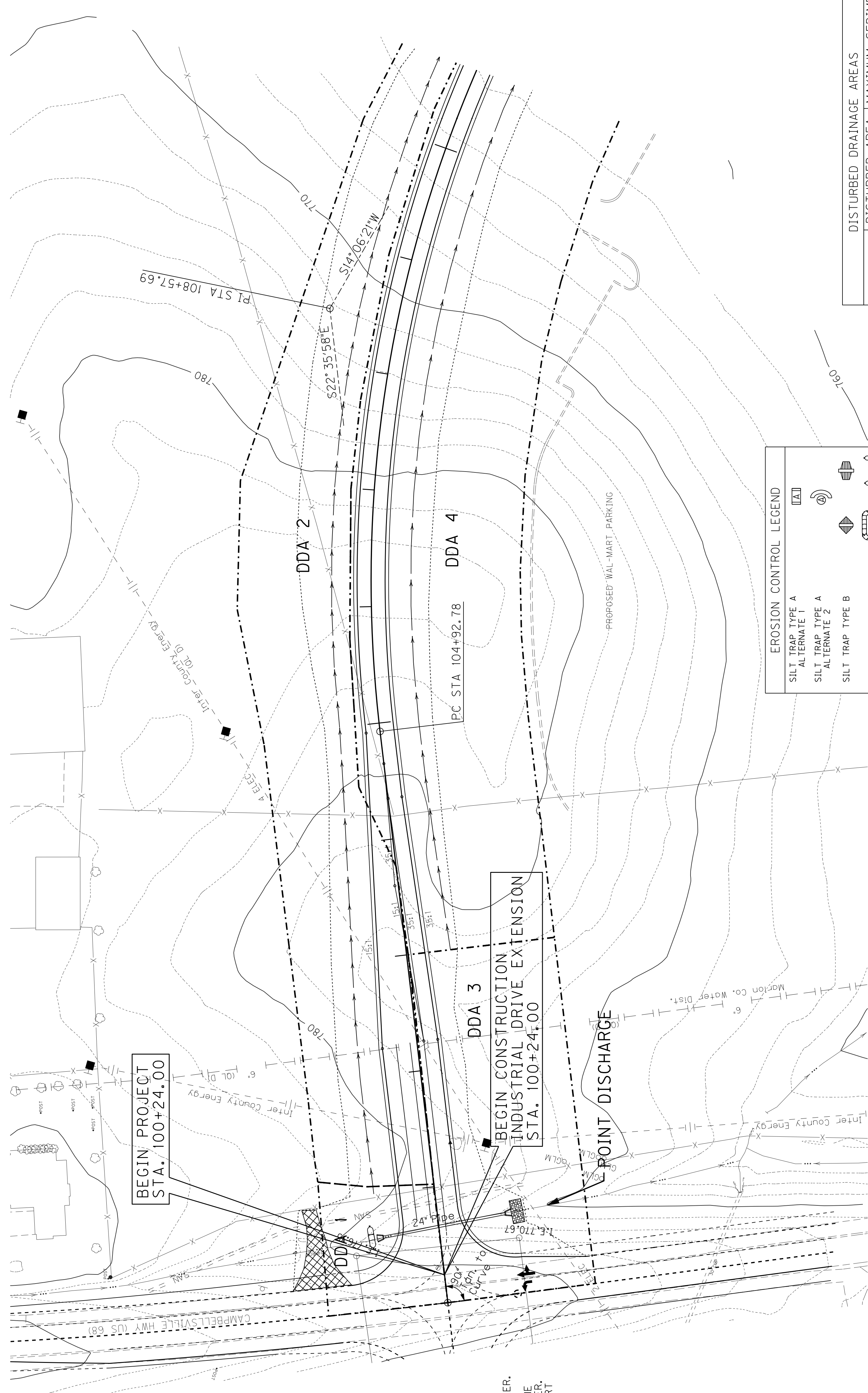
DISCHARGE LOCATIONS SHALL BE INSPECTED TO ENSURE THAT VELOCITY DISSIPATORS PREVENT SIGNIFICANT IMPACTS TO RECEIVING WATERS.

DISTURBED AREAS AND MATERIAL STORAGE AREAS THAT ARE EXPOSED TO PRECIPITATION SHALL BE INSPECTED FOR EVIDENCE OF POLLUTANTS ENTERING THE DRAINAGE SYSTEM.

A SIGNED REPORT SUMMARIZING THE SCOPE OF THE INSPECTION, MAJOR OBSERVATIONS, AND ANY CORRECTIVE ACTION TAKEN SHALL BE MADE AND KEPT AS A PART OF THESE PLANS.

A COPY OF THESE PLANS SHALL BE KEPT ON SITE.

THE CONTRACTOR SHALL SUBMIT A SIGNED NOTICE OF TERMINATION (NOT) FORM TO KENTUCKY DIVISION OF WATER AFTER THE SITE HAS BEEN FINALLY STABILIZED.



EROSION CONTROL LEGEND

SILT TRAP TYPE A ALTERNATE 1	
SILT TRAP TYPE A ALTERNATE 2	
SILT TRAP TYPE B	
SILT TRAP TYPE C	
SILT FENCE	
TEMPORARY SILT DITCH	
DISTURBED DRAINAGE AREA	
OVERLAND SHEET FLOW	
PROPOSED R/W	
PROPOSED EASEMENT	

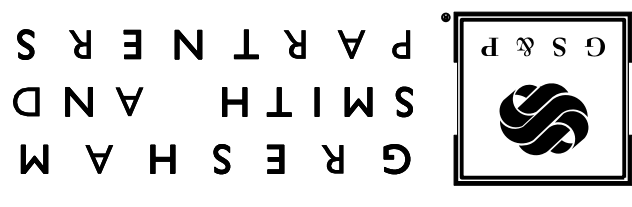
DISTURBED DRAINAGE AREAS

SECTION	DISTURBED AREA (ACRES)	MAXIMUM SEDIMENT VOLUME (CU FT)
DDA 1	0.25	900
DDA 2	3.08	11,088
DDA 3	0.87	3,132
DDA 4	4.75	17,100

INDUSTRIAL DRIVE EXTENSION
 STA. 100+00 TO STA. 110+00
 EROSION CONTROL PLANS

SCALE: 1"=50'

PREPARED BY GRISHAM SMITH AND PARTNERS
 CHECKED BY _____
 APPROVED BY _____
 DATE 09-DEC-2008



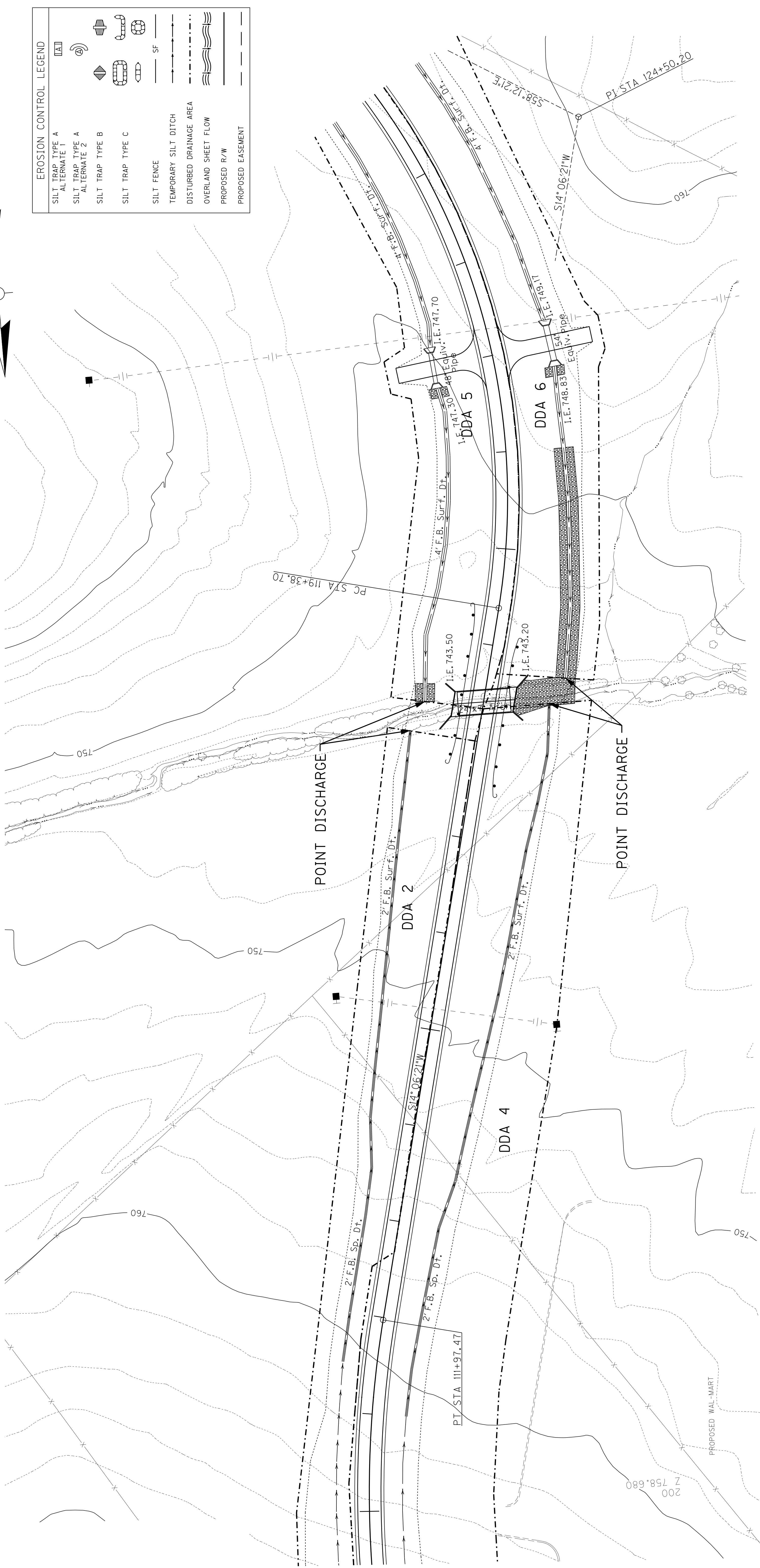
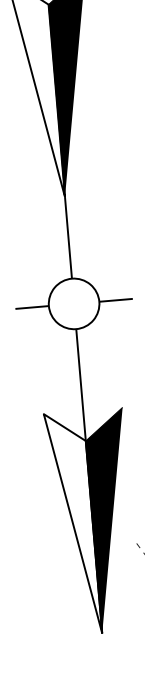
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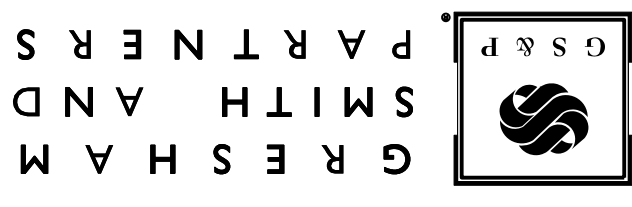
DISTURBED DRAINAGE AREAS		
SECTION	DISTURBED AREA (ACRES)	MAXIMUM SEDIMENT VOLUME (CU FT)
DDA 5	5.68	20,448
DDA 6	4.48	16,128

110+00
 115+00
 120+00
 125+00

EROSION CONTROL LEGEND	
SILT TRAP TYPE A ALTERNATE 1	
SILT TRAP TYPE A ALTERNATE 2	
SILT TRAP TYPE B	
SILT TRAP TYPE C	
SILT FENCE	
TEMPORARY SILT DITCH	
DISTURBED DRAINAGE AREA	
OVERLAND SHEET FLOW	
PROPOSED R/W	
PROPOSED EASEMENT	



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COUNTY OF MARION
 ITEM NO. 4-138.00
 SHEET NO. R34

USER: \$\$\$USER\$\$\$

DATE: \$\$\$DATE\$\$\$

FILE NAME: \$\$\$design\file\$specification\$\$\$

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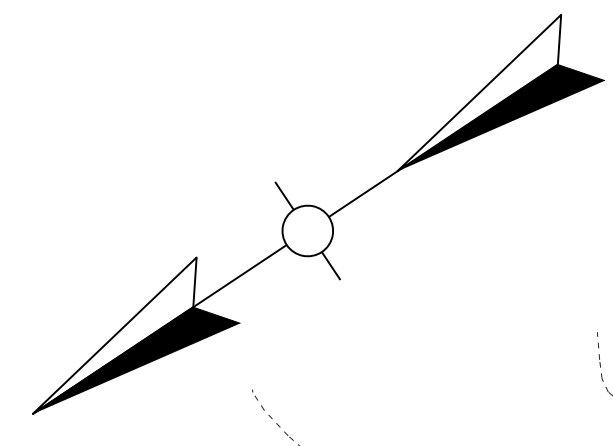
EROSION CONTROL LEGEND	
SILT TRAP TYPE A ALTERNATE 1	
SILT TRAP TYPE A ALTERNATE 2	
SILT TRAP TYPE B	
SILT TRAP TYPE C	
SILT FENCE	
TEMPORARY SILT DITCH	
DISTURBED DRAINAGE AREA	
OVERLAND SHEET FLOW	
PROPOSED R/W	
PROPOSED EASEMENT	

125+00

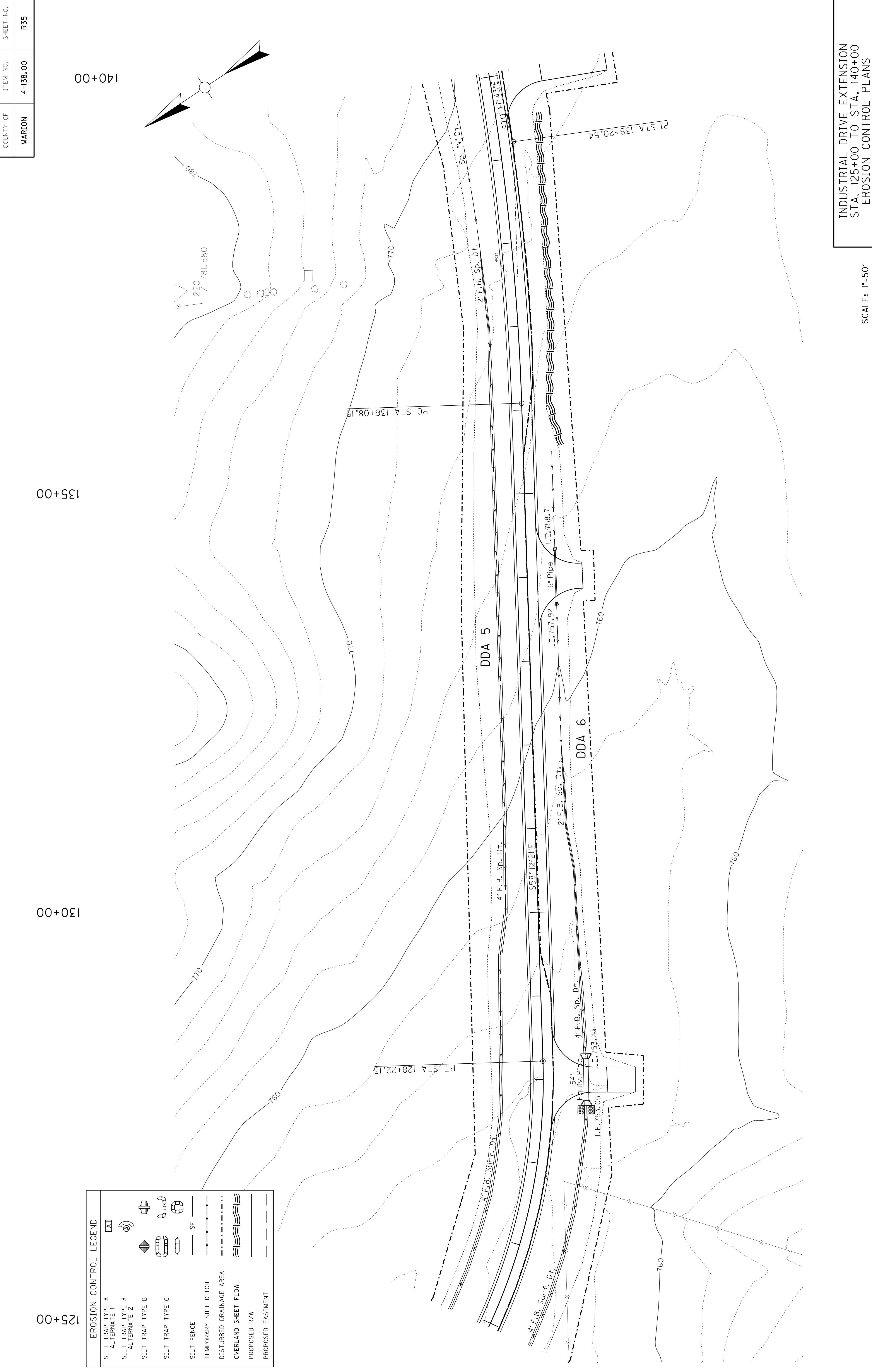
130+00

135+00

140+00



COUNTY OF	ITEM NO.	SHEET NO.
MARION	4-138.00	R35



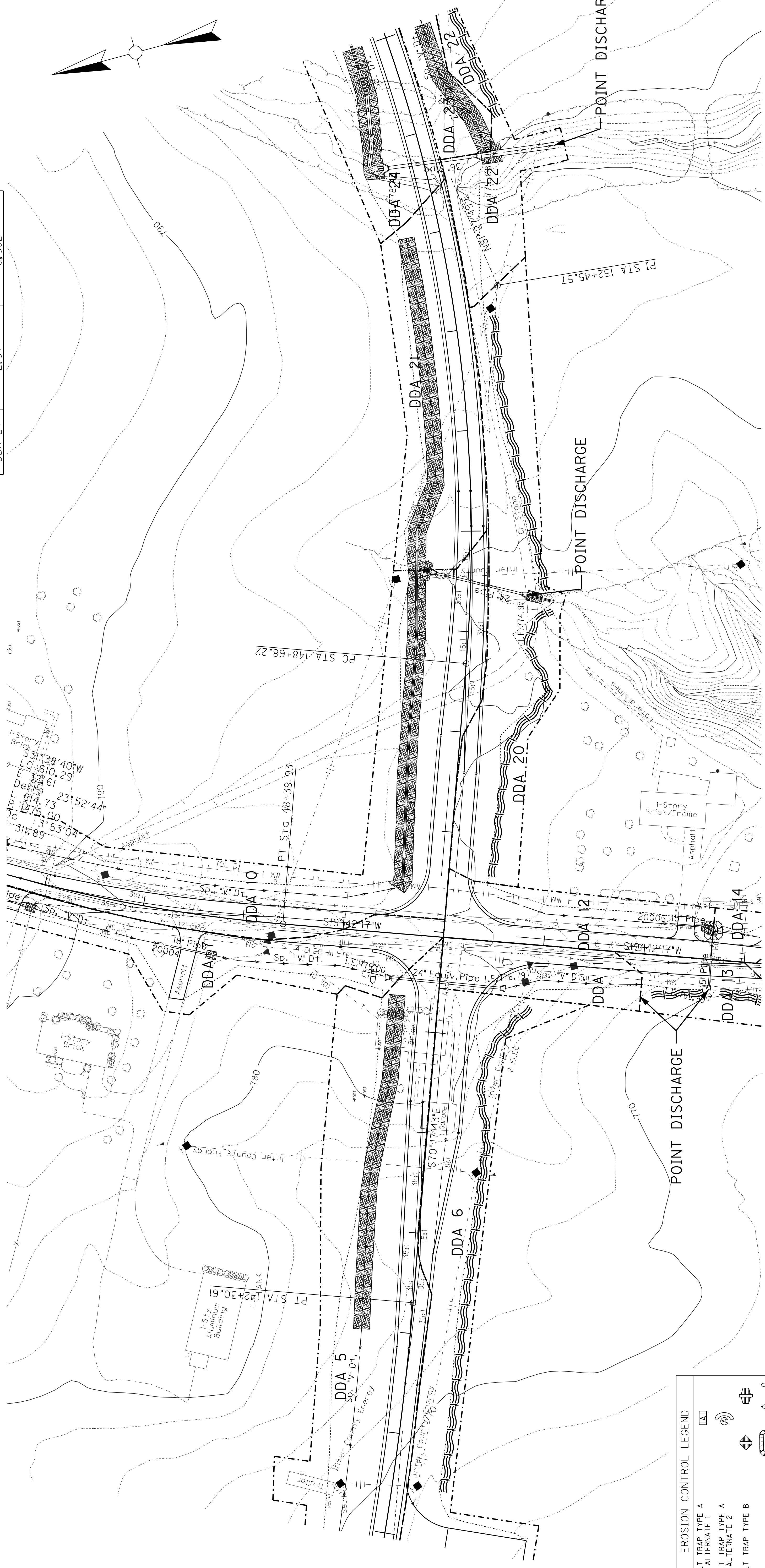
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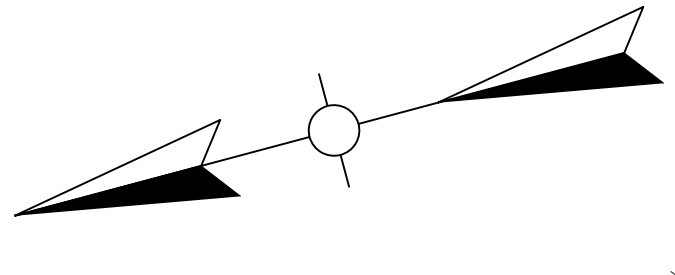
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EROSION CONTROL LEGEND	
SILT TRAP TYPE A ALTERNATE 1	
SILT TRAP TYPE A ALTERNATE 2	
SILT TRAP TYPE B	
SILT TRAP TYPE C	
SILT FENCE	
TEMPORARY SILT DITCH	
DISTURBED DRAINAGE AREA	
OVERLAND SHEET FLOW	
PROPOSED R/W	
PROPOSED EASEMENT	



DISTURBED DRAINAGE AREAS		
SECTION	DISTURBED AREA (ACRES)	MAXIMUM SEDIMENT VOLUME (CU. FT.)
DDA 20	0.84	3,024
DDA 21	0.65	2,340
DDA 22	0.34	1,224
DDA 23	1.44	5,184
DDA 24	2.37	8,532

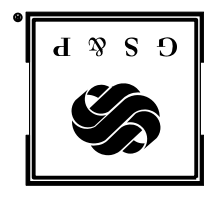


155+00

150+00

145+00

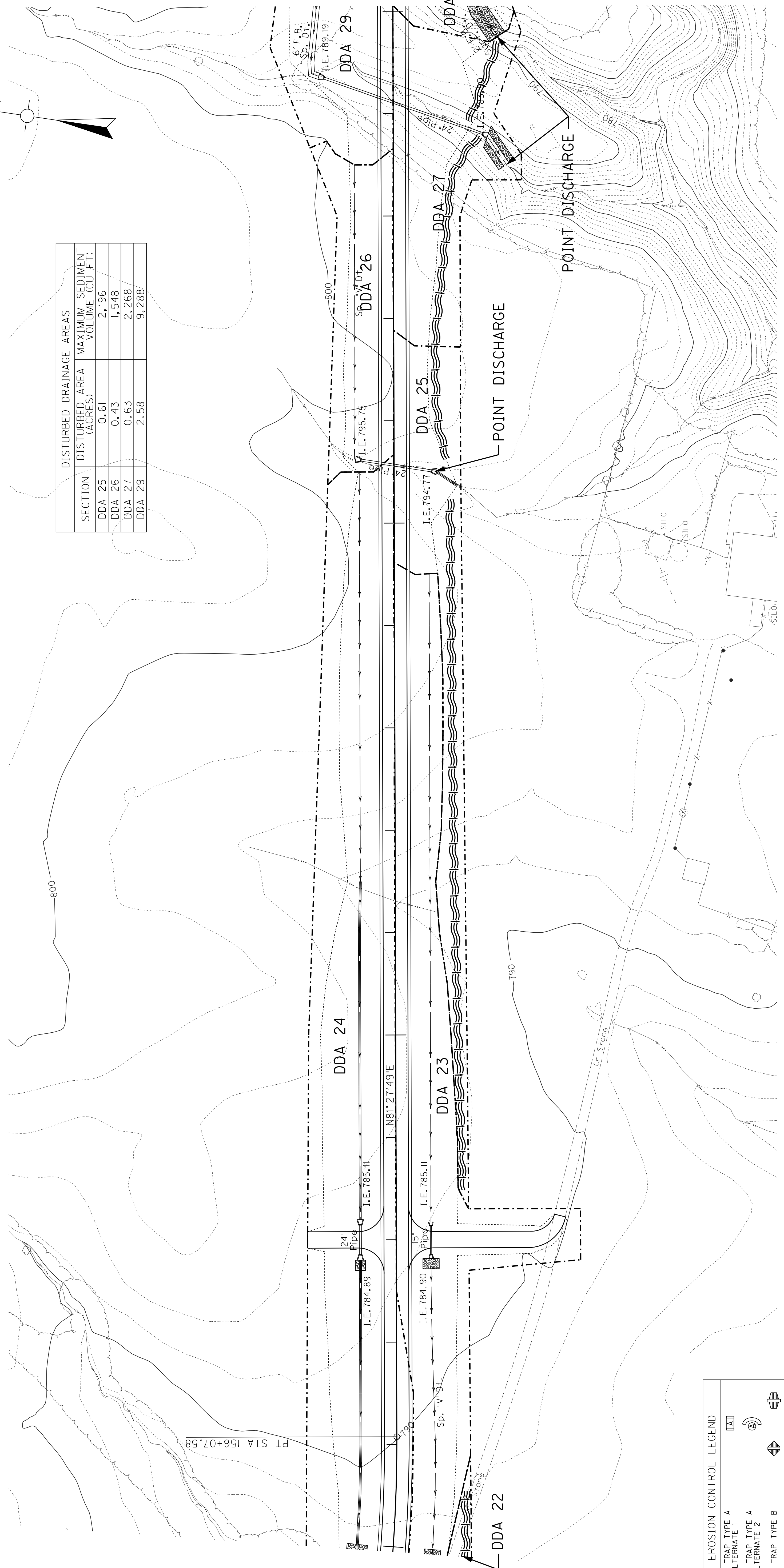
140+00



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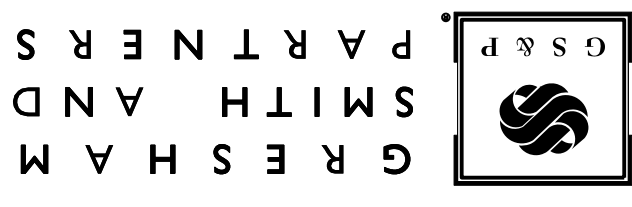
155+00 160+00 165+00 170+00



DISTURBED DRAINAGE AREAS		
SECTION	DISTURBED AREA (ACRES)	MAXIMUM SEDIMENT VOLUME (CU. FT.)
DDA 25	0.61	2,196
DDA 26	0.43	1,548
DDA 27	0.63	2,268
DDA 29	2.58	9,288

EROSION CONTROL LEGEND	
SILT TRAP TYPE A ALTERNATE 1	
SILT TRAP TYPE A ALTERNATE 2	
SILT TRAP TYPE B	
SILT TRAP TYPE C	
SILT FENCE	
TEMPORARY SILT DITCH	
DISTURBED DRAINAGE AREA	
OVERLAND SHEET FLOW	
PROPOSED R/W	
PROPOSED EASEMENT	

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EROSION CONTROL LEGEND

SILT TRAP TYPE A ALTERNATE 1	
SILT TRAP TYPE A ALTERNATE 2	
SILT TRAP TYPE B	
SILT TRAP TYPE C	
SILT FENCE	
TEMPORARY SILT DITCH	
DISTURBED DRAINAGE AREA	
OVERLAND SHEET FLOW	
PROPOSED R/W	
PROPOSED EASEMENT	

DISTURBED DRAINAGE AREAS

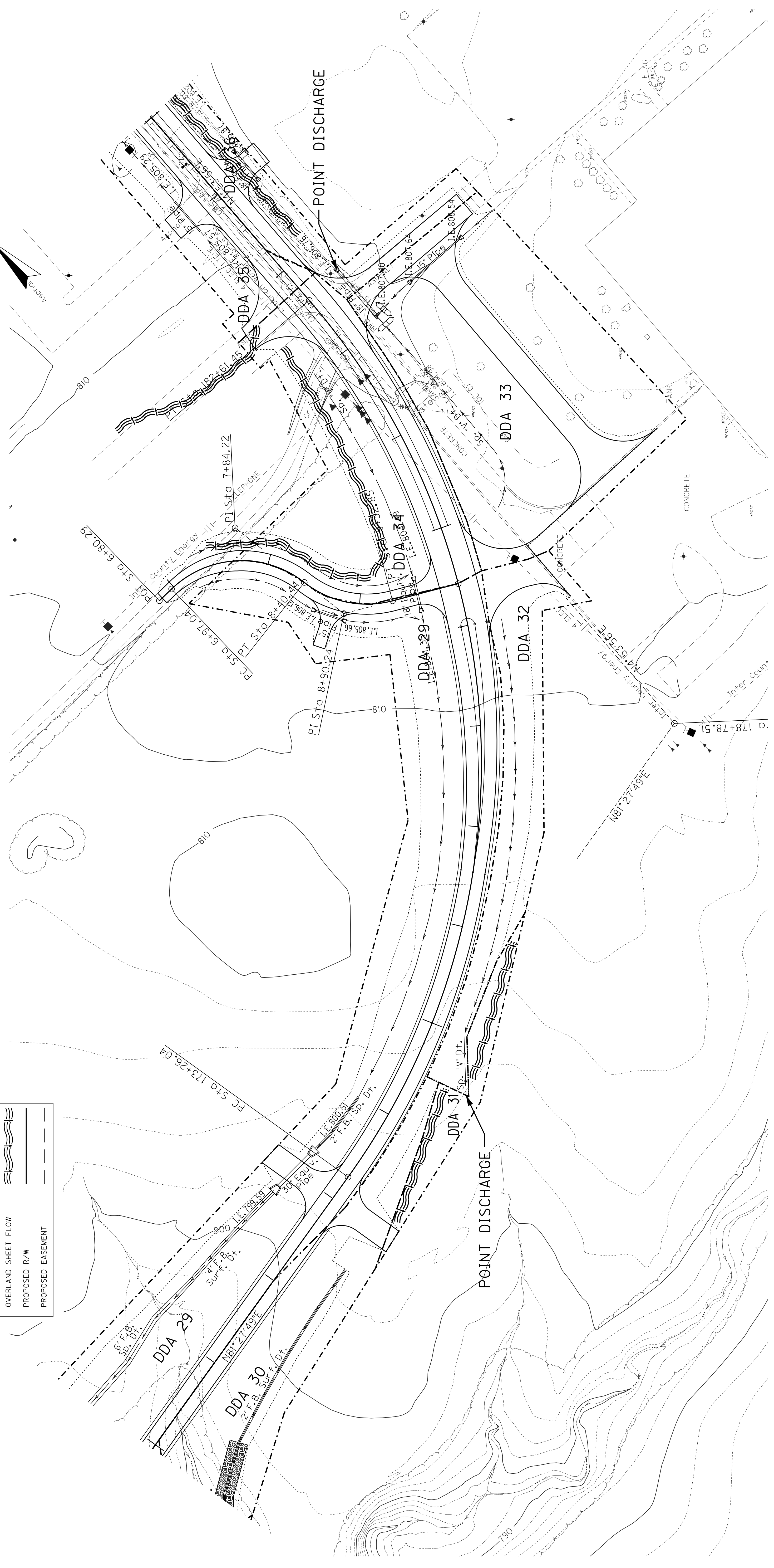
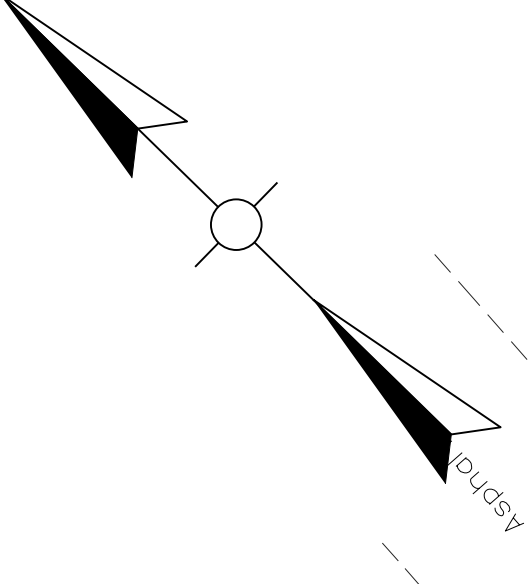
SECTION	DISTURBED AREA (ACRES)	MAXIMUM SEDIMENT VOLUME (CU FT)
DDA 30	0.73	2,628
DDA 31	0.17	612
DDA 32	0.51	1,836
DDA 33	1.45	5,220
DDA 34	0.98	3,528
DDA 35	1.67	6,012
DDA 36	1.15	4,140

175+00

180+00

170+00

185+00



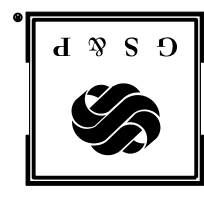
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DATE: \$\$\$DATE\$\$\$

FILE NAME: \$\$\$design\file\specification\$\$\$

E-SHEET NAME:

GRESHAM SMITH AND PARTNERS



PREPARED BY GRESHAM SMITH AND PARTNERS DATE 09-DEC-2008
CHECKED BY DATE
APPROVED BY DATE

EROSION CONTROL LEGEND

SILT TRAP TYPE A	
ALTERNATE 1	
SILT TRAP TYPE B	
ALTERNATE 2	
SILT TRAP TYPE C	
SILT TRAP TYPE D	
SILT FENCE	
TEMPORARY SILT DITCH	
DISTURBED DRAINAGE AREA	
OVERLAND SHEET FLOW	
PROPOSED R/W	
PROPOSED EASEMENT	

DISTURBED DRAINAGE AREAS

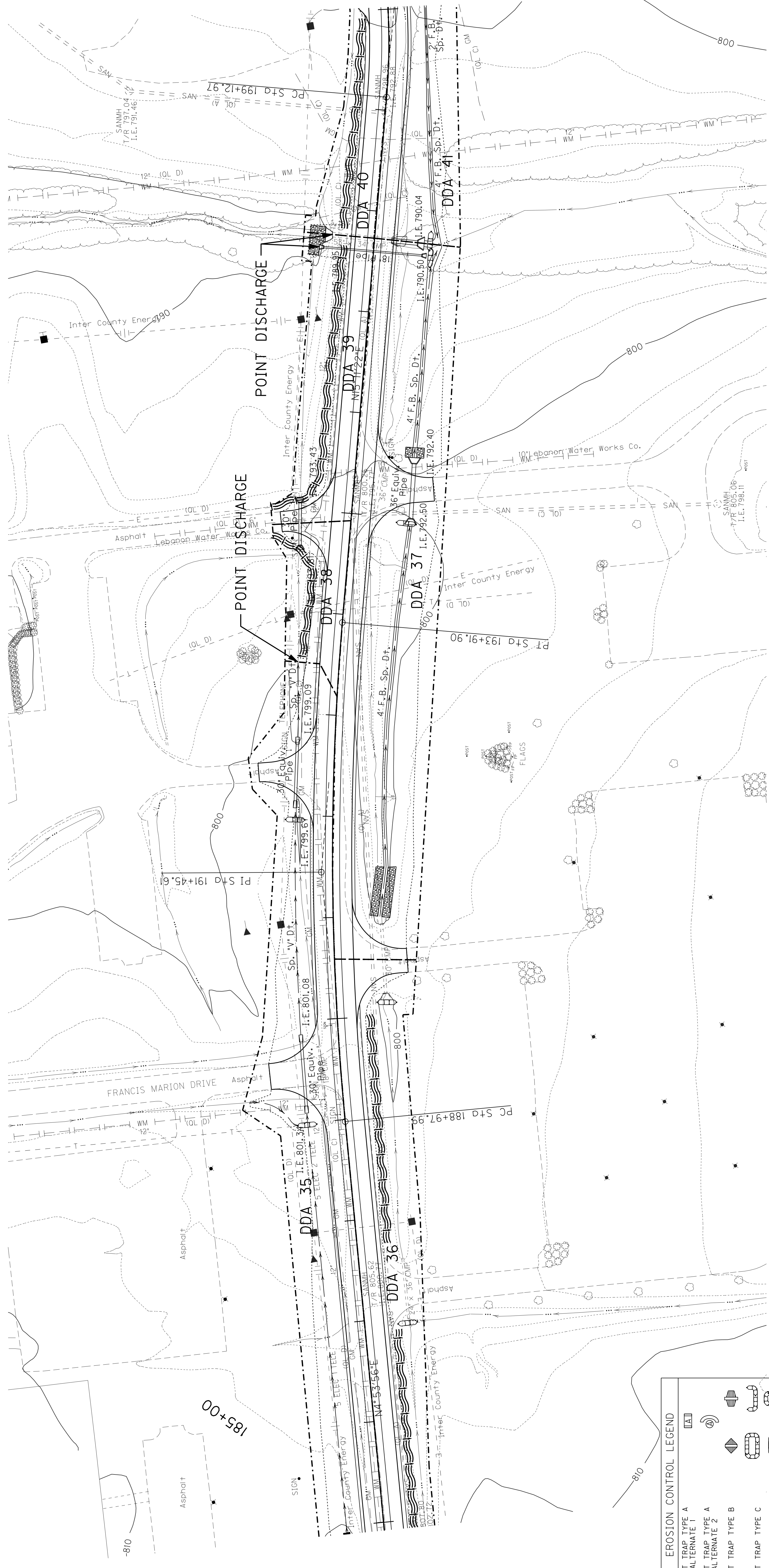
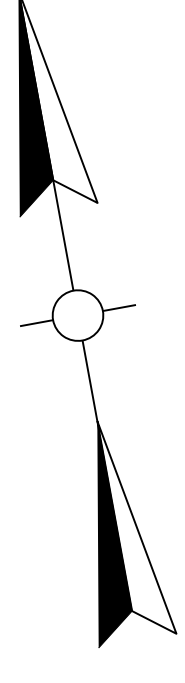
SECTION	DISTURBED AREA (ACRES)	MAXIMUM SEDIMENT VOLUME (CU FT)
DDA 37	1.46	5,256
DDA 38	0.20	720
DDA 39	0.41	1,476
DDA 40	0.43	1,548
DDA 41	1.60	5,760

185+00

190+00

195+00

200+00

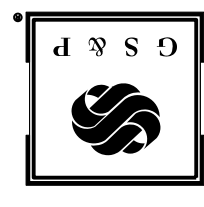


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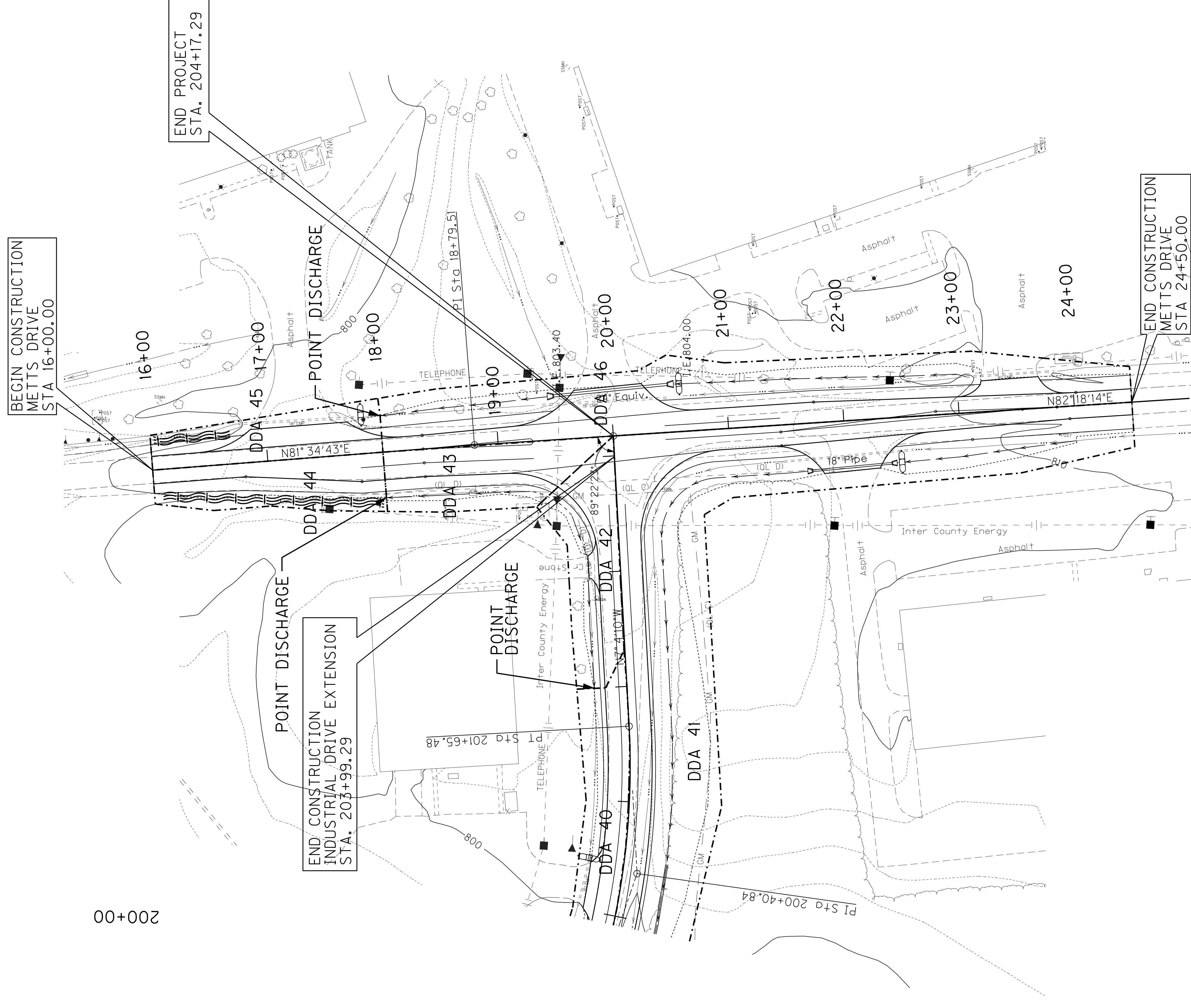
E-SHEET NAME:



GRESHAM SMITH AND PARTNERS

PREPARED BY GRESHAM SMITH AND PARTNERS DATE 09-DEC-2008
CHECKED BY DATE
APPROVED BY DATE

200+00



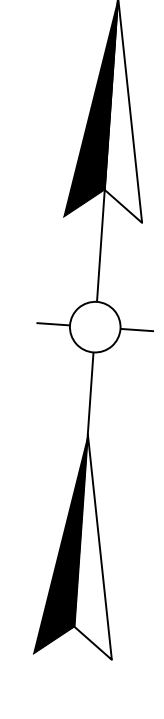
BEGIN CONSTRUCTION
METTS DRIVE
STA. 16+00.00

END PROJECT
STA. 204+17.29

END CONSTRUCTION
INDUSTRIAL DRIVE EXTENSION
STA. 203+99.29

END CONSTRUCTION
METTS DRIVE
STA. 24+50.00

COUNTY OF	ITEM NO.	SHEET NO.
MARION	4-138.00	R40

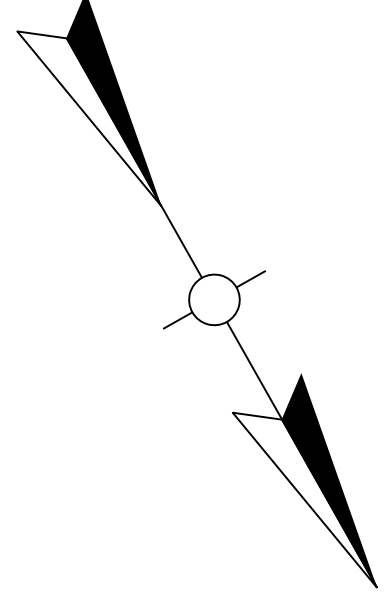


DISTURBED DRAINAGE AREAS		
SECTION	DISTURBED AREA (ACRES)	MAXIMUM SEDIMENT VOLUME (CU FT)
DDA 42	0.21	756
DDA 43	0.21	756
DDA 44	0.19	684
DDA 45	0.18	648
DDA 46	0.78	2,808

EROSION CONTROL LEGEND	
SILT TRAP TYPE A ALTERNATE 1	
SILT TRAP TYPE A ALTERNATE 2	
SILT TRAP TYPE B	
SILT TRAP TYPE C	
SILT FENCE	
TEMPORARY SILT DITCH	
DISTURBED DRAINAGE AREA	
OVERLAND SHEET FLOW	
PROPOSED R/W	
PROPOSED EASEMENT	

SCALE: 1"=50'

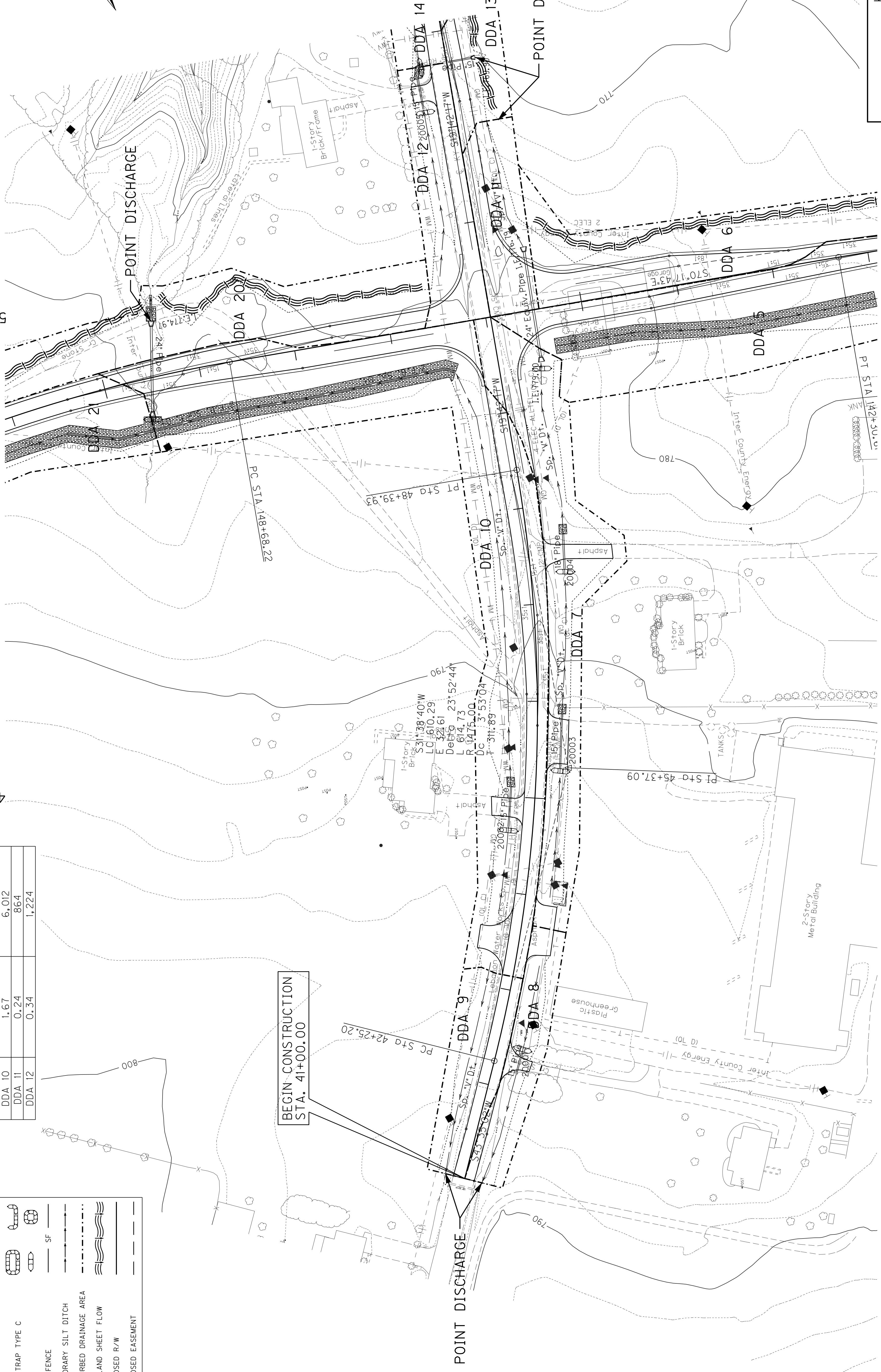
INDUSTRIAL DRIVE EXTENSION STA. 200+00 TO STA. 204+17.29 & METTS DRIVE STA 16+00 TO STA 24+50 EROSION CONTROL PLANS



DISTURBED DRAINAGE AREAS		
SECTION	DISTURBED AREA (ACRES)	MAXIMUM SEDIMENT VOLUME (CU FT)
DDA 7	0.68	2,448
DDA 8	0.23	828
DDA 9	0.27	972
DDA 10	1.67	6,012
DDA 11	0.24	864
DDA 12	0.34	1,224

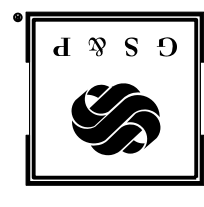
EROSION CONTROL LEGEND	
SILT TRAP TYPE A ALTERNATE 1	
SILT TRAP TYPE A ALTERNATE 2	
SILT TRAP TYPE B	
SILT TRAP TYPE C	
SILT FENCE	
TEMPORARY SILT DITCH	
DISTURBED DRAINAGE AREA	
OVERLAND SHEET FLOW	
PROPOSED R/W	
PROPOSED EASEMENT	

BEGIN CONSTRUCTION STA. 41+00.00



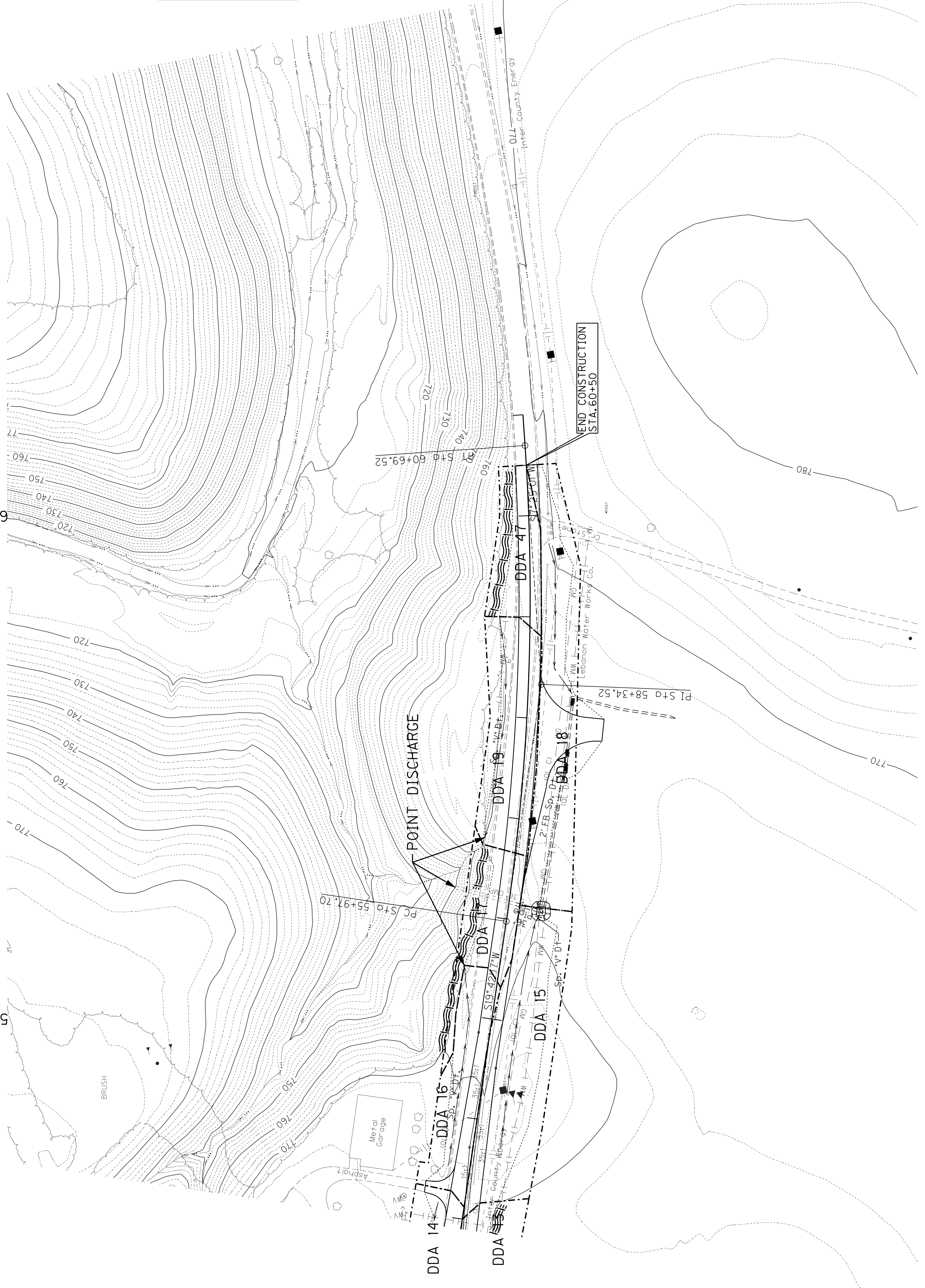
45+00

50+00



GRESHAM SMITH AND PARTNERS

PREPARED BY GRESHAM SMITH AND PARTNERS DATE 09-DEC-2008
 CHECKED BY _____ DATE _____
 APPROVED BY _____ DATE _____

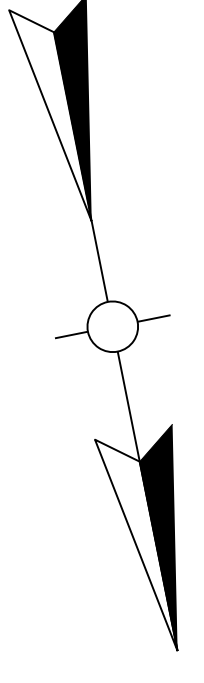


EROSION CONTROL LEGEND

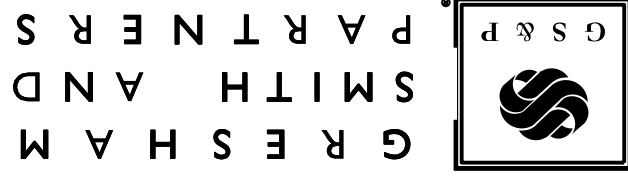
SILT TRAP TYPE A	[Symbol]
ALTERNATE 1	[Symbol]
SILT TRAP TYPE A ALTERNATE 2	[Symbol]
SILT TRAP TYPE B	[Symbol]
SILT TRAP TYPE C	[Symbol]
SILT FENCE	[Symbol]
TEMPORARY SILT DITCH	[Symbol]
DISTURBED DRAINAGE AREA	[Symbol]
OVERLAND SHEET FLOW	[Symbol]
PROPOSED R/W	[Symbol]
PROPOSED EASEMENT	[Symbol]

DISTURBED DRAINAGE AREAS

SECTION	DISTURBED AREA (ACRES)	MAXIMUM SEDIMENT VOLUME (CU FT)
DDA 13	0.17	612
DDA 14	0.07	252
DDA 15	0.42	1,512
DDA 16	0.20	720
DDA 17	0.17	612
DDA 18	0.39	1,404
DDA 19	0.27	972
DDA 47	0.15	540



PREPARED BY GRESHAM SMITH AND PARTNERS DATE 09-DEC-2008
 CHECKED BY _____ DATE _____
 APPROVED BY _____ DATE _____



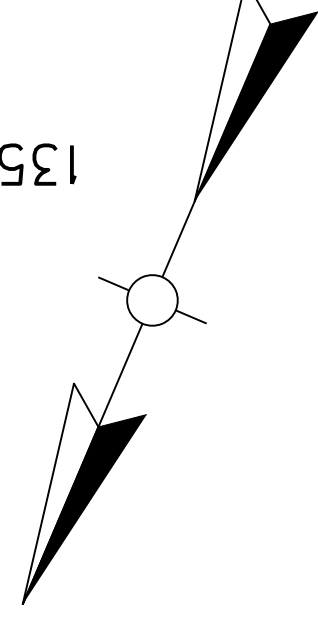
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F-SHEET NAME:

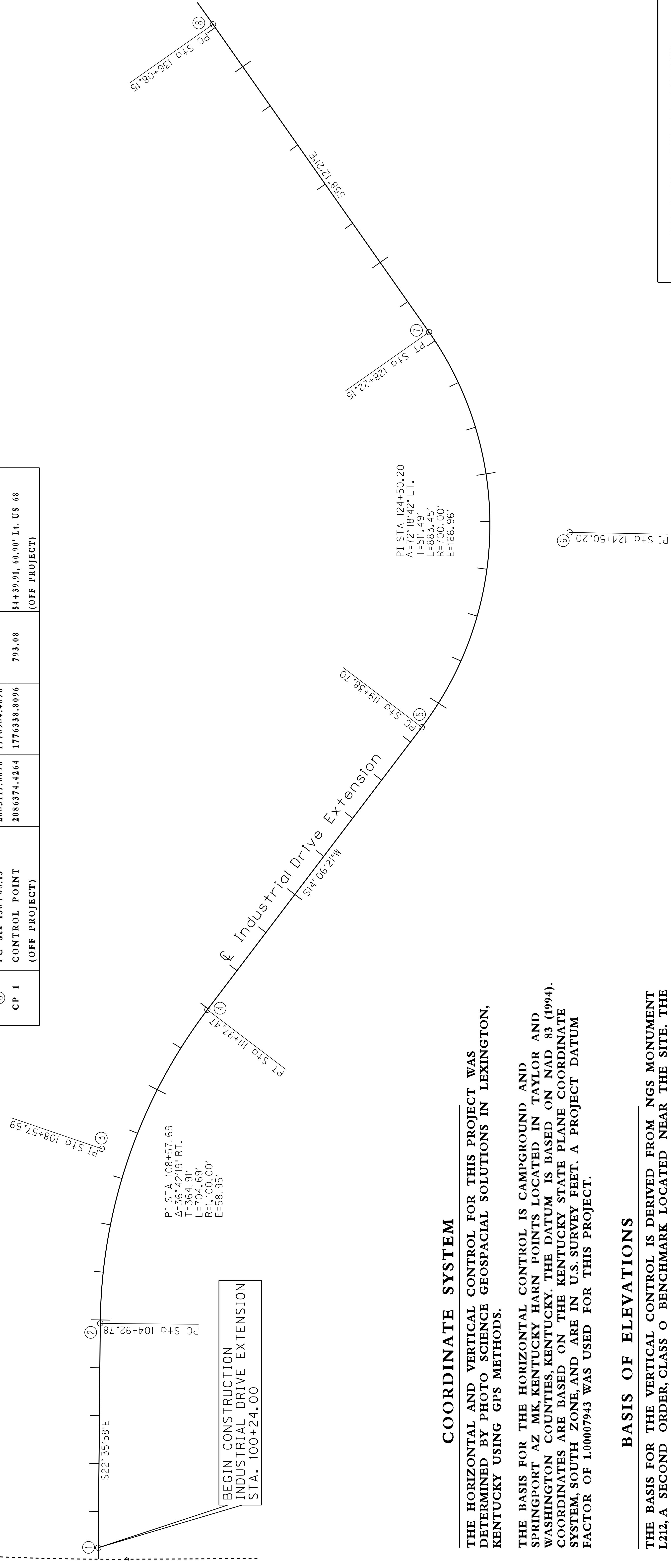
POINT	DESCRIPTION	Project Coordinates			STATION and OFFSET
		NORTH (Y)	EAST (X)	ELEV. (Z)	
①	BEGIN CONSTRUCTION	2086139.8177	1775955.5538		
②	PC Sta 104+92.78	2085707.0298	1776135.7000		
③	PI Sta 108+57.69	2085370.1393	1776275.9294		
④	PT Sta 111+97.47	2085016.2320	1776186.9958		
⑤	PC Sta 119+38.70	2084297.3512	1776006.3477		
⑥	PI Sta 124+50.20	2083801.2809	1775881.6899		
⑦	PT Sta 128+22.15	2083531.7900	1776316.4310		
⑧	PC Sta 136+08.15	2083117.6696	1776984.4876		
CP 1	CONTROL POINT (OFF PROJECT)	2086374.4264	1776338.8096	793.08	
				54+39.91, 60.90' Lt. US 68 (OFF PROJECT)	

COORDINATE CONTROL POINTS

100+00 105+00 110+00 115+00 120+00 125+00 130+00 135+00



COUNTY OF MARION
 ITEM NO. 4-138.00
 SHEET NO. R43



COORDINATE SYSTEM

THE HORIZONTAL AND VERTICAL CONTROL FOR THIS PROJECT WAS DETERMINED BY PHOTO SCIENCE GEOSPACIAL SOLUTIONS IN LEXINGTON, KENTUCKY USING GPS METHODS.

THE BASIS FOR THE HORIZONTAL CONTROL IS CAMPGROUND AND SPRINGPORT AZ MK, KENTUCKY HARN POINTS LOCATED IN TAYLOR AND WASHINGTON COUNTIES, KENTUCKY. THE DATUM IS BASED ON NAD 83 (1994). COORDINATES ARE BASED ON THE KENTUCKY STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, AND ARE IN U.S. SURVEY FEET. A PROJECT DATUM FACTOR OF 1.00007943 WAS USED FOR THIS PROJECT.

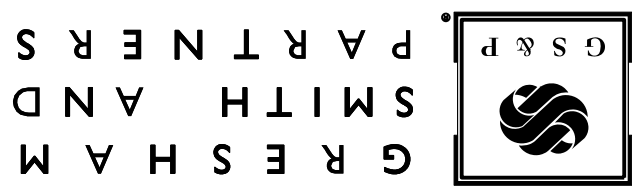
BASIS OF ELEVATIONS

THE BASIS FOR THE VERTICAL CONTROL IS DERIVED FROM NGS MONUMENT L212, A SECOND ORDER, CLASS 0 BENCHMARK LOCATED NEAR THE SITE. THE VERTICAL DATUM IS NAVD88.

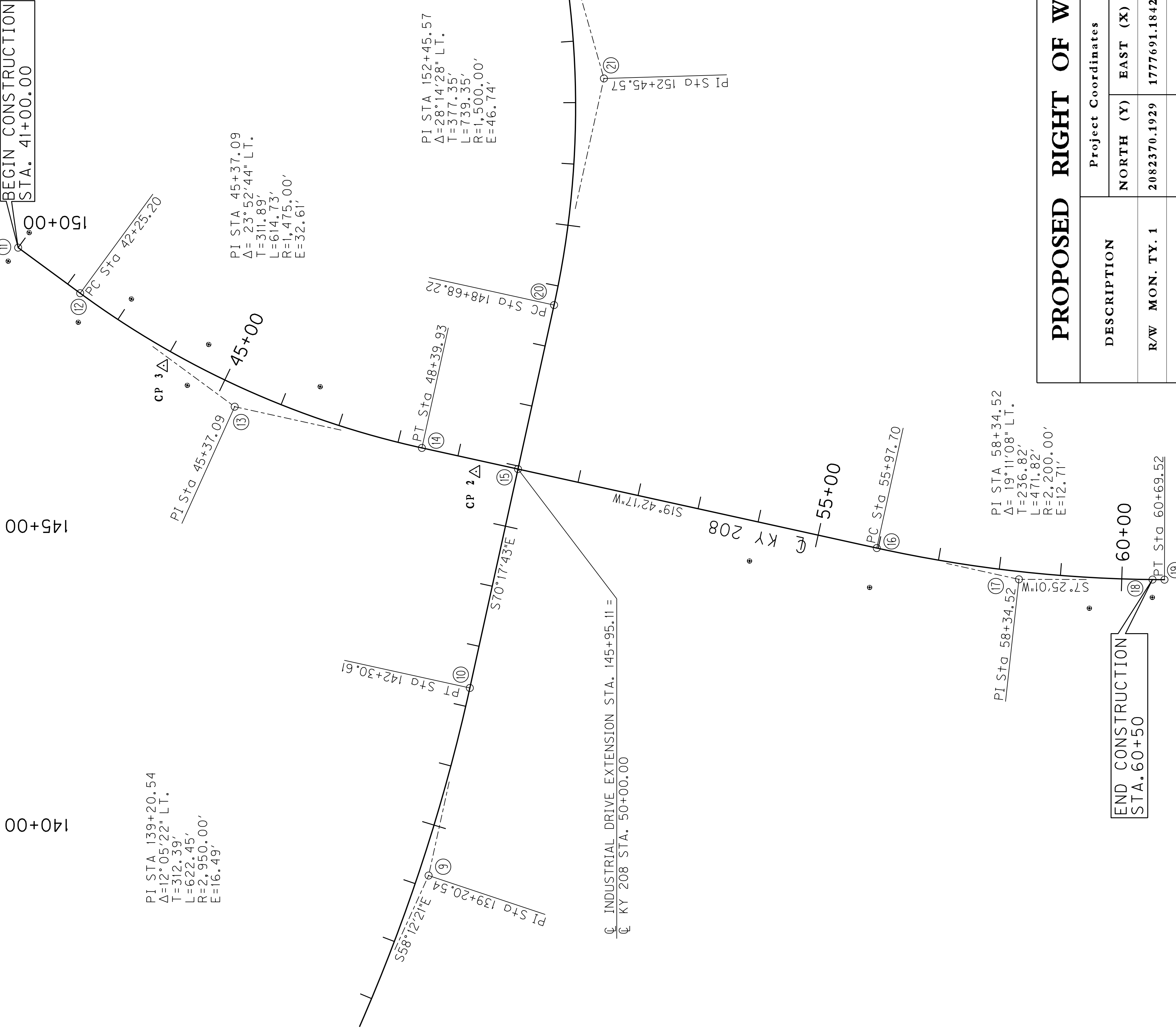
Scale: 1"=100'

INDUSTRIAL DRIVE EXTENSION
COORDINATE CONTROL SHEET

PREPARED BY GRESHAM SMITH AND PARTNERS DATE 09-DEC-2008
 CHECKED BY _____ DATE _____
 APPROVED BY _____ DATE _____



USER: \$\$\$USER\$\$\$
 DATE: \$\$\$DATE\$\$\$
 FILE NAME: \$\$\$design\file\$specification\$\$\$
 E-SHEET NAME:



PROPOSED RIGHT OF WAY POINTS

DESCRIPTION	Project Coordinates		KY 208 STATION & OFFSET
	NORTH (Y)	EAST (X)	
R/W MON. TY. 1	2083464.7646	1778369.8158	41+00.00, 30.50' LT
R/W MON. TY. 1	2083504.5499	1778328.0135	41+00.00, 27.21' RT
R/W MON. TY. 1	2083404.0818	1778215.0254	42+50.00, 40.00' RT
R/W MON. TY. 1	2083313.5644	1778241.5680	43+00.00, 40.00' LT
R/W MON. TY. 1	2083198.2502	1778152.2344	44+50.00, 40.00' LT.
R/W MON. TY. 1	2083241.1091	1778090.6867	44+50.00, 35.00' RT.
R/W MON. TY. 1	2083026.9832	1778061.0963	46+50.00, 50.00' LT

COORDINATE CONTROL POINTS

POINT	DESCRIPTION	Project Coordinates			STATION and OFFSET
		NORTH (Y)	EAST (X)	ELEV. (Z)	
⑨	PI Sta 139+20.54	2082953.0828	1777249.9980		
⑩	PT Sta 142+30.61	2082847.7543	1777544.0906		
⑪	BEGIN CONSTRUCTION	2083485.7942	1778347.7200	41+00 KY 208	
⑫	PC Sta 42+25.20	2083395.1044	1778261.4062		
⑬	PI Sta 45+37.09	2083169.1796	1778046.3823		
⑭	PT Sta 48+39.93	2082875.5503	1777941.2197		
⑮	INTERSECTION	2082724.8533	1777887.2480	IDE 145+95.11=KY 208 50+00	
⑯	PC Sta 55+97.70	2082162.1527	1777685.7181		
⑰	PI Sta 58+34.52	2081939.2030	1777605.8693		
⑱	END CONSTRUCTION	2081723.7111	1777577.9038	60+50 KY 208	
⑲	PT Sta 60+69.52	2081704.3672	1777575.2983		
⑳	PC Sta 148+68.22	2082632.7656	1778144.3705		
㉑	PI Sta 152+45.57	2082505.5334	1778499.6213		
㉒	PT Sta 156+07.58	2082561.5457	1778872.7885		
CP 2	CONTROL POINT	2082792.9314	1777891.9544	781.84 49+34.36, 18.52' Rt. KY 208	
CP 3	CONTROL POINT	2083275.1682	1778127.3857	796.10 44+01.89, 25.14' Rt. KY 208	

PROPOSED RIGHT OF WAY POINTS

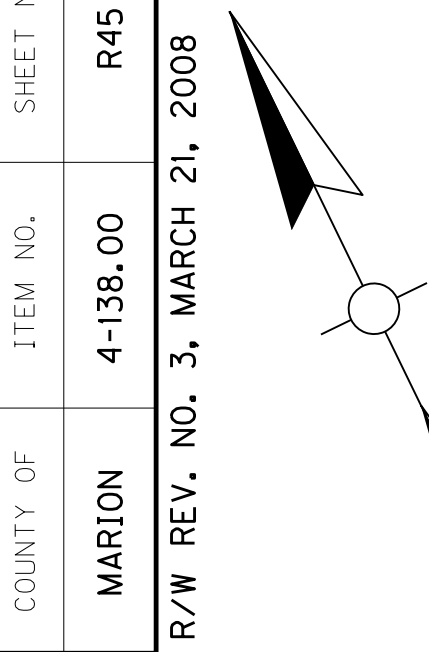
DESCRIPTION	Project Coordinates		STATION & OFFSET
	NORTH (Y)	EAST (X)	
R/W MON. TY. 1	2082370.1929	1777691.1842	54+00.00, 65.00' RT
R/W MON. TY. 1	2082181.8402	1777623.7275	56+00.00, 65.00' RT
R/W MON. TY. 1	2081831.5458	1777544.7801	59+50.00, 50.00' RT
R/W MON. TY. 1	2081727.7003	1777549.2482	60+50.00, 28.93' RT

COUNTY OF MARION
 ITEM NO. 4-138-00
 SHEET NO. R44

155+00
 160+00
 165+00
 170+00

Scale: 1"=100'

INDUSTRIAL DRIVE EXTENSION
COORDINATE CONTROL SHEET



COORDINATE CONTROL POINTS

POINT	DESCRIPTION	Project Coordinates			STATION and OFFSET
		NORTH (Y)	EAST (X)	ELEV. (Z)	
23	PC Sta 173+26.04	2082816.6285	1780572.2108		
24	PI Sta 178+78.51	2082898.6367	1781118.5688		
25	PT Sta 182+61.45	2083449.0969	1781165.7480		
26	PC Sta 188+97.99	2084083.3096	1781220.1055		
27	PI Sta 191+45.61	2084330.0279	1781241.2514		
28	PT Sta 193+91.90	2084569.0000	1781306.1312		
29	PC Sta 199+42.97	2085071.8603	1781442.6552		
30	PI Sta 200+40.84	2085195.2640	1781476.1587		
31	PT Sta 201+65.48	2085322.1627	1781460.4216		
32	BEGIN CONSTRUCTION	2085514.9817	1781033.5311	16+00 Metts Drive	
33	PI Sta 18+79.51	2085555.9166	1781310.0244		
34	INTERSECTION	2085572.0531	1781429.4319	IDE 204+17.29 = METTS 20+00	
35	END CONSTRUCTION	2085632.3174	1781875.3783	24+50 Metts Drive	
36	POB Sta 6+80.29	2083347.9520	1780849.7300		
37	PC Sta 6+97.04	2083347.4234	1780866.4744		
38	PI Sta 7+84.22	2083344.6732	1780953.6014		
39	PRC Sta 8+40.44	2083257.9856	1780962.7652		
40	PI Sta 8+90.24	2083208.4563	1780968.0010		
41	PT Sta 9+32.85	2083182.7941	1781010.6859		
42	INTERSECTION	2083148.1973	1781068.2321	IDE 179+42.39 = COOP ENTR 10+00	
CP 123	CONTROL MONUMENT	2084127.8400	1781249.2800	804.28	
CP 124	CONTROL MONUMENT	2085207.3600	1781472.8500	801.85	
CP 4	CONTROL POINT	2085615.1732	1781480.5561	806.42	

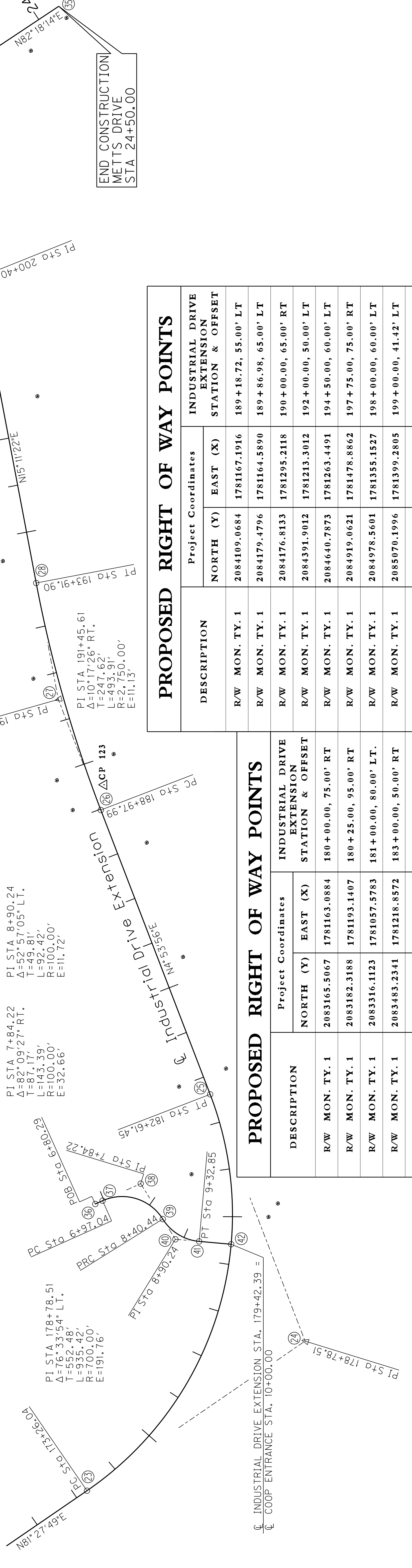
PROPOSED RIGHT OF WAY POINTS

DESCRIPTION	R/W MON. TY. 1	Project Coordinates		METTS DRIVE STATION & OFFSET
		NORTH (Y)	EAST (X)	
R/W MON. TY. 1	2085500.4153	1781136.7776	17+00.00, 29.53' RT	
R/W MON. TY. 1	2085500.3488	1781187.3325	17+50.00, 37.00' RT	
R/W MON. TY. 1	2085571.8768	1781212.1242	17+85.00, 30.13' LT	
R/W MON. TY. 1	2085506.0912	1781287.5723	18+50.00, 46.00' RT	
R/W MON. TY. 1	2085592.1531	1781274.8308	18+50.00, 41.00' LT	
R/W MON. TY. 1	2085516.7717	1781371.3117	19+35.00, 47.00' RT	
R/W MON. TY. 1	2085535.8956	1781535.2271	21+00.00, 50.00' RT	
R/W MON. TY. 1	2085632.0218	1781522.2368	21+00.00, 47.00' LT	
R/W MON. TY. 1	2085656.8507	1781735.8358	23+15.00, 43.00' LT	
R/W MON. TY. 1	2085644.8647	1781737.4556	23+15.00, 30.90' LT	
R/W MON. TY. 1	2085574.3307	1781782.3055	23+50.00, 45.00' RT	
R/W MON. TY. 1	2085603.5203	1781879.2699	24+50.00, 29.06' RT	

BEGIN CONSTRUCTION
METTS DRIVE
STA 16+00.00

END PROJECT
STA. 204+17.29

END CONSTRUCTION
METTS DRIVE
STA 24+50.00



PROPOSED RIGHT OF WAY POINTS

DESCRIPTION	R/W MON. TY. 1	Project Coordinates		INDUSTRIAL DRIVE EXTENSION STATION & OFFSET
		NORTH (Y)	EAST (X)	
R/W MON. TY. 1	2084109.0684	1781167.1916	189+18.72, 55.00' LT	
R/W MON. TY. 1	2084179.4796	1781164.5890	189+86.98, 65.00' LT	
R/W MON. TY. 1	2084176.8133	1781295.2118	190+00.00, 65.00' RT	
R/W MON. TY. 1	2084391.9012	1781213.3012	192+00.00, 50.00' LT	
R/W MON. TY. 1	2084640.7873	1781263.4491	194+50.00, 60.00' LT	
R/W MON. TY. 1	2084919.0621	1781478.8862	197+75.00, 75.00' RT	
R/W MON. TY. 1	2084978.5601	1781355.1527	198+00.00, 60.00' LT	
R/W MON. TY. 1	2085070.1996	1781399.2805	199+00.00, 41.42' LT	
R/W MON. TY. 1	2085258.4649	1781535.1784	201+00.00, 70.00' RT	
R/W MON. TY. 1	2085476.5292	1781409.0473	203+25.00, 31.99' LT	
R/W MON. TY. 1	2085513.2752	1781502.2190	203+50.00, 65.00' RT	

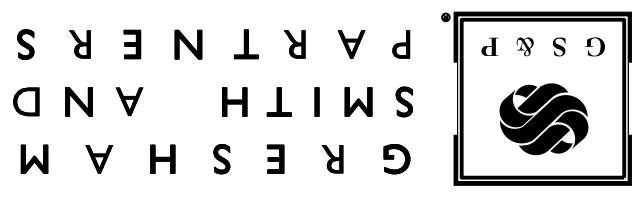
PROPOSED RIGHT OF WAY POINTS

DESCRIPTION	R/W MON. TY. 1	Project Coordinates		INDUSTRIAL DRIVE EXTENSION STATION & OFFSET
		NORTH (Y)	EAST (X)	
R/W MON. TY. 1	2083165.5067	1781163.0884	180+00.00, 75.00' RT	
R/W MON. TY. 1	2083182.3188	1781193.1407	180+25.00, 95.00' RT	
R/W MON. TY. 1	2083316.1123	1781057.5783	181+00.00, 80.00' LT	
R/W MON. TY. 1	2083483.2341	1781218.8572	183+00.00, 50.00' RT	
R/W MON. TY. 1	2083492.2006	1781114.2407	183+00.00, 55.00' LT	
R/W MON. TY. 1	2083732.3209	1781240.2061	185+50.00, 50.00' RT	
R/W MON. TY. 1	2083980.1267	1781276.5002	188+00.00, 65.00' RT	

Scale: 1"=100'

INDUSTRIAL DRIVE EXTENSION
COORDINATE CONTROL SHEET

PREPARED BY GRESHAM SMITH AND PARTNERS DATE 09-DEC-2008
 CHECKED BY _____ DATE _____
 APPROVED BY _____ DATE _____



GEOTECHNICAL SYMBOLS

AASHTO Classification of Soils and Soil-Aggregate Mixtures

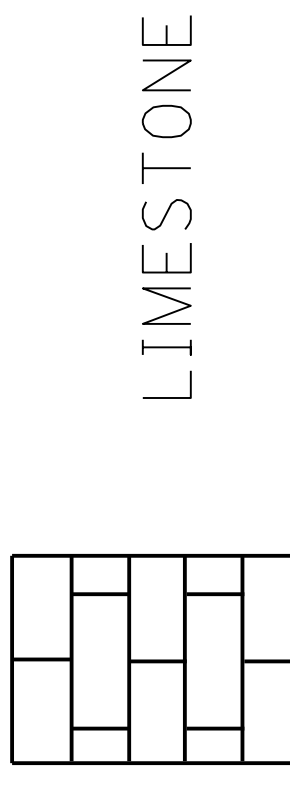
General Classification	Granular Materials (35% or less passing 0.075 mm)				Silt-Clay Materials (More than 35% passing 0.075 mm)				
	A-1		A-2		A-3	A-4	A-5	A-6	A-7
Group Classification	A-1-a	A-1-b	A-2-4	A-2-5	A-2-6	A-2-7			
Sieve Analysis, Percent Passing	50 max	50 max	---	---	---	---	---	---	---
	30 max	25 max	---	---	---	---	---	---	---
	15 max	10 max	35 max	35 max	35 max	35 max	36 min	36 min	36 min
Characteristics of Fraction Passing 0.425 mm (No. 40)	Liquid Limit	---	40 max	41 min	40 max	41 min	40 max	40 max	41 min
	Plasticity Index	6 max	10 max	10 max	11 min	11 min	10 max	11 min	11 min

Unified Soil Classifications

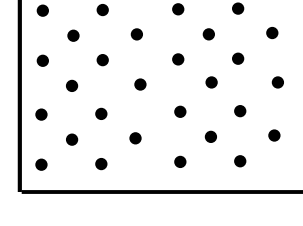
MAJOR DIVISIONS	SYMBOL		NAME
GRAVEL AND GRAVELLY SOILS	GW		Well-graded gravels or gravel-sand mixtures, little or no fines.
			Poorly graded gravels or gravel-sand mixtures, little or no fines.
	GM		Silty gravels, gravel-sand-silt mixtures.
			Clayey gravels, gravel-sand-clay mixtures.
SAND AND SANDY SOILS	SW		Well graded sands or gravelly sands, little or no fines.
			Poorly graded sands or gravelly sands, little or no fines.
	SM		Silty sands, sand-silt mixtures.
SILTS AND CLAYS LESS THAN 50	ML		Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity.
			Inorganic clays of low to medium plasticity, gravelly clays, sandy clays silty clays, lean clays.
SILTS AND CLAYS GREATER THAN 50	MH		Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts.
			Inorganic clays of high plasticity, fat clays.
UNCLASSIFIED MATERIAL	NONE		Non-classified material (i.e. overburden, pavement, slag, etc.) Include visual description.

- AI Activity Index
- LI Liquidity Index
- S+C Silt + Clay (% finer than No.200 Sieve)
- Rockline Soundings
- Disturbed Sample Boring
- Undisturbed Sample Boring
- Undisturbed Sample Boring & Rock Core
- Slope inclinometer Installation
- typical applications:
- OW Observation Well

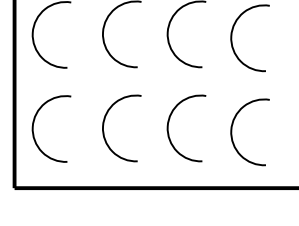
- Approximate Footing Elevation
- Water Elevation
- Field Vane Shear Strength
- Thin-walled Tube Sample
- Standard Penetration Test Sample
- Penetration Resistance
- Unconfined Compressive Strength
- Unconsolidated Undrained Triaxial Strength
- Moisture Content
- Rock Quality Designation (Kentucky Method)
- Rock Quality Designation (Standard Method)
- Slake Durability Index (Jar Slake Test)
- Core Recovery
- ϕ Angle of Internal Friction (Total Stress)
- $\bar{\phi}$ Angle of Internal Friction (Effective Stress)
- c (psf) Cohesion (Total Stress)
- \bar{c} (psf) Cohesion (Effective Stress)
- δ (pcf) Total Unit Weight
- RDZ Rock Disintegration Zone
- OB Overburden Bench
- IB Intermediate Bench
- R Refusal
- NR Refusal Not Encountered



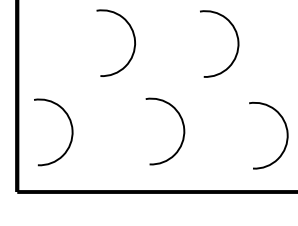
LIMESTONE



SANDSTONE



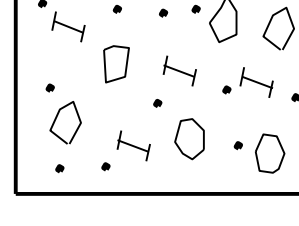
DURABLE SHALE
(SDI \geq 95)



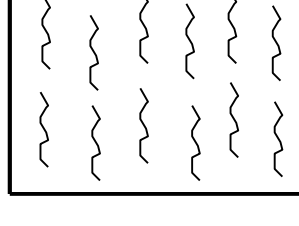
NONDURABLE SHALE
(SDI $<$ 95)



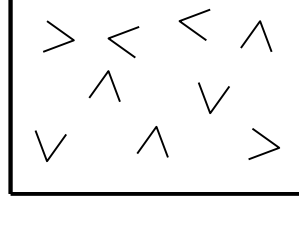
COAL



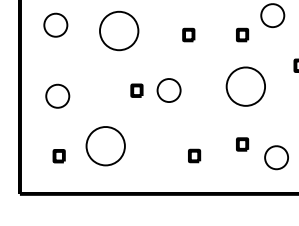
TALUS,
MINE WASTE,
FILL MATERIAL,
BOULDERS, & ETC.



GRANULAR
EMBANKMENT



STRUCTURE
GRANULAR
BACKFILL



SLOPE PROTECTION

PREPARED BY _____ DATE _____
 CHECKED BY _____ DATE _____
 APPROVED BY _____ DATE _____

GEOTECHNICAL NOTES

1). In accordance with Section 206 of the current Standard Specifications, the moisture content of embankment material shall not vary from the optimum moisture content as determined by KM 64-511 by more than +2 percent or less than -2 percent. This moisture content requirement shall have equal weight with the density requirement when determining the acceptability of embankment construction. Refer to the Family of Curves for moisture/density correlation.

2). All soils, whether from roadway or borrow, may require manipulation to obtain proper moisture content prior to compaction. Direct payment shall not be permitted for rehandling, hauling, stockpiling, and/or manipulating soils.

3). Excavation of surface ditches and channel changes adjacent to embankment areas shall be performed prior to the placement of the adjacent embankments. The material excavated for the channel changes and surface ditches is suitable for embankment construction if dried to proper moisture content in accordance with Section 206 of the current Standard Specifications.

4). The contractor is responsible for conducting any operations necessary to excavate the cut areas to the required typical section. These operations shall be incidental to the unit bid price for roadway excavation or embankment-in-place.

5). The contractor shall conduct grading operations in such a manner that soil, free of shale or rock fragments from roadway excavation, be stockpiled separately or otherwise manipulated so that ample quantities are available for a chemically stabilized roadbed meeting the specifications in Section 208 of the current Standard Specifications for Road and Bridge Construction. No direct payment will be allowed for such necessary manipulating as stockpiling, hauling and/or handling the material.

6). Borrow material, if required for subgrade, shall meet the minimum CBR value of 3.0.

7). Shale (above or below the RDZ, durable or nondurable) cannot be used in the subgrade.

8). Perforated pipe for subgrade drainage shall be placed in vertical sags in accordance with RDP-005 at the following approximate locations and/or where designated by the Engineer.

Mainline
Station 118+50
Station 198+00

9). The contractor shall construct foundation embankment benches and transverse benches as indicated on the plans and/or as directed by the Engineer, prior to placement of embankments in areas requiring such benches.

10). Some of the soil horizons and slopes on the project are subject to erosion. Necessary procedures in accordance with Sections 212 and 213 of the current Standard Specifications shall be followed on construction.

11). Transverse benching and/or perforated pipe underdrains shall be installed at the following approximate locations and any others designated by the Engineer. Contrary to Standard Drawing RDP-006, transverse benches and perforated pipe underdrains shall be placed on both the upgrade and downgrade cut to fill transitions.

Mainline
Station 112+00
Station 154+80
Station 174+00

12). Foundation embankment benches shall be placed in accordance with Standard Drawing RGX-010 at the locations listed below and/or as directed by the Engineer.

Mainline
Stations 169+25 to 169+75

13). Where shale bedrock is encountered at the roadbed grade in the cuts above the RDZ, the roadbed shall be undercut 1 foot below the proposed grade and the limits of the roadbed shall extend the roadway excavation to the ditch lines. The refill shall be constructed with soil for a chemically stabilized roadbed as specified in Section 204 of the Standard Specifications for Road and Bridge Construction, current edition. Shale cannot be used in the subgrade. The excavation and replacement of this material is incidental to the unit bid price for roadway excavation or embankment-in-place.

14). In areas in which chemical modification is deemed impractical, crossovers, tie-ins, and areas in which the pavement is being removed the existing subgrade is anticipated to be wet and soft. Therefore, a working platform will be required in these areas consisting of 1.0 ft of Kentucky Coarse Aggregate # 2's, 3's or 23's in accordance with Section 805 of the current Standard Specifications wrapped with Geotextile Fabric, Type IV in accordance with Section 214 & 843 of the current Standard Specifications. The platform shall extend from shoulder to shoulder in the fills and ditchline to ditchline in the cuts to assure positive drainage. For purposes of calculating quantities, 500 linear feet should be used.

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS
COUNTY OF
MARION

PROJECT _____
NUMBERS: _____

GEOTECHNICAL NOTE SHEET

PREPARED BY _____ DATE _____
CHECKED BY _____ DATE _____
APPROVED BY _____ DATE _____

USER: \$\$\$USER\$\$\$
DATE: \$\$\$DATE\$\$\$
FILE NAME: \$\$\$design\$file\$specification\$\$\$
E-SHEET NAME:

COUNTY OF	ITEM NO.	SHEET NO.
MARION	4-136.00	R47

PREPARED BY _____
 CHECKED BY _____
 DATE _____

APPROVED BY _____
 CHECKED BY _____
 DATE _____

NOTICE - Without regard to the materials encountered, all roadway and drainage excavation shall be unclassified and shall be designated as Roadway Excavation. It shall be distinctly understood that any reference to rock, earth or any other materials on the plans or cross sections whether in numbers, words, letters, or lines, is solely for the Department's information and is not to be taken as an indication of classified excavation or the quantity of either rock, earth or any other material involved. The bidder must draw his own conclusions as to the conditions to be encountered. The Department does not give any guarantee as to the accuracy of the data and no claim will be considered for additional compensation when the materials encountered are not in accord with the classification shown.

Field Drilling and Sampling were performed in February 2007. Detailed data and interpretation of subsurface conditions encountered in individual borings are shown on the soil profile. Soil and rock strata descriptions and indicated boundaries are based on engineering interpretation of available subsurface information obtained at selected locations, and may not necessarily reflect the actual variation in subsurface conditions between borings and samples. The observed water levels and/or subsurface conditions indicated on the soil profile are as recorded at the time of exploration. These water levels and/or subsurface conditions may vary considerably with time, according to the prevailing climate, rainfall or other factors and are otherwise dependent on the duration of and methods used in the exploration program. Selected rock cores and all applicable drill logs, are stored at the Division of Structural Design in Frankfort and are available for inspection on request. Contact the Division of Structural Design, Geotechnical Branch for availability information and to schedule an inspection.

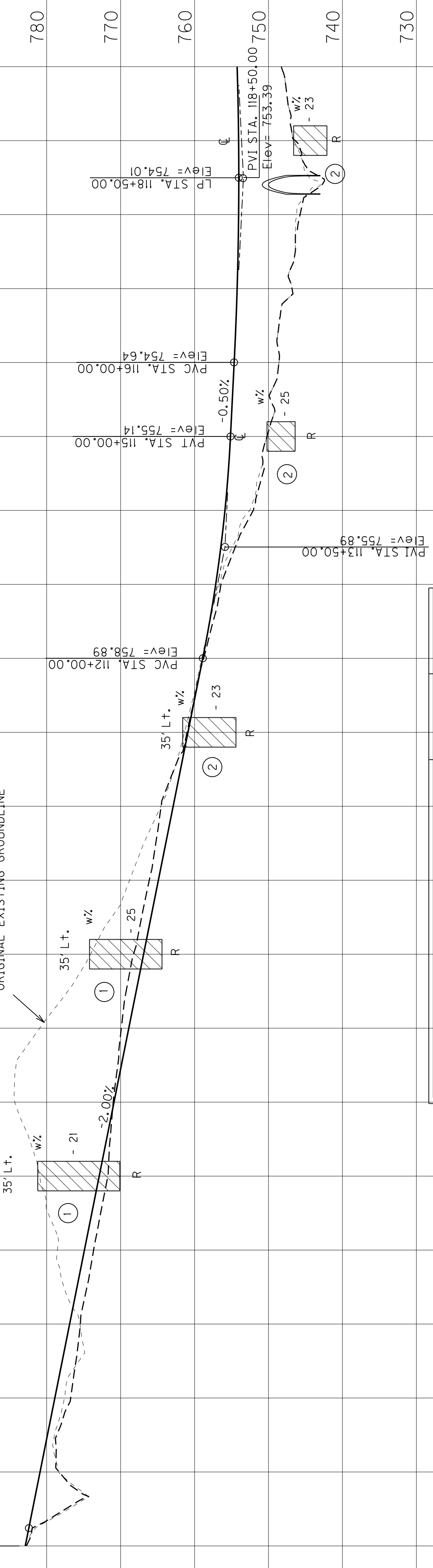
REFER TO CUT STABILITY FOR STATION 106+00

REFER TO GEOTECHNICAL NOTE II FOR STATION 112+00

REFER TO GEOTECHNICAL NOTE 8 FOR STATION 118+50

STA. 100+00.00
 P. U.S. 68 =

ORIGINAL EXISTING GROUNDLINE



SAMPLE NO.	1	2
STATION	105+00	111+00
OFFSET	35' Lt.	35' Lt.
DEPTH	0.0-9.0	0.0-7.2
COMPOSITION OF TOTAL SAMPLE	GRAVEL (+3' + NO. 10) SAND (+ NO. 10 + NO. 200) SILT (+ 0.075 mm + 0.002 mm) CLAY (+ 0.002 mm)	
LIQUID LIMIT	44	48
PLASTIC LIMIT	24	36
PLASTICITY INDEX	20	17
ACTIVITY INDEX	48	35
SPECIFIC GRAVITY	2.66	2.80
AASHTO CLASSIFICATION	A-7-6(19)	A-6(15)
UNIFIED CLASSIFICATION	CL	CL
CALIFORNIA BEARING RATIO	6.3	1.3
MAXIMUM DRY DENSITY (pcf)	110	103
OPTIMUM MOISTURE (%)	17	20
MATERIAL IN CBR & MOISTURE-DENSITY TESTS	-	-

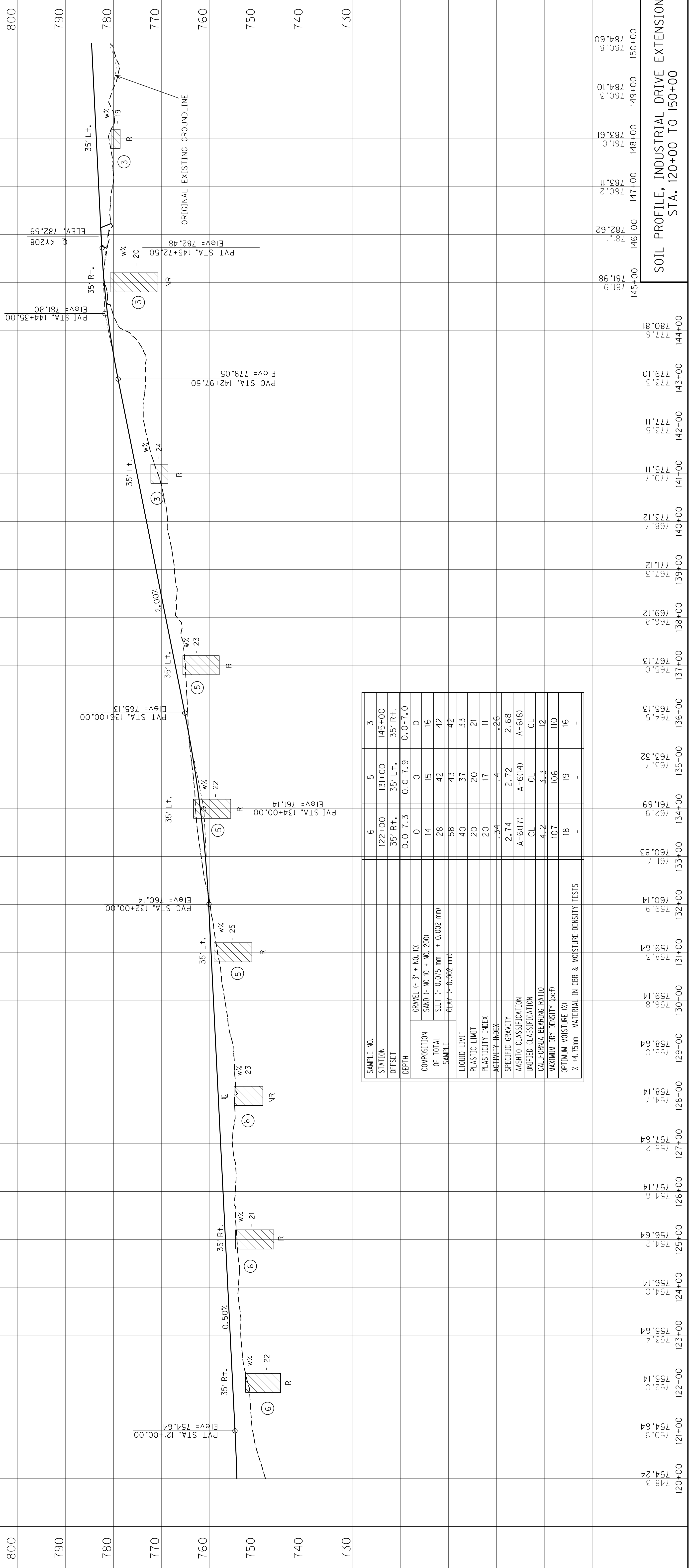
Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS
COUNTY OF
MARION

PROJECT NUMBERS: _____

SOIL PROFILE, INDUSTRIAL DRIVE EXTENSION
 STA. 100+00 TO 120+00

PREPARED BY _____ DATE _____
 CHECKED BY _____ DATE _____
 APPROVED BY _____ DATE _____

SAMPLE NO.	STATION	DEPTH	COMPOSITION OF TOTAL SAMPLE	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	ACTIVITY INDEX	SPECIFIC GRAVITY	AASHO CLASSIFICATION	UNIFIED CLASSIFICATION	CALIFORNIA BEARING RATIO	MAXIMUM DRY DENSITY (pcf)	OPTIMUM MOISTURE (%)	MATERIAL IN CBR & MOISTURE-DENSITY TESTS
3	145+00	0.0-7.0	GRAVEL (- 3" + NO. 10) SAND (- NO. 10 + NO. 200) SILT (- 0.075 mm + 0.002 mm) CLAY (- 0.002 mm)	0	14	15	16	2.72	A-6(14)	A-6(8)	CL	107	19	-
5	131+00	0.0-7.9		40	20	20	17	2.72	A-6(14)	A-6(8)	CL	106	19	-
6	122+00	0.0-7.3		58	43	42	42	2.74	A-6(17)	A-6(14)	CL	107	18	-

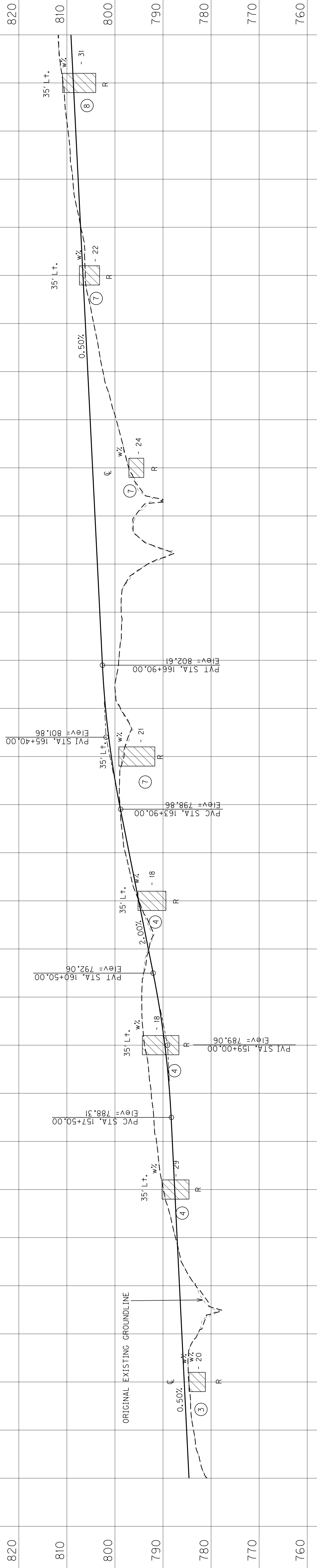


PREPARED BY _____
 CHECKED BY _____
 APPROVED BY _____
 DATE _____
 DATE _____
 DATE _____

SOIL PROFILE, INDUSTRIAL DRIVE EXTENSION
 STA. 150+00 TO 180+00

809.16	808.16	807.16	806.16	805.16	804.16	803.16	802.16	801.16	800.16	799.16	798.16	797.16	796.16	795.16	794.16	793.16	792.16	791.16	790.16	789.16	788.16	787.16	786.16	785.16	784.16	783.16	782.16	781.16	780.16	779.16	778.16	777.16	776.16	775.16	774.16	773.16	772.16	771.16	770.16	769.16	768.16	767.16	766.16	765.16	764.16	763.16	762.16	761.16	760.16	759.16	758.16	757.16	756.16	755.16	754.16	753.16	752.16	751.16	750.16	749.16	748.16	747.16	746.16	745.16	744.16	743.16	742.16	741.16	740.16	739.16	738.16	737.16	736.16	735.16	734.16	733.16	732.16	731.16	730.16	729.16	728.16	727.16	726.16	725.16	724.16	723.16	722.16	721.16	720.16	719.16	718.16	717.16	716.16	715.16	714.16	713.16	712.16	711.16	710.16	709.16	708.16	707.16	706.16	705.16	704.16	703.16	702.16	701.16	700.16	699.16	698.16	697.16	696.16	695.16	694.16	693.16	692.16	691.16	690.16	689.16	688.16	687.16	686.16	685.16	684.16	683.16	682.16	681.16	680.16	679.16	678.16	677.16	676.16	675.16	674.16	673.16	672.16	671.16	670.16	669.16	668.16	667.16	666.16	665.16	664.16	663.16	662.16	661.16	660.16	659.16	658.16	657.16	656.16	655.16	654.16	653.16	652.16	651.16	650.16	649.16	648.16	647.16	646.16	645.16	644.16	643.16	642.16	641.16	640.16	639.16	638.16	637.16	636.16	635.16	634.16	633.16	632.16	631.16	630.16	629.16	628.16	627.16	626.16	625.16	624.16	623.16	622.16	621.16	620.16	619.16	618.16	617.16	616.16	615.16	614.16	613.16	612.16	611.16	610.16	609.16	608.16	607.16	606.16	605.16	604.16	603.16	602.16	601.16	600.16	599.16	598.16	597.16	596.16	595.16	594.16	593.16	592.16	591.16	590.16	589.16	588.16	587.16	586.16	585.16	584.16	583.16	582.16	581.16	580.16	579.16	578.16	577.16	576.16	575.16	574.16	573.16	572.16	571.16	570.16	569.16	568.16	567.16	566.16	565.16	564.16	563.16	562.16	561.16	560.16	559.16	558.16	557.16	556.16	555.16	554.16	553.16	552.16	551.16	550.16	549.16	548.16	547.16	546.16	545.16	544.16	543.16	542.16	541.16	540.16	539.16	538.16	537.16	536.16	535.16	534.16	533.16	532.16	531.16	530.16	529.16	528.16	527.16	526.16	525.16	524.16	523.16	522.16	521.16	520.16	519.16	518.16	517.16	516.16	515.16	514.16	513.16	512.16	511.16	510.16	509.16	508.16	507.16	506.16	505.16	504.16	503.16	502.16	501.16	500.16	499.16	498.16	497.16	496.16	495.16	494.16	493.16	492.16	491.16	490.16	489.16	488.16	487.16	486.16	485.16	484.16	483.16	482.16	481.16	480.16	479.16	478.16	477.16	476.16	475.16	474.16	473.16	472.16	471.16	470.16	469.16	468.16	467.16	466.16	465.16	464.16	463.16	462.16	461.16	460.16	459.16	458.16	457.16	456.16	455.16	454.16	453.16	452.16	451.16	450.16	449.16	448.16	447.16	446.16	445.16	444.16	443.16	442.16	441.16	440.16	439.16	438.16	437.16	436.16	435.16	434.16	433.16	432.16	431.16	430.16	429.16	428.16	427.16	426.16	425.16	424.16	423.16	422.16	421.16	420.16	419.16	418.16	417.16	416.16	415.16	414.16	413.16	412.16	411.16	410.16	409.16	408.16	407.16	406.16	405.16	404.16	403.16	402.16	401.16	400.16	399.16	398.16	397.16	396.16	395.16	394.16	393.16	392.16	391.16	390.16	389.16	388.16	387.16	386.16	385.16	384.16	383.16	382.16	381.16	380.16	379.16	378.16	377.16	376.16	375.16	374.16	373.16	372.16	371.16	370.16	369.16	368.16	367.16	366.16	365.16	364.16	363.16	362.16	361.16	360.16	359.16	358.16	357.16	356.16	355.16	354.16	353.16	352.16	351.16	350.16	349.16	348.16	347.16	346.16	345.16	344.16	343.16	342.16	341.16	340.16	339.16	338.16	337.16	336.16	335.16	334.16	333.16	332.16	331.16	330.16	329.16	328.16	327.16	326.16	325.16	324.16	323.16	322.16	321.16	320.16	319.16	318.16	317.16	316.16	315.16	314.16	313.16	312.16	311.16	310.16	309.16	308.16	307.16	306.16	305.16	304.16	303.16	302.16	301.16	300.16	299.16	298.16	297.16	296.16	295.16	294.16	293.16	292.16	291.16	290.16	289.16	288.16	287.16	286.16	285.16	284.16	283.16	282.16	281.16	280.16	279.16	278.16	277.16	276.16	275.16	274.16	273.16	272.16	271.16	270.16	269.16	268.16	267.16	266.16	265.16	264.16	263.16	262.16	261.16	260.16	259.16	258.16	257.16	256.16	255.16	254.16	253.16	252.16	251.16	250.16	249.16	248.16	247.16	246.16	245.16	244.16	243.16	242.16	241.16	240.16	239.16	238.16	237.16	236.16	235.16	234.16	233.16	232.16	231.16	230.16	229.16	228.16	227.16	226.16	225.16	224.16	223.16	222.16	221.16	220.16	219.16	218.16	217.16	216.16	215.16	214.16	213.16	212.16	211.16	210.16	209.16	208.16	207.16	206.16	205.16	204.16	203.16	202.16	201.16	200.16	199.16	198.16	197.16	196.16	195.16	194.16	193.16	192.16	191.16	190.16	189.16	188.16	187.16	186.16	185.16	184.16	183.16	182.16	181.16	180.16
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SAMPLE NO.	3	4	7	8
STATION	145+00	156+00	165+00	179+00
OFFSET	35' Lt.	35' Lt.	35' Lt.	35' Lt.
DEPTH	0.0'-7.0	0.0'-5.6	0.0'-7.5	0.0'-6.9
COMPOSITION	GRAVEL (- 3' + NO. 10)			
OF TOTAL	SAND (- NO 10 + NO. 200)			
SAMPLE	SILT (- 0.075 mm + 0.002 mm)			
LIQUID LIMIT	CLAY (- 0.002 mm)			
PLASTIC LIMIT				
PLASTICITY INDEX				
ACTIVITY INDEX				
SPECIFIC GRAVITY				
AASHTO CLASSIFICATION				
UNIFIED CLASSIFICATION				
CALIFORNIA BEARING RATIO				
MAXIMUM DRY DENSITY (pcf)				
OPTIMUM MOISTURE (%)				
7 + 4.75mm MATERIAL IN CBR & MOISTURE-DENSITY TESTS				



REFER TO EMBANKMENT STABILITY FOR STATION 168+50

REFER TO GEOTECHNICAL NOTE 11 FOR STATION 154+80

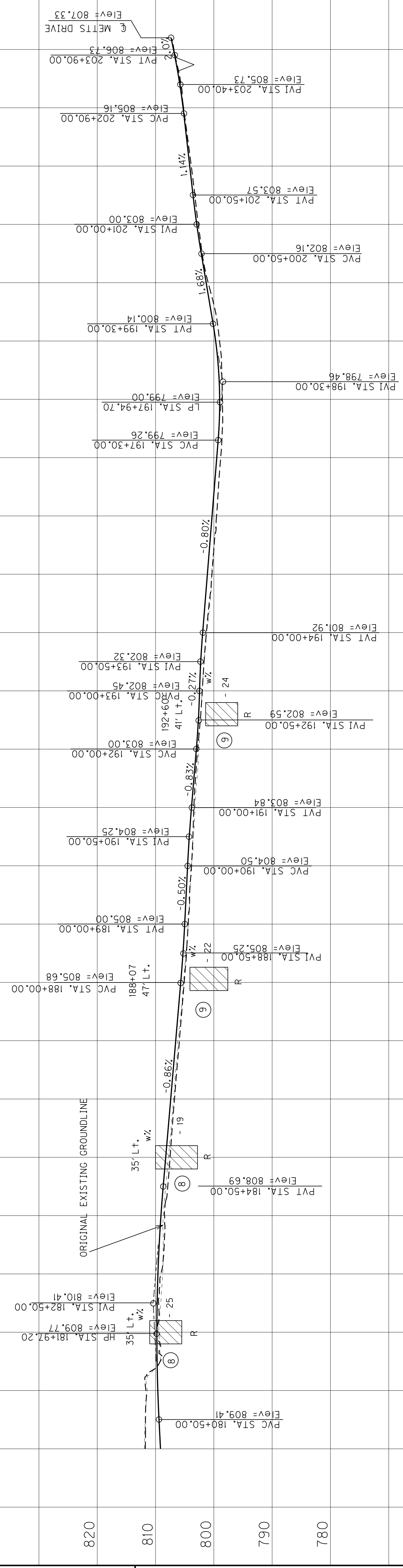
REFER TO GEOTECHNICAL NOTE 11 FOR STATION 161+00

REFER TO GEOTECHNICAL NOTE 12 FOR STATIONS 169+25 TO 169+75

SOIL PROFILE, INDUSTRIAL DRIVE EXTENSION
STA. 180+00 TO 194+00

COUNTY OF MARION
ITEM NO. 4-136.00
SHEET NO. R51

REFER TO GEOTECHNICAL NOTE 8 FOR STATION 198+00



SAMPLE NO.	STATION	OFFSET	DEPTH	COMPOSITION OF TOTAL SAMPLE			LIQUID LIMIT	PLASTICITY INDEX	ACTIVITY INDEX	AASHTO CLASSIFICATION	UNIFIED CLASSIFICATION	CALIFORNIA BEARING RATIO	MAXIMUM DRY DENSITY (pcf)	OPTIMUM MOISTURE (%)	MATERIAL IN CBR & MOISTURE-DENSITY TESTS
				GRAVEL (-3" + NO. 10)	SAND (-NO 10 + NO. 200)	SILT (-0.075 mm + 0.002 mm)									
8	179+00	35' Lt.	0.0-6.9	0	15	37	48	19	2.78	A-6(16)	CL	6-5	106	16	-
9	188+07	47' Lt.	0.0-6.5	0	10	37	53	39	2.75	A-6(18)	CL	5	105	16	-

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FILE NAME: \$\$\$design\file\specification\$\$\$

PREPARED BY _____ DATE _____
CHECKED BY _____ DATE _____
APPROVED BY _____ DATE _____

PREPARED BY	DATE
CHECKED BY	DATE
APPROVED BY	DATE

SUMMARY OF TRIAXIAL TEST DATA	
STATION	106+00
OFFSET	66' LT.
DEPTH	5.0-7.0
C	10.0-12.0
σ	487 psf
	27.9'

FACTORS OF SAFETY		
INTERMEDIATE TERM	A	2.4
LONG TERM	B	1.4

ASSUMED SOIL STRENGTH PARAMETERS	
SOIL I	
INTERMEDIATE TERM	φ = 120 pcF c = 270 psf δ = 28°
LONG TERM	φ = 120 pcF c = 54 psf δ = 28°

	w%	LI	OW
A-6(14), CL, S+C=82(39+43)	26	0.33	
A-6(13), CL, S+C=84(38+46)	20	0.07	
A-6(13), CL, S+C=87(38+46)	29	0.51	
A-6(17), CL, S+C=95(45+50)	19	0.02	

Core Log Sta. 109+50, 34' LT.
 Elev. 766.9+759.9 Overburden
 759.9+748.6 Shale : (siltstone) dark gray, calcareous, limestone partings, fossiliferous

Cut Limits from Sta. 103+50 to Sta. 112+50
 Core Log Sta. 106+00, 34' LT.
 Elev. 784.7+768.8 Overburden
 768.8+751.5 Shale : (siltstone) dark gray, calcareous, limestone partings, fossiliferous

Core Log Sta. 106+00, 34' LT.
 Elev. 768.8+751.5 Shale : (siltstone) dark gray, calcareous, limestone partings, fossiliferous

ORIGINAL EXISTING GROUNDLINE

Interpolated Base of RDZ

ORIGINAL EXISTING GROUNDLINE

Interpolated Base of RDZ

780

770

760

750

780

770

760

750

790

780

770

760

750

790

780

770

760

750

150

100

50

0

50

100

150

CUT STABILITY SECTION
 INDUSTRIAL DRIVE EXTENSION
 STA. 106+00 & 109+50

PREPARED BY _____ DATE _____
 CHECKED BY _____ DATE _____
 APPROVED BY _____ DATE _____

COUNTY OF MARION
 ITEM NO. 4-136.00
 SHEET NO. R53

810
800
790
780
770

150

100

50

0

50

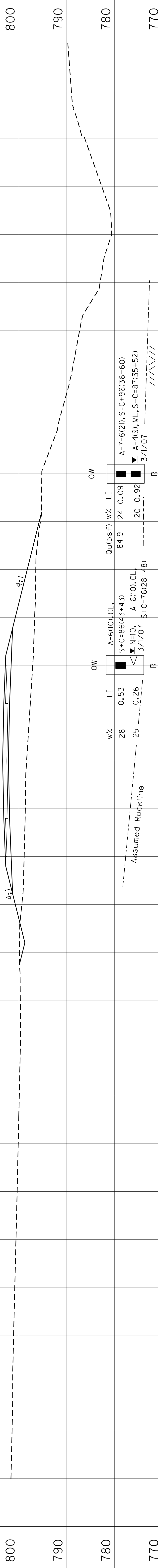
100

150

168+50

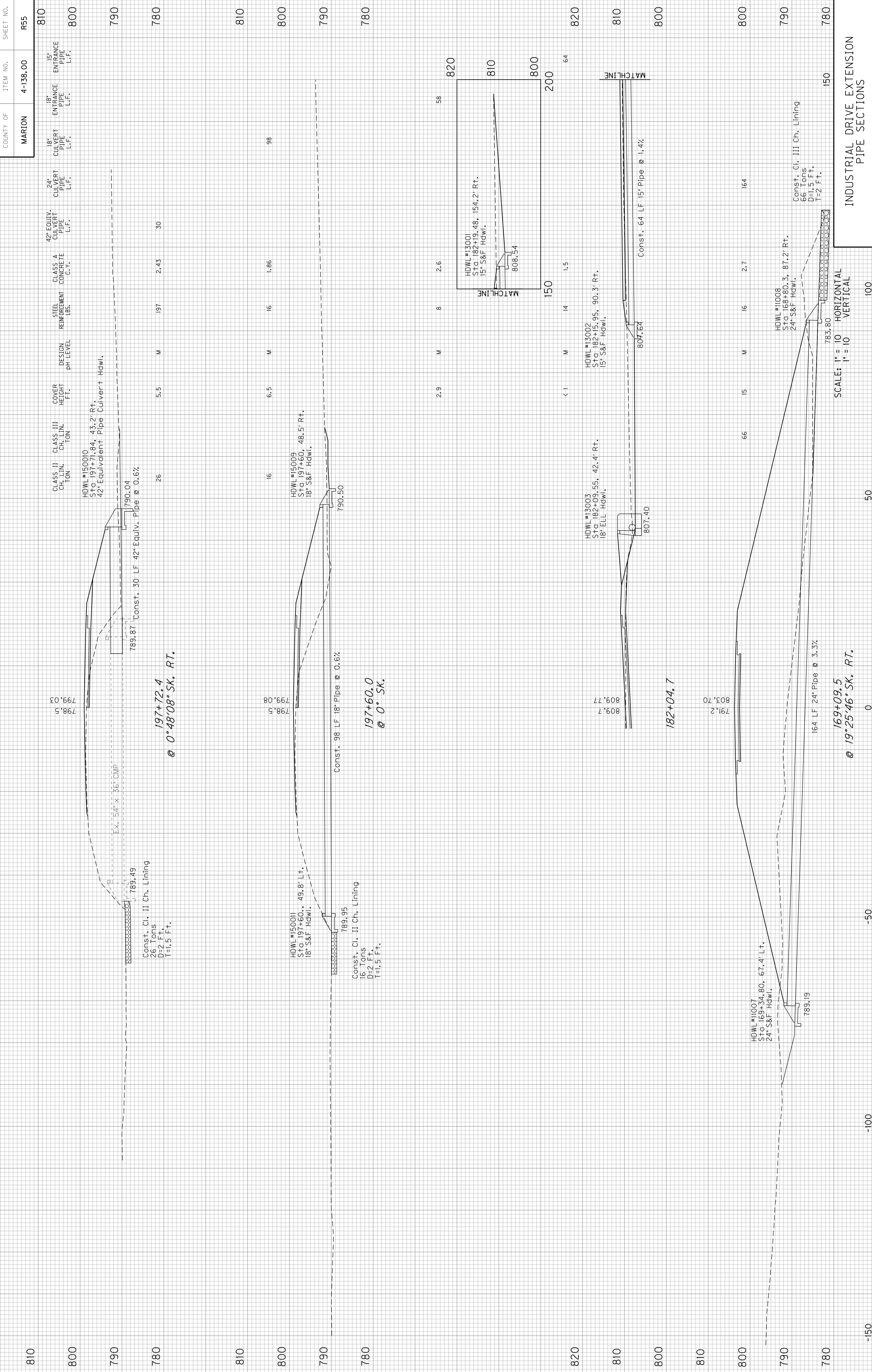
NOTE : NO STABILITY ANALYSIS DEEMED NECESSARY DUE TO SUBSURFACE CONDITIONS AND SLOPE CONFIGURATION.

NOTE : SURFACE ELEVATION OF STABILITY HOLES WAS FROM THE ORIGINAL GROUNDLINE BEFORE MATERIAL WAS REMOVED.





GRESHAM SMITH AND PARTNERS



INDUSTRIAL DRIVE EXTENSION PIPE SECTIONS

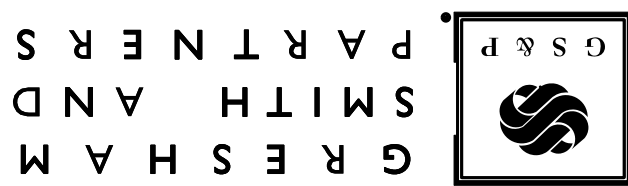
SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL

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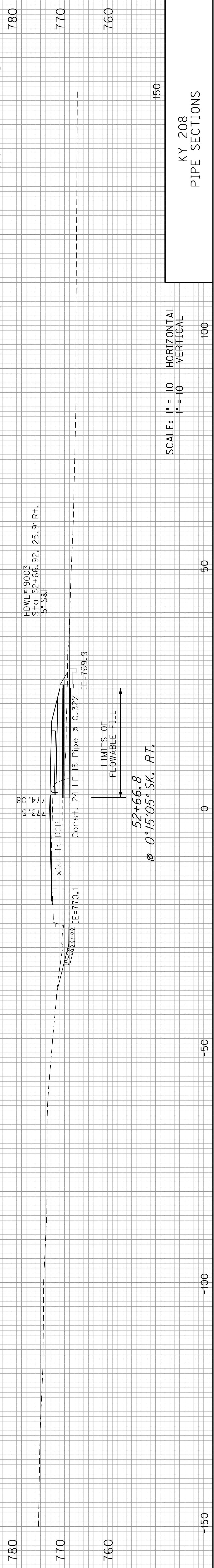
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 APPROVED BY _____



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

KY 208
PIPE SECTIONS



COUNTY OF MARION
 ITEM NO. 4-136.00
 SHEET NO. R56

CLASS II CH. LIN. TON
 COVER HEIGHT F.T.
 DESIGN PH LEVEL
 D.B.I. TYPE 4 EACH
 STEEL REINFORCEMENT LBS.
 CLASS A CONCRETE C.Y.
 36\"/>

OTHER ACCEPTABLE ALTERNATES AS SHOWN IN THE "APPROVED LIST FOR 3-SIDED CULVERTS":

CONSPAN, 24' SPAN x 7' RISE, LISTED FLOW AREA 143 SQUARE FEET

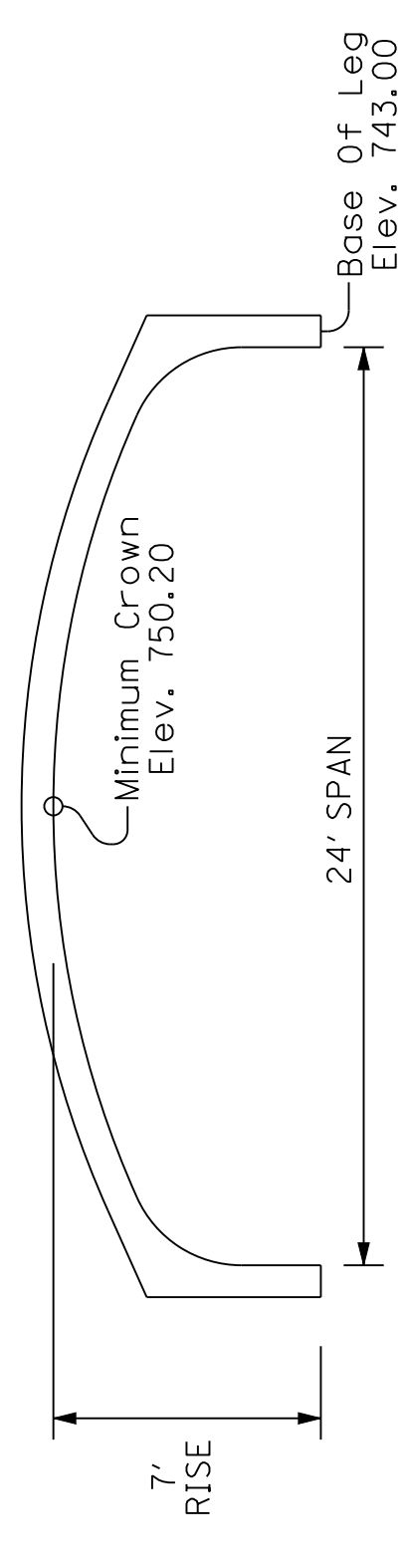
GENERAL NOTES

1. DIMENSIONS AND ELEVATIONS SHOWN ARE APPROXIMATE AND INTENDED TO CONVEY ENOUGH INFORMATION TO DEVELOP DETAIL STRUCTURAL DRAWINGS, AND BIDDING DOCUMENTS, IF CONTRACTOR DESIRES TO MODIFY THIS LAYOUT, NO PAYMENT ADJUSTMENTS WILL BE ALLOWED.
2. IF A LISTED ALTERNATE IS USED, CROWN ELEVATIONS MUST BE EQUAL TO OR GREATER THAN THE MINIMUM CROWN ELEVATION SHOWN HERE. IF MODIFICATIONS TO THE LAYOUT DUE TO SELECTION OF AN ALTERNATE STRUCTURE ARE REQUIRED, NO PAYMENT ADJUSTMENTS WILL BE ALLOWED.
3. ALL WORK TO CONSTRUCT THE 3-SIDED CULVERT IS PAID FOR UNDER THE BID ITEMS "3-SIDED CULVERT" AND "FOUNDATION PREPARATION." "3-SIDED CULVERT" IS A LINEAR FOOT BID ITEM THAT COVERS ALL WORK TO CONSTRUCT THE CULVERT THAT IS NOT COVERED UNDER "FOUNDATION PREPARATION." THIS INCLUDES LABOR AND MATERIALS TO CONSTRUCT FOUNDATIONS, CULVERT SECTIONS, WING WALLS, PARAPET WALLS (ALSO REFERRED TO AS HEADWALLS), JOINT SEALING, AND STRUCTURE DRAINAGE APPURTENANCES, AS PER SECTION 603 OF THE KYTC STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, "STRUCTURE EXCAVATION SOLID ROCK" WILL BE MEASURED AND PAID FOR AS NEEDED. GUARDRAIL WILL ALSO BE MEASURED AND PAID FOR SEPARATELY.
4. ALL COMPONENTS MUST BE DESIGNED TO MEET STRUCTURAL REQUIREMENTS AS SET FORTH FOR EARTH, DEAD, AND HL-93 LIVE LOAD IN AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, WITH INTERIMS. ALL DESIGNS SUBMITTED FOR CONSIDERATION MUST BE PERFORMED AND STAMPED BY A QUALIFIED PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE STATE OF KENTUCKY.
5. ALL FOUNDATION DESIGNS MUST BE IN ACCORDANCE WITH THE APPROPRIATE PROJECT GEOTECHNICAL INVESTIGATION.
6. ALL MATERIALS USED MUST BE IN CONFORMANCE WITH KYTC STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, THE KYTC LIST OF APPROVED MATERIALS, AND ALL APPLICABLE ASTM AND AASHTO STANDARDS.
7. ALL PRECAST COMPONENTS SHALL BE MANUFACTURED BY A FABRICATOR APPROVED BY KYTC AND BE IN STRICT COMPLIANCE WITH SECTION 605 OF THE KENTUCKY TRANSPORTATION CABINET, DEPARTMENT OF HIGHWAYS, STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION
8. COMPLY WITH SECTION 106.04 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION BUY AMERICAN REQUIREMENT.
9. IN ACCORDANCE WITH SECTION 611 OF KYTC STANDARD SPECIFICATIONS FOR ROAD A BRIDGE CONSTRUCTION, WEEP HOLES WILL BE REQUIRED FOR THESE STRUCTURES.
10. 3-SIDED STRUCTURES THAT REQUIRE SPECIAL BACKFILL CONTRARY TO KYTC STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION WILL REQUIRE A CERTIFICATION LETTER STATING THAT THE BACKFILL WAS CONSTRUCTED PROPERLY. THE LETTER WILL BE SIGNED BY THE CONTRACTOR AND THE MANUFACTURER OF THE 3-SIDED STRUCTURE AND WILL BE SUBMITTED TO THE RESIDENT ENGINEER.
11. THE MANUFACTURER OR SUPPLIER MUST PROVIDE 6 COPIES OF DETAILED SHOP DRAWINGS FOR FINAL APPROVAL FOR USE ON THIS PROJECT. BACKFILL REQUIREMENTS AND ANY SPECIFICATIONS THAT ARE CONTRARY TO THE KYTC STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SHOULD BE SUPPLIED AS WELL. INCLUDE ONE SET OF STRUCTURAL DESIGN CALCULATIONS FOR REVIEW AND ARCHIVAL PURPOSES. THIS INFORMATION WILL BE SUBMITTED TO THE DIVISION OF CONSTRUCTION. ALLOW 4 WEEKS TIME FOR REVIEW OF THIS MATERIAL.

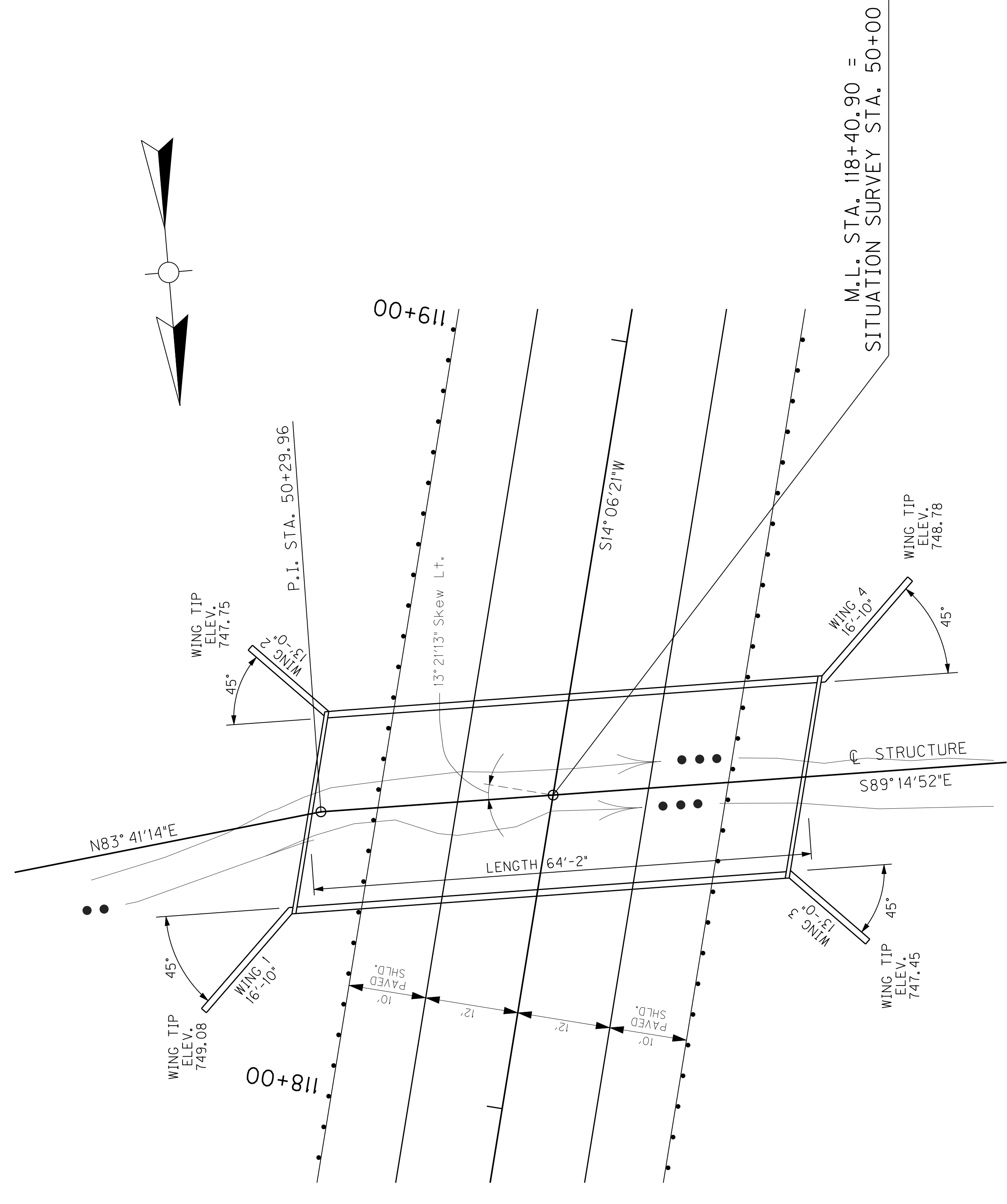
ATTACHED GUARDRAIL NOTES

WHEN IT BECOMES NECESSARY TO ATTACH GUARDRAIL DIRECTLY TO THESE STRUCTURES, THE FOLLOWING REQUIREMENTS MUST BE MET:

1. GUARDRAIL CONFIGURATION ACROSS THE STRUCTURE WILL BE IN ACCORDANCE WITH KYTC "RAILING SYSTEM TYPE II" AS SHOWN IN STANDARD DRAWING BDP 005.
2. WHEN MOUNTING POSTS TO THE TOP OF A STRUCTURE, ANCHOR PLATES WILL BE USED AS SHOWN IN RBR-015.
3. CALCULATIONS WILL BE PROVIDED SHOWING THAT THE GUARDRAIL POSTS WILL FAIL BEFORE ALL CONNECTIONS BETWEEN THE PRECAST COMPONENTS BELOW THE GUARDRAIL POSTS AND THE CULVERT SECTIONS.
4. ALL GUARDRAIL TRANSITIONS FROM THE NORMAL ROADWAY GUARDRAIL TO THE STRUCTURE GUARDRAIL WILL BE IN ACCORDANCE WITH STANDARD DRAWING BHS 007.



Culvert Section
US & DS
Scale 1"=5'

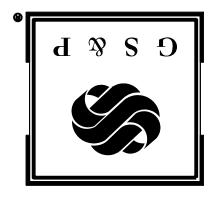


M.L. STA. 118+40.90 =
SITUATION SURVEY STA. 50+00

General Plan
Scale 1"=10'

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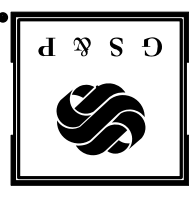
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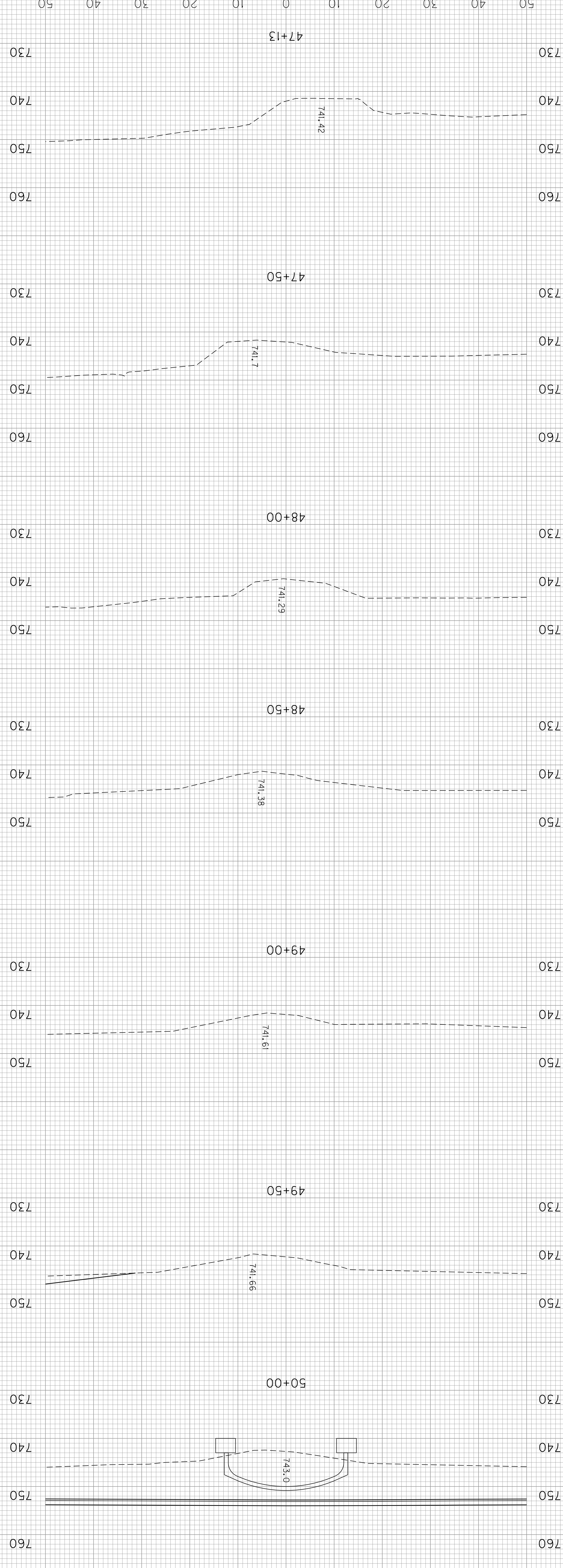
E-SHEET NAME:

PREPARED BY: GRESHAM SMITH AND PARTNERS
 CHECKED BY: _____
 APPROVED BY: _____
 DATE: 12-DEC-2008



G R E S H A M
S M I T H
A N D
P A R T N E R S

FLOOD DATA		
DESIGN	STORM (YR)	HEADWATER ELEV (FT)
CHECK	25	749.22
	100	751.07
	919	749.22
	1,326	751.07



Const. C. III Chl. Lining
 205 Tons
 D=2 FT.
 T=2 FT.

M.L. STA. 118+40.90 @ 13°21'13" SK. LT. =
 SITUATION SURVEY STA. 50+00

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

INDUSTRIAL DRIVE EXTENSION
 CULVERT SITUATION
 STA. 118+40.90
 3-SIDED CULVERT @ 13°21'13" SKEW LT

COUNTY OF MARION
 ITEM NO. 4-136.00
 SHEET NO. R58

REFILL	EMB. BENCH	COM	EMB
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FILE NAME: \$\$\$designfilespecification\$\$\$

E-SHEET NAME:



GRESHAM
SMITH AND
PARTNERS

PREPARED BY GRESHAM SMITH AND PARTNERS
CHECKED BY _____
APPROVED BY _____

DATE 12-DEC-2008

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

INDUSTRIAL DRIVE EXTENSION
CULVERT SITUATION

3-SIDED CULVERT @ 13° 21' 13" SKEW LT

STA: 118+40.90

52+50

51+50

52+00

53+00

52+50

51+50

52+00

53+00

52+50

51+50

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