

I:\ProjectData\HEN\05662_HEN_IB_8.46\Design\Roadway\Sheets\05662_GG001.dgn Sheet 4/13/2020 9:24:49 AM abarnes

SHEET NUM.										PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
3	4	7	8	12	01/STR/CV	02/NFA/CV											
ROADWAY																	
LS					LS	LS	201	11000	LS								
					LS	LS	202	11000	LS								
		461			278	183	202	23000	461	SY							
		35			35		202	35100	35	FT							
		2			2		202	58100	2	EACH							
					LS	LS	202	98000	LS								8,12
		219			168	51	203	10000	219	CY							
		812			393	419	203	20000	812	CY							
		599			352	247	204	10000	599	SY							
		187.5			187.5		606	15101	187.5	FT							4
		1			1		606	26150	1	EACH							
		1			1		606	26550	1	EACH							
	1				1		SPECIAL	69050000	1	EACH							4
EROSION CONTROL																	
					11	45	45	11	601	32204	56	CY					
		248			154	94	659	00300	248	CY							
		2,227			1,385	842	659	10000	2,227	SY							
		0.29			0.18	0.11	659	20000	0.29	TON							
		6			3.7	2.3	659	35000	6	MGAL							
					5,000	5,000	832	30000	10,000	EACH							
DRAINAGE																	
					LS		503	11100	LS								
					LS		503	21300	LS								
		3.9			3.9		602	20000	3.9	CY							
20		8			28		611	00406	28	FT							
20					20		611	01500	20	FT							
		8			8		611	03700	8	FT							
		15			15		611	05200	15	FT							
		60			60		611	26000	60	FT							
		1			1		611	38600	1	EACH							
PAVEMENT																	
		71			42	29	301	46000	71	CY							
12		90			65	37	304	20000	102	CY							3
		83			49	34	407	20000	83	GAL							
		44			26	18	441	50000	44	CY							
		13			7	6	617	10100	13	CY							
TRAFFIC CONTROL																	
2					1	1	621	54000	2	EACH							
		6			6		626	00116	6	EACH							
		1			1		630	84900	1	EACH							
		1			1		630	86002	1	EACH							
		9			9		630	03100	9	FT							
		1			1		630	80100	1	SF							
		1			1		630	81100	1	SF							
STRUCTURE 20 FOOT SPAN AND UNDER (HEN-281-2.35)																	
																	18
					LS	LS	614	11000	LS								
					LS	LS	623	10000	LS								
					LS	LS	624	10000	LS								

GENERAL SUMMARY

HEN - 18 / 281 - 8.46 / 2.35

PAVEMENT SUBSUMMARY													
STATION	LENGTH	AVERAGE WIDTH (EXISTING)	AVERAGE WIDTH (PROPOSED)	SURFACE AREA (EXISTING)	SURFACE AREA (PROPOSED)	202	204	301	304	407	441	617	
						PAVEMENT REMOVED	SUBGRADE COMPACTION	ASPHALT CONCRETE BASE, PG64-22	AGGREGATE BASE	NON-TRACKING TACK COAT	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22	COMPACTED AGGREGATE	
FROM	TO	FEET	FEET	SQ FT	SQ FT	SQ YD	SQ YD	CU YD	CU YD	GAL	CU YD	CU YD	
SR 18													
445+75.00	446+50.00	75	22	24	1650	1800	183.33	247.22	29.13	37.04	34.07	18.06	5.56
SR 281													
123+00.00	124+00.00	100	25	26	2500	2600	277.78	351.85	41.92	53.09	49.09	26.08	7.41
TOTALS TO BE CARRIED TO GENERAL SUMMARY						461	599	71	90	83	44	13	

DRAINAGE SUB-SUMMARY									
REFERENCE	202				611				
	PIPE REMOVED, 24" AND UNDER	CATCH BASIN REMOVED	4" CONDUIT, TYPE F	10" CONDUIT, TYPE F	12" CONDUIT, TYPE F	48" CONDUIT, TYPE C	72" CONDUIT, TYPE A, 706.02	CATCH BASIN, NO. 2-6	
	FT	EACH	FT	FT	FT	FT	FT	EACH	
D-1								1	
D-2							60		
D-3						72			
D-4				8					
D-5			8						
D-6					15				
R-1	35								
R-2		2							
TOTALS CARRIED TO GENERAL SUMMARY	35	2	8	8	15	72	60	1	

EARTHWORK SUBSUMMARY									
SHEET NO.	LOCATION	STATION	203		659				
			EXCAVATION	EMBANKMENT	SEEDING AND MULCHING	TOPSOIL	COMMERCIAL FERTILIZER	WATER	
		FROM	TO	CU YD	CU YD	SQ YD	CU YD	TON	M. GAL
10	SR 18	445+25.00	446+00.00	13	250	416	46	0.06	1.1
11	SR 18	446+11.40	446+50.00	23	155	322	36	0.04	0.9
12	SR 18	446+75.00	447+00.00	15	14	104	12	0.01	0.3
14	SR 281	122+50.00	123+25.00	93	75	372	41	0.05	1
15	SR 281	123+50.00	124+25.00	55	281	683	76	0.09	1.8
16	SR 281	124+50.00	125+25.00	20	37	330	37	0.04	0.9
TOTALS CARRIED TO GENERAL SUMMARY				219	812	2227	248	0.29	6.00

GUARDRAIL SUBSUMMARY - SR 281						
REFERENCE	STATION	606	606	606	626	
		ANCHOR ASSEMBLY, MGS TYPE E	ANCHOR ASSEMBLY, MGS TYPE T	GUARDRAIL, TYPE MGS WITH LONG POSTS, AS PER PLAN	BARRIER REFLECTOR, TYPE 5 - BIDIRECTIONAL	
	FROM	TO	EACH	EACH	FT	EACH
GR-1	121+36.31	123+67.83	1	1	187.5	6
TOTALS TO BE CARRIED TO GENERAL SUMMARY			1	1	187.5*	6**

TRAFFIC CONTROL SUBSUMMARY						
REFERENCE	STATION	630	630	630	630	630
		REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	GROUND MOUNTED SUPPORT, NO. 3 POST	SIGN, FLAT SHEET	SIGN ERECTED, FLAT SHEET
		EACH	EACH	FT	SF	SF
R-3	123+60.00	1	1			
S-1	123+60.00			9	1	1
TOTALS TO BE CARRIED TO GENERAL SUMMARY		1	1	9	1	1

*MGS POSTS TO BE INSTALLED OVER CULVERT SHALL BE INLET MOUNTED. SEE SCD MGS-1.1 FOR DETAILS
 **BARRIER REFLECTOR, TYPE 5, BIDIRECTIONAL SHALL BE SPACED AT 50 FT. INTERVALS

HEN-18-8.46

PRIMARY PROJECT CONTROL INFORMATION

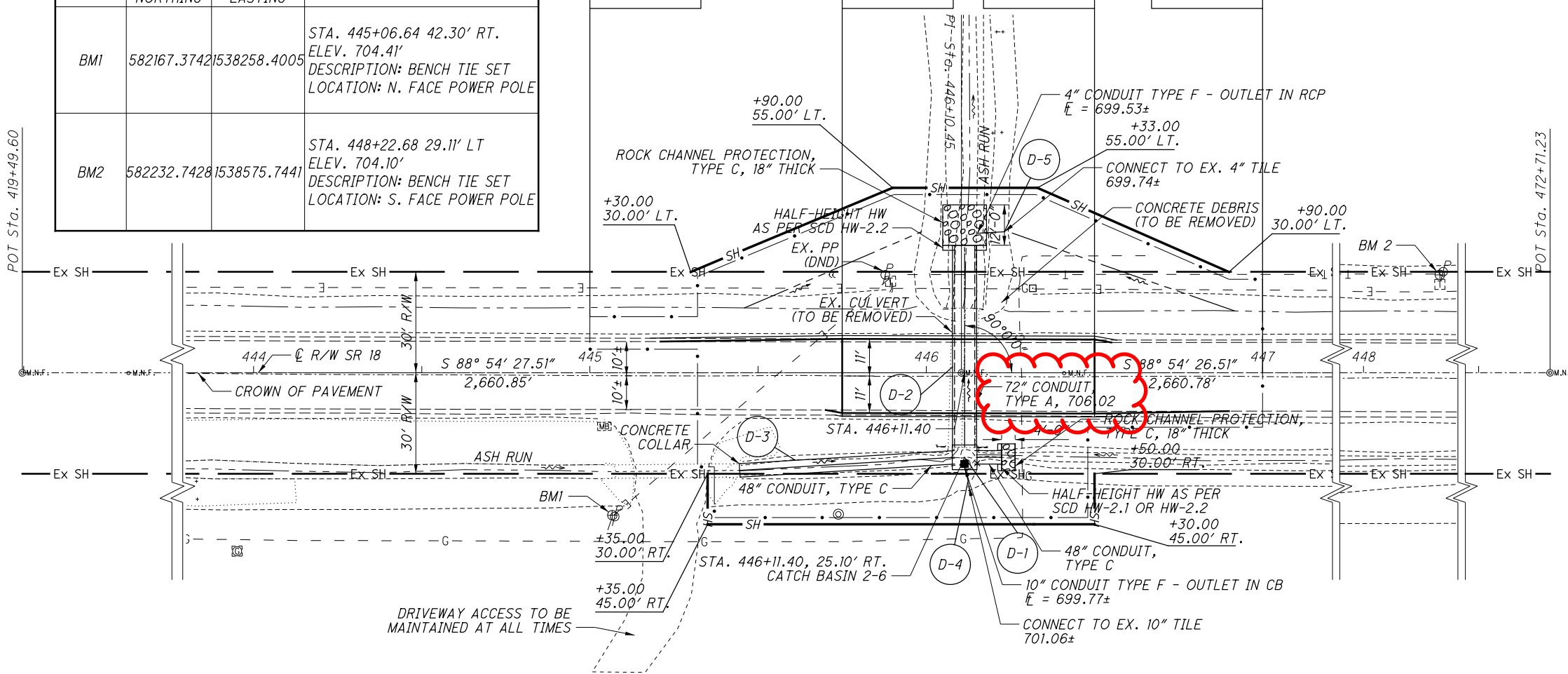
POINT NUMBER	GROUND COORDINATES U.S. SURVEY FEET		DESCRIPTION
	NORTHING	EASTING	
BM1	582167.3742	1538258.4005	STA. 445+06.64 42.30' RT. ELEV. 704.41' DESCRIPTION: BENCH TIE SET LOCATION: N. FACE POWER POLE
BM2	582232.7428	1538575.7441	STA. 448+22.68 29.11' LT ELEV. 704.10' DESCRIPTION: BENCH TIE SET LOCATION: S. FACE POWER POLE

POT Sta. 419+49.60

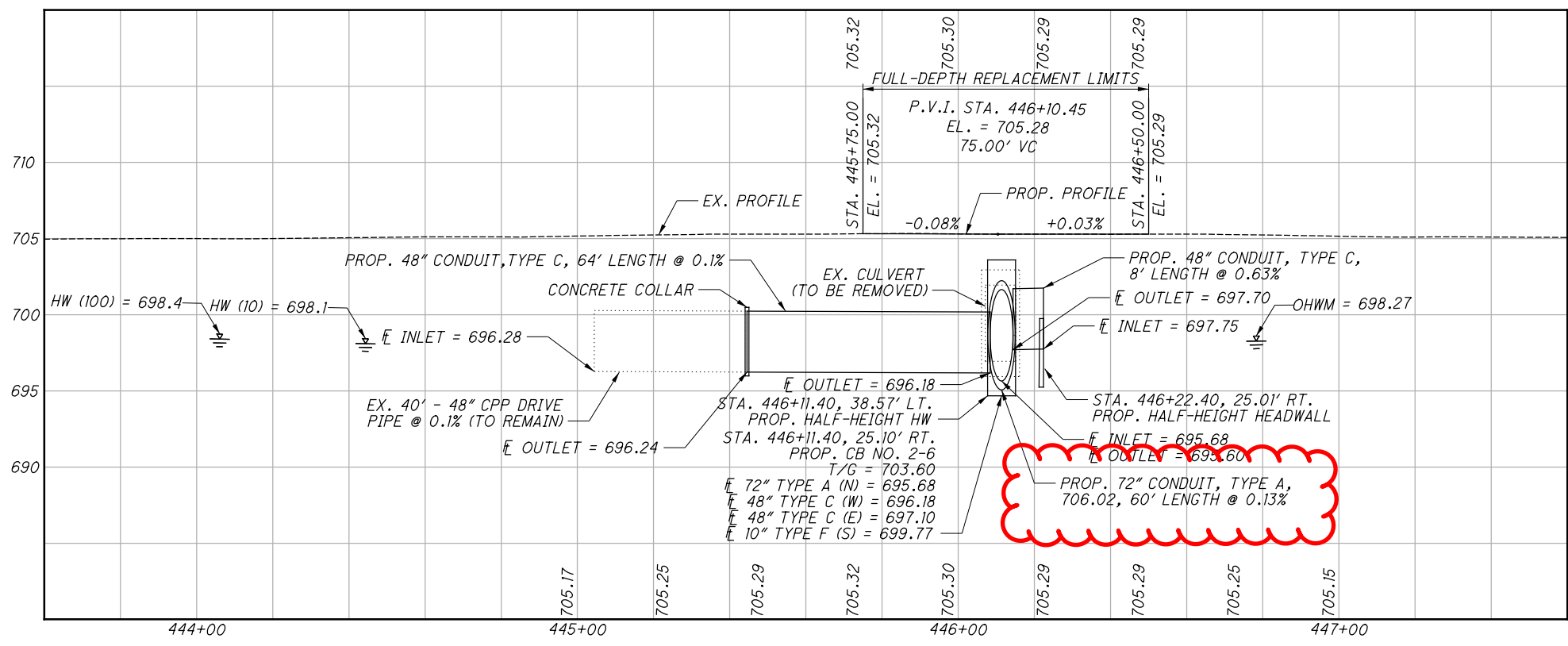
abarnes

I:\ProjectData\HEN\05662_HEN_IB_8.46\Design\Roadway\Sheets\05662_GPO01.dgn Sheet 4/13/2020 9:35:34 AM

BEGIN WORK STA. 445+00
 BEGIN PROJECT STA. 445+75
 END PROJECT STA. 446+50
 END WORK STA. 447+00



DRIVEWAY ACCESS TO BE MAINTAINED AT ALL TIMES



SR 18 REF. TIES (NOT TO SCALE)

STA. 419+49.60
 NOTE: MONROE TWP SEC 32 SE/COR
 RECORD: SET SM.R.R.SPIKE 6/13/89, MDB
 FD SM.R.R.SPIKE 1/10/07, SAH
 REF17 6/27/08, KPM
 SET MAG/WASHER 5/21/09, SAH

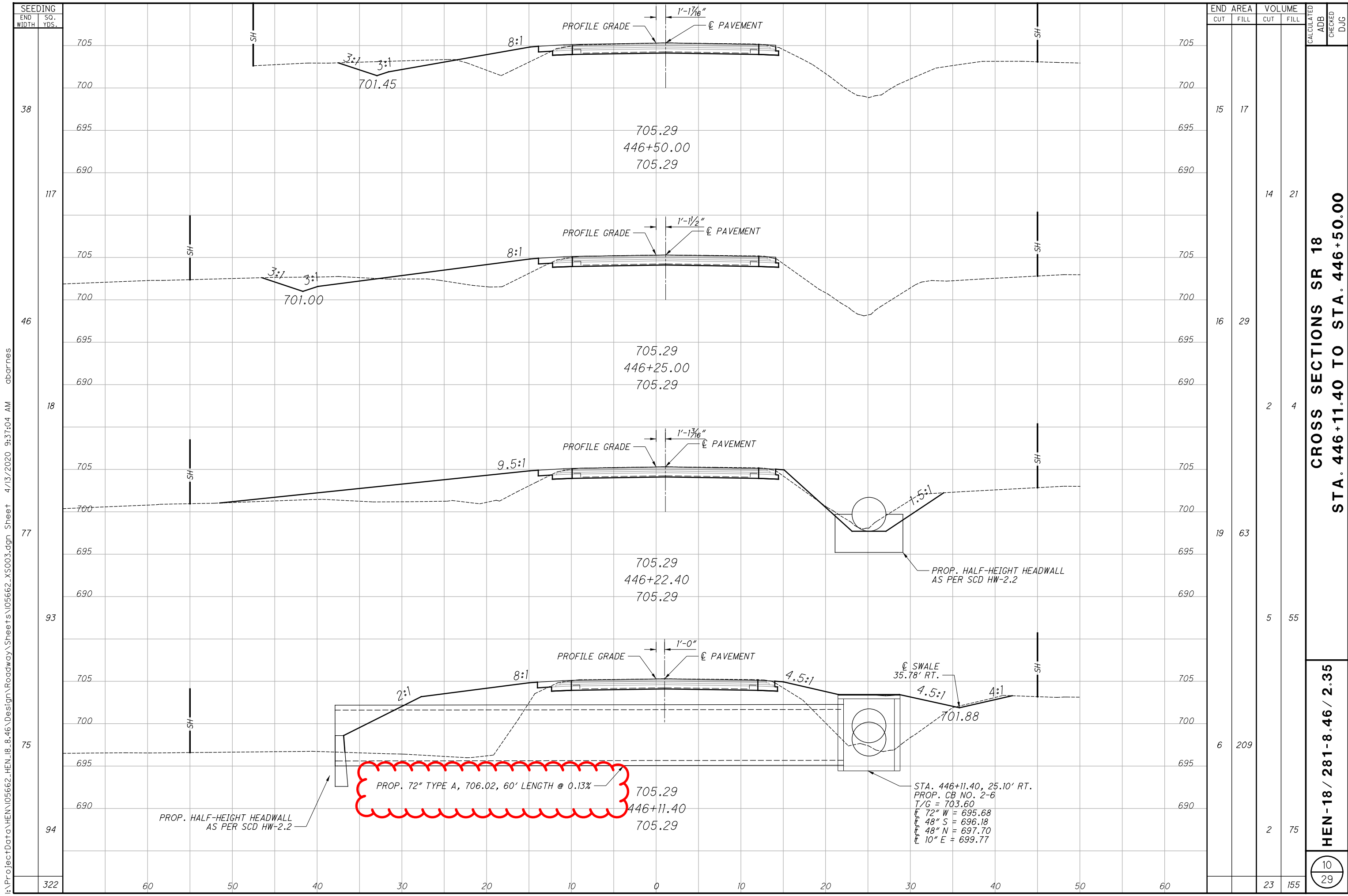
STA. 446+10.45
 NOTE: MONROE TWP SEC 33 S4/POST
 RECORD: SET SM.R.R.SPIKE 6/13/89, MDB
 FD P.K./WASHER 1/10/07, SAH
 REF18 6/27/08, KPM
 SET MAG/WASHER 5/26/09, SAH
 FD MAG/WASHER REF18 6/20/16, JFO UNCOVERED 11/13/17, JFO
 GPS REF17 7/20/18, JFO

STA. 472+71.23
 NOTE: MONROE TWP SEC 33 SE/COR
 RECORD: SET SM.R.R.SPIKE 6/13/89, MDB
 FD SM.R.R.SPIKE 1/10/07, SAH
 REF19 6/30/08, KPM
 SET MAG/WASHER 5/26/09, SAH
 FD MAG/WASHER REF19 6/20/16, JFO UNCOVERED 7/20/18, JFO
 GPS REF19 7/20/18, JFO

N=582258.4137
 E=1535702.6317

N=582207.6870
 E=1538362.9973

N=582156.9486
 E=1541023.2969



SEEDING	
END WIDTH	SO. YDS.
38	
117	
46	
18	
77	
93	
75	
94	
322	

END STA.	AREA		VOLUME		CALCULATED	CHECKED	DUG
	CUT	FILL	CUT	FILL			
446+50.00	15	17					
446+25.00	16	29			14	21	
446+22.40	19	63			2	4	
446+11.40	6	209			5	55	
446+00.00	2	75			23	155	

CROSS SECTIONS SR 18
STA. 446+11.40 TO STA. 446+50.00
HEN-18 / 281-8.46 / 2.35

10
 29

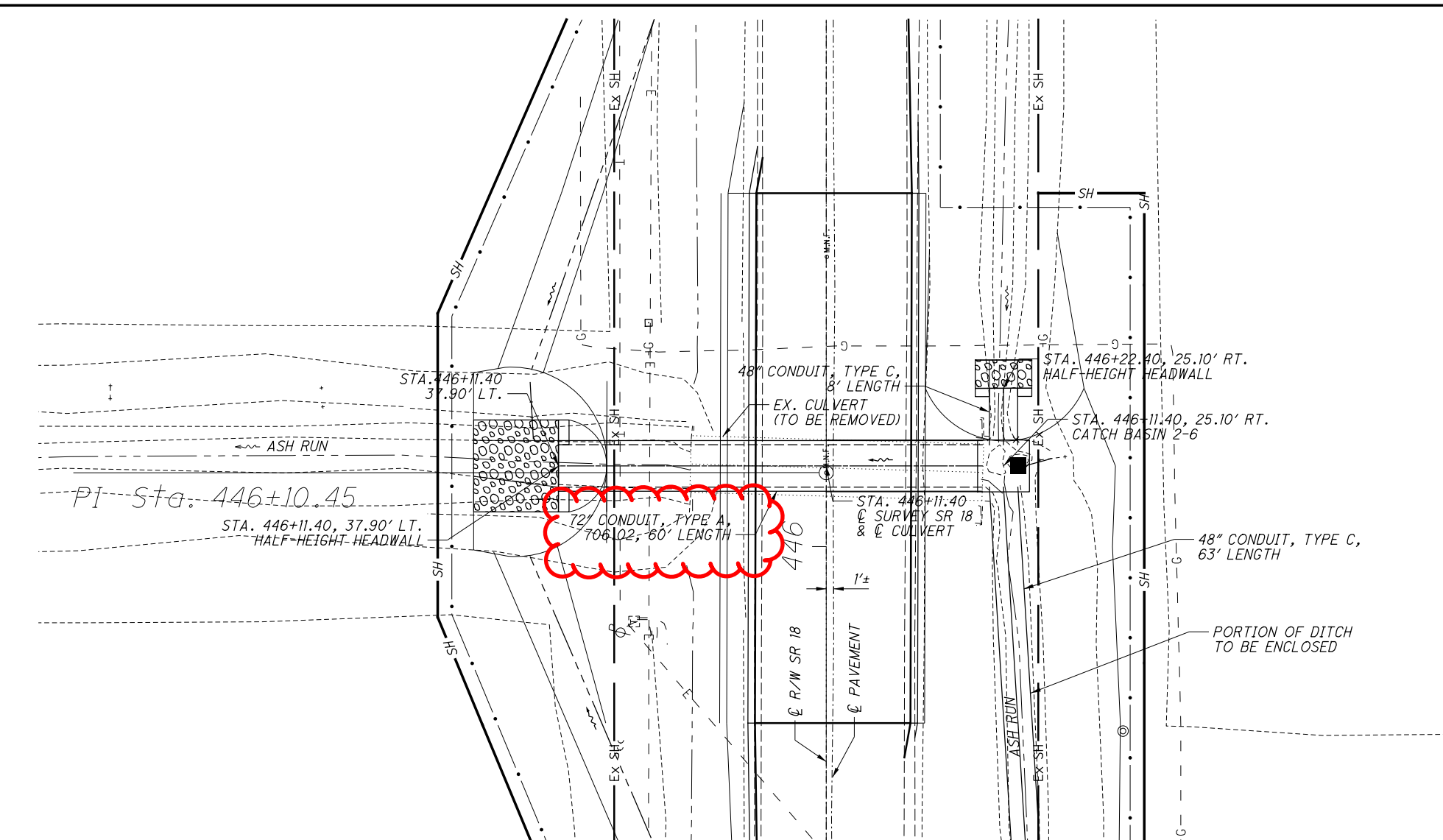
I:\ProjectData\HEN\05662_HEN_18_8.46\Design\Roadway\Sheets\05662_XS003.dgn Sheet 4/13/2020 9:37:04 AM abarnes

PROP. 72" TYPE A, 706.02, 60' LENGTH @ 0.13%

STA. 446+11.40, 25.10' RT.
 PROP. CB NO. 2-6
 T/G = 703.60
 E 72" W = 695.68
 E 48" S = 696.18
 E 48" N = 697.70
 E 10" E = 699.77

PROP. HALF-HEIGHT HEADWALL
 AS PER SCD HW-2.2

PROP. HALF-HEIGHT HEADWALL
 AS PER SCD HW-2.2



HYDRAULIC DESIGN DATA	
DRAINAGE AREA: 48 ACRES	
Q (10) = 13.9 CFS	Q (100) = 20.9 CFS
V (10) = 1.29 FPS	V (100) = 1.68 FPS
HW (10) = 698.1 FT.	HW (100) = 698.4 FT.
OHWM: 698.27	

PROPOSED CULVERT
72" CONDUIT, TYPE A, 706.02
LENGTH: 60'
SKEW: NONE

EXISTING CULVERT
CONCRETE SLAB TOP WITH CONCRETE ELLIPTICAL EXTENSIONS
SIZE: SLAB TOP: 96" X 60" EXTENSIONS: 96" X 60" ELLIPTICAL
LENGTH: SLAB TOP: 24' EXTENSIONS: 8' EACH
DATE BUILT: UNKNOWN
CFN: 1846408
DISPOSITION: TO BE REMOVED

