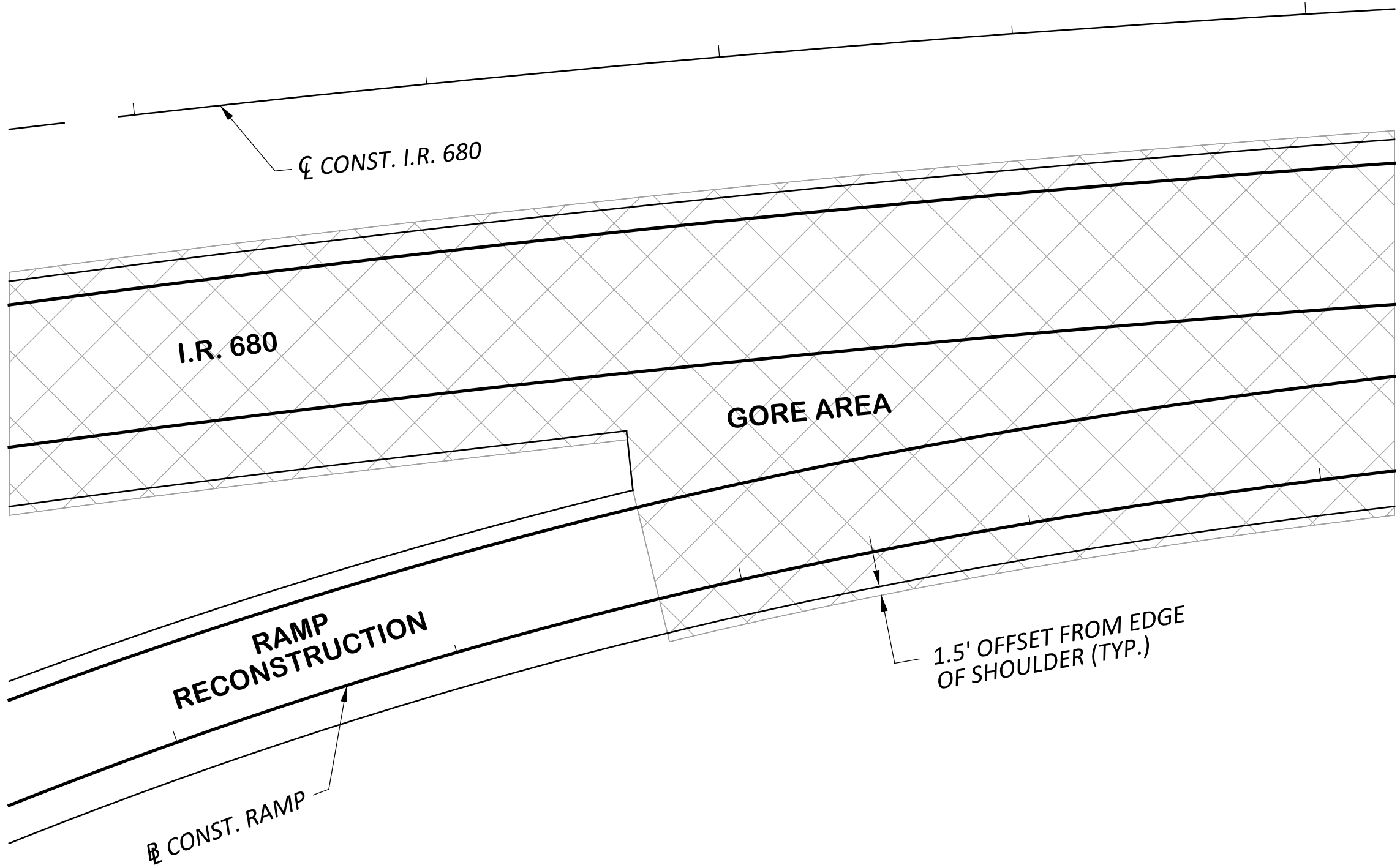


I.R. 680 - PROPOSED RAMP UNDERCUT TABLE

INTERCHANGE	RAMP NAME	UNDERCUT (INCHES)	STATION RANGE	UNSUITABLE/ UNSTABLE	LENGTH (FT)	AVG. WIDTH (FT)	ITEM 204 - EXCAVATION OF SUBGRADE (CY)	ITEM 204 - GRANULAR MATERIAL, TYPE B (CY)	ITEM 204 - GEOTEXTILE FABRIC (SY)
SB I-680 ON RAMP FROM SILLIMAN ST.	RAMP C	24	0+00 TO 1+42	UNSTABLE	142	28	295	295	442
SB I-680 OFF RAMP TO HIGH	RAMP F	22	8+32.21 TO 10+68	UNSUITABLE	235.79	28	449	449	734
SB I-680 ON RAMP FROM HIGH	RAMP H	12	7+21 TO 10+96	UNSTABLE	375	25	348	348	1042
SB I-680 OFF RAMP TO MARKET	RAMP M	12	1033+15 TO 1036+62	N/A	348	29	374	374	1122
		32	1036+62 TO 1039+24	UNSUITABLE	259	29	742	742	835
SB I-680 OFF RAMP TO NB 62	RAMP BX	32	8+76 TO 11+23.38	UNSTABLE	274.38	28	759	759	854
NB I-680 ON RAMP FROM WOODLAND	RAMP N	26	1037+61 TO 1039+56	UNSUITABLE	195	25	392	392	542
SB 62 RAMP TO SB I-680	RAMP SB	12	1037+93 TO 1041+80	N/A	387	41	588	588	1763
		34	1053+58 TO 1055+74	UNSTABLE	216	27	612	612	648
SB 62 OFF RAMP TO WILLIAMSON	RAMP BV	24	10+17 TO 12+60	UNSTABLE	243	34	612	612	918
NB I-680 OFF RAMP TO NB 62	RAMP NB	24	1044+94 TO 1048+41	UNSTABLE	347	41	1054	1054	1581
SB I-680 OFF RAMP TO SOUTH AVE	RAMP A	36	1081+86 TO 1083+96	UNSTABLE	300	26	867	867	867
NB I-680 ON RAMP FROM SOUTH AVE	RAMP B	18	1086+56.75 TO 1087+72	ROCK	115.25	27	173	173	346
NB I-680 OFF RAMP TO SOUTH AVE	RAMP D	7	1088+68 TO 1090+50.50	ROCK	182.5	25	99	99	507
		9	1083+87 TO 1086+37	ROCK	250	25	174	174	695
SB I-680 ON RAMP FROM SOUTH AVE	RAMP C	30	1088+34 TO 1090+18.45	ROCK	184.45	25	427	427	513
TOTALS							7965	7965	13409



CEMENT STABILIZED SUBGRADE AT RAMPS AND GORE AREA DETAIL

TYPICAL OF ALL ENTRANCE AND EXIT RAMPS ON I.R. 680 NORTHBOUND AND SOUTHBOUND REGARDLESS OF RAMP UNDERCUT REQUIREMENTS SHOWN IN THE ADJACENT TABLE

ITEM 206 - CEMENT STABILIZED SUBGRADE, 14 INCHES DEEP

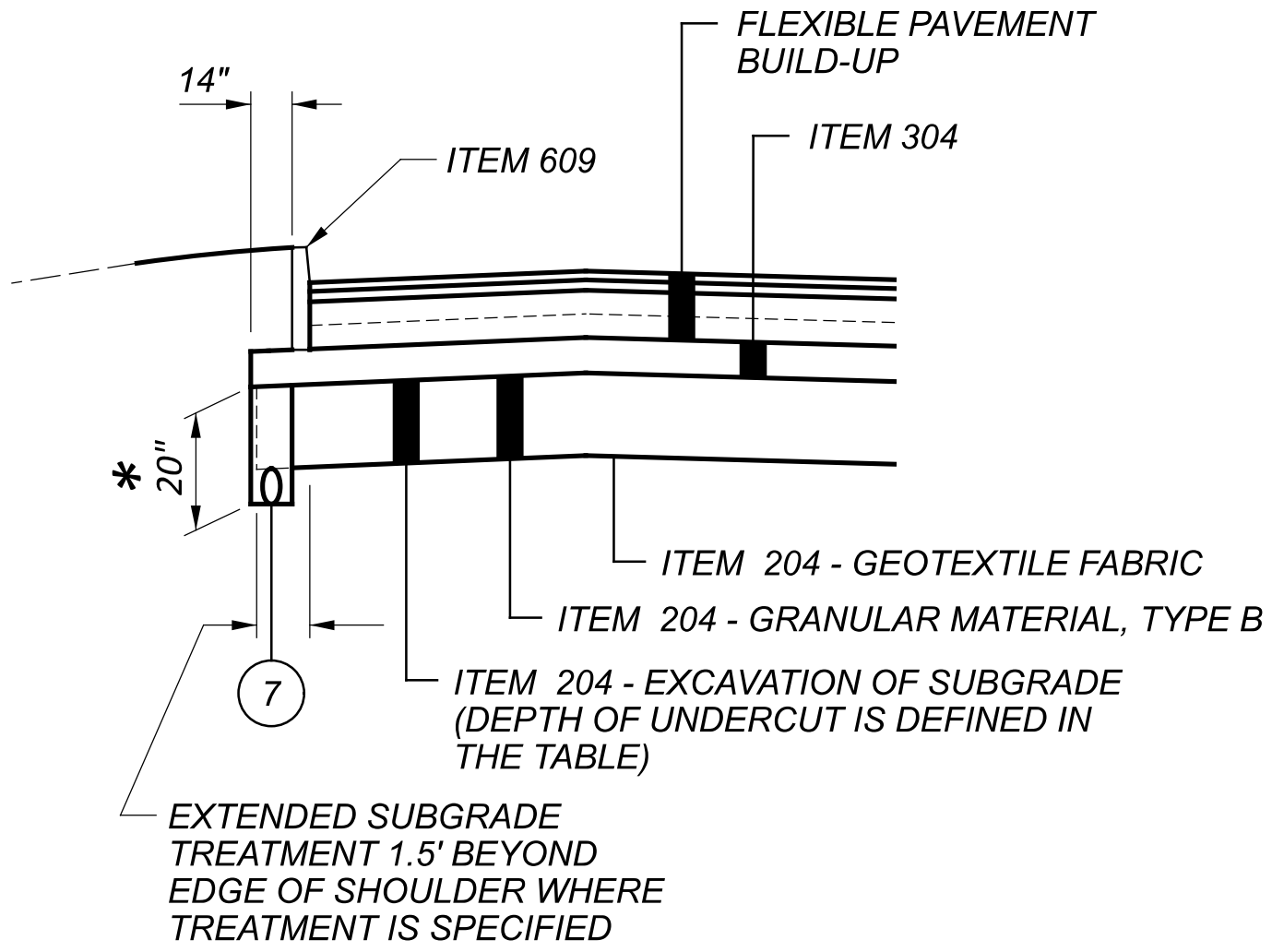
NOTE:

* WHEN THE UNDERCUT IS GREATER THAN 14" THE UNDERDRAIN SHALL BE PLACED 6" LOWER THAN THE UNDERCUT DEPTH SHOWN IN THE TABLE ABOVE.

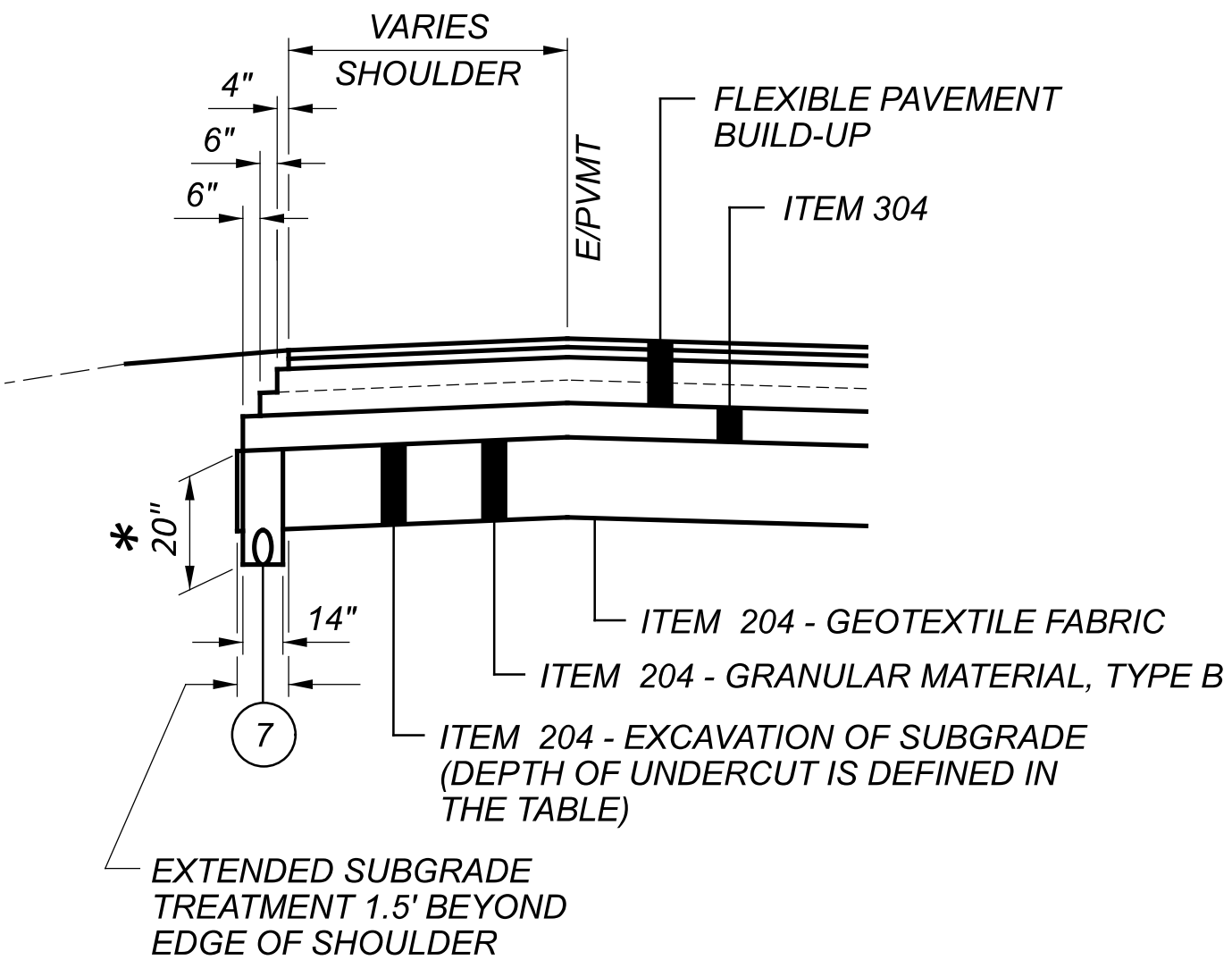
R6 UNDERCUT TABLE ADDED

I.R. 680 - PROPOSED UNDERCUT TABLE

I.R. 680 STATION RANGE	AVG. ROCK DEPTH (INCHES)	UNSUITABLE/ UNSTABLE	LENGTH (FT)	AVG. WIDTH (FT)	ITEM 204 - EXCAVATION OF SUBGRADE (CY)	ITEM 204 - EMBANKMENT (CY)
968+40 TO 976+65	17	ROCK	825	100	4329	4329
1033+15 TO 1037+65	20	ROCK	450	87	2417	2417
1080+96 TO 1088+68	10	ROCK	772	125	2979	2979
1088+68 TO 1092+64	8	ROCK	396	128	1252	1252
1092+64 TO 1096+61	20	ROCK	397	140	3431	3431
1096+61 TO 1097+25	4	ROCK	64	135	107	107
TOTALS					14515	14515

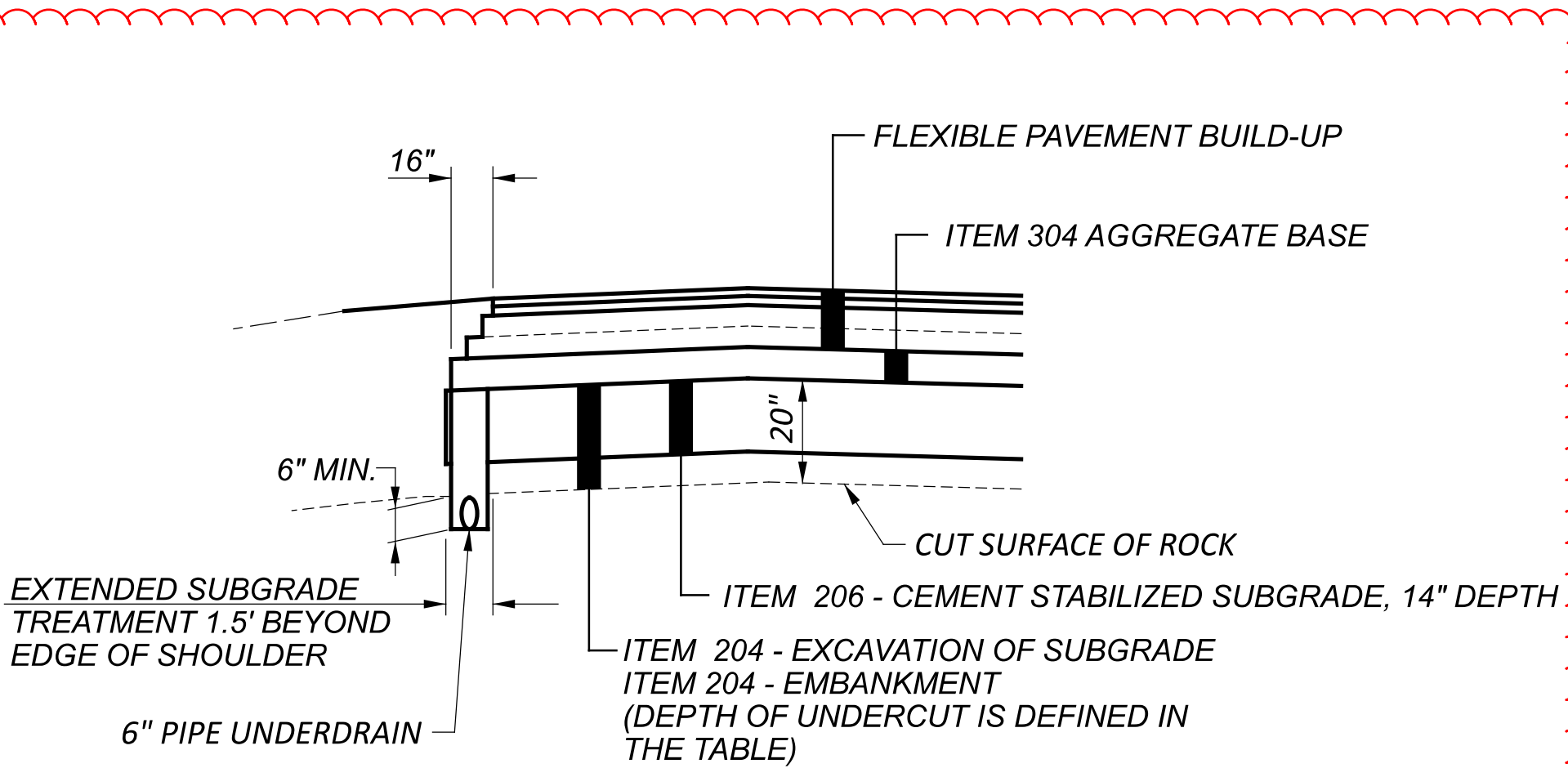


UNDERCUT EDGE COURSE DESIGN WITH CURB



UNDERCUT EDGE COURSE DESIGN

R6 UNDERCUT DETAIL ADDED



ROCK UNDERCUT / ROCK CUT UNDERDRAIN DETAIL N.T.S.

MAH-680-4.58

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 1/28/2026 TIME: 9:29:53 AM PLTDRV: OHDOT_PDF E+: plctfg PENTBL: OHDOT USER: doros@msconsultants.com WORKSPACE: OHDOTCEv02 WORKSET: 121474 PRODUCT: OpenRoadsDesigner 24.00.02.25
 www\\ohdotd-pw.bentley.com\\ohdotd-pw-02\\Documents\\01 Active Projects\\District 04\\Mahoning\\121474\\402-Engineering_MSConsultants\\Roadway\\Sheets\\121474_GG001.dgn

[illegible]

GENERAL SUMMARY

DESIGN AGENCY



DESIGNER

MSN

REVIEWER

CMN 08/29

PROJECT ID

121474

12147-4

SHEET TOTAL

P.156	6
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MAH-680-4.58

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www.lvhohdior-pw.bentley.com/chdot-pw-02/Documents01 Active Projects\District 04\Main\ing121474\402-Engineering_MSCConsultants\Roadway\Sheets\121474_GG002.dgn

[illegible]

SHEET NUMBER																PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.			
P.47	P.48	P.49	P.50	P.74A	P.172	P.175	P.178	P.179	P.180	P.181	P.192	P.318				CALC							01/IMS		
							1										1	611	98230	1	EACH	DRAINAGE (CONT.)			
								1	2	5							8	611	98370	8	EACH	CATCH BASIN, NO. 4			
							8	10	7	8							33	611	98410	33	EACH	CATCH BASIN, NO. 6			
							1	1									2	611	98434	2	EACH	CATCH BASIN, NO. 8			
									4								4	611	98840	4	EACH	CATCH BASIN, NO. 8A			
																						INLET, NO. 2-A-6			
				1					4								4	611	98840	4	EACH	INLET, NO. 2-A-6			
							15	14	5								1	611	99110	1	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE C1			
																	34	611	99111	34	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE C1, AS PER PLAN		P.49	
							1			4							5	611	99114	5	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D			
							2	3	2								7	611	99574	7	EACH	MANHOLE, NO. 3			
							15	15	8								38	611	99575	38	EACH	MANHOLE, NO. 3, AS PER PLAN, BOLTED DOWN		P.50	
		4															44	611	99710	44	EACH	PRECAST REINFORCED CONCRETE OUTLET			
			2														2	611	99720	2	EACH	INSPECTION WELL			
																						PAVEMENT			
281																	281	251	01020	281	SY	PARTIAL DEPTH PAVEMENT REPAIR (442)			
281																	281	253	01000	281	SY	PAVEMENT REPAIR			
																1,121	1,121	254	01000	1,121	SY	PAVEMENT PLANING, ASPHALT CONCRETE, (1.5")			
5																48,181	48,186	302	56000	48,186	CY	ASPHALT CONCRETE BASE, PG64-22, (449)			
52												2				37,750	37,804	304	20000	37,804	CY	AGGREGATE BASE			
2																38,248	38,250	407	20000	38,250	GAL	NON-TRACKING TACK COAT			
																50	50	409	30000	50	FT	SAWING AND SEALING ASPHALT CONCRETE PAVEMENT JOINTS			
					496	604											1,100	441	70800	1,100	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (449), (UNDER GUARDRAIL)		P.49	
																	19,006	19,006	442	00100	19,006	CY	ANTI-SEGREGATION EQUIPMENT		
																	10,363	10,363	442	10080	10,363	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 12.5 MM, TYPE A (446)		
																	8,643	8,643	442	10300	8,643	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (447)		
2																47	49	442	22100	49	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (449)			
2	10																12	442	22300	12	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 12.5 MM, TYPE A (449)			
																4,093	4,093	452	14010	4,093	SY	10" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P			

REF NO.	SHEET NO.	STATION TO STATION						601	602	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611
								ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	CONCRETE MASONRY	15" CONDUIT, TYPE C	15" CONDUIT, TYPE B	18" CONDUIT, TYPE B	18" CONDUIT, TYPE F, AS PER PLAN, 707.33	24" CONDUIT, TYPE B	27" CONDUIT, TYPE B, 706.02	30" CONDUIT, TYPE B	36" CONDUIT, TYPE B	24" CONDUIT, TYPE C	CATCH BASIN, NO. 3A	CATCH BASIN, NO. 6		CATCH BASIN, NO. 8	CATCH BASIN, NO. 8A	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE C1, AS PER PLAN	MANHOLE, NO. 3	MANHOLE, NO. 3, AS PER PLAN, BOLTED DOWN	15" CONDUIT, TYPE C, 706.02	15" CONDUIT, TYPE C, 706.08			
								CY	CY	FT	FT	FT	FT	FT	FT	FT	FT	FT	EACH	EACH		EACH	EACH	EACH	EACH	EACH	FT	FT			
		I.R. 680																													
D414A	P.214	1020+04.15	RT			1019+00.00	CL				104																				
D415	P.214	1019+00.00	CL			1016+50.00	RT				250													1							
D417	P.214	1021+88.99	RT			8+10.74(RAMP K)	LT				40														1						
D420A	P.214	1020+04.34	RT			1020+10.00	RT				5								1												
D441	P.216	1029+20.00	CL			1029+52.43	RT				47													1							
D442	P.216	1029+52.43	RT			1030+63.39	RT					115																			
D443	P.216	1030+63.39	RT			1030+63.39	RT																								
D453	P.216	1032+04.22	CL			1032+04.31	RT					40													1						
D454	P.216	1032+04.31	RT			1030+63.39	RT										146														
D455	P.216	1032+75.11	CL			1032+04.22	CL				71														1						
D460	P.216	1033+50.00	RT			1032+04.31	RT										150														
D461	P.216	1033+50.00	CL			1033+50.00	RT					58													1						
D464	P.216	1036+50.00	LT			1034+91.23	LT			159																					
D465	P.216	1034+91.23	LT			1034+91.43	RT							100																	
D466	P.216	1034+91.43	RT			1033+50.00	RT																								
D467	P.218	1037+99.87	RT			1034+91.43	RT			308																					
D468	P.218	1038+00.00	CL			1037+99.87	RT				61														1						
D492	P.218	1043+56.79	RT			1043+50.73	RT																								
D494	P.218	1044+00.00	CL			1044+58.00	RT				69																				
D495	P.218	1044+58.00	RT			1044+58.00	RT				12																				
D496	P.218	1044+58.00	RT			1045+12.38	RT			51																					
D497	P.218	1045+12.38	RT			1045+12.38	RT	1.22	0.27																						
D498	P.218	1047+30.27	LT			1047+33.52	LT																								
D607	P.220	1050+00.00	CL			1050+00.00	LT				41																				
D608	P.220	1050+00.00	LT			1047+66.00	LT				238																				
D608A	P.218	1047+66.00	LT			1047+56.47	LT				37																				
D609	P.218	1047+56.47	LT			1047+56.47	LT		0.27																						
D613	P.220	1053+00.00	CL			1052+85.89(RAMP NB)	LT				96																				
D614	P.220	1052+85.89(RAMP NB)	LT			1052+85.89(RAMP NB)	LT		0.27																						
D616A	P.222	1060+78.65	RT			1060+78.65	LT																								
D617	P.222	1060+79.78	LT			1060+79.78	LT																								
D618	P.222	1060+78.65	LT			1060+79.78	LT																								
D619	P.222	1060+91.80	RT			1060+95.02	LT					73																			
D620	P.222	1062+00.00	RT			1060+91.80	RT			108																					
D621	P.222	1061+00.00	CL			1060+95.02	LT				8																				
D622	P.222	1060+95.02	LT			1060+78.65	LT							17																	
D623	P.222	1062+52.51	LT			1062+52.51	LT				62																				
D624	P.222	1062+52.51	LT			1060+95.02	LT				158																				
D625	P.222	1065+00.00	LT			1062+52.51	LT				248																				
D626	P.222	1068+00.00	CL			1065+00.00	LT				300																				
D627	P.224	1075+69.02	LT			1076+48.73	LT				76																				
D628	P.224	1076+48.73	LT			1076+46.56	LT																								
D629	P.224	1076+50.00	CL			1076+48.73	LT				51																				
D630	P.224	1076+46.56	LT			1076+46.56	LT	1.22	0.33																						
D631	P.224	1078+84.96	LT			1078+85.86	LT																								
D632	P.224	1078+85.86	LT			1078+85.86	LT		0.33																						
D633	P.224	1080+00.00	CL			1080+79.81	RT				80																				
D635	P.224	1080+79.81	RT			1080+79.78	LT																								
D637	P.226	1082+94.41	LT			1083+25.00	LT				47																				
D638	P.226	1083+30.00	RT			1083+10.23	RT				63																				
D639	P.224, P.226	1083+10.23	RT			1080+79.81	RT																								
D640	P.226	1083+50.00	CL			1083+10.23	RT				40																				

DRAINAGE SUBSUMMARY

DESIGN AGENCY



ms consultants, inc.

DESIGNER

REVIEWER

DNO 5/20/25

PROJECT ID

121474

SHEET

P.179

TOTAL

655

