



MAINTENANCE HOLE TYPE I-A												
MARK	TYP OF BAR	NO. REQ'D	SIZE OF BAR	DIMENSIONS				ANGLE OF HOOK	CUTTING LENGTH	NO. x CUTTING LENGTH = TOTAL LENGTH METERS	LOCATION	
				A	B	C	D					OVERALL DIM 'E'
MK-1	4	24	16	100	2200	100	-	2400	-	2400	57.60	TOP SLAB
	5	8	16	100	690	-	-	790	-	790	6.32	
	5	8	16	100	565	-	-	665	-	665	5.32	
	5	4	16	100	530	-	-	630	-	630	2.52	
MK-2A	4	6	16	100	3100	100	-	3300	-	3300	19.80	TOP SLAB
	5	4	16	100	1275	-	-	1375	-	1375	5.50	
	5	4	16	100	1065	-	-	1165	-	1165	4.66	
	5	4	16	100	980	-	-	1080	-	1080	4.32	
MK-2B	4	6	20	100	3100	100	-	3300	-	3300	19.80	TOP SLAB
	5	4	20	100	1275	-	-	1375	-	1375	5.50	
	5	4	20	100	1065	-	-	1165	-	1165	4.66	
	5	4	20	100	980	-	-	1080	-	1080	4.32	
MK-3	1	4	16	-	-	-	-	2400	-	2400	5.52	TOP SLAB
MK-3	1	4	16	-	-	-	-	2600	-	2600	6.32	TOP SLAB
MK-4	4	84	16	300	2650	300	-	3250	-	3250	273.00	WALL SECTION
MK-5	7	16	12	180	1750	240	1260	5600	-	5900	94.40	WALL SECTION
MK-5	7	16	12	80	1650	240	1260	3230	-	3830	61.28	WALL SECTION
MK-6	1	38	16	-	-	-	-	2600	-	2600	98.00	BOTTOM SLAB
MK-7	1	28	20	-	-	-	-	3500	-	3500	98.00	BOTTOM SLAB

MAINTENANCE HOLE TYPE 2-A												
MARK	TYP OF BAR	NO. REQ'D	SIZE OF BAR	DIMENSIONS				OVERALL DIM. 'E'	ANGLE OF HOOK	CUTTING LENGTH	NO. x CUTTING LENGTH = TOTAL LENGTH METERS	LOCATION
				A	B	C	D					
MK-1	4	32	16	200	2950	200	-	3350	-	3350	107.20	TOP SLAB
	5	8	16	200	1070	-	-	1270	-	1270	18.16	
	5	8	16	200	940	-	-	1040	-	1040	8.32	
	5	4	16	200	900	-	-	1100	-	1100	4.40	
MK-2A	4	10	16	200	3950	200	-	4350	-	4350	43.50	TOP SLAB
	5	4	16	200	1700	-	-	1900	-	1900	7.60	
	5	4	16	200	1500	-	-	1700	-	1700	6.80	
	5	4	16	200	1400	-	-	1600	-	1600	5.60	
MK-2B	4	12	20	200	3950	200	-	4350	-	4350	52.20	TOP SLAB
	5	4	20	200	1600	-	-	1800	-	1800	7.20	
	5	4	20	200	1470	-	-	1670	-	1670	6.68	
	5	4	20	200	1400	-	-	1600	-	1600	6.40	
MK-3	1	4	20	-	3525	-	-	3525	-	3525	14.10	TOP SLAB
MK-3	1	4	20	-	3725	-	-	3725	-	3725	14.90	TOP SLAB
MK-4	4	46	16	300	2725	300	-	3325	-	3325	152.95	WALL SECTION
MK-5	7	16	12	250	2400	400	1550	7650	-	7950	127.20	WALL SECTION
MK-6	7	16	12	100	2200	400	1500	6900	-	7200	115.20	WALL SECTION
MK-7	6	42	16	300	2725	150	-	3175	-	3175	133.35	WALL SECTION
MK-8	4	52	20	200	3325	200	-	3725	-	3725	193.70	BOTTOM SLAB
MK-9	4	36	20	200	4325	200	-	4725	-	4725	170.10	BOTTOM SLAB

- NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
 2. DESIGN, FABRICATION, AND CONSTRUCTION SHALL COMPLY WITH SAES-Q-001. PRECAST CONCRETE SHALL ALSO COMPLY WITH SAES-Q-012.
 3. EXCAVATION AND BACKFILL SHALL COMPLY WITH SAES-A-114.
 4. ORIGINAL DESIGN LOADING WAS CALCULATED USING A CLASS H-20-40 TRUCK WITH MAXIMUM AXLE LOAD OF 145 KN (32.5 KIPS).
 5. REVISED DESIGN LOADING WAS CALCULATED USING A CLASS HS-20 TRUCK WITH MAXIMUM WEIGHT OF 40 TONS & AXLE LOAD OF 170.06 KNS (38.14 KIPS).
 6. REINFORCING STEEL SHALL CONFORM TO ASTM-615 GRADE 50 WITH A MINIMUM YIELD STRENGTH, $F_y=345$ MPa (50,000 PSI). BARS SHALL BE EPOXY COATED IN ACCORDANCE WITH 09-SAMSS-106. ALL REINFORCING BARS SHALL COMPLY WITH SASO SSA2/ 1979.
 7. FABRICATION AND INSTALLATION OF FBE COATED REBAR SHALL BE IN ACCORDANCE WITH SAES-Q-001 AND 09-SASS-106.

REFERENCE DRAWINGS	
STD COMMS SERVICE MAINTENANCE HOLE	AA-036140.001
STD COMMS MAINTENANCE HOLE TYPE 1	AA-036140.002
STD COMMS MAINTENANCE HOLE TYPE 2	AA-036140.003

MAINTENANCE HOLE TYPE I-B												
MARK	TYP OF BAR	NO. REQ'D	SIZE OF BAR	DIMENSIONS				ANGLE OF HOOK	CUTTING LENGTH	NO. x CUTTING LENGTH = TOTAL LENGTH METERS	LOCATION	
				A	B	C	D					OVERALL DIM. 'E'
MK-1	4	24	16	100	2200	100	-	2400	-	2400	57.60	TOP SLAB
	5	8	16	100	825	-	-	925	-	925	7.40	
	5	8	16	100	615	-	-	715	-	715	5.72	
	5	8	16	100	535	-	-	635	-	635	5.08	
MK-2A	4	6	16	100	3450	100	-	3650	-	3650	21.90	TOP SLAB
	5	4	16	100	1450	-	-	1550	-	1550	6.20	
	5	4	16	100	1240	-	-	1340	-	1340	5.36	
	5	4	16	100	1160	-	-	1260	-	1260	5.04	
MK-2B	4	6	20	100	3450	100	-	3650	-	3650	21.90	TOP SLAB
	5	4	20	100	1450	-	-	1550	-	1550	6.20	
	5	4	20	100	1240	-	-	1340	-	1340	5.36	
	5	4	20	100	1160	-	-	1260	-	1260	5.04	
MK-3	1	4	16	-	-	-	-	2650	-	2650	10.60	TOP SLAB
MK-3	1	4	16	-	-	-	-	2850	-	2850	11.40	TOP SLAB
MK-4	4	84	16	300	2725	300	-	3325	-	3325	279.30	WALL SECTION
MK-5	7	16	12	180	1925	240	1260	5950	-	6250	100.00	WALL SECTION
MK-5	7	16	12	80	1825	240	1260	5550	-	5850	93.60	WALL SECTION
MK-6	1	40	16	-	-	-	-	2600	-	2600	104.00	BOTTOM SLAB
MK-7	1	28	20	-	-	-	-	3850	-	3850	107.80	BOTTOM SLAB

SERVICE MAINTENANCE HOLE												
MARK	TYP OF BAR	NO. REQ'D	SIZE OF BAR	DIMENSIONS				OVERALL DIM. 'E'	ANGLE OF HOOK	CUTTING LENGTH	NO. x CUTTING LENGTH = TOTAL LENGTH METERS	LOCATION
				A	B	C	D					
MK-1	4	12	16	100	1850	100	-	2050	-	2050	24.60	TOP SLAB
	5	8	16	100	495	-	-	595	-	595	4.76	↓
	5	8	16	100	365	-	-	465	-	465	3.72	
MK-2A	4	4	16	100	2180	100	-	2380	-	2380	9.52	TOP SLAB
	5	4	16	100	660	-	-	760	-	760	3.04	↓
	5	4	16	100	530	-	-	630	-	630	2.52	
MK-2B	4	4	20	100	2180	100	-	2380	-	2380	9.52	TOP SLAB
	5	4	20	100	660	-	-	760	-	760	3.04	↓
	5	4	20	100	530	-	-	630	-	630	2.52	
MK-3	1	4	16	-	-	-	-	1500	-	1500	6.00	TOP SLAB
MK-3	1	4	16	-	-	-	-	1700	-	1700	6.80	TOP SLAB
MK-4	2	64	20	2625	400	300	50	3375	-	3375	216.00	WALL SECTION
MK-5	3	16	12	1850	2200	400	250	4700	-	4700	75.20	WALL SECTION
MK-5	3	16	12	1650	2000	400	250	3850	-	3850	61.60	WALL SECTION
MK-6	1	22	16	-	-	-	-	2250	-	2250	49.50	BOTTOM SLAB
MK-7	1	20	20	-	-	-	-	2588	-	2588	51.76	BOTTOM SLAB

MAINTENANCE HOLE TYPE 2-B												
MARK	TYP OF BAR	NO. REQ'D	SIZE OF BAR	DIMENSIONS				OVERALL DIM. 'E'	ANGLE OF HOOK	CUTTING LENGTH	NO. x CUTTING LENGTH = TOTAL LENGTH METERS	LOCATION
				A	B	C	D					
MK-1	4	36	16	200	2950	200	-	3350	-	3350	120.60	TOP SLAB
↓	5	8	16	200	1070	-	-	1270	-	1270	10.16	↓
	5	8	16	200	940	-	-	1040	-	1040	8.32	
	5	4	16	200	900	-	-	1100	-	1100	4.40	
MK-2A	4	10	16	200	4350	200	-	4750	-	4750	47.50	TOP SLAB
↓	5	4	16	200	1900	-	-	2000	-	2000	8.00	↓
	5	4	16	200	1700	-	-	1900	-	1900	7.60	
	5	4	16	200	1600	-	-	1800	-	1800	7.20	
MK-2B	4	14	20	200	4350	200	-	4750	-	4750	66.50	TOP SLAB
↓	5	4	20	200	1825	-	-	2025	-	2025	8.10	↓
	5	4	20	200	1700	-	-	1900	-	1900	7.60	
	5	4	20	200	1625	-	-	1825	-	1825	7.30	
	5	2	20	200	1600	-	-	1800	-	1800	3.60	
MK-3	1	4	20	-	3820	-	-	3820	-	3820	15.28	TOP SLAB
MK-3	1	4	20	-	4020	-	-	4020	-	4020	16.08	TOP SLAB
MK-4	4	50	16	300	3025	300	-	3625	-	3625	181.25	WALL SECTION
MK-5	7	20	12	250	2575	400	1550	8000	-	8300	166.00	WALL SECTION
MK-6	7	20	12	100	2425	400	1500	6750	-	7050	141.00	WALL SECTION
MK-7	6	46	16	300	3025	150	-	3475	-	3475	159.85	WALL SECTION
MK-8	4	66	20	200	3325	200	-	3725	-	3725	245.85	BOTTOM SLAB
MK-9	4	36	20	200	4750	200	-	5150	-	5150	185.40	BOTTOM SLAB