

AEI, Installation Support

Enclosure 6

**Example of
Total Housing Maintenance (THM) Contract**

Volume II



**US Army Corps
of Engineers**

Kansas City District
You Matter — We Care

RFP No. DACA41-94-R-0012

Total Housing Maintenance

Volume II

Fort Riley
Kansas

PARTIAL DOCUMENT
Complete document on file at CEHNC-ED-ES-G

Technical Exhibits

Administration: Kansas City District

February 1994

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REQUEST FOR PROPOSAL (RFP)
FOR TOTAL HOUSING MAINTENANCE
FORT RILEY, KANSAS

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Tech Exh 2	Location Maps of Family Housing Structures
Tech Exh 3	Location Maps of Billeting Structures
Tech Exh 4	Location Maps of Playgrounds and Description of Inventory
Tech Exh 5	Location Maps of Bus Stop Shelters
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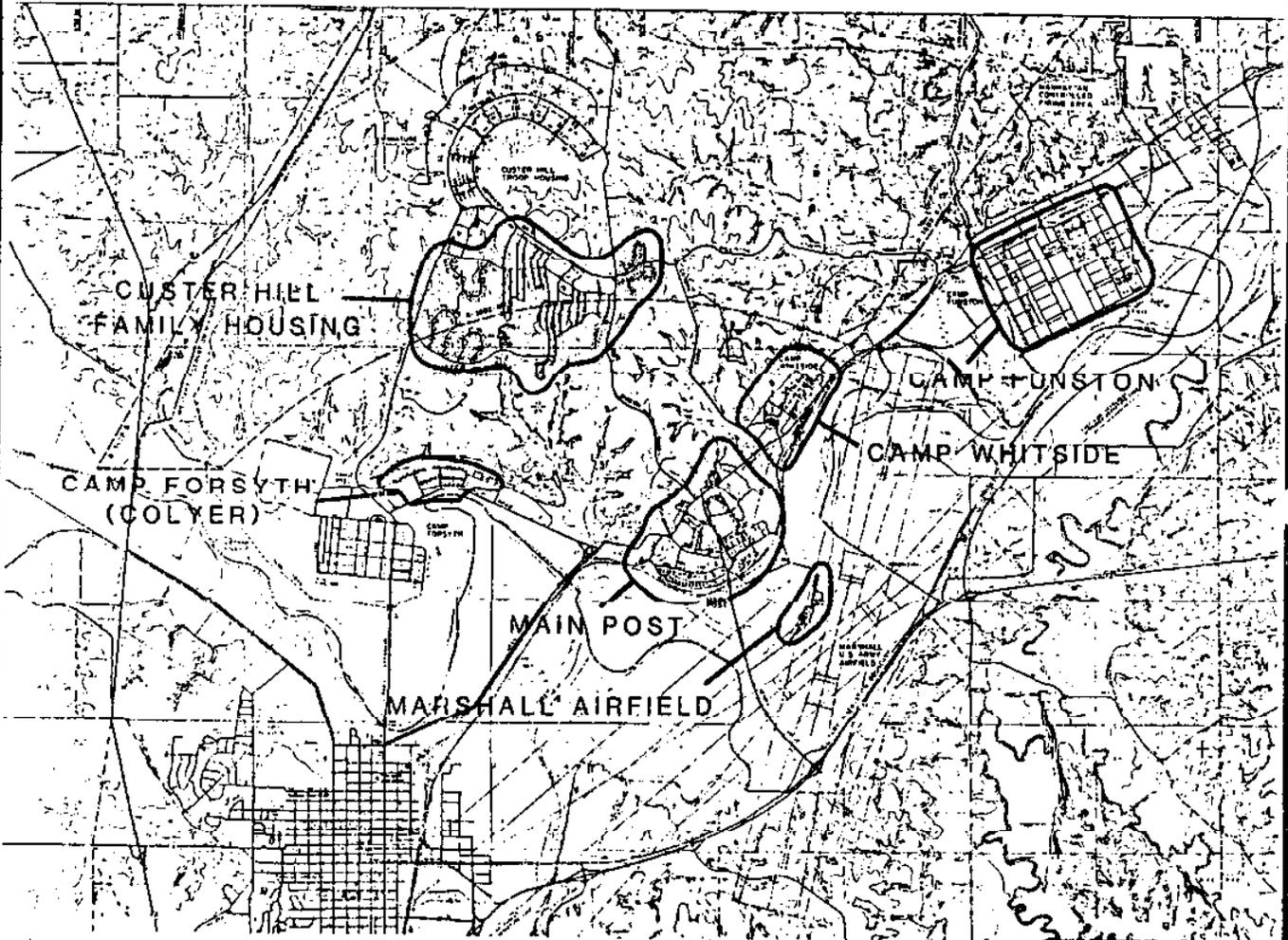
DACA41-94-R-0012

**TE-1 LOCATION MAP OF FORT RILEY BUILT-UP
AREAS**

TE-1-I

TECHNICAL EXHIBIT 1
LOCATION MAP OF FORT RILEY BUILT-UP AREAS

<u>MAP SHEET NUMBER</u>	<u>TITLE</u>
1	Fort Riley Built-Up Areas



NORTH



FORT RILEY



KANSAS

DIRECTORATE OF ENGINEERING AND HOUSING

TECHNICAL EXHIBIT 1
FORT RILEY BUILT-UP AREAS

FORT RILEY AREA MAP

Date 12-1-89

Drawn by DY

Scale 1" = 8000'

Sheet 1 of 1

Approved by

Project No.

DACA41-94-R-0012

**TE-2 LOCATION MAPS OF FAMILY HOUSING
STRUCTURES**

TE-2-I

TECHNICAL EXHIBIT 2

LOCATION MAPS OF FAMILY HOUSING STRUCTURES

<u>FAMILY HOUSING AREA NO.</u>	<u>MAP SHEET NUMBER</u>	<u>AREA LOCATION AND NAME</u>	<u>NUMBER OF QUARTERS BUILDINGS</u>	<u>NUMBER OF LIVING UNITS</u>	<u>NUMBER OF DETACHED GARAGES</u>
1	1	Main Post	25	48	2
2	1	Main Post	26	46	1
3	1	Main Post	11	45	4
4	1	Main Post	30	71	16
5	1	Main Post	22	63	4
6	2	Camp Whitside	1	1	
7	3	Marshall U.S. Army Airfield	11	11	1
8	4	Camp Forsyth, Colyer Manor	10	20	
9	4	Camp Forsyth, Colyer Manor	30	204	
10	4	Camp Forsyth, Colyer Manor	20	100	
11	4	Camp Forsyth, Colyer Manor	45	141	
12 (1)	5	Custer Hill, Ellis Heights (Existing)	26	157	
12 (1)	5	Custer Hill, Ellis Heights (New)	[32]	[101]	
13 (1)	5	Custer Hill, Ellis Heights (Existing)	16	80	
13 (1)	5	Custer Hill, Ellis Heights (New)	[39]	[131]	
14 (1)	5	Custer Hill, Ellis Heights (Existing)	32	196	
14 (1)	5	Custer Hill, Ellis Heights (New)	[??]	[185]	
15	5	Custer Hill, Old O'Donnell Heights	30	126	
16	5	Custer Hill, New O'Donnell Heights	16	32	
17	5	Custer Hill, Old Monteith Heights	35	70	
18	5	Custer Hill, New Monteith Heights	6	18	1
19	5&6	Custer Hill, Peterson Heights	54	108	
20	5&6	Custer Hill, Peterson Heights	88	176	
21	5&6	Custer Hill, Warner Heights	62	124	
22	5&6	Custer Hill, Warner Heights	52	104	
23	5&6	Custer Hill, Warner Heights	67	133	
24	6	Custer Hill, Warner Heights	76	152	
25	6	Custer Hill, Meade Heights	22	136	
26	6	Custer Hill, Meade Heights	28	154	
27	6	Custer Hill, McClellan Heights	24	156	
28	6	Custer Hill, McClellan Heights	22	136	
29	6	Custer Hill, Burnside Heights	18	108	
30	6	Custer Hill, Burnside Heights	18	120	
31	6	Custer Hill, South Warner Heights	<u>25</u>	<u>100</u>	
TOTALS			948	3,136	29

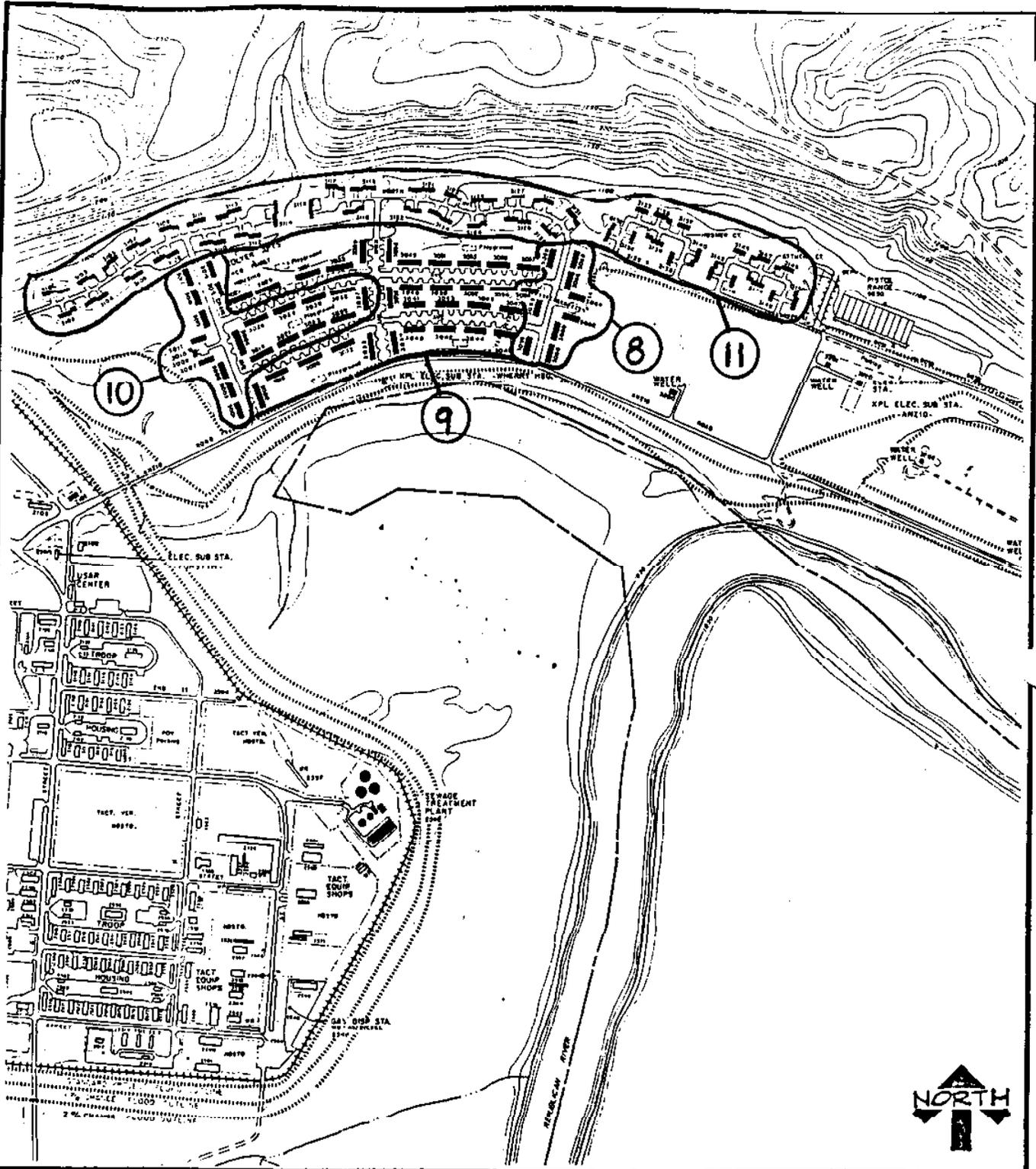
NOTES.

(1) Beginning in the spring of 1993 all 433 existing quarters (Family Housing Quarters Types 53 and 54) in Family Housing Areas 12, 13 and 14 will be demolished and replaced with 417 new quarters. Phase I for 232 new quarters (Family Housing Quarters Types 51 and 52) has been awarded and work has begun. Phase II for 185 new quarters (No Family Housing Quarters Types assigned yet) was advertised in the fall 1993 and work should begin sometime in 1994. New

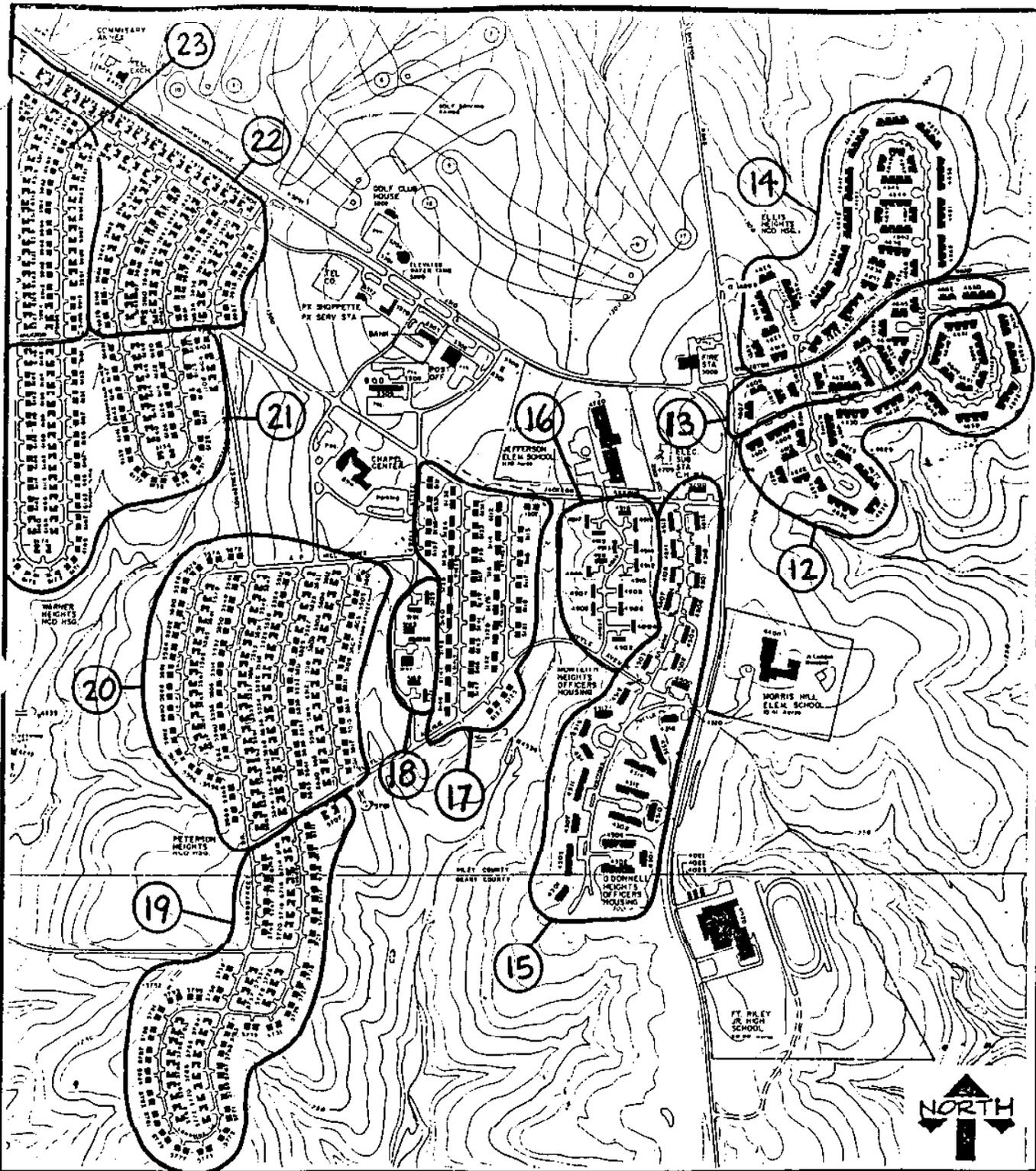
quarters are not included in totals. Map Sheet 5 shows the existing layout of Family Housing Areas 12, 13 and 14. A revised map will be supplied when the new layout is finalized.



<p>FORT RILEY</p>  <p>KANSAS</p>	<p>DIRECTORATE OF ENGINEERING AND HOUSING</p>	<p>Date 12-1-89</p>
	<p>TECHNICAL EXHIBIT 2</p> <p>FAMILY HOUSING STRUCTURES</p>	<p>Drawn by DY</p>
	<p>CAMP WHITSIDE AREA</p>	<p>Scale 1"=800'</p>
	<p>Approved by _____</p>	<p>Sheet 2 of 6</p> <p>Project No. _____</p>



<p>FORT RILEY</p>  <p>KANSAS</p>	<p>DIRECTORATE OF ENGINEERING AND HOUSING</p>	<p>Date 12-1-89</p>	
	<p>TECHNICAL EXHIBIT 2</p> <p>FAMILY HOUSING STRUCTURES</p>		<p>Drawn by DY</p>
	<p>CAMP FORSYTH FAMILY HOUSING AREA</p>		<p>Scale 1"=800'</p>
	<p>Approved by _____</p>		<p>Sheet 4 of 6</p> <p>Project No. _____</p>



<p>FORT RILEY</p> <p>KANSAS</p>	<p>DIRECTORATE OF ENGINEERING AND HOUSING</p>	<p>Date 12-1-89</p>
	<p>TECHNICAL EXHIBIT 2</p>	<p>Drawn by DY</p>
	<p>FAMILY HOUSING STRUCTURES</p>	<p>Scale 1"=800'</p>
	<p>CUSTER HILL FAMILY HOUSING EAST AREA</p>	<p>Sheet 5 of 6</p>
	<p>Approved by _____</p>	<p>Project No. _____</p>

DACA41-94-R-0012

**TE-3 LOCATION MAPS OF BILLETING
STRUCTURES**

TE-3-I

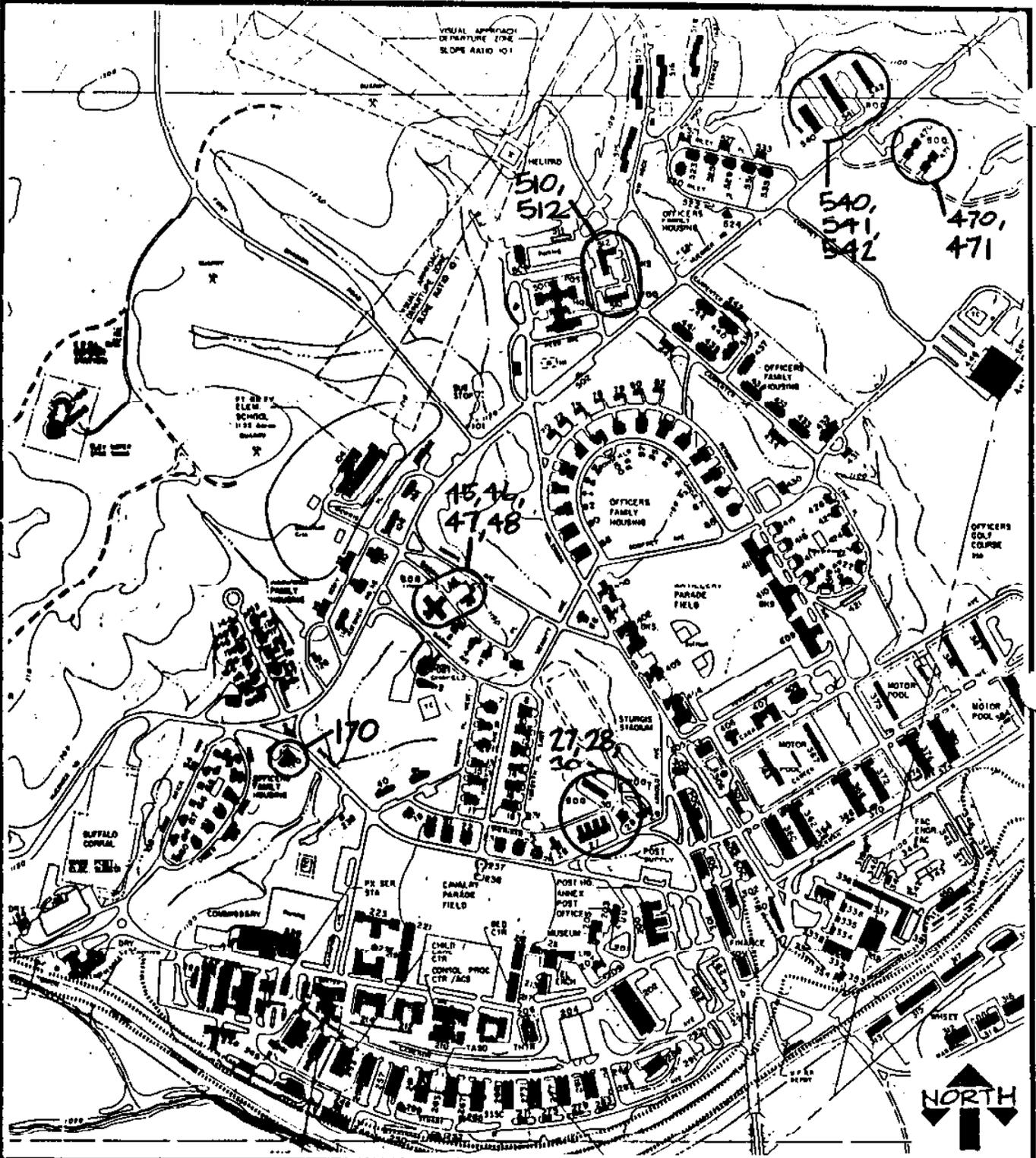
TECHNICAL EXHIBIT 3

LOCATION MAPS OF BILLETING STRUCTURES

<u>BUILDING NUMBER</u>	<u>BUILDING NAME</u>	<u>MAP SHEET NUMBER</u>	<u>TYPE OF STRUCTURE</u>	<u>LOCATION</u>	<u>NUMBER OF LIVING UNITS</u>
27	Arnold Hall	1	BOQ	Main Post	32
28	Bacon Hall	1	Transient Quarters	Main Post	1
30		1	Detached Garage	Main Post	
45	Carr Hall	1	Transient Quarters	Main Post	11
46		1	Detached Garage	Main Post	
47		1	Detached Garage	Main Post	
48		1	Detached Garage	Main Post	
170	Waters Hall	1	Guest House	Main Post	8
470		1	BOQ	Main Post	8
471		1	BOQ	Main Post	8
510	Grimes Hall	1	Transient Quarters	Main Post	9
512		1	SEBQ	Main Post	19
540	Symmonds Hall	1	SEBQ	Main Post	30
541	Lott Hall	1	Transient Quarters	Main Post	38
542	Hoyle Hall	1	Transient Quarters	Main Post	30
620	Barnes Hall	2	Transient Quarters	Camp Whitside	18
621	Kimball Hall	2	Transient Quarters	Camp Whitside	24
5309	Will Hall	3	Transient Quarters	Custer Hill	<u>30</u>
TOTALS					266

BOQ = Bachelor Officers Quarters

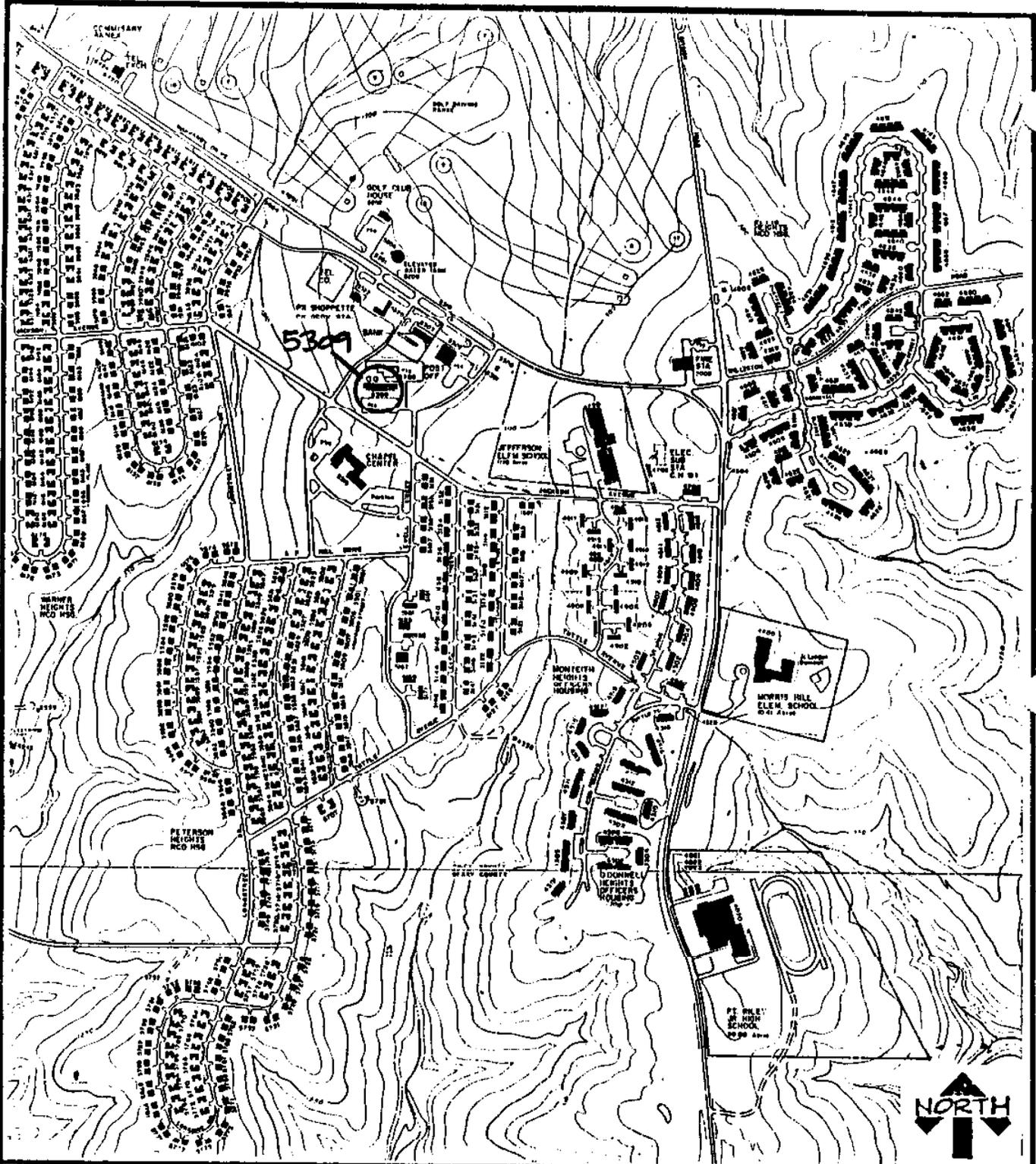
SEBQ = Senior Enlisted Bachelor Quarters



<p>FORT RILEY</p>  <p>KANSAS</p>	<p>DIRECTORATE OF ENGINEERING AND HOUSING</p>		<p>Date 12-1-89</p>
	<p>TECHNICAL EXHIBIT 3 BILLETING STRUCTURES</p>		<p>Drawn by <i>DX</i></p>
<p>MAIN POST AREA</p>		<p>Scale 1" = 800'</p>	
		<p>Approved by</p>	<p>Sheet 1 of 3</p>
		<p>Project No.</p>	



<p>FORT RILEY</p>  <p>KANSAS</p>	DIRECTORATE OF ENGINEERING AND HOUSING		Date 12-1-89
	TECHNICAL EXHIBIT 3		Drawn by DY
	BILLETING STRUCTURES		Scale 1"=800'
	CAMP WHITESIDE AREA		Sheet 7 of 3
	Approved by _____		Project No. _____



 FORT RILEY KANSAS	DIRECTORATE OF ENGINEERING AND HOUSING		Date 12-1-89
	TECHNICAL EXHIBIT 3		Drawn by DY
	BILLETING STRUCTURES		Scale 1"=800'
	CLUSTER HILL FAMILY HOUSING EAST AREA		Sheet 3 of 3
	Approved by _____		Project No. _____

DACA41-94-R-0012

**TE-4 LOCATION MAPS OF PLAYGROUNDS
AND DESCRIPTION OF INVENTORY**

TE-4-I

TECHNICAL EXHIBIT 4

LOCATION MAPS OF PLAYGROUNDS AND DESCRIPTION OF INVENTORY

<u>PLAY- GROUND NUMBER</u>	<u>MAP SHEET NUMBER</u>	<u>FAMILY HOUSING AREA NO.</u>	<u>LOCATION/ADDRESS</u>	<u>TYPE OF EQUIPMENT AND NUMBER OF EACH</u>	<u>SEE DE- SCRIPTION</u>
1-1/7	1	1	45 Barry Ave	6 Swings 1 Volleyball Court	
1-2/1	1	1	3 Barry Ave	1 Basketball Court	
1-3/12	1	1	9 Forsyth Pl West	1 Activity Center	Type 12
1-4/25	1	1	13 Forsyth Pl West	8 Swings 2 See-Saws 1 Slide 1 Activity Center 3 Benches	Type 2
1-5/2	1	1	17 Forsyth Pl West	2 Basketball Goals	
1-6/6	1	1	14 Forsyth Pl East	2 Swings 1 See-Saw 1 Slide 1 Chin Bar 1 Bench	
2-1/11	1	2	400 Holbrook Ave	3 swings 1 Slide 1 Activity Center 2 Benches	Type 1
2-2/15	1	2	91 Pershing Ave	2 Basketball Goals 1 Activity Center 2 Benches	Type 2
2-3/4	1	2	507 Reed Ave	1 Activity Center	Type 6
3-1/8	1	3	515 Rimrock Terr	3 Swings 1 Large Whirl 1 Slide 1 Climber 2 Benches	
3-2/1	1	3	517 Rimrock Terr	1 Basketball Goal	
3-3/1	1	3	516 Rimrock Terr	1 Basketball Goal	
3-4/11	1	3	516 Rimrock Terr	3 Swings 2 See-Saws 1 Large Whirl 1 Slide	

<u>PLAY- GROUND NUMBER</u>	<u>MAP SHEET NUMBER</u>	<u>FAMILY HOUSING AREA NO.</u>	<u>LOCATION/ADDRESS</u>	<u>TYPE OF EQUIPMENT AND NUMBER OF EACH</u>	<u>SEE DE- SCRIPTION</u>
3-4/11 Cont'd	1	3	516 Rimrock Terr	1 Climber 1 Basketball Goal 2 Benches	
3-5/9	1	3	518 Rimrock Terr	3 Swings 2 Large Whirls 1 Slide 1 Climber 2 Benches	
3-6/1	1	3	518 Rimrock Terr	1 Basketball Goal	
3-7/17	1	3	525 Riley Pl	4 Swings 2 See-Saws 1 Large Whirl 1 Climber 1 Basketball Goal 1 Activity Center 3 Benches	Type 1
3-8/1	1	3	533 Riley Pl	Basketball Goal	
4-1/12	1	4	114 Scott Pl	1 Activity Center 1 Bench	Type 2
4-2/22	1	4	Stone Ct Circle	4 Swings 1 Slide 3 See-Saws 1 Basketball Goal 1 Activity Center 2 Benches	Type 2
4-3/22	1	4	Lower Brick Row Courtyard	8 Swings 2 See-Saws 2 Slides 1 Basketball Goal 1 Tennis Court 1 Activity Center 3 Benches	Type 1
5-1/15	1	5	Upper Carpenter Ave Courtyard	3 Swings 2 See-Saws 1 Slide 1 Sandbox (Remnants) 1 Basketball Goal 1 Activity Center 2 Benches	Type 1
5-2/31	1	5	Lower Carpenter Ave	4 Swings 1 Slide	

<u>PLAY- GROUND NUMBER</u>	<u>MAP SHEET NUMBER</u>	<u>FAMILY HOUSING AREA NO.</u>	<u>LOCATION/ADDRESS</u>	<u>TYPE OF EQUIPMENT AND NUMBER OF EACH</u>	<u>SEE DE- SCRIPTION</u>
5-2/31 Cont'd	1	5	Lower Carpenter Ave	1 Sandbox 1 Basketball Goal 2 Activity Centers 2 Benches	Type 2
5-3/29	1	5	Lowe Pl Courtyard	3 Swings & 1 Rings 3 See-Saws 1 Slide 1 Basketball Goal 1 Tennis Court 1 Activity Center 1 Activity Center 2 Benches 1 Bulletin Board	Type 1 Type 2
NONE	2	6			
7-1/16	3	7	Durand Ct Courtyard	3 Swings & 1 Rings 2 See-Saw 1 Sandbox 1 Activity Center 1 Activity Center	Type 7 Type 8
7-2/1	3	7	788 Ray Rd	1 Basketball Goal	
9-1/13	4	9	3020 Rodney Ave	4 Swings 4 See-Saws 2 Slides 1 Basketball Goal 2 Benches	
9-2/13	4	9	3042 Rodney Ave	4 Swings 4 See-Saws 2 Slides 1 Basketball Goal 2 Benches	
9-3/13	4	9	3053 Moore Ave	4 Swings 4 See-Saws 2 Slides 1 Basketball Goal 2 Benches	
9-4/29	4	9	3029 Moore Ave	4 Swings 4 See-Saws 2 Slides 1 Basketball Goal 1 Activity Center 1 Activity Center 2 Benches	Type 1 Type 2

<u>PLAY- GROUND NUMBER</u>	<u>MAP SHEET NUMBER</u>	<u>FAMILY HOUSING AREA NO.</u>	<u>LOCATION/ADDRESS</u>	<u>TYPE OF EQUIPMENT AND NUMBER OF EACH</u>	<u>SEE DE- SCRIPTION</u>
10-1/5	4	10	3015 Craig Ave	1 Activity Center	Type 1
10-2/14	4	10	3023 Rodney Ave	4 Swings 4 See-Saws 2 Slides 1 Basketball Goal 2 Benches 1 Bulletin Board	
11-1/4	4	11	3140 Hosmer Ct	1 Activity Center	Type 6
11-2/21	4	11	3131 Booth Ave	4 Swings 1 Spiral Slide 1 Large Whirl 1 Small Whirl 1 Dome Climber 1 Activity Center 2 Benches	Type 11
11-3/16	4	11	3108 Booth Ave	2 Basketball Goals 1 Tetherball Set 1 Activity Center 2 Benches	Type 2
12-1/37	5	12	4624 Clarke St	12 Swings 5 See-Saws 1 Slide 1 Basketball Goal 1 Activity Center 1 Activity Center 2 Benches	Type 1 Type 2
12-2/17	5	12	4632 Roosevelt St	1 Activity Center 1 Activity Center 1 Bench	Type 1 Type 2
12-3/42	5	12	4649 Lee St	12 Swings 5 See-Saws 1 Slide 2 Basketball Goals 1 Sand Tire 1 Activity Center 1 Activity Center 5 Benches	Type 1 Type 2
12-4/12	5	12	4654 Lee St	1 Activity Center 1 Bench	Type 2
13-1/28	5	13	4631 Roosevelt St	12 Swings 5 See-Saws	

<u>PLAY- GROUND NUMBER</u>	<u>MAP SHEET NUMBER</u>	<u>FAMILY HOUSING AREA NO.</u>	<u>LOCATION/ADDRESS</u>	<u>TYPE OF EQUIPMENT AND NUMBER OF EACH</u>	<u>SEE DE- SCRIPTION</u>
13-1/28 Cont'd	5	13	4631 Roosevelt St	1 Slide 1 Basketball Goal 1 Sand Tire 1 Activity Center 2 Benches 1 Bulletin Board	Type 1
14-1/12	5	14	4819 McCormick St	1 Activity Center 1 Bench	Type 2
14-2/6	5	14	4831 McCormick St	1 Activity Center 1 Bench	Type 1
14-3/14	5	14	4852 McCormick St	6 Swings 3 See-Saws 1 Slide 1 Basketball Goal 1 Sand Tire 2 Benches	
14-4/24	5	14	4856 McCormick St	6 Swings 3 See-Saws 1 Slide 1 Basketball Goal 1 Activity Center 2 Benches	Type 2
14-5/18	5	14	4860 McCormick St	6 Swings 3 See-Saws 1 Slide 1 Basketball Goal 1 Activity Center 2 Benches	Type 1
15-1/13	5	15	4507 Wofford Dr	4 Swings 4 Seat Hopride 1 Slide 1 Large Whirl 1 Climber 1 Basketball Goal 1 Bench	
15-2/17	5	15	4319 Wofford Dr	1 Activity Center 1 Activity Center 1 Bench	Type 1 Type 2
15-3/14	5	15	4318 Tuttle Pl	4 Swings 4 Seat Hoprides 1 Slide 1 Large Whirl	

<u>PLAY- GROUND NUMBER</u>	<u>MAP SHEET NUMBER</u>	<u>FAMILY HOUSING AREA NO.</u>	<u>LOCATION/ADDRESS</u>	<u>TYPE OF EQUIPMENT AND NUMBER OF EACH</u>	<u>SEE DE- SCRIPTION</u>
15-3/14 Cont'd	5	15	4318 Tuttle Pl	1 Climber 1 Basketball Goal 2 Benches	
15-4/19	5	15	4302 Wofford Dr	1 Baseball Backstop 1 Activity Center 1 Activity Center 2 Benches	Type 1 Type 2
16-1/12	5	16	4917 Jackson Ave	1 Dome Climber 1 Activity Center 1 Activity Center 2 Benches 1 Bulletin Board	Type 7 Type 8
17-1/17	5	17	5157 Ewell St	9 Swings 4 See-Saws 1 Slide 1 Basketball Goal 2 Benches	
18-1/17	5	18	5167 Ewell St	1 Activity Center 1 Activity Center 1 Bench	Type 1 Type 2
19-1/27	5	19	5707 Tuttle Ave	1 Activity Center 1 Activity Center 1 Large Whirl 1 Small Whirl 1 Bench 1 Bulletin Board	Type 1 Type 3
19-2/6	5	19	5755 Longstreet Dr	3 Swings 1 Climber 2 Benches	
19-3/1	5	19	5756 Longstreet Dr	1 Basketball Goal	
19-4/21	5	19	5775 Lorraine Cir	9 Swings 3 See-Saws 1 Slide 1 Climber 4 Animal Hops 1 Basketball Goal 2 Benches	
20-1/32	5	20	Longstreet Dr & A.P. Hill Dr	9 Swings 3 See-Saws 1 Slide 1 Basketball Goal	

<u>PLAY- GROUND NUMBER</u>	<u>MAP SHEET NUMBER</u>	<u>FAMILY HOUSING AREA NO.</u>	<u>LOCATION/ADDRESS</u>	<u>TYPE OF EQUIPMENT AND NUMBER OF EACH</u>	<u>SEE DE- SCRIPTION</u>
20-1/32	5	20	Longstreet Dr & A.P. Hill Dr	1 Activity Center 1 Activity Center 2 Benches	Type 1 Type 2
21-1/31	5&6	21	6161 Gordon Pl	9 Swings 3 See-Saws 1 Slide 1 Basketball Goal 1 Activity Center 1 Activity Center 2 Benches	Type 1 Type 2
22-1/32	5&6	22	5958 Beauregard Pl	9 Swings 3 See-Saws 1 Slide 1 Basketball Goal 1 Activity Center 1 Activity Center 2 Benches 1 Bulletin Board	Type 1 Type 2
23-1/31	6	23	6318 Pickett Ave	9 Swings 3 See-Saws 1 Slide 1 Basketball Goal 1 Activity Center 1 Activity Center 2 Benches	Type 1 Type 2
24-1/31	6	24	6531 Bragg Pl	9 Swings 3 See-Saws 1 Slide 1 Basketball Goal 1 Activity Center 1 Activity Center 2 Benches	Type 1 Type 2
25-1/9	6	25	Jackson Ave & Warren Rd	4 Tennis Courts 3 Basketball Goals 1 Bench 1 Bulletin Board	
25-2/99	6	25	Meade Lp 6817	10 Swings 3 Toddler Swings 3 See-Saws 1 Large Slide 1 Small Slides 1 Dome Climber 1 A-Frame Climber 1 Arch Climber	

<u>PLAY- GROUND NUMBER</u>	<u>MAP SHEET NUMBER</u>	<u>FAMILY HOUSING AREA NO.</u>	<u>LOCATION/ADDRESS</u>	<u>TYPE OF EQUIPMENT AND NUMBER OF EACH</u>	<u>SEE DE- SCRIPTION</u>
25-2/99 Cont'd	6	25	Meade Lp 6817	1 Horizontal Ladder 1 Large Whirl 1 Small Whirl 1 4 Seat Whirl 13 Animal Hops 1 Parallel Bars 1 Balance Beam 1 Space Shuttle Ride 5 Sandboxes 2 Tetherball Sets 1 Baseball Backstop 1 Activity Center 1 Activity Center 1 Activity Center 17 Benches	Type 3 Type 4 Type 9
27-1/78	6	27	6716 McClelland Lp	8 Swings 7 Toddler Swings 4 See-Saws 1 Large Slide 2 Small Slides 1 Dome Climber 1 A-Frame Climber 1 Large Whirl 1 Small Whirl 1 4 Seat Whirl 10 Animal Hops 1 Parallel Bars 1 Balance Beam 1 Space Shuttle Ride 1 Elevated Sandbox 2 Tetherball Sets 2 Basketball Goals 1 Baseball Backstop 1 Activity Center 1 Activity Center 8 Benches 1 Bulletin Board	Type 3 Type 10
29-1/71	6	29	6764 Burnside Lp	8 Swings 3 Toddler Swings 4 See-Saws 1 Large Slide 2 Small Slides 1 Dome Climber 1 A-Frame Climber 1 Large Whirl 1 Small Whirl 1 4 Seat Whirl 10 Animal Hops	

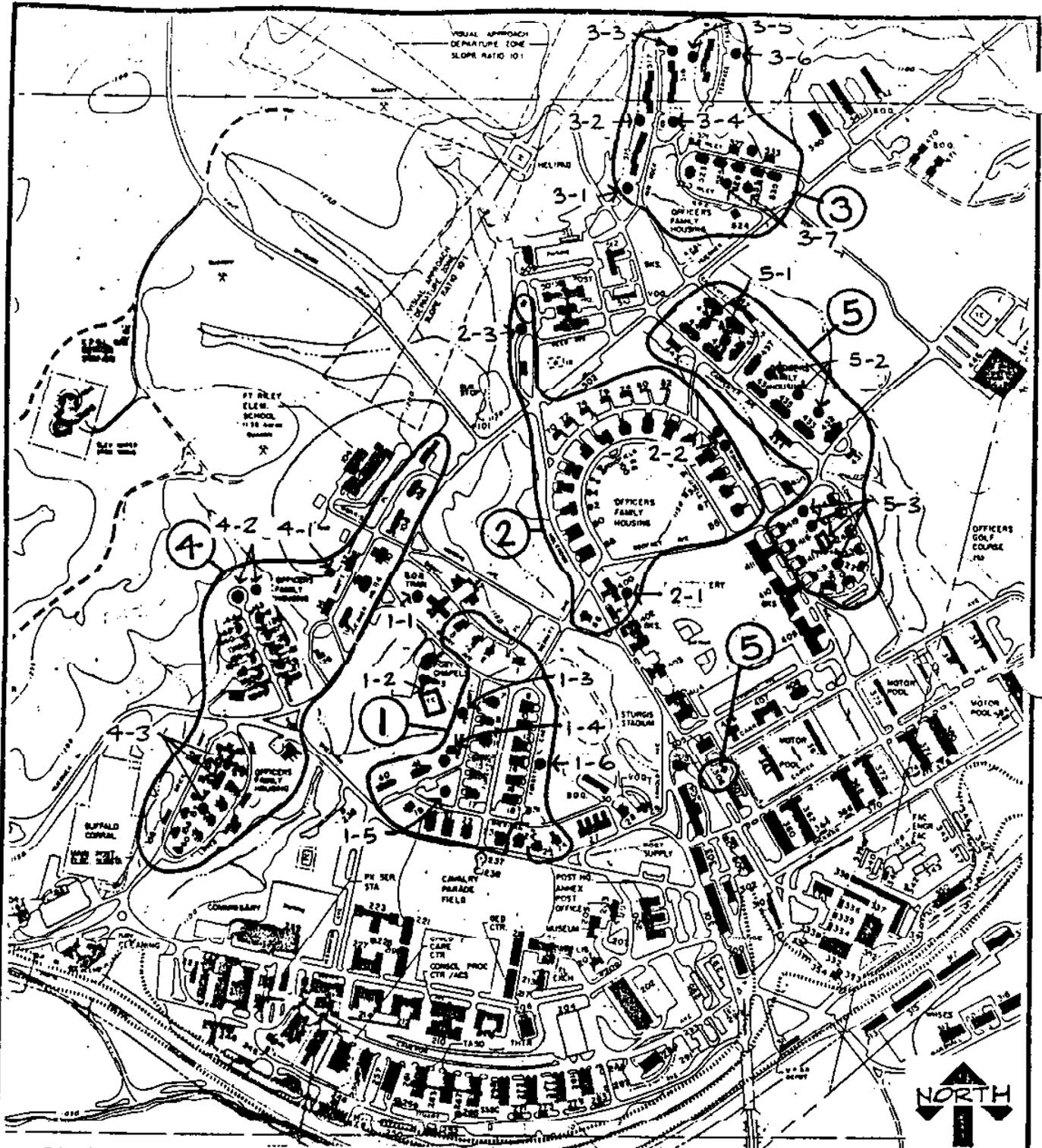
<u>PLAY- GROUND NUMBER</u>	<u>MAP SHEET NUMBER</u>	<u>FAMILY HOUSING AREA NO.</u>	<u>LOCATION/ADDRESS</u>	<u>TYPE OF EQUIPMENT AND NUMBER OF EACH</u>	<u>SEE DE- SCRIPTION</u>
29-1/71 Cont'd	6	29	6764 Burnside Lp	1 Parallel Bars 1 Balance Beam 1 Space Shuttle Ride 1 Elevated Sandbox 2 Tetherball Sets 2 Basketball Goals 1 Activity Center 1 Activity Center 6 Benches 1 Bulletin Board	Type 3 Type 10
31-1/7	6	31	6247 Fleetwood Ct	1 Slide 1 Climber 2 Animal Hops 1 Balance Barrel 2 Benches	
31-2/6	6	31	6219 Knight Lp	1 Activity Center 1 Bench	Type 1
31-3/20	6	31	6225 Knight Lp	2 Slides 1 Large Sand Area 1 Wood Fort 1 Cement Crawl Tube 1 Wood Tee Pee 3 Animal Hops 1 Concrete Sandbox 1 Timber Climb 1 Activity Center 4 Benches	Type 1
31-4/9	6	31	6211 Tobie Ct	1 Activity Center 2 Benches	Type 5

NOTES:

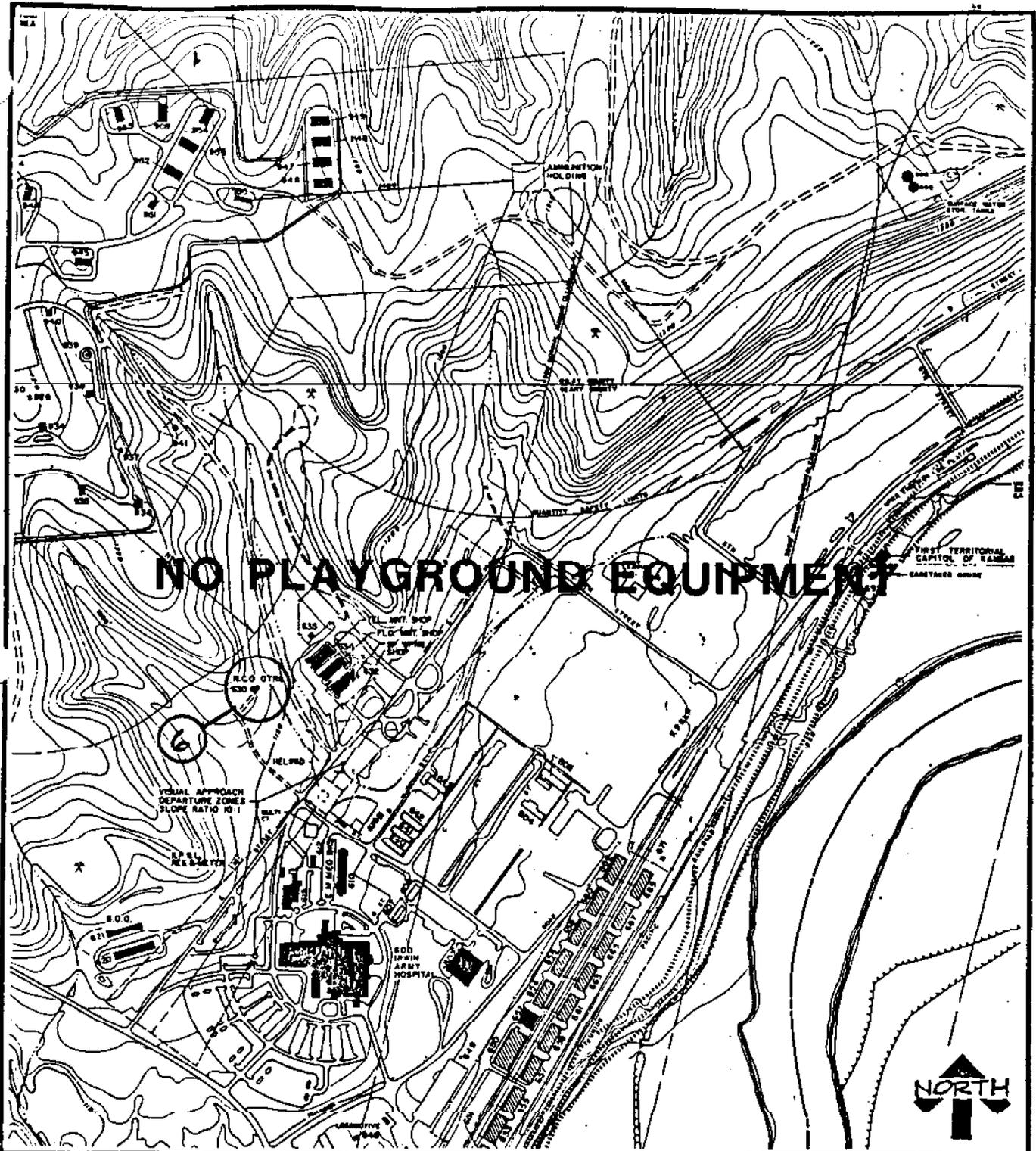
(1) PLAYGROUND NUMBER: First character is FAMILY HOUSING AREA NUMBER, second character is SEQUENTIAL NUMBER OF PLAYGROUNDS IN AREA, third character is the number PLAYGROUND ELEMENTS IN THE PLAYGROUND. For example: Playground 1-1/7 is Family Housing Area 1, Playground 1, with 7 Playground Elements in the Playground (Six Swings and 1 Volleyball Court).

(2) PLAYGROUND ELEMENT: Is defined as a component of a playground such as a swing, a slide, a ladder, a bench, a sandbox, a basketball goal, a tennis court, etc. Activity Centers are incorporated by the number of Playground Elements in the Activity Center. For example, a Type 1 Activity Center has 5 Playground Elements.

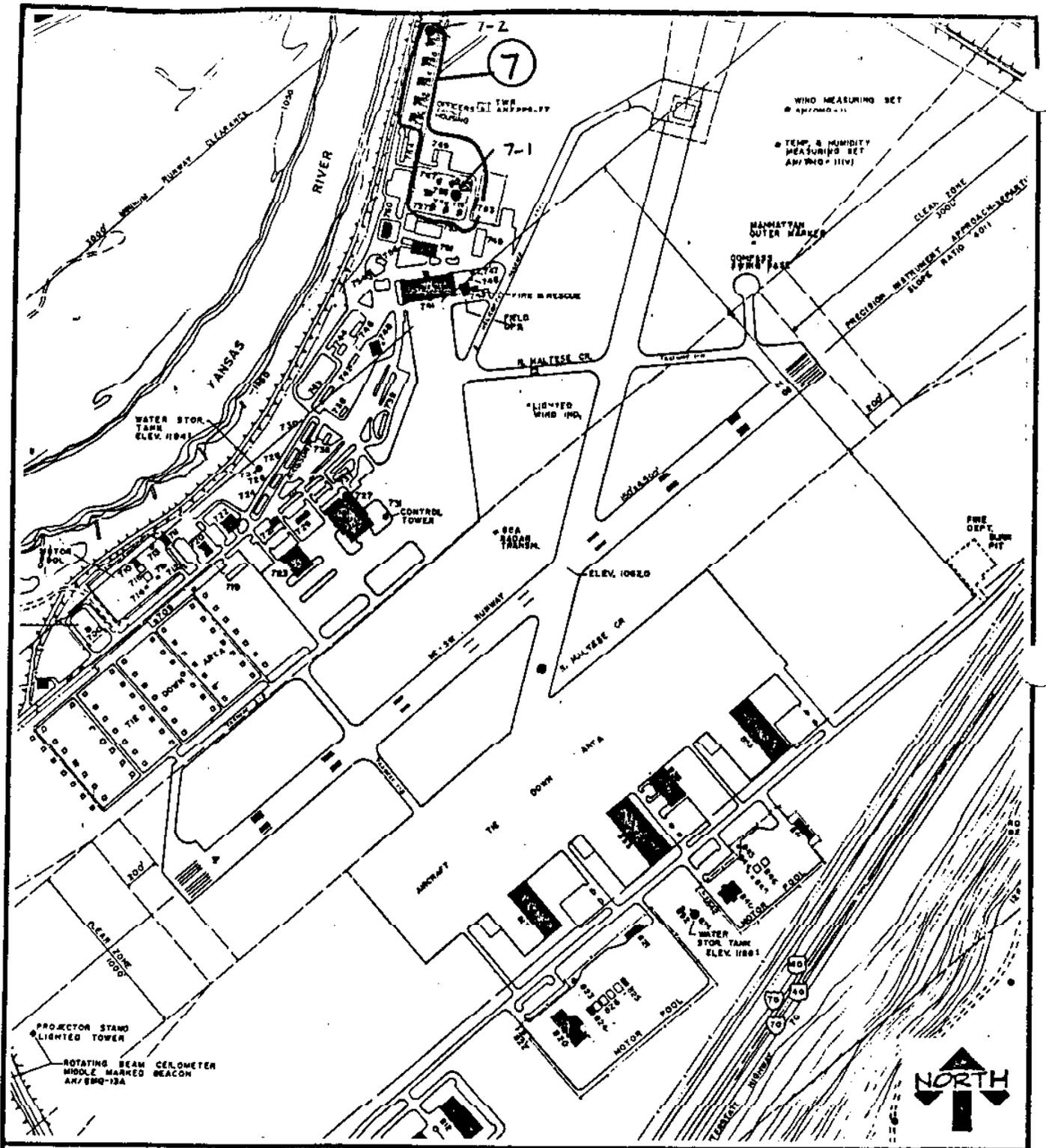
(3) ADDITIONS AND DELETIONS: Additions and deletions to the list will be accomplished by Contract Modification.



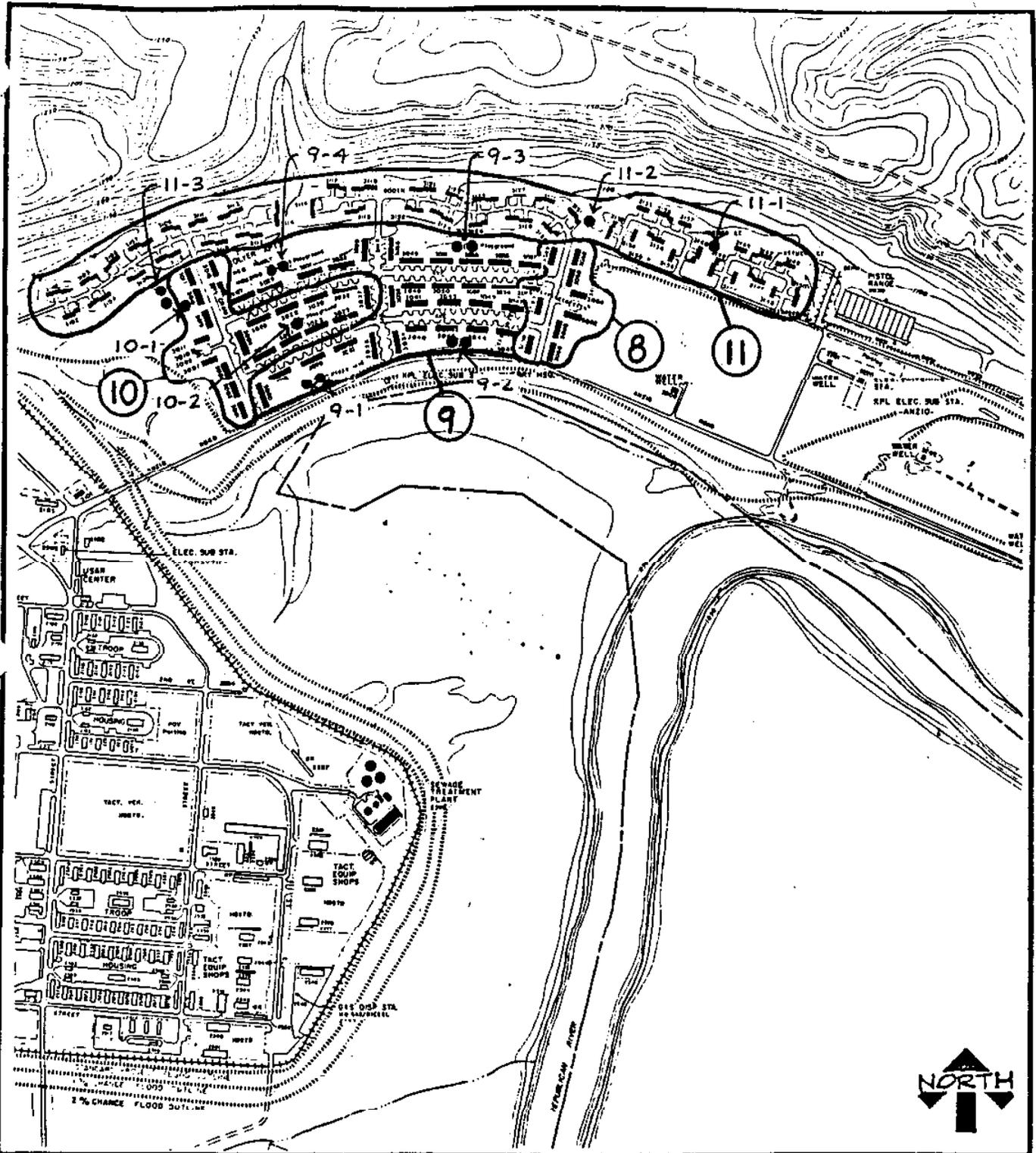
<p>FORT RILEY</p>  <p>KANSAS</p>	DIRECTORATE OF ENGINEERING AND HOUSING		Date 12-1-89
	TECHNICAL EXHIBIT 4 PLAYGROUNDS		Drawn by DY
	MAIN POST AREA		Scale 1" = 800'
			Sheet 1 of 6
		Approved by	Project No.



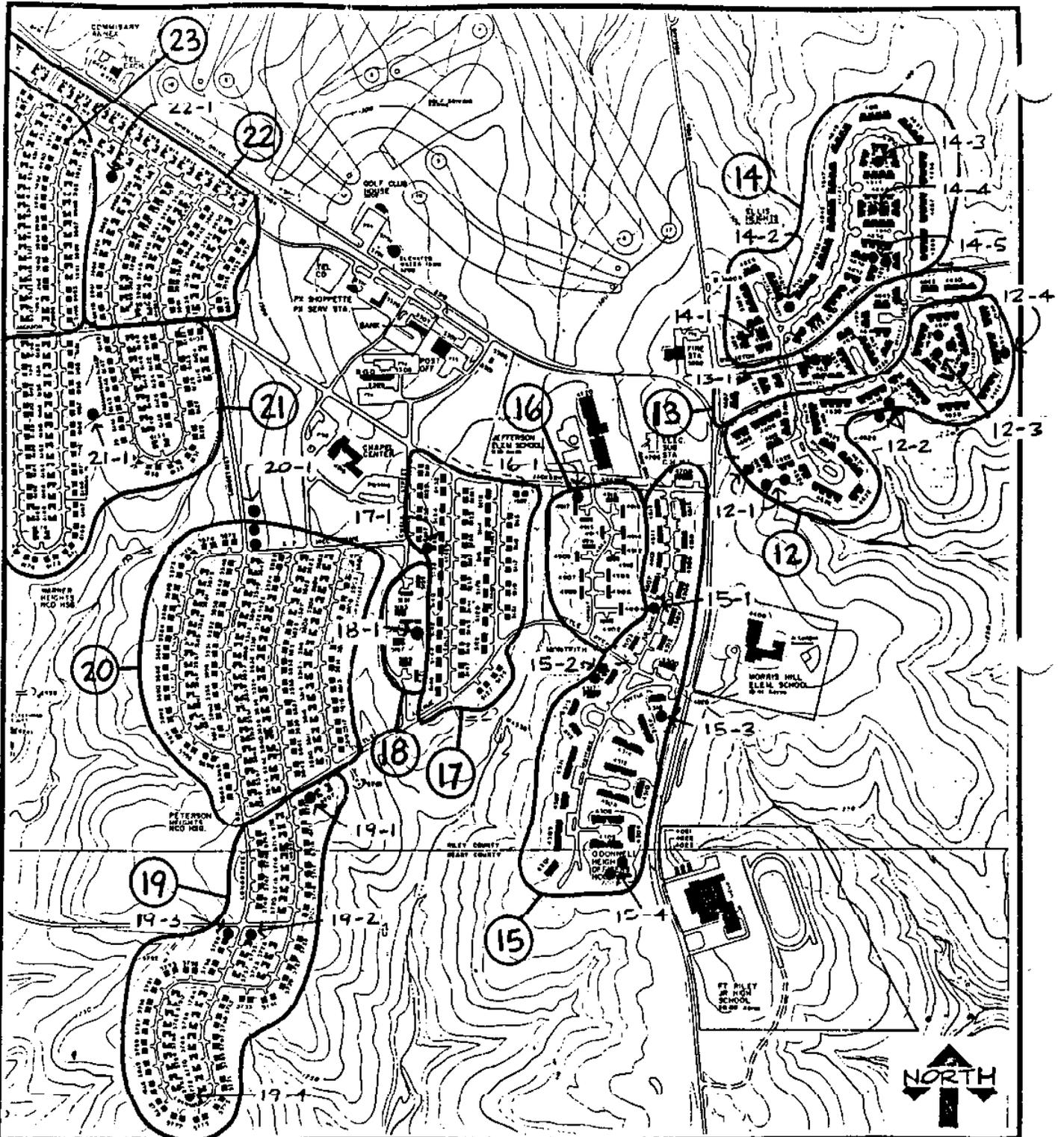
<p>FORT RILEY</p> <p>KANSAS</p>	<p>DIRECTORATE OF ENGINEERING AND HOUSING</p>	<p>Date 12-1-89</p>
	<p>TECHNICAL EXHIBIT 4</p> <p>PLAYGROUNDS</p>	<p>Drawn by DY</p>
	<p>CAMP WHITESIDE AREA</p>	<p>Scale 1"=800'</p>
	<p>Approved by _____</p>	<p>Sheet 2 of 6</p> <p>Project No. _____</p>



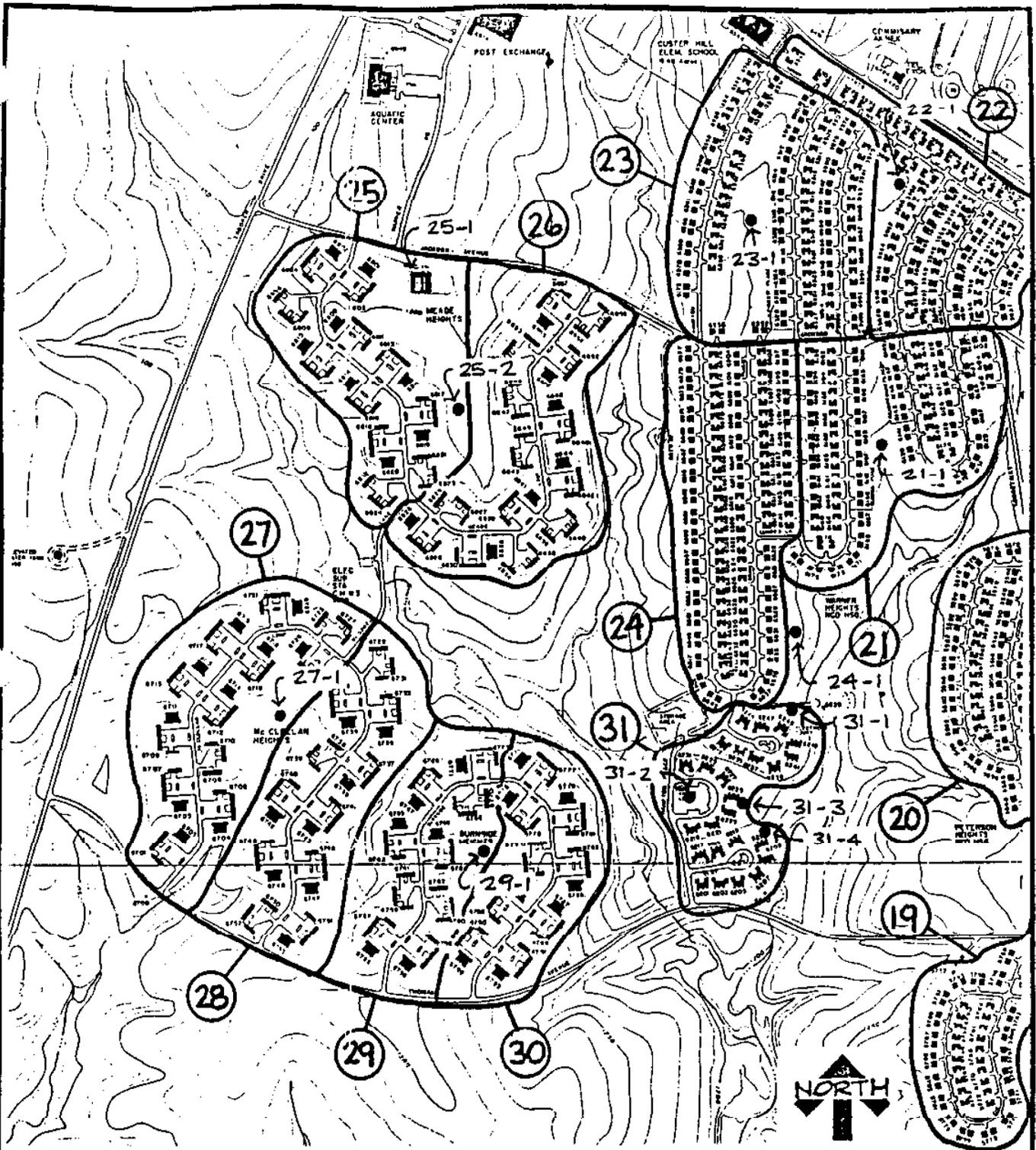
 FORT RILEY KANSAS	DIRECTORATE OF ENGINEERING AND HOUSING		Date 12-1-89
	TECHNICAL EXHIBIT 4		Drawn by DY
	PLAYGROUNDS		Scale 1"=800'
	MARSHALL U.S. ARMY AIRFIELD		Sheet 3 of 6
		Approved by	Project No.



<p>FORT RILEY</p>  <p>KANSAS</p>	<p>DIRECTORATE OF ENGINEERING AND HOUSING</p>	<p>Date 12-1-89</p>
	<p>TECHNICAL EXHIBIT 4</p> <p>PLAYGROUNDS</p>	<p>Drawn by DY</p>
	<p>CAMP FORSYTH FAMILY HOUSING AREA</p>	<p>Scale 1"=800'</p>
	<p>Approved by _____</p>	<p>Sheet 4 of 6</p> <p>Project No. _____</p>



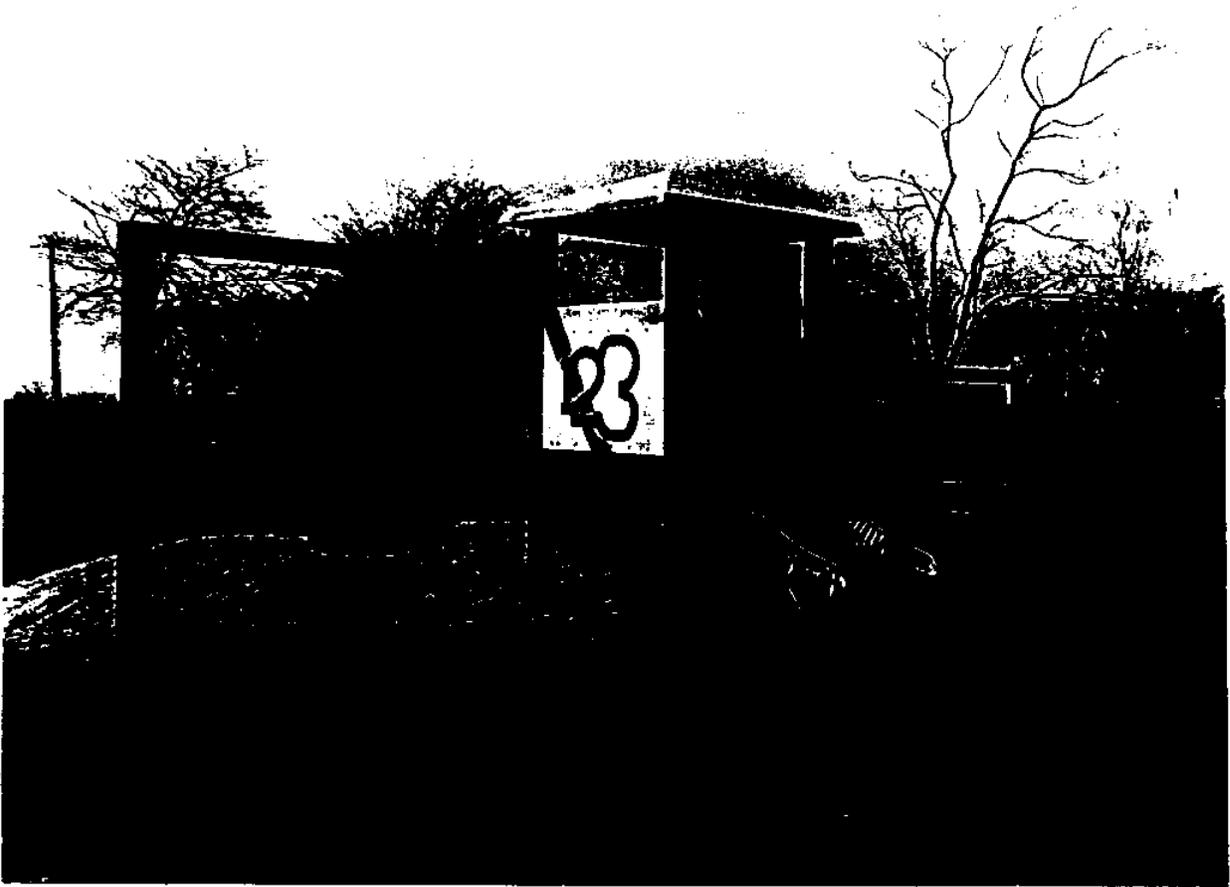
<p>FORT RILEY</p>  <p>KANSAS</p>	<p>DIRECTORATE OF ENGINEERING AND HOUSING</p>		<p>Date 12-1-89</p>
	<p>TECHNICAL EXHIBIT 4 PLAYGROUNDS</p>		<p>Drawn by DY</p>
	<p>CUSTER HILL FAMILY HOUSING EAST AREA</p>		<p>Scale 1"=800'</p>
	<p>Approved by</p>		<p>Sheet 5 of 6</p>
			<p>Project No.</p>



<p>FORT RILEY</p> <p>KANSAS</p>	<p>DIRECTORATE OF ENGINEERING AND HOUSING</p>	<p>Date 12-1-89</p>
	<p>TECHNICAL EXHIBIT 4 PLAYGROUNDS</p>	<p>Drawn by DY</p>
	<p>CUSTER HILL FAMILY HOUSING WEST AREA</p>	<p>Scale 1"=800'</p>
	<p>Approved by</p>	<p>Sheet 6 of 6</p>
		<p>Project No.</p>

INDEX OF ACTIVITY CENTER DESCRIPTIONS

<u>DESCRIPTION NUMBER</u>	<u>TITLE</u>
1	Activity Center Type 1
2	Activity Center Type 2
3	Activity Center Type 3
4	Activity Center Type 4
5	Activity Center Type 5
6	Activity Center Type 6
7	Activity Center Type 7
8	Activity Center Type 8
9	Activity Center Type 9
10	Activity Center Type 10
11	Activity Center Type 11
12	Activity Center Type 12
13	Activity Center Type 13
14	Activity Center Type 14
15	Activity Center Type 15
16	Activity Center Type 16
17	Activity Center Type 17
18	Activity Center Type 18



ACTIVITY CENTER TYPE 1

Activity Center Type 1 consists of a construction heart redwood framework set in concrete; two elevated platforms; one fiberglass roof; and four fiberglass side panels. Activities include: horizontal ladder, stainless steel tube, wood steps, steel slide, and tire swing.



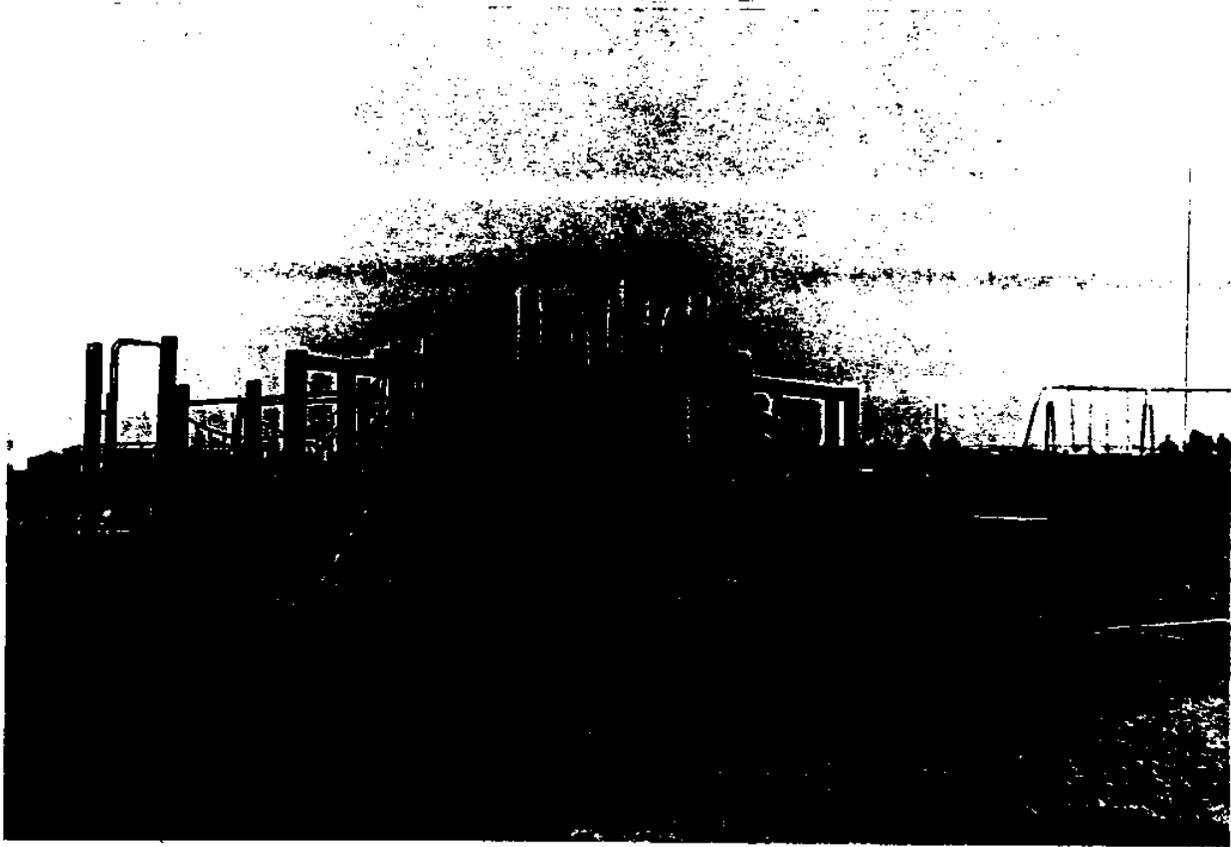
ACTIVITY CENTER TYPE 2

Activity Center Type 2 consists of a construction heart redwood framework set in concrete and four elevated platforms. Activities include: horizontal ladder, two steel ladders, wood swinging bridge, arch climber, two slides, balance beam, fire pole, and two tire swings.



ACTIVITY CENTER TYPE 3

Activity Center Type 3 consists of a construction heart redwood framework set in concrete and five elevated platforms. Activities include: wood swinging bridge, two steel steps, five steel ladders, chain ladder, four slides, two fire poles, and three climbing ropes.



ACTIVITY CENTER TYPE 4

Activity Center Type 4 consists of a construction heart redwood framework set in concrete and five elevated platforms. Activities include: horizontal ladder, wood swinging bridge, steel steps, two steel ladders, chain ladder, three slides, fire pole, climbing rope, and tire swing.

DACA41-94-R-0012

**TE-5 LOCATION MAPS OF BUS STOP
SHELTERS**

TE-5-1

TECHNICAL EXHIBIT 5

LOCATION MAPS OF BUS STOP SHELTERS

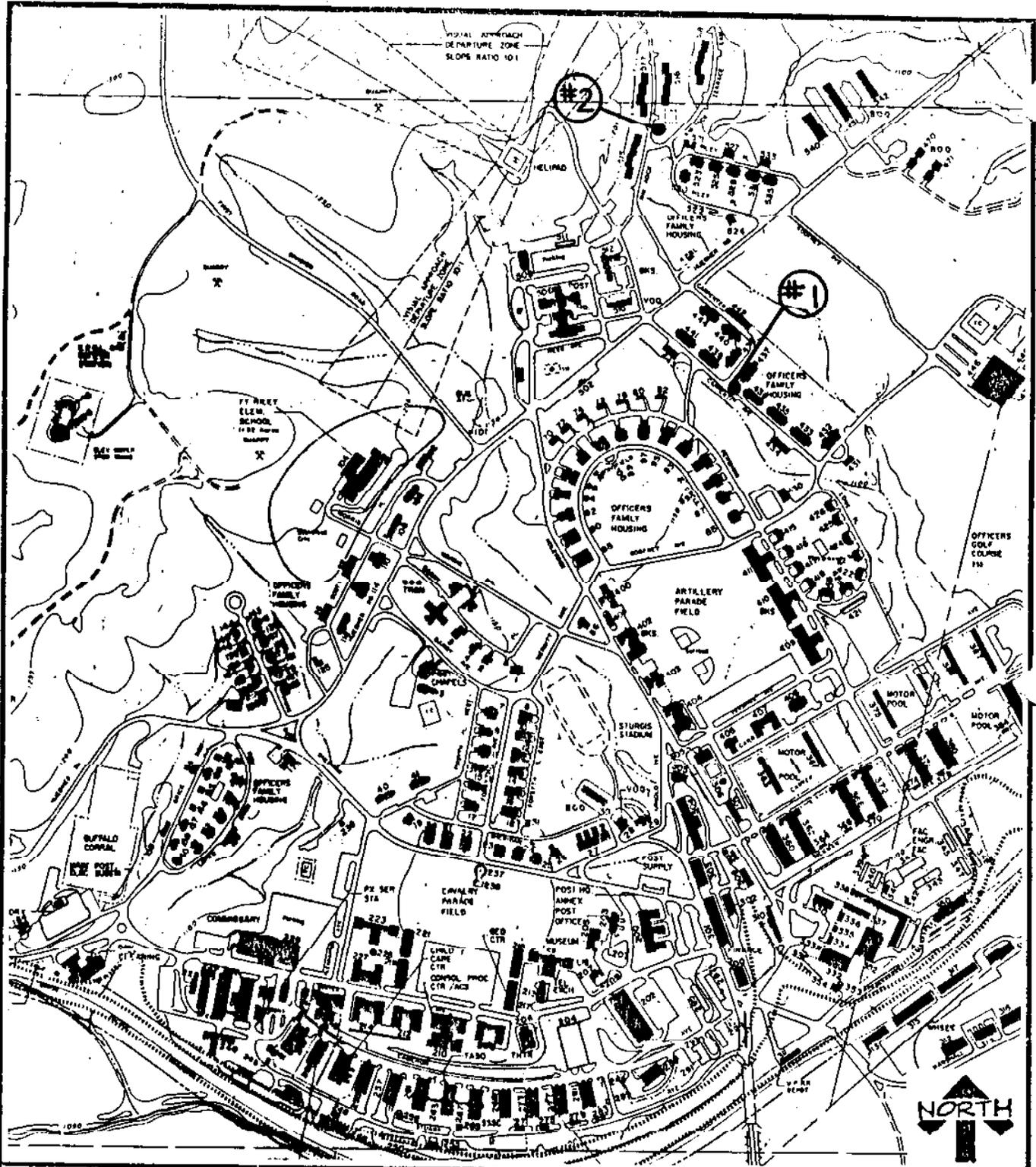
<u>BUS SHELTER NUMBER</u>	<u>TYPE OF SHELTER</u>	<u>MAP SHEET NUMBER</u>	<u>LOCATION ADJACENT BUILDING/STREET</u>	<u>FAMILY HOUSING AREA AND NAME</u>
1	Type 1	1	436 Carpenter Ave	3 Main Post
2	Type 1	1	515 Rimrock Terr	3 Main Post
3	Type 2	2	McCormick Rd & Booth Ave	8 Colyer
4	Type 2	2	McCormick Rd & Craig Ave	10 Colyer
5	Type 3	2	3121 Booth Ave	11 Colyer
6	Type 3	2	3142 Pistol Range Rd	11 Colyer
7	Type 3	3	4819 Williston Point Rd	14 Ellis Hts
8	Type 3	3	4860 Williston Point Rd	14 Ellis Hts
9	Type 3	4	6332 Jackson Ave	23 Warner Hts
10	Type 3	4	6810 Meade Loop	25 Meade Hts
11	Type 3	4	6826 Meade Loop	26 Meade Hts
12	Type 3	4	6852 Meade Loop	26 Meade Hts
13	Type 3	4	6703 McClelland Loop	27 McClelland Hts
14	Type 3	4	6715 McClelland Loop	27 McClelland Hts
15	Type 3	4	6733 McClelland Loop	28 McClelland Hts
16	Type 3	4	6751 McClelland Loop	28 McClelland Hts
17	Type 3	4	6757 Burnside Loop	29 Burnside Hts
18	Type 3	4	6771 Burnside Loop	29 Burnside Hts
19	Type 3	4	6201 Tobie Ct	31 South Warner
20	Type 3	4	6219 Knight Loop	31 South Warner
21	Type 3	4	6233 Fleetwood Ct	31 South Warner

DESCRIPTION OF TYPES:

TYPE 1: Custom built brick structure with asphalt shingle pitched roof. Partially enclosed in front. Polycarbonate glazing at windows. Aluminum bench. Concrete slab base. (See Sheets 5 and 6).

TYPE 2: Custom built brick structure with asphalt shingle pitched roof. Partially enclosed in front. Polycarbonate glazing at windows. Aluminum bench. Concrete slab base. (See Sheets 7 and 8).

TYPE 3: Factory prefabricated aluminum frame shelter partially enclosed in front. Polycarbonate glazing all around with acrylic skylight dome. Aluminum bench. Concrete slab base. (See Sheets 9 and 10).



FORT RILEY

KANSAS

DIRECTORATE OF ENGINEERING AND HOUSING

TECHNICAL EXHIBIT 5

BUS STOP SHELTERS

MAIN POST AREA

Date	12-1-89
Drawn by	DY
Scale	1" = 800'
Sheet	1 of 10
Approved by	Project No.

DACA41-94-R-0012

**TE-6 LOCATION MAPS OF COMMON AREA
GROUNDS MAINTENANCE**

TE-6-I

TECHNICAL EXHIBIT 6

LOCATION MAPS OF COMMON AREA GROUNDS MAINTENANCE

<u>MAP SHEET NUMBER</u>	<u>TITLE</u>	<u>APPROXIMATE SQUARE FOOTAGE OF AREAS TO BE MOWED</u>
1	Main Post - Family Housing Areas 1 thru 5	588,000
2	Marshall Airfield - Family Housing Area 7	5,000
3	Camp Forsyth - Family Housing Areas 8 thru 11	655,400
4	Custer Hill - Family Housing Areas 12 thru 14	71,000
5	Custer Hill - Family Housing Areas 15 thru 22	877,900
6	Custer Hill - Family Housing Areas 22 thru 31	1,694,500

**TE-9 LIST OF FAMILY HOUSING QUARTERS
TYPES, ADDRESSES, AND DESCRIPTIONS OF
EACH FAMILY HOUSING QUARTERS TYPE**

TECHNICAL EXHIBIT 9

LIST OF FAMILY HOUSING QUARTERS TYPES, ADDRESSES, AND DESCRIPTIONS
OF EACH FAMILY HOUSING QUARTERS TYPE

NOTES:

- (1) PREVIOUS FAMILY HOUSING QUARTERS TYPE is listed in this column when the QUARTERS TYPE in the first column is different from the QUARTERS TYPE used in the previous Housing Maintenance Contract.
- (2) APPROXIMATE GROSS SQUARE FEET OF FLOOR AREA is the area within the perimeter of exterior walls in a set of quarters as measured from the inside surface of the exterior and party walls, with no deduction for closets, hallways, stairways, thickness of interior walls, columns, or other interior features. This area includes readily accessible finished, semifinished, and unfinished attics, basements, and all storage areas. This area also includes all common use hallways, stairways, mechanical equipment rooms, and laundry rooms. It does not include attached garages and carports, and patios and porches. In essence, this is the total gross square footage of a building divided by the number of apartments. When two areas appear in this column the first area is for quarters with full basements; the second area is for quarters with partial basements.
- (3) APPROXIMATE NET SQUARE FEET OF FLOOR AREA is the area within the perimeter of exterior walls in a set of quarters as measured from the inside surface of the exterior and party walls, with no deduction for hallways, stairs, closets, thickness of interior walls, columns, or other interior features. This area includes only finished, normally habitable, attics and basements, and private storage areas. It does not include common use spaces, attached garages and carports, and patios and porches.
- (4) Small bedrooms in first floor apartments without closets are not considered bedrooms. First floor apartments are considered 3 bedroom 2 bath and second floor apartments are considered 4 bedroom 2 bath.
- (5) Small bedrooms in first floor apartments without closets are not considered bedrooms.
- (6) Partial basement divided into storage areas for all apartments in building. Buildings 3006, 3007, 3019, 3020, 3021, 3023, 3025, 3026, 3028, 3029, 3030, 3032, 3037, 3044, 3052, 3053, and 3064 have full basements.
- (7) Beginning in the spring of 1993 all 433 existing quarters (Family Housing Quarters Types 53 and 54) in Family Housing Areas 12, 13 and 14 will be demolished and replaced with 417 new quarters. Phase I for 232 new quarters (Family Housing Quarters Types 51 and 52) has been awarded and work has begun. Phase II for 185 new quarters (No Family Housing Quarters Types assigned yet) was advertised in the fall 1993 and work should begin sometime in 1994.
- (8) Sloped ceiling in main living area.
- (9) Unoccupied Quarters.

DACA41-94-R-0012

**TE-10 LIST OF BILLETS TYPES, ADDRESSES,
AND DESCRIPTIONS OF EACH BILLETS TYPE**

TE-10-I

TECHNICAL EXHIBIT 10

LIST OF BILLETS TYPES, ADDRESSES, AND DESCRIPTIONS OF EACH BILLETS TYPE

NOTES:

- (1) PREVIOUS BILLETS TYPE is listed in this column when the BILLETS TYPE in the first column is different from the BILLETS TYPE used in the previous Housing Maintenance Contract.
- (2) APPROXIMATE GROSS SQUARE FEET OF FLOOR AREA is the area within the perimeter of exterior walls in a set of quarters as measured from the inside surface of the exterior and party walls, with no deduction for closets, hallways, stairways, thickness of interior walls, columns, or other interior features. This area includes readily accessible finished, semifinished, and unfinished attics, basements, and all storage areas. This area also includes all common use hallways, stairways, mechanical equipment rooms, and laundry rooms. It does not include attached patios and porches.
- (3) APPROXIMATE NET SQUARE FEET OF FLOOR AREA is the area within the perimeter of exterior walls in a set of quarters as measured from the inside surface of the exterior and party walls, with no deduction for hallways, stairs, closets, thickness of interior walls, columns, or other interior features. This area includes only finished, normally habitable, basements and private storage areas. This area also includes all common use hallways, stairways, and laundry rooms. It does not include patios and porches.
- (4) Some rooms have a small kitchenette.
- (5) Kitchen is shared with adjacent apartment.
- (6) Two bedroom apartments have two room numbers, i.e. 5/6.
- (7) All rooms share common bathrooms.
- (8) All rooms share common kitchens.

140103

PREVIOUS BILLET TYPE	PREVIOUS BILLET NUMBER	PREVIOUS BUILDING NAME (IF APPLICABLE)	QUARTERS OR OTHER FLOOR SPACE	ADDRESS AND LOCATION	CLASSIFICATION	YEAR BUILT	NUMBER OF FLOORS	CEILING HEIGHT	NUMBER OF BEDROOMS	KITCHEN OR YES	BATHROOM YES	NUMBER OF BATHS	NUMBER OF FIREPLACES	CHIMNEY	APPROX GROSS FLOOR AREA (1)	APPROX NET FLOOR AREA (2)
1	24	Arnold Hall	1, 2, 4, 5, 7, 8, 10, 12, 13, 15, 16, 17, 18, 20, 21, 23, 24, 25, 26, 28, 29, 31 & 32	27 Arnold Ave Mail Post	800	1908	4	11-4	1	Yes	Yes	1	Ex	5	11	546
2	8	Arnold Hall	3, 6, 11, 14, 19, 22, 27 & 30	27 Arnold Ave Mail Post	800	1908	4	11-4	1	Yes	Yes	None	None	N/A	N/A	723
3	1	Arnold Hall	1st, 2nd & 3rd Floor Stairways & Halls; Basement Rest Room; Laundry Room & Circulation Spaces	27 Arnold Ave Mail Post	800	1908	4	11-4	N/A	N/A	N/A	N/A	N/A	N/A	12472	12472
4	1	Bacon Hall	Single Family House	28 Arnold Ave Mail Post	Transient Quarters	1889	1	11-0	3	Yes	Yes	2	1	1	1	1770
5	11	Carr Hall	1, 3, 4, 5, 6, 18, 19, 20, 21, 22 & 23	45 Jarry Ave Mail Post	Transient Quarters	1904	4	11-4	1	No	Yes	1	Ex	4	7	545
6	1	Carr Hall	1st, 2nd & 3rd Floor Wing Stairways & Halls	45 Jarry Ave Mail Post	Transient Quarters	1904	4	11-4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1008
7	1	Carr Hall	Basement Admin Spaces, Restrooms, & Stairways	45 Jarry Ave Mail Post	Sousing Offices	1904	4	11-4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3482
8	1	Carr Hall	1st Floor Admin Spaces, Restroom, & Stairway	45 Jarry Ave Mail Post	Sousing Offices	1904	4	11-4	N/A	N/A	N/A	3	N/A	N/A	N/A	3376
9	1	Carr Hall	2nd Floor Admin Spaces, Restroom, & Stairway	45 Jarry Ave Mail Post	Sousing Offices	1904	4	11-4	N/A	N/A	N/A	2	N/A	N/A	N/A	3131
10	1	Carr Hall	3rd Floor Admin Spaces, Restrooms, & Stairway	45 Jarry Ave Mail Post	Sousing Offices	1904	4	11-4	N/A	N/A	N/A	2	N/A	N/A	N/A	1896
11	4	Waters Hall	1, 2, 5, & 6	170 Sheridan Ave Mail Post	Guest House	1888	3	12-0	1	Yes	Yes	None	None	1	1	732
12	2	Waters Hall	3 & 7	170 Sheridan Ave Mail Post	Guest House	1888	3	12-0	1	Yes	Yes	None	None	N/A	N/A	899
13	2	Waters Hall	4 & 8	170 Sheridan Ave Mail Post	Guest House	1888	3	12-0	2	Yes	Yes	None	None	N/A	N/A	806
14	1	Waters Hall	1st & 2nd Floor Stairways & Halls	170 Sheridan Ave Mail Post	Guest House	1888	3	12-0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	434
15	11	470	1, 2, 3, 4, 7 & 1	470 Huebner Rd Mail Post	800	1972	1	8-0	Efficiency	Yes	Yes	None	None	None	None	360
15	471	471	1, 2, 3, 4, 5, 6, & 8	471 Huebner Rd Mail Post	800	1972	1	8-0	Efficiency	Yes	Yes	None	None	N/A	N/A	360

DACA41-94-R-0012

TE-12 GOVERNMENT-FURNISHED FACILITIES

TE-12-I

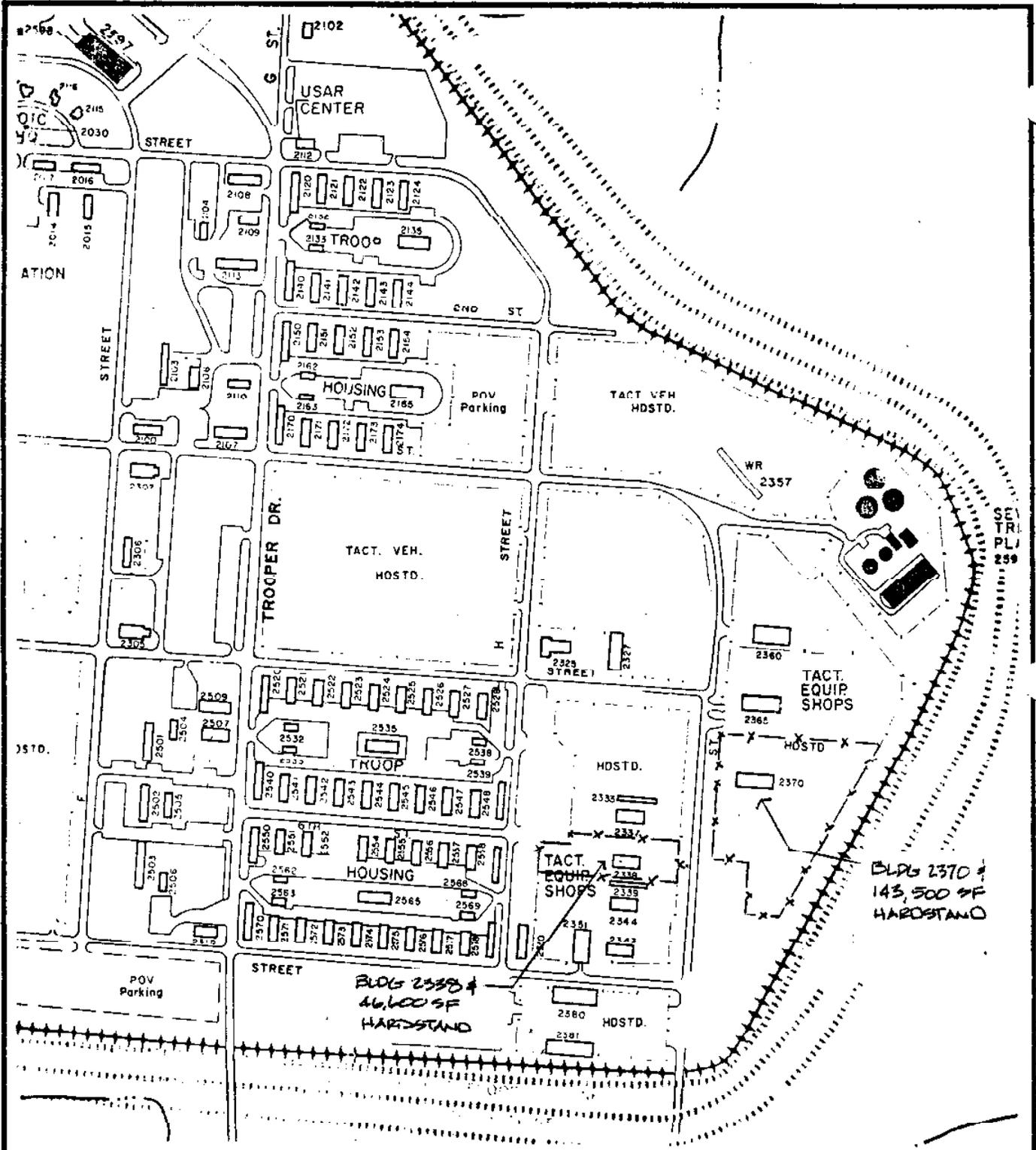
TECHNICAL EXHIBIT 12

GOVERNMENT-FURNISHED FACILITIES

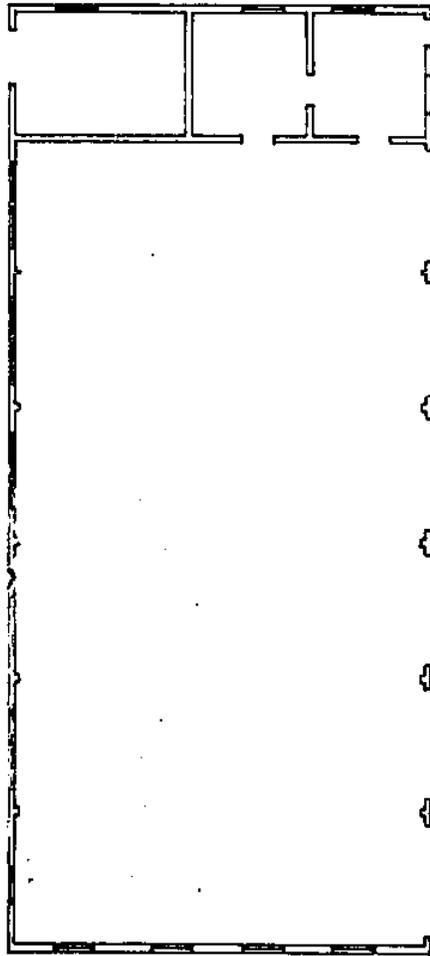
Building 2338 and a 46,600 square foot concrete hardstand, and building 2370 and a 143,500 square foot gravel hardstand located in Camp Forsyth will be provided to the contractor by the government as specified in paragraph C.3.1.1. The contractor shall maintain the buildings and real estate as specified in paragraph C.3.1.2. The following drawings show the buildings and real estate locations and building floor plans. Building 2370 and the 143,500 square foot hardstand is being used by the current housing maintenance contractor and will not be available until the current housing maintenance contractor vacates the premises. This could take up to 90 days following the expiration or termination of the current contract. Building 2338 and the 46,600 square foot hardstand will be made available to the new housing maintenance contractor immediately after the issue of the Notice to Proceed. Building 2338 and the 46,600 square foot hardstand shall be vacated by the new contractor within 60 days after the current housing maintenance contractor vacates building 2370 and the 143,500 square foot hardstand. Building 2338 will then demolished by the government.

SHEETNUMBERTITLE

1	Location Map
2	Building 2338 Floor Plan
3	Building 2370 Floor Plan

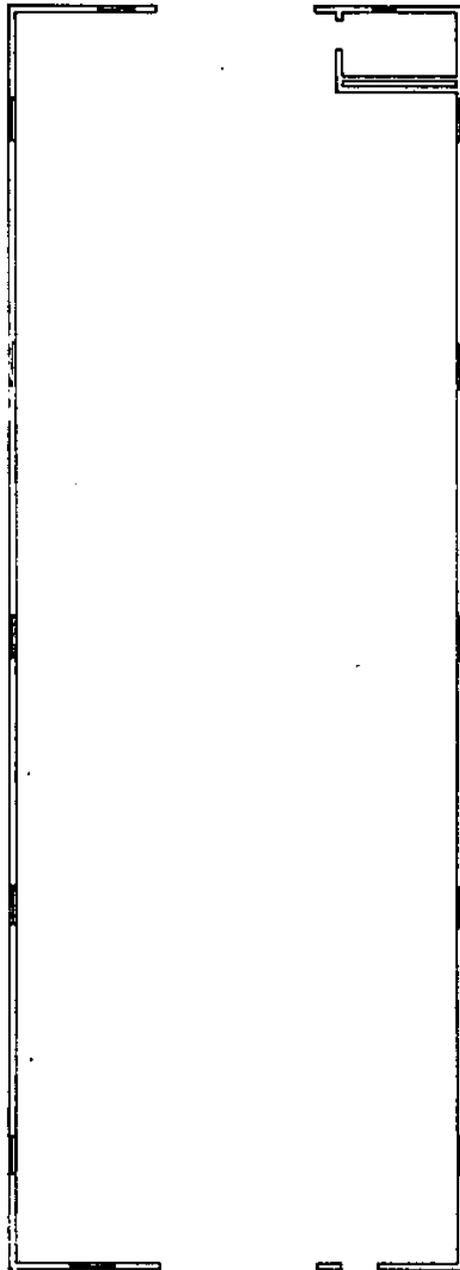


<p>FORT RILEY</p>  <p>KANSAS</p>	DIRECTORATE OF ENGINEERING AND HOUSING		Date 2-25-93
	TECHNICAL EXHIBIT 12		Drawn by DY
	GOVERNMENT FURNISHED FACILITIES		Scale NONE
	LOCATION MAP		Sheet 1 of 3
		Approved by	Project No.



BLDG NO. 2338

<p>FORT RILEY</p>  <p>KANSAS</p>	<p>DIRECTORATE OF ENGINEERING AND HOUSING</p>	<p>Date 2-25-93</p>
	<p>TECHNICAL EXHIBIT 12</p>	<p>Drawn by DY</p>
	<p>GOVERNMENT FURNISHED FACILITIES</p>	<p>Scale 1/16" = 1'-0"</p>
	<p>FLOOR PLAN</p>	<p>Sheet 2 of 3</p>
	<p>Approved by</p>	<p>Project No.</p>



BLDG. NO. 2370

FORT RILEY  KANSAS	DIRECTORATE OF ENGINEERING AND HOUSING	Date 12-1-89
	TECHNICAL EXHIBIT 12 GOVERNMENT FURNISHED FACILITIES FLOOR PLAN	Drawn by DY
		Scale 1/16" = 1'-0"
		Sheet 3 of 3
	Approved by	Project No.

DACA41-94-R-0012

TE-13 WORKLOAD SUMMARY

TE-13-I

TECHNICAL EXHIBIT 13

WORKLOAD SUMMARY

1.1 SCOPE: This technical exhibit provides annual workload summaries of Work Level I - Scheduled Maintenance; Work Level II - Service Order Work; and Work Level III - Specific Ordered Items of Maintenance, Repair, and Incidental Improvement. Also provided is a listing of family housing terminations (turn-over) over the past five years. The data presented herein is based on DEH and the present housing maintenance contractor's historical maintenance data.

2.1 GENERAL: The Contractor is cautioned that there may be no similarity between the workload summaries reflected in this technical exhibit and the actual workload requirements during any period of this contract. This data is supplied for information purposes only and is to be used by the Contractor at his own risk in developing his bid prices. There will be no adjustments in Contract prices for workloads which differ from the amounts shown.

3.1 WORK MANAGEMENT WORKLOAD SUMMARY: The figures below provide a summary of the historic and/or anticipated Work Management workload for a 12-month period.

WORK MANAGEMENT:

<u>CLIN</u>	<u>DESCRIPTION</u>	<u>HISTORIC AND/OR ANTICIPATED QUANTITY</u>	<u>UNIT</u>
1000	Establish and Manage Work Status and Complaint Program for all Family Housing Quarters, Billeting Quarters, and Garages.	4	LQ
1001	Establish and Manage Customer Satisfaction Feedback Program for all Family Housing Quarters, Billeting Quarters, and Garages.	4	LQ
1002	Provide, Maintain, and Submit all Project Management Records, Reports, Schedules, Forms, Checklists, and Handouts for all Family Housing Quarters, Billeting Quarters and Garages.	4	LQ
1003	Mobilization of Contractor Facilities, Utilities, and Assets to Include all Costs Associated with Contract	1	LS

Startup.

4.1 WORK LEVEL I - SCHEDULED MAINTENANCE WORKLOAD SUMMARY:

4.1.1 The figures below provide a summary of the typical family housing and billeting quarters Work Level I - Scheduled Maintenance workload for a 12-month period.

<u>TYPE OF WORK</u>	<u>NUMBER OF CLIN ORDERED</u>	<u>MAN-HOURS EXPENDED</u>	<u>MATERIAL COSTS</u>
Interior and Exterior Building Scheduled Maintenance:	3,671	12,809	\$96,008
Playground and Recreational Equipment Scheduled Maintenance:	7	175	\$1,735
Bus Stop Shelter Scheduled Maintenance (Refer to Note 1):	0	0	\$0
Pest Control Scheduled Maintenance (Refer to Note 2):	44	36	\$1,800
Appliance and Water Heater Scheduled Maintenance (Refer to Note 3):	9,254	6,139	\$7,522
HVAC Systems Scheduled Maintenance (Refer to Note 4):	8,416	4,209	\$7,469

4.1.2 The figures below provide a summary of the historic and/or anticipated family housing and billeting quarters Work Level I - Scheduled Maintenance workload for a 12-month period.

WORK LEVEL I - SCHEDULED MAINTENANCE:

<u>CLIN</u>	<u>DESCRIPTION</u>	<u>HISTORIC AND/OR ANTICIPATED QUANTITY</u>	<u>UNIT</u>
1020	Perform Scheduled Maintenance of Interior and Exterior of all Family Housing Quarters Less Than 1,700 Gross SF and Garages For First Time Within Base or Option Period.	2,397	FG
1021	Perform Scheduled Maintenance of Interior and Exterior of all Family Housing	2,397	FG

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1996	Test a Paint Sample and Determine Lead Content and Provide Test Results.	50	EA
1997	Remove Lead-Based Paint and Dispose Residue - For Interior Surfaces Only.	20,000	SF
1998	Remove Lead-Based Paint and Dispose Residue - For Exterior Surfaces Only.	20,000	SF

TE-13-77a

Housing Quarters Buildings
in Family Housing Area 18.

7.1 FAMILY HOUSING TERMINATIONS: The figures below provide a summary of family housing terminations over the past five years.

<u>MONTH</u>	<u>FY 88</u>	<u>FY 89</u>	<u>FY 90</u>	<u>FY 91</u>	<u>FY 92</u>	<u>AVERAGE</u>
October	231	211	175	125	132	175
November	104	144	121	99	137	121
December	121	109	200	359	211	200
January	98	104	114	90	163	114
February	113	97	94	44	123	94
March	174	141	134	57	164	134
April	262	121	150	37	179	150
May	198	134	142	54	183	142
June	237	176	193	102	255	193
July	212	153	194	169	242	194
August	190	181	201	164	268	201
September	<u>195</u>	<u>119</u>	<u>172</u>	<u>132</u>	<u>255</u>	<u>175</u>
Totals	2,135	1,690	1,893	1,432	2,312	1,893

NOTES.

1. No Bus Stop Shelter Scheduled Maintenance was ordered during the period.
2. Pest Control Scheduled Maintenance was for Billeting Quarters only.
3. Appliance Scheduled Maintenance was performed in the previous contract, but will not be performed in this contract.
4. HVAC Systems Scheduled Maintenance for Billeting Quarters was not included in the previous contract.
5. Bus Stop Shelter Service Orders were not included in the previous contract.
6. HVAC Systems Service Orders for Billeting Quarters were not included in the previous contract.
7. Data for Appliance, Water Heater, and HVAC Systems Service Orders is combined.
8. From the time of contract award until approximately August of 1995, the Ellis Heights Family Housing Area (Areas 12, 13 and 14) will under go a phased replacement of housing units. This will involve a total of approximately 400 units, which will be under a one year warranty for maintenance and repairs after units are accepted by the Government. The Contractor is advised that these projects will result in some workload reduction over the next four years.

DACA41-94-R-0012

**TE-14 RECORDS, REPORTS, SCHEDULES,
FORMS, CHECKLISTS, AND HANDOUTS
REQUIRED**

TE-14-I

TECHNICAL EXHIBIT 14

RECORDS, REPORTS, SCHEDULES, FORMS, CHECKLISTS, AND HANDOUTS REQUIRED

1.1 SCOPE: This technical exhibit contains samples of the records, reports, schedules, forms, checklists, and handouts required by Subsection C-5, paragraph C.5.2.3, and referenced throughout the specifications. The samples are provided to assist the Contractor in determining the Government's needs. The Contractor may propose modifications to the proposed documents and submit them to the COR for approval.

2.1 COMPUTERIZATION: Items which shall be, or should be, maintained using a computer have been so identified. All records shall be maintained on a computer using a suitable operating system and database program which allows the database to be downloaded onto DOS based IBM compatible computer systems operating the dBase program so that the database can be easily accessed, sorted, reviewed, and reports printed by Housing Division personnel. Diskettes with all contract records shall be available to the COR and Housing Division at all times at their request. Diskettes with all contract records shall be turned over to the COR at the end of each contract period and upon expiration or termination of the contract.

3.1 SAMPLES: The following is a list of samples of all required records, reports, schedules, forms, checklists, and handouts in this technical exhibit.

<u>PAGE NUMBER</u>	<u>TITLE</u>
TE-14-3	Maintenance and Repair Records and Reports (Computerized).
TE-14-4	Pest Control Service Records, DD Form 1532-1 (Should be Computerized).
TE-14-6	Subterranean Termite Control Inspection Report and Proposal.
TE-14-7	Work Status and Complaint Report (Computerized).
TE-14-8	Customer Satisfaction Feedback Report (Computerized).
TE-14-9	Pest Control Service Reports, DD Form 1532 (Should be Computerized).
TE-14-30	Installed Appliance and HVAC Equipment Report (Should be Computerized).
TE-14-31	Serial Numbers of New Appliances Report (Should be Computerized).
TE-14-32	Serial Numbers of Appliances Turned-In to DRMO Report (Should be Computerized).
TE-14-33	Scheduled Maintenance Master Schedule (Should be Computerized).

TE-14-34 Scheduled Maintenance Monthly Schedule (Should be Computerized).

TE-14-35 Work Level III Maintenance Weekly Schedule (Should be Computerized).

TE-14-36 Advanced Notification Card.

TE-14-37 Call-Back Card.

TE-14-38 Not Home - Return Call Card.

TE-14-39 Service Order Control Log (Should be Computerized).

TE-14-40 Service Order Worksheet (Should be Computerized).

TE-14-41 Pest Control Service Order Control Log (Should be Computerized).

TE-14-42 Appliance and HVAC System Maintenance Service Order Control Log (Should be Computerized).

TE-14-43 Not Home - Emergency Call Card.

TE-14-44 Multiple Quarters Pest Control Card.

TE-14-45 Multiple Quarters Pest Control Signature Sheet.

TE-14-46 Work Status and Complaint Control Log (Should be Computerized).

TE-14-47 Customer Satisfaction Feedback Card.

TE-14-48 Scheduled and Vacant Quarters Maintenance Checklists.

TE-14-49 Fireplace and Chimney Inspection Checklist.

TE-14-50 Pest Control Guide.

TE-14-53 Pest Control Treatment Information Handout.

MAINTENANCE AND REPAIR RECORDS AND REPORTS

Reference paragraphs C.1.5.3.3, C.1.16.2, and C.5.2.3.1.1. The Contractor shall maintain complete and accurate maintenance and repair records of all work performed. All records shall be maintained on a computer using a suitable operating system and database program which allows the database to be downloaded onto DOS based IBM compatible computer systems operating the dBase program so that the database can be easily accessed, sorted, reviewed, and reports printed by Housing Division personnel. Records shall include as a minimum: quarters and apartment number; work level and maintenance tasks accomplished on each quarters per visit; man-hours expended; type and cost of materials; date and time work was started; and date and time work was accepted. Records shall be sorted and reports produced monthly and in a yearly cumulative summary showing quarters and apartment numbers; work level and maintenance tasks accomplished at each quarters; man-hours expended; and type and cost of materials. The reports shall show year-to-date totals for man-hours and cost of materials by work level and type of tasks. A diskette(s) with the report for each month shall be delivered to the Housing Office no later than the 15th day of the following month. The following is the required format for the report.

MAINTENANCE AND REPAIR REPORT

QUARTERS AND APARTMENT NUMBER	MAINTENANCE TASKS ACCOMPLISHED	MAN HOURS EXPENDED	MAN HOURS EXPENDED YTD	TYPE OF MATERIALS AND COST	TYPE OF MATERIALS AND COST YTD
--	--------------------------------------	-----------------------	------------------------------	----------------------------------	---

MAINTENANCE AND REPAIR REPORT (CONTINUED)

QUARTERS AND APARTMENT NUMBER	DATE/TIME WORK STARTED	DATE/TIME WORK ACCEPTED
--	------------------------------	-------------------------------

Date	Units Serviced	Work Origin	Unit of Measure	Target Pest	Control Operation	If Pesticide is Used				Labor Time	Applicator Initials
						Name	EPA Reg	% Conc	Amount		
REMARKS											

DD Form 1532-1 Reverse, MAY 87

GPO: 1988-201-624/80362

(Attach additional card to continue record)

SUBTERRANEAN TERMITE CONTROL INSPECTION REPORT AND PROPOSAL

Reference paragraphs C.1.5.6.11.5.4 and C.5.2.3.2.1. If upon answering a SO for termite inspection, or during scheduled maintenance, termites are found, the Contractor shall report the finding to the COR in accordance with Technical Exhibit 21 and prepare and provide a copy of the Subterranean Termite Control Inspection Report and Proposal. The COR will approve what actions will be taken. No termite treatment will be accomplished without written approval from the COR. The following is a copy of the required report and proposal.

SUBTERRANEAN TERMITE CONTROL INSPECTION REPORT AND PROPOSAL

Property Location _____ City _____ State _____

Name _____ Address _____

Tenant's Name _____ Tenant's Phone _____ Bus. Phone _____

Type of Property _____ Res. Phone _____

Method of Access _____

LEGEND

___ T Subterranean Termite Evidence	___ CSA Accessible	___ EXTERIOR CONDITION
___ ST Subterranean Termite Swarms	___ CSI Inaccessible	___ Pairs adjacent
___ D Subterranean Termite Damage	___ DI Blind area, inaccess	___ Fretting adjacent
- ensure to some extent inspection or core	___ CB Capped Basement or Crawl space	___ Lumber adjacent
- Identify additional damaged areas at		___ Firewood adjacent
- Dt, Dt, etc.) Describe damage at each	FOUNDATION	___ Scrubby evergreen and flowerbeds
- area.	___ CF Poured Concrete	___ Planter adjacent
___ F Fungus (Deer) Evidence	___ CF Concrete Block	___ Garage attached
___ B Powder-post Beetle Evidence	___ SF Stone	___ Garage detached
___ A Wood Destroying Axi Evidence	___ BRF Brick	___ Wood in condition
___ W Excessive Dampness	___ Other _____	___ Veneer on frame
- (Conducive to pest infest.)		___ BV Brick
		___ SV Stone

TYPE OF STRUCTURE	NEEDED CHANGES
___ BL Basement	___ (Described)
___ CS Crawl Space	___ RD Removal of debris, stumps, etc.
___ SL Slab	___ EN excavation
___ CO Combination	___ AN building alteration
	___ Other _____

BASEMENT WALLS	EXTERIOR
___ CW Concrete Walls	___ Wood
___ BrW Brick Walls	___ Brick
___ SW Stone Walls	___ Stone
___ HW Hollow Block Walls	___ Hollow block
___ TW Tile Walls	___ Stucco on frame
- Walls finished with _____	___ Stucco on masonry
	___ Other _____
	___ Fences attached

___ CFL Concrete Floor	___ Fireplace or chimney
- Floor finished with _____	___ PW Partition wall
___ Support Wall (masonry)	
- Divider partitions	
- Wood _____	
- Masonry _____	
- Chimney or fireplace _____	
___ WS Wood soil contact	
- Ceiling joint inaccessible	
- Sub flooring inaccessible	
- Plate inaccessible	

RECOMMENDED PROCEDURES:

Lin Ft Rodding Soil - _____

Lin Ft Drilling Slab - Basement - _____

Lin Ft Drilling Tile - Carpet - _____

No. Gal Finished Solution To Be Applied - _____

No. Gal Actual Chemical Used - _____

No. Labor Hrs - _____

Prepared by _____

Date _____

WORK STATUS AND COMPLAINT REPORT

Reference paragraphs C.1.5.3.1, C.5.2.1.4, and C.5.2.3.2.2. The Contractor shall establish a Work Status and Complaint Program to receive and respond to maintenance work status requests and complaints. The Contractor shall log all status requests and complaints on a Status Request and Complaint Control Log and furnish the COR and Housing Division a Weekly Status Request and Complaint Report. The log and report shall include: name of the requester or quarters occupant; phone number; quarters and apartment number; date and time of receipt; date and time of response; nature of the request or problem; action taken; current status of complaint or request; and remarks for Contractor's response to complaint or status request. The database shall be maintained and report produced on a computer using a suitable operating system and database program which allows the database to be downloaded onto DOS based IBM compatible computer systems operating the dBase program so that the database can be easily accessed, sorted, reviewed, and reports printed by Housing Division personnel. The following is the required format for the report.

WORK STATUS AND COMPLAINT REPORT

NAME OF REQUESTER OR OCCUPANT	PHONE NUMBER	QUARTERS AND APARTMENT NUMBER	DATE/TIME OF RECEIPT	DATE/TIME OF RESPONSE	NATURE OF REQUEST OR PROBLEM	ACTION TAKEN OR STATUS	REMARKS
--	-----------------	--	----------------------------	-----------------------------	---------------------------------------	---------------------------------	---------

CUSTOMER SATISFACTION FEEDBACK REPORT

Reference paragraphs C.1.5.3.2, C.5.2.2.1, and C.5.2.3.2.3. The Contractor shall establish a Customer Satisfaction Feedback Program. When any work is accomplished, the Contractor shall provide quarters occupants with a Customer Satisfaction Feedback Card along with the occupant's copy of the Scheduled and Vacant Quarters Maintenance Checklist, SO Worksheet, or JO Worksheet. The card shall be a minimum of 5 by 7 inches in size and have space and lines available for customers to use in providing opinions of service quality, timeliness, and courtesy of workmen. The card shall be addressed to and postage paid by the Contractor. The Contractor shall provide the COR and Housing Division a Monthly Customer Satisfaction Feedback Report along with copies of all cards received. The Contractor shall follow up on all derogatory replies and take the necessary actions to correct all deficiencies to include discourtesy. The database shall be maintained and report produced on a computer using a suitable operating system and database program which allows the database to be downloaded onto DOS based IBM compatible computer systems operating the dBase program so that the database can be easily accessed, sorted, reviewed, and reports printed by Housing Division personnel. The following is the required format for the report.

CUSTOMER SATISFACTION FEEDBACK REPORT

NAME OF OCCUPANT	PHONE NUMBER	QUARTERS AND APARTMENT NUMBER	DATE/TIME	DATE/TIME	NATURE OF PROBLEM (IF ANY)	ACTION	
			OF RECEIPT	OF RESPONSE		TAKEN OR STATUS	REMARKS

PEST CONTROL SERVICE REPORT - DD FORM 1532

Reference paragraphs C.1.16.3 and C.5.2.3.2.4. The Contractor shall maintain complete and accurate records of all work performed on DD Form 1532, "Pest Management Report". The Contractor shall complete DD Form 1532 for each month's work, and submit this report to the COR within three working days of the following month. The database shall be maintained and report produced on a computer using a suitable operating system and database program which allows the database to be downloaded onto DOS based IBM compatible computer systems operating the dBase program so that the database can be easily accessed, sorted, reviewed, and reports printed by Housing Division personnel. Starting on the following page is a copy of the preparation instructions and DD Form 1532.

DEPARTMENT OF DEFENSE PEST MANAGEMENT PROGRAM
INSTRUCTIONS FOR THE PREPARATION AND USE OF THE
PEST MANAGEMENT REPORT - DD FORM 1532

TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	<u>Page</u>
1	General Information	TE-23-11
2	Submission Procedures	TE-23-12
3	Preparation Guidance and Recording Pest Control Information on the Form	TE-23-13
4	Sample Pest Control Report	TE-23-14
5	Table of Descriptive and Report Terms	TE-23-20

INSTRUCTIONS FOR THE PREPARATION AND USE OF THE
PEST MANAGEMENT REPORT, DD FORM 1532SECTION 1 - GENERAL INFORMATION

1. PURPOSE. The purpose of the Pest Management Report is to provide a standard procedure for recording and reporting pest control operations conducted on military property. The Pest Management Report, when reviewed monthly, can be an important tool for monitoring safety and effectiveness of pest management operations and to ensure a practical protection of the environment. The report also provides data for efficient management of current activity pest control programs and an overall record of past programs.

a. Reporting activities will use the Pest Management Report to record all pest control operations except those operations performed by persons for their own personal relief. Land-use permit holders who conduct pest control operations must report such actions at prescribed intervals to the host activity so that the information may be added to that activity's pest management report. In order to maintain complete records of environmental impact, all pest control operations will be reported. The Pest Management Report Form allows reporting total program information for management, monitoring and record purposes.

b. The Pest Management Report is used to report pest control operations monthly and the time required for their performance in any report month, including contract operations. The form is also used to report other items which contribute to the pest control function such as leave, training, program planning and coordination and maintenance of shop facilities or equipment so that a total program effort can be accurately determined.

2. REPORT LANGUAGE

Pest management information is machine processed; all report data must adhere to a uniform system of "report language." Standard report terms have been developed for describing and reporting most pest control techniques and materials. The terms are arranged in functional groups or categories. Both the descriptive terms used to look up and classify any given operation and the report terms for actual entry on the DD Form 1532 report are listed in Section 5. Where standard units are required, such as for acres, pounds, gallons, etc., report units are also listed. Only report terms and report units listed in this instruction shall be used on the form. All other terms will be rejected by the processing unit. In many cases the descriptive term and the report term are similar while others may differ by only one letter, so it is necessary to carefully check the report terms. Descriptive terms and report terms in Section 5 are listed in three principal categories: (1) Pests; (2) Operations; (3) Pesticides.

SECTION 2 - SUBMISSION PROCEDURES1. INSTALLATION RESPONSIBILITIES

a. The Pest Management Report, DD Form 1532, will be prepared each month by consolidating the data from DD Forms 1532-1 (Pest Management Maintenance Record) when they become available. To assure accuracy the typed report shall be returned to the originating office for review and signature by the pest management supervisor, applicator, or inspector. It is then signed by the facilities engineer and distributed no later than the 15th day after the end of each month. Five copies of the report will also be signed by the facilities engineer and then be distributed.

b. Distribution of the Pest Management Report will be as follows:

(1) One copy shall be retained by the facilities engineer at the pest management shop facility.

(2) One copy shall be furnished the installation medical officer.

(3) One copy shall be forwarded to the appropriate major command pest management professional.

(4) One copy shall be forwarded to the USAEMA, Aberdeen Proving Ground, Maryland 21010.

(5) One copy shall be forwarded to the appropriate medical entomologist at USAEMA regional divisions.

c. An Army-wide data processing system for the storage and retrieving of pest management information submitted by each installation has not been established at this time. Instructions covering data processing actions to be taken will be furnished when the Army system is established.

2. MAJOR COMMAND (MACOM) RESPONSIBILITIES

Installation data received by the MACOM on DD Form 1532 will be reviewed promptly by the cognizant pest management professionals to provide operational safety, monitoring, and guidance as necessary, and to ensure report accuracy. If situations are reported which are hazardous to the applicator, to other personnel, or to the environment, the pest management professional shall immediately contact the reporting installation to correct the problem.

SECTION 3 - PREPARATION GUIDANCE

1 DD FORM 1532 HEADER INFORMATION

PEST MANAGEMENT REPORT	
NAME OF MAJOR OR REVIEWING COMMAND	ADDRESS

REF: DODI 4150.7

NAME OF REPORTING INSTALLATION	CD	UIC	1	2	3	4	5	6	7	8	9	10	11	12	REPORT ESTIMATED COSTS DD FORM 1532-10-80
	ADDRESS														

Before pest control data is entered on the form, identification and address information must be entered in the appropriate spaces on the header. The figure above illustrates a header format and type of information required. The name and address of the MACOM having jurisdiction over the installation should be entered into the block on the upper left side of the report form. The name and address of the installation submitting the report is entered in the appropriate block on the upper right side of the form. Reporting installations will leave the numbered spaces 1-8 blank in the upper right part, as Army will not use the CD or UIC code numbers at this time. Enter the last two digits of the calendar year in spaces 9 and 10, and a numerical designation of the month in which operations were performed in spaces 11 and 12.

2 RECORDING PEST MANAGEMENT INFORMATION ON THE FORM

a. Each line of the DD Form 1532 can be used to report a complete pest control operation as illustrated on the sample form. Most operations using a single pesticide can be entered without difficulty, but in operations where two or more pesticides are used as a tank mix or pre-mixed pesticides, each pesticide is reported as if it were a separate operation. When the application of two or more pesticides is done simultaneously, the manhours are simply divided equally for each chemical. This has been illustrated by example in Section 4.

b. The form is divided into specific fields and columns. These are described in the order they appear on the form.

3. PEST

TARGET PEST	
2	NAME IN LIST
1	ROACHES

Column (a). (Name). Find the most appropriate descriptive term from Section 5 for the pest and enter the corresponding report term on the form.

For example, for cockroach control find "cockroach" in the descriptive terms and enter the corresponding report term "ROACHES" in column (a) as shown. If there is no suitable descriptive term, find the general grouping which is most appropriate and use the "Other" designation, if listed. For example, a rattlesnake would fall into the "Miscellaneous Pests" grouping and be described as an "Other Vertebrate Pest." The report term for this is "OVE" to which the name of the pest is added, as in "OVESNAKE."

4. OPERATIONS

OPERATION			
NAME IN LIST	TOTAL UNITS TREATED IN AREA	UNIT IN LIST	LIST IN LIST
RESIDTR	5h	MSF	RES

Column (b). (Operation Name). Find the most appropriate descriptive term listed in Section 5 and enter the corresponding report term. Note that operation names are paired with area units (e.g., AC, MSF, etc.). Only the indicated area unit can be used. Non-pest oriented program operations or functions are also reported in this column.

Column (c). (Total Units Treated). This indicates the area, volume or individual items treated. For some operations such as trapping or crack-and-crevice treatment, the Area protected will be reported. The numerical value must be reported as a whole number, therefore rounding off to the nearest whole number may be necessary. Operations which involve treatment of a fraction of a unit area (e.g., 1/8 of an acre) can be held over and added to subsequent reports once a whole unit area of treatment has been achieved.

Column (d). (Area Unit). These are located in the Operations category paired with the Operation Names. The report units MSF, MCF, and AC respectively indicate thousand square feet, thousand cubic feet, and acres.

Column (e). (Site). Enter the report term for the most appropriate descriptive term for the site where a control operation was performed. A single exception is in applications made to trees. Regardless of the type of operation (i.e., misting, spraying power, etc.), the report term used in column (d) would be "EA." An example of this use is given on line 17, page 7a.

D. PESTICIDES

NAME (i)	FORM (g)	APPLICATION		FINAL CONC (j)	RATE PER AREA UNIT		SUPPLY METHOD (k)
		AMOUNT (h)	UNIT (l)		LBS (k)	%	
DIAZINON	ZPL	12	ZGL	0.5			S

Column (f). (Pesticide Name). Enter the report term for the pesticide used in the control operation, if any. If two or more pesticides are simultaneously applied, they must be reported separately. See the example in Section 4. Note: Many operations do not involve pesticides. For such operations, leave this column blank.

Column (g). (Pesticide form). Enter the report term for the formulation if a pesticide was used.

Column (h). (Application amount). Enter the amount (a whole number) of the pesticide applied in the finished or diluted form. If no pesticide was used in the operations, leave this column blank.

Column (i). (Application unit). Enter either of the DoD standard abbreviations "PDW" for pounds, "ZGL" for gallons. In this column as appropriate, or leave blank if no pesticide was used. For reporting fluid ounces of liquid pesticides, use the standard abbreviation "FLOZ" and enter the first three letters "FLO" in column (i). These are found paired with the pesticide formulation report terms.

Column (j). (Final concentration %). Enter the concentration of the pesticide in percent if any was used in the operations. For example, if a 1% material was applied, enter 1.0 in the column. If .025% bait was used, enter .025. Enter no more than three digits and the decimal point. If necessary, round off to three digits. Note: Some operations cannot be reported in column (j). See specific notes in Section 5. Concentrations should be reported in column (j) or columns (k and l), but not in both.

Columns (k) and (l). (Rate). These columns are used together to report the rate of application per area unit of a pesticide. Enter the number of pounds in pesticidal material in column (k) and its concentration in percent

in column (l). For example, if 200 pounds of a 5% pesticide dust was used to treat 2 acres, there are two ways it can be reported. In both, the amount (200 lbs) would be entered in columns "h" and "i" as described on the preceding page. The differences are in reporting the pesticide concentration or rate. In the first method, the application rate (100 lbs of dust per acre) would be entered in column (l) as 5.0. The second method used for reporting the same operation involves the actual amount of toxicant or active ingredient applied per acre (5 lbs in column (k) and 100% in column (l). Either report method would be correct.

Column (m). (Supply Source). Indicate the supply source of the pesticide by entering an "S", "N", "G", or "C" in column (m). "S" indicates standard stock pesticides or materials procured from the Defense Logistics Agency. "N" applies to non-standard materials procured through open purchase. "G" applies to pesticides obtained from the General Services Administration. If the supply source cannot be identified, it should be entered as non-standard. "C" indicates materials were supplied by the contractor who also performed the work. Pesticidal materials used by land-use permit holders or leases will be reported as non-standard.

6. TIME

TIME
HOURS
(M)
(S)
19

Column (n). (Time). Indicate the time in hours devoted to all aspects of the control operation. This may include such tasks as inspections, preparation of pesticides, application, clean up, travel time, supervision, etc. Surveys which are conducted independently of control operations (e.g., for mosquitoes or termites) are reported as separate operations. Time expended by commercial services must be reported in conjunction with their control operations. Managerial and administrative time related to pest control functions shall also be reported.

SECTION 4 - PEST MANAGEMENT REPORT (EXAMPLE)

1. Report Example. A sample pest management report provided on pages 8 and 9 lists various pest control operations to illustrate how they may be reported. Pests selected were typical of those found at military installations. Several examples are described below.

a. Lines 1 and 2 are two separate control operations which were performed at the same time and place. In this case diazinon and boric acid were applied to 54,000 square feet of housing to control cockroaches. The total application time of 38 hours was divided between the two pesticides so that each was credited with 19 manhours.

b. Line 7 is an example of an operation in which a pesticide was not used; however, 20 hours were devoted to the servicing of mouse traps. Since this is a pest control operation, it must be reported. Lines 12, 17 and 20 are similar non-pesticidal functions.

c. Lines 8 and 9 represent alternative methods of reporting the application of 95% malathion by either using column (j) or columns (k) and (l).

d. Lines 24 and 25 are an operation in which a combination herbicide, amitrole (a mixture of 15% amino triazole and 45% simazine) was used for brush control. The rate of application for amino triazole is reported in columns (k) and (l) and the simazine is reported in the same columns on the following line. The total time is divided equally between each line.

e. Line 26 illustrates the pest control efforts of land-use permit holder who used Dylox on two separate occasions to control leaf chewing pests on a citrus orchard. Although the permit holder is exempt from filing a separate report, all pesticide usage must be reported to the host installation, which in turn incorporates this information into its report. In this way the total pesticide impact on the environment can be properly and accurately assessed.

f. Lines 27, 28 and 29 illustrate the method of reporting time used in planning work schedules, equipment maintenance and obtaining a medical examination. While these operations are not directly related to controlling pest problems, the time required is charged to the pest control function overhead.

REF: DODI 4150.7
REPORT CONTROL SYMBOL

NAME OF MAJOR OR REVIEWING COMMAND ADDRESS
 NAME OF REPORTING INSTALLATION ADDRESS
 NAME OF REPORTING COMMAND ADDRESS

NO	TARGET PEST		OPERATION				PESTICIDE				TIME	
	NAME	ID	NAME	TREATED	UNIT	SITE	FORM	AMOUNT	APPLICATION	FINAL CONC		PER ALI (UNIT)
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												

OVER

NO.	TARGET PEST		OPERATION				PESTICIDE				TIME	
	NAME	LA	NAME	UNIT	SITE	NAME	FORM	AMOUNT	APPLICATION	FINAL CONC.		PER GALL UNIT
19	13-1		1219	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												

REMARKS	
<p>INSTRUCTIONS FOR USE</p> <ol style="list-style-type: none"> Detailed instructions of the implementing department directive that be used in the preparation of this report. Military installations shall prepare this report by the 15th day after the end of each month. The report shall be prepared and signed by the DOD certified pest management supervisor, applicator or inspector and by the installation engineer. Three copies shall be signed and distributed as follows: <ol style="list-style-type: none"> Copy No. 1. To the appropriate pest management; professional in accordance with implementing department directives for technical review. Copy No. 2. Record to the installation surgeon. Copy No. 3. Record copy to the installations engineer for two year retention in accordance with Public Law 92-518. 	

INSTALLATION ENGINEER <i>(Print name and title)</i>	INSTALLATION CERTIFIED PEST MANAGEMENT SUPERVISOR <i>(Print name and title)</i>
SIGNATURE	SIGNATURE
DATE (yy/mm/dd)	DATE (yy/mm/dd)
TYPED NAME	TYPED NAME
	OAT (yy/mm/dd)

SECTION 5 - TABLE OF DESCRIPTIVE AND REPORT TERMS

Descriptive Terms

Category I - TARGET PESTS

Report Terms
Col. (a)

Group I Disease Vectors - Flies, Gnats and Mosquitoes

1. Culicoids (Sand Flies, Punkies, No-see-ums).....	CULICOIDS
2. House Flies and other Filth Flies.....	FILTHFLIES
3. Mosquitoes (Culicids).....	MOSQUITOES
4. Filter Flies, Drain Flies (Psychodids).....	PSYCHODA
5. Black Flies, Buffalo Gnats (Simuliids).....	SIMULIIDS
6. Stable Flies, Dog Flies, Biting House Flies (Stomoxys).....	STOMOXYS
7. Horse Flies, Deer Flies (Tabanids).....	TABANID
8. Midges, Gnats (Chironomids).....	CHIRONOMID
9. Other Diptera (Miscellaneous Flies, Gnats, etc.).....	OTH (add name)

Group II Household, Nuisance and Miscellaneous Arthropod Pests

1. Ants, other (Carpenter Ants - see Wood Destroying Pests).....	ANTS
2. Fire Ants.....	FIREANTS
3. Bedbugs.....	BEDBUGS
4. Centipedes.....	CENTIPEDES
5. Clovermites.....	CLOMITES
6. Crickets.....	CRICKETS
7. Cockroaches.....	ROACHES
8. Earwigs.....	EARWIGS
9. Fleas.....	FLEAS
10. Lice.....	LICE
11. Mites and Chiggers (See also Clover Mites above).....	MITES
12. Pillbugs and Sowbugs.....	PILLBUGS
13. Scorpions.....	SCORPIONS
14. Silverfish, Millipedes, Psocids, Firebrats.....	SLVRSOCID
15. Spiders.....	SPIDERS
16. Ticks.....	TICKS
17. Urticating Insects (Caterpillars, etc.).....	URTICATING
18. Wasps, Bees and Hornets.....	WOB
19. Other disease vectors or Venomous Arthropods.....	ODV (add name)
20. Other Arthropod Pests.....	OAR (add name)

Group III Plant Pests

1. Arthropod Plant Pests Infesting Roots and Soil (White Grubs, etc.).....	ROO (add name)
2. Sap-Sucking Arthropods (Thrips, Aphids, etc.).....	SAP (add name)
3. Leaf-Chewing or defoliating insects (Leaf Miners, Tent Caterpillars).....	LEA (add name)
4. Boring & Girdling Insects (attacking plants above ground).....	BRG (add name)
5. Japanese Beetles.....	JPBEETLES
6. Gypsy Moth.....	GYPSTH

Group IV Stored Products Pests

1. Arthropod Pests of Stored Foods.....	FOODPESTS
2. Arthropod Pests of Fibers and Fabrics.....	FIBFABPST

TARGET PESTS (continued)Descriptive TermsReport Terms
Col. (a)Group V Wood-Destroying Pests

1.	Termites, Subterranean.....	SURTERMS
2.	Termites, Drywood.....	DRYWDTERM
3.	Termites, Dampwood.....	DAMPWDTERM
4.	Powder-Post Beetles (Lyctids, Anobiids, etc.).....	POSTLESFY
5.	Old House Borers.....	OLDHOUSEBR
6.	Carpenter Ants.....	CARPENTANT
7.	Other Wood-Destroying Insects.....	OWI (add name)
8.	Wood-Destroying Fungi.....	FUNGIWD
9.	Marine Borers (Shipworms and Gibbiers).....	MARINEBOR
10.	Other Wood-Destroying Pests.....	OWD (add name)

Group VI Vertebrate and Miscellaneous pests other than Arthropods

1.	Rats.....	RATS
2.	Mice.....	MICE
3.	Ground Squirrels.....	GRDSQRLS
4.	Other Rodents (Woodchucks, Pocket Gophers, etc.).....	RODENTSOTH
5.	Bats.....	BATS
6.	Birds.....	BIRDS
7.	Fish.....	FISH (add name)
8.	Other Vertebrate Pests (Rabbits, Moles, Mongooses, etc.).....	OVE (add name)
9.	Snails and Slugs.....	SNAILSLUGS
10.	Snakes.....	SNKES
11.	Nematodes.....	NEMATODES
12.	Other Miscellaneous Pests.....	OTP (add name)

Group VII Weed Pests

1.	Algae.....	ALGAE
2.	Other Aquatic Weeds.....	AQUATICWDS
3.	Grassy Weeds.....	GRASSYWEED
4.	Herbaceous Broad-Leaved Weeds.....	BLVDWEEDS
5.	Mixed Grassy and Broad-Leaved Weeds.....	MXGRABDLVD
6.	Woody Vegetation, Brush.....	BRUSH
7.	Mixed Herbaceous and Woody Weeds.....	MXBOLDRUSH
8.	Soil Sterilization (Eradication of all vegetation).....	ALLVEG

Group VIII Plant and Turf Diseases

1.	Turf Diseases (Dollar Spot, Anthracnose, Brown Spot, Smut, Rust, etc.)	TURF (add name)
2.	Ornamental Plant or Tree Diseases (Flux, Wilt, Blight, Dutch Elm Disease)	ORN (add name)
3.	Other Plant Diseases.....	OPD (add name)

End of Target Pest Category

Category 2 - OPERATIONS

Descriptive Terms

Col. (b)

Report Terms
Col. (d) Use Col.

Group I Exterior Control Operations

1. Fogging, Thermal or Non-Thermal and ULV, Outdoor.....	FOGGING	AC	j or k and l
2. Misting.....(Use EA for tree applications only)...	MISTING	AC, EA	j or k and l
3. Spraying, hand...(Use EA for tree applications only)...	SPHAND	AC, EA	j or k and l
4. Spraying, power...(Use EA for tree applications only)...	SPPEEQ	AC, EA	j or k and l
5. Spraying, aerial.....	SPAIR	AC	k and l
6. Dust/Granule Application, Hand.....	DGHAND	AC	k and l
7. Dust/Granule Application, Power.....	DGPEQ	AC	j or k and l
8. Dust/Granule Application, Aerial.....	DGAIR	AC	j or k and l
9. Systemic Application to Trees (other than above).....	SYSTEMAPP	EA	j
10. Receptacle Treatment (catch basins, barrels, grease traps, transportable garbage containers (TGCs) and other individual receptacles)....	RECEPTREAT	EA	j
11. Residual or spot treatment to Building Exteriors (Spraying, Dusting, etc.)	EXRESIDTR	MSF, MLF	j
12. Baiting (report area protected).....	EXBAIT	AC	j or k and l
13. Barrier, Chemical.....	CHEMBAR	MLF	j

Group II Interior Control Operations

1. Indoor Residual Treatment (Report area treated;) for crack-and-crevice treatment (Report area protected).....	RESIDTR	MSF, MLF	j
2. Space Treatment (Dug-bombs, Flitguns, Aerosol Generators and DDVP Strips) (Report area treated).....	SPCTR	MCF, MLF	j
3. Baiting (Chemical or biological control only) (Report area protected)	INDBAIT	MSF, MLF	j

Group III Fumigation

1. Vacuum Chamber Fumigation.....	VACUUMFUM	MCF	j or k and l
2. Atmospheric Fumigation (Stack, Car, Ship, Equipment, etc.)	ATMOSFUM	MCF	j or k and l
3. Structural Fumigation.....	STRUCFUM	MCF	j or k and l
4. Soil Fumigation (for weed seeds, nematodes or plant diseases, etc.) (for burrow fumigation report area protected).....	SOILFUM	SY	j or k and l
5. Deactivation of fumigants received from intransit fumigation of railroad cars. Report RRC as site and enter time only.	DEACTIVATE		

Group IV Soil Treatment for Termite Control

1. Surface Soil Treatment (Surface pretreatment or corrective treatment, subslab injection, horizontal rodding).....	SURSOILTR	MSF,MLF	j
2. Trench Treatment (Digging, vertical rodding) (Convert linear feet or trench directly to cubic feet).....	TRNSOILTR	CF	j
3. Rodding (vertical or horizontal) and subslab injection (convert linear feet of rodding directly to cubic feet of soil).....	INJECTSOIL	CF	j

OPERATIONS (continued)

Descriptive Terms

Report Terms
Col. (b) Col. (d) Use Columns

Group V Physical and Mechanical Control of Pest Organisms

1.	Earthwork, Sanitary Landfill.....	SANITFILL	CY	
2.	Earthwork, Hydraulic Landfill.....	HYDRAFILL	MCY	
3.	Earthwork, Ditching (new and maintenance).....	DITCHING	MCY	
4.	clearing (weed, brush and selective tree removal).....	CLEARING	AC	
5.	Barrier Construction (screening, etc.) interior.....	BARRIER	MSF,MLF	
6.	Trapping, Exterior.....	EXTRAP	AC	
7.	Trapping, Interior.....	INTRAP	MSF,MLF	
8.	Steam cleaning trucks, transportable containers, or garbage bins	STEAMCLEAN	EA	
9.	Other Mechanical Control (Manual removal of pests, nests or infested materials)	OMCONTROL	AC, MSF or EA	
10.	Grazing (for weed control).....	GRAZING	AC	

Group VI Wood Protection from Wood Decaying Organisms

1.	Treated Lumber Installed (Pressure treated).....	IRLUMBINST	MSF	
2.	In-Place Treatment, Structural or Dimension Materials	STINPLTR	MSF,MLF	j
3.	In-Place Treatment, Poles, include ground line treatment	POLEINPLTR	EA	i
4.	In-Place Treatment, Piles.....	PILEINPLTR	EA	i
5.	Poles Installed (Pressure Treated).....	POINSTALTR	EA	
6.	Piles Installed (Pressure Treated).....	PIINSTALTR	EA	
7.	Dip/Soak Treatment-Lumber & Plywood.....	DIPTRLUMB	MBF	j
8.	Dip/Soak Treatment-Pallets.....	PALLDIPTR	EA	i

Group VII Inspection and Survey of Pest Problems. Not a direct part of control operations. Indicate operational area in column e and the hours in column g. Leave columns c, d, and f through m blank.

1.	Inspection or survey by medical department personnel.....	MEDDINSSUR		
2.	Inspection or survey by public works department other than for contract performance.	ENGDINSSUR		
3.	Inspection or survey of stored products by veterinary personnel.....	VETINSUR		
4.	Timber survey by forestry personnel for forest insect pests (Report this operation only for timber or ornamental trees and include acres inspected).....	TIMBSURVEY		

Group VIII Program Administration and Maintenance. Not a direct part of control operations. Report time only.

1.	Program planning, estimating, scheduling, coordinating and reporting.....	PROGRAMMING		
2.	Training (includes on-the-job, correspondence, in-service and formal courses to establish or improve competency in pest control).....	TRAINING		
3.	Maintenance, calibration and cleanup of equipment, vehicles and shop facilities.....	MAINTENANCE		
4.	Non-program functions supporting pest control (medical examinations, blood tests, annual, sick and administrative leave, and indirect training).....	NONPROGRAM		
5.	Quality assurance evaluation or inspection of contractor performance (enter on line following report of the pest control operation evaluated).....	QAEVALUATE		
6.	Decontamination of areas, materials or equipment resulting from pesticide contamination. Use "Deactivate" for residue disposal from intransit fumigation operations.....	DECONTAMIN		

OPERATIONS (continued)

Descriptive Terms

Report Terms
Col. (e) Col. (d)

Group IX Outdoor Sites (Terrestrial)

1. Wooded Areas, including forest lands.....	WOO	AC
2. Open Areas with Brush.....	OPB	AC
3. Open Areas with grass, may have some trees and shrubs (lawns, parade grounds) (omit lands).....	OPG	AC
4. Golf course fairways and greens.....	GFG	AC
5. Landfills, refuse dumps.....	LDF	AC
6. Open areas with no vegetation, mostly paved or barren	OPX	AC
7. Trees or ornamental shrubs treated individually (Report only with Hand Spraying, Mist Power Spraying or Systemic Operations).....	TRE	EA
8. Croplands (areas under outlease).....	CRP	AC
9. Grazing lands (areas under outlease).....	GRZ	AC

Group X Outdoor Sites (Aquatic)

1. Marsh/Swamp (Do not include temporary pools or flooded areas).....	NOS	AC
2. Waterway (Moving water such as ditches, streams, rivers, harbors...)	WWW	AC
3. Impoundment (standing water such as lakes, ponds, temporary pools)	IMP	AC
4. Underground sewer lines (if operation is RESIDTR, SPCTR, or INBAIT use MLF as area unit).....	UGS	MLF
5. Receptacles, manholes, catch basins, barrels or water containers	REC	EA

Group XI Indoor Sites and Structures

1. Food Handling Buildings (Preparation and serving only).....	FHB	MSF
2. Residential and Family Quarters.....	RES	MSF
3. Barracks and BOQs.....	BRQ	MSF
4. Hospitals and Medical Laboratories.....	HOL	MSF
5. Recreation Buildings and Chapels.....	RCH	MSF
6. Office and Administrative Buildings.....	OFF	MSF
7. Industrial Buildings, Shop Areas and Non-Medical Laboratories.....	IND	MSF
8. Storage Buildings and Warehouses.....	WHS	MSF
9. Utility Buildings.....	UTL	MSF
10. Waterfront Structures (Pier, Wharf, with or w/o buildings).....	WAT	MSF
11. Greenhouses.....	GRH	MSF
12. Exchanges and Commissaries.....	EXC	MSF
13. Kennels and Stables.....	KEN	MSF
14. Brigs or Prison Cells.....	BRG	MSF

Group XII Miscellaneous Sites

1. Ships or Barges in port or drydock.....	SIP	MSF
2. Railroad Cars.....	RRC	MSF
3. Trucks and Vans.....	TRV	MSF
4. Aircraft.....	ACF	MSF
5. Transportable Garbage Containers (Dumpsters).....	TGC	EA

End of Operations Category

Category 3 - PESTICIDESDescriptive TermsReport Term:
Col. (E)Group I Inorganic Insecticides and Acaricides

1.	Boric Acid Crystals.....	BRICACID
2.	Copper Sulfate Formulations.....	COPPERSULF
3.	Sulfur dusts and wettable powders.....	DUSWETSULF
4.	Lime Sulfur.....	LIMESULFRON
5.	Lead Arsenate.....	LDARSENATE
6.	Paris Green.....	FRISGREEN
7.	Silica Aerogels (Dry-Die).....	SILICAAERO
8.	Silica Aerogel and Pyrethrins (Drione).....	DRIONE
9.	Sodium Fluoride.....	SODIUMFLD
10.	Other Inorganic Insecticides & Acaricides.....	OII (add name)

Group II Natural Organic and Biological Insecticides and Acaricides

1.	Pyrethrum, including synergized formulations.....	PYRETHRUM
2.	Pyrethrum and silica aerogel.....	DRIONE
3.	Rotenone, all forms.....	ROTENONE
4.	Nicotine Compounds.....	NICOTINE
5.	Miscible Oils (Summer and Dormant).....	MISCOIL
6.	Flit MLO.....	FLITMLO
7.	Oils, Minerals (including fuel and diesel).....	MINOILS
8.	Other Natural Organic Materials.....	ONA (add name)
9.	Milky Spore Dust (Bacillus popilliae).....	MILKYSPORE
10.	Bacillus Thuringiensis (Thuricide, Dipel).....	BACTHURING
11.	Mosquito Fish (Gambusia and Top Feeding Minnows).....	MOSQFISH
12.	Other Biological Insecticides and Acaricides.....	OBI (add name)

Group III Chlorinated Hydrocarbon Insecticides and Acaricides

1.	Aldrin.....	ALDRIN
2.	Chlordane.....	CHLORDANE
3.	DDT.....	DDT
4.	Dieldrin.....	DIELDRIN
5.	Heptachlor.....	HEPTACHLOR
6.	Lindane.....	LINDANE
7.	Benzene Hexachlor.....	BHC
8.	Kelthane (Dicofol).....	KELTHANE
9.	Kepone.....	KEPONE
10.	Methoxychlor.....	MTHOXYCHLOR
11.	Mirex.....	MIREX
12.	Other Chlorinated Hydrocarbon Insecticides & Acaricides.....	OCH (add name)

Group IV Organic Phosphate Insecticides and Acaricides

1.	Abate.....	ABATE
2.	Acephate (Orthene).....	ACEPHATE
3.	Aspon.....	ASPON
4.	Diazinon.....	DIAZINON
5.	Dichlorvos, DDVP, Vapona.....	DCHLORVOS
6.	Dimethoate.....	DIMETHOATE
7.	Dioxathion (Deinav).....	DIOXATHION
8.	Disyston (Disulfoton).....	DSYSTON
9.	Metasystox-R.....	MTASYSTOX

PESTICIDES (continued)

Descriptive Terms

Report Terms
Col. (f)Group V Organic Phosphate Insecticides and Acaricides (continued)

10. Dursban (Chlorpyrifos).....	DURSBAN
11. Fenthion (Baytex, Entex).....	FENTHION
12. Malathion.....	MALATHION
13. Maleo (Dibrom).....	MALEO
14. Ronnel (Korlan).....	RONNEL
15. Aramite.....	ARAMITE
16. Mocap (Ethoprop).....	ETHOPROP
17. Toxaphene.....	TOXAPHENE
18. Other Organic Phosphate Insecticides and Acaricides.....	OOR (add name)

Group VI Miscellaneous Insecticides and Acaricides.

1. Allethrin (a thiocyanate).....	ALLETHRIN
2. Other Organic Thiocyanates.....	OOT (add name)
3. Permethrin (Ambush).....	PERMETHRIN
4. d-phenothrin.....	D-PHENOTHRIN
5. Organic Sulfur Compounds.....	ORGANSULF
6. Chlorobenzilate (Acaraben).....	CIROBENZIL
7. Resmethrin.....	RESMETHRIN
8. Baygon (propoxur).....	BAYGON
9. Carbaryl (Sevin).....	CARBARYL
10. Ficam (bendiocarb).....	FICAM
11. Zectran (4-(Dimethylamino)-3,5-xyllyl Methyl Carbamates.....	ZECTRAN
12. Other Carbamates.....	OCA (add name)
13. Other Synthetic Organic Insecticides and Acaricides.....	OSY (add name)

Group VII Insect Growth Regulators and Interruptants

1. Altosid (methoprene).....	ALTOSID
2. Disparlure.....	DISPARLURE
3. Dimilin (Diflubenzuron).....	DMILIN
4. Other Pheromones.....	OPH (add name)
5. Other Insect Growth or Metabolic Regulators & Interruptants (Biochemicals).....	OIGROWTHREG

Group VIII Nematocides

1. Dasanit (Fensulfothion).....	DASANIT
2. MOCAP (Ethoprop).....	ETHOPROP
3. NEMACUR (Fenamiphos).....	NEMACUR
4. Sarolex (Diazinon).....	DIAZINON

Group IX Rodenticides, Avicides and Related Materials

1. Anticoagulants, Chronic (Warfarin, Diphacinone, Fivalyn).....	ANICOAG
2. Talon (Brodifacoum).....	TALON
3. Maki (Bromadiolone).....	MAKI
4. Chloro-phacinone (Rozol).....	CHPHACIN
5. Calcium Cyanide.....	CACN
6. Glue Compounds (Sticky boards).....	GLUE
7. Norbormide (Raticate).....	NORBORMIDE

PESTICIDES (continued)

Descriptive Terms	Report Terms Col. (f)
<u>Group IX</u> Rodenticides, Avicides and Related Materials (continued)	
8. Perching and Roosting Repellants.....	ROOSTREPEL
9. Red Squill.....	RSQUILL
10. Sodium Monofluoroacetate (1080).....	1080
11. Strychnine.....	STRYCHNINE
12. Zinc Phosphide.....	ZNPH
13. Other Rodenticides.....	ORO (add name)
14. Gophacide.....	GOPHACIDE
15. Other Avicides.....	OVA (add name)
<u>Group X</u> Fumigants and Related Materials	
1. Aluminum Phosphide and Magnesium Phosphide (Phosphine).....	PHOSPHINE
2. Carboxide.....	CRBOXIDE
3. Carbon Bisulfide.....	CBISULFIDE
4. Hydrogen Cyanide.....	HON
5. Methyl Bromide.....	MEBROMIDE
6. Paradichlorobenzene and Napthalene.....	PN
7. Sufficator Cartridges.....	SUFFICATE
8. Sulfuryl Fluoride (Vikane).....	SULFURYLFL
9. Vapam (metham-sodium).....	VAPAM
10. Other Fumigants and related materials.....	OFU (add name)
<u>Group XI</u> Fungicides and Wood Preservatives	
1. Benomyl (Tersan).....	BNOMYL
2. Bordeaux Mixture (fixed copper).....	BRDEAUX
3. Cadmate.....	CADMINATE
4. Captan.....	CAPTAN
5. Chloroneb.....	CHRONEB
6. Cycloheximide (Actidione).....	CYCLOHEXIM
7. Daconil (Bravo, Chlorothalonil).....	DACONIL
8. Dexon (Diazoben).....	DEXON
9. Difolatan (Captafol).....	DIFOLATAN
10. Dithane (M-45).....	DITHANE
11. Dyrene (Anilazine).....	DYRENE
12. Ferbam.....	FERBAM
13. Folpet (Phaltan).....	FOLPET
14. Karathane (Dinocap).....	KARATHANE
15. Koban (Terrazole).....	KOBAN
16. Kromad.....	KROMAD
17. Maneb.....	MANEB
18. Mancozeb (Fore).....	FORE
19. Thiophanate Methyl (Fungo).....	FUNGO
20. Thiram (Arasan).....	THIRAM
21. Zineb.....	ZINEB
22. Other Fungicides.....	OFN (add name)
23. Creosote or Creosote-Tar Mixtures.....	CREOSOTE
1. Pentachlorophenol in Non-Volatile Oils.....	NONVPENTA
25. Pentachlorophenol, Water-repellent in volatile solvent.....	PENTAWR
26. Pentachlorophenol in greases or gels.....	PEGEL
27. Other Wood Preservatives.....	OWO (add name)

PESTICIDES (continued)

Descriptive Terms

Report Terms
Col. (4)Group XII Miscellaneous Pesticidal Compounds

1.	Attractants.....	ATTRACTANT
2.	Repellents (for insects, mites, ticks only).....	REPELLENT
3.	Repellents, Other.....	OREPELLENT
4.	Metalddehyde (a molluscicide).....	METALDHIDE
5.	Sodium Carbonate (molluscicide).....	SDIUMCARB
6.	Sodium Chloride (a molluscicide).....	NACLMOLEUS
7.	Sodium Pentachlorophenate (a molluscicide).....	NAPENTA
8.	Mesurool (Methiocarb) (a molluscicide).....	MESUROOL
9.	Other Molluscicides.....	OMO (add nam
10.	Avitrol (4-Nitropyridine-N-Oxide).....	AVITROL
11.	Tribromoethanol (an avicide).....	TBE
12.	Starlicide.....	STARLICIDE
13.	Other Miscellaneous Materials.....	OMJ (add nam

Group XIII Herbicides Phenoxy-, Chlorophenyl-, Phenylurea, and Picolinic Acid Com

1.	2, 4-D (2, 4-dichlorophenoxy acetic acid equivalent).....	24D
2.	2, 4, 5-T (2, 4, 5-trichlorophenoxy acetic acid equivalent).....	245T
3.	Diuron (3-(3, 4-dichlorophenyl)-1, 1-dimethylurea) (Karmex).....	DIURON
4.	Fenuron (Dybar).....	FNURON
5.	Monuron (3-(p-chlorophenyl) -1, 1-dimethylurea) (Telvar).....	MONURON
6.	Monuron-TCA (UROX).....	MOT
7.	Silvex, 2,4,5-TP (2-(2, 4, 5-trichlorophenoxy) propionic acid equivalent).....	SLVEX
8.	Tebuthiuron (Spike).....	TEBUTHI
9.	Picloram (potassium salt of 4-amino-3, 5, 6- trichloropicolinic acid (Tordon).....	PICLORAM
10.	Other Phenoxy-, Chlorophenyl-, Phenylurea, & Picolinic Acid Compounds.....	OPH (add

Group XIV Herbicides Benzoic-, Propionic-, and Trichloroacetic Acid Compounds

1.	TCA (trichloroacetic acid equivalent).....	TCA
2.	Dalapon (2, 2-dichloropropionic acid equivalent).....	DALAPON
3.	Dicamba (Banvel).....	DICAMBA
4.	Pronamide (Kerb).....	PRNAMIDE
5.	Fenac.....	FNAC
6.	Other Benzoic-, Propionic-, & Trichloroacetic Acid Compounds.....	OBE (add nam

Group XV Herbicides Triazines, Triazoles, Hydrazides and Dinitro Compounds

1.	Amitrol (aminotriazole) (3 amino-1, 2, 4-triazole).....	AMITROL
2.	Atrazine (2-chloro-4-ethylamino-6-isopropyl amino-s-triazine).....	ATRAZINE
3.	Prometon (Pramitol) (2-Methoxy-4, 6-bis (isopropylamine)-s-triazine).....	PROMETONE
4.	Simazine (2-chloro-4, 6-bis (ethylamino)-s-triazine) (Princep).....	SIMAZINE
5.	Maleic hydrazide (1, 2-dihydropyridazine-3, 6-dione).....	MLEICHYDRA
6.	Velpar (Hexazinone).....	VELPAR
7.	Other Triazines, Triazoles and Hydrazides.....	OTR (add nam
8.	Balan (BeneCin).....	BALAN
9.	Other Dinitro Compounds.....	DINITRO

PESTICIDES (continued)

Descriptive Terms	Report Terms Col. (f)
<u>Group XVI</u> Herbicides Inorganic and Metal-Organic Compounds	
1. Copper sulfate (Cutrine).....	COPPERSULF
2. Ammate (Ammonium Sulfamate).....	AMMATE
3. Arsenicals, Organic (DSMA) (MSMA) (Cacodylic Acid).....	ARSENICORG
4. Borate Compounds, Uncombined.....	BOR (add name)
5. Chlorate Compounds, Uncombined.....	ClO (add name)
6. Other Inorganic and Metal-Organic Herbicide Compounds.....	OIN (add name)

Group XVII Miscellaneous Herbicides, Algacides and Plant Growth Regulators

1. Asulox (Methyl 4-amino benzene sulphonylcarbanate).....	ASULOX
2. Bensulide (Betasan) (N-(2-mercaptoethyl) benesene sulfonamide S-(O, O-diisopropyl phosphorodiathioate).....	BENSULIDE
3. Bromacil (5-bromo-3-sec-butyl-6 methyluracil) (Hyvar).....	BROMACIL
4. Diquat (1, 1-ethylene-2, 2'-dipyridilium).....	DIQUAT
5. Paraquat.....	PARAQUAT
6. DCPA (Dacthal) (Dimethyl tetrachlorotere-phtalate).....	ENDOTHALL
7. Oil, Herbicidal.....	HERBOIL
8. Tandex (Karbutilate).....	TANDEX
9. Casoron.....	CASORON
10. Glyphosate (Round-up).....	GLYPHOSATE
11. Other Herbicides, Uncombined.....	OUN (add name)
12. Maintain (MI-30), maleic hydrazide.....	MALEICHYDRA
13. Chlorflurecol (maintain-A) (CF-125).....	CHFLURECOL
14. Embark (an acetamide compound).....	ACTAMIDE
15. Other Plant Growth Regulators.....	PGR (Add name)

Group XVIII Dry Formulations

	Col. (g)	Col. (i)
1. Dusts.....	DUS	PDW
2. Granules and pellets.....	GRN	PDW
3. Solid Fumigants (include Dichlorvos strips and pellets).....	SFU	PDW
4. Baits.....	BTS	PDW
5. Briquettes (for slow release of pesticides).....	BQT	PDW
6. Other Dry Pesticide Forms (include Tossits).....	ODP	PDW

Group XIX Liquid, Pastes, Greases, Gasses and Miscellaneous Formulations

1. Emulsions.....	EML	ZGL
2. Solutions.....	SLN	ZGL
3. Suspensions.....	SUS	ZGL
4. Liquid Fumigants and Liquidified Gasses.....	LFU	PDW
5. Pastes and Greases (include invert emulsions).....	POG	PDW
6. Aerosols.....	AER	FLO
7. Other Liquid Forms.....	OLP	ZGL

End of Table

INSTALLED APPLIANCE AND HVAC EQUIPMENT REPORT

Reference paragraphs C.4.10 and C.5.2.3.2.5. The Contractor shall prepare and submit an Installed Appliance and HVAC Equipment Report for each appliance and piece of HVAC equipment he installs. The database shall be maintained and report produced on a computer using a suitable operating system and database program which allows the database to be downloaded onto DOS based IBM compatible computer systems operating the dBase program so that the database can be easily accessed, sorted, reviewed, and reports printed by Housing Division personnel. The following is the required format for the report.

INSTALLED APPLIANCE AND HVAC EQUIPMENT REPORT

ITEM NAME: _____

INSTALLED BY _____ DATE INSTALLED _____

MANUFACTURER _____ DATE PURCHASED _____

WARRANTY PERIOD _____ CONTRACT NO. _____

LOCATION:

BUILDING NO. _____ FLOOR _____

APARTMENT NO. _____ AREA _____

TECHNICAL MANUAL REFERENCE: _____

NAME PLATE DATA:

MODEL/CAT NO. _____ SERIAL NO. _____

EQUIPMENT TYPE; _____ SYSTEM: _____

BTU/HR _____ TYPE OF FUEL _____

REFRIGERANT _____ CHARGE WEIGHT _____ TONS _____

CAPACITY _____ SIZE _____ CFM _____ PSI _____

MOTOR H.P. _____ VOLTS _____ PHASE _____ AMPS _____

RPM _____ GPM _____ HEAD (FT) _____

ADDITIONAL DATA: _____

UNIT REPLACED:

ITEM NAME _____ MANUFACTURER _____

PART NO. _____ MODEL/CAT NO. _____

SERIAL NO. _____

SERIAL NUMBERS OF NEW APPLIANCES REPORT

Reference paragraphs C.5.5.0.2 and C.5.2.3.2.6. The Contractor shall provide serial numbers of all new appliances and appliances turned into DRMO to the Housing Furniture Management Office, Building 317, within eight hours after issue for posting on quarters' hand receipts. The Contractor shall prepare and submit a Serial Numbers of New Appliances Report for this purpose. The database shall be maintained and report produced on a computer using a suitable operating system and database program which allows the database to be downloaded onto DOS based IBM compatible computer systems operating the dBase program so that the database can be easily accessed, sorted, reviewed, and reports printed by Housing Division personnel. The following is the required format for the report.

SERIAL NUMBERS OF NEW APPLIANCES REPORT

QUARTERS AND APARTMENT NUMBER	DESCRIPTION OF NEW APPLIANCE	SERIAL NUMBER NEW APPLIANCE	DATE INSTALLED
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SERIAL NUMBERS OF APPLIANCES TURNED-IN TO DRMO REPORT

Reference paragraphs C.5.5.9.2 and C.5.2.3.2.7. The Contractor shall provide serial numbers of all new appliances and appliances turned into DRMO to the Housing Furniture Management Office, Building 317, within eight hours after issue for posting on quarters' hand receipts. The Contractor shall prepare and submit a Serial Numbers of Appliances Turned-In to DRMO Report for this purpose. The database shall be maintained and report produced on a computer using a suitable operating system and database program which allows the database to be downloaded onto DOS based IBM compatible computer systems operating the dBase program so that the database can be easily accessed, sorted, reviewed, and reports printed by Housing Division personnel. The following is the required format for the report.

SERIAL NUMBERS OF APPLIANCES TURNED-IN TO DRMO REPORT

QUARTERS AND APARTMENT NUMBER	DESCRIPTION OF TURNED-IN APPLIANCE	SERIAL NUMBER TURNED-IN APPLIANCE	DATE TURNED-IN
--	---------------------------------------	---	-------------------

SCHEDULED MAINTENANCE MASTER SCHEDULE

Reference paragraphs C.1.6.6.6 and C.6.2.3.3.1. The Government will assist the Contractor in developing a master schedule for scheduled maintenance for the base period of the contract. In option years, the Contractor shall submit, no later than 10 days prior to beginning of option year, Master Schedules for Scheduled Maintenance based on all scheduled maintenance requirements and frequencies specified in the provisions of the contract. The schedule shall include: location of the scheduled maintenance, i.e. quarters number, playground number, or bus stop shelter number; date of scheduled maintenance; and type of scheduled maintenance to be performed. The Contractor shall not schedule scheduled maintenance of occupied quarters from 11 December through 3 January unless specifically directed by Housing Division. The following is the required format for the schedule.

SCHEDULED MAINTENANCE MASTER SCHEDULE

LOCATION OF SM	DATE OF SM	TYPE OF SM TO BE PERFORMED
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SCHEDULED MAINTENANCE MONTHLY SCHEDULE

Reference paragraphs C.1.5.5.6 and C.5.2.3.3.2. The Contractor shall submit by the 21st day of each month a detailed Monthly Scheduled Maintenance Schedule for the following month. The schedule shall include: location of the scheduled maintenance, i.e. quarters number, playground number, or bus stop shelter number; date of scheduled maintenance; type of scheduled maintenance to be performed; any start-up or shut-down work; and the estimated man-hours required to perform the scheduled maintenance. The schedule shall be categorized by the type of maintenance consistent with Technical Exhibits 16, 21 and 22. The COR will review and approve the monthly schedules. If the Contractor needs to make changes, he shall notify the COR a week in advance of the scheduled time, providing what is to be scheduled and what the new scheduled time is and if approved, is responsible to coordinate with the affected occupants. The following is the required format for the schedule.

SCHEDULED MAINTENANCE MONTHLY SCHEDULE					
LOCATION OF SM	DATE OF SM	TYPE OF SM TO BE PERFORMED	ANY REQ'D START-UP WORK	ANY REQ'D SHUT-DOWN WORK	ESTIMATED MAN-HOURS TO COMPLETE

WORK LEVEL III MAINTENANCE WEEKLY SCHEDULE

Reference paragraphs C 1 5 7 5 and C 5 2 3 3.3. The Contractor shall submit detailed Weekly Schedules of all Level III work to be accomplished in occupied quarters covering the following week not later than Wednesday of the current week. The initial weekly schedule shall be submitted not later than 10 days prior to start of Level III work. The schedules shall indicate: location of the work; date of the work; type of work to be performed; any required start-up or shut-down work; and the estimated man-hours to perform the work. The Contractor shall attend meetings with Housing Division every Wednesday at 1:00 p.m. in the Housing Office, Building 45, or as requested by the COR, to assist in developing a mutually compatible weekly work schedule. The Contractor shall conform to the schedules. Revisions or changes to any Level III work shall be submitted 24 hours in advance and shall indicate reason for any revision or change. All revisions and changes are subject to COR approval prior to implementing such revision or change. The following is the required format for the schedule.

WORK LEVEL III MAINTENANCE WEEKLY SCHEDULE

LOCATION OF WORK	DATE OF WORK	TYPE OF WORK TO BE PERFORMED	ANY REQ'D START-UP WORK	ANY REQ'D SHUT-DOWN WORK	ESTIMATED MAN-HOURS TO COMPLETE
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ADVANCED NOTIFICATION CARD

Reference paragraphs C.1.5.5.7.1 and C.5.2.3.4.1. The Contractor shall provide Advanced Notification Cards to quarters occupants seven calendar days prior to the work. The card is to be of a light-colored, lightweight cardboard, and shall be cut at the top center so that it can be hung on the main entrance doorknob. The following is the required format for the card. It may be reduced accordingly to fit on an appropriate size doorknob card.

ADVANCED NOTIFICATION CARD
<ul style="list-style-type: none"> - CONTRACTOR'S NAME. - FAMILY QUARTERS OR BILLETING BUILDING NUMBER AND APARTMENT NUMBER IN WHICH THE SERVICE IS TO BE ACCOMPLISHED. - WHAT SERVICE IS TO BE ACCOMPLISHED (BRIEF DESCRIPTION) AND THE ESTIMATED TIME REQUIRED TO ACCOMPLISH THE SERVICE. - DATE SERVICE IS TO BE PERFORMED. - APPROXIMATE TIME (AM OR PM) SERVICE PERSON IS EXPECTED TO ARRIVE. - IF THE SCHEDULED TIME IS NOT CONVENIENT, THE LOCAL PHONE NUMBER OF THE CONTRACTOR THAT THE TENANT SHOULD CALL. - SPECIFY THE TENANT HAS TWENTY-FOUR HOURS TO CALL, IF CONTRACTOR SPECIFIED TIME IS INCONVENIENT. - SIGNATURE OF CONTRACTOR REPRESENTATIVE WHO IS DOING THE SCHEDULING. - ADDITIONAL INFORMATION REQUIRED FOR PEST CONTROL SERVICES. - ANY UNSANITARY CONDITIONS TO BE CORRECTED (BRIEF DESCRIPTION OF WHAT UNSANITARY CONDITIONS ARE). - PREPARATIONS, PRECAUTIONS, AND/OR FOLLOW-UP ACTIONS THE OCCUPANT MUST TAKE PRIOR TO, DURING AND AFTER THE SERVICE IS PERFORMED.

CALL-BACK CARD

Reference paragraphs C.1.5.5.7.3, C.1.5.6.11.3, and C.5.2.3.4.2. The Contractor shall provide Call-Back Cards to quarters occupants when the occupant is not at home at the time of the prearranged maintenance call or SO call. The card is to be of a light-colored, lightweight cardboard, and shall be cut at the top center so that it can be hung on the main entrance doorknob. The following is the required format for the card. It may be reduced accordingly to fit on an appropriate size doorknob card.

CALL-BACK CARD

- SO NUMBER (IF APPLICABLE).
- WHAT THE REQUIRED WORK WAS.
- DATE AND TIME SERVICE PERSON WAS THERE.
- CONTRACTOR'S LOCAL SERVICE ORDER DESK PHONE NUMBER.
- IF FOR SCHEDULED MAINTENANCE: SPECIFY THE TENANT HAS TWENTY FOUR HOURS TO CALL AND RESCHEDULE THE SCHEDULED MAINTENANCE WORK.
- IF FOR SERVICE ORDER WORK: STATE THE OCCUPANT HAS FIVE DAYS IN WHICH TO CALL THE CONTRACTOR AND RESCHEDULE THE SERVICE. IF A CALL IS NOT RECEIVED IN FIVE DAYS, THE SO WILL BE COMPLETED AS A 'NO SHOW' AND THE OCCUPANT MUST CALL IN FOR A NEW SO.

NOT HOME - RETURN CALL CARD

Reference paragraphs C.1.5.5.7.5, C.1.5.6.11.3.2, and C.5.2.3.4.3. FOR SCHEDULED MAINTENANCE. If the occupant is not at home the second time, the Contractor shall leave a Not Home - Return Call Card. The card shall inform the occupant that they were not at home at the rescheduled time and if a call is not received in 5 days, the occupant is to initiate a SO and reschedule the work. The Contractor shall provide to the COR a listing of all quarters where the scheduled maintenance was not accomplished after the second attempt was made. FOR SERVICE ORDERS: The Contractor shall provide Not Home - Return Call Cards if an occupant is not home at the agreed-upon time plus 15 minutes. The card will notify the occupant they were not at home at the rescheduled time and if they still need the service, they are to call in for a new SO. At this point, the SO is complete. The Contractor shall notify the COR and provide a copy of the SO listing date and times of the initial and second visits. The card is to be of a light-colored, lightweight cardboard, and shall be cut at the top center so that it can be hung on the main entrance doorknob. The following is the required format for the card. It may be reduced accordingly to fit on an appropriate size doorknob card.

NOT HOME - RETURN CALL CARD

- SO NUMBER (IF APPLICABLE).
- WHAT THE REQUIRED WORK WAS.
- DATE AND TIME SERVICE PERSON WAS THERE.
- CONTRACTOR'S LOCAL SERVICE ORDER DESK PHONE NUMBER.
- IF FOR SCHEDULED MAINTENANCE: SPECIFY THE TENANT WAS NOT AT HOME AT THE RESCHEDULED TIME AND IF A CALL IS NOT RECEIVED IN 5 DAYS, THE OCCUPANT IS TO INITIATE A SO AND RESCHEDULE THE WORK.
- IF FOR SERVICE ORDER WORK: STATE THE OCCUPANT WAS NOT AT HOME AT THE RESCHEDULED TIME AND IF THEY STILL NEED THE SERVICE, THEY ARE TO CALL IN FOR A NEW SO.

SERVICE ORDER CONTROL LOG

Reference paragraphs C.1.5.6.11, C.1.5.6.11.2, C.1.5.6.11.9, and C.5.2.3.4.4. The Contractor shall record the following information for each request for service on a Service Order Control Log: name of occupant; phone number; quarters and apartment number; the nature of the problem or work requested; the SO priority; and the SO control number. The Contractor shall then prepare a Service Order Worksheet to accomplish the work. The database shall be maintained and report produced on a computer using a suitable operating system and database program which allows the database to be downloaded onto DOS based IBM compatible computer systems operating the dBase program so that the database can be easily accessed, sorted, reviewed, and reports printed by Housing Division personnel. The following is the required format for the log.

SERVICE ORDER CONTROL LOG

NAME OF OCCUPANT	PHONE NUMBER	QUARTERS AND APARTMENT NUMBER	NATURE OF PROBLEM OR WORK	SO PRIORITY	SO CONTROL NUMBER
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SERVICE ORDER WORKSHEET

Reference paragraphs C.1.5.6.11, C.1.5.6.11.2, C.1.5.6.11.9, and C.5.2.3.4.5. After logging the SO request the Contractor shall prepare a Service Order Worksheet to accomplish the work. The worksheet shall be produced by a computer using a suitable operating system and database program which allows the database to be downloaded onto DOS based IBM compatible computer systems operating the dBase program so that the database can be easily accessed, sorted, reviewed, and reports printed by Housing Division personnel. The following is the required format for the worksheet.

SERVICE ORDER WORKSHEET

NAME OF OCCUPANT	PHONE NUMBER	QUARTERS AND APARTMENT NUMBER	NATURE OF PROBLEM OR WORK	SO PRIORITY	SO CONTROL NUMBER
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INITIAL DATE/TIME RESPONDED	SECOND DATE/TIME RESPONDED	DATE/TIME SO WORK COMPLETE	ACTUAL WORK REQUIRED	MATERIALS USED AND COST	MAN-HOURS EXPENDED
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WORKMAN'S NAME/ID BADGE NUMBER AND COMMENTS:

OCCUPANT'S SIGNATURE AND COMMENTS:

PEST CONTROL SERVICE ORDER CONTROL LOG

Reference paragraphs C.1.5.6.11 and C.6.2.3.4.6. The Contractor (or appropriate Subcontractor) shall record the following information for each request for pest control service on a Pest Control Service Order Control Log: name of occupant; phone number; quarters and apartment number; the nature of the problem or work requested; the SO priority; and the SO control number. The Contractor shall then prepare a Service Order Worksheet to accomplish the work. The database shall be maintained and report produced on a computer using a suitable operating system and database program which allows the database to be downloaded onto DOS based IBM compatible computer systems operating the dBase program so that the database can be easily accessed, sorted, reviewed, and reports printed by Housing Division personnel. The following is the required format for the log.

PEST CONTROL SERVICE ORDER CONTROL LOG

NAME OF OCCUPANT	PHONE NUMBER	QUARTERS AND APARTMENT NUMBER	NATURE OF PROBLEM OR WORK	SO PRIORITY	SO CONTROL NUMBER
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APPLIANCE AND HVAC SYSTEMS MAINTENANCE SERVICE ORDER CONTROL LOG

Reference paragraphs 0.1.5.6.11 and 0.5.2.3.4.7. The Contractor (or appropriate Subcontractor) shall record the following information for each request for appliance and HVAC systems maintenance service on an Appliance and HVAC Systems Maintenance Service Order Control Log: name of occupant; phone number; quarters and apartment number; the nature of the problem or work requested; the SO priority; and the SO control number. The Contractor shall then prepare a Service Order Worksheet to accomplish the work. The database shall be maintained and report produced on a computer using a suitable operating system and database program which allows the database to be downloaded onto DOS based IBM compatible computer systems operating the dBase program so that the database can be easily accessed, sorted, reviewed, and reports printed by Housing Division personnel. The following is the required format for the log.

APPLIANCE AND HVAC SYSTEMS MAINTENANCE SERVICE ORDER CONTROL LOG

NAME OF OCCUPANT	PHONE NUMBER	QUARTERS AND APARTMENT NUMBER	NATURE OF PROBLEM OR WORK	SO PRIORITY	SO CONTROL NUMBER
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NOT HOME - EMERGENCY CALL CARD

Reference paragraphs C.1.5.6.11.4 and C.5.2.3.4.8. The Contractor shall provide Not Home - Emergency Call Cards if the occupant is not home when the Contractor responds to an emergency call. The card is to be of a light-colored, lightweight cardboard, and shall be cut at the top center so that it can be hung on the main entrance doorknob. The card will notify the occupant they were not home when the Contractor responded to the emergency call the occupant is to call in for a new SO. At this point, the SO is complete. The Contractor shall notify the COR and provide a copy of the SO listing date and time of the visit. The following is the required format for the card. It may be reduced accordingly to fit on an appropriate size doorknob card.

NOT HOME - EMERGENCY CALL CARD

- SO NUMBER.
- WHAT THE REQUIRED WORK WAS.
- DATE AND TIME SERVICE PERSON WAS THERE.
- CONTRACTOR'S LOCAL SERVICE ORDER DESK PHONE NUMBER.
- STATE THE OCCUPANT WAS NOT HOME WHEN THE CONTRACTOR RESPONDED TO THE EMERGENCY CALL AND THE OCCUPANT IS TO CALL IN FOR A NEW SO.

MULTIPLE QUARTERS PEST CONTROL CARD

Reference paragraphs C.1.5.6.11.5.2.1 and C.5.2.3.4.9. The Contractor shall obtain each quarters occupant's decision whether or not they want their quarters treated. The Contractor shall explain to each occupant what will happen if they elect to have their area treated or consequences if they elect not to. The Contractor shall inform occupants that they may change their decision up to the time of treatment. The Contractor shall do this verbally and with an appropriate handout. If the occupant is not at home, the Contractor shall notify the occupants by leaving a Multiple Quarters Pest Control Card requesting occupant contact the Contractor, or by repeated visits. If cards are used, the Contractor shall provide complete information to the occupants of the service needed and instructions to obtain the service. The following is the required format for the card. It may be reduced accordingly to fit on an appropriate size doorknob card.

MULTIPLE QUARTERS PEST CONTROL CARD

- CONTRACTOR'S NAME.
- FAMILY QUARTERS OR BILLETING BUILDING NUMBER AND APARTMENT NUMBER IN WHICH THE SERVICE IS TO BE ACCOMPLISHED.
- WHAT SERVICE IS TO BE ACCOMPLISHED (BRIEF DESCRIPTION) AND THE ESTIMATED TIME REQUIRED TO ACCOMPLISH THE SERVICE.
- DATE SERVICE IS TO BE PERFORMED.
- APPROXIMATE TIME (AM OR PM) SERVICE PERSON IS EXPECTED TO ARRIVE.
- IF THE SCHEDULED TIME IS NOT CONVENIENT, THE CONTRACTOR'S LOCAL SERVICE ORDER DESK PHONE NUMBER OF THE CONTRACTOR THAT THE TENANT SHOULD CALL.
- SPECIFY THE TENANT HAS TWENTY-FOUR HOURS TO CALL, IF CONTRACTOR SPECIFIED TIME IS INCONVENIENT.
- NAME OF CONTRACTOR REPRESENTATIVE WHO IS DOING THE SCHEDULING.
- ADDITIONAL INFORMATION, IF APPROPRIATE.
- ANY UNSANITARY CONDITIONS TO BE CORRECTED (BRIEF DESCRIPTION OF WHAT UNSANITARY CONDITIONS ARE).
- PREPARATIONS, PRECAUTIONS, AND/OR FOLLOW-UP ACTIONS THE OCCUPANT MUST TAKE PRIOR TO, DURING AND AFTER THE SERVICE IS PERFORMED.

MULTIPLE QUARTERS PEST CONTROL SIGNATURE SHEET

Reference paragraphs C.1.5.6.11.5.2.1 and C.5.2.3.4.10. The Contractor shall obtain each quarters occupant's decision whether or not they want their quarters treated. The Contractor shall do this verbally and with an appropriate handout. Once the occupants are contacted the Contractor shall provide the occupants with a Multiple Quarters Pest Control Signature Sheet, where the occupants are to print their name, address, if they want or do not want the service, their signature, and the date. A copy of the signature sheet is to be attached to the SO. The following is the required format for the card. It may be reduced accordingly to fit on an appropriate size doorknob card.

MULTIPLE QUARTERS PEST CONTROL SIGNATURE SHEET				
OCCUPANTS NAME	QUARTERS AND APARTMENT NUMBER	I WANT TREATMENT YES/NO	OCCUPANTS SIGNATURE	DATE

WORK STATUS AND COMPLAINT CONTROL LOG

Reference paragraphs C.1.5.3.1, C.5.2.1.4, and C.5.2.3.4.11. The Contractor shall establish a Work Status and Complaint Program to receive and respond to maintenance work status requests and complaints. The Contractor shall log all status requests and complaints on a Status Request and Complaint Control Log and furnish the COR a Weekly Status Request and Complaint Report. The log and report shall include: name of the requester or occupant; phone number; quarters and apartment number; date and time of receipt; date and time of response; nature of the request or problem; action taken; current status of complaint or request; and remarks for Contractor's response to complaint or status request. The database shall be maintained and report produced on a computer using a suitable operating system and database program which allows the database to be downloaded onto DOS based IBM compatible computer systems operating the dBase program so that the database can be easily accessed, sorted, reviewed and reports printed by Housing Division personnel. The following is the required format for the log.

WORK STATUS AND COMPLAINT CONTROL LOG

NAME OF REQUESTER OR OCCUPANT	PHONE NUMBER	QUARTERS AND APARTMENT NUMBER	DATE/TIME OF RECEIPT	DATE/TIME OF RESPONSE	NATURE OF REQUEST OR PROBLEM	ACTION TAKEN OR STATUS	REMARKS
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CUSTOMER SATISFACTION FEEDBACK CARD

Reference paragraphs C.1.5.3.2, C.5.2.2.1, and C.5.2.3.4.12. The Contractor shall establish a Customer Satisfaction Feedback Program. When any work is accomplished, the Contractor shall provide quarters occupants with a Customer Satisfaction Feedback Card along with the occupant's copy of the Scheduled and Vacant Quarters Maintenance Checklist, SO Worksheet, or JO Worksheet. The card shall be a minimum of 5 by 7 inches in size and have space and lines available for customers to use in providing opinions of quality of service; timeliness; and courtesy of workmen. The card shall be addressed to and postage paid by the Contractor. The Contractor shall provide the COR a Monthly Customer Satisfaction Feedback Report along with copies of all cards received. The Contractor shall follow up on all derogatory replies and take the necessary actions to correct all deficiencies to include discourtesy. The following is the required format for the card.

CUSTOMER SATISFACTION FEEDBACK CARD		
<p>THE HOUSING MANAGER AND THE HOUSING MAINTENANCE CONTRACTOR WOULD LIKE YOUR COMMENTS REGARDING THE WORK PERFORMED IN YOUR QUARTERS. PLEASE TAKE A MOMENT TO ANSWER THE FOLLOWING QUESTIONS AND TO MAKE ANY COMMENTS YOU LIKE.</p>		
NAME OF OCCUPANT:		
PHONE NUMBER:		
QUARTERS AND APARTMENT NUMBER:		
WHAT TYPE OF WORK WAS PERFORMED:		
WAS THE WORK COMPLETED ON THE INITIAL VISIT?	YES	NO
IF NOT, WERE YOU INFORMED OF WHY AND WHEN THE PROBLEM WOULD BE CORRECTED?	YES	NO
WERE YOUR QUESTIONS ANSWERED TO YOUR SATISFACTION?	YES	NO
DID THE REPAIRMAN PERFORM QUALITY WORK?	YES	NO
WAS THE WORK AREA CLEANED UP SATISFACTORILY?	YES	NO
WAS THE SERVICEMAN COURTEOUS?	YES	NO
ADDITIONAL REMARKS: _____		

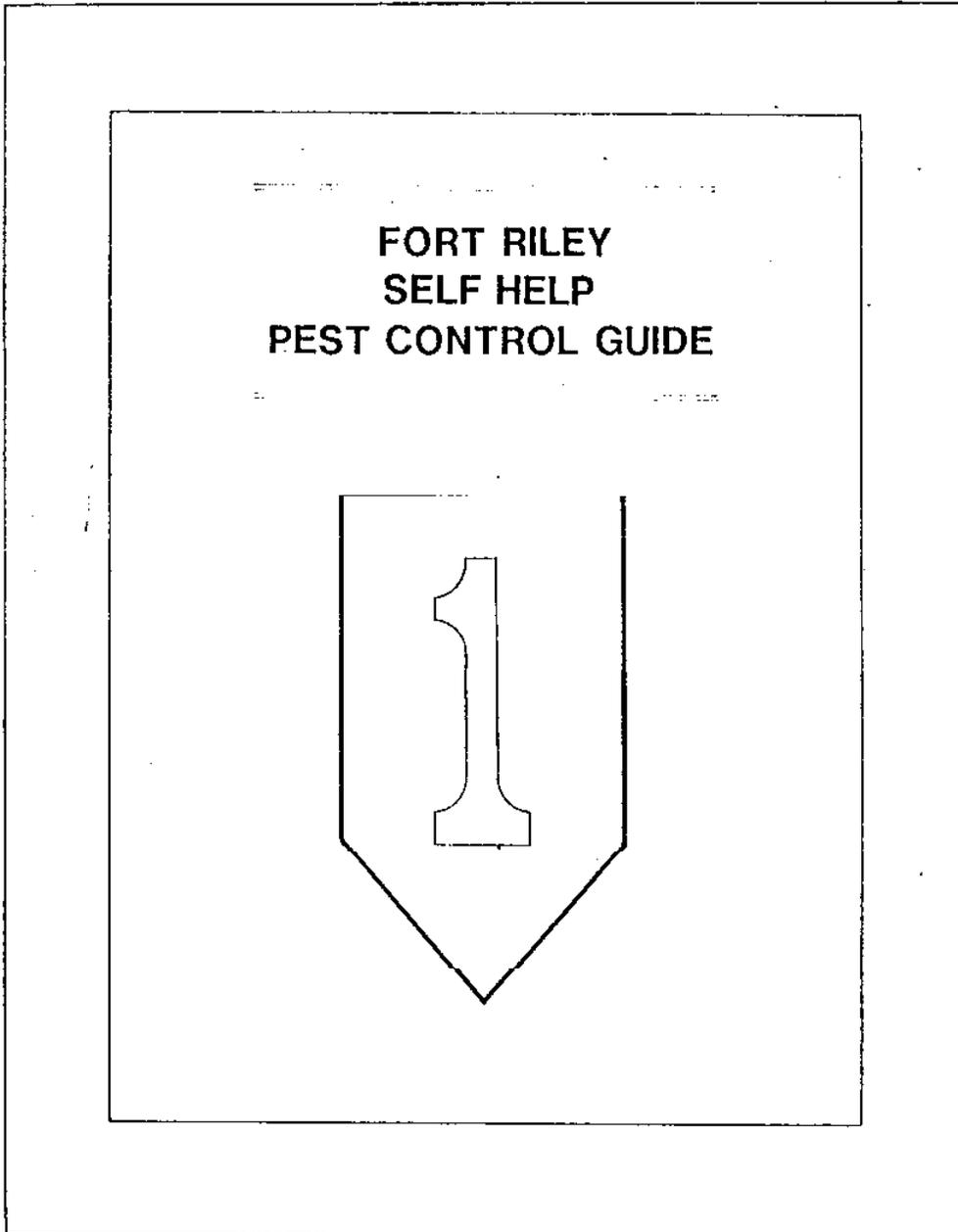
SCHEDULED AND VACANT QUARTERS MAINTENANCE CHECKLISTS

Reference paragraphs C.1.5.5.10, C.1.5.7.8, and C.5.2.3.5.1. The Contractor shall prepare Scheduled and Vacant Quarters Maintenance Checklists as part of scheduled and vacant quarters maintenance. The checklists shall contain all scheduled and vacant quarters maintenance tasks listed in Technical Exhibits 16, 21, and 22. Upon completion of scheduled or vacant quarters maintenance, the Contractor shall enter on each checklist: name of occupant (if scheduled maintenance); phone number; quarters and apartment number; the date and time responded; the date and time the work was accepted; the work performed; the material used and cost (including part number, when applicable); the name(s) or ID badge number(s) of the Contractor's employee(s) performing the work; and the man-hours expended to complete the job. The Contractor shall request the quarters occupant sign and date each checklist. A copy of the completed and signed checklist shall be given to the occupants. The Contractor shall file a second copy of all completed checklists in respective facility folders. Original completed checklists shall be attached to the corresponding delivery order and submitted with the Contractor's invoice for payment. The following is the required format for the checklists.

SCHEDULED AND VACANT QUARTERS MAINTENANCE CHECKLISTS					
NAME OF OCCUPANT	PHONE NUMBER	QUARTERS AND APARTMENT NUMBER	INITIAL DATE/TIME RESPONDED	SECOND DATE/TIME RESPONDED	DATE/TIME WORK ACCEPTED
WORK PERFORMED:		MATERIALS USED AND COST		MAN-HOURS EXPENDED	
WORKMAN'S NAME/ID BADGE NUMBER AND COMMENTS:					
OCCUPANT'S SIGNATURE AND COMMENTS:					
LIST OF TASKS TO BE ACCOMPLISHED: (From Technical Exhibits 16, 21 and 22)					

PEST CONTROL GUIDE HANDOUT

Reference paragraphs C.1.5.6.11.5.1.1, C.1.5.6.11.5.1.2.1, C.4.7.3.3, and C.3.2.3.0.1. The Contractor shall provide a Pest Control Guide. The guide shall contain the following: a description of the pest being treated; picture of the pest; what the customer is required to do before treatment, during treatment, and after treatment; what the Contractor will be doing; what pesticides will be used and when the chemicals will be applied; and what precautions the customer must take. The guide shall be three color, easily readable, and in a neat, professional appearance. Multiple pests may be included in the guide, but the Contractor shall specify to the occupant what pest is being treated. The following is a black and white example of the color guide required. A color example will be supplied to the contractor after contract award.



PEST	METHODS OF CONTROL	
WHAT TO LOOK FOR	WHAT TO USE	WHERE TO TREAT



American Roach



German Roach

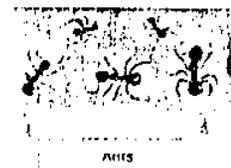
- Aerosol Bomb
- Roach Kill
 - Blattox
 - Sticky Traps
 - Bait
 - Caution

ROACHES

Spray in cracks and crevices around, under, and inside cupboards and cabinets. Spray under kitchen sink, around water compartment of refrigerator, around dishwasher and other kitchen equipment, in scaptable base, and under table tops. Spray along and behind baseboards, and rubbing strips, window and door frames, and areas where pipes go through walls and floors. In bathrooms, spray around tub, sink and commode. Do not spray entire walls or floors. Treatments should be repeated once every two weeks until no roaches are observed. In addition to aerosol roach kill sprays, wet sticky traps should be placed under cabinets and behind or under appliances.

NOTE: Before spraying cupboards or washable base, remove contents, and clean thoroughly. Do not eat inside of drawers. After spraying cupboard shelves, allow to dry, then cover with clean fresh shell paper before replacing articles. Do not contaminate food, dishes or utensils. Apply only enough spray to moisten surfaces, but not to the point where the spray will drip or run.

REMARKS: Good housekeeping (not leaving food scraps around) and the use of insecticides when necessary are the only sure ways of having a roach-free home. Practice good sanitation. Roaches prefer warm, dark, out-of-sight areas where there is a good source of water and food. They are flat fast-moving insects that are active at night and hide during the day. Several kinds of roaches infest homes in the United States. These include the American, German, Oriental, and the brownbanded cockroach. They are the only insects that lay eggs and are capable of surviving a contact spray if laid in a capsule that is placed in out-of-the-way areas by the female roach; young roaches may not hatch from some of these capsules for several weeks.



Ants

- Aerosol Bomb
- Insecticide
 - Powders

ANTS

Ants can be controlled by treating areas where they have been seen. It is especially important to treat openings that ants are using to enter the house or home. Spray over surfaces where ants are passing in the form of trails. Treat bases of window frames and around doors including the door sill. Spray baseboards and the floor close to baseboards, and cracks or crevices that ants may be using as entry points. Spray around sinks, bathtub, toilets, kitchen cabinets and concrete pipes, under refrigerator and around other kitchen equipment. Do not spray entire walls or floors. After a few days, if ants are still seen, they are probably entering from areas that have not been treated. Locate and spray near entry points. Check basements outside and treat with powders.

NOTE: Do not contaminate food, dishes or utensils when spraying in kitchen areas.

REMARKS: Nearly all ants you see in homes are wingless workers in search of food to take back to the nest which is outside. Good housekeeping will help keep ants out of your home. Do not leave food exposed either in containers or on cooking utensils. Clean up crumbs and spilled liquids and cover food containers carefully. Wash food counters regularly. Some kinds of ants enter homes. Some ants prefer sweet foods, while others are toxic, and some ants even invade homes in search of nesting sites. They can be very destructive. They can be very difficult to control. They can be very difficult to control. They can be very difficult to control.



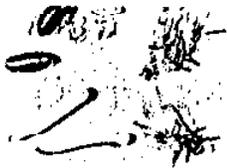
Silverfish

- Aerosol Bomb

SILVERFISH

Spray in areas where silverfish are seen - usually crevices, under sinks and in roof, damp places. Spray baseboards and the floor close to baseboards around doors and window casings, under sinks and around openings, where pipes go through walls, and floors. In bathrooms, spray around tub, sink and commode. Treat also along the base of walls and floors in basements. Do not spray entire walls or floors. Usually, more than one treatment is needed for good control. Spray again in 2 or 3 weeks if you continue to see silverfish.

REMARKS: Silverfish are wingless, fast-moving insects about 1/2 inch long when fully grown. The body tapers from head to tail and is covered with thin scales which give it a silvery shiny appearance. These insects have three fat like filaments, each about as long as the body. They feed on such things as wallpaper, book bindings and stained clothing. Although silverfish may be found in almost any part of the house, cool, damp basements are ideal locations for these insects.

PEST		METHODS OF CONTROL	
WHAT TO LOOK FOR	WHAT TO USE	WHERE TO TREAT	
 <p>House Fly</p>	<p>Approved Brands</p> <p>Fly Swatter</p>	<p>HOUSE FLIES</p> <p>The best way to keep flies out of your house is to make sure screens in windows and doors are tight fitting and in good repair. When only a few flies are found in the house, use a fly swatter to get rid of them instead of a spray. Spraying (that is, spraying into the air so that they contact the bees, etc.) as they fly through the mesh should only be done when many flies are in a room. If screens are properly installed, doors are kept closed, and you use a fly swatter, then the use of insecticide sprays will rarely be needed.</p> <p>NOTE: When spraying, make sure no other persons are exposed.</p>	
<p>REMARKS: Practice good sanitation. This is the best way to keep from attracting flies into your home. Clean up food scraps and keep food containers covered. House flies will breed where garbage or manure accumulates. These breeding sites are the source of adult flies that will most often enter your home from garbage cans, manure, and other such areas. If you can clean up pet droppings, if everyone practices good sanitation, flies will be only a problem in a neighborhood.</p>			
 <p>House Mouse</p>	<p>Snap Trap</p>	<p>HOUSE MICE</p> <p>One of the first steps in controlling mice is to seal any cracks in walls, floors and foundations of the house to prevent mice from entering. The next step is to see that food is not left in places where mice can get to it. Place foods such as bird seed and pet food in tight-fitting containers such as metal or plastic garbage cans. If mice are found in the house, and there are only a few of them, they usually can be disposed of with ordinary snap traps. Before setting the snap trap, place a small portion of food on the trigger surface. Good baits to use are peanut butter, grain (corn) or bacon. Traps should be placed along walls and out-of-the-way areas where mice travel. Place traps at a right angle to walls with the trigger mechanism toward the wall. Traps should be placed where pets or children cannot reach them.</p>	
 <p>Droppings</p>	 <p>Snap Trap & Placement</p>	<p>REMARKS: Mice are usually more of a pest in the fall when the weather has cooled and they move from outdoor areas into the home. They will eat nearly any kind of food stuff and damage made in search of nesting material. The house mouse is long and measures about 2" to 3" inches in length. The tail is about as long as the body. They may move from traps to traps to follow with a white to dark gray belly. Besides evidence of feeding on food stuffs and damage to goods, the presence of mice in the house is indicated by the tiny droppings they leave behind.</p>	
 <p>Swarming Termites</p>	<p>Approved Brands</p>  <p>Termite vs. Ant</p>	<p>TERMITES</p> <p>One of the first indications of a termite infestation is the presence of large numbers of winged termites emerging or swarming from the roof or from gaps in the house. While you may not see the actual flight of the termites, you may find discarded wings and some dead adult termites on the floor beneath windows and doors. The adults are attracted by strong light to these areas when they emerge without buildings. Swarming termites are six-legged, spring feet may often be seen during the summer and sometimes in the fall in various parts of the country. The adults are yellow-brown to black in color and have two pairs of long, which transparent wings of equal size. Termites differ from winged ants by having a straight body and no pinched "waist"; ants have a narrow "waist" like a wasp and wings of unequal size. Spray swimmers with acetone.</p>	
<p>REMARKS: When swarming termites are noticed, you should call the service or check for inspection of 230-3065.</p>			

PEST CONTROL TREATMENT INFORMATION HANDOUT

Reference paragraphs C.1.5.6.11.5.1.2.3, C.1.5.6.11.5.2.2, and C.5.2.3.6.2. When an occupant elects to have the treatment, the Contractor shall prepare and provide the occupant with a copy of the Pest Control Treatment Information Handout. The handout shall provide the occupant with the necessary preparation requirements, during and after treatment, for the particular pest control service. When vacant quarters are treated, the Contractor shall prepare and provide a copy of the Pest Control Treatment Information Handout. The handout shall be left on the kitchen countertop for the new occupants. The following is the required format for the handout.

PEST CONTROL TREATMENT INFORMATION HANDOUT

- CONTRACTORS NAME.
- CONTRACTORS LOCAL SERVICE ORDER DESK PHONE NUMBER.
- WHAT SERVICE IS TO BE ACCOMPLISHED (BRIEF DESCRIPTION) AND THE ESTIMATED TIME REQUIRED TO ACCOMPLISH THE SERVICE.
- DATE SERVICE IS TO BE PERFORMED.
- APPROXIMATE TIME (AM OR PM) SERVICE PERSON IS EXPECTED TO ARRIVE.
- ANY UNSANITARY CONDITIONS TO BE CORRECTED (BRIEF DESCRIPTION OF WHAT UNSANITARY CONDITIONS ARE).
- PREPARATIONS, PRECAUTIONS, AND/OR FOLLOW-UP ACTIONS THE OCCUPANT MUST TAKE PRIOR TO, DURING AND AFTER THE SERVICE IS PERFORMED.

DACA41-94-R-0012

TE-15 NOT USED

TE-15-I

DACA41-94-R-0012

**TE-16 SCHEDULED AND VACANT QUARTERS
MAINTENANCE**

TE-16-I

TECHNICAL EXHIBIT 16

SCHEDULED AND VACANT QUARTERS MAINTENANCE

1.1 SCOPE: This technical exhibit sets forth the required tasks and standards for scheduled and vacant quarters maintenance in this contract.

2.1 GENERAL: The Contractor shall perform scheduled and vacant quarters maintenance in accordance with this technical exhibit, and the requirements specified in Subsections C-1 thru C-6 and Technical Exhibits 17, 18, and 23.

3.1 SCHEDULED AND VACANT QUARTERS MAINTENANCE TASKS AND STANDARDS: Scheduled and vacant quarters maintenance includes the maintenance tasks and standards below. Scheduled and vacant quarters maintenance shall be performed by the Contractor so that the results of his work meet or exceed the performance standards indicated. When the minimum standards are not met, the Contractor shall be required to reperform the work until the standards are met, at no additional cost to the Government. Liquidated damages will be assessed if applicable. Where linear, square, or other means of measurement are indicated, they apply to scheduled and vacant quarters maintenance only, not Work Level II - Service Order Work. Where cleaning standards are indicated, it applies to vacant quarters maintenance only. During scheduled maintenance the Contractor shall move housing occupants' and Government property in the immediate work area as necessary to accomplish the required work and then replace it to its original location.

3.1.1 Interior Scheduled and Vacant Quarters Maintenance Tasks:

3.1.1.1 Walls, Ceilings, Mouldings, and Millwork:

3.1.1.1.1 Task: Repair walls, ceilings, mouldings, and millwork (maximum of 300 square feet of repairs per set of quarters). Repair and replace damaged railings, handrails, brackets, and other components; reset loose fasteners.

3.1.1.1.2 Standard: All surfaces shall be smooth and unbroken. No cracks, paint runs, or holes shall be apparent from a distance of 36 inches or greater. Surface color and luster shall be uniform. Vinyl wall covering and wall-paper shall be firmly attached to walls with no bubbles, tears or loose edges. Patterns shall be matched where patching is required. All railings, handrails, and brackets shall be in place and securely attached to floors and walls. All wall, ceiling, mouldings, and millwork surfaces shall meet or exceed the cleaning standards set forth in Technical Exhibit 17: QUARTERS CLEANING.

3.1.1.2 Cabinets:

3.1.1.2.1 Task: Repair kitchen, bathroom, hallway, and laundry room cabinets.

3.1.1.2.2 Standard: All surfaces shall be smooth and unbroken. No cracks, paint runs, holes, or other blemishes shall be apparent from a distance of 36 inches or greater. Surface color and luster shall be uniform. All doors and drawers shall be in good repair and function properly. All hardware and fas-

teners shall be secure and tight. All hardware shall be lubricated and in working order. Repairs to surface shall match adjacent surfaces. Shelves shall be aligned with no splits or cracks. All hardware shall be free of paint. All cabinet surfaces shall meet or exceed the cleaning standards set forth in Technical Exhibit 17: QUARTERS CLEANING.

3.1.1.3 Countertops:

3.1.1.3.1 Task: Repair kitchen and bathroom countertops.

3.1.1.3.2 Standard: All surfaces, edges and end caps shall be securely glued. Surfaces shall be smooth and free of nicks, chips, and scratches. Surface repairs shall match the color, texture, and luster of the existing countertop. There shall be a solid bead of caulking applied where the countertop meets the wall. The caulking shall have been applied in a smooth and continuous bead. The countertop shall be solidly affixed to the base cabinet. All countertop surfaces shall meet or exceed the cleaning standards set forth in Technical Exhibit 17: QUARTERS CLEANING.

3.1.1.4 Doors: This item includes all types of metal and wood doors both interior and exterior. All passage doors, entrance doors, closet doors, sliding glass doors, storm doors, screen doors, and basement bulkhead doors are included.

3.1.1.4.1 Task: Repair doors and door hardware including bi-folding, bi-passing, and pocket door hardware. Doors with holes larger than 1 square inch will be replaced with the appropriate unit price item. As part of vacant quarters maintenance each set of vacant quarters shall have all entry, dead bolts, and storage room door locks rekeyed to a new pin set and four new keys cut and turned in to the Housing Facilities Section, Building 45. Dead bolts shall be keyed differently from entry locks.

3.1.1.4.2 Standard: Door surfaces shall be smooth and even without holes, cracks, chips, or scratches. Patches shall match the surrounding surface color and texture. Surfaces shall have either paint or varnish. All hardware on doors shall be lubricated (no graphite) and in fully functional condition. All locks shall work easily. Doors shall open and close without binding or dragging. All hardware shall be free of paint. Door closers shall be properly adjusted and door shall open and close freely without binding or dragging. Broken glass and torn screen shall be replaced. Damaged and missing weatherstripping shall be replaced. Door locks rekeyed and four new keys turned in to Housing Facilities Section. All door surfaces shall meet or exceed the cleaning standards set forth in Technical Exhibit 17: QUARTERS CLEANING.

3.1.1.5 Windows, Window Frames, and Window Screens: This item includes all types of metal, wood, and metal or vinyl clad wood windows both prime and storm. Both interior and exterior surfaces are included.

3.1.1.5.1 Task: Repair and clean prime and storm windows and screens.

3.1.1.5.2 Standard: All glass and screen material shall be undamaged and securely fastened in place. Storm doors and the storm window inserts shall fit snugly in the window and door channels yet shall slide freely up and down when the adjustment release mechanism is depressed. All primary window sashes shall open and close easily. All window parts (sash springs, sash ropes, etc.) shall be in good condition and serving the purpose for which they were designed. No paint or varnish shall be on the window, screen or glass. Paint shall not be on the hardware. Damaged and missing weatherstripping shall be replaced. Deteriorated calking and glazing compound shall be replaced, primed and painted. All window surfaces shall meet or exceed the cleaning standards set forth in Technical Exhibit 17: QUARTERS CLEANING whether repairs were required or not.

3.1.1.6 Ceramic Tile:

3.1.1.6.1 Task: Repair ceramic wall and floor tile (maximum of 100 square feet of repairs per set of quarters).

3.1.1.6.2 Standard: There shall be no missing grout or calking. All grout and calking shall be smooth and stain free. Calking at joint between tile and bathtubs and shower bases shall be in place and free from gaps, cracks, and deterioration. Any tile replacement or repair shall be identical in color, size, texture, and appearance. Tile shall be paint free. All tile surfaces shall meet or exceed the cleaning standards set forth in Technical Exhibit 17: QUARTERS CLEANING.

3.1.1.7 Resilient Flooring:

3.1.1.7.1 Task: Repair resilient tile and sheet flooring (maximum of 100 square feet of repairs per set of quarters when replacing other resilient tile and sheet flooring).

3.1.1.7.2 Standards:

3.1.1.7.2.1 Tile Floors: Tile floors shall not be cracked, chipped or broken. All tiles shall be the same color. No excess adhesive or mastic shall be coming up between the tile. Tile shall be firmly attached to the floor. All tile shall have a uniform luster.

3.1.1.7.2.2 Sheet Vinyl Floors: Floors shall be tightly fastened with no tears, cuts, or splits. Seams shall be tightly fastened. Patterns shall be matched when patching is required. All vinyl shall have a uniform luster.

3.1.1.7.2.3 All resilient flooring surfaces shall meet or exceed the cleaning standards set forth in Technical Exhibit 17: QUARTERS CLEANING.

3.1.1.8 Carpet:

3.1.1.8.1 Task: Repair carpeting (maximum of 100 square feet of repairs per set of quarters). Restretch loose carpeting.

3.1.1.8.2 Standard: Carpet shall be freshly cleaned (vacant quarters only). No stains larger than 10 inches in diameter shall be visible from distance of five feet. No tears, rips, or loose seams shall be visible. Carpet shall be all one color throughout an entire room. All carpeting surfaces shall meet or exceed the cleaning standards set forth in Technical Exhibit 17: QUARTERS CLEANING.

3.1.1.9 Hardwood Floors:

3.1.1.9.1 Task: Repair hardwood strip flooring and stairs (maximum of 100 square feet of repairs per set of quarters). Refasten loose components; reset nails and screws; touch up finish.

3.1.1.9.2 Standard: Floors and stairs shall be evenly finished and securely fastened. All warped and stained floorboards are replaced. Scratches and gouges are filled in. Light stains shall be bleached out, but only when the entire floor, wall to wall, in any given room is being refinished. The final appearance shall be a smooth, uniform color, finish, and luster. All hardwood surfaces shall meet or exceed the cleaning standards set forth in Technical Exhibit 17: QUARTERS CLEANING.

3.1.1.10 Toilet and Bathroom Accessories:

3.1.1.10.1 Task: Repair toilet and bathroom accessories.

3.1.1.10.2 Standard: Towel bars, shower curtains, rods, toilet paper holders, and soap dishes shall be free of paint, rust, scratches, and dents. Shower rods shall be straight (not bent or sagging). All items shall be firmly and properly attached to the wall. All toilet and bathroom accessory surfaces shall meet or exceed the cleaning standards set forth in Technical Exhibit 17: QUARTERS CLEANING.

3.1.1.11 Appliances:

3.1.1.11.1 Task: The Contractor shall inspect all appliances and determine their condition. Nonoperational appliances shall be repaired or replaced. Damaged or missing components shall be repaired or replaced. Appliances shall be cleaned inside and outside. Appliance repair and replacement shall be accomplished as Work Level II - Service Order Work.

3.1.1.11.2 Standards:

3.1.1.11.2.1 Ranges, Cooktops, and Built-in Ovens: Ranges, cooktops, and built-in ovens shall be fully operational. Ranges, cooktops, and built-in ovens shall be fully assembled and hooked up to gas and/or electricity. All burners and ovens shall operate correctly. Oven doors shall seal properly with no leaks. Clocks and timers shall operate correctly. All knobs shall match. There shall be no cracks. All light bulbs shall be working. All racks and drip pans shall be installed and be free of rust and holes.

3.1.1.11.2.2 Refrigerators and Freezers: Refrigerators and freezers shall be fully operational including icemakers, if applicable. All racks, egg racks, knobs, ice cube trays, and crisper tops shall be in place and without cracks.

Both the refrigerator and freezer compartments shall operate properly. All doors shall seal properly and not let air escape. If the refrigerator is turned off, the doors shall be propped open to prevent mildew.

3.1.1.11.2.3 Dishwashers: Racks, knobs, and floats shall be in place and without cracks. The dishwasher shall be properly secured to the countertop and shall be fully operational.

3.1.1.11.2.4 Garbage Disposals: Disposals shall be fully operational and shall not leak.

3.1.1.11.2.5 Smoke Detectors: Smoke detectors shall be fully operational.

3.1.1.11.2.6 Garage Door Openers: Garage door openers shall be properly lubricated and fully operational.

3.1.1.11.2.7 Water Heaters: Water heaters shall be fully operational and shall not leak.

3.1.1.11.2.8 All appliance surfaces shall meet or exceed the cleaning standards set forth in Technical Exhibit 17: QUARTERS CLEANING.

3.1.1.12 Drapery Hardware and Roll Shades:

3.1.1.12.1 Task: Repair and tighten and/or rehang drapery hardware and roll shades.

3.1.1.12.2 Standard: All drapery hardware and roll shades shall be securely fastened to the wall/window trim and function properly. Traverse rod draw cords shall not be frayed, broken or missing. Paint shall not be on the hardware. All drapery hardware and roll shade surfaces shall meet or exceed the cleaning standards set forth in Technical Exhibit 17: QUARTERS CLEANING.

3.1.1.13 Housing Occupants' and Government Owned Property:

3.1.1.13.1 Task: Move housing occupants' and Government owned property as necessary to accomplish the required work and then replace it to its original location.

3.1.1.13.2 Standard: Furniture and other property shall not be stacked, left upside down, or stored sideways. In vacant quarters, all furniture surfaces shall meet or exceed the cleaning standards set forth in Technical Exhibit 17: QUARTERS CLEANING.

3.1.1.14 Fuel Gas Piping:

3.1.1.14.1 Task: Repair fuel gas piping.

3.1.1.14.2 Standard: All natural gas piping, valves, connectors, appliances, water heaters, and heating systems shall be free of all leaks. Opening where the natural gas piping enters the quarters shall be calked with calking the

same color of exterior building surface. When the work is finished in the quarters, gas shall be turned on to all appliances, water heaters, and heating systems which require gas. All pilot lights shall be lighted.

3.1.1.15 Plumbing: This item includes both interior and exterior plumbing fixtures and components.

3.1.1.15.1 Task: Repair plumbing fixtures and components.

3.1.1.15.2 Standard: All water supply and DWV piping, sinks, tubs, showers, lavatories, faucets, sill cocks, clothes washer plumbing, shut off valves, stops, boiler drains, water closets, and flush valves shall be fully functional and free of leaks. All porcelain and fiberglass fixtures shall be smooth and free of cracks, chips, scratches, and other defects. Patches shall be the same color and texture as the surfaces. All drain stoppers shall work as designed. All fixtures shall be calked with a smooth unbroken bead at all places where they meet the floor or wall. All plumbing components shall be free of paint drips and spatters. All water closets shall flush properly. Water shall be turned on and working in the quarters. All sinks, tubs, and showers shall have both hot and cold water when supply piping is connected. All plumbing fixtures shall be securely attached to floors and/or walls as appropriate. All plumbing fixture surfaces shall meet or exceed the cleaning standards set forth in Technical Exhibit 17: QUARTERS CLEANING.

3.1.1.16 HVAC Systems:

3.1.1.16.1 Task: The Contractor shall inspect all HVAC systems and determine their condition. HVAC system equipment includes all types of heating and cooling equipment, humidifiers, kitchen range hoods, kitchen exhaust fans, bathroom exhaust fans, attic fans, and ceiling fans. Nonoperational HVAC system equipment shall be repaired or replaced. Damaged or missing components shall be repaired or replaced. HVAC system components shall be cleaned on the outside. HVAC systems repair and replacement shall be accomplished as Work Level II - Service Order Work.

3.1.1.16.2 Standard: Furnace filters shall be clean and free of dust. Humidifier filters shall be clean and unclogged. Kitchen range hood filters shall be clean and free from cooking grease. The ductwork shall be free of dust caused by maintenance/repair work accomplished by the Contractor. All HVAC system equipment shall be properly lubricated and fully operational. All fans components, diffusers, grilles, and registers shall be securely fastened in their proper place. All HVAC component surfaces shall meet or exceed the cleaning standards set forth in Technical Exhibit 17: QUARTERS CLEANING.

3.1.1.17 Appliance and HVAC Equipment Thermostat Settings:

3.1.1.17.1 Task: The Contractor shall reset thermostatic controls on appliances and HVAC equipment in each set of vacant quarters. Thermostats shall be set in accordance with the table below.

THERMOSTAT SETTINGS (Degrees Fahrenheit)

15 Nov 1 Apr 16 Jun 16 Sep

APPLIANCE OR HVAC EQUIPMENT	thru 30 Mar	thru 15 Jun	thru 15 Sep	thru 14 Nov
Heating Equipment Thermostats	50	Off	Off	Off
Cooling Equipment Thermostats	Off	Off	85	Off
Water Heater Thermostats	140	140	140	140

3.1.1.17.2 Standard: Thermostats shall reset as indicated upon completion of vacant quarters maintenance.

3.1.1.18 Electrical: This item includes both interior and exterior electrical fixtures and components.

3.1.1.18.1 Task: Repair electrical system. Check batteries in smoke detectors, garage door openers, and remote door chimes.

3.1.1.18.2 Standard: All fixtures, switches, outlets, and service panels shall be properly wired, and grounded if 3-wire grounded system. All switches, receptacles, and plate covers shall be one color throughout the quarters and not chipped, nicked, cracked, or otherwise damaged. No wiring shall be exposed on walls, ceilings, or floor. All electric circuits shall be on and working. Smoke detectors shall be firmly secured and working. All light fixtures shall have operational light bulbs. Broken light fixture globes shall be replaced. Nonrepairable light fixtures shall be replaced using the appropriate unit price item. Door bells and/or chimes shall be fully operational. Telephone circuits shall be fully operational (maximum two telephone connections per quarters). All electrical items shall be free of paint. Battery operated smoke detectors, garage door openers, and remote door chimes shall be operational. All electrical fixtures and component surfaces shall meet or exceed the cleaning standards set forth in Technical Exhibit 17: QUARTERS CLEANING.

3.1.1.19. Chimneys and Flues:

3.1.1.19.1 Task: Clean and repair chimneys and flues.

3.1.1.19.2 Standard: Chimneys shall be free of obstructions and cleaned of any creosote build-up. Dampers and ashpit doors shall be working and operational. Screens and chimney caps shall be in place. Fireplace and chimney inspection conducted and checklist prepared and submitted to COR.

3.1.1.20 Fireplaces and Ashpits:

3.1.1.20.1 Task: Clean and repair fireplaces and ashpits.

3.1.1.20.2 Standard: Fireplaces and ashpits shall be free from ashes and soot. All fire bricks and mortar shall be free of defects and in good working order. Face brick and ceramic tile on hearths shall be free of paint.

3.1.2 Exterior Scheduled and Vacant Quarters Maintenance Tasks:

3.1.2.1 Concrete:

3.1.2.1.1 Task: Repair broken and spalled concrete surfaces on porches, stairs, and sidewalks (maximum of 4 square feet of repairs per set of quarters).

3.1.2.1.1 Standard: Concrete shall be free from broken and spalled areas.

3.1.2.2 Stone and Brick:

3.1.2.2.1 Task: Repair stone and brick (maximum of 25 square feet of brick replacement and 25 square feet of brick or stone tuck pointing per set of quarters).

3.1.2.2.2 Standard: Stone and/or brick repair or replacement shall match the existing in color, texture, and appearance. Broken and spalled brick and stone shall be replaced. Deteriorated masonry joints shall be tuck pointed. All stone and brick shall be paint free.

3.1.2.3 Exterior Millwork and Trim:

3.1.2.3.1 Task: Repair exterior millwork and trim including porches, stairs, and railings (maximum of 50 lineal feet of repairs per set of quarters).

3.1.2.3.2 Standard: All wood shall be free of defects and uniform in color, texture, and appearance. All screening material shall be free of rust, holes, tears, and patches and shall be securely fastened in place.

3.1.2.4 Exterior Siding and Stucco:

3.1.2.4.1 Task: Repair exterior siding and stucco (maximum of 100 square feet of repairs per set of quarters).

3.1.2.4.2 Standard: All siding and stucco (includes trim, soffits, fascia) shall be smooth and free of defects, holes, cracks or other blemishes. The surface shall be uniform in color, texture, and appearance. Siding and lath shall be securely fastened to the dwelling unit.

3.1.2.5 Roofs: Item includes all types of roofing; asphalt shingles and roll roofing, metal roofing, built-up roofing, EPDM roofing, modified bitumen roofing; and flashings.

3.1.2.5.1 Task: Repair roofs (maximum of 100 square feet of repairs per set of quarters).

3.1.2.5.2 Standard: All roofing and flashings shall not leak. All replacement roofing and flashings shall match existing roofing and flashings in type, color, texture, and appearance.

3.1.2.6 Rain Water Collection and Drainage Systems:

3.1.2.6.1 Task: Repair gutters and downspouts; reset splashblocks. Clean the entire rain water collection and drainage system to include gutters, downspouts, all associated parts, window wells, driveway drains, basement access stairwell drains, and underground drain pipe. Cleaning shall include removal

and disposal of all debris, toys, leaves, soil, tar, pine straw, pine cones, bird nests, sticks, stones, roots, or any other foreign object not a part of the rain water collection and drainage system. The Contractor shall remove and dispose of the aforementioned debris on roofs, in valley gutters or on built up roofs without a rain water collection and drainage system.

3.1.2.6.2 Standard: All gutters and downspouts shall be free of rust, holes, dents, cracks, and splits. All seams shall be tight and will not leak. Repairs shall be uniform in color, texture, and appearance with existing. Gutters and downspouts shall be securely fastened to the building and free of debris. Splashblocks shall be a minimum of 2 inches above the adjacent ground surface and sloped to drain away from the building. This item does not include replacement of missing gutters and downspouts. The entire rain water drainage system shall be free from all debris, toys, leaves, soil, tar, pine straw, pine cones, bird nests, sticks, stones, roots, or any other foreign object not a part of the rain water drainage system.

3.1.2.7 Garage Doors:

3.1.2.7.1 Task: Repair garage doors.

3.1.2.7.2 Standard: All doors shall be lubricated and will move freely on the door tracks. Doors shall be free of holes, cracks, and splits. Surfaces shall be uniform in color, appearance, and texture. When more than one door section is damaged, the entire door will be replaced using the appropriate separate bid item.

3.1.2.8 Clotheslines:

3.1.2.8.1 Task: Maintain clotheslines. The following maintenance and repairs shall be performed on all clotheslines:

3.1.2.8.1.1 Replace deteriorated, bent, or missing sections of pipe, tees, and pipe caps with galvanized steel components specified.

3.1.2.8.1.2 Plumb and square clothesline frames and secure all threaded tee joints so they can not twist. Remove rust and paint exposed pipe threads with aluminum paint specified.

3.1.2.8.1.3 Where serviceable eyebolts do not exist, install 5/16 inch steel eyebolts. Restraining existing clothesline wire, or replace deteriorated or missing clothesline wire with the gauge and type specified.

3.1.2.8.1.4 Replace damaged, misaligned, and frost heaved concrete clothesline bases including pipe sleeves of the proper size.

3.1.2.8.2 Standards:

3.1.2.8.2.1 All deteriorated, bent, or missing sections of pipe, tees, and pipe caps replaced

3.1.2.8.2.2 All clothesline frames plumb and square and threaded joints secured.

3.1.2.8.2.3 All eyebolts serviceable and deteriorated or missing clothesline wire replaced.

3.1.2.8.2.4 All damaged, misaligned, and frost heaved concrete bases replaced.

3.1.2.9 Miscellaneous Exterior Accessories and Hardware: This item includes building numbers, nameplate holders, mailboxes, Government-owned privacy fencing, trash pad enclosures, exhaust fan and dryer vents, and chimney covers, raincaps, and spark arresters.

3.1.2.9.1 Tasks: Reset or replace damaged or missing building numbers; replace damaged or missing nameplate holders; repair or replace damaged mailbox components, repair or replace damaged or missing privacy fencing and trash pad enclosures and components including filler strips; clean and repair exhaust fan and dryer vents and vent covers; and resecure chimney covers, raincaps, and spark arresters.

3.1.2.9.2 Standards: All components shall be free of defects, securely fastened in place, and clean.

3.1.2.10 Quarters Grounds Maintenance.

3.1.2.10.1 Task: During the time frame for which the Contractor has been assigned vacant quarters, he shall perform all grounds maintenance within 75 feet in front of and behind each building and 75 feet to each side. If the actual yard limits of a set of quarters is greater than 75 feet as defined by hedge rows, driveways, alleyways, street curbing, treelines, or fences, the Contractor shall also maintain that additional area. Grounds maintenance as it pertains to this contract includes keeping the grass cut to a height of no more than 3 inches, trimming, and edging; removing all fallen leaves, vines, trash, debris, and stains, removing snow and ice; and reestablishing turf. No separate payment shall be made for this requirement.

3.1.2.10.2 Standard: Grounds maintenance shall meet or exceed the grounds maintenance standards set forth in Technical Exhibit 18: GROUNDS MAINTENANCE.

3.1.3 Work Level III - Specific Ordered Items of Maintenance, Repair, and Incidental Improvement: The Contractor shall perform all major repairs such as, but not limited to replacement of components not identified as Work Level III items, but which are found to be in need of replacement while quarters are vacant. The COR has the authority to allocate additional time when extraordinary needs are found. The Contractor shall also perform repairs identified as Work Level III items during vacancy when identified and approved by the COR. This does not relieve the Contractor of the requirement to perform Work Level III items under service order procedures at any time. If the Contractor discovers additional Work Level III items that need to be done, he will request written authority (service order) to perform the work from the COR prior to accomplishment of same. The Government reserves the right to increase or decrease the scope of work at any dwelling unit at any time.

DACA41-94-R-0012

TE-17 QUARTERS CLEANING

TE-17-I

TECHNICAL EXHIBIT 17

QUARTERS CLEANING

1.1 SCOPE: This technical exhibit sets forth the required tasks and standards for quarters cleaning in this contract.

2.1 GENERAL: The Contractor shall perform quarters cleaning in accordance with this technical exhibit, and the requirements specified in Subsections C-1 thru C-6 and Technical Exhibit 23, Sections 01901 and 09681.

3.1 CLEANING TASKS AND STANDARDS: Quarters cleaning includes the cleaning tasks and standards below. Cleaning shall be performed by the Contractor so that the results of his work meet or exceed the performance standards indicated. When the minimum standards are not met, the Contractor shall be required to reperform the work until the standards are met, at no additional cost to the Government. Liquidated damages will be assessed if applicable.

3.1.1 Walls, Ceilings, and Woodwork:

3.1.1.1 Task: All walls, ceilings, and woodwork throughout the house shall be cleaned and of all marks, stains, grease, food particles, etc. Damage to the walls as a result of cleaning or improperly patching holes shall be repaired by the Contractor at no cost to the Government. When filling nail holes in walls, use a small amount of spackling paste, press it into the hole, then take a damp cloth and wipe all excess paste off the wall.

3.1.1.2 Standards:

3.1.1.2.1 Ceilings: Clean without streaks or lap marks. (Para 3 10b, DA Pam 210-2, page 31-5).

3.1.1.2.2 Walls: Clean without streaks or lap marks. Corners and other difficult places to reach shall be free of foreign matter. Nails, screws, and picture hanging devices removed. Walls patched. (Para 3-10b, DA Pam 210-2, page 31-5).

3.1.1.2.3 Woodwork: Uniformly clean and free of smudges. No dirt in corners or grooves of wood molding. (Para 3-10b, DA Pam 210-2, page 31-5).

3.1.2 Vinyl Tile and Sheet Vinyl Floors:

3.1.2.1 Task: Sweep, mop, scrub, strip, seal, and wax as ordered. Clean thoroughly and remove all old wax with a floor cleaning agent specifically designed for use on vinyl floors. After cleaning, allow time for floors to dry thoroughly and then apply a sufficient, but not excessive, coat of sealer and liquid wax of a type specifically designed for use on vinyl tile floors and buff to a high luster. Follow the wax manufacturer's directions explicitly. Do not strip or wax "No-Wax" vinyl floors. Do not use acrylic wax.

3.1.2.2 Standard: A properly waxed floor shall have a thin even coating, smooth to the touch. The floor shall be clean and bright in corners and under furniture. Floors that have been buffed shall have a uniform sheen, leaving no heavy brush marks. (Para 3-10, DA Pam 210-2, page 3-13).

3.1.3 Hardwood Floors:

3.1.3.1 Task: Sweep, mop, strip, seal, and wax as ordered. Clean thoroughly and remove all old wax with floor cleaning agent specifically designed for use on hardwood floors. After cleaning, allow sufficient time for floors to dry thoroughly and then apply a sufficient, but not excessive, coat of sealer and paste or liquid wax and buff to high luster. Follow the wax manufacturer's directions explicitly. Do not use acrylic wax.

3.1.3.2 Standard: A properly waxed floor will have a thin, even coating, smooth to the touch. The floor will be clean and bright in corners and under furniture. Floors that have been buffed will have a uniform sheen leaving no heavy brush marks. There will be no wax on stairwell or landing. (Para 3-10, DA Pam 210-2, page 3-3 and 3-14).

3.1.4 Carpeted Floors:

3.1.4.1 Task: Vacuum carpeted floors. Remove stains and spots with a suitable stain and spot remover. Carpet cleaning will be ordered for excessively soiled carpeting.

3.1.4.2 Standard: Carpeted floors shall be vacuumed and free of dust, debris, stains, and spots.

3.1.5 Cabinets:

3.1.5.1 Task: Washed and free of all marks, stains, grease, food particles, etc. Remove false bottoms from cabinets and wash the floor area beneath. Remove all shelf paper, decals or self-adhesive paper. Painted cabinets and bases (see Walls and Ceilings). The use of abrasives or scouring powder will damage cabinets and shall not be used. Adhesive must be completely removed without damage to cabinets.

3.1.5.2 Standards:

3.1.5.2.1 Wooden Cabinets: Interior empty and clean. Exterior uniformly clean, no streaks, or water marks. Exterior sides and doors wiped clean where on varnished cabinets. (Para 3-10, DA Pam 210-2, page 3-15).

3.1.5.2.2 Metal Cabinets: Wooden standards apply.

3.1.6 Kitchen Sinks and Countertops:

3.1.6.1 Task: Washed; free of dirt, grease, soap, scouring powder residue, and removable stains.

3.1.6.2 Standard: Clean and bright; no film or residue on sink fixtures, strainers, etc.

3.1.7 Dishwashers:

3.1.7.1 Task: Wash interior, racks. Wash the exterior and door. Clean all gaskets.

3.1.7.2 Standard: Must be completely clean. All accumulated grease, hard water deposits, and other residue will be removed.

3.1.8 Ranges:

3.1.8.1 Tasks: Cooking range shall be thoroughly cleaned. Grease, carbonized particles, and food particles on and in range shall be removed. Range burners can best be cleaned by using dry coarse steel wool; ovens by using a popular brand oven cleaner. Cleaning agent must be completely removed.

3.1.8.1.1 Wash range and assorted elements including oven racks, burners, burner rings, drip pans, broiler pan, storage drawer(s), and control knobs.

3.1.8.1.2 Place papers under stove to avoid drip damage to the floor. Disconnecting or removing range from gas lines by contractor is prohibited. No oven cleaner or abrasive type material will be used to clean ovens of self or continuous clean stoves. Do not use oven cleaner on any aluminum part of the range. Unplug the range prior to cleaning.

3.1.8.1.3 Wash the floor under the range. This applies only to ranges equipped with flexible gas supply connections.

3.1.8.2 Standard: Range is completely assembled, clean of all dirt, grease, food particles, and cleaning residue. Pilot lights relit. Oven light bulbs replaced. Range is checked for proper operation. (Chapter 5, DA Pam 210-2, page 5-1).

3.1.9 Refrigerators:

3.1.9.1 Task: Wash interior, racks, crisper, and tray. Wash the exterior and door. Clean refrigeration coil and motor compartment. Wash the floor under the refrigerator. Do not use sharp instruments to remove ice or frost from freezer compartment. Damage to refrigerators due to improper cleaning shall be repaired by the Contractor at no cost to the Government.

3.1.9.2 Standard: Clean inside and out; door gasket clean of particles, stains, mildew, etc. Refrigeration coils and motor compartment clean and free of lint. Leave refrigerator door open and turned off. Clean drip pan under refrigerator. (Para 5-7, DA Pam 210-2, page 5-6).

3.1.10 Bathrooms:

3.1.10.1 Task: Cleaned and free of dirt, grease, soap, scouring powder residue, removable stains, and algae. Wash all walls and ceilings. Ceramic tile shall not be waxed.

3.1.10.2 Standards:

3.1.10.2.1 Tile: Tiles and grout lines clean with no algae or mildew stains.

3.1.10.2.2 Toilet Bowls, toilet tanks, bathtubs, and washbowls: Clean and bright. No soap film, sediment or scouring powder residue on fixtures.

3.1.10.2.3 Wall: Painted surface standard for walls, ceilings, and woodwork applies. Tile wainscoting and floor clean and bright, no soap film or scouring powder residue. Wash down completely.

3.1.10.2.4 Metal fixtures and other hardware: Clean and bright.

3.1.10.2.5 Medicine Cabinet: Clean, no film or residue. mirror washed, no streaks.

3.1.11 Closets and Interior Storage:

3.1.11.1 Task: Thoroughly cleaned including removal of dust from shelves and rods.

3.1.11.2 Standard: Walls, ceilings and woodwork standards apply.

3.1.12 Prime and Storm Doors and Windows:

3.1.12.1 Task: All door and window glazing, inside and out; window screens both sides; and all window frames shall be dusted and washed. All screens and storm windows shall be in place.

3.1.12.2 Standard: No streaks or unwashed areas of glazing. Window frames shall be uniformly clean and free of streaks. No dirt on the various parts or in corners, or grooves.

3.1.13 Electric Light Fixtures and Lamps:

3.1.13.1 Task: Light fixture globes shall be removed, washed, and replaced; this includes porch light fixture globes. Light fixtures will be wiped clean with a damp sponge. Do not wipe the lamp base or electrical connections with a damp/moist sponge or cloth.

3.1.13.2 Standard: Clean, free of dust, dirt and bugs, with a functioning light bulb left in each light socket. Replace cracked light globes. Replacement bulbs will be 60 watt, 120 volt.

3.1.14 Exhaust Fans, Ceiling Fans, and Range Hoods:

3.1.14.1 Task: Wash fan blades and supports, fan housing, and fan guard. Do not wash the fan motor - wipe with a damp sponge or cloth. This does not apply to hallway or ceiling exhaust fans. Ceiling fans shall have blades, motor housing, and light fixture globes dusted.

3.1.14.2 Standard: Range hood, fan, fan housing, and fan guard clean - free of dirt, grease, and food particles. (Para 5-5, DA Pam 210-2, page 5-3).

3.1.15 Radiators:

3.1.15.1 Task: Wash radiator covers, end caps, wood sill, and heating pipes. Brush or vacuum radiator (convector) fins, and steam radiators.

3.1.15.2 Standard: Radiator covers, end caps, heating pipes and wood sill clean of dust, and smudges. Radiator fins free of all debris and lint.

3.1.16 Basements, Storage Sheds, Garages, and Furnace Rooms:

3.1.16.1 Task: Dry clean, vacuum brush, etc., pipes, I-beams, electrical conduit, floor joists, and basement walls. Where walls have crayon marks, smudges, etc., washing shall be required. Basement stairs and handrails along with the cement floor shall be washed. Laundry sinks shall be cleaned in the same manner as the kitchen sink.

3.1.16.2 Standard: Floors, to include drain screen, walls, and stairs clean; basement area free of trash, boxes, bottles, etc. Pipes, I-beams, electrical conduit, and floor joists free of dust, lint, and cobwebs. NOTE: All hand tools and garbage cans issued with quarters shall be clean and displayed in storage area.

3.1.17 Government-Owned Furniture:

3.1.17.1 Tasks:

3.1.17.1.1 Rugs and Carpeting: Vacuumed and steam cleaned.

3.1.17.1.2 Upholstered Chairs, Couches, etc.: Vacuumed; spots/stains removed.

3.1.17.1.3 Wooden Furniture: Cleaned and polished. Mirror: Frames treated as wooden furniture; mirrors treated as windows.

3.1.17.1.4 Bed Springs: Vacuumed or washed as required.

3.1.17.1.5 Shades - Window, Lamp, and Venetian Blinds: Vacuumed and/or wiped with dry cloth. Venetian Blinds shall be washed with warm water and a mild detergent. Replace broken or missing pull cords.

3.1.17.1.6 Drapes: Drycleaned or laundered in accordance with care instructions, pressed, and rehung.

3.1.17.2 Standards:

3.1.17.2.1 Carpets and Rugs: Clean and free of streaks, stains, and spots, color bright and uniform.

3.1.17.2.2 Upholstered Chairs, Couches, etc.: Free of dust, lint, stains and spots; no hairpins, coins, etc. in crevices.

3.1.17.2.3 Wooden Furniture: Clean, free of food, spots, chewing gum, etc.; highly polished; drawers dust free and empty.

3.1.17.2.4 Bed Springs: Clean, free of dust, stains, and lint.

3.1.17.2.5 Shades - Window, Lamp and Venetian Blinds: Dust and smudge free. In place and one-half down. Each window shall have a shade and curtain rod in place. Lamp shades shall be free of dust, lint, stains and cobwebs. Venetian blinds shall be clean, free of dirt, dust and cobwebs.

3.1.17.2.6 Drapes: Clean, free of dust, stains, and lint; wrinkle free.

3.1.18 Garbage Cans and Trash Carts:

3.1.18.1 Task: Washed inside and out - clean of all foreign matter.

3.1.18.2 Standard: Clean, free of residue, placed in the storage area.

3.1.19 Murders and Suicides:

3.1.19.1 Task: Clean up blood stains and minute human body parts following a murder or suicide. (Assume body has been removed). Includes all interior building surfaces.

3.1.19.2 Standard: All interior building surfaces shall be free of evidence of the murder or suicide. All interior building surfaces cleaning standards apply. Replacement of interior finishes shall be accomplished as Work Level III - Specific Ordered Items of Maintenance.

3.1.20 Flooded Basements, Crawl Spaces, and Garages:

3.1.20.1 Task: Pump out, clean, and deodorize flooded basements, crawl spaces, and garages.

3.1.20.2 Standard: Basements, crawl spaces, and garages shall be free of water, mud, debris, and obnoxious odors.

3.1.21 Clean Up a Set of Quarters After a Fire:

3.1.21.1 Task: Clean up and dispose of all trash, debris, and occupants possessions left behind after a fire.

3.1.21.2 Standard: The burned out set of quarters shall be free from all trash, debris, and occupants possessions.

4.1 FAMILY HOUSING OCCUPANTS CLEANING TASKS AND STANDARDS: When family housing occupants decide to use contract cleaning services the occupants must perform the following cleaning tasks and meet the minimum standards indicated.

4.1.1 Walls, Ceilings, and Woodwork:

4.1.1.1 Task: Clean walls, ceilings, and woodwork.

4.1.1.2 Standard: Walls, ceilings, and woodwork shall be free of cobwebs, crayon marks, pencil marks, food, nails, screws, and picture hanging devices.

4.1.2 Vinyl Tile, Vinyl Sheet, Wood Strip, and Carpeted Floors.

4.1.2.1 Task: Clean vinyl tile, vinyl sheet, wood strip, and carpeted floors, as applicable.

4.1.2.2 Standard: Vinyl tile, vinyl sheet, and wood strip floors shall be swept and free of dust and debris. Carpeted floors shall be vacuumed and free of dust, debris, stains, and spots.

4.1.3 Cabinets, Countertops, Drawers, Closets, and Shelves:

4.1.3.1 Task: Clean cabinets, countertops, drawers, closets, and shelves.

4.1.3.2 Standard: Cabinets, countertops, drawers, closets, and shelves shall be free of personal items, food particles, dust, debris, shelf paper, tape, staples, and tacks.

4.1.4 Ranges:

4.1.4.1 Task: Clean range inside and outside.

4.1.4.2 Standard: Range shall be free of dirt, grime, and burned and crusted-on food inside and outside. All components shall be in place.

4.1.5 Refrigerators:

4.1.5.1 Task: Clean refrigerator inside and outside.

4.1.5.2 Standard: Refrigerator shall be defrosted and free of dirt, grime, and food particles inside and outside. Refrigerators shall be operational, thermostat set at the warmest setting, and door closed. All components shall be in place.

4.1.6 Lighting Fixtures:

4.1.6.1 Task: Replace burned out light bulbs in light fixtures and appliances.

4.1.6.2 Standard: All light bulbs shall be in place, proper wattage, and functional.

4.1.7 Exhaust Fans and Range Hoods:

4.1.7.1 Task: Clean exhaust fans and range hood. Clean or replace filters.

4.1.7.2 Standard: Exhaust fans, range hood, and associated filters shall be free of dirt and cooking grease.

4.1.8 Garbage Cans and Trash Carts:

4.1.8.1 Task: Empty and clean garbage cans and trash carts.

4.1.8.2 Standard: Garbage cans and trash carts shall empty and clean.

4.1.9 Outdoor Areas:

4.1.9.1 Task: Clean outside of quarters, garage or carport, storage room(s), patio, balcony, sidewalks, and driveway.

4.1.9.2 Standard: Building siding and garage or carport walls shall be free of marks and mud. Outside of quarters, garage or carport, storage room(s), patio, balcony, sidewalks, and driveway shall be free of trash and debris. Garage or carport floors and driveways free of accumulations of oil and grease.

4.1.10 Lawn, and Foliage.

4.1.10.1 Task: Mow and trim lawn. Rake and dispose of grass clippings and leaves. Remove and dispose of dead foliage. Fill holes and reseed damaged turf.

4.1.10.2 Standard: Lawn shall be neatly mowed, trimmed, and free of grass clippings, leaves, and dead foliage. Holes filled and damaged turf reseeded.

4.1.11 Miscellaneous Items:

4.1.11.1 Task: Remove all personal items from the premises.

4.1.11.2 Standard: Quarters, garage or carport, storage room(s), patio, balcony, and surrounding outdoor spaces shall be free of personal items.

TE-18 GROUND MAINTENANCE

TECHNICAL EXHIBIT 18

GROUNDS MAINTENANCE

1.1 SCOPE: This technical exhibit sets forth the required tasks and standards for grounds maintenance in this contract.

2.1 GENERAL: The Contractor shall perform grounds maintenance in accordance with this technical exhibit, and the requirements specified in Subsections C-1 thru C-6, Technical Exhibit 6, and applicable portions of Technical Exhibit 23, Sections 01902 and 02930.

3.1 GROUNDS MAINTENANCE TASKS AND STANDARDS: Grounds maintenance includes the maintenance tasks and standards below. Grounds maintenance shall be performed by the Contractor so that the results of his work meet or exceed the performance standards indicated. When the minimum standards are not met, the Contractor shall be required to reperform the work until the standards are met, at no additional cost to the Government. Liquidated damages will be assessed if applicable.

3.1.1 Tasks:

3.1.1.1 Grass Mowing: Mow grass to the height specified. Grass mowing operations includes mowing, trimming, edging, and clean up as specified herein.

3.1.1.1.1 Grass Mowing Adjacent to Family Housing Quarters: Grass mowing adjacent to Family Housing Quarters includes all yard areas within 75 feet in front of and behind each building and 75 feet to each side. When the actual yard limits of a set of quarters is greater than 75 feet as defined by hedge rows, driveways, alleyways, street curbing, treelines, or fences, the Contractor shall also maintain that additional area.

3.1.1.1.2 Grass Mowing at Common Areas and Playgrounds: Grass mowing at common areas and playgrounds shall fully cover the areas shown on the maps in Technical Exhibit 6 and be complete to pavement and sidewalk edges, curbs, fences, tree lines, or other physical edges.

3.1.1.1.3 Trimming: Trim along building foundations, patios, pavement and sidewalk edges, curbs, fences, trees, utility poles, playground equipment, and other obstructions.

3.1.1.1.4 Edging: Edge along patios, pavement and sidewalk edges, and curbs.

3.1.1.1.5 Clean Up: Remove and dispose of all grass clippings, fallen leaves, tree branches, trash, and debris.

3.1.1.2 Clean Up and Dispose of Leaves: Clean up and dispose of fallen leaves, tree branches, trash, and debris by raking or vacuuming.

3.1.2.3 Remove and Dispose of Vines: Remove and dispose of vines attached to building surfaces and cut off the stumps below finished grade.

3.1.1.4 Clean Up Animal Excrement: Clean up and dispose of animal excrement from exterior of quarters including front, side, and rear yards; porches, steps, patios, sidewalks, driveways, carports, and garages.

3.1.1.5 Porches, Steps, Sidewalks, Driveways, Carports, and Garages: Sweep porches, steps, patios, sidewalks, driveways, carports, and garages. Wash porches, steps, sidewalks, driveways, carports, and garages. Clean accumulations of oil from driveways, parking areas, carports, and garages.

3.1.1.6 Clean Second Floor Balconies of Quarters Type 67: Clean second floor balconies of Quarters Type 67 including removal and reinstallation of balcony floor panels and cleaning under them. Also included is trimming the edges of the panels to facilitate easier removal and reinstallation.

3.1.1.7 Snow and Ice Removal: Remove snow and ice from porches, steps, patios, sidewalks, driveways, carports, and garages within 12 hours following snow or ice storms.

3.1.1.8 Reestablishing Turf: Reestablish turf at bare areas and those areas damaged or removed during the course of the work.

3.1.2. Standards:

3.1.2.1 Grass Mowing:

3.1.2.1.1 General:

3.1.2.1.1.1 The Contractor shall cut all grass areas to uniform height as established by standards specified. Types of mowing equipment used shall be a rotary or reel type unless otherwise specified and shall be appropriate for the areas mowed. Grass mowing on slopes at or exceeding one (1) foot vertical for each three (3) feet horizontal shall be accomplished with hand mowing or gas powered mowers with a low center of gravity and good stability of a type designed for use on slopes. The Contractor shall not cut grass below the standards specified or allow equipment to scalp or otherwise damage grass turf. The Contractor shall lap each pass of the mowing equipment as required to provide a uniform cut without strips or streaks of unmowed areas. The Contractor shall maintain mowers and mowing blades in a sharp condition to provide a clean, even cut.

3.1.2.1.1.2 Grass mowing shall be performed when weather permits the safe operation of equipment and mowing operations can be conducted without damage to grass and lawn areas. The Contractor shall not mow when operations would result in rutting or tearing of grass turf or when grass is laid over or matted because of moist conditions, and/or if grass is frozen or frost covered.

3.1.2.1.1.3 All obstructions, debris, or litter shall be removed from the areas to be mowed prior to each mowing. All such items shall be disposed of as specified in 3.1.2.4.

3.1.2.1.1.4 Mowing within six feet along the pavement edges of streets and roads with a permitted speed limit of more than 25 miles per hour shall be conducted with equipment moving in the same direction as traffic.

3.1.2.1.2 Type A Mowing - Adjacent to Family Housing Quarters:

3.1.2.1.2.1 The intent of this standard is to provide grass mowing to a height of 3 inches at the work frequency of one (1) mowing per week spaced at least seven (7) days apart. One mowing shall consist of mowing the entire area adjacent to a set of quarters (as described in 3.1.1.1.1) once. Each mowing shall be completed before the next is begun. Payment will be based on complete mowings. The required frequency of mowing may be adjusted as ordered by the Contracting Officer due to weather conditions or other factors.

3.1.2.1.2.2 Mowing work shall include grass mowing per 3.1.2.1, trimming per 3.1.2.2, edging one time per month as per 3.1.2.3., and clean up per 3.1.2.4.

3.1.2.1.3 Type B Mowing - Common Areas and Playgrounds:

3.1.2.1.3.1 The intent of this standard is to provide grass mowing to a height of 4 inches at the work frequency of one (1) mowing every 9 days. One complete mowing shall consist of mowing all common areas and playgrounds shown on the maps in Technical Exhibit 6. Each mowing shall be completed before the next is begun. Payment will be based on complete mowings. The required frequency of mowing may be adjusted as ordered by the Contracting Officer due to weather conditions or other factors.

3.1.2.1.3.2 Mowing work shall include grass mowing per 3.1.2.1, trimming per 3.1.2.2, and edging one time per growing season as per 3.1.2.3.

3.1.2.2 Trimming:

3.1.2.2.1 All grass within the mowing areas adjacent to any and all vertical obstructions including, but not limited to building foundations, patios, pavement and sidewalk edges, curbs, fences, trees, utility poles, playground equipment, and other obstructions is to be cut to the same height as the surrounding grass with hand held manual shears, string trimmers, or manually propelled power mowers. The Contractor shall be responsible for protecting all such items from damage during mowing and trimming operations and shall promptly repair any such damage to the satisfaction of the Contracting Officer at no additional expense to the government.

3.1.2.2.2 Trimming should be done simultaneously with each mowing but shall not lag behind the mowing by more than one day.

3.1.2.3 Edging:

3.1.2.3.1 Cut grass with an appropriate blade or "edging" tool as approved by the Contracting Officer along patios, pavement and sidewalk edges, and curbs where specified for the various mowing types. Edging shall consist of removing all vegetation for a distance of 1/4 inch outward from the edge of the structure, and deep enough to assure that vegetation is cut off approximately 1/2 inch below ground surface. Work shall produce a neat, clean, even edge.

3.1.2.3.2 Edging shall be done simultaneously with mowing and shall not lag behind the mowing by more than one day.

3.1.2.4 Clean Up:

3.1.2.4.1 The Contractor shall completely remove all grass clippings, twigs, leaves, and other debris from the grass areas where clean up is specified for the various mowing types. The Contractor shall also remove all grass clippings blown or dropped on all pavements such as sidewalks or streets. All such items shall be raked or otherwise collected, picked-up and removed from the site by the Contractor and disposed of off-post or the installation compost pile.

3.1.2.4.2 Clean up should be done simultaneously with each mowing and shall not lag behind the mowing by more than one day.

3.1.2.5 Clean Up and Dispose of Leaves: Yards, porches, steps, patios, sidewalks, driveways, carports, and garages shall be free from fallen leaves, tree branches, trash, and debris.

3.1.2.6 Remove and Dispose of Vines: Building surfaces shall be free from vines and stumps shall be cut off below finished grade.

3.1.2.7 Clean Up Animal Excrement: Yards, porches, steps, patios, sidewalks, driveways, carports, and garages shall be free from animal excrement.

3.1.2.8 Porches, Steps, Sidewalks, Driveways, Carports, and Garages: Porches, steps, patios, sidewalks, driveways, carports, and garages shall swept and clean. Driveways, parking areas, carports, and garages shall be clean and free of accumulated oil or oil stains.

3.1.1.9 Clean Second Floor Balconies of Quarters Type 67: Second floor balconies of Quarters Type 67 shall free from dirt, trash, debris, and animal excrement. Edges of the panels shall have been trimmed to facilitate easier removal and reinstallation.

3.1.2.10 Snow and Ice Removal: Porches, steps, patios, sidewalks, driveways, carports, and garages shall be free of snow and ice within 12 hours following snow or ice storms.

3.1.2.11 Reestablishing Turf: Holes have been filled and bare areas and those areas damaged or removed during the course of the work have been reseeded in accordance with Technical Exhibit 23, Section 02930.

**TE-19 PLAYGROUND AND RECREATIONAL
EQUIPMENT MAINTENANCE**

TECHNICAL EXHIBIT 19

PLAYGROUND AND RECREATIONAL EQUIPMENT MAINTENANCE

1.1 SCOPE: This technical exhibit sets forth the required tasks and standards for playground and recreational equipment maintenance in this contract.

2.1 GENERAL: The Contractor shall perform playground and recreational equipment maintenance in accordance with this technical exhibit, and the requirements specified in Subsections C-1 thru C-6 and Technical Exhibit 23, Sections 02861, 02864, and 02866.

3.1 PLAYGROUND AND RECREATIONAL EQUIPMENT MAINTENANCE TASKS AND STANDARDS: Playground and recreational equipment maintenance includes the maintenance tasks and standards below. Playground and recreational equipment maintenance shall be performed by the Contractor so that the results of his work meet or exceed the performance standards indicated. When the minimum standards are not met, the Contractor shall be required to reperform the work until the standards are met, at no additional cost to the Government. Liquidated damages will be assessed if applicable.

3.1.1 Playground Equipment:

3.1.1.1 Task: Maintain playground equipment. The following maintenance and repairs shall be performed on all playground equipment:

3.1.1.1.1 Replace damaged, misaligned, frost heaved concrete equipment bases.

3.1.1.1.2 Replace all bent, broken, deteriorated, rusted, worn, or missing metal structural members, components, fasteners, and hardware.

3.1.1.1.3 Replace all broken, splintered, or missing wood structural members and components.

3.1.1.1.4 Replace all broken, splintered, or missing fiberglass and plastic components.

3.1.1.1.5 Replace all broken, splintered, or missing miscellaneous components such as chains, rope, steel cable, and tires.

3.1.1.1.6 Tighten all loose fasteners and hardware. Replace stripped-out fasteners.

3.1.1.1.7 Lubricate all center hub bearings, races, and other turning type mechanisms.

3.1.1.1.8 Clean rust from all painted surfaces, prime, and repaint.

3.1.1.1.9 Reweld all broken welded joints.

3.1.1.1.10 Remove all vegetation from sand blanket areas and replenish sand blankets to a depth of 6 inches above the surrounding finish grade. Fill holes beneath swings and around whirls.

3.1.1.2 Standards:

3.1.1.2.1 All damaged, misaligned, frost heaved concrete equipment bases replaced.

3.1.1.2.2 All bent, broken, deteriorated, rusted, worn, or missing metal structural members, components, fasteners, and hardware replaced.

3.1.1.2.3 All broken, splintered, or missing wood structural members and components replaced.

3.1.1.2.4 All broken, splintered, or missing fiberglass and plastic components replaced.

3.1.1.2.5 All broken, splintered, or missing miscellaneous components such as chains, rope, steel cable, and tires replaced.

3.1.1.2.6 All loose fasteners and hardware tightened. Stripped-out fasteners replaced.

3.1.1.2.7 All center hub bearings, races, and other turning type mechanisms properly lubricated.

3.1.1.2.8 All rust removed and painted surfaces primed and repainted.

3.1.1.2.9 All broken welded joints rewelded.

3.1.1.2.10 Vegetation removed from all sand blanket areas and sand blankets replenished to a depth of 6 inches above the surrounding finish grade. All holes beneath swings and around whirls filled with sand.

3.1.2.1 Task: Maintain basketball standards. The following maintenance and repairs shall be performed on all basketball standards:

3.1.2.1.1 Replace damaged, misaligned, frost heaved concrete basketball standard bases.

3.1.2.1.2 Replace all bent, broken, deteriorated, rusted, worn, or missing structural members, components, fasteners, and hardware.

3.1.2.1.3 Tighten all loose fasteners and hardware. Replace stripped-out fasteners.

3.1.2.1.4 Clean rust from all painted surfaces, prime, and repaint.

3.1.2.1.5 Reweld all broken welded joints.

3.1.2.2 Standards:

3.1.2.2.1 All damaged, misaligned, frost heaved concrete basketball standard bases replaced.

3.1.2.2.2 All bent, broken, deteriorated, rusted, worn, or missing structural members, components, fasteners, and hardware replaced.

3.1.2.2.3 All loose fasteners and hardware tightened. All stripped-out fasteners replaced.

3.1.2.2.4 All rust removed and painted surfaces primed and repainted.

3.1.2.2.5 All broken welded joints rewelded.

3.1.3.1 Task: Maintain tennis court posts, nets, and accessories. The following maintenance and repairs shall be performed on all tennis court posts, nets, and accessories:

3.1.3.1.1 Replace damaged, misaligned, frost heaved concrete tennis net post bases.

3.1.3.1.2 Replace all bent, broken, deteriorated, rusted, worn, or missing posts, nets, accessories, fasteners, and hardware.

3.1.3.1.3 Tighten all loose fasteners and hardware. Replace stripped-out fasteners.

3.1.3.1.4 Clean rust from all painted surfaces, prime, and repaint.

3.1.3.1.5 Reweld all broken welded joints.

3.1.3.2 Standards:

3.1.3.2.1 All damaged, misaligned, frost heaved concrete tennis net post bases replaced.

3.1.3.2.2 All bent, broken, deteriorated, rusted, worn, or missing posts, nets, accessories, fasteners, and hardware replaced.

3.1.3.2.3 All loose fasteners and hardware tightened. All stripped-out fasteners replaced.

3.1.3.2.4 All rust removed and painted surfaces primed and repainted.

3.1.3.2.5 All broken welded joints rewelded.

3.1.4.1 Task: Maintain community life bulletin boards. The following maintenance and repairs shall be performed on all community life bulletin boards:

3.1.4.1.1 Replace damaged, misaligned, frost heaved concrete bulletin board post bases.

3.1.4.1.2 Replace all bent, broken, deteriorated, rusted, worn, or missing posts, cabinet components, glazing, fasteners, and hardware.

3.1.4.1.3 Tighten all loose fasteners and hardware. Replace stripped-out fasteners.

3.1.4.1.4 Clean rust from all painted surfaces, prime, and repaint.

3.1.4.1.5 Reweld all broken welded joints.

3.1.4.2 Standards:

3.1.4.2.1 All damaged, misaligned, frost heaved concrete bulletin board post bases replaced.

3.1.4.2.2 All bent, broken, deteriorated, rusted, worn, or missing posts, cabinet component, glazing, fasteners, and hardware replaced.

3.1.4.2.3 All loose fasteners and hardware tightened. All stripped-out fasteners replaced.

3.1.4.2.4 All rust removed and painted surfaces primed and repainted.

3.1.4.2.5 All broken welded joints rewelded.

DACA41-94-R-0012

TE-20 BUS STOP SHELTER MAINTENANCE

TE-20-I

TECHNICAL EXHIBIT 20

BUS STOP SHELTER MAINTENANCE

1.1 SCOPE: This technical exhibit sets forth the required tasks and standards for bus stop shelter maintenance in this contract.

2.1 GENERAL: The Contractor shall perform bus stop shelter maintenance in accordance with this technical exhibit, and the requirements specified in Subsections C-1 thru C-6 and applicable portions of Technical Exhibit 23, Section 01900.

3.1 BUS STOP SHELTER MAINTENANCE TASKS AND STANDARDS: Bus stop shelter maintenance includes the maintenance tasks and standards below. Bus stop shelter maintenance shall be performed by the Contractor so that the results of his work meet or exceed the performance standards indicated. When the minimum standards are not met, the Contractor shall be required to reperform the work until the standards are met, at no additional cost to the Government. Liquidated damages will be assessed if applicable.

3.1.1 Task: Maintain bus stop shelters. The following maintenance and repairs shall be performed on all bus stop shelters:

3.1.1.1 Replace damaged, misaligned, frost heaved concrete bus stop shelter slabs.

3.1.1.2 Replace all bent, broken, deteriorated, rusted, worn, or missing metal structural members, components, fasteners, and hardware.

3.1.1.3 Replace all broken, splintered, or missing wood structural members and components.

3.1.1.4 Replace all broken, splintered, or missing fiberglass and plastic components.

3.1.1.5 Tighten all loose fasteners and hardware. Replace stripped-out fasteners.

3.1.1.6 Clean rust from all painted surfaces, prime, and repaint.

3.1.1.7 Reweld all broken welded joints.

3.1.1.8 Remove vegetation and debris from inside and immediately around all shelters.

3.1.2 Standards:

3.1.2.1 All damaged, misaligned, frost heaved concrete bus stop shelter slabs replaced.

3.1.2.2 All bent, broken, deteriorated, rusted, worn, or missing metal structural members, components, fasteners, and hardware replaced.

3.1.2.3 All broken, splintered, or missing wood structural members and components replaced.

3.1.2.4 All broken, splintered, or missing fiberglass and plastic components replaced.

3.1.2.5 All loose fasteners and hardware tightened. Stripped-out fasteners replaced.

3.1.2.6 All rust removed and painted surfaces primed and repainted.

3.1.2.7 All broken welded joints rewelded.

3.1.2.8 Vegetation and debris removed from inside and immediately around all shelters.

DACA41-94-R-0012

TE-21 PEST CONTROL MAINTENANCE

TE-21-I

TECHNICAL EXHIBIT 21

PEST CONTROL MAINTENANCE

1.1 SCOPE: This technical exhibit sets forth the required tasks and standards for pest control maintenance in this contract.

2.1 GENERAL: The Contractor shall perform pest control maintenance in accordance with this technical exhibit, and the requirements specified in Subsections C-1 thru C-6 and Technical Exhibit 23, Section 01903.

3.1 PEST CONTROL MAINTENANCE TASKS AND STANDARDS: Pest control maintenance includes the maintenance tasks and standards below. Pest control maintenance shall be performed by the Contractor so that the results of his work meet or exceed the performance standards indicated. When the minimum standards are not met, the Contractor shall be required to reperform the work until the standards are met, at no additional cost to the Government. Liquidated damages will be assessed if applicable.

3.1.1 Inspection Service for Family Housing and Billeting Quarters:

3.1.1.1 Work Level I - Scheduled Maintenance Tasks: None.

3.1.1.2 Work Level II - Service Order Tasks: The Contractor shall respond to all service order calls and investigate the problem. Flushing agents shall be used for the applicable pests to determine if the pest are present. After the investigation, the Contractor shall inform the requestors as to one of the following actions:

3.1.1.2.1 No problem. Nothing Was Found. The Contractor shall advise the requestor nothing was found, but if pest are seen, there are self-help supplies available at the DEH Self-Help Store, Building 2113, Forsyth area, and how to reduce or eliminate the conditions from reoccurring. The Contractor shall provide the requestor with the proper handout. The Contractor shall close out the SO and charge the Government for an inspection only.

3.1.1.2.2 Problem exists: The Contractor shall advise the requestor that a problem exists and offer to provide treatment.

3.1.1.2.2.1 If the requestor does not want treatment, the Contractor shall inform the requestor that self-help items are available at the DEH Self-Help Store, Building 2113, Forsyth Area and how to reduce or eliminate the pests from reoccurring and provide the requestor with the proper handout. The Contractor shall close out the SO and charge the Government for an inspection only.

3.1.1.2.2.2 If the Contractor determines unsanitary conditions exist to where pests are able to breed, the Contractor shall not apply any pesticides and immediately notify the COR. The COR will make the determination whether or not the Contractor shall provide the treatment. If no additional service is required, the Contractor shall charge the Government for an inspection only. If the COR determines that the conditions are sanitary, the Contractor shall perform the required treatment service and charge the Government for the par-

particular treatment listed in the Bid Schedule. The Contractor will not be entitled to compensation for the inspection visit. This requirement applies to all services required in the contract whenever the Contractor responds to a SO for the initial visit, a rescheduled SO visit, or a scheduled maintenance visit, or a scheduled maintenance visit.

3.1.1.2.2.3 If the requestor elects to have the treatment, the Contractor shall inform the requestor of the necessary preparation requirements, for the particular pest control service, and provide the requestor with the proper handout. The Contractor shall perform the treatment if it can be accomplished at the time. If not, the Contractor shall schedule with the requestor a mutual agreed-upon time for the service to be performed and obtain a statement along with the requestor's signature indicating that the treatment service is desired. Upon completion, the SO shall be appropriately closed out and the Government charged for the particular service listed in the Bid Schedule. The contractor will not be entitled to compensation for the inspection visit.

3.1.1.3 Standards: The Contractor shall properly diagnose the problem and level of infestation. Treatments made are subject to the appropriate quality standards for the particular facility or particular pest.

3.1.2 Household Pest Control for Family Housing Quarters

3.1.2.1 Work Level I - Scheduled Maintenance Tasks: None.

3.1.2.2 Work Level II - Service Order Work Tasks: The Contractor shall perform household pest control in vacant Family Housing Quarters seven days-a-week as required to expedite the return of vacant quarters to service. Upon arriving to apply the actual treatment, the Contractor shall advise the occupant of the requirements necessary during and after treatment for the particular pest control service and provide the occupant with the proper handout if another handout is needed.

3.1.2.2.1 The Contractor shall apply the necessary treatments when and where needed for Arthropods. Any voids and hollow spaces shall be treated with a dust formulation of appropriate pesticide. A flushing agent shall be used after pesticides are applied to force the pests to move into chemicals. Treatment shall include the sealing of holes, cracks, and other openings. Treatment of rodents shall be in accordance with paragraph 3.1.2.2.3 below. Treatment of termites shall be in accordance with paragraph 3.1.4, "Structural Pest Control for Family Housing and Billeting Quarters".

3.1.2.2.2 Ultra-Low Dosage (ULD) may be requested by the COR to control infestations. If the Contractor determines that ULD is needed rather than the normal spray treatment, the COR's approval shall be obtained prior to any application. Payment shall be made for ULD space treatment as provided in the Bid Schedule.

3.1.2.2.3 The Contractor shall use snap traps, mechanical traps or poison. Glue boards will not be permitted excepted with COR approval. Dry or liquid poison baits shall be placed in distinctively marked, tamper-proof bait stations made of wood, metal or plastic. The Contractor shall use a method of treatment when children and/or pets could have access to the trap and/or poi-

son so that children and/or pets can not gain access to the poisons or be injured by the traps. Treatment shall include the sealing of cracks, holes and other openings, placement of bait outside or underneath the building and around or under trash dumpsters, garbage containers and grease holding containers for the particular facility. The Contractor shall inspect the traps daily, and remove any dead rodent and dispose of at an off-post State of Kansas approved dump site.

3.1.2.3 Standards:

3.1.2.3.1 For Arthropods: No healthy, live pests shall be observed within the treated area 30 calendar days after date of treatment. Allowances will be made, in accordance with the pesticide manufacturer's recommendations, to allow the pesticide to work (max 10 calendar days). If live, healthy pests are observed any time after treatment, the Contractor shall perform the necessary retreatments the Contractor shall perform the necessary retreatment(s) at no additional cost to the Government.

3.1.2.3.2 For Rodents: Buildings ordered for rodent control shall remain rodent free for a period of 30 calendar days after the Contractor removes his trap/poisons. If live, healthy rodents are observed after treatment, the contractor shall perform the necessary retreatment(s) at no additional cost to the Government.

3.1.3. Household Pest Control for Billeting Quarters:

3.1.3.1 Monthly Work Level I - Scheduled Maintenance Tasks: Pests to be controlled are arthropods and rodents in billets building numbers 28, 45, 170, 510, 541, 542, 620, 621, and 5309.

3.1.3.1.1 Upon arriving for applying the actual treatment, the Contractor shall again advise the quarters occupants of the necessary requirements during and after treatment for the particular pest control service.

3.1.3.1.2 The Contractor shall apply the necessary treatment where and when needed for Arthropods. Any voids and hollow spaces shall be treated with a dust formulation of the appropriate pesticide. A flushing agent shall be used after pesticides are applied to force the pests to move into chemicals. Treatment shall include the sealing of holes, cracks and other openings. Treatment for rodents shall be in accordance with paragraph 3.1.6, "Bird and Pest Mammal Control for Family Housing and Billeting Quarters".

3.1.3.1.3 If access to the treated areas is to be restricted for a given amount of time, the Contractor shall post warning signs. The Contractor shall remove the warning signs after the required warning period has passed.

3.1.3.2 Work Level II - Service Order Work Tasks: Pests to be controlled are arthropods and rodents in billets.

3.1.3.2.1 Upon arriving to apply the actual treatment, the Contractor shall again advise the occupant of the necessary during and after treatment requirements for the particular pest control service. The Contractor shall provide the occupant with the proper handout if another handout is needed.

3.1.3.2.2 The Contractor shall apply the necessary treatments when and where needed for Arthropods. Any voids and hollow spaces shall be treated with a dust foundation of the appropriate pesticide. A flushing agent shall be used after pesticides are applied to force the pests to move into chemicals. Treatment shall include the sealing of holes, cracks, and other openings. Treatment for rodents shall be in accordance with paragraph 3.1.2.2.3 above.

3.1.3.2.3 ULD may be requested by the COR to control infestation. If the Contractor determines that ULD is needed rather than the normal spray treatment, the COR's approval shall be obtained prior to any application. Payment shall be made for ULD space treatment as given in the Bid Schedule.

3.1.3.2.4 If access to quarters is to be restricted for a given amount of time, the Contractor shall post warning signs. The Contractor shall remove the warning signs after the required waiting period has passed.

3.1.3.3 Standards:

3.1.3.3.1 For Arthropods: No healthy, live pests shall be observed within the treated area thirty (30) calendar days after date of treatment. Allowances will be made, in accordance with the pesticide manufacturer's recommendations, to allow the pesticide to work (max. 10 calendar days). If live, healthy pests are observed any time after treatment, the Contractor shall perform the necessary retreatment(s) at no additional cost to the Government.

3.1.3.3.2 For Rodents: Buildings ordered for rodent control shall remain rodent free for a period of 30 calendar days after the Contractor removes traps and/or poisons. If live, healthy rodents are observed any time after treatment, the Contractor shall perform the necessary retreatment(s) at no additional cost to the Government.

3.1.4 Structural Pest Control for Family Housing and Billeting Quarters:
Pests to be controlled are termites in all quarters buildings.

3.1.4.1 Work Level I - Scheduled Maintenance Tasks: None.

3.1.4.2 Work Level II - Service Order Work Tasks: The Contractor shall inspect the specified building to determine if any infestations or damage to wood structural components exist and submit a written report to the COR for each structure inspected. The report shall include a sketch of the facility depicting a general structural layout, what portions of the structure require treatment, and cost estimate based on number of lineal feet to be treated and Contractor's estimated cost established in bid schedule. (Refer to Technical Exhibit 14, for example of information required for termite inspection report). The report page size shall not exceed 8 1/2 by 11 inches. Treatment shall be accomplished only when directed by the COR. The Contractor shall use Dursban TC unless otherwise approved by the COR.

3.1.4.2.1 The Contractor shall perform the treatment service during regular working hours except when building occupants are affected, then services are to be performed after 4:00 p.m. (This will occur less than fifteen percent of the time).

3.1.4.2.2 The Contractor shall be responsible for obtaining adequate information about the structure to be treated, to avoid damage to the structure and protection of the utility systems. Building plans with utility systems are available for inspection at the Engineering Division, DEH, Building 408.

3.1.4.2.3 The Contractor shall coordinate with the quarters occupants and/or occupant as to time and date the service will be performed and inform him of the necessary requirements before, during and after treatment. The Contractor shall provide the occupant and/or quarters occupants with the proper hand-out.

3.1.4.2.4 Where the Contractor must drill through the floor to perform treatment, the Contractor shall plug the floor with like material. The Contractor shall take special care if there is tile, sheet vinyl or carpet on the floor. For tile, the Contractor shall cut, heat and lift a corner of the tile. After the hole is plugged, the Contractor shall recement the tile to the floor. For sheet vinyl, the contractor shall make a V-cut, heat and lift a corner of the sheet vinyl. After the hole is plugged, the Contractor shall recement the sheet vinyl to the floor. For carpet, the Contractor shall make a V-cut and carefully peel back the carpet. After the hole is plugged, the Contractor shall recement the carpet to the floor. The Contractor shall move and replace household items to perform treatment as required.

3.1.4.2.5 If access to the facility or treated area is to be restricted for a given amount of time, the Contractor shall post warning signs. The Contractor shall move the warning signs after the waiting period has passed.

3.1.4.2.6 The Contractor shall provide a sketch of building to show exactly where the chemical was injected and the amount per injection. The sketch shall include interior and exterior walls and to scale.

3.1.4.2.7 If treatment is for swarmers, the Contractor shall eliminate all swarmers.

3.1.4.3 Standards:

3.1.4.3.1 For Structural Pest Infestations: Five year warranty against reinfestation or damage due to reinfestation for (a) buildings treated in their entirety; and (b) the treated portion of buildings which were spot treated.

3.1.4.3.2 For Swarmers: No healthy, live pest shall be observed within the treated area 30 calendar days after date of treatment. If live, healthy pests are observed anytime after treatment, the contractor shall perform the necessary retreatment(s) at no additional cost to the Government.

3.1.5 Odor Control for Family Housing and Billeting Quarters: Odors to be controlled are odors in all quarters buildings.

3.1.5.1 Work Level I - Scheduled Maintenance Tasks: None.

3.1.5.2 Work Level II - Service Order Work Tasks: The Contractor shall apply the particular masking deodorants for the particular application. They shall be applied either by spray or aerosol, within and/or under any enclosed building. The deodorant shall be strong enough to mask skunk and dead animal odors. The Contractor shall remove the source of odor (e.g. birds, rodents, pest mammals), and dispose of at an off-post State of Kansas approved dump site.

3.1.5.3 Standard: The odor being masked is not detectable after the masking agent is applied.

3.1.6 Bird and Pest Mammal Control for Family Housing and Billeting Quarters: Pests to be controlled are birds and pest mammals removed from buildings and/or application of bird or pest mammal repellents in all quarters buildings.

3.1.6.1 Work Level I - Scheduled Maintenance Tasks: None.

3.1.6.2 Work Level II - Service Order Work Tasks:

3.1.6.2.1 Bird or Pest Mammal Removal From Living or Working Areas: The Contractor shall remove birds or pest mammals present within any or all enclosed spaces of a structure such as living rooms, bedrooms, and offices. The Contractor shall remove birds or pest mammals whether dead or alive. Removal shall be done without violating state or federal regulations. Buildings shall not be modified or damaged during work performance. Bird or pest mammal removal shall be through existing access points. The Contractor shall release live birds at the exterior of the building and live pest mammals at any Fort Riley area at least one mile from any building. The Contractor shall dispose of dead birds or pest mammals at an off-post State of Kansas approved dump site.

3.1.6.2.2 Bird or Pest Mammal Removal from Enclosed Spaces: The Contractor shall remove birds or pest mammals present within any or all enclosed spaces of a structure such as attics, space above suspended ceiling and crawl spaces. The Contractor shall remove birds or pest mammals, whether dead or alive. Removal shall be done without violating state or federal regulations. The Contractor shall be required to remove and replace stove pipes and other similar fixtures that can be unbolted, unscrewed or otherwise disassemble in order to remove birds or pest mammals. Buildings shall not be modified or damaged during work performance. Bird or pest mammal removal shall be through existing access points. If existing access is not adequate, the Contractor shall notify the COR. If the COR determines that additional access is required, the Government will have the work performed by the Contractor as Work Level III. The Contractor shall seal any location where birds or pest mammals enter and exit. The Contractor shall release live birds at exterior of the building and live pest mammals at any Fort Riley area at least one mile from any building. The Contractor shall dispose of dead birds or pest mammals at an off-post State of Kansas approved dump site.

3.1.6.2.3 Application of Chemical Bird and Pest Mammal Repellents: The Contractor shall remove nests, droppings, and other foreign materials to include dust and pieces of insulation from designated family housing quarters and bil-

lets and apply the repellent material. All debris removed shall be placed into sealed plastic bags and disposed of in any steel trash dumpster on Fort Riley. Most areas to be treated are high places which require high lift equipment or ladders to reach. The Government will order the building to be treated. The Contractor shall estimate the number of 10-linear-foot units required to perform the treatment. Any inspections required to estimate the number of 10-linear-foot units will be the responsibility of the Contractor. COR approval is required before the Contractor begins any treatment. A cost estimate for the job, based on the unit price in the Bid Schedule, shall be submitted with the request for approval.

3.1.6.2.4 Application of Mechanical Bird Repellants: The Contractor shall remove nests, droppings, and other foreign materials to include dust and pieces of insulation from the areas of family housing quarters and billets designated for application of mechanical repellants. All debris removed shall be placed into sealed plastic bags and disposed of in any steel trash dumpster on Fort Riley. The areas to be treated are high buildings which require high lift equipment or ladders to reach. The Government will order the buildings to be treated. The Contractor shall estimate the number of ten-linear-foot units required to perform the treatment. Any inspections required to estimate the number of ten-linear-units shall be the responsibility of the Contractor. COR approval is required before the Contractor begins any treatment. A cost estimate for the job, based on the unit price in the Bid Schedule, shall be submitted with the request for approval. Mechanical bird repellants shall consist of prefabricated strips of metal needles arrayed in such a manner as to prevent birds from landing on the surface where the repellent has been installed. Needle strips shall be made of 302 stainless steel and have a minimum 120 needles per foot such as "Cat Claw" manufactured by Cat Claw, Inc. of Johnstown, Pennsylvania or "Nixalite Stainless Steel Needle Strips" manufactured by Nixalite of America of East Moline, Illinois. Bird repellent needle strips shall be securely fastened to the building with noncorrosive nails or screws and prefabricated clips. Nail and screw holes shall be sealed by means of a neoprene washer or application of silicone sealant. Arrangement and quantity of needle strips and spacing of fasteners shall be in accordance with the manufacturer's written recommendations.

3.1.6.3 Standards:

3.1.6.3.1 Bird or Pest Mammal Removal: All birds or pest mammals shall be removed from the enclosed spaces, and living or working areas of a building with no birds or pest mammals regaining access back into the enclosed space.

3.1.6.3.2 Application of Bird and Pest Mammal Repellents: Buildings ordered for application of bird and pest mammal repellent shall remain bird and pest mammal free for a period of 30 calendar days after the Contractor applies the repellent. If birds and pest mammals return within 10 days after treatment, the Contractor shall perform the necessary retreatment(s) at no additional cost to the Government.

3.1.7 Land Pest Control for Family Housing and Billeting Quarters: Pests to be controlled shall include common moles, pocket gophers, or other rodents residing on grounds surrounding quarters buildings.

3.1.7.1 Work Level I - Scheduled Maintenance Tasks: None.

3.1.7.2 Work Level II - Service Order Work Tasks: The Contractor shall apply the treatment to control common moles, pocket gophers and/or other rodents which damage turfgrass areas as directed by the COR. The COR will direct the use of either chemical application or trapping. The Contractor shall use a method of treatment, when children or pets could have access to the poison and/or trap, so that children and/or pets can not gain access to the poisons or be injured by the traps.

3.1.7.2.1 Chemical Application: The Contractor shall apply the appropriate chemical applications below the soil line as needed to control vertebrate pests.

3.1.7.2.2 Trapping:

3.1.7.2.2.1 The Contractor shall provide, set and maintain traps as needed to catch common moles and pocket gophers which damage turfgrass. The Contractor shall remove and dispose of dead animals at an off-post State of Kansas approved dump site.

3.1.7.2.2.2 The type of traps the Contractor uses shall be approved by the COR before use. Each trap shall have a protective cover around and above the trap. The cover shall not have any opening larger than one-half inch square in size and have a sign attached on top that states "CAUTION TRAP". The sign shall have a silver or white background with red letters. Each letter shall be standard one-inch high lettering. The Contractor shall firmly attach each trap to the soil to prevent it being pushed over by small children and pets.

3.1.7.2.2.3 The Contractor shall check each trap daily. The Contractor shall daily remove all animals caught and properly dispose of as stated in paragraph 3.1.7.2.2.1.

3.1.7.2.2.4 The Contractor shall rake all mounds and holes after the chemicals are applied or the trapping concluded to restore the appearance of the grounds prior to gopher and mole activity. The Contractor will not be required to reseed any restored grounds. If additional soil is required to fill the holes, the Contractor shall notify the COR immediately. The Contractor will not be required to place the additional soil.

3.1.7.3 Standards:

3.1.7.3.1 For Chemical Treatment: There shall be no visible signs of active vertebrate pests in any treated area for thirty (30) days after date of treatment.

3.1.7.3.2 For Trapping: There shall be no fresh mounding or tunneling of the turfgrass and soil for a period of seven (7) calendar days after Contractor removes the traps.

3.1.7.3.3 If live, healthy pests are observed within the times stated above for each treatment, the Contractor shall perform the necessary retreatment(s) at no additional cost to the Government.

3.1.8 Control of Stinging Flying Insects and Box Elder Bugs for Family Housing and Billeting Quarters: Pests to be controlled include wasps, bees, honey bees, cicada killer wasps, mud daubers, hornets, and yellow jackets at all quarters areas and/or buildings. The Contractor shall eliminate box elder bugs on exterior of buildings as required.

3.1.8.1 Work Level I - Scheduled Maintenance Tasks: None.

3.1.8.2 Work Level II - Service Order Work Tasks:

3.1.8.2.1 The Contractor shall spray as required to control stinging, flying insects from buildings, structures, playground equipment, dump sites, trees, burrows, latrines, training areas, and bleachers or as directed by the COR. The Contractor shall remove all active and inactive nests. The Contractor shall transport the honey bee swarms to a release point on Fort Riley designated by the COR.

3.1.8.2.2 The Contractor shall spray for box elder bugs as required to control pests on exterior of buildings as directed by the COR.

3.1.8.3 Standards:

3.1.8.3.1 Stinging, Flying Insects: All stinging flying insects shall be eliminated after treatment is applied and nests removed. Honey bee swarms shall be transported to a release point on Fort Riley as designated by the COR.

3.1.8.3.2 Box Elder Bugs: All box elder bugs shall be eliminated after treatment is applied.

3.1.9 Roach and Ant Control by Bait Application for Family Housing and Billeting Quarters: The Contractor shall use baits, as specified herein, to control roaches and ants. Use of baits shall be by service order and may be required in conjunction with or in lieu of sprays and powders. Bait application may be required in any quarters included in this contract. The species of ants that are to be controlled by baits include the Argentine, Odorous House, Bigheaded, Pavement, Red Imported Fire, Thief, and Pharaoh Ants. All local species of roach shall be controlled by the baits.

3.1.9.1 Baits: Baits shall consist of an odorless waxy mass with suspended particulate matter packed in a childproof unbreakable plastic container. The container shall serve as a feeding station for roaches or ants. The bait shall contain a minimum of 1.65 percent and 0.9 percent active ingredient for roach and ant baits respectively. The active ingredient shall be Hydramenthynon which is slow-acting, non-resistant, non-repellant stomach poison and is non-mutagenic as determined by the Ames mutagenicity test. The bait container shall be capable of being temporarily adhered to any smooth surface.

3.1.9.2 Application: Placement of baits shall be done in accordance with the manufacturer's written instructions and as directed by the Contracting Officer. Roach baits shall be placed at twelve stations per unit of application with a coverage rate of four to six baits per one hundred square feet of floor

space. Ant baits shall be placed at two stations per unit of application with a coverage rate of one bait per one hundred square feet of floor space. The Contractor shall install the baits then remove and dispose of them three months later. Disposal shall be done in accordance with the manufacturer's written recommendations.

3.1.9.3 Standard: No healthy, live pests shall be observed within the treated areas 50 calendar days after date of placement of baits. If live, healthy pests are observed any time after the first fifty days of the treatment, the Contractor shall perform the necessary retreatments(s) at no additional cost to the Government.

DACA41-94-R-0012

**TE-22 APPLIANCE AND HEATING,
VENTILATING, AND AIR CONDITIONING
SYSTEMS MAINTENANCE**

TE-22-I

TECHNICAL EXHIBIT 22

APPLIANCE AND HEATING, VENTILATING, AND AIR CONDITIONING
SYSTEMS MAINTENANCE

1.1 SCOPE. This technical exhibit sets forth the required tasks and standards for appliance and heating, ventilating, and air conditioning (HVAC) systems maintenance in this contract.

2.1 GENERAL: The Contractor shall perform appliance and HVAC systems maintenance in accordance with this technical exhibit, and the requirements specified in Subsections C-1 thru C-6 and Technical Exhibit 23, Sections 11450, 15805, 15810, 15832, and 15870. When performing scheduled maintenance or service order work, the Contractor shall perform all work and coordination necessary to complete the scheduled maintenance or service order work. This shall include, but is not limited to, coordinating with other occupants if necessary for access to utility shutoffs, relighting pilots of affected areas if gas is cut off for the Contractor's work, and performing other minor repairs or adjustments to other equipment in the same location provided such is within the Contractor's scope of work.

3.1 APPLIANCE AND HVAC SYSTEM MAINTENANCE TASKS AND STANDARDS: Appliance and HVAC systems maintenance includes the maintenance tasks and standards below. Appliance and HVAC systems maintenance shall be performed by the Contractor so that the results of his work meet or exceed the performance standards indicated. When the minimum standards are not met, the Contractor shall be required to reperform the work until the standards are met, at no additional cost to the Government. Liquidated damages will be assessed if applicable.

3.1.1 Appliances:

3.1.1.1 General:

3.1.1.1.1 This section covers the scheduled maintenance, service calls, and replacement of all appliances and associated utilities at family housing and billeting quarters, and miscellaneous administrative buildings listed in Technical Exhibit 11. Unless specifically stated otherwise, appliances include residential and commercial gas and electric: ranges, cooktops, built-in ovens, microwave ovens, deep fat fryers, griddles, and toasters; refrigerators including icemakers; freezers; ice making machines; dishwashers; garbage disposals; unit kitchens (kitchenettes); grating machines; meat slicing machines; smoke detectors; garage door openers; and gas and electric water heaters. The Contractor shall restore appliances and their associated components as defined herein per applicable sections of the National Electric Code (NEC), National Fuel Gas Code (NFGC), National Standard Plumbing Code (NSPC) or Uniform Plumbing Code (UPC), Uniform Mechanical Code (UMC), American Society of Mechanical Engineers (ASME) Codes, and American Society of Sanitary Engineers (ASSE) Codes. The Contractor shall obtain approval in writing from the Contracting Officer prior to planning any deviation from these requirements. The Contractor shall comply with Subsection C-1, paragraph C.1.9.6 when handling, recovering, and disposing of refrigerants.

3.1.1.1.2 Limits of Responsibility for Appliance Utilities: The limits of the Contractor's responsibility for appliance utilities is defined below. These requirements supplement the requirements set forth in Subsection C-1, paragraph C.1.1.3.1. The greater extent of responsibility applies.

3.1.1.1.2.1 Natural gas line - from just after the first shut-off valve, whether the line comes above ground before entering the quarters or if the line remains underground after it enters through the foundation wall, to the point of usage. The first shut-off valve is not included. The Contractor has the responsibility for the regulator for the quarters, regardless where it is located.

3.1.1.1.2.2 Water line for Water Heaters/Generators - from the point where domestic cold water enters the heater/generator to the point where domestic hot water leaves the storage tank and enters the distribution system. There are approximately 10 water systems which have a hot water generator and a separate storage tank.

3.1.1.1.2.3 Electric Wiring - from the panel box, including the breaker, to the point of usage if the appliance is on a dedicated circuit. If the appliance is not on a dedicated circuit, the Contractor is responsible only for the wiring attached and within the appliance.

3.1.1.2 Work Level I - Scheduled Maintenance Tasks for Water Heaters Only:

3.1.1.2.1 General:

3.1.1.2.1.1 Scheduled maintenance for water heaters includes inspection of water heaters and all repair work necessary to restore defective water heaters to the operating conditions specified by the water heater manufacturer. The work includes, but is not limited to, rewiring, replacement of parts, components, or subassemblies; operational testing; and adjustment and calibration as required to assure proper operation of the water heaters. If water heaters cannot be economically repaired, the Contractor shall replace them as specified in Subsection C-1, paragraph C.1.17. Water heater replacement shall be accomplished as Work Level II - Service Order Work.

3.1.1.2.1.2 Repair quality shall be equivalent to the original equipment's quality in terms of parts, materials, and workmanship. After completing water heater repairs, the water heater shall be given a thorough operational test to ensure water heater is functioning in accordance with the manufacturer's specifications.

3.1.1.2.1.3 Scheduled maintenance for water heaters shall include, but not be limited to, the following:

3.1.1.2.1.3.1 Troubleshooting: Performance of necessary troubleshooting procedures to assure the most cost-effective repair by assuring minimal replacement parts.

3.1.1.2.1.3.2 Repair or Replacement of Wiring: Wiring shall be repaired or replaced when insulation is defective or corrosion is excessive, and when wiring is damaged, broken, or frayed.

3.1.1.2.1.3.3 Replacement of Defective Components: As determined from troubleshooting, parts, components, or subassemblies shall be replaced as required to restore operational capability.

3.1.1.2.1.3.4 Calibration: Operational performance shall be measured to assure that the appliance operates within the manufacturer's tolerances.

3.1.1.2.1.3.5 Performance of Operational Checks: After completing repairs, the appliance shall be operated to simulate a complete cycle in all modes of operation, or as required to assure complete operational capability.

3.1.1.2.1.3.6 Warranties: Receive a record of warranties from the Government at the start of the contract. Maintain a record of warranties in effect throughout the contract. Turn over the record of warranties to the Government upon expiration or termination of the contract.

3.1.1.2.1.3.6.1 Determine if repairs required are under warranty and who is responsible for those repairs.

3.1.1.2.1.3.6.2 If warranty repairs are the responsibility of a party outside this contract, the Contractor shall notify the Contracting Officer or his representative. At this point the Contractor has completed his task.

3.1.1.2.1.3.6.3 If warranty repairs are the responsibility of the Contractor under this contract, then he shall immediately perform the warranty work.

3.1.1.2.2 Scheduled Maintenance for Water Heaters: The Contractor shall accomplish the following scheduled maintenance for water heaters. This maintenance will normally be accomplished when heating maintenance is accomplished in the fall.

3.1.1.2.2.1 Tasks for Both Natural Gas-Fired and Electric Water Heaters:

3.1.1.2.2.1.1 The Contractor shall inspect all water heaters and determine their condition. Failed or failing water heaters shall be repaired or replaced. Damaged or missing components shall be repaired or replaced. Water heater replacement shall be accomplished as Work Level II - Service Order Work.

3.1.1.2.2.1.2 Check operation and condition of pressure and temperature relief valve. Inspect for leaks and signs of rust and corrosion.

3.1.1.2.2.1.3 Check automatic controls (temperature regulator and fuel shut-off device) for proper operation. Clean controls to remove dust accumulation.

3.1.1.2.2.1.4 Check for proper water temperature setting. Adjust temperature setting to the medium setting in accordance with Subsection C-1, paragraph C.1.6.

3.1.1.2.2.1.5 Close water inlet valve, open water heater boiler drain and drain tank. Flush and remove loose scale from tank with clean water from inlet valve. Perform tasks such as checking and cleaning temperature controls

and heating elements. Close boiler drain, open inlet valve and refill tank. Install 3/4 inch FIP cap and seal on boiler drain outlet if one does not already exist. Check for and stop any leaks.

3.1.1.2.2.1.6 Clean up the outside of the water heater and the work area.

3.1.1.2.2.2 Tasks for Natural Gas-Fired Water Heaters:

3.1.1.2.2.2.1 Check pilot on gas burner. Adjust pilot flame so that gas burns with optimum efficiency.

3.1.1.2.2.2.2 Clean burner; remove carbon build-up on burner and clear any clogged orifices. Adjust burner so that gas burns with optimum efficiency.

3.1.1.2.2.2.3 Check gas pressure regulator for proper operation.

3.1.1.2.2.3 Tasks for Electric Water Heaters:

3.1.1.2.2.3.1 Check condition of heating elements and all connections and wiring for tightness and corrosion.

3.1.1.2.2.3.2 Clean scale build-up off of heating elements and remove scale build-up from water heater.

3.1.1.2.2.4 Standards: Water heaters shall be fully operational in accordance with the manufacturer's specifications and free of safety deficiencies and shall not leak.

3.1.1.3 Work Level II - Service Order Work for Appliances and Water Heaters:

3.1.1.3.1 General:

3.1.1.3.1.1 Service order work for appliances and water heaters includes inspection and all repair work necessary to restore defective appliances and water heaters to the operating conditions specified by appliance and water heater manufacturers. The work includes, but is not limited to, rewiring, replacement of parts, components, or subassemblies; operational testing; and adjustment and calibration as required to assure proper operation of the appliances and water heaters. If appliances and water heaters cannot be economically repaired, the Contractor shall replace them as specified in Subsection C-1, paragraph C.1.17.

3.1.1.3.1.2 Repair quality shall be equivalent to the original equipment's quality in terms of parts, materials, and workmanship. After completing appliance and water heater repairs, the appliance or water heater shall be given a thorough operational test to ensure the appliance or water heater is functioning in accordance with the manufacturer's specifications.

3.1.1.3.1.3 Service order work for appliances and water heaters shall include, but not be limited to, the following:

3.1.1.3.1.3.1 Troubleshooting: Performance of necessary troubleshooting procedures to assure the most cost-effective repair by assuring minimal replacement parts.

3.1.1.3.1.3.2 Repair or Replacement of Wiring: Wiring shall be repaired or replaced when insulation is defective or corrosion is excessive, and when wiring is damaged, broken, or frayed.

3.1.1.3.1.3.3 Cleaning and Lubrication of Electric Motors and Bearings: Electric motors or other bearings shall be cleaned and lubricated where required; lint, dirt, or debris shall be removed from all air passages, and collected gum or oil shall be cleaned up, using an appropriate solvent.

3.1.1.3.1.3.4 Cleaning of Fans and Blowers: Build-ups of lint, grease, dirt, gum, and debris on fan and impeller blades shall be removed.

3.1.1.3.1.3.5 Filters: Clean permanent and washable type filters, and replace throwaway filters with new filters of the same type and size.

3.1.1.3.1.3.6 Replacement of Defective Components: As determined from troubleshooting, parts, components, or subassemblies shall be replaced as required to restore operational capability.

3.1.1.3.1.3.7 Calibration: Operational performance shall be measured to assure that the appliance operates within the manufacturer's tolerances.

3.1.1.3.1.3.8 Performance of Operational Checks: After completing repairs, the appliance shall be operated to simulate a complete cycle in all modes of operation, or as required to assure complete operational capability.

3.1.1.3.1.3.9 Replacement of Motors: Burned-out motors shall be replaced with a new motor in accordance with the manufacturer's specifications. Disposal of burned-out motors shall be according to Subsection C-1, paragraph C.1.19.

3.1.1.3.1.3.10 Warranties: Receive a record of warranties from the Government at the start of the contract. Maintain a record warranties in effect throughout the contract. Turn over the record of warranties to the Government upon expiration or termination of the contract.

3.1.1.3.1.3.10.1 Determine if repairs required are under warranty and who is responsible for those repairs.

3.1.1.3.1.3.10.2 If warranty repairs are the responsibility of a party outside this contract, the Contractor shall notify the Contracting Officer or his representative. At this point the Contractor has completed his task.

3.1.1.3.1.3.10.3 If warranty repairs are the responsibility of the Contractor under this contract, then he shall immediately perform the warranty work.

3.1.1.3.2 Service Order Work for Appliances: The Contractor shall accomplish the following for appliances.

3.1.1.3.2.1 Tasks:

3.1.1.3.2.1.1 The Contractor shall inspect appliances to determine the scope of repairs and estimate the cost to make the repairs. The scope and estimate will be the basis for determining whether appliances will be repaired or replaced. If replacement is justified as specified in Subsection C-1, paragraph C.1.17, the Contractor shall provide an estimate and obtain approval from the Contracting Officer to replace appliances.

3.1.1.3.2.1.2 When replacements are required, the Contractor shall transport, install, and test the appliance prior to releasing it to the occupant. This work includes, but is not limited to hauling, modifying utilities to fit the new appliance, connecting the appliance in its final position, and performing test operations to ensure acceptable performance. The Contractor shall demonstrate to the occupant all features and the operation of the new appliance. Clean up the work area upon completion of the work.

3.1.1.3.2.2 Standards:

3.1.1.3.2.2.1 Ranges, Cooktops, Built-In Ovens, and Microwave Ovens: Ranges, cooktops, built-in ovens, and microwave ovens shall be fully operational in accordance with the manufacturer's specifications and free of safety deficiencies. Ranges, cooktops, built-in ovens, and microwave ovens shall be fully assembled and hooked up to gas and/or electricity. All burners and ovens shall operate correctly. Oven doors shall seal properly with no leaks. Clocks and timers shall operate correctly. All knobs shall match. There shall be no cracks. All light bulbs shall be working. All racks and drip pans shall be installed and be free of rust and holes.

3.1.1.3.2.2.2 Electric Deep Fat Fryer: Electric deep fat fryers shall be fully operational in accordance with the manufacturer's specifications and free of safety deficiencies.

3.1.1.3.2.2.3 Gas Griddle: Gas griddles shall be fully operational in accordance with the manufacturer's specifications and free of safety deficiencies.

3.1.1.3.2.2.4 Toaster: Toasters shall be fully operational in accordance with the manufacturer's specifications and free of safety deficiencies.

3.1.1.3.2.2.5 Refrigerators and Freezers: Refrigerators including icemakers, if applicable, and freezers shall be fully operational in accordance with the manufacturer's specifications and free of safety deficiencies. All racks, egg racks, knobs, ice cube trays, and crisper tops shall be in place and without cracks. Both the refrigerator and freezer compartments shall operate properly. All doors shall seal properly and not let air escape. If the refrigerator is turned off, the doors shall be propped open to prevent mildew.

3.1.1.3.2.2.6 Ice Making Machines: Ice making machines shall be fully operational in accordance with the manufacturer's specifications and free of safety deficiencies and shall not leak.

3.1.1.3.2.2.7 Dishwashers: Dishwashers shall be fully operational in accordance with the manufacturer's specifications and free of safety deficiencies and shall not leak. Racks, knobs, and floats shall be in place and without cracks. Dishwashers shall be properly secured to the countertop or floor.

3.1.1.3.2.2.8 Garbage Disposers: Garbage disposers shall be fully operational in accordance with the manufacturer's specifications and free of safety deficiencies and shall not leak.

3.1.1.3.2.2.9 Grating Machine: Grating machines shall be fully operational in accordance with the manufacturer's specifications and free of safety deficiencies.

3.1.1.3.2.2.10 Meat Slicing Machine: Meat slicing machines shall be fully operational in accordance with the manufacturer's specifications and free of safety deficiencies.

3.1.1.3.2.2.11 Smoke Detectors: Smoke detectors shall be fully operational in accordance with the manufacturer's specifications and free of safety deficiencies.

3.1.1.3.2.2.12 Fire Detection and Alarm Systems: Fire detection and alarm systems shall be fully operational in accordance with the manufacturer's specifications and free of safety deficiencies.

3.1.1.3.2.2.13 Garage Door Openers: Garage door openers shall be properly lubricated and fully operational in accordance with the manufacturer's specifications and free of safety deficiencies.

3.1.1.3.3 Service Order Work for Water Heaters: The Contractor shall accomplish the following for water heaters.

3.1.1.3.3.1 Tasks:

3.1.1.3.3.1.1 The Contractor shall inspect water heaters to determine the scope of repairs and estimate the cost to make the repairs. The scope and estimate will be the basis for determining whether water heaters will be repaired or replaced. If replacement is justified as specified in Subsection C-1, paragraph C.1.17, the Contractor shall provide an estimate and obtain approval from the Contracting Officer to replace the water heaters.

3.1.1.3.3.1.2 When replacements are required, the Contractor shall transport, install, and test the water heater prior to releasing it to the occupant. This work includes, but is not limited to hauling, modifying utilities to fit the new water heater, connecting the water heater in its final position, and performing test operations to ensure acceptable performance. The Contractor shall demonstrate to the occupant all features and the operation of the new water heater.

3.1.1.3.3.2 Standards:

3.1.1.3.3.2.1 Water heaters shall be fully operational; operating within their manufacturer's specified range of operation and efficiency; including all special features, safety features, and controls.

3.1.1.3.3.2.2 Exterior of water heaters shall be free of dirt, grime, dents, scratches, and rust.

3.1.1.3.3.2.3 Connections to utility systems shall be free from leaks and safety defects.

3.1.2 Heating, Ventilating, and Air Conditioning Systems:

3.1.2.1 General:

3.1.2.1.1 This section covers scheduled maintenance and repair and replacement of all heating, ventilating, and air conditioning (HVAC) systems and equipment, and associated utilities at family housing and billeting quarters, and miscellaneous administrative buildings listed in Technical Exhibit 11.. The Contractor shall restore HVAC systems and their associated components as defined herein per applicable sections of the National Electric Code (NEC), National Fuel Gas Code (NFGC), National Standard Plumbing Code (NSPC) or Uniform Plumbing Code (UPC), Uniform Mechanical Code (UMC), American Society of Mechanical Engineers (ASME) Codes, and American Society of Sanitary Engineers (ASSE) Codes. The Contractor shall obtain approval in writing from the Contracting Officer prior to planning any deviation from these requirements. The Contractor shall comply with Subsection C-1, paragraph C.1.9.6 when handling, recovering, and disposing of refrigerants. HVAC systems and equipment include, but are not limited to, the following:

3.1.2.1.1.1 Gas-fired hot water and steam boilers.

3.1.2.1.1.2 Building heating and domestic hot water heat exchangers.

3.1.2.1.1.3 Gas-fired forced-air furnaces.

3.1.2.1.1.4 Electric forced-air furnaces including indoor air-to-air heat pump sections.

3.1.2.1.1.5 Residential air handling units with water-to-air heat pump sections.

3.1.2.1.1.6 Residential and commercial air handling units with heating and/or cooling coils of all types.

3.1.2.1.1.7 Residential type air cooled condensers and outdoor air-to-air heat pump sections including condensing and evaporative coils.

3.1.2.1.1.8 Commercial type air cooled condensers.

3.1.2.1.1.9 Chillers.

3.1.2.1.1.10 Window air conditioners.

- 3.1.2.1.1.12 Unit heaters with hot water coils.
- 3.1.2.1.1.11 Fan coil units with heating and/or cooling coils.
- 3.1.2.1.1.13 Electric wall heaters.
- 3.1.2.1.1.14 Domestic and HVAC water circulating and condensate return pumps.
- 3.1.2.1.1.15 Domestic hot water storage tanks, hot water expansion tanks, and condensate receiver tanks.
- 3.1.2.1.1.16 HVAC control systems including thermostats, humidistats, set-backs, outside air temperature and humidity sensors, air compressors, oil separators, refrigerated air dryers, safety related features, and associated tubing and wiring.
- 3.1.2.1.1.17 HVAC duct systems and associated insulation including combustion air intakes, flues; supply, return, and make-up air ducts; diffusers, grilles, and registers; and exhaust and intake systems.
- 3.1.2.1.1.18 HVAC piping systems and associated insulation including fuel gas, refrigeration, steam, water, condensate drains, air separators, pumps, radiators, convectors, and valves of all types.
- 3.1.2.1.1.19 Sump pumps.
- 3.1.2.1.1.20 Commercial exhaust fans, commercial HVAC intake fans, attic fans, radon exhaust fans, ceiling fans, kitchen range hoods, and kitchen and bathroom exhaust fans.
- 3.1.2.1.2 Limits of Responsibility for HVAC Utilities: The limits of the Contractor's responsibility for HVAC utilities is defined below. These requirements supplement the requirements set forth in paragraph C.1.1.3.1. The greater extent of responsibility applies.
- 3.1.2.1.2.1 Natural gas line - from just after the first shut-off valve, whether the line comes above ground before entering the quarters or if the line remains underground after it enters through the foundation wall, to the point of usage. The first shut-off valve is not included. The Contractor has the responsibility for the regulator for the quarters, regardless where it is located.
- 3.1.2.1.2.2 Electric Wiring - from the panel box, including the breaker, to the point of usage.
- 3.1.2.2 Work Level 1 - Scheduled Maintenance Tasks for HVAC Equipment:
- 3.1.2.2.1 General:
- 3.1.2.2.1.1 Scheduled maintenance for HVAC equipment includes all work necessary to restore a defective piece of equipment to the operating conditions specified by the manufacturer. The work includes, but is not limited to, re-wiring; replacement of parts, components, or subassemblies; operational test-

ing; and adjustment and calibration as required to assure proper operations of the equipment. If the equipment cannot be economically repaired, the Contractor shall replace the item upon receipt of approval by the Contracting Officer. HVAC equipment replacement shall be accomplished as Work Level II - Service Order Work.

3.1.2.2.1.2 Repair quality shall be equivalent to the original equipment's quality in terms of parts, materials and workmanship. Replacement parts shall conform to the manufacturer's design requirements, and shall provide reliability and durability comparable to the original element. In the case the part is no longer produced, the Contractor shall use an approved substitution. After completing the repairs, the system shall be given a thorough operational test and demonstrated to function in accordance with the manufacturer's specification.

3.1.2.2.1.3 Replacement item shall be equivalent to the original equipment's quality in terms of material and workmanship. The replacement item shall conform to the design requirements of the system and shall provide reliability and durability comparable to the original equipment. The new item will meet or exceed current codes. After completing the work, replacing the item, the item and system (when applicable) shall be given a thorough operational test and demonstrated to function in accordance with the manufacturer's specifications and overall system requirements.

3.1.2.2.1.4 Scheduled maintenance shall include, but not be limited to, the following:

3.1.2.2.1.4.1 Troubleshooting: Performance of necessary troubleshooting procedures to assure the most cost-effective repair by assuring minimal replacement parts.

3.1.2.2.1.4.2 Repair or Replacement of Wiring: Wiring shall be repaired or replaced when insulation is defective or corrosion is excessive, and when wiring is damaged, broken, or frayed.

3.1.2.2.1.4.3 Cleaning and Lubrication of Electric Motors and Bearings: Electric motors or other bearings shall be cleaned and lubricated where required; lint, dirt, or debris shall be removed from all air passages, and collected gum or oil shall be cleaned up, using an appropriate solvent.

3.1.2.2.1.4.4 Cleaning of Fans and Blowers: Build-ups of lint, grease, dirt, gum, and debris on fan and impeller blades shall be removed.

3.1.2.2.1.4.5 Filters: Clean permanent and washable type filters, and replace throwaway filters with new filters of the same type and size.

3.1.2.2.1.4.6 Replacement of Defective Components: As determined from troubleshooting, parts, components, or subassemblies shall be replaced as required to restore operational capability.

3.1.2.2.1.4.7 Calibration: Operational performance shall be measured to assure that the appliance operates within the manufacturer's tolerances.

3.1.2.2.1.4.8 Performance of Operational Checks: After completing repairs, the appliance shall be operated to simulate a complete cycle in all modes of operation, or as required to assure complete operational capability.

3.1.2.2.1.4.9 Replacement of Motors: Burned-out motors shall be replaced with a new motor in accordance with the manufacturer's specifications. Disposal of burned-out motors shall be according to Subsection C-1, paragraph C.1.19.

3.1.2.2.1.4.10 Closing and Opening Crawl Space Vents: Crawl space vents shall be closed at the beginning of the heating season in conjunction with fall HVAC maintenance and opened at the end of heating season in conjunction with spring HVAC maintenance.

3.1.2.2.1.4.11 Warranties: Receive a record of warranties from the Government at the start of the contract. Maintain a record warranties in effect throughout the contract. Turn over the record of warranties to the Government upon expiration or termination of the contract.

3.1.2.2.1.4.11.1 Determine if repairs required are under warranty and who is responsible for those repairs.

3.1.2.2.1.4.11.2 If warranty repairs are the responsibility of a party outside this contract, the Contractor shall notify the Contracting Officer or his representative. At this point the Contractor has completed his task.

3.1.2.2.1.4.11.3 If warranty repairs are the responsibility of the Contractor under this contract, then he shall immediately perform the warranty work.

3.1.2.2.2: Tasks. The Contractor shall accomplish the following specific scheduled maintenance tasks. All scheduled maintenance on HVAC equipment shall be performed in accordance with the equipment manufacturer's recommendation, ASME codes, or as outlined below. The list of requirements noted below are only noted for reasons of identifying the nature of the work involved and are not limited to the specific items indicated.

3.1.2.2.2.1 Gas-Fired Boilers: (As appropriate for hot water or steam boilers, whether used for building heating, domestic water heating, or both).

3.1.2.2.2.1.1 Fall Boiler Service and Start-Up Service: Shall be accomplished during the period 1 thru 30 September.

3.1.2.2.2.1.1.1 Check the low water probe relay for proper operation.

3.1.2.2.2.1.1.2 Check for leaks in piping and connections.

3.1.2.2.2.1.1.3 Check all valves. Tighten packing as necessary to stop leakage. Lubricate and exercise the valves. Check the stem over the full range of travel, and the condition of the seat for cracking and leakage.

3.1.2.2.2.1.1.4 Clean the feeder and its float and switch components.

- 3.1.2.2.2.1.1.5 Check the electrical connections and wiring. Tighten any loose connections and replace any frayed wiring. Check electric connections for rust and corrosion.
- 3.1.2.2.2.1.1.6 Inspect insulation and replace worn or damaged sections.
- 3.1.2.2.2.1.1.7 Check, clean and adjust the pilot burner. Adjust the pilot flame so that the gas burns with optimum efficiency.
- 3.1.2.2.2.1.1.8 Check the low and high temperature limits for proper operation. Clean the temperature control and adjust to within plus or minus one degree.
- 3.1.2.2.2.1.1.9 Clean the burner orifices. Remove carbon or soot buildup on burners and clear any clogged orifices. Adjust burners so that the gas burns with optimum efficiency.
- 3.1.2.2.2.1.1.10 Check the draft motor and fan blade for excessive noise, heat, vibration, and clean.
- 3.1.2.2.2.1.1.11 Check the fire box for proper operating condition.
- 3.1.2.2.2.1.1.12 Check the blow-down valves.
- 3.1.2.2.2.1.1.13 Operate the boiler through three (3) complete firing cycles to assure that all controls are functioning correctly and that the pilot and main burner are responding properly to the programming controls.
- 3.1.2.2.2.1.1.14 Check the combustion efficiency with a carbon dioxide indicator and a stack thermometer. Adjust the burner and air supply dampers to provide a clean fire, complete combustion, and a range of from 9 to 11 percent carbon dioxide with a stack temperature of 350 degrees F. to 450 degrees F., unless otherwise authorized or directed by the Contracting Officer's Representative.
- 3.1.2.2.2.1.1.15 If the boiler controls, burner, safety valves or any auxiliaries fail or do not operate properly during start-up, they are to be corrected under the provisions of this contract. The Contractor shall take the system out of service immediately until all parts and components are in a correct, safe, and efficient operating condition. Only then is the boiler to be placed back into service by the Contractor.
- 3.1.2.2.2.1.1.16 After system is in a correct, safe and efficient operating condition, the controls are to be set to permit the occupant to switch on or over to heating mode of the thermostats and have system function properly.
- 3.1.2.2.2.1.1.17 Perform associated services on domestic hot water heat exchanger, pumps, tanks, and control system, as appropriate, as described in paragraphs 3.1.2.2.2.2, 3.1.2.2.2.15, 3.1.2.2.2.16, and 3.1.2.2.2.17 below.
- 3.1.2.2.2.1.1.18 Clean up the work area.

3.1.2.2.2.1.2 Spring Boiler Service and Lay-Up Service: Shall be accomplished during the period 1 thru 30 April or within 30 days after heat is turned off unless an extension of time has been approved by the COR.

3.1.2.2.2.1.2.1 Conduct all scheduled maintenance as recommended by equipment manufacturer.

3.1.2.2.2.1.2.2 Drain and wash boiler, ensuring all scale and sludge is removed from the water side of boiler tubes.

3.1.2.2.2.1.2.3 Clean relay.

3.1.2.2.2.1.2.4 Clean the expansion tank and vent tube.

3.1.2.2.2.1.2.5 Inspect the visible interior water side portions of the boiler for corrosion, pitting and scale formation. Report findings as specified in the provisions of this contract.

3.1.2.2.2.1.2.6 Refill the boiler with clean, fresh water to the normal operating level. Fire up boiler, check for proper operation. After oxygen is boiled off, secure all valves and shut off power.

3.1.2.2.2.1.2.7 Thoroughly service and check the burner, ensuring that all burner components and controls are in good operating condition. Replace parts and subassemblies where necessary per the provisions of this contract.

3.1.2.2.2.1.2.8 Repack all replaceable-type pump packing glands with the required make and type as specified by the manufacturer, if applicable.

3.1.2.2.2.1.2.9 Lay up boiler by closing boiler valves, water and steam valves, fuel valves, etc. Place electrical switches to the boiler in the OFF position.

3.1.2.2.2.1.2.10 Perform associated services on domestic hot water heat exchanger, pumps, tanks, and control system, as appropriate, as described in paragraphs 3.1.2.2.2.2, 3.1.2.2.2.15, 3.1.2.2.2.16, and 3.1.2.2.2.17 below.

3.1.2.2.2.1.2.11 Clean up the work area.

3.1.2.2.2.2 Building Heating and Domestic Hot Water Heat Exchangers - Fall and Spring Service: Shall be accomplished during the periods 1 thru 30 September and 1 thru 30 April respectively.

3.1.2.2.2.2.1 Inspect piping and valves for signs of leaks, corrosion, and abnormalities. Check operation of hand valves.

3.1.2.2.2.2.2 Inspect and lubricate circulating pump.

3.1.2.2.2.2.3 Drain vessel, remove and inspect tube bundle.

3.1.2.2.2.2.4 Clean/de-lime tube bundle in solution (soaking time not included).

- 3.1.2.2.2.2.5 Flush vessel, remove scale, sludge, mud, lime and other foreign deposits.
- 3.1.2.2.2.2.6 Repair or replace faulty traps and strainers.
- 3.1.2.2.2.2.7 Repair any leaks found in tube bundle.
- 3.1.2.2.2.2.8 Reinstall tube bundle, fill vessel.
- 3.1.2.2.2.2.9 Check for leaks and proper operation after installation.
- 3.1.2.2.2.2.10 Perform associated services on pumps, tanks, and control system, as appropriate, as described in paragraphs 3.1.2.2.2.15, 3.1.2.2.2.16, and 3.1.2.2.2.17 below.
- 3.1.2.2.2.2.11 Clean up the work area.
- 3.1.2.2.2.3 Gas-Fired Forced-Air Furnaces:
 - 3.1.2.2.2.3.1 Fall Gas-Fired Forced-Air Furnace Service: Shall be accomplished during the period 1 September thru 31 October.
 - 3.1.2.2.2.3.1.1 Check, clean and adjust the furnace thermostat. The thermocouple reading shall conform to system specifications.
 - 3.1.2.2.2.3.1.2 Check the blower and motor for proper alignment. Check for excessive noise, heat, and vibration. Correct in accordance with system specifications.
 - 3.1.2.2.2.3.1.3 Lubricate blower motor.
 - 3.1.2.2.2.3.1.4 Check the electrical components, wiring and connections. Check for signs of rust and corrosion. Tighten any loose connection and replace any frayed wiring.
 - 3.1.2.2.2.3.1.5 Check the combustion chamber for leaks and cracks. Clean the combustion chamber to remove any accumulations of dirt and grime. Inspect the fuel system for leaks, check all pipes and connections.
 - 3.1.2.2.2.3.1.6 Check for proper operation of the pilot and burner. Clean and adjust the pilot as necessary.
 - 3.1.2.2.2.3.1.7 Clean blower and air plenum.
 - 3.1.2.2.2.3.1.8 Clean the fire box.
 - 3.1.2.2.2.3.1.9 Clean permanent and washable type air filters, and replace throwaway air filters with new filters of the same type and size.
 - 3.1.2.2.2.3.1.10 After the system is in a correct, safe and efficient operating condition, the controls are to be set to permit the occupant to switch on or over to the heating mode of the thermostat and have system function properly.

- 3.1.2.2.2.3.1.11 Clean and inspect humidifier, if appropriate. Lubricate motor, and check controls for proper operation.
- 3.1.2.2.2.3.1.12 Clean up the work area.
- 3.1.2.2.2.3.1.13 Close all crawl space vents.
- 3.1.2.2.2.3.2 Spring Gas-Fired Forced-Air Furnace Service: Shall be accomplished during the period 1 March thru 30 April.
- 3.1.2.2.2.3.2.1 Lubricate blower motor.
- 3.1.2.2.2.3.2.2 Clean permanent and washable type air filters, and replace throwaway air filters with new filters of the same type and size.
- 3.1.2.2.2.3.2.3 Inspect evaporator coil and condensate drain, and clean as necessary.
- 3.1.2.2.2.3.2.4 Check humidifier, clean or replace moisture pick-up screen or filter, as required.
- 3.1.2.2.2.3.2.5 Clean up the work area.
- 3.1.2.2.2.3.2.6 Open all crawl space vents.
- 3.1.2.2.2.4 Electric Forced-Air Furnaces and Indoor Air-To-Air Heat Pump Sections:
- 3.1.2.2.2.4.1 Fall Electric Forced-Air Furnace Service: Shall be accomplished during the period 1 September thru 31 October.
- 3.1.2.2.2.4.1.1 Check, clean and adjust the furnace thermostat.
- 3.1.2.2.2.4.1.2 Check the blower and motor for proper alignment. Check for excessive noise, heat, and vibration. Correct in accordance with system specifications.
- 3.1.2.2.2.4.1.3 Lubricate blower motor.
- 3.1.2.2.2.4.1.4 Check the electrical components, wiring and connections. Check for signs of rust and corrosion. Tighten any loose connection and replace any frayed wiring.
- 3.1.2.2.2.4.1.5 Clean blower and air plenum.
- 3.1.2.2.2.4.1.6 Clean permanent and washable type air filters, and replace throwaway air filters with new filters of the same type and size.
- 3.1.2.2.2.4.1.7 After the system is in a correct, safe and efficient operating condition, the controls are to be set to permit the occupant to switch on or over to the heating mode of the thermostat and have system function properly.

- 3.1.2.2.2.4.1.8 Clean and inspect humidifier, if appropriate. Lubricate motor, and check controls for proper operation.
- 3.1.2.2.2.4.1.9 Clean up the work area.
- 3.1.2.2.2.4.1.10 Close all crawl space vents.
- 3.1.2.2.2.4.2 Spring Electric Forced-Air Furnace Service: Shall be accomplished during the period 1 March thru 30 April.
- 3.1.2.2.2.4.2.1 Lubricate blower motor.
- 3.1.2.2.2.4.2.2 Clean permanent and washable type air filters, and replace throwaway air filters with new filters of the same type and size.
- 3.1.2.2.2.4.2.3 Inspect evaporator coil and condensate drain, and clean as necessary.
- 3.1.2.2.2.4.2.4 Check humidifier, clean or replace moisture pick-up screen or filter, as required.
- 3.1.2.2.2.4.2.5 Clean up the work area.
- 3.1.2.2.2.4.2.6 Open all crawl space vents.
- 3.1.2.2.2.5 Residential Air Handling Units With Water-To-Air Heat Pump Sections:
 - 3.1.2.2.2.5.1 Fall Water-To-Air Heat Pump Section Service: Shall be accomplished during the period 1 September thru 31 October.
 - 3.1.2.2.2.5.1.1 Check, clean and adjust the air handler thermostat.
 - 3.1.2.2.2.5.1.2 Check the blower and motor for proper alignment. Check for excessive noise, heat, and vibration. Correct in accordance with system specifications.
 - 3.1.2.2.2.5.1.3 Lubricate blower motor.
 - 3.1.2.2.2.5.1.4 Check the electrical components, wiring and connections. Check for signs of rust and corrosion. Tighten any loose connection and replace any frayed wiring.
 - 3.1.2.2.2.5.1.5 Clean blower and air plenum.
 - 3.1.2.2.2.5.1.6 Clean permanent and washable type air filters, and replace throwaway air filters with new filters of the same type and size.
 - 3.1.2.2.2.5.1.7 After the system is in a correct, safe and efficient operating condition, the controls are to be set to permit the occupant to switch on or over to the heating mode of the thermostat and have system function properly.

- 3.1.2.2.2.5.1.8 Clean and inspect humidifier, if appropriate. Lubricate motor, and check controls for proper operation.
- 3.1.2.2.2.5.1.9 Clean up the work area.
- 3.1.2.2.2.5.2 Spring Water-To-Air Heat Pump Section Service: Shall be accomplished during the period 1 March thru 30 April.
- 3.1.2.2.2.5.2.1 Lubricate blower motor.
- 3.1.2.2.2.5.2.2 Clean permanent and washable type air filters, and replace throwaway air filters with new filters of the same type and size.
- 3.1.2.2.2.5.2.3 Inspect heat exchanger, coil and condensate drain, and clean as necessary.
- 3.1.2.2.2.5.2.4 Check humidifier, clean or replace moisture pick-up screen or filter, as required.
- 3.1.2.2.2.5.2.5 Clean up the work area.
- 3.1.2.2.2.6 Residential Air Handling Units With Direct Exchange (DX) Cooling Coils - Spring Service: Shall be accomplished during the period 1 March thru 30 April.
- 3.1.2.2.2.6.1 Check, clean and adjust the air handler thermostat.
- 3.1.2.2.2.6.2 Check the blower and motor for proper alignment. Check for excessive noise, heat, and vibration. Correct in accordance with system specifications.
- 3.1.2.2.2.6.3 Lubricate blower motor.
- 3.1.2.2.2.6.4 Check the electrical components, wiring and connections. Check for signs of rust and corrosion. Tighten any loose connection and replace any frayed wiring.
- 3.1.2.2.2.6.5 Clean blower and air plenum.
- 3.1.2.2.2.6.6 Clean permanent and washable type air filters, and replace throwaway air filters with new filters of the same type and size.
- 3.1.2.2.2.6.7 After the system is in a correct, safe and efficient operating condition, the controls are to be set to permit the occupant to switch on or over to the cooling mode of the thermostat and have system function properly.
- 3.1.2.2.2.6.8 Clean and inspect humidifier, if appropriate. Lubricate motor, and check controls for proper operation.
- 3.1.2.2.2.6.9 Clean up the work area.

3.1.2.2.2.7 Air Handling Units With Heating and/or Cooling Coils of All Types.

3.1.2.2.2.7.1 Quarterly Air Handling Unit Service: Shall be accomplished during the periods 1 thru 31 January, 1 thru 30 April, and 1 thru 31 August.

3.1.2.2.2.7.1.1 Inspect belt tension and condition.

3.1.2.2.2.7.1.2 Visually inspect unit for leaks.

3.1.2.2.2.7.1.3 Inspect valves and piping for corrosion, leaks and crustation.

3.1.2.2.2.7.1.4 Clear and clean condensate drain pipe.

3.1.2.2.2.7.1.5 Inspect bearings for noise and excessive temperature.

3.1.2.2.2.7.1.6 Clean permanent and washable type air filters, and replace throwaway air filters with new filters of the same type and size.

3.1.2.2.2.7.1.7 Clean up the work area.

3.1.2.2.2.7.2 Fall Air Handling Unit Service: Shall be accomplished during the period 1 thru 31 October.

3.1.2.2.2.7.2.1 Inspection condition of motor mounts and vibration pads. Report findings.

3.1.2.2.2.7.2.2 Inspect fan wheel for broken, missing blades and balancers.

3.1.2.2.2.7.2.3 Lubricate fan and motor shaft bearings.

3.1.2.2.2.7.2.4 Clean and inspect strainers. Replace as needed.

3.1.2.2.2.7.2.5 Inspect and report condition of coils.

3.1.2.2.2.7.2.6 Verify operation of freeze protection.

3.1.2.2.2.7.2.7 Inspect belt condition and replace faulty belts.

3.1.2.2.2.7.2.8 Inspect valves and piping for leaks and corrosion.

3.1.2.2.2.7.2.9 Clean permanent and washable type air filters, and replace throwaway air filters with new filters of the same type and size.

3.1.2.2.2.7.2.10 Clean up the work area.

3.1.2.2.2.8 Residential Type Air Cooled Condensers and Outdoor Air-To-Air Heat Pump Sections:

3.1.2.2.2.8.1 Spring Residential Type Air Cooled Condenser and Outdoor Air-To-Air Heat Pump Section Service: Shall be accomplished during the period 1 March thru 30 April.

3.1.2.2.2.8.1.1 Clean and remove all dead vegetation, trash, and debris from around (within 3 feet) and inside the condensing unit. Washing may be required. Trim back live vegetation so that it is at least 1 foot away from the sides and 8 feet from the top of the condensing unit.

3.1.2.2.2.8.1.2 Check unit for signs of structural damage and/or deterioration of the condensing unit.

3.1.2.2.2.8.1.3 Wash condensing coil to remove accumulations of grass clippings, leaves, dirt, dust, grime, and cottonwood seed. Coil cleaning shall be accomplished in accordance with the unit manufacturers' written instructions.

3.1.2.2.2.8.1.4 Lubricate cooling fan motor.

3.1.2.2.2.8.1.5 Check condition of cooling fan blades. Straighten bent blades or replace the entire blade assembly.

3.1.2.2.2.8.1.6 Test refrigerant charge and examine for moisture. Add refrigerant as needed, inspect for refrigerant leaks and repair as necessary.

3.1.2.2.2.8.1.7 After the system is in a correct, safe and efficient operating condition, the controls are to be set to permit the occupant to switch on or over to the cooling mode of the thermostat and have the system function properly.

3.1.2.2.2.8.1.8 Clean up the work area.

3.1.2.2.2.8.2 Fall Residential Type Air-To-Air Outdoor Heat Pump Section Service: shall be accomplished during the period 1 September thru 31 October.

Same as Spring Residential Type Air Cooled Condenser and Outdoor Air-To-Air Heat Pump Section Service listed in paragraphs 3.1.2.2.2.7.1.1 thru 3.1.2.2.2.7.1.7 above.

3.1.2.2.2.9 Commercial Air Cooled Condensers - Spring Service: Shall be accomplished during the period 1 March thru 30 April.

3.1.2.2.2.9.1 Clean and remove all dead vegetation, trash, and debris from around (within 3 feet) and inside the condensing unit. Washing may be required. Trim back live vegetation so that it is at least 1 foot away from the sides and 8 feet from the top of the condensing unit.

3.1.2.2.2.9.2 Check unit for signs of structural damage and/or deterioration of the condensing unit.

3.1.2.2.2.9.3 Wash condensing coil(s) to remove accumulations of grass clippings, leaves, dirt, dust, grime, and cottonwood seed. Coil cleaning shall be accomplished in accordance with the unit manufacturers' written instructions.

3.1.2.2.2.9.4 Lubricate cooling fan motor(s).

- 3.1.2.2.2.9.5 Check condition of belts, if appropriate. Belts shall be tight and free of cracks. Tighten or replace belts as necessary.
- 3.1.2.2.2.9.6 Check condition of cooling fan blades. Straighten bent blades or replace the entire blade assembly.
- 3.1.2.2.2.9.7 Check compressor(s) and shaft seals for signs of gasket or seal failure.
- 3.1.2.2.2.9.8 Check the low and high pressure cut-out switches to see that they are properly set. Adjust settings so that they are in accordance with the system specifications. Clean the contacts and points.
- 3.1.2.2.2.9.9 Check the temperature and pressure gauges for proper calibration. Recalibrate if gauge is greater than five degrees or pounds off actual reading.
- 3.1.2.2.2.9.10 Test the refrigerant charge and examine for moisture. Add refrigerant as needed, inspect for refrigerant leaks and repair as necessary.
- 3.1.2.2.2.9.11 Test compressor oil for acids and contaminates.
- 3.1.2.2.2.9.12 Check the amperage of the motor(s) (only if there is a problem).
- 3.1.2.2.2.9.13 After the system is in a correct, safe and efficient operating condition, the controls are to be set to permit the occupant to switch on or over to the cooling mode of the thermostat and have the system function properly.
- 3.1.2.2.2.9.14 Clean up the work area.
- 3.1.2.2.2.10 Split System Chillers - Spring Service: Shall be accomplished during the period 1 March thru 30 April.
 - 3.1.2.2.2.10.1 Inspect main starter and control panel for faulty conditions.
 - 3.1.2.2.2.10.2 Change oil and filters. Test oil for acidity and contaminates.
 - 3.1.2.2.2.10.3 Inspect and clean purge unit.
 - 3.1.2.2.2.10.4 Change oil in purge pump and oil separator.
 - 3.1.2.2.2.10.5 Lubricate purge pump motor.
 - 3.1.2.2.2.10.6 Lubricate inlet vane linkage.
 - 3.1.2.2.2.10.7 Inspect oil pump and heat operation.
 - 3.1.2.2.2.10.8 Check refrigerant and oil for correct level.
 - 3.1.2.2.2.10.9 Check system for refrigeration leaks.

- 3.1.2.2.2.10.10 Check refrigerant and oil for correct level.
- 3.1.2.2.2.10.11 Inspect and test all operating and safety controls for proper operation.
- 3.1.2.2.2.10.12 Inspect conditions of chemical system.
- 3.1.2.2.2.10.13 Check operation and condition of auxiliary equipment.
- 3.1.2.2.2.10.14 Inspect operation condition of temperature and amperage recorders.
- 3.1.2.2.2.10.15 Clean up the work area.
- 3.1.2.2.2.11 Window Air Conditioners - Spring Service: Shall be accomplished during the period 1 March thru 30 April.
 - 3.1.2.2.2.11.1 Check unit for signs of structural damage and/or deterioration of the unit.
 - 3.1.2.2.2.11.2 Wash condensing coil to remove accumulations of grass clippings, leaves, dirt, dust, grime, and cottonwood seed. Coil cleaning shall be accomplished in accordance with the unit manufacturers' written instructions.
 - 3.1.2.2.2.11.3 Lubricate cooling fan motor.
 - 3.1.2.2.2.11.4 Check condition of cooling fan blades. Straighten bent blades or replace the entire blade assembly.
 - 3.1.2.2.2.11.5 Lubricate blower motor.
 - 3.1.2.2.2.11.6 Clean permanent and washable type air filters.
 - 3.1.2.2.2.11.7 Inspect evaporator coil and condensate drain, and clean as necessary.
 - 3.1.2.2.2.11.8 Test refrigerant charge and examine for moisture. Add refrigerant as needed, inspect for refrigerant leaks and repair as necessary.
 - 3.1.2.2.2.11.9 After the system is in a correct, safe and efficient operating condition, the controls are to be set to permit the occupant to switch on or over to the cooling mode of the thermostat and have the system function properly.
 - 3.1.2.2.2.11.10 Clean up the work area.
- 3.1.2.2.2.12 Fan Coil Units With Heating and/or Cooling Coils:
 - 3.1.2.2.2.12.1 Quarterly Fan Coil Unit Service: Shall be accomplished during the periods 1 thru 31 January, 1 thru 30 April, and 1 thru 31 August.

- 3.1.2.2.2.12.1.1 Inspect air filter(s); clean permanent and washable filters. remove restrictions.
- 3.1.2.2.2.12.1.2 Replace throwaway filters with filters of the same type and size.
- 3.1.2.2.2.12.1.3 Inspect coil(s), drain pan, condensate trap and condensate drain for cleanliness.
- 3.1.2.2.2.12.1.4 Check operating condition of unit.
- 3.1.2.2.2.12.1.5 Clean up the work area.
- 3.1.2.2.2.12.2 Fall Fan Coil Unit Service: Shall be accomplished during the period 1 thru 31 October.
 - 3.1.2.2.2.12.2.1 Brush and clean grilles, coil, fan and unit interior.
 - 3.1.2.2.2.12.2.2 Lubricate fan and motor bearings per manufacturer's specifications.
 - 3.1.2.2.2.12.2.3 Inspect condition of electrical connections, switches and operating controls.
 - 3.1.2.2.2.12.2.4 Check and clean drains and drain pans.
 - 3.1.2.2.2.12.2.5 Inspect filters, replace dirty/damaged filters with filters of the same size and type.
 - 3.1.2.2.2.12.2.6 Check unit operating conditions.
 - 3.1.2.2.2.12.2.7 Clean up the work area.
- 3.1.2.2.2.13 Unit Heaters With Hot Water Coils - Fall Service: Shall be accomplished during the period 1 September thru 31 October.
 - 3.1.2.2.2.13.1 Brush and clean grilles, coil, fan, and unit exterior and interior.
 - 3.1.2.2.2.13.2 Lubricate fan and motor bearings per manufacturer's specifications.
 - 3.1.2.2.2.13.3 Inspect condition of electrical connections, switches and operating controls.
 - 3.1.2.2.2.13.4 Check unit operating conditions.
 - 3.1.2.2.2.13.5 Clean up the work area.
- 3.1.2.2.2.14 Electric Wall Heaters - Fall Service: Shall be accomplished during the period 1 September thru 31 October.
 - 3.1.2.2.2.14.1 Check, clean and adjust the heater thermostat.

3.1.2.2.2.14.2 Check the electrical components, wiring, and connections. Check for signs of rust and corrosion. Tighten any loose connection and replace any frayed wiring.

3.1.2.2.2.14.3 Check for correct, safe, and efficient operating condition.

3.1.2.2.2.14.4 Clean up the work area.

3.1.2.2.2.15 Domestic and HVAC Water Circulating and Condensate Return Pumps - Fall and Spring Service: Shall be accomplished during the periods 1 September thru 31 October and 1 March thru 31 April.

3.1.2.2.2.15.1 Inspect motor, pump, and coupling for correct alignment, abnormalities, and malfunctioning. Lubricate motor and pump.

3.1.2.2.2.15.2 Check nuts and bolts for tightness; check condition of motor mounts and vibration pads; tighten, adjust or replace as conditions warrant.

3.1.2.2.2.15.3 Inspect electrical connections, wiring, motor, switches, contactors, protective devices, and circuit breaker to insure safe proper power supply to pump and freedom from unusual noise, vibration, and overheating.

3.1.2.2.2.15.4 Inspect pump seals, piping, fittings, and valves for leaks and signs of deterioration.

3.1.2.2.2.15.5 Inspect and clean strainers. Replace worn and damaged strainers.

3.1.2.2.2.15.6 Clean up the work area.

3.1.2.2.2.16 Domestic Hot Water Storage Tanks, Hot Water Expansion Tanks and Condensate Receiver Tanks - Fall and Spring Service: Shall be accomplished during the periods 1 September thru 31 October and 1 March thru 31 April.

3.1.2.2.2.16.1 Inspect tank, piping, fittings, valves, and traps for signs of leaks or deterioration. Ensure expansion tanks are not waterlogged.

3.1.2.2.2.16.2 Check operation of shut off valves and pressure relief valves, where applicable.

3.1.2.2.2.16.3 Check operation of steam traps, where applicable.

3.1.2.2.2.16.4 Check operation of sightglass, where applicable.

3.1.2.2.2.16.5 Clean up the work area.

3.1.2.2.2.17 HVAC Control System Air Compressors - Fall and Spring Service: Shall be accomplished during the periods 1 September thru 31 October and 1 March thru 31 April.

3.1.2.2.2.17.1 Inspect motor, compressor unit, receiver tank, oil separator, and refrigerated air dryer for possible abnormalities and malfunctioning.

- 3.1.2.2.2.17.2 Change suction filter as required. Check unloader and check valve. Check high pressure safety valve.
- 3.1.2.2.2.17.3 Inspect electrical connections, wiring, motor, switches, contactors, protective devices, and circuit breaker to insure safe proper power supply to compressor and freedom from unusual noise, vibration, and overheating.
- 3.1.2.2.2.17.4 Inspect piping, fittings, and valves for leaks and signs of deterioration.
- 3.1.2.2.2.17.5 Drain moisture from receiver tank and check traps, where applicable.
- 3.1.2.2.2.17.6 Clean refrigerated air dryer condenser and cover grille. Check refrigerant pressure and temperature, and adjust as necessary. Check drain trap and bypass valves.
- 3.1.2.2.2.17.7 Clean up the work area.
- 3.1.2.2.2.18 Sump Pumps - Fall and Spring Service: Shall be accomplished during the periods 1 September thru 31 October and 1 March thru 31 April.
 - 3.1.2.2.2.18.1 Inspect pump and motor for possible abnormalities and malfunctioning.
 - 3.1.2.2.2.18.2 Inspect electrical connections, wiring, motor, switches, protective devices, and circuit breaker to insure safe proper power supply to pump and freedom from unusual noise, vibration, and overheating.
 - 3.1.2.2.2.18.3 Inspect pump seals, piping, fittings, and valves for leaks and signs of deterioration.
 - 3.1.2.2.2.18.4 Inspect and clean strainers. Replace worn and damaged strainers.
 - 3.1.2.2.2.18.5 Test for proper operation.
 - 3.1.2.2.2.18.6 Clean up the work area.
- 3.1.2.2.2.19 Commercial Exhaust and HVAC Intake Fans - Fall and Spring Service: Shall be accomplished during the periods 1 September thru 31 October and 1 March thru 31 April.
 - 3.1.2.2.2.19.1 Inspect fan blades, shaft, motor, bearings, and louvers for possible abnormalities and malfunctioning. Clean and lubricate as required.
 - 3.1.2.2.2.19.2 Inspect, tighten or replace fan belts as required.
 - 3.1.2.2.2.19.3 Check controls for proper operation and adjust as required.
 - 3.1.2.2.2.19.4 Test for proper operation.

3.1.2.2.2.19.5 Clean up the work area.

3.1.2.2.2.20 Attic Fans:

3.1.2.2.2.20.1 Spring Attic Fan Service: Shall be accomplished during the period 1 thru 30 April.

3.1.2.2.2.20.1.1 Remove cover in hallway and store in furnace room.

3.1.2.2.2.20.1.2 Inspect fan blades, shaft, motor, bearings, and louvers for possible abnormalities and malfunctioning. Clean and lubricate as required.

3.1.2.2.2.20.1.3 Inspect, tighten or replace fan belts as required.

3.1.2.2.2.20.1.4 Check controls for proper operation and adjust as required.

3.1.2.2.2.20.1.5 Turn maintenance safety switch and breaker for the attic fan to the ON position.

3.1.2.2.2.20.1.6 Test for proper operation.

3.1.2.2.2.20.1.7 Clean up the work area.

3.1.2.2.2.20.2 Fall Attic Fan Service: Shall be accomplished during the period 1 thru 30 November.

3.1.2.2.2.20.2.1 Turn maintenance safety switch and breaker, for the attic fan, to the OFF position.

3.1.2.2.2.20.2.2 Install existing fan cover in hallway.

3.1.2.2.2.21 Miscellaneous Ventilating Equipment: Miscellaneous ventilating equipment includes radon exhaust fans, ceiling fans, kitchen range hoods, and kitchen and bathroom exhaust fans. Radon exhaust fan fall and spring service shall be accomplished during the periods 1 September thru 31 October and 1 March thru 31 April. All other fan service shall be performed annually in conjunction with heating and cooling equipment scheduled maintenance during the period 1 September thru 31 October.

3.1.2.2.2.21.1 Inspect fan blades, shaft, motor, bearings, and louvers for possible abnormalities and malfunctioning. Clean and lubricate as required.

3.1.2.2.2.21.2 Inspect, tighten or replace fan belts as required.

3.1.2.2.2.21.3 Check controls for proper operation and adjust as required.

3.1.2.2.2.21.4 Test for proper operation.

3.1.2.2.2.21.5 Clean up the work area.

3.1.2.2.3 Standards:

3.1.2.2.3.1 HVAC equipment shall be fully operational: operating within their manufacturer's specified range of operation and efficiency; including all task lighting and indicator lamps (light bulbs), special features, safety features, and controls.

3.1.2.2.3.2 Missing, damaged, and deteriorated appurtenances and components shall be replaced including gaskets, seals, and electrical wiring.

3.1.2.2.3.3 Exterior of HVAC equipment shall be free of dirt, grime, dents, scratches, and rust.

3.1.2.2.3.4 Air handler/furnace filters shall be free of dust, dirt, and debris.

3.1.2.2.3.5 Humidifier elements shall be free of dust, dirt, and water deposits.

3.1.2.2.3.6 Supply and return air diffusers, grilles, and registers shall be securely fastened in place, fully functional, and free of dust and dirt.

3.1.2.2.3.7 Ductwork shall be free of dust, dirt, and debris caused by maintenance and repair work accomplished by the Contractor.

3.1.2.2.3.8 Motors shall be clean and properly lubricated.

3.1.2.2.3.9 Fan or impeller blades, grilles, and housings shall be free of dust, dirt, and cooking grease.

3.1.2.2.3.10 Belts shall be tightened to equipment manufacturer's specifications and free from excessive wear.

3.1.2.2.3.11 Heat exchangers and condenser and evaporator coils shall be free of dust, dirt, grass, leaves, and cottonwood fuzz.

3.1.2.2.3.12 Connections to utility systems shall be free from leaks and safety defects.

3.1.2.3 Work Level II - Service Order Work Tasks for HVAC Equipment:

3.1.2.3.1 General: Service order work for HVAC equipment includes inspection and all repair work necessary to restore defective HVAC equipment to the operating conditions specified by the HVAC equipment manufacturer. The work includes the same tasks and standards established for Work Level I - Scheduled Maintenance in paragraph 3.1.2.2. above and the items below. If HVAC equipment cannot be economically repaired, the Contractor shall recommend replacement of the equipment to the Contracting Officer.

3.1.2.3.2 Tasks:

3.1.2.3.2.1 The Contractor shall inspect the equipment to determine the scope of repair and estimate the cost to make the repairs. The scope and estimate will be the basis for determining whether the equipment will be repaired or replaced. The Contractor shall obtain approval from the Contracting Officer for replacement of the equipment.

3.1.2.3.2.2 When replacements are required, the Contractor shall transport, install, and test the equipment prior to releasing it to the occupant. This work includes, but is not limited to hauling, modifying utilities to fit the new equipment, connecting the equipment in its final position, and performing test operations to ensure acceptable performance. The Contractor shall demonstrate to the occupant all features and the operation of the new equipment.

3.1.2.3.3 Standards:

3.1.2.3.3.1 HVAC equipment shall be fully operational; operating within their manufacturer's specified range of operation and efficiency; including all task lighting and indicator lamps (light bulbs), special features, safety features, and controls.

3.1.2.3.3.2 Exterior of HVAC equipment shall be free of dirt, grime, dents, scratches, and rust.

3.1.2.3.3.3 Supply and return air diffusers, grilles, and registers shall be securely fastened in place, fully functional, and free of dust and dirt.

3.1.2.3.3.4 Ductwork shall be free of dust, dirt, and debris caused by maintenance and repair work accomplished by the Contractor.

3.1.2.3.3.5 Heat exchangers and condenser and evaporator coils shall be free of dust, dirt, grass, leaves, and cottonwood fuzz.

3.1.2.3.3.6 Connections to utility systems shall be free from leaks and safety defects.

3.1.3 Work Level II - Insulation Replacement: Whenever insulation work is required to fix the problem listed on a Service Order, the Contractor's responsibilities shall include the following:

3.1.3.1 Tasks:

3.1.3.1.1 Asbestos: When asbestos containing materials are encountered, the Contractor shall proceed on accordance with Subsection C-1, paragraph C.1.3.1.

3.1.3.1.2 Duct Insulation Replacement: Duct insulation shall be one inch thick mineral fiber insulation with integral vapor barrier facing. Facing joints shall be sealed to form a continuous vapor barrier. Insulation shall be installed as recommended by the manufacturer and shall be supported with mechanical fasteners, wire, or other means on the underside of ducts.

3.1.3.1.3 Piping Insulation Replacement: Piping insulation shall be one inch thick mineral fiber molded cylinders made for application on standard sizes of piping or tubing. Insulation shall fit snugly with all joints closed. Sections shall be bonded or taped together. Insulation shall be completely covered with a vapor barrier jacket with all joints sealed.

3.1.3.1.4 Equipment Insulation Replacement: Whenever equipment insulation is required to be removed for the Contractor's work, the Contractor shall repair or replace the existing insulation with identical material or an approved equal.

3.1.3.2 Standard: Duct, pipe, and equipment insulation shall be properly installed.

3.1.4 Work Level II - Electrical: Whenever electrical work is required to fix the problem listed on the Service Order, the Contractor shall accomplish the work according to the National Electric Code. The Contractor's responsibilities shall include the following:

3.1.4.1 Tasks:

3.1.4.1.1 Circuit Breakers: All replacement circuit breakers shall be of the same manufacturer as the breaker panel, and shall be installed in accordance with the manufacturer's instructions.

3.1.4.1.2 Wiring:

3.1.4.1.2.1 Repair shall consist of replacing wiring where there is evidence of charred insulation or conductors, cracked or missing insulation, otherwise defective or deteriorated insulation, and/or broken conductors.

3.1.4.1.2.2 General splicing of non-metallic sheathed cable will be allowed except in cases where the cable must be replaced due to a deteriorated insulation condition. Anytime a wire in conduit is to be spliced, an electrical box shall be used to contain the splice.

3.1.4.1.2.3 All replacement wiring shall be copper.

3.1.4.1.2.4 If new wire is installed, the old wire shall be removed.

3.1.4.1.2.5 Work performed on a facility's electrical system shall be described in writing and submitted to the Contracting Officer.

3.1.4.2 Standard: Electrical work shall be accomplished in accordance with NEC.

3.1.5 Work Level II - Disruption of Utility Service (i.e. Electricity and/or Natural Gas):

3.1.5.1 Task: When utility service is disrupted (whether disrupted by the Contractor, the Government, or other cause), the Contractor shall relight pilot lights and reset heating and air conditioning system controls in the affected dwelling units.

3.1.5.2 Standard: Pilot lights shall be relit and heating and air conditioning system controls reset within one hour if outage was caused by the Contractor and within four hours if outage caused by sources other than the Contractor.

3.1.6 Work Level II - Start Up/Shut Down of Appliances and HVAC Systems:

3.1.6.1 Task: The Contractor shall start up, shut down, winterize, dewaterize appliances and HVAC systems.

3.1.6.2 Standard: Appliances and HVAC systems shall be started up, shut down, winterized, and dewaterized within the time frames dictated by the priority on Service Orders.

DACA41-94-R-0012

TE-23 TECHNICAL SPECIFICATIONS

TE-23-I

TECHNICAL EXHIBIT 23
TECHNICAL SPECIFICATIONS

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DIVISION 1 - GENERAL REQUIREMENTS

SECTION 01000

WARRANTY OF CONSTRUCTION

PART 1 GENERAL

1.1 GENERAL: In addition to any other warranties set out elsewhere in this contract, the Contractor warrants that work performed under this contract conforms to the contract requirements and is free of any defect of equipment, material or design furnished, or workmanship performed by the Contractor or any of his subcontractors or suppliers at any tier. Such warranty shall continue for a period of one year from the date of final acceptance of the work, but with respect to any part of the work which the Government takes possession of prior to final acceptance, such warranty shall continue for a period of one year from the date the Government takes possession. Under this conform or any such defect. In addition, the Contractor shall remedy at his own expense any damage to Government-owned or controlled real or personal property, when that damage is the result of the Contractor's failure to conform to contract requirements or any such defect of equipment, material, workmanship, or design. The Contractor shall also restore any work damaged in fulfilling the terms of this clause. The Contractor's warranty with respect to work repaired or replaced hereunder will run for one year from the date of such repair or replacement.

1.2 NOTICE OF FAILURE: The Government will notify the Contractor in writing within a reasonable time after the discovery of any failure, defect, or damage.

1.3 CONTRACTOR'S LIABILITY: Should the Contractor fail to remedy any failure, defect, or damage described in paragraph GENERAL above, within a reasonable time after receipt of notice thereof, the Government will have the right to replace, repair, or otherwise remedy such failure, defect, or damage at the Contractor's expense.

1.4 OTHER WARRANTIES: In addition to the other rights and remedies provided by this clause, all subcontractors', manufactures', and suppliers' warranties expressed or implied, respecting any work and materials shall, at the direction of the Government, be enforced by the Contractor for the benefit of the Government. In such case if the Contractor's warranty under paragraph GENERAL above has expired, any suit directed by the Government to enforce a subcontractors', manufacturers's or suppliers' warranty will be at the expense of the Government. The Contractor shall obtain any warranties which the subcontractor, manufacturers, or suppliers would give in normal commercial practice.

1.5 ENDORSEMENT OF OTHER WARRANTIES: If directed by the Contracting Officer, the Contractor shall require any such warranties to be executed in writing to the Government.

1.6 WARRANTY STICKERS: The Contractor shall place equipment warranty stickers on all warranted equipment in the location designated by the Contracting Officer's representative. The Contracting Officer will furnish the stickers and the Contractor shall fill out the required information and place the stickers on the equipment.

1.7 CONTRACTOR'S LIABILITY EXCLUSIONS: Notwithstanding any other provision of this clause, unless such a defect is caused by the negligence of the Contractor or his subcontractors or suppliers at any tier, the Contractor shall not be liable for the repair of any defects of material or design furnished by the Government nor for the repair of any damage which results from any such defect in Government-furnished material or design.

1.8 GOVERNMENTS' ADDITIONAL RIGHT: The warranty specified herein shall not limit the Government's rights under CONTRACT clause entitled "Inspection of Contract" of this contract with respect to latent defects, gross mistake, or fraud.

1.9 BRAND NAME WARRANTIES: Defects in design or manufacture of equipment specified by the Government on a "brand name and model" basis, shall not be included in this warranty. The Contractor shall require any subcontractors, manufacturers, or suppliers thereof to execute their warranties in writing directly to the Government.

1.10 WARRANTY SERVICE CALLS: The Contractor shall furnish to the Contracting Officer the names of local service representatives and/or Contractors that are available for warranty service calls and who will respond to a call within the time periods as follows: 4 hours for heating, air-conditioning, refrigeration, air supply and distribution, and critical electrical service systems and food service equipment, and 24 hours for all other systems. The names, addresses, and telephone numbers for day, night, weekend, and holiday service responses shall be furnished to the Contracting Officer and also posted at a conspicuous location in each mechanical and electrical room or close to the unit.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

DIVISION 1 - GENERAL REQUIREMENTS

SECTION 01012

CONSTRUCTION QUALITY MANAGEMENT
CONTRACTOR QUALITY CONTROL

PART 1 GENERAL

1.1 QUALITY CONTROL PLAN:

1.1.1 General: The Contractor shall submit, within 10 days after receipt of Notice to Proceed, the Quality Control (QC) Plan with which he proposes to implement the requirements of Contract Clause FAR 52.246-0012 entitled: INSPECTION OF CONSTRUCTION. The plan shall identify personnel, procedures, instructions, records, and forms to be used. Construction will not begin until the Quality Control Plan has been approved by the Government. Failure to execute the approved Quality Control Plan will result in withholding of funds from progress payments in accordance with the Contract Clause FAR 52.232-0005 entitled: PAYMENTS UNDER FIXED-PRICE CONSTRUCTION CONTRACTS.

1.1.2 Coordination Meeting: Before start of construction, the Contractor shall meet with the Contracting Officer and discuss the Contractor's quality control system. During the meeting, a mutual understanding of the system details shall be developed, including the forms for recording the QC operations, control activities, testing, administration of the system for both onsite and offsite work, and the interrelationship of Contractor's inspection and control with the Government's inspection. Minutes of the meeting shall be prepared by the Contractor and signed by both the Contractor and the Contracting Officer. The minutes shall become a part of the contract file. There may also be occasions when subsequent conferences will be called to reconfirm mutual understandings.

1.1.3 Quality Control Plan: The plan shall include as a minimum, the following:

1.1.3.1 A description of the quality control organization, including chart showing lines of authority and acknowledgment that the QC staff shall report to the project manager or someone higher in the Contractor's organization.

1.1.3.2 The name, qualifications, duties, responsibilities and authorities of each person assigned a QC function.

1.1.3.3 A copy of the letter to the QC manager signed by an authorized official of the firm, which describes the responsibilities and delegates the authorities of the QC manager shall be furnished.

1.1.3.4. Procedures for scheduling and managing submittals, including those of subcontractors, offsite fabricators, suppliers and purchasing agents.

1.1.3.5 Control testing procedures for each specific test. (Laboratory facilities must be approved by the Contracting Officer.)

1.1.3.6 Reporting procedures including proposed reporting formats.

1.1.4 Acceptance Of Plan: Acceptance of the Contractor's plan is required prior to the start of construction. Acceptance is conditional and will be predicated on satisfactory performance during the construction. The Government reserves the right to require the Contractor to make changes in his QC plan and operations as necessary to obtain the quality specified.

1.1.5 Notification Of Changes: After acceptance of the QC plan by the Government, the Contractor shall notify the Contracting Officer in writing of any proposed change. Proposed changes are subject to acceptance by the Contracting Officer.

1.2 QUALITY CONTROL ORGANIZATION:

1.2.1 QC System Manager: The Contractor shall identify an individual, within his organization at the site of the work, who shall be responsible for overall management of QC and have the authority to act in all QC matters for the Contractor. The Contractor Quality Control System Manager shall not have duties other than Contractor Quality Control Management. The QC System Manager shall be approved by the Contracting Officer and changed if the QC System Manager is unable or unwilling to perform his duties as prescribed.

1.2.2 Personnel: A staff shall be maintained under the direction of the system manager to perform all QC activities. The actual strength of the staff during any specific work period may vary to cover work phase needs, shifts, and rate of placement. The personnel of this staff shall be fully qualified by experience and technical training to perform their assigned responsibilities and shall be directly hired by and work for the prime Contractor.

1.3 SUBMITTALS: Submittals shall be as specified in the SECTION 01300: SUBMITTALS. The QC Organization shall be responsible for certifying that all submittals are in compliance with the contract requirements.

1.4 CONTROL: Contractor Quality Control is the means by which the Contractor assures himself that his construction complies with the requirements of the contract plans and specifications. The controls shall be adequate to cover all construction operations, including both onsite and offsite fabrication, and will be keyed to the proposed construction sequence. The controls shall include at least three phases of inspection for all definitive features of work as follows:

1.4.1 Preparatory Inspection: Shall be performed prior to beginning any work on any definable feature of work. It shall include a review of contract requirements, a check to assure that all materials and/or equipment have been tested, submitted and approved; a check to assure that provisions have been made to provide control testing; examination of the work area to ascertain that all preliminary work has been completed; and a physical examination of materials, equipment and sample work to assure that they conform to approved shop drawings or submittal data and that all materials and/or equipment are on hand. The Contracting Officer Representative (COR) shall be notified at least 24 hours in advance of the preparatory inspection and such inspection shall be made a matter of record in the Contractor's Quality Control documentation as required below. Subsequent to the preparatory inspection and prior to com-

mencement of work, the Contractor shall instruct each applicable worker as to the acceptable level of workmanship required in his QC plan in order to meet contract specifications

1.4.2 Initial Inspection: This shall be performed as soon as representative portion of the particular feature of work has been accomplished and shall include examination of the quality of workmanship and a review of control testing for compliance with contract requirements. The Contracting Officer's Representative shall be notified at least 24 hours in advance of the initial inspection and such inspection shall be made a matter of record in the QC documentation as required below.

1.4.3 Follow-up Inspections: These shall be performed daily to assure continuing compliance with contract requirements, including control testing, until completion of the particular feature of work. Such inspections shall be made a matter of record in the QC documentation as required below. Final follow up inspections shall be conducted and test deficiencies corrected prior to the addition of new features of work.

1.5 TESTS:

1.5.1 Testing Procedure: The Contractor shall perform the tests specified or as required to verify that control measures are adequate to provide a product which conforms to contract requirements. The Contractor shall procure the services of an industry recognized testing laboratory or he may establish an approved testing laboratory at the project site. A list of tests which the Contractor understands he is to perform shall be furnished as a part of the QC plan to the Contracting Officer. The list shall give the test name, specification paragraph containing the test requirements, and the personnel and laboratory responsible for each type of test. The Contractor shall perform the following activities and record and provide the following data:

1.5.1.1 Verify that testing procedures comply with contract requirements.

1.5.1.2 Verify that facilities and testing equipment are available and comply with testing standards.

1.5.1.3 Check test instrument calibration data against certified standards.

1.5.1.4 Verify that recording forms, including all of the test documentation requirements, have been prepared.

1.5.2 Testing:

1.5.2.1 Capability Check: The COR will have the right to check laboratory equipment in the proposed laboratory for compliance with the standards set forth in the contract specifications and to check the laboratory technician's testing procedures and techniques.

1.5.2.2 Capability Recheck: If the selected laboratory fails the capability check, the Contractor will be assessed a charge of \$750.00 to reimburse the Government for each succeeding recheck of the laboratory or the checking of a subsequently-selected laboratory. Such costs will be deducted from the contract amount due the Contractor.

1.5.2.3 Project Laboratory: The COR will have the right to utilize the Contractor's control testing laboratory and equipment to make assurance tests and to verify the Contractor's testing procedures, techniques, and test results at no additional cost to the Government.

1.5.2.4 Transportation of Samples for Testing: Costs incidental to the transportation of samples or materials will be borne by the Contractor. Samples of materials for test verification and acceptance testing by the Government shall be delivered to the Corps of Engineer Division Laboratory, f.o.b., at the following address:

1.5.2.4.1 For Delivery By Mail:

Missouri River Division Laboratory
420 South 18th Street
Omaha, Nebraska 68102

1.5.2.4.2 For Other Deliveries:

Same as above.

1.6 COMPLETION INSPECTION: At the completion of all work or any increment thereof established by a completion time stated elsewhere in the specifications, the QC System Manager shall conduct a completion inspection of the work and develop a "punch list" of items which do not conform to the approved plans and specifications. Such a list shall be included in the QC documentation, as required by paragraph 1.7 below, and shall include the estimated date by which the deficiencies will be corrected. The QC System Manager or his staff shall make a second completion inspection to ascertain that all deficiencies have been corrected and so notify the Contracting Officer's Representative. The completion inspection and any deficiency corrections required by this paragraph will be accomplished within the time stated for completion of the entire work or any particular increment thereof if the project is divided into increments by separate completion dates. The completion inspection and second inspection shall be performed before the building or any portion of the building is turned over to the DEH Contract Inspectors as being complete.

1.7 DOCUMENTATION:

1.7.1 Records: The Contractor shall maintain current records of quality control operations, activities, and tests performed including the work of suppliers and subcontractors. These records shall be on an approved form and indicate a description of trades working on the project, the numbers of personnel working, the weather conditions encountered, any delays encountered, and acknowledgment of deficiencies noted along with the corrective actions taken on current and previous deficiencies. In addition, these records shall include factual evidence that required activities or tests have been performed, including but not limited to the following:

1.7.1.1 Type and number of control activities and tests involved.

1.7.1.2 Results of control activities or tests.

1.7.1.3 Nature of defects, causes for rejection, etc.

1.7.1.4 Proposed remedial action.

1.7.1.5 Corrective actions taken.

1.7.2 Content: These records shall cover both conforming and defective or deficient features and shall include a statement that supplies and materials incorporated in the work comply with the contract. Legible copies of these records shall be furnished to the Contracting Officer daily.

1.8 NOTIFICATION OF NONCOMPLIANCE: The Contracting Officer will notify the Contractor of any noncompliance with the foregoing requirements. The Contractor shall, after receipt of such notice, immediately take corrective action. Such notice, when delivered to the Contractor or his representative at the site of the work, shall be deemed sufficient for the purpose of notification. If the Contractor fails or refuses to comply promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to any such stop orders shall be made the subject of claim for extension of time or for excess costs or damages by the Contractor.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

DIVISION 1 - GENERAL REQUIREMENTS

SECTION 01710

SPECIAL REQUIREMENTS FOR HOUSING PROJECTS

PART 1 GENERAL

1.1 SCOPE: The work covered by this section includes special requirements for quarters cleanliness, use of appliances and conveniences, and grounds maintenance in projects involving billeting or family housing quarters which are UNOCCUPIED during the course of the work.

1.2 PURPOSE: The purpose of this section is to ensure the Contractor leaves quarters in clean "ready-to-be-lived-in" condition upon completion of the required work. The Contractor shall perform all quarters cleaning required to meet the cleanliness standards specified in SECTION 01901: QUARTERS CLEANING and the requirements herein regardless of the state of cleanliness at the time the quarters were released to the Contractor and the cleaning requirements indicated on Delivery Orders.

PART 2 PRODUCTS

2.1 CLEANING MATERIALS: Use cleaning materials which will not create hazards to health, property or environment, and which will not damage surfaces to be cleaned.

2.2 CLEANING EQUIPMENT: Use cleaning equipment designed for the specific tasks to be performed. Electrically powered cleaning equipment shall be free from safety defects.

PART 3 EXECUTION

3.1 QUARTERS CLEANLINESS: Upon completion of the required work in unoccupied quarters, the Contractor shall ensure the following items are accomplished:

3.1.1 Floors: Floors, including stairs and landings, shall be clean and free of dust, marks, and scuffs. Resilient tile floors shall be cleaned with a damp mop.

3.1.2 Walls: Walls, woodwork and closet shelving shall be clean and free of dust.

3.1.3 Cabinets: Cabinets shall be empty, clean and free of dust, and the doors left open.

3.1.4 Doors and Windows: Doors and window glass shall be clean, free of dust, closed, and locked.

3.1.5 Furnishings: Furnishings, if any, shall be free of dirt and dust.

3.1.6 Light Fixtures: Light fixtures, exhaust fans, and range hoods shall be clean, free of dust, and turned off.

3.1.7 Trash and Garbage Cans: Trash and garbage cans shall be empty and clean.

3.2 USE OF APPLIANCES AND CONVENIENCES: The following stipulations apply to the Contractor's use of appliances and conveniences.

3.2.1 Use of Appliances: Appliances shall not be used by the Contractor, and they shall be clean and free of dust. Unplugged refrigerators shall be left unplugged and the doors open.

3.2.2 Moving Appliances: Appliances moved to accomplish the required work shall be returned to their original positions and reconnected to utilities.

3.2.3 Use of Conveniences: Conveniences such as toilets and sinks may be used by the Contractor provided they are left in a clean and sanitary condition. Toilets shall be flushed after each use. Toilets and sinks shall not be used to dispose of construction debris. Toilets and sinks shall not be used if the water is shut off.

3.3 GROUNDS MAINTENANCE: Maintain grounds surrounding all quarters beginning the day following the receipt of the keys for the quarters until the day the quarters are accepted by the government upon completion of the work. Grounds maintenance includes yard areas within 75 feet in front of and behind each building and 75 feet to each side. If the actual yard limits of a set of quarters is greater than 75 feet as defined by hedge rows, driveways, alleyways, street curbing, treelines, or fences, the Contractor shall also maintain that additional area. Grounds maintenance shall include the following:

3.3.1 Grass Mowing: Keep grass cut to a height of no more than 3 inches; edge and trim along building foundations, patios, pavement and sidewalk edges, curbs, fences, trees, utility poles, playground equipment, and other obstructions; remove and dispose of all grass clippings, fallen leaves, tree branches, trash, and debris. Water grass and shrubbery to provide the equivalent of 1 inch of rainfall per week.

3.3.2 Porches, Steps, Sidewalks, Driveways, Carports, and Garages: Sweep porches, steps, sidewalks, driveways, carports, and garages. Wash porches, steps, patios, sidewalks, driveways, carports, and garages. Clean accumulations of oil from driveways, parking areas, carports, and garages.

3.3.3 Snow and Ice Removal: Remove snow and ice from porches, steps, patios, sidewalks, driveways, carports, and garages within 12 hours following snow or ice storms.

3.3.4 Reestablishing Turf: Reestablish turf at bare areas and those areas damaged or removed during the course of the work.

3.4 THERMOSTATS: Heating thermostats shall be set at their lowest possible setting and air conditioners shall be off.

3.5 TELEPHONES: Telephones shall not be used by the Contractor. If telephones are disconnected to accomplish the work they shall be reconnected upon completion of the work.

DIVISION 1 - GENERAL REQUIREMENTS

SECTION 01900

SCHEDULED AND VACANT QUARTERS MAINTENANCE

PART 1 GENERAL

1.1 SCOPE: The work covered by this section includes furnishing all plant, labor, equipment, materials, and transportation necessary for scheduled and vacant quarters maintenance and repair required in this project. Scheduled and vacant quarters maintenance and repair encompasses most all aspects of interior and exterior maintenance and repairs included in this project. Scheduled maintenance and vacant quarters maintenance and repair consists of the Contractor performing miscellaneous maintenance and repairs in family housing and billeting quarters on a regularly scheduled basis and during the period between occupants without the Government having the administrative burden of having to write lengthy Job Orders listing a multitude of relatively minor maintenance and repairs items common to many quarters. This work will most always be performed in conjunction with one or more other divisions of work described in other sections of the specifications. This section is divided into major elements of work such as Cleaning, Carpentry, and Counter-tops. Repair and replacement work involves subcomponents of these major elements. For example, replacement of an entire door would be accomplished using the appropriate separate bid item. Patching a hole in the door or replacing a subcomponent of the door such as a broken hinge or bent striker plate would be considered part of vacant quarters maintenance and repair. Another example would include the placement of subcomponents of plumbing fixtures such as toilet ballcocks and faucet washers or cartridges. Again, another example would include the replacement of subcomponents electrical systems such as broken receptacles, wall plates, and fixture globes. Limits to the quantity of work required in scheduled and vacant quarters maintenance and repair work in any given set of quarters have been identified in Technical Exhibit 16 where appropriate. The cost of materials and labor the Contractor is required to provide for this item is limited to \$1,000.00 in any one set of quarters.

1.2 APPLICABLE PUBLICATIONS: See appropriate Technical Sections.

1.3 SUBMITTALS: See appropriate Technical Sections.

PART 2 PRODUCTS

2.1 MATERIALS: Materials furnished under this section shall be standard products of manufacturers regularly engaged in the production of the items, and the most current design which conforms to the requirements specified.

2.2 CLEANING: Cleaning materials shall conform to the requirements of SECTION 01901: QUARTERS CLEANING.

2.3 GROUNDS MAINTENANCE: Grounds maintenance materials, tools, and equipment shall conform to the requirements of SECTION 01902: GROUNDS MAINTENANCE.

2.4 CLOTHESLINES: Clothesline repair materials shall conform to the requirements of SECTION 02877: CLOTHESLINES.

2.5 CONCRETE: Concrete repair materials shall conform to the requirements of SECTION 03730: CONCRETE REPAIR.

2.6 MASONRY: Masonry repair materials shall conform to the requirements of SECTION 04500: MASONRY REPAIR.

2.7 CHIMNEYS, FIREPLACE, AND ASHPITS: Chimney, flue, ashpit components shall conform to the requirements of SECTION 04500: CHIMNEY, FIREPLACE, AND ASHPIT CLEANING.

2.8 CARPENTRY: Carpentry repair materials shall conform to the requirements of SECTION 06100: CARPENTRY.

2.9 COUNTERTOPS: Countertop repair materials shall conform to the requirements of SECTION 06241: COUNTERTOPS AND VANITY TOPS.

2.10 CABINETS: Cabinet repair materials shall conform to the requirements of SECTION 06410: CABINETS and SECTION 09922: REPAIR AND REFINISHING CABINETS.

2.11 ROOF INSULATION, ASPHALT SHINGLES, ROLL ROOFING, METAL ROOFING, BUILT-UP ROOFING, EPDM ROOFING, MODIFIED BITUMEN SHEET ROOFING, AND FLASHING AND SHEET METAL: Roof insulation, asphalt shingles, roll roofing, metal roofing, built-up roofing, EPDM roofing, modified bitumen sheet roofing, and flashing and sheet metal materials shall conform to the requirements of SECTION 07220: BUILT-UP ROOF INSULATION, SECTION 07311: ASPHALT SHINGLES AND ROLL ROOFING, SECTION 07410: METAL ROOFING, SECTION 07510: ASPHALT BUILT-UP 4-PLY GLASS-FIBER ROOFING, SECTION 07530: ETHYLENE PROPYLENE DIENE MONOMER (EPDM) ROOFING, SECTION 07535: MODIFIED BITUMEN SHEET ROOFING, and SECTION 07600: FLASHING AND SHEET METAL.

2.12 GUTTERS AND DOWNSPOUTS: Gutter and downspout repair materials shall conform to the requirements of SECTION 07600: FLASHING AND SHEET METAL.

2.13 CALKING AND SEALANT: Calking and Sealant materials shall conform to the requirements of SECTION 07920: CALKING AND SEALANT.

2.14 DOORS AND WINDOWS: Door and window repair materials shall conform to the requirements of SECTION 08110: STEEL DOORS, SECTION 08121: ALUMINUM STORM DOORS, SECTION 08210: WOOD DOORS, SECTION 08362: SECTIONAL METAL OVER-HEAD DOORS, SECTION 08370: ALUMINUM SLIDING GLASS DOORS, SECTION 08520: ALUMINUM WINDOWS, SECTION 08529: ALUMINUM STORM WINDOWS, SECTION 08610: WOOD WINDOWS, SECTION 08611: ALUMINUM AND VINYL CLAD WOOD WINDOWS, and SECTION 08800: DOOR AND WINDOW REPAIR.

2.15 BUILDERS' HARDWARE: Builders' hardware shall conform to the requirements of SECTION 08700: HARDWARE.

2.16 PLASTER AND GYPSUM WALLBOARD: Plaster and gypsum wallboard repair materials shall conform to the requirements of SECTION 09200: LATH AND PLASTER and SECTION 09250: GYPSUM WALLBOARD.

2.17 CERAMIC TILE: Ceramic tile repair materials shall conform to the requirements of SECTION 09300: CERAMIC TILE.

2.18 RESILIENT TILE AND SHEET FLOORING: Resilient tile and sheet flooring repair materials shall conform to the requirements of SECTION 09660: RESILIENT TILE AND SHEET FLOORING.

2.19 CARPETING: Carpeting repair materials shall conform to SECTION 09680: CARPETING.

2.20 PAINTING: Painting materials shall conform to the requirements of SECTION 09910: EXTERIOR PAINTING and SECTION 09920: INTERIOR PAINTING.

2.21 WOOD STRIP FLOORING: Wood strip flooring repair materials shall conform to the requirements of SECTION 09921: REPAIR AND REFINISHING WOOD STRIP FLOORING.

2.22 VINYL WALL COVERINGS AND WALLPAPER: Vinyl wall covering and wallpaper repair materials shall conform to the requirements of SECTION 09952: VINYL WALL COVERINGS AND WALLPAPER.

2.23 TOILET AND BATHROOM ACCESSORIES: Toilet and bathroom accessories shall conform to the requirements of SECTION 10800: TOILET AND BATHROOM ACCESSORIES.

2.24 DRAPERY HARDWARE: Drapery hardware shall conform to the requirements of SECTION 12501: DRAPERY HARDWARE.

2.25 ROLL SHADES: Roll shades shall conform to the requirements of SECTION 12513: ROLL SHADES.

2.26 PLUMBING: Plumbing repair materials shall conform to the requirements of SECTION 15400: PLUMBING.

2.27 DIFFUSERS, GRILLES, AND REGISTERS: Diffusers, grilles, and registers shall conform to the requirements of SECTION 15870: DIFFUSERS, GRILLES, AND REGISTERS.

2.28 ELECTRICAL: Electrical repair materials shall conform to the requirements of SECTION 16050: ELECTRICAL.

PART 3 EXECUTION

3.1 GENERAL: The Contractor shall perform scheduled maintenance and repair of interior and exterior building components and surfaces as part of Work Level I - Scheduled Maintenance and vacant quarters maintenance and repair of interior and exterior building components and surfaces as part of Work Level III - Specific Ordered Items of Maintenance, Repair, and Incidental Improvement. Scheduled maintenance and repair and vacant quarters maintenance and repair consist of the same maintenance and repair tasks performed to the same maintenance and repair standards. Delivery Orders will designate locations and items of work to be accomplished for Work Level III.

3.2 PROCEDURES: Procedures for performing scheduled and vacant quarters maintenance and repairs shall conform to the appropriate sections of the Technical Specifications and the requirements herein. For example, procedures for quarters cleaning shall conform to SECTION 01901: QUARTERS CLEANING; and procedures for plumbing repairs shall conform to SECTION 15400: PLUMBING.

3.3 MAINTENANCE AND REPAIR TASKS AND STANDARDS: Scheduled and vacant maintenance and repair includes the maintenance and repair tasks and standards contained in Technical Exhibit 16. Maintenance and repair work shall be performed by the Contractor so that the results of the work meet or exceed the standards contained in Technical Exhibit 16. When the minimum maintenance and repair standards are not met the Contractor shall be required to return to quarters and reperform the work until the minimum standards are met at no additional cost to the Government.

DIVISION 1 - GENERAL REQUIREMENTS

SECTION 01901

QUARTERS CLEANING

PART 1 GENERAL

1.1 SCOPE: The work covered by this section includes furnishing all plant, labor, equipment, materials, and transportation necessary for quarters cleaning required in this project.

1.2 APPLICABLE PUBLICATIONS: The publications listed below form a part of this section to the extent referenced. The publications are referred to in the text by basic designation only.

1.2.1 Army Technical Manual (TM):

5-609 Military Custodial Services Manual; September 1969.

1.2.2 Department of the Army Pamphlet (DA PAM):

210-2 Handbook for Family Housing Occupants; September 1971.

1.3 SUBMITTALS: None

PART 2 PRODUCTS

2.1 MATERIALS: Materials furnished under this section shall be standard products of manufacturers regularly engaged in the production of the items, and the most current design which conforms to the requirements specified.

2.2 CLEANING MATERIALS: Use cleaning materials which will not create hazards to health, property or environment, and will not damage surfaces to be cleaned. Cleaning materials shall be consistent with the recommendations set forth in TM 5-609 and DA PAM 210-2.

2.3 CLEANING EQUIPMENT: Use cleaning equipment designed for the specific tasks to be performed. Cleaning equipment shall be consistent with the recommendations set forth in TM 5-609 and DA PAM 210-2. Electrically powered cleaning equipment shall be free from safety defects.

PART 3 EXECUTION:

3.1 GENERAL: The Contractor shall perform quarters cleaning as part of Work Level I - Scheduled Maintenance, Work Level II - Service Order Work, and Work Level III - Specific Ordered Items of Maintenance, Repair, and Incidental Improvement. Specifically, the Contractor shall perform quarters cleaning in all Work Levels as part of special requirements for housing projects as specified in SECTION 01710: SPECIAL REQUIREMENTS FOR HOUSING PROJECTS. The Contractor shall perform quarters cleaning in Work Levels I and III as part of preventive and vacant quarters maintenance and repair as specified in SECTION

01900: PREVENTIVE AND VACANT QUARTERS MAINTENANCE. Delivery Orders will designate locations and items of work to be accomplished for Work Level III. Cleaning shall be performed on a "Complete Quarters Basis" or "Individual Item Basis" in the quantities indicated on Delivery Orders.

3.2 PROCEDURES: Procedures for cleaning various interior and exterior surfaces shall conform to the applicable portions of TM 5-609 and DA PAM 210-2, and the requirements herein. The Contractor shall coordinate twice each workday with the Housing Division Office to pick up keys for quarters to be cleaned and coordinate inspection times for completed quarters.

3.3 CLEANING TASKS AND STANDARDS: Quarters cleaning includes the cleaning tasks and standards contained in Technical Exhibit 17. Cleaning shall be performed by the Contractor so that the results meet or exceed the standards contained in Technical Exhibit 17. When the minimum cleaning standards are not met the Contractor shall be required to reclean the quarters until the minimum standards are met at no additional cost to the Government.

DIVISION 1 - GENERAL REQUIREMENTS

SECTION 01902

GROUNDS MAINTENANCE

PART 1 GENERAL

1.1 SCOPE: The work covered by this section includes furnishing all plant, labor, equipment, materials, and transportation necessary for grounds maintenance required in this project.

1.2 APPLICABLE PUBLICATIONS: The US Army Corps of Engineer Manual listed below forms a part of this section to the extent referenced. The publication is referred to in the text by basic designation only.

EM 385-1-1 General Safety and Health Requirements;
October 1987.

1.3 SUBMITTALS:

1.3.1 List of Vehicles and Equipment: The Contractor shall submit a list of all Contractor assigned vehicle identification numbers with a brief description of the vehicle to include make, year, model, and color. Subsequent changes to this list shall be submitted, in writing, to the Contracting Officer within five (5) working days of the change.

PART 2 PRODUCTS

2.1 MATERIALS: Materials furnished under this section shall be standard products of manufacturers regularly engaged in the production of the items, and the most current design which conforms to the requirements specified.

2.2 VEHICLES AND EQUIPMENT: The Contractor shall provide and maintain all vehicles and equipment required to fulfill the terms of the contract. All vehicles and equipment shall be in an operable condition and meet all federal, state, and local safety requirements, and shall comply with EM 385-1-1. The Contractor shall remove from service, within one hour of notification by the Contracting Officer, non-acceptable vehicles and equipment identified as not meeting the above safety requirements. Repair or replacement of the vehicle or equipment shall be at the Contractor's expense. Inoperable or unserviceable equipment or vehicles shall not be cause for the Contractor to reduce any service or performance. All vehicles and equipment shall be kept in a clean state while on the installation. This may require daily washing.

2.2.1 Contractor vehicles shall be equipped with 4-way flashers and turn signals in operating condition. Flashers shall be activated when vehicles are parked on, or traveling slowly along roadways.

2.2.2 Tractors over twenty (20) drawbar horsepower shall be equipped with an approved rollover-protection system, 4-way flashers, turn signals, and seatbelts. Seatbelts shall be worn and flashers activated at all times when equipment is in operation. The Contractor's tractors and other slow moving equipment shall be equipped with "Slow-Moving" vehicle sign. All mowers and

trimming equipment shall be equipped and maintained with safety chains, discharge-deflection devices, and/or other approved safety devices to prevent accidental damage or injury from objects thrown by mowers. All mowers used for work on slopes with a steepness of or exceeding one (1) foot vertical for each three (3) feet horizontal shall be of a type with a low center of gravity and good stability.

2.2.3 The Contractor shall maintain legible markings (logo) located on both sides of all Contractor furnished vehicles and equipment, which shall include, as a minimum, the Contractor's name, Contractor's telephone number, and Contractor assigned vehicle identification number. The Contractor shall submit a list of all Contractor assigned vehicle identification numbers with a brief description of the vehicle to include make, year, model, and color. Subsequent changes to this list shall be submitted, in writing, to the Contracting Officer within five (5) working days of the change.

2.2.4 All vehicles and equipment shall be operated in accordance with State of Kansas and installation traffic regulations.

2.2.5 The Contractor's vehicles or equipment utilized under the contract shall be registered and licensed according to the requirements of the State of Kansas prior to being operated under this contract. Operators of equipment and vehicles shall possess a valid state operator's permit to operate Contractor furnished vehicles or equipment for work under the contract. In addition, all equipment operators shall be properly trained and familiar with the safe, efficient operation of said equipment.

2.3 TOOLS AND CLOTHING: The Contractor shall provide all tools and clothing including personal protective clothing and equipment for Contractor employees as required by Federal and State safety regulations and EM 385-1-1 to meet the terms of the contract.

PART 3 EXECUTION:

3.1 GENERAL: The Contractor shall perform grounds maintenance at family housing quarters as part of Work Level I - Scheduled Maintenance and Work Level III - Specific Ordered Items of Maintenance, Repair, and Incidental Improvement. The Contractor shall perform grounds maintenance at common areas and playgrounds as part of Work Level III - Specific Ordered Items of Maintenance, Repair, and Incidental Improvement. Specifically, the Contractor shall perform grounds maintenance at family housing quarters in Work Levels I and III as part of special requirements for housing projects as specified in SECTION 01710: SPECIAL REQUIREMENTS FOR HOUSING PROJECTS. The Contractor shall perform grounds maintenance in Work Levels I and III as part of preventive and vacant quarters maintenance and repair as specified in SECTION 01900: PREVENTIVE AND VACANT QUARTERS MAINTENANCE. Delivery Orders will designate locations and items of work to be accomplished for Work Level III. The Contractor shall perform grounds maintenance in the quantities indicated on Delivery Orders. See Technical Exhibit 6 for Location Maps of Common Area Grounds Maintenance.

3.2 GROUNDS MAINTENANCE TASKS AND STANDARDS: Grounds maintenance includes the tasks and standards contained in Technical Exhibit 18. Grounds maintenance shall be performed by the Contractor so that the results meet or exceed

the standards contained in Technical Exhibit 18. When the minimum grounds maintenance standards are not met the Contractor shall be required to reperform the services until the minimum standards are met at no additional cost to the Government.

DIVISION 1 - GENERAL REQUIREMENTS

SECTION 01903

PEST CONTROL

PART 1 GENERAL

1.1 SCOPE: The work covered by this section includes furnishing all plant, labor, equipment, materials, and transportation necessary for pest control services required in this project.

1.2 APPLICABLE PUBLICATIONS: The publications listed below form a part of this section to the extent referenced. The publications are referred to in the text by basic designation only.

1.2.1 Armed Forces Pest Control Board (AFPCB) Publications:

AFPCB T.I.M. No. 11	Armed Forces Pest Control Board Technical Information Memorandum No. 11, Hydrogen Phosphide Fumigation with Aluminum Phosphide, 1974.
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1.2.2 Fort Riley Regulations (FR):

11-1	Energy Resources Conservations.
420-16	Generation, Treatment, Storage, and Disposal of Hazardous Waste; 8 April 1982.

1.2.3 State of Kansas Publications:

Pesticide Regulations.

1.2.4 U.S. Army Regulations (AR):

AR 420-76	Pest Control Services.
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1.2.5 U.S. Codes:

7 U.S.C 136	Title 7, United States Code, Section 136 et seq., 1976, "Federal Insecticide, Fungicide, and Rodenticide Act", as amended.
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1.2.6 U.S. Department of Defense (DOD) Publications:

DOD Directive 4150-7	Department of Defense Pest Management Program.
DOD Certification	"DOD Plan for the Certification of as Pesticide Applicators ", (Available from the Armed Forces Pest Management Board, Forest Glen Section, WRAMC Washington D.C. 20307).

1.2.7 U.S. Department of Labor Occupational Safety and Health Administration (OSHA) Publications:

29 CFR 1910 General Industry Safety and Health Standards.

1.2.8 U.S. Environmental Protection Agency (EPA) Regulations:

40 CFR 117 Clean Water Act.

40 CFR 152 Federal Insecticide Fungicide and Rodenticide Act.

40 CFR 260-261 Resource Conservation Recovery Act.

40 CFR 300 Comprehensive Environmental Response Compensation and Liability Act.

40 CFR 702-704 Toxic Substance Control Act.

1.3 SUBMITTALS:

1.3.1. Material Safety Data Sheets and Container Labels for Pesticides: The Contractor shall submit a copies of material safety data sheets (MSDS) and labels from containers of each type of pesticide to be used in this contract prior to the pesticides being used. Any time a pesticide changes, the information on the label changes, or a different pesticide is used, another copy of the MSDS and label shall be submitted three weeks prior to the pesticide being used in the performance of this contract.

1.3.2. Licenses: The contractor shall be licensed by the State of Kansas to apply restricted use pesticides in the State of Kansas. The Contractor's personnel shall have valid certifications to apply restricted use pesticides upon contract award and throughout the duration of the contract. The Contractor shall submit copies of these certifications upon request.

PART 2 PRODUCTS

2.1 MATERIALS: Materials furnished under this section shall be standard products of manufacturers regularly engaged in the production of the items, and the most current design which conforms to the requirements specified.

2.2 PESTICIDES: Use only EPA registered pesticide chemicals which are approved by the State of Kansas for use in the state. Application is to be in accordance with pesticides label instructions. The use of any pesticide is subject to change due to any future changes in pesticide laws, regulations, or for safety purposes.

2.3 PESTICIDE APPLICATION EQUIPMENT: Use only pesticide application equipment designed for the specific tasks to be performed. Pesticide application equipment shall conform to applicable EPA and OSHA regulations. Electrically powered pest control equipment shall be free from safety defects.

2.4 TOOLS AND CLOTHING: The Contractor shall provide all tools and clothing including personal protective clothing and equipment for Contractor employees as required by OSHA, EPA and State of Kansas regulations to meet the terms of the contract.

PART 3 EXECUTION:

3.1 GENERAL: The Contractor shall perform pest control services as part of Work Level I - Scheduled Maintenance, Work Level II - Service Order Work, and Work Level III - Specific Ordered Items of Maintenance, Repair, and Incidental Improvement. Delivery Orders will designate locations and items of work to be accomplished for Work Level III. The Contractor shall perform pest control services in the quantities indicated on Delivery Orders.

3.2 PROCEDURES: Pest control services shall conform to applicable Federal, State of Kansas, and Fort Riley rules and regulations. Pesticides shall be applied in strict accordance with their manufacturer's written application instructions.

3.3 PEST CONTROL TASKS AND STANDARDS: Pest control services includes the tasks and standards contained in Technical Exhibit 21. Pest control services shall be performed by the Contractor so that the results meet or exceed the standards contained in Technical Exhibit 21. When the minimum pest control service standards are not met the Contractor shall be required to reperform the services until the minimum standards are met at no additional cost to the Government.

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DIVISION 2 - SITE WORK

SECTION 02050

DEMOLITION

PART 1 GENERAL

1.1 SCOPE: The work covered by this section includes furnishing all plant, labor, equipment, materials, and transportation necessary for demolition and disposal required in this project.

1.2 APPLICABLE PUBLICATIONS: The publications listed below form a part of this section to the extent referenced. The publications are referred to in the text by basic designation only.

1.2.1 Defense Reutilization and Marketing Office Standard Operating Procedures (DRMO SOP):

19 Turn In Procedures for Excess Surplus Property; 1 April 1992.

19A Turn In Procedures for Hazardous Materials/Hazardous Waste; 1 October 1991.

1.2.2 U.S. Army Technical Manual (TM):

5-630 Natural Resources Land Management; July 1982.

1.2.3 American National Standards Institute (ANSI) Standard:

Z133.1-88 Safety Requirements for Tree Care Operations-Pruning, Trimming, Repairing, Maintaining, and Removing Trees, and Cutting Brush.

1.3 SUBMITTALS:

1.3.1 Receipts: The Contractor shall obtain receipts for all salvable items turned in to Government Agencies and submit copies of the receipts to the Contracting Officer. DD Forms 1348-1 serves as receipt for items turned-in to DRMO.

1.3.2 DD Form 1348-1: The Contractor shall prepare DD Form 1348-1 in accordance with DRMO SOP 19 and 19A for all items turned-in to DRMO. DD Forms 1348-1 may be obtained from DRMO. Submit copies of DD Form 1348-1 to the Contracting Officer.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.1 DEMOLITION AND DISPOSAL: The Contractor shall demolish or remove from the work site all items designated to be demolished or removed as part of the replacement process, and any other items necessary to accomplish the required

work. The specifications may not designate all demolition and removal items existing at the work site. Therefore, prior to beginning demolition or removal work, the Contractor shall verify with the Contracting Officer all items to be demolished or removed and all items to remain. The Contractor is responsible for loading, hauling, and unloading salvage items and debris. The Contractor is also responsible for preparing salvage items for turn in at the Fort Riley DRMO.

3.1.1 Removal: Carefully remove salvage items to prevent unnecessary damage to items to be salvaged or portions of components and structures to remain. Salvable items shall be removed and protected to prevent unnecessary damage. Items, embedded in concrete or masonry, or which are otherwise nonremovable, shall be neatly cut off at or beneath the surrounding surface. Open piping or conduit shall be capped or plugged, and the surrounding surface repaired as specified. Asphalt and concrete being removed shall be removed along saw cut lines.

3.1.2 Disposition of Nonsalvable and Nonrecyclable Items: Construction materials and debris, which will have no salvage or recycling value because of the type of material or the procedures required for dismantling or demolition, shall be disposed of at an authorized off-post landfill, the DEH Compost Area, or the DEH Demolition and Construction Debris Landfill located in the quarry behind Irwin Army Community Hospital as indicated below. Use of the DEH Compost Area and DEH Demolition and Construction Debris Landfill shall be coordinated with the Contracting Officer. Unless otherwise indicated, nonsalvable items include: refuse; yard waste; tires; miscellaneous concrete and masonry items; wood and wood products; nonmetallic roofing materials; wood doors, door frames, windows, trim, and glazing; gypsum wallboard, plaster, and acoustical ceiling board; floor and wall coverings; and nonmetallic plumbing, mechanical, and electrical components.

3.1.2.1. Refuse. The Contractor shall place only ordinary refuse in dumpsters. No yard waste, construction and demolition waste, tires, recyclable materials, salvable items, or hazardous materials or waste will be placed in dumpsters. Large amounts of refuse shall be delivered to the Riley County Transfer Station and fees paid by the Contractor.

3.1.2.2 Yard Waste. The Contractor shall deliver all yard waste to the DEH Compost Area located in Camp Funston, in the vicinity of Building 1980.

3.1.2.3 Construction and Demolition Waste. All wood, lumber, rock, soil, etc. shall be disposed of at the DEH Construction and Demolition Landfill.

3.1.2.4 Tires. All tires shall be consolidated in the tire cage located at the DEH Construction and Demolition Landfill.

3.1.3 Disposition of Salvable and Recyclable Items: Construction materials, which have salvage or recycling value, or which can be dismantled or removed without damage, shall be disposed of at the DEH Materials Yard, the DEH Recycle Center, or the DRMO Yard, Building No. 1950, Camp Funston, as directed by the Contracting Officer. Unless otherwise indicated, salvable items include: chain link fence components; sheet metal items including siding, flashings, roofing, fasciae, soffits, gutters, and downspouts; metal doors, door frames, builders' hardware, and windows; metal toilet and bath accessories; metal toi-

DIVISION 2 - SITEWORK

SECTION 02866

TENNIS POSTS AND NETS

PART 1 GENERAL

1.1 SCOPE: The work covered by this section includes furnishing all plant, labor, equipment, materials, and transportation necessary for repair and replacement of tennis court posts, nets, and accessories required in this project.

1.2 APPLICABLE PUBLICATIONS: The American Society for Testing and Materials (ASTM) publications listed below form a part of this section to the extent referenced. The publications are referred to in the text by basic designation only.

A53-90B Pipe, Steel, Black and Hot-Dipped, Zinc-Coated Welded and Seamless.

C94-91A Ready-Mixed Concrete.

1.3 SUBMITTALS:

1.3.1 List of Materials: The Contractor shall submit a certified list of materials or manufacturer's descriptive literature for all major materials proposed for use in work under this section.

1.3.2 Installation Instructions: The Contractor shall submit copies of manufacturer's written installation instructions.

PART 2 PRODUCTS

2.1 MATERIALS: Materials furnished under this section shall be standard products of manufacturers regularly engaged in the production of the items, and the most current design which conforms to the requirements specified.

2.2 GROUND SLEEVES: Ground sleeves shall be galvanized steel pipe manufactured to match the net posts supplied. Sleeves shall receive and hold net posts in a vertical position at the proper height without excessive movement in the horizontal direction. Sleeves shall be set in concrete to a depth that will prohibit movement of sleeve and post due to tension on post caused by installation of the net. Sleeves and concrete piers shall be set to such depth to prevent movement resulting from freezing of the surrounding earth. Steel ground sleeves shall conform to ASTM A53, Standard Weight, Schedule 40, Type S, Grade A.

2.3 NET ANCHORS: Net anchors shall be galvanized strap bent to form an eye and set in a concrete pier.

2.4 POSTS: Posts shall be 3 1/2 inch outside diameter galvanized steel pipe with malleable iron cap and pulley. One post at each court shall have a winch welded to post, the other post shall have a cable clamp and hook. Steel posts shall conform to ASTM A53, Standard Weight, Schedule 40, Type S, Grade A.

2.5 READY-MIXED CONCRETE: Concrete for piers shall conform to ASTM C94, and have a compressive strength of 3,000 psi at 28 days.

2.6 TENNIS NETS: Nets shall be standard design and made of 2.8 mm twisted polyethylene 1 3/4 inch mesh, 285 pound tensile strength, double reinforced headband and steel cable in top edge.

2.7 WINCHES: Winches shall be made of galvanized steel with sufficient capacity for proper tension on the net. Winch handles shall be removable and tamperproof.

PART 3 EXECUTION

3.1 GENERAL: The Contractor shall repair and replace tennis court posts, nets, and accessories as part of Work Level II - Service Order Work and Work Level III - Specific Ordered Items of Maintenance, Repair, and Incidental Improvement. Delivery Orders will designate locations and items of work to be accomplished for Work Level III. Unit Prices for tennis court posts, nets, and accessory repair shall be for making all required repairs to single complete tennis post and net set regardless of its condition.

3.2 TENNIS COURT EQUIPMENT REPAIRS: The repair and replacement of posts, nets, and accessories shall be accomplished in accordance with the manufacturer's written installation instructions. Tennis court equipment repairs includes the maintenance and repair tasks and standards contained in Technical Exhibit 19. Maintenance and repair work shall be performed by the Contractor so that the results of the work meet or exceed the standards contained in Technical Exhibit 19. When the minimum maintenance and repair standards are not met the Contractor shall be required to return to the tennis court and reperform the work until the minimum standards are met at no additional cost to the Government.

DIVISION 3 - CONCRETE

SECTION 03730

CONCRETE REPAIR

PART 1 GENERAL

1.1 SCOPE: The work covered by this section includes furnishing all plant, labor, equipment, materials, and transportation necessary for the repair of concrete porches, stoops and steps required in this project.

1.2 APPLICABLE PUBLICATIONS: The publications listed below form a part of this section to the extent referenced. The publications are referred to in the text by basic designation only.

1.2.1 American Concrete Institute (ACI) Standards:

503.3-79 (R1986) Producing a Skid-Resistant Surface on Concrete by the Use of a Multi-Component Epoxy System.

503.4-79 (R1986) Repair Concrete with Epoxy Mortars.

1.2.2 American Society for Testing and Materials (ASTM) Publications:

C150-92 Portland Cement.

C881-90 Epoxy-Resin-Base Bonding Systems for Concrete.

1.3 SUBMITTALS:

1.3.1 List of Materials: The Contractor shall submit a certified list of materials or manufacturer's descriptive literature for all major materials proposed for use in work under this section.

1.3.2 Installation Instructions: The Contractor shall submit manufacturer's written installation instructions.

PART 2 PRODUCTS

2.1 MATERIALS: Materials furnished under this section shall be standard products of manufacturers regularly engaged in the production of the items, and the most current design which conforms to the requirements specified.

2.2 BONDING AGENT: Bonding agents for patching concrete shall be similar to "Daraweld C" or "Larson Weld Crete", or approved equal.

2.3 EPOXY MORTAR TOPPING: Epoxy mortar topping materials shall conform to ASTM C881. Product shall be "Permatop" as manufactured by Permagile Corp. of Plainview, NY, or "Silikal" manufactured by Silikal, Inc. of Bridgeport, CT, or approved equals. Polymer concrete overlays and epoxy mortar toppings shall match existing concrete color and be applied with non-skid finish surfaces.

2.4 PORTLAND CEMENT PATCHING MORTAR: Portland cement shall conform to ASTM C150. Portland cement patching mortar shall consist of 1 part portland cement, 3 parts clean evenly graded sand, and water; a commercial latex-based ready-mix; or a commercial sand-portland cement-epoxy mix.

PART 3 EXECUTION

3.1 GENERAL: The Contractor shall repair concrete porches, stoops, and steps as part as part of Work Level I - Scheduled Maintenance, Work Level II - Service Order Work, and Work Level III - Specific Ordered Items of Maintenance, Repair, and Incidental Improvement. Delivery Orders will designate locations and items of work to be accomplished for Work Level III. Corner and edge spalls shall be repaired by using a portland cement patching mortar and an epoxy bonding agent. Horizontal surface spalling shall be repaired by using an epoxy mortar topping.

3.2 REPAIRS OF CORNER AND EDGE SPALLS: Prior to application of portland cement patching mortar, existing concrete surfaces shall have all loose, deteriorated concrete removed by mechanical or manual means. Concrete surfaces shall be dry and cleaned of oils, grease, paint, and other contaminants. Edges of concrete to receive patch shall be saw cut to produce vertical edges at least 1 inch deep around the perimeter of the patch area. An approved bonding agent shall be applied to the cleaned surface immediately prior to application of the concrete patch. Use of bonding agent shall be in conformance with the manufacturer's instructions for the particular application. Concrete patch shall be placed inside formwork as required.

3.3 APPLICATION OF EPOXY MORTAR TOPPING:

3.3.1 Preparation: Prior to application of epoxy mortar toppings, all concrete to be overlaid shall be cleaned by sandblasting to remove all foreign matter, grease, oil, wax, organic coatings, dirt and efflorescence. Follow sandblasting with compressed air cleaning to remove all residue. Fill in all voids, cracks and depressions in excess of 1/2 inch depth to surfacing.

3.3.2 Application: Place epoxy mortar topping in conformance with ACI Standards 503.3 and 503.4. Overlays shall be placed to a minimum depth of 3/16 inch. Final finish shall be made to produce a non-skid finish. Feather-edge to 1/16 inch thickness.

DIVISION 4 - MASONRY

SECTION 04500

MASONRY REPAIR

PART 1 GENERAL

1.1 SCOPE: The work covered by this section includes furnishing all plant, labor, equipment, materials, and transportation necessary for the accomplishment of masonry repair work required in this project.

1.2 APPLICABLE PUBLICATIONS: The publications listed below form a part of this section to the extent referenced. The publications are referred to in the text by basic designation only.

1.2.1 American Concrete Institute (ACI) Standard:

318/318R-89	Building Code Requirements for Reinforced Concrete.
531-79 (R1983)	Building Code Requirements for Concrete Masonry Structures.

1.2.2 American Society for Testing and Materials (ASTM) Publications:

A82-90A	Cold-Drawn Steel Wire for Concrete Reinforcement.
C55-85	Concrete Building Brick.
G62-91B	Building Brick (Solid Masonry Units made from Clay or Shale).
C90-90	Load-Bearing Concrete Masonry Units.
C216-91B	Facing Brick (Solid Masonry Units made from Clay or Shale).
C270-91A	Mortar for Unit Masonry.
C476-91	Grout for Reinforced Masonry.
G652-91C	Hollow Brick (Hollow Masonry Units made from Clay or Shale).

1.2.3 Brick Institute of America (BIA) Publication:

1A	Cold Weather Masonry Construction - Construction and Protection Recommendations; December 1982.
17	Reinforced Brick Masonry - Part 1; October

1981.

1.3 SUBMITTALS:

1.3.1 List of Materials: The Contractor shall submit a certified list of materials or manufacturer's descriptive literature for all major materials proposed for use in work under this section.

1.3.2 Samples: The Contractor shall submit color samples for selection of colors.

PART 2 PRODUCTS

2.1 MATERIALS: Materials furnished under this section shall be standard products of manufacturers regularly engaged in the production of the items, and the most current design which conforms to the requirements specified.

2.2 BRICK: Concrete building brick shall conform to ASTM C55, Grade N, Type 1. Solid building brick shall conform to ASTM C62, Grade SW. Solid facing brick shall conform to ASTM C216, Type FBX. Hollow brick shall conform to ASTM C652, Grade SW, Type HBX. Brick shall be the type and size which match the existing brick. Color and texture of bricks shall match the existing brick or be selected by the Contracting Officer from samples provided by the Contractor.

2.3 CONCRETE MASONRY UNITS: Hollow and solid load-bearing concrete masonry units shall conform to ASTM C90, Grade N, Type I for exterior walls and Grade S, Type I for interior walls. Concrete masonry units shall be normal weight, and the type and size which match the existing concrete masonry units.

2.4 EXPANSION JOINT MATERIALS: Expansion joint materials shall be the type and size which match the existing expansion joint materials.

2.5 JOINT REINFORCEMENT: Joint reinforcement shall be factory-fabricated from 8 gauge welded galvanized steel wire conforming to ASTM A82. Joint reinforcement and wall ties may be separate items or combination joint reinforcement and wall ties. Joint reinforcement shall be ladder or truss type and have a width 2 inches less than the wall thickness in which it is being installed. Corners and tees shall be factory or field-fabricated.

2.6 MORTAR AND GROUT: Mortar for unit masonry shall conform to ASTM C270, Type S. Grout for masonry shall conform to ASTM C476.

2.7 PRECAST CONCRETE ITEMS: Precast concrete items shall be factory-made items made from concrete conforming to ASTM C94. Precast concrete items shall be the type and size which match the existing precast concrete items.

2.8 STONE ITEMS: Stone items shall be of the type, material, and size which match the existing stone items.

2.9 WALL TIES: Wall ties shall be factory-fabricated from galvanized or copper-clad steel, and the type and size which match the existing wall ties.

PART 3 EXECUTION

3.1 GENERAL: The Contractor shall perform masonry repair work as part as part of Work Level I - Scheduled Maintenance, Work Level II - Service Order Work, and Work Level III - Specific Ordered Items of Maintenance, Repair, and Incidental Improvement. Delivery Orders will designate locations and items of work to be accomplished for Work Level III.

3.2 REPAIRS: Masonry repair shall conform to the applicable portions of ACI 531, BIA 17, and the requirements herein.

3.2.1 Scaffolding and Shoring: Provide, install and remove scaffolding and shoring as necessary to accomplish the required work.

3.2.2 Demolition: Remove portions of damaged masonry as indicated, and as necessary to accomplish the required work.

3.2.3 Reconstruction: Reconstruct portions of damaged masonry including installation of new flashings where appropriate.

3.2.4 Joints: Control and expansion joints shall be fabricated and installed in the same locations as the existing joints.

3.2.5 Joint Reinforcement and Wall Ties: Joint reinforcement shall be installed 1 foot 4 inches on center vertically, and 8 inches on center vertically 2 courses above and below openings and in parapet walls. Wall ties shall be installed 2 feet on center horizontally and 1 foot 4 inches on center vertically so that there is not less than 1 wall tie per 3 square feet of wall area.

3.2.6 Calking: Calk around door and window frames affected by the required work.

3.2.7 Painting: Spot paint previously painted exterior building surfaces affected by the required work.

3.3 TUCK POINTING:

3.3.1 Preparation: Tuck pointing shall be accomplished in accordance with the applicable portions of ACI 531 and BIA 17. Cold weather masonry work shall conform to BIA 1.

3.3.1.1 Removal of Deteriorated Mortar: Cut out old mortar to a minimum depth of 1/2 inch. Remove all loose and deteriorated mortar beyond cut depth. Cutting operations shall not widen joint or damage masonry units. Mortar shall be removed cleanly from units leaving square corners at the back of the cut. No mortar or detritus shall remain on stone or brick on either side of the joint.

3.3.1.2 Joint Preparation: Clean joints of loose aggregate with a fine bristle, narrow width wire brush. Following brush cleaning, blow joints clean with 90 psi clean, oil-free air to remove all dust, dirt, and remaining loose aggregate. Wet masonry and existing mortar with water at time of repointing. No excess water shall be present.

3.3.2 Pointing of Brickwork: Joints with a depth greater than 1/2 inch shall be filled first. Compact new mortar in deep cuts in successive layers until a uniform joint depth throughout has been attained. After deep joints have been leveled, fill all joints with mortar and pack the back corners of the joint. Setting rate and moisture content shall be controlled by dampening the masonry and mortar with water.

3.3.1 Tooling:

3.3.3.1 When the last layer of mortar is thumbprint hard, tool the joint to match the appearance of the adjacent mortar joints with a round jointer to produce smooth, dense, concave joints. The jointer shall be slightly larger than the width of the mortar joint so that complete contact is made along the edges of the units. Avoid excessive burrs at the intersections of head and bed joints. When stopping work, arrange to have the last joints tooled when the mortar has become thumbprint hard.

3.3.3.2 Produce a weathered look by lightly brushing the new mortar with a stiff natural bristle brush immediately after tooling in order to slightly roughen the surface.

3.3.3.3 Upon completion, inspect all joints thoroughly, fill all holes, cut out defective joints, and repoint with mortar.

3.4 COLD WEATHER REQUIREMENTS: Cold-weather masonry work shall conform to BIA 1A.

3.5 CLEANUP: Keep all exposed masonry clean and free from mortar as work progresses. Clean masonry surfaces using water or an approved environmentally safe masonry cleaner. Stiff natural brushes shall be used for all surfaces except on glazed or polished masonry for which only soft cloths shall be used. Mortar shall be fully hardened before cleaning. Not less than 7 days before cleaning the entire structure, apply the proposed cleaning agent to a small, inconspicuous test area to demonstrate that there will be no adverse effect on the mortar or masonry. Rinse surfaces with clean water immediately after cleaning.

DIVISION 5 - METALS

SECTION 05500

METAL FABRICATIONS

PART 1 GENERAL

1.1 SCOPE: The work covered by this section includes furnishing all plant, labor, equipment, materials, and transportation necessary for the replacement of metal fabrications required in this project.

1.2 APPLICABLE PUBLICATIONS: The publications listed below form a part of this section to the extent referenced. The publications are referred to in the text by basic designation only.

1.2.1 American Society for Testing and Materials (ASTM) Publications:

A36/A36M-91 Structural Steel.

A501-89 Hot-Formed Welded and Seamless Carbon Steel
Structural Tubing.

1.2.2 American Welding Society (AWS) Publications:

D1.1-92 Structural Welding Code, Steel.

1.3 SUBMITTALS:

1.3.1 List of Materials: The Contractor shall submit a certified list of materials or manufacturer's descriptive literature for all major materials proposed for use in work under this section.

1.3.2 Shop Drawings: The Contractor shall submit shop drawings of the proposed fabrication and installation of metal fabrications.

PART 2 PRODUCTS

2.1 MATERIALS: Materials furnished under this section shall be standard products of manufacturers regularly engaged in the production of the items, and the most current design which conforms to the requirements specified.

2.2 HANDRAILS: Handrails shall be fabricated from steel bars, channels, and plate which conform to ASTM A36/A36M and structural steel tubing which conforms to ASTM A501. Handrails shall be 36 inches high. Newels shall be supplied at both ends, where appropriate, and 48 inches on center. Balusters shall be spaced not more than 3 inches on center. Top rails and newels shall be 1 1/2 inch square structural tubing. Bottom rails shall be 1 1/2 by 1/2 inch channel. Balusters shall be 1/2 inch square bars. Handrails shall all welded construction and primed and painted with exterior acrylic enamel paint. Handrails shall be securely anchored into or onto porches and steps.

PART 3 EXECUTION

3.1 GENERAL: The Contractor shall replace metal fabrications as part of Work Level I - Scheduled Maintenance, Work Level II - Service Order Work, and Work Level III - Specific Ordered Items of Maintenance, Repair, and Incidental Improvement. Delivery Orders will designate locations and items of work to be accomplished for Work Level III.

3.2 INSTALLATION: The installation of metal fabrications shall be accomplished in accordance with the Contractor's approved shop drawings.

3.3 WELDING: Welding of structural steel shall be accomplished in accordance with AWS D1.1.

3.4 PAINTING: Metal fabrications shall be primed and painted immediately following fabrication.

DIVISION 6 - WOOD AND PLASTICS

SECTION 06410

WOOD CABINETS

PART 1 GENERAL

1.1 SCOPE: The work covered by this section includes furnishing all plant, labor, equipment, materials, and transportation necessary for the repair and replacement of wood cabinets and wall shelves required in this project.

1.2 APPLICABLE PUBLICATIONS: The publications listed below form a part of this section to the extent referenced. The publications are referred to in the text by basic designation only.

1.2.1 U.S. Department of Commerce Publications:

CS 236-66	Mat-Formed Wood Particleboard; April 1966.
PS 1-83	Construction and Industrial Plywood; May 1984.
PS 20-70	American Softwood Lumber Standard; January 1970.
PS 51-71	Hardwood and Decorative Plywood; January 1972.

1.2.2 American National Standards Institute, Inc. (ANSI) Standards:

A156.9-88	Cabinet Hardware.
A161.1-90	Recommended Construction and Performance Standards for Kitchen and Vanity Cabinets.
A208.1-79 (R1986)	Mat-Formed Wood Particleboard.

1.2.4 International Association of Plumbing and Mechanical Officials (IAPMO) Publication:

Uniform Plumbing Code (UPC); 1988 Edition.

1.3 SUBMITTALS:

1.3.1 List of Materials: The Contractor shall submit a certified list of materials or manufacturer's descriptive literature for all major materials proposed for use in work under this section.

1.3.2 Samples: The Contractor shall submit samples of cabinet finishes, doors and hardware, and countertops for selection of colors, patterns and design.

1.3.3 Installation Instructions: The Contractor shall submit manufacturer's written installation instructions.

PART 2 PRODUCTS

2.1 MATERIALS: Materials furnished under this section shall be standard products of manufacturers regularly engaged in the production of the items, and the most current design which conforms to the requirement specified.

2.2 ADHESIVE AND FASTENERS: Adhesives and fasteners shall be the proper products for the intended applications. Adhesives shall be waterproof and dry clear. Exposed fasteners on cabinets shall be brass or match the cabinet hardware.

2.3 CABINET REPAIR MATERIALS: All materials used to repair cabinets, including hardware, cabinet doors and drawer fronts, shall be of equal size, design and quality, and match the items being replaced. Wood components shall be the same wood species and quality as the components being replaced, and be stained to match the existing. Cabinet hardware shall conform to ANSI A156.9. All cabinet repair materials are subject to approval by the Contracting Officer.

2.4 WOOD CABINETS: Cabinet design and construction shall conform to ANSI 161.1 and the requirements herein. Standard construction plywood shall conform to PS 1. Softwood lumber shall conform to PS 20. Hardwood plywood shall conform to PS 51. Particleboard shall conform to ANSI A208.1 or CS 236, Type 2, Grade B, Class 2. All hardwood shall be kiln-dried clear oak. All hardwood plywood and particleboard shall be oak veneer both sides or oak veneer on exterior surfaces of cabinets and birch or maple veneer on interior surfaces of cabinets. Kitchen base cabinets shall be 24 inches deep and 34 1/2 inches high. Bathroom vanity cabinets shall be 21 inches deep and 30 inches high. Wall cabinets shall be 12 inches deep and the height indicated or required to match the existing cabinets.

2.4.1 Fronts and Framing: Cabinets shall have 3/4 inch thick by 1 1/2 inches wide (minimum) hardwood flush framed fronts and framing members. Center stiles shall be 3/4 inch thick by 3 inches wide. Fronts and framing members shall be mortised and tenoned, dovetailed or doweled, and glued together. Top and bottom corners shall be braced with solid wood blocks that are glued and fastened in place, or an approved equal design.

2.4.2 Bottoms, Backs, Ends, and Tops: Bottoms and ends of base and wall cabinets shall be 1/2 inch (minimum) hardwood plywood. Bottoms of base cabinets shall be braced with solid wood members glued and fastened in place. Backs of base and wall cabinets shall be 3/16 inch (minimum) hardwood plywood. Tops of wall cabinets shall be 1/2 inch (minimum) hardwood plywood. Backrails in base cabinets shall be 3/4 by 1 3/4 inch (minimum) solid wood. Backrails in overhead cabinets shall 3/4 by 1 inch (minimum) solid wood top and bottom. Toe kicks on base cabinets shall be 3/4 by 3 1/2 inch (minimum) solid wood.

2.4.3 Shelves: Shelves shall be 3/4 inch hardwood plywood with hardwood nosing or 3/4 inch particleboard with a hardwood nosing and veneer both sides. Shelves shall be supported on the ends and on 24 inch centers. Shelf support rails, if used, shall be mortised into cabinet ends. All base cabinets, ex-

cept sink base cabinets, shall have one adjustable full width and depth shelf. All wall cabinets, except over-range and refrigerator wall cabinets, shall have two adjustable full width and depth shelves.

2.4.4 Doors and Drawer Fronts: Door and drawer front design shall be selected by the Contracting Officer from samples provided by the Contractor. Slab doors shall be used in Family Housing Areas 8 thru 31. Raised panel doors shall be used in Family Housing Areas 1 thru 7.

2.4.4.1 Slab: Doors and drawer fronts shall be 3/4 inch thick hardwood.

2.4.4.2 Raised Panel: Doors shall have 3/4 inch thick hardwood frames and 5/8 inch thick (minimum) hardwood raised panel inserts. Pantry hutch doors shall have glass inserts. Drawer fronts shall be 3/4 inch thick hardwood.

2.4.4.3 Glass: Pantry hutch doors shall have tempered glass inserts.

2.4.5 Drawers: Drawer sides, fronts, and backs shall be 1/2 inch (minimum) hardwood. Drawer bottoms shall be 1/4 inch (minimum) hardwood plywood.

2.4.6 Hardware: Hardware shall conform to ANSI A156.9. Hardware shall be corrosion resisting steel or brass, and the finish and design selected by the Contracting Officer from samples provided by the Contractor. Each door and drawer shall have a two-point mounting pull. Hinges shall be concealed self-closing knife type or double demountable type. Drawer slides shall be rated for 100 pounds, be self-closing, have nylon rollers, and glide on 20-gauge steel drawer slides with a factory-applied ivory epoxy enamel finish.

2.4.7 Finish: Wood cabinets shall have a natural wood finish selected by the Contracting Officer from samples provided by the Contractor. Cabinet finish shall consist of one coat of hand wiped quality wood stain; one coat of penetrating sealer; and one coats of a satin polyurethane or catalyzed varnish, or an approved equal finish system. All surfaces shall be sanded between coats. All interior and exterior cabinet surfaces shall be finished.

2.4.8 Toe Kick Cover Strips: Toe kick cover strips shall be 1/4 inch hardwood plywood finished to match cabinets and furnished in 8 foot lengths for placement after base cabinet installation.

2.5 WALL SHELVES: Wall shelves shall be fabricated from 1 by 12 softwood lumber which conforms to PS 20. The lumber shall be No. 1 - Clear Grade. Shelf supports shall be fabricated from 1 by 3 softwood lumber, No. 1 - Clear Grade. Shelves and supports shall be primed and painted with gloss enamel paint which matches the surrounding wall surfaces.

PART 3 EXECUTION

3.1 GENERAL: The Contractor shall repair and replace kitchen, bathroom, and laundry room cabinets as part of as part of Work Level I - Scheduled Maintenance, Work Level II - Service Order Work, and Work Level III - Specific Ordered Items of Maintenance, Repair, and Incidental Improvement. The Contractor shall repair kitchen, bathroom, and laundry room cabinets as part of vacant quarters maintenance and repair as specified in SECTION 01900: VACANT

QUARTERS MAINTENANCE AND REPAIR. The Contractor shall also repair and replace kitchen, bathroom, and laundry room cabinets in the quantities indicated on Delivery Orders. Delivery Orders will designate locations and items of work to be accomplished for Work Level III. Unit Prices for cabinet replacement shall include removal of existing countertops, vanity tops, sinks, lavatories, faucets, and disposers; patching all cracks, holes and otherwise damaged or deteriorated lath and plaster, gypsum wallboard, and ceramic wall tile surfaces resulting from cabinet replacement; reinstallation of existing sinks, lavatories, faucets, and disposers unless Delivery Orders specify the installation of new countertops, vanity tops, sinks, lavatories, faucets, and disposals at the time of cabinet installation; and preparation and painting all surfaces patched or damaged as a result of the installation of new cabinets.

3.2 CABINET REPAIRS: Cabinet repair shall include, but not be limited to, replacing defective or missing hardware; removing old paint from previous paint jobs from hardware; repairing or replacing defective or missing cabinet components such as doors, drawer fronts, drawer sides and bottoms, stiles, rails, toe kicks and shelves; and any other items as required to make the cabinets function and appear "Like New".

3.3 INSTALLATION: The replacement of cabinets and shelves shall be accomplished in accordance with the manufacturer's written installation instructions and the requirements herein. Plumbing work required for removal and installation of sinks, and faucets shall be accomplished in accordance with the Uniform Plumbing Code.

3.3.1 Cabinets: Cabinets shall be installed level, plumb, and true to line with suitable fasteners to securely anchor each unit. Hardware shall be installed as indicated on the plans. Closer strips, filler strips, toe kick cover strips, and finish molding shall be provided as required. Prior to final acceptance, doors shall be aligned, hardware adjusted, and cabinets left in a clean and neat condition.

3.3.2 Shelves: Shelves shall be installed level, and true to line with suitable fasteners and anchors.

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

SECTION 07210

BUILDING INSULATION

PART 1 GENERAL

1.1 SCOPE: The work covered by this section includes furnishing all plant, labor, equipment, materials, and transportation necessary for the replacement of building insulation and vapor barriers required in this project.

1.2 APPLICABLE PUBLICATIONS: The publications listed below form a part of this section to the extent referenced. The publications are referred to in the text by basic designation only.

1.2.1 American National Standards Institute, Inc. (ANSI) Standards:

A194.1-85 Cellulosic Fiber Board.

1.2.2 American Society for Testing and Materials (ASTM) Publications:

C665-91 Mineral Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing.

C739-91 Cellulosic Fiber (Wood-Base) Loose-Fill Thermal Insulation.

D4397-91 Polyethylene Sheeting for Construction, Industrial and Agricultural Applications.

E84-91A Surface Burning Characteristics of Building Materials.

E96-92 Water Vapor Transmission of Materials.

1.3 SUBMITTALS:

1.3.1 List of Materials: The Contractor shall submit a certified list of materials or manufacturer's descriptive literature for all major materials proposed for use in work under this section.

1.3.2 Installation Instructions: The Contractor shall submit manufacturer's written installation instructions.

PART 2 PRODUCTS

2.1 MATERIALS: Materials furnished under this section shall be standard products of manufacturers regularly engaged in the production of the items, and the most current design which conforms to the requirements specified. Unless otherwise specified, all insulating materials shall have a Class A flame spread and smoke developed classification when tested in accordance with

ASTM E84. Insulation packaging and individual pieces of material shall be marked or labeled showing the R-value of installed thicknesses and the certified burning characteristics. Insulation shall be the thickness indicated.

2.2 CELLULOSIC FIBERBOARD INSULATION: Asphalt impregnated cellulosic fiberboard insulation and sheathing shall conform to ANSI A194.1, Type IV, Class 1.

2.3 CELLULOSIC LOOSE FILL INSULATION: Cellulosic or wood fiber loose fill insulation shall conform to ASTM C739.

2.4 FIBERGLASS BATT AND BLANKET INSULATION: Unfaced fiberglass batt and blanket insulation shall conform to ASTM C665, Type I. Kraft faced fiberglass batt insulation shall conform to ASTM C665, Type II, Class C. Foil faced fiberglass batt insulation shall conform to ASTM C665, Type III, Class A.

2.5 VAPOR BARRIER MATERIAL: When a separate vapor barrier material is indicated, it shall be polyethylene sheet conforming to ASTM D4397, and .006 inch thick. All vapor barrier material shall have a perm rating less than 0.1 when tested in accordance with ASTM E96.

PART 3 EXECUTION

3.1 GENERAL: The Contractor shall replace insulation and vapor barriers as part of Work Level I - Scheduled Maintenance, Work Level II - Service Order Work, and Work Level III - Specific Ordered Items of Maintenance, Repair, and Incidental Improvement. Delivery Orders will designate locations and items of work to be accomplished for Work Level III.

3.2 INSTALLATION: The installation of insulation and vapor barriers shall be accomplished in accordance with the manufacturer's written installation instructions. Vapor barriers shall be tightly sealed to prevent moisture migration. Damaged vapor barriers shall be patched or replaced. When more than one layer of insulation is installed together, only the interior layer of insulation shall have a vapor barrier. Batt insulation which has become loose from framing shall be resecured with steel wire staples.

DIVISION 8 - DOORS AND WINDOWS

SECTION 08121

ALUMINUM STORM DOORS

PART 1 GENERAL

1.1 SCOPE: The work covered by this section includes furnishing all plant, labor, equipment, materials, and transportation necessary for the repair and replacement of aluminum storm doors required in this project.

1.2 APPLICABLE PUBLICATIONS: The publications listed below form a part of this section to the extent referenced. The publications are referred to in the text by basic designation only.

1.2.1 American National Standards Institute (ANSI) Standards:

- | | |
|-----------|---|
| 1102.7-89 | Aluminum Storm Doors. |
| Z97.1-84 | Safety Performance Specifications and Methods of Test for Safety Glazing Materials Used in Buildings. |

1.2.2 American Society for Testing and Materials (ASTM) Publications:

- | | |
|------------|---|
| C834-91 | Latex Sealing Compounds. |
| C1048-91 | Heat Treated Flat Glass - Kind HS, Kind FT Coated and Uncoated Glass |
| E283-91 | Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors. |
| E330-90 | Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference. |
| E331-86 | Water Penetration of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference. |
| E437 E1-85 | Industrial Wire Cloth and Screens (Square Opening Series). |
| E547 E1-86 | Water Penetration of Exterior Windows, Curtain Walls, and Doors by Cyclic Static Air Pressure Differential. |

1.2.3 Flat Glass Marketing Association (FGMA) Publication:

Glazing Manual; Current Edition.

1.3 SUBMITTALS:

1.3.1 List of Materials: The Contractor shall submit a certified list of materials or manufacturer's descriptive literature for all major materials proposed for use in work under this section.

1.3.2 Installation Instructions: The Contractor shall submit manufacturer's written installation instructions.

PART 2 PRODUCTS

2.1 MATERIALS: Materials furnished under this section shall be standard products of manufacturers regularly engaged in the production of the items, and the most current design which conforms to the requirements specified.

2.2 ALUMINUM STORM DOORS: Aluminum storm doors shall conform to ANSI/AAMA 1102.7, ANSI Z97.1, and the requirements herein. Aluminum storm doors shall meet or exceed the minimum performance standards set forth in ANSI/AAMA 1102.7 when tested in accordance with ASTM E283, E330, and E331 or E547. Storm doors shall be externally mounted, 1 1/4 inches thick, 40/40/20 split, double-track, vertical sliding combination self-storing storm-and-screen type, and consist of jambs, head, master door frame, 2 glass inserts, 1 screen insert and a heavy duty aluminum kick panel. Glass and screen inserts shall be removable, and lock in open and closed positions with spring-loaded latches. Door frame and inserts shall have storm-pile or Mylar fin-seal type weatherstripping. Storm doors shall be complete units with all hardware including 4 heavy duty closer; spring chain stop; and adjustable sweep. Master door frame corner construction shall be with extruded metal corner key and 4-#8 x 1/2 inch screws. Storm doors shall have a mill finish, or a factory-applied baked enamel bronze or white finish, and be the size necessary to match the doors being replaced.

2.3 CALKING: Calking compound shall conform to ASTM C834.

2.4 FASTENERS: Fasteners for door construction and installation shall be aluminum alloy, cadmium or zinc plated steel, stainless steel, or other non-corrosive metal compatible with aluminum.

2.5 GLASS: Glass used in storm doors shall be 1/8 inch thick tempered safety glass and conform to ASTM C1048 and ANSI Z97.1. Door glass shall be permanently marked indicating its conformance with ANSI Z97.1. Glazing shall be in accordance with FGMA "Glazing Manual".

2.6 INSECT SCREENING: Insect screening used in storm doors shall be 18 x 16 aluminum wire mesh and conform to ASTM E437.

PART 3 EXECUTION

3.1 GENERAL: The Contractor shall repair aluminum storm doors as part of as part of Work Level I - Scheduled Maintenance, Work Level II - Service Order Work, and Work Level III Specific Ordered Items of Maintenance, Repair, and Incidental Improvement. Delivery Orders will designate locations and items of work to be accomplished for Work Level III. The Contractor shall repair and

replace aluminum storm doors in the quantities indicated on Delivery Orders. Unit Prices for door replacement shall include removal and disposal of existing doors and installation of new doors.

3.2 INSTALLATION: The replacement of aluminum storm doors shall be accomplished in accordance with the applicable portions of ANSI/AAMA 1102.7, and the door manufacturer's written installation instructions. Storm door jambs and heads shall be set in a 1/4 inch bead of caulking when installed. Glass shall have labels removed and be spotlessly clean upon completion of the installation.

2.2 ACOUSTICAL CEILING PANELS AND TILES: Acoustical ceiling panels and tiles shall conform to Federal Specification SS-S-118. Acoustical panels and tiles shall have a Noise Reduction Co-efficient (NCR) in the range of .50 to .60 when tested in accordance with ASTM C423, a Ceiling Sound Transmission Class (STC) in the range of 35 to 39 when tested in accordance with ASTM E413, and a Class A flame spread and smoke developed classification when tested in accordance with ASTM E84. Acoustical ceiling panels and tiles shall be the size, thickness, type, and design which match the items being replaced.

2.3 METAL SUSPENSION SYSTEM: Metal suspension system for acoustical ceiling panels and tiles shall conform to ASTM C635. Metal suspension systems shall be the size, type, and design which match the items being replaced.

PART 3 EXECUTION

3.1 GENERAL: The Contractor shall repair and replace suspended acoustical ceiling systems as part of as part of Work Level I - Scheduled Maintenance, Work Level II - Service Order Work, and Work Level III - Specific Ordered Items of Maintenance, Repair, and Incidental Improvement. Delivery Orders will designate locations and items of work to be accomplished for Work Level III. The Contractor shall repair and replace suspended acoustical ceiling systems in the quantities indicated on Delivery Orders.

3.2 INSTALLATION: Repair and replacement of suspended acoustical ceiling systems shall conform to ASTM C636 and the manufacturer's written installation instructions.

DIVISION 10 - SPECIALTIES

SECTION 10800

TOILET AND BATH ACCESSORIES

PART 1 GENERAL

1.1 SCOPE: The work covered by this section includes furnishing all plant, labor, equipment, materials and transportation necessary for repair and replacement of toilet and bath accessories required in this project.

1.2 APPLICABLE PUBLICATIONS: The Federal Specifications listed below form a part of this section to the extent referenced. The publications are referred to in the text by basic designation only.

WW-P-541E & AMD 1	Plumbing Fixtures (General Specification).
WW-P-541/8B & AMD 1	Plumbing Fixtures (Accessories), (Detail Specification).
A-A-2524	Holder, Toilet Paper (Single Roll).
A-A-2668	Dispenser, Toilet Paper, Cabinet.

1.3 SUBMITTALS:

1.3.1 List of Materials: The Contractor shall submit a certified list of materials or manufacturer's descriptive literature for all major materials proposed for use in work under this section.

1.3.2 Installation Instructions: The Contractor shall submit manufacturer's written installation instructions.

PART 2 PRODUCTS

2.1 MATERIALS: Materials furnished under this section shall be standard products of manufacturers regularly engaged in the production of the items, and the most current design which conforms to the requirements specified. Type of base metal and finish of replacement accessories shall match the accessories being replaced.

2.2 BARS: Surface-mounted bars shall conform to Federal Specifications WW-P-541 and WW-P-541/8, Type IV, Class 1 - towel, 18 and 24 inches long. Bars shall be stainless steel or bright chrome or brass-plated steel, aluminum, copper, or die-cast zinc alloy.

2.3 MEDICINE CABINETS: Medicine cabinets shall conform to Federal Specifications WW-P-541 and WW-P-541/8, Type III, Class 2 - swing door, and Style R - recessed, or Style S - surface. Medicine cabinets shall be fabricated from 22-gauge cold-rolled sheet steel and have a white baked enamel finish inside and outside. Medicine cabinets shall have a minimum of two full depth and width shelves and No. 1 quality plate glass mirror doors mounted in solid

oak frames. Door backs shall be 22-gauge steel or 1/4 inch hardboard with a white enamel finish. Doors shall have self-closing hinges or magnetic door catches. Medicine cabinets shall be supplied with matching light bars when indicated on Delivery Orders. Light bars shall be surface mount, solid medium oak with bright brass-plated hardware and opal glass shades. Light bars shall be suitable for use with 60-watt incandescent lamps. Medicine cabinets and light bars shall be the approximate sizes indicated below:

<u>Vanity Top Size In Inches (WxD)</u>	<u>Corresponding Overall Medicine Cabinet Size In Inches (WxHxD)</u>	<u>Corresponding Light Bar Size In Inches (WxHxD)</u>	<u>Number of 60-Watt Lamps</u>
Not Applicable	17x23x5 - 1 Panel	None	None
Not Applicable	17x27x5 - 1 Panel	None	None
19x19	17x27x5 - 1 Panel	18x8x10	2
25x22	24x31x5 - 3 Panel	24x8x10	3
31x22	30x31x5 - 3 Panel	30x8x10	3

2.4 SHOWER CURTAIN RINGS AND RODS: Shower curtain rings and rods shall be 1 inch outside diameter by .049 inch thick wall (minimum) stainless steel, chrome-plated steel or brass. Rings and rods shall be furnished with all wall and ceiling mounting hardware as required to make complete installations.

2.5 SOAP HOLDERS: Soap holders shall conform to Federal Specifications WW-P-541 and WW-P-541/8, Type VI, and be Class 1 - soap, surface-mounted, Class 2 - soap, recessed. Soap holders shall be stainless steel or bright chrome or brass-plated steel, aluminum, copper, or die-cast zinc alloy.

2.6 TOILET PAPER HOLDERS: Single roll toilet paper holders shall conform to Federal Specification A-A-2524, Type I - roller mounted on two surface-mounted support brackets. Multi-roll toilet paper holders shall conform to Federal Specification A-A-2668, Type II - 2 roll or Type IV - 3 roll, Class B - Stainless Steel Cabinet, Satin Finish as necessary to match the holders being replaced. Toilet paper holders shall be stainless steel or bright chrome or brass-plated steel, aluminum, copper, or die-cast zinc alloy.

2.7 TOOTHBRUSH HOLDERS: Toothbrush holders shall conform to Federal Specifications WW-P-541 and WW-P-541/8, Type VI, and be Class 3 - toothbrush, surface-mounted, Class 4 - toothbrush and tumbler, surface-mounted. Toothbrush holders shall be stainless steel or bright chrome or brass-plated steel, aluminum, copper, or die-cast zinc alloy.

2.8 HARDWARE: The Contractor shall provide all parts, hardware and fasteners necessary for the installation of toilet and bath accessories. All hardware and fasteners shall be stainless steel or chrome or brass-plated corrosive resistant metal. Fasteners shall be tamper-proof, but removable for replacement.

PART 3 EXECUTION

3.1 GENERAL: The Contractor shall repair and replace toilet and bath accessories as part of as part of Work Level I - Scheduled Maintenance, Work Level II - Service Order Work, and Work Level III - Specific Ordered Items of Maintenance, Repair, and Incidental Improvement. Delivery Orders will designate locations and items of work to be accomplished for Work Level III. The Contractor shall repair and replace toilet and bath accessories in the quantities indicated on Delivery Orders.

3.2 INSTALLATION: Replacement of toilet and bath accessories shall be in accordance with the manufacturer's written installation instructions.

DIVISION 11 - EQUIPMENT

SECTION 11450

APPLIANCES

PART 1 GENERAL

1.1 SCOPE: The work covered by this section includes furnishing all plant, labor, equipment, materials, and transportation necessary for the repair and replacement of appliances required in this project.

1.2 APPLICABLE PUBLICATIONS: The publications listed below form a part of this section to the extent referenced. The publications are referred to in the text by basic designation only.

1.2.2 Federal Specification:

W-H-196J & INT AMD 1 Heater, Water, Electric, and Gas-fired, Residential.

OO-G-1513B Garbage Disposer, Household.

1.2.2 American Gas Association (AGA) Standard:

Z21.1-90 Household Cooking Gas Appliances.

Z21.10.1-90 Gas Water Heaters Volume I Storage Water Heaters with Inputs of 75,000 BTU Per Hour or Less.

Z21.10.3-90 Gas Water Heaters Volume III Storage Input Ratings Above 75,000 BTU per hour. Circulating and Instantaneous Water Heaters.

Z21.22-86 Relief Valves and Automatic Gas Shutoff Devices for Hot Water Supply Systems.

1.2.3 American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Handbook; Equipment Volume:

CH 37-88 Household Refrigerators and Freezers.

1.2.4 American Society of Sanitary Engineering (ASSE) Standards:

1008-86 Household Food Waste Disposer Units.

1.2.5 International Association of Plumbing and Mechanical Officials (IAPMO) Publication:

Uniform Plumbing Code (UPC); 1988 Edition.

1.2.6 National Fire Protection Association (NFPA) Standards:

54-88 National Fuel Gas Code.

70-90 National Electrical Code.

1.2.7 Underwriters Laboratories (UL) Standards:

174-89 Household Electric Storage Tank Water Heaters; Eighth Edition, January 22, 1991.

250-83 Household Refrigerators and Freezers; Ninth Edition, December 16, 1991.

430-86 Waste Disposers; Fourth Edition.

749-84 Household Dishwashers; Fourth Edition, December 17, 1991.

858-86 Household Electric Ranges; Thirteenth Edition, April 30, 1990.

1.3 SUBMITTALS:

1.3.1 List of Materials: The Contractor shall submit a certified list of materials or manufacturer's descriptive literature for all major materials proposed for use in work under this section.

1.3.2 Installation, Operation, and Maintenance Instructions: The Contractor shall submit manufacturer's written installation, operation, and maintenance instructions.

PART 2 PRODUCTS

2.1 MATERIALS: Materials furnished under this section shall be standard products of manufacturers regularly engaged in the production of the items, and the most current design which conforms to the requirements specified. Types and sizes of residential appliances shall be the types and sizes required to match the appliances being replaced.

2.2 DISHWASHERS: Dishwashers shall conform to UL 749. Dishwashers shall be full-size built-in type and have the following features: 3-level wash, light wash cycle, rinse and hold cycle, water miser cycle, normal wash cycle, pots and pans cycle, china wash cycle, power miser/air dry option, water heat option, 1-6 hour delay start, automatic rinse injector, pushbutton controls, "ON" indicator light, and white baked enamel finish. Dishwashers shall be 120 volts, 60 hertz AC.

2.3 ELECTRIC RANGES: Electric ranges shall conform to UL 858. Electric ranges shall be 30-inch single oven or 40-inch double oven free-standing type and have the following features: porcelain-enameled cooktop and subtop, two 8-inch and two 6-inch removable surface burner elements with one-piece chrome-plated steel burner bowls, 2 oven racks, glass windowed oven door, automatic

self-cleaning oven, full width storage drawer below, dial-clock with 1-hour timer, interior oven light, burner and oven "ON" indicator lights, and white baked enamel finish. Electric ranges shall be 120/240 volts, 60 hertz AC.

2.4 GARBAGE DISPOSERS: Garbage disposers shall conform to Federal Specification 00-G-1513, Type I, Size 1; ASSE 1008; and UL 430. Garbage disposers shall be continuous feed type, sound insulated, 1/2 horsepower, and 120 volts, 60 hertz AC. Garbage disposers shall have stainless steel grinding chamber, grinding wheel, and grinding rings.

2.5 GAS RANGES: Gas ranges shall conform to AGA Z21.1. Gas ranges shall be 30-inch single oven or 40-inch double oven free-standing type and have the following features: porcelain-enameled cooktop and burner box, pilot-free ignition, four 8-inch surface burners, 2 oven racks, glass windowed oven door, automatic self-cleaning oven, full width storage drawer below, dial-clock with 1-hour timer, interior oven light, "Oven Ready" light, and white baked enamel finish. Gas ranges shall be 120 volts, 60 hertz AC.

2.6 REFRIGERATORS: Refrigerators shall conform to ASHRAE CH 38-83 and UL 250. Refrigerators shall be 14 or 14.5 cubic foot minimum double door without icemaker, 16 or 16.5 cubic foot minimum double door without icemaker, 18 or 18.5 cubic foot minimum with or without icemaker, or 20 cubic foot minimum with or without icemaker. Refrigerators shall have the following features: 3 adjustable shelves and 2 crispers in lighted refrigerator section, 3 fixed shelves and butter and egg bins in refrigerator section door, 1 fixed shelf in lighted freezer section, 2 fixed shelves in freezer section door, automatic self-defrosting, and white baked enamel finish. Refrigerators shall be 120 volts, 60 hertz AC.

2.7 SUMP PUMPS: Sump pumps shall be not than 1/3 horsepower 2,400 gpm at 10 feet of head. Sump pumps shall be fully automatic, electric motor-driven, submersible type, complete with all control equipment necessary to make complete installations. Sump pumps shall be 120 volts, 60 hertz AC.

2.8 WATER HEATERS: Gas-fired water heaters with an input of 75,000 Btuh or less shall conform to Federal Specification W-H-196 and ANSI Z21.10.1. Gas-fired water heaters over 75,000 Btuh input shall conform to ANSI Z21.10.3. Gas-fired water heaters shall be supplied with draft hoods, flues and roof caps as necessary to make complete installations. Electric water heaters shall conform to Federal Specification W-H-196 and UL 174. All water heaters shall be supplied with pressure temperature relief valves conforming to ANSI Z21.22.

2.7.1 Gas-Fired Water Heaters: Gas-fired water heaters shall be 30-gallon capacity with a 34.0 gph recovery rate at 90 degrees F. rise, or 40-gallon capacity with a 41.0 gph recovery rate at 90 degrees F. rise, or 100-gallon capacity with a 80.0 gph recovery rate at 90 degrees F. rise.

2.7.2 Electric Water Heaters: Electric water heaters shall be 52-gallon capacity with a 25.0 gph recovery rate at 90 degrees F. rise, or 82-gallon capacity with a 25.0 gph recovery rate at 90 degrees F. rise. Water heaters shall be 240 volts, 60 hertz AC.

PART 3 EXECUTION

3.1 GENERAL: The Contractor shall repair and replace appliances as part of Work Level I - Scheduled Maintenance (water heaters only), Work Level II - Service Order Work, and Work Level III - Specific Ordered Items of Maintenance. Repair, and Incidental Improvement Delivery Orders will designate locations and items of work to be accomplished for Work Level III.

3.2 INSTALLATION: Repair and replacement of appliances shall be accomplished in accordance with the manufacturer's written installation, operation, and maintenance instructions; and the requirements herein.

3.2.1 Gas Supply Connections: Gas supply connections shall be accomplished in accordance with NFPA 54.

3.2.2 Plumbing Connections: Plumbing connections shall be accomplished in accordance with the Uniform Plumbing Code.

3.2.3 Electrical Supply Connections: Electrical supply connections shall be accomplished in accordance with NFPA 70.

3.3 MAINTENANCE AND REPAIR TASKS AND STANDARDS: Appliance maintenance and repair includes the maintenance and repair tasks and standards contained in Technical Exhibit 22. Maintenance and repair work shall be performed by the Contractor so that the results of the work meet or exceed the standards contained in Technical Exhibit 22. When the minimum maintenance and repair standards are not met the Contractor shall be required to return to quarters and reperform the work until the minimum standards are met at no additional cost to the Government.

DIVISION 12 - FURNISHINGS

SECTION 12510

VENETIAN BLINDS

PART 1 GENERAL

1.1 SCOPE: The work covered by this section includes furnishing all plant, labor, equipment, materials, and transportation necessary for the installation/replacement of venetian blinds required in this project.

1.2 APPLICABLE PUBLICATIONS: The Federal Specification listed below forms a part of this section to the extent referenced. The publication is referred to in the text by basic designation only.

AA-V-00200B Venetian Blinds.

1.3 SUBMITTALS:

1.3.1 List of Materials: The Contractor shall submit a certified list of materials or manufacturer's descriptive literature for all major materials proposed for use in work under this section.

1.3.2 Samples: The Contractor shall submit color samples for selection of colors.

1.3.3 Installation Instructions: The Contractor shall submit manufacturer's written installation instructions.

PART 2 PRODUCTS

2.1 MATERIALS: Materials furnished under this section shall be standard products of manufacturer's regularly engaged in the production of the items, and the most current design which conforms to the requirements specified.

2.2 VENETIAN BLINDS: Venetian blinds shall conform to Federal Specification AA-V-00200 and the requirements herein.

2.2.1 Materials and Components:

2.2.1.1 Headrail: Manufacturer's standard headrail, channel-shaped section fabricated from minimum 0.020-inch thick sheet steel. Increase metal thickness as recommended by the manufacturer for large blind units. Cross-brace for extra rigidity. Furnish complete with tilting mechanism, top and end brace, top cradle, cord lock, and accessory items required for the type of blind and installation indicated.

2.2.1.2 Bottom Rail: Manufacturer's standard tubular steel bottom rail, designed to withstand twisting or sagging. Contour top surface to match slat curvature, with flat or slightly curved bottom. Close ends with manufacturer's standard metal or plastic end caps, of the same color as rail. Finish rail the same color as slats, unless otherwise indicated.

2.2.1.3 Slats: Manufacturer's standard, spring-tempered slats (louver blades), with rounded corners and forming burrs removed, as follows:

2.2.1.3.1 Aluminum slats not less than 0.010 inch thick.

2.2.1.3.2 Provide 1-inch narrow slats, with other components sized to suit.

2.2.1.4 Braided Ladders: Manufacturer's standard polyester support cords with integrally braided ladder rungs. Provide cord size and rung spacing as required for each type of blind shown.

2.2.1.5 Tilter: Furnish wand (or rod) type tilter consisting of standard tilter mechanism adopted for rotating wand operation. Furnish manufacturer's standard plastic or aluminum rod of proper length to suit blind installation.

2.2.1.6 Cords: Manufacturer's standard braided polyester or nylon cords, sized to suit blind type, equipped with soft-molded plastic, rubber or composition tassels securely attached to each cord end.

2.2.1.7 Cord Locks: Manufacturer's standard cord locks as required for each type of blind.

2.2.1.8 Cord Equalizers: Nylon, self-aligning type, designed to maintain horizontal blind position.

2.2.1.9 Finish: Galvanize and phosphate coat all steel parts, followed by manufacturer's standard glass-smooth, baked-on synthetic resin enamel finish. Prime aluminum slats with chromate conversion coating, followed by manufacturer's standard glass-smooth, baked-on synthetic resin enamel finish.

2.2.2 Fabrication and Operation: Prior to fabrication, verify actual opening dimensions by accurate site measurements. Adjust blind dimensions for proper fit in all openings. Fabricate components of blinds from noncorrosive, non-staining, nonfading materials which are completely compatible with each other, and which do not require lubrication during normal expected life. Space supporting tapes or cords in accordance with manufacturer's standards, unless otherwise indicated. Space louver blades (slats) to provide overlap for light exclusion when in the fully closed position. Equip blind units, unless otherwise indicated, for the following operation:

2.2.2.1 Full-tilting operation with slats rotating approximately 180 degrees. Place tilt operating controls on left-hand side of blind units.

2.2.2.2 Full-height raising, to manufacturer's minimum stacking dimension, with lifting cord locks for stopping blinds at any point of ascending or descending travel. Place pull cords on right-hand side of blind units.

PART 3 EXECUTION

3.1 GENERAL: The Contractor shall repair and replace venetian blinds as part of as part of Work Level I - Scheduled Maintenance, Work Level II - Service Order Work, and Work Level III - Specific Ordered Items of Maintenance, Re-

pair, and Incidental Improvement. Delivery Orders will designate locations and items of work to be accomplished for Work Level III. The Contractor shall install and replace venetian blinds in the quantities indicated on Delivery Orders.

3.2 INSTALLATION: Installation/replacement of venetian blinds shall be accomplished in accordance with the manufacturer's written instructions. Provide intermediate supports at intervals to permit easy entrance and removal of head, and to ensure level head and slat position. Provide adequate clearance between sash and diversions between blinds to permit unencumbered operation of sash hardware.

DIVISION 15 - MECHANICAL

SECTION 15810

HUMIDIFIERS

PART 1 GENERAL

1.1 SCOPE: The work covered by this section includes furnishing all plant, labor, equipment, materials, and transportation necessary for the repair and replacement of humidifiers as required in this project.

1.2 APPLICABLE PUBLICATIONS: The publications listed below form a part of this section to the extent referenced. The publications are referred to in the text by basic designation only.

1.2.1 Air Conditioning and Refrigeration Institute (ARI) Standards:

620-89 Self-Contained Humidifiers.

Guideline F-88 Selection, Installation and Servicing of Residential Humidifiers.

1.2.2 International Association of Plumbing and Mechanical Officials (IAPMO) Publication:

Uniform Plumbing Code (UPC); 1988 Edition.

1.2.3 National Fire Protection Association (NFPA) Standards:

70-90 National Electrical Code.

90A-89 Installation of Air Conditioning and Ventilating Systems.

90B-89 Installation of Warm Air Heating and Air Conditioning Systems.

1.2.4 Sheet Metal and Air Conditioning Contractors National Association (SMACNA) Standard:

HVAC Duct Construction Standards - Metal and Flexible; Current Edition.

1.3 SUBMITTALS:

1.3.1 List of Materials: Submit manufacturer's technical product data, including rated capacities of selected model clearly indicated, weights, installation and start-up instructions, and furnished specialties and accessories.

1.3.2 Installation, Operation, and Maintenance Instructions: The Contractor shall submit manufacturer's written installation, operation, and maintenance instructions.

PART 2 PRODUCTS

2.1 MATERIALS: Materials furnished under this section shall be standard products of manufacturers regularly engaged in the production of the items, and the most current design which conforms to the requirements specified. Types and sizes of humidifiers shall be the types and sizes required to match the humidifiers being replaced.

2.2 HUMIDIFIERS: Humidifiers shall be self-contained wetted-element type including all ancillary equipment required for complete installation. Humidifiers shall conform to ARI 620 and ARI 630.

PART 3 EXECUTION

3.1 GENERAL: The Contractor shall repair and replace humidifiers as part of Work Level I - Scheduled Maintenance, Work Level II - Service Order Work, and Work Level III - Specific Ordered Items of Maintenance, Repair, and Incidental Improvement. Delivery Orders will designate locations and items of work to be accomplished for Work Level III. The Contractor shall repair and replace humidifiers in the quantities indicated on Delivery Orders. Work includes all items necessary to make complete installations.

3.2 INSTALLATION: Repair and replacement of humidifiers shall be accomplished in accordance with the manufacturer's written installation, operation, and maintenance instructions; and the requirements herein.

3.2.1 Plumbing Connections: Plumbing connections shall be accomplished in accordance with the Uniform Plumbing Code.

3.2.2 Ductwork Connections: Ductwork connections shall be accomplished in accordance with SMACNA HVAC Duct Construction Standards - Metal and Flexible, and NFPA 90A and 90B.

3.2.3 Electrical Supply Connections: Electrical supply connections shall be accomplished in accordance with NFPA 70.

3.3 MAINTENANCE AND REPAIR TASKS AND STANDARDS: Humidifier maintenance and repair includes the maintenance and repair tasks and standards contained in Technical Exhibit 22. Maintenance and repair work shall be performed by the Contractor so that the results of the work meet or exceed the standards contained in Technical Exhibit 22. When the minimum maintenance and repair standards are not met the Contractor shall be required to return to quarters and reperform the work until the minimum standards are met at no additional cost to the Government.

DIVISION 16 - ELECTRICAL

SECTION 16050

ELECTRICAL

PART 1 GENERAL

1.1 SCOPE: The work covered by this section includes furnishing all plant, labor, equipment, materials, and transportation necessary for repair and replacement of electrical components required in this project.

1.2 APPLICABLE PUBLICATIONS: The publications listed below from a part of this section to the extent referenced. The publications are referred to in the text by basic designation only.

1.2.1 Federal Specification:

W-L-305D & INT AMD 1 Light Set, General Illumination (Emergency or Auxilliary).

1.2.2 National Electrical Manufacturers Association (NEMA) Publications:

AB 1-86 (R1989) Molded Case Circuit Breakers and Molded Case Switches.

WD 1-83 (R1989) Wiring Devices.

1.2.3 National Fire Protection Association (NFPA) Standard:

70-90 National Electrical Code.

1.2.4 Underwriters Laboratories (UL) Publications:

1-85 Flexible Metal Conduit; Eighth Edition, January 3, 1992.

3-84 Flexible Nonmetallic Tubing for Electric Wiring; Eight Edition, March 22, 1990.

5-85 Surface Metal Raceways and Fittings; Tenth Edition, September 21, 1990.

6-81 Rigid Metal Conduit; Ninth Edition, July 8, 1991.

20-86 General-Use Snap Switches; Tenth Edition, July 18, 1991.

44-83 Rubber-Insulated Wires and Cables; Twelfth Edition, December 7, 1990.

62-91 Flexible Cord and Fixture Wire; Fifteenth

Edition, December 20, 1991.

83-91 Thermoplastic-Insulated Wires and Cables; Tenth Edition, November 7, 1991.

217-85 Single and Multiple Station Smoke Detectors; Third Edition, February 27, 1989.

231-88 Power Outlets; Sixth Edition, May 17, 1991.

360-86 Liquid-Tight Flexible Steel Conduit; Third Edition, February 20, 1990.

486A-91 Wire Connectors and Soldering Lugs for Use with Copper Conductors; Eighth Edition, October 8, 1991.

486B-91 Wire Connectors for Use with Aluminum Conductors; Third Edition, April 21, 1992.

489-91 Molded-Case Circuit Breakers and Circuit-Breaker Enclosures; Eighth Edition, March 16, 1992.

493-88 Thermoplastic-Insulated Underground Feeder and Branch-Circuit Cables; Seventh Edition, December 7, 1990.

498-91 Attachment Plugs and Receptacles; Twelfth Edition, January 3, 1992.

514A-91 Metallic Outlet Boxes; Eighth Edition.

514B-89 Fittings for Conduit and Outlet Boxes; Second Edition, August 9, 1990.

514C-88 Nonmetallic Outlet Boxes, Flush-Device Boxes, and Covers; Second Edition, June 13, 1989.

651-89 Schedule 40 and 80 Rigid PVC Conduit; Fifth Edition, December 4, 1989.

651A-89 Type EB and A Rigid PVC Conduit and HDPE Conduit; Second Edition, December 6, 1989.

719-85 Nonmetallic-Sheathed Cables; Ninth Edition, December 20, 1990.

773A-89 Non-Industrial Photoelectric Switches for Lighting Control; Third Edition.

797-83 Electrical Metallic Tubing; Fifth Edition, July 8, 1991.

854-91	Service-Entrance Cables; Eighth Edition, January 13, 1992.
924-90	Emergency Lighting and Power Equipment; Seventh Edition, December 23, 1991.
943-85	Ground-Fault Circuit Interrupters; Second Edition, May 23, 1990.
1570-88	Fluorescent Lighting Fixtures; Third Edition, October 1, 1991.
1571-91	Incandescent Lighting Fixtures; Third Edition, January 21, 1992.
1572-91	High Intensity Discharge Lighting Fixtures; Third Edition, January 29, 1992.

1.3 SUBMITTALS:

1.3.1 List of Materials: The Contractor shall submit a certified list of materials or manufacturer's descriptive literature for all major materials proposed for use in work under this section.

1.3.2 Installation, Operation, and Maintenance Instructions: The Contractor shall submit manufacturer's written installation, operation, and maintenance instructions.

PART 2 PRODUCTS

2.1 MATERIALS: Materials furnished under this section shall be standard products of manufacturers regularly engaged in the production of the items, and the most current design which conforms to the requirements specified.

2.2 CABLE AND WIRING: Cable and wiring shall conform to UL 44, UL 62, UL 83, UL 493, UL 719, or UL 854 as appropriate for the application, and be the type and size which matches the cable and wiring being replaced.

2.3 CIRCUIT BREAKERS: Circuit breakers shall be molded case type, and conform to UL 489 and NEMA AB 1, and be the size which matches the breakers being replaced.

2.4 CONDUIT AND FITTINGS: Conduit and fittings shall conform to UL 1, UL 3, UL 6, UL 360, UL 514B, UL 651, UL 651A, or UL 797 as appropriate for the application, and be the type and size which matches the conduit and fittings being replaced.

2.5 CONNECTORS AND LUGS: Connectors and lugs shall conform to UL 486A or UL 486B as appropriate for the application, and be the type and size which matches the connectors and lugs being replaced.

2.6 COVERS: Covers for outdoor ground fault circuit interrupter (GFCI) receptacles shall be horizontal mounting, single-gang, weatherproof, corrosion resistant die cast aluminum, with self-closing lid, neoprene gaskets, baked-on gray enamel finish, and stainless steel mounting screws. Covers shall be the type and size which matches the covers being replaced.

2.7 DOORBELLS:

2.7.1 Conventional Doorbells: Conventional doorbells shall consist of a wall mounted two-tone chime, transformer, and lighted outdoor wall push-button. Conventional doorbells shall be 120 Volts, 60 Hertz, AC.

2.7.2 Wireless Doorbells: Wireless doorbells shall consist of an outdoor wall mounted push-button/transmitter and an indoor wall mounted receiver/chime such as NuTone Model LA-99N. Wireless doorbells shall be completely battery powered.

2.8 EMERGENCY LIGHTING DEVICES: Emergency lighting devices shall conform to Federal Specification W-L-305, UL 57 and UL 924, and be the type and size indicated on the drawings at the end of this section, or which match the devices being replaced.

2.9 EXIT LIGHTING FIXTURES: Exit lighting fixtures shall conform to UL 57 and UL 924, and the type and size indicated on the drawings at the end of this section, or which match the fixtures being replaced.

2.10 FLUORESCENT LIGHTING FIXTURES: Fluorescent lighting fixtures shall conform to UL 1570, and be the type, style, and size indicated on the drawings at the end of this section, or which match the fixtures being replaced. Fixtures shall be supplied with the lamps indicated. Fixtures shall have energy conserving ballasts and lamps.

2.11 GROUND-FAULT CIRCUIT INTERRUPTERS: Ground-fault interrupter circuit breakers shall conform to UL 943. Ground-fault interrupter receptacles shall conform to NEMA WD 1, UL 498 and UL 943. Ground-fault interrupter receptacles shall be duplex, 15 or 20 amp, 125 volt, 2 pole, 3 wire, ivory, Class A, Group I, and premium Specification Grade. Ground-fault interrupter receptacles shall be Leviton Catalog No. 6199-XI, Hubbell Catalog No. GF-52621, or an approved equal.

2.12 HIGH INTENSITY DISCHARGE LIGHTING FIXTURES: High intensity discharge lighting fixtures shall conform to UL 1572, and be the type, style, and size indicated on the drawings at the end of this section, or which match the fixtures being replaced. Fixtures shall be supplied with the lamps indicated.

2.13 INCANDESCENT LIGHTING FIXTURES: Incandescent lighting fixtures shall conform to UL 1571, and be the type, style and size indicated on the drawings at the end of this section, or which match the fixtures being replaced. Fixtures shall be supplied with the lamps indicated.

2.14 METALLIC OUTLET BOXES AND FITTINGS: Metallic outlet boxes and fittings shall conform to UL 514A and UL 514B as appropriate for the application, and be the type and size which matches the boxes and fittings being replaced.

TE-24 ITEMS REQUIRING SUBMITTALS

TECHNICAL EXHIBIT 24

ITEMS REQUIRING SUBMITTALS

1.1 SCOPE: This technical exhibit provides a summary of submittals which are required in various subsections and technical exhibits of the specifications, and is provided for the convenience of the Contractor and the Government in the administration of the Contract. Any omission of a submittal in this summary, but required elsewhere in the specifications, shall not relieve the Contractor of the responsibility of furnishing the requested submittal.

2.1 DEFINITION: The term "submittal" includes, but is not limited to: catalog cuts and samples; certificates of compliance; certified lists of major equipment and materials; installation, application, and finishing instructions; keying schedules; manufacturer's descriptive literature; operation and maintenance instructions; repair parts lists; shop drawings; test reports and results; batch and weigh tickets; applications for authorizations or permits; material safety data sheets; pesticide container labels; and other related information to be furnished by the Contractor to describe, in detail, specific portions of the work and materials required by the specifications. It also includes records, reports, schedules, forms, checklists, and handouts associated with contract work management.

2.1.1 Certified Lists of Materials: Certified lists of major materials shall include names of manufacturers; brand names, model numbers, stock numbers, or other designations; item descriptions; cross-references to applicable publications; and certification by manufacturers that materials being supplied meet or exceed the requirements specified. Current, dated manufacturer's descriptive literature sufficient to determine conformance with the requirements specified may be submitted in lieu of written certification by manufacturers.

2.1.2 Installation Instructions: Manufacturer's written installation, application and finishing instructions required in various sections of the specifications includes all installation, application and finishing instructions, recommendations, suggestions, and guidance whether published separately, noted on the manufacturer's shop drawings, or printed on the product or its packaging.

2.1.3 Samples: Samples of materials proposed for use in the project shall be furnished to the Contracting Officer, if requested.

2.1.4 Test Reports: Test reports or other technical analyses demonstrating that materials proposed for use in the project conform to the requirements specified shall be furnished to the Contracting Officer, if requested.

2.1.5 Applications for DA Radiation Authorizations or Permits: The Contractor or his testing laboratory shall not operate nuclear density testing equipment without obtaining a Radiation Permit from the Fort Riley Radiation Protection Officer. The Contractor shall prepare and submit DA Form 3337, Application for Department of the Army Radiation Authorization or Permit, 30 days prior to use of nuclear density testing equipment.

3.1 GENERAL: Submittals shall be adequate, in themselves, to determine conformance with the Contract specifications. Certificates of compliance submitted shall be notarized. The Contractor shall coordinate all submittals and review them for accuracy, completeness, and compliance with contract requirements, and indicate his approval thereon as evidence of such coordination and review. Submittals submitted to the Contracting Officer without evidence of the Contractor's approval will be returned without action for resubmission. The Contracting Officer shall indicate his approval or disapproval of the submittals, and if not approved as submitted, indicate his reasons for disapproval. No material for which a submittal is required shall be incorporated into the work without prior approval of the submittal. Approval by the Contracting Officer shall not relieve the Contractor from responsibility for any errors or omissions in shop drawings, nor from responsibility for complying with the requirements of this Contract, except with respect to variations described and approved in compliance with the following paragraph.

4.1 VARIATIONS: If submittals show variations from the Contract requirements, the Contractor shall describe the variations in writing, separate from the basic submittal document, at the time of submission.

5.1 SUBMITTAL SUBMISSION:

5.1.1 Where to Submit: Submission of submittals shall be to the Housing Manager, Building 45, Fort Riley, Kansas 66442-5921.

5.1.2 When to Submit: Whenever possible, all submittals for a project shall be submitted at one time. Material submittals shall be submitted within 30 days after contract award. The Government will process the initial submittal within 10 days after receipt from the Contractor.

5.1.3 What to Submit: All submittals shall be accompanied by properly filled out FORSCOM Forms 59-2-R, which are available from the Contracting Officer. The Contractor shall submit for approval four (4) copies of all submittals except physical samples of materials. Only one item of a physical material sample is required for submission. Eight (8) copies of DA Form 3337, Application for DA Radiation Authorization or Permit shall be submitted. Three (3) sets of submittals shall be retained by the Contracting Officer and one (1) set shall be returned to the Contractor. The one (1) physical material sample submitted shall be retained by the Contracting Officer unless stated otherwise.

6.1 SUBMITTAL SUMMARY: Submittals required by various subsections and technical exhibits of the specifications are summarized as follows:

<u>Referenced Subsection or Technical Exhibit and Paragraph Number</u>	<u>Description of Submittal</u>
Subsection C-1, Paragraph C.1.4.2	Personnel List.
Subsection C-4, Paragraph C.4.7.2	Material Safety Data Sheets and Container Labels for Pesticides.
Subsection C-4, Paragraph C.4.7.3	Computer Generated Samples or Printer

	Proof Copies of Records, Reports, Schedules, Forms, Checklists, and Handouts.
Subsection C-4, Paragraph C.4.7.4	Warranties.
Subsection C-4, Paragraph C.4.9	Facility Folder Supplies.
Subsection C-4, Paragraph C.4.10	Installation, Operation, and Maintenance Manuals; and Installed Appliance and HVAC Equipment Report.
Subsection C-4, Paragraph C.4.11	Licenses, Registrations, Certifications, and Permits.
Subsection C-5, Paragraph C.5.2.3.1.1	Maintenance and Repair Records and Reports.
Subsection C-5, Paragraph C.5.2.3.1.2	Pest Control Service Records, DD Form 1532-1.
Subsection C-5, Paragraph C.5.2.3.2.1	Subterranean Termite Control Inspection Report and Proposal.
Subsection C-5, Paragraph C.5.2.3.2.2	Work Status and Complaint Report.
Subsection C-5, Paragraph C.5.2.3.2.3	Customer Satisfaction Feedback Report.
Subsection C-5, Paragraph C.5.2.3.2.4	Pest Control Service Records and Reports.
Subsection C-5, Paragraph C.5.2.3.2.5	Installed Appliance and HVAC Equipment Report.
Subsection C-5, Paragraph C.5.2.3.2.6	Serials Numbers of New Appliances Report.
Subsection C-5, Paragraph C.5.2.3.2.7	Serials Numbers of Appliances Turned-In to DRMO Report.
Subsection C-5, Paragraph C.5.2.3.2.8	Material Inventory Report.
Subsection C-5, Paragraph C.5.2.3.2.9	Tool Inventory Report.
Subsection C-5, Paragraph C.5.2.3.2.10	Material Issued Report.
Subsection C-5, Paragraph C.5.2.3.2.11	Overdue Tool Report.

Subsection C-5, Paragraph C.5.2.3.3.1	Scheduled Maintenance Master Schedule.
Subsection C-5, Paragraph C.5.2.3.3.2	Scheduled Maintenance Monthly Schedule.
Subsection C-5, Paragraph C.5.2.3.3.3	Work Level III Maintenance Weekly Schedule.
Subsection C-5, Paragraph C.5.2.3.5.1	Scheduled and Vacant Quarters Maintenance Checklists.
Subsection C-5, Paragraph C.5.2.3.5.2	Fireplace and Chimney Inspection Checklists.
Technical Exhibit 23:	
Section 01000, Paragraph 1.3	None.
Section 01012, Paragraph 1.3	None.
Section 01710, Paragraph 1.3	None.
Section 01900, Paragraph 1.3	None.
Section 01901, Paragraph 1.3	None.
Section 01902, Paragraph 1.3	List of Vehicles and Equipment.
Section 01903, Paragraph 1.3	Material Safety Data Sheets and Container Labels for Pesticides, and Certifications.
Section 02050, Paragraph 1.3	Receipts and DD Form 1348-1.
Section 02081, Paragraph 1.3	DD Form 1348-1, List of Materials, and Test Results.
Section 02223, Paragraph 1.3	List of Materials, Test Results, and Request for DA Radiation Authorization or Permit.
Section 02831, Paragraph 1.3	List of Materials and Installation Instructions.
Section 02861, Paragraph 1.3	List of Materials.
Section 02864, Paragraph 1.3	List of Materials.
Section 02866, Paragraph 1.3	List of Materials.
Section 02877, Paragraph 1.3	List of Materials.
Section 02930, Paragraph 1.3	List of Materials and Application In-

DACA41-94-R-0012

TE-25 RATE OF PERFORMANCE

TE-25-I

TECHNICAL EXHIBIT 25

RATE OF PERFORMANCE

1.1 SCOPE: This technical exhibit sets forth the required rates of performance for this contract.

2.1 WORK LEVEL I - SCHEDULED MAINTENANCE: The rate of performance for Work Level I - Scheduled Maintenance shall be as indicated in paragraphs C.1.5.5.1 thru C.1.5.5.6.

3.1 WORK LEVEL II - SERVICE ORDER WORK: The rate of performance for Work Level II - Service Order Work shall be as indicated in paragraphs C.1.5.6.8 and C.1.5.6.9.

4.1 WORK LEVEL III - SPECIFIC ORDERED ITEMS OF MAINTENANCE, REPAIR, AND INCIDENTAL IMPROVEMENT: The rate of performance for Work Level III - Specific Ordered Items of Maintenance, Repair, and Incidental Improvement shall be as follows:

Work Item <u>Number</u>	<u>Description Of Work</u>	<u>Maximum Time Allowed In Calendar Days if This is The Only Work Item To Be Accomplished At A Set Of Quarters or Billets</u>
INTERIOR MAINTENANCE:		
Repair, Prepare, Prime, and Paint Walls, Ceilings, Cabinets, Doors, Windows, and Trim Including Re- placement of Wall Coverings:		
1A	Quarters With Less Than 1,500 Gross SF of Floor Area.	2.0
1B	Quarters With 1,500 to 2,999 Gross SF of Floor Area.	3.0
1C	Quarters With More Than 3,000 Gross SF of Floor Area.	4.0
Gypsum Wallboard Repairs Requiring Replacement of Wallboard and Taping and/or Plaster Repairs Requir- ing Three Coats of Plaster:		
2A	With Whole House Painting.	1.0
2B	Without Whole House Painting.	3.0
Repair, Prepare and Refinish Wood Strip Floors, Stair Treads, Risers, Landings, and Railings:		
3A	All of the Above.	4.0
3B	Stair Treads, Risers, and Landings Only.	2.0

Work Item Number	Description Of Work	Maximum Time Allowed In Calendar Days If This Is The Only Work Item To Be Accomplished At A Set Of Quarters or Billets
3C	Railings Only.	1.0
	Strip, Prepare and Refinish Wood (Stain, Seal, and Two Coats of Finish):	
4A	Kitchen and Bathroom Cabinets.	4.0
4B	Balustrades (Includes Top Rails Balusters, and Bottom Rails).	4.0
4C	Fireplace Mantel.	4.0
	Replace Resilient Flooring (Vinyl Tile and Sheet Flooring):	
5A	Quarters With Less Than 200 SF of Floor Area to be Retiled.	1.0
5B	Quarters With More Than 200 SF of Floor Area to be Retiled.	2.0
6	Replace Carpet and Pad or Steam Clean Carpet.	1.0
7	Replace a Sink, Lavatory, Faucet, Flush Valve, Water Closet, or Urinal.	.5
	Replace a Bathtub or Shower Receptor:	
8A	With Fiberglass or Steel Surround.	1.0
8B	With Thin Set Ceramic Tile Surround.	3.0
8C	With Mud-Set Ceramic Tile Surround.	4.0
9	Replace Kitchen Countertop.	1.0
10	Miscellaneous Repair and Replacement Work.	1.0
	Complete Quarters Cleaning:	
11A	Quarters With Less Than 900 Gross SF of Floor Area.	1.0
11B	Quarters With 900 to 2,999 Gross SF of Floor Area.	2.0
11C	Quarters With More Than 3,000 Gross SF of Floor Area.	3.0
	Miscellaneous Cleaning:	

12A	Less Than Five Different Items.	0.5
		Maximum Time Allowed In Calendar Days If This Is The Only Work Item To Be Accomplished At A Set Of Quarters or Billets.
<u>Work Item Number</u>	<u>Description Of Work</u>	
12B	Five or More Different Items.	1.0
	Vacant Quarters Maintenance and Repair:	
13A	Quarters With Less Than 1,500 Gross SF of Floor Area.	1.0
13B	Quarters With More Than 1,500 Gross SF of Floor Area.	2.0
	EXTERIOR MAINTENANCE:	
14	Clean Gutters and Downspouts.	0.25
15	Repair, Align and Rehang Gutters or Downspouts.	0.5
16	Replace Gutters, Downspouts, Splash Blocks, or Wood Trim Including Priming and Painting.	1.0
17	Clean Chimney Flue, Fireplace Firebox and Ashpit.	0.25
18	Replace Grate and/or Chimney Cap; or Reseal Chimney/Roof Flashing.	0.125
19	Tuckpoint Firebrick; Replace Firebrick; or Repair or Replace Damper or Ashpit Door.	1.0
20	RegROUT Mantel/Hearth Ceramic Tile.	0.5
21	Prepare and Paint Exterior of Quarters.	3.0
22	Make Miscellaneous Repairs to Exterior of Quarters.	1.0
23	Replace Insect Screen and Wood Trim on Patio and Porch Enclosures Including Associated Priming and Painting.	2.0
24	Grounds Maintenance Including Mowing, Cleaning Up Leaves, Cleaning Porches, Steps, Patios, Garages, Carparks, and Shoveling Snow:	1.0
25	Quality Control	.5

NOTES:

(1) The maximum allowable time to complete all work at a given set of quarters or billets is 8 calendar days regardless of the number of work items. Exceptions can be made as deemed appropriate by the Ordering Officer. All work items except for work item numbers 2A/B, 3A/B, 5A/B, 6, 8A/B/C, 11A/B/C, 12A/B, 13A/B, 17, 21, and 25 shall be done concurrently and the total time allowed to complete all work contained in the Delivery Order shall be determined by the longest time allowed for the individual work items contained in the Job Order not to exceed 8 calendar days. For example, if a Job Order includes work items numbers 1B, 7, 9, 10, 14 and 23 the maximum time allowed for the Contractor to complete the work would be 3 days, which is the amount of time allowed for the longest work item included, or No. 1B in this example.

(2) Work item numbers 3A and 3B, Repair, Prepare and Refinish Wood Strip Floors, Stair Treads, Risers, Landings, and Railings, cannot be done concurrently with other work items and should be accomplished after all other work has been completed. When work item number 3A, for example, is included in a Job Order, the total number of calendar days allowed for the accomplishment of all work will be the time allowed for all other work items as described in the preceding paragraph plus 4 additional calendar days to accomplish work item number 3A. For example, if a Job Order is issued for a 2,000 sf quarters and includes work item number 3A with work items 1B, 7, 9, 10, 14 and 23 the total time would be 7 calendar days or the sum of 4 days for work item number 3A and 3 days for work item number 1B.

(3) It should be noted that work rates are expressed in calendar days, not work days, which may require work on Saturdays and Sundays to complete work within the calendar days stipulated. The Contractor shall not begin work before 8:00 a.m. in the morning nor work past 8:00 p.m. in the evening seven days a week.