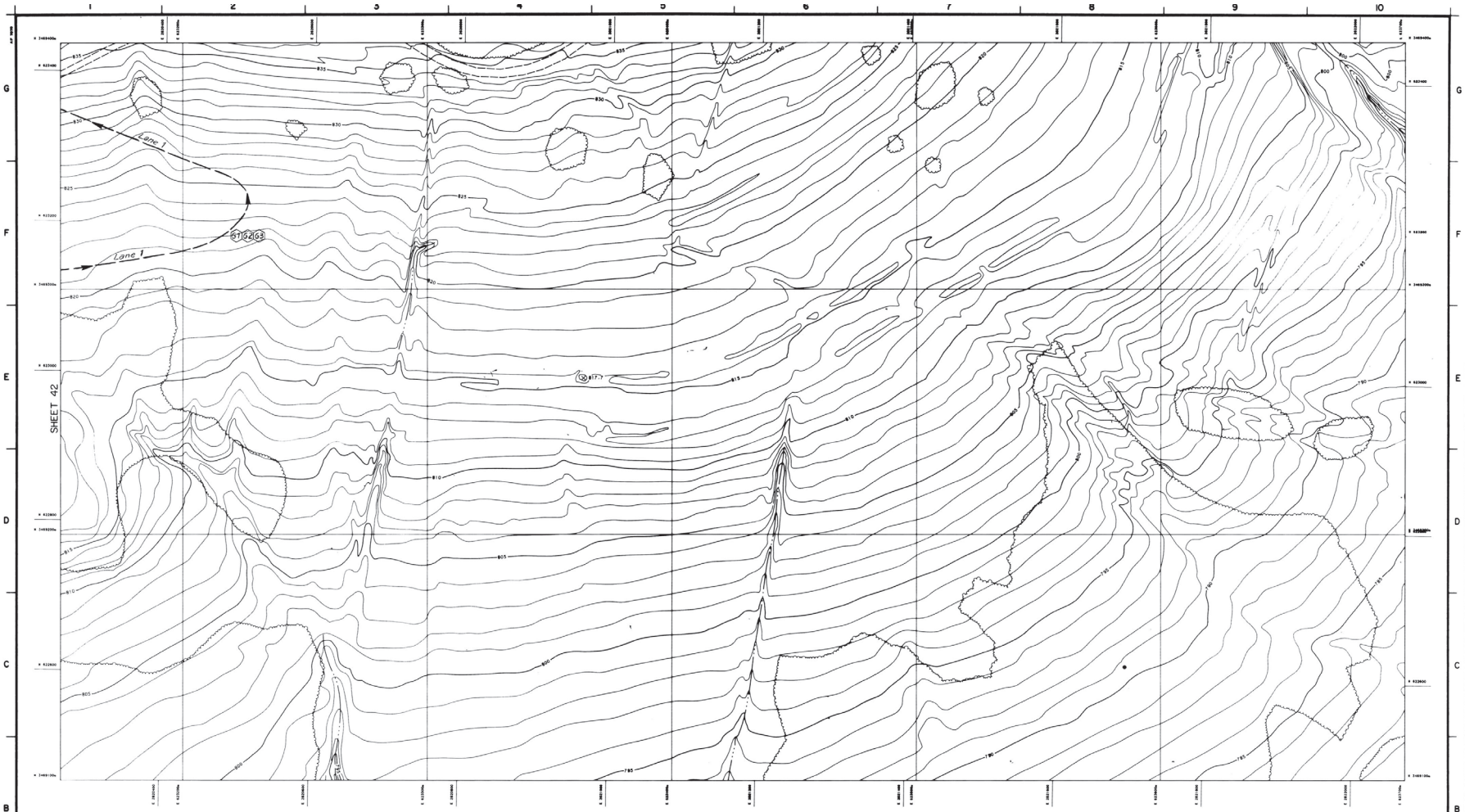


DWG. NO. 00349130

REVISION NO.	REVISED BY	DATE	DESCRIPTION OF REVISION
		7/16/85	REV. SEQ AS-BUILT

WATKINS AND ASSOCIATES, INC.
architects · engineers · planners
Lexington, Kentucky

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
CORPS OF ENGINEERS
FORT WORTH, TEXAS

DESIGNED BY: MUF
DRAWN BY: BRH
REVIEWED BY: AOL 000260
SUBMITTED BY: ENGINEER:

FORT HOOD, TEXAS

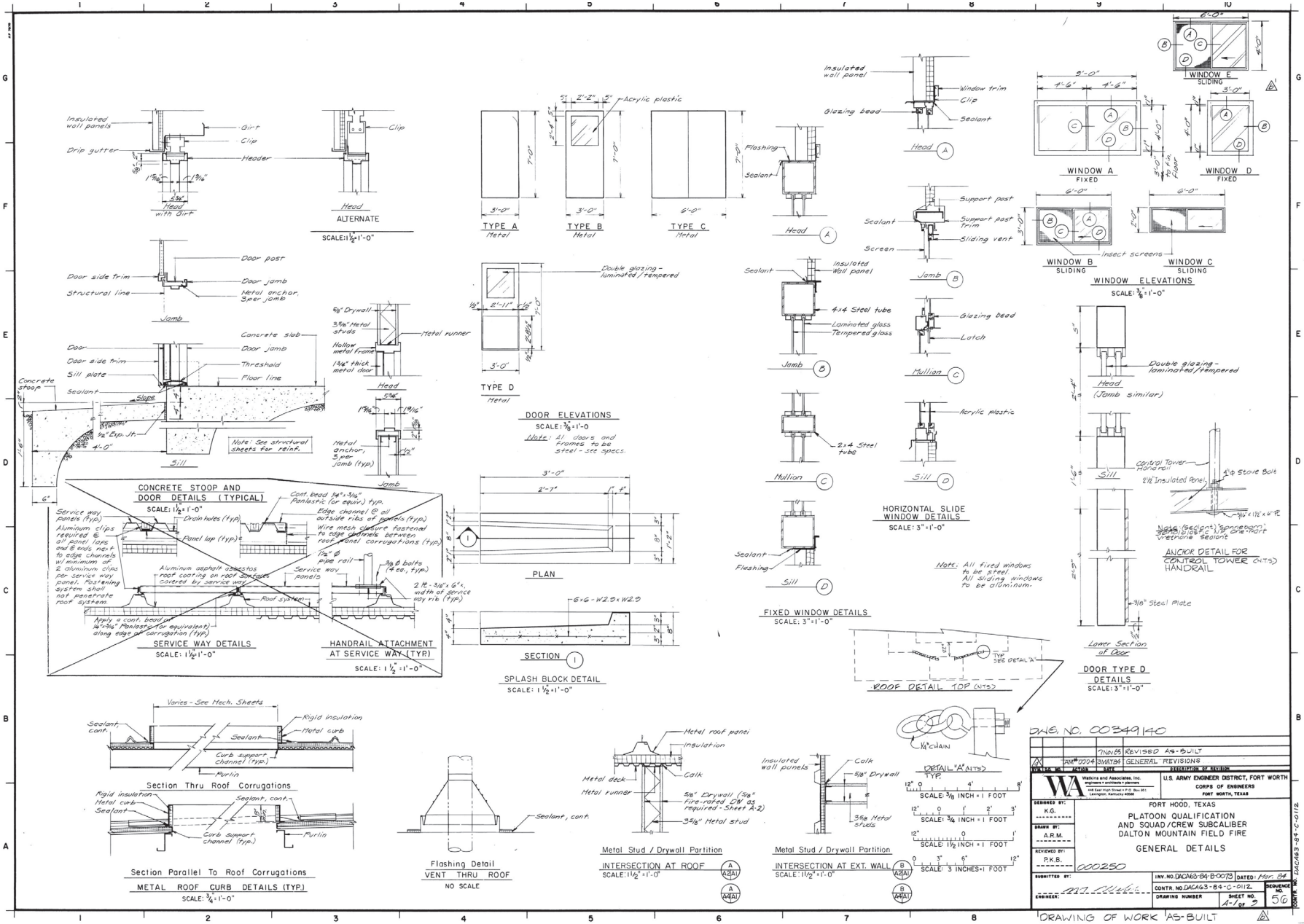
PLATOON QUALIFICATION
AND SQUAD/CREW SUBCALIBER
DALTON MOUNTAIN FIELD FIRE

TRAINING RANGE SITE PLAN

INV. NO. DACA63-84-B-0073 DATED: Mar 84
CONTR. NO. DACA63-84-C-0112
DRAWING NUMBER C4/of 58
SHEET NO. 55
SEQUENCE NO.
CONTR. NO. DACA63-84-C-0112

50 0 50 100
SCALE: 1" = 50'-0"

DRAWING OF WORK AS-BUILT



DAES. NO. 00349140

REV. NO.	REVISION NO.	DATE	DESCRIPTION OF REVISION
		7NOV85	REVISED AS-BUILT
1	TAM#0004	3MAY84	GENERAL REVISIONS

Watkins and Associates, Inc. engineers • architects • planners
148 East High Street • P.O. Box 361 Lexington, Kentucky 40588

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
CORPS OF ENGINEERS
FORT WORTH, TEXAS

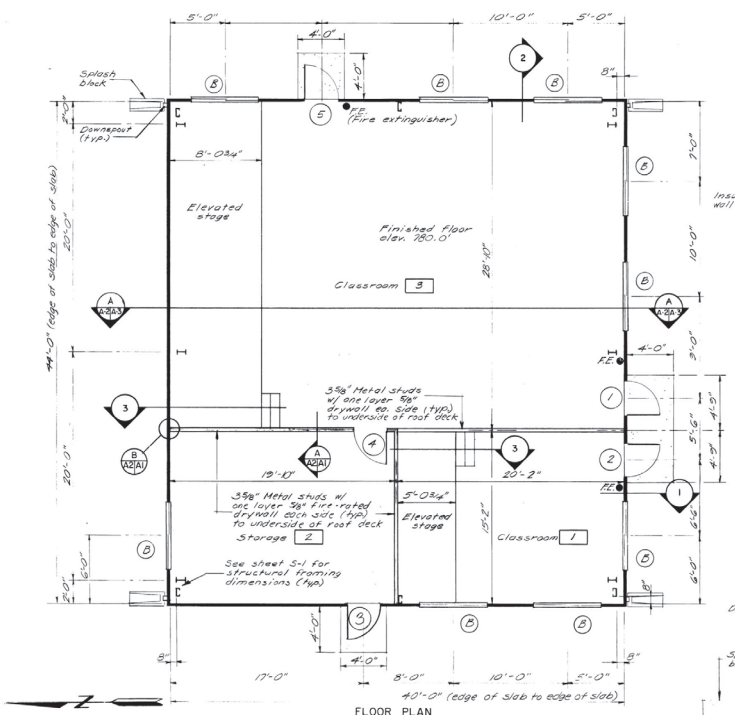
DESIGNED BY: K.G.
DRAWN BY: A.R.M.
REVIEWED BY: P.K.B.
SUBMITTED BY:
ENGINEER:

FORT HOOD, TEXAS
PLATOON QUALIFICATION AND SQUAD/CREW SUBCALIBER DALTON MOUNTAIN FIELD FIRE
GENERAL DETAILS

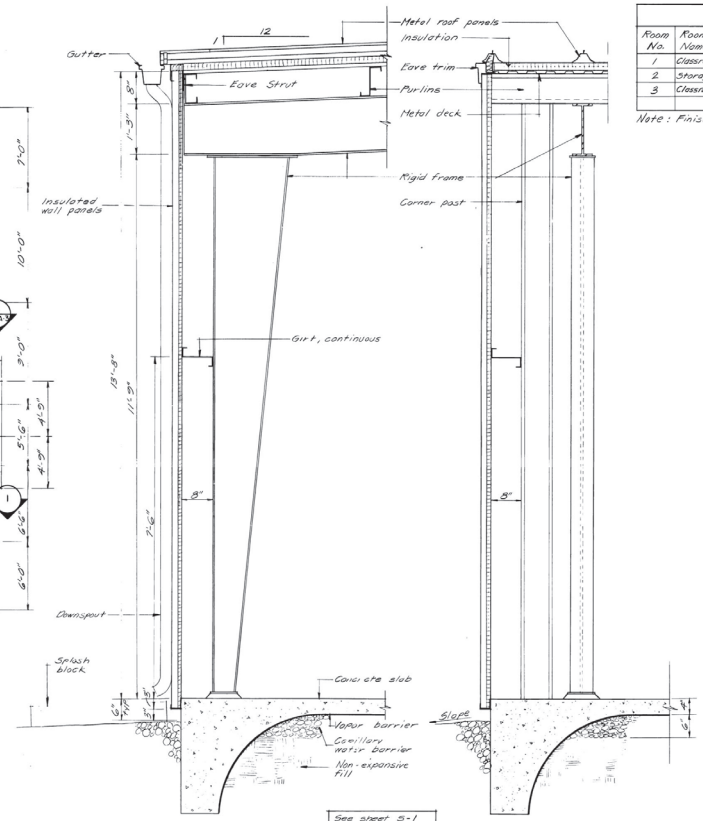
000250

INV. NO. DACA63-84-B-0073 DATED: Mar. 84
CONTR. NO. DACA63-84-C-0112
DRAWING NUMBER A-1 of 3
SEQUENCE NO. 50
CONTR. NO. DACA63-84-C-0112

DRAWING OF WORK AS-BUILT



FLOOR PLAN
SCALE: ¼" = 1'-0"



See sheet S-1 for reinforcing and slab detailing

WALL SECTION 1
SCALE: 1" = 1'-0"

WALL SECTION 2
SCALE: 1" = 1'-0"

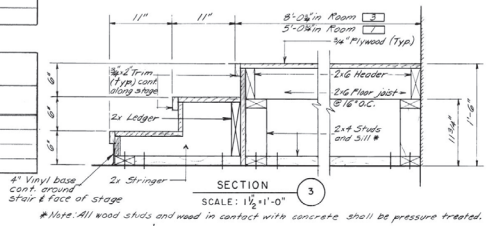
ROOM FINISH SCHEDULE								
Room No.	Room Name	Floor	Base	Wall Material	Wall Finish	Ceiling Material	Ceiling Hgt.	Remarks
1	Classroom	Conc.	Vinyl	Drywall	Paint	Exposed		
2	Storage	Conc.	Vinyl	Drywall	Paint	Exposed		
3	Classroom	Conc.	Vinyl	Drywall	Paint	Exposed		

Note: Finishes exclude interior & exterior walls

DOOR SCHEDULE									
Door No.	No. Of Doors	Door Size Width	Door Size Height	Door Size Thick.	Door Type	Material Door	Material Frame	Hdwr. Set No.	Remarks
1	1	3'-0"	7'-0"	1¾"	B	Steel	Steel	HW-1	Insulated doors
2	1	3'-0"	7'-0"	1¾"	B	Steel	Steel	HW-1	Insulated doors
3	1	3'-0"	7'-0"	1¾"	A	Steel	Steel	HW-4	Insulated doors *
4	1	3'-0"	7'-0"	1¾"	A	Steel	Steel	HW-5	*
5	1	3'-0"	7'-0"	1¾"	B	Steel	Steel	HW-1	Insulated doors

* Self-Closing "B" Class Fire Door

WINDOW SCHEDULE							
Window No.	No. Of Windows	Window Size Width	Window Size Height	Window Type	Material	Glazing	Remarks
B	9	6'-0"	3'-0"	Sliding	Aluminum	Acrylic Plastic	



SECTION 3
SCALE: 1½" = 1'-0"

* Note: All wood studs and wood in contact with concrete shall be pressure treated.

12" 0 5' 10'
SCALE: ¼ INCH = 1 FOOT

12" 0 1' 2'
SCALE: 1 INCH = 1 FOOT

12" 6" 0 1'
SCALE: 1½ INCH = 1 FOOT

DWG. NO. 00249150

REVISION NO.	DATE	REVISION	
	7NOV85	28U1580	AS-BUILT

Watkins and Associates, Inc. engineers • architects • planners
440 East High Street • P.O. Box 951
Lexington, Kentucky 40588

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
CORPS OF ENGINEERS
FORT WORTH, TEXAS

DESIGNED BY: K.G.
DRAWN BY: A.R.M.- J.D.G.
REVIEWED BY: P.K.B.

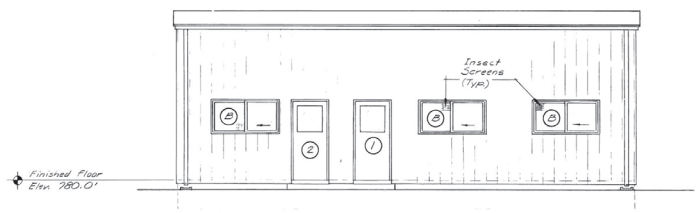
000250

FORT HOOD, TEXAS
PLATOON QUALIFICATION AND SQUAD/CREW SUBCALIBER DALTON MOUNTAIN FIELD FIRE
INSTRUCTIONAL BUILDING
FLOOR PLAN, SECTIONS AND SCHEDULES

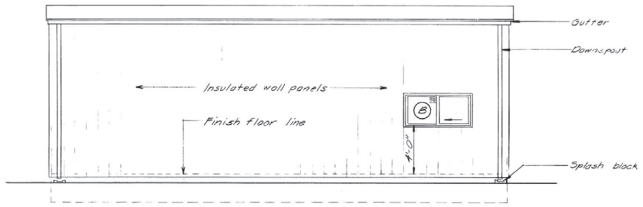
SUBMITTED BY:
ENGINEER:
INV. NO. DACA63-84-B-0073 DATED: Mar. 84
CONTR. NO. DACA63-84-C-0112
DRAWING NUMBER
SHEET NO. A-2 OF 9
SEQUENCE NO. 57

CONTR. NO. DACA63-84-C-0112

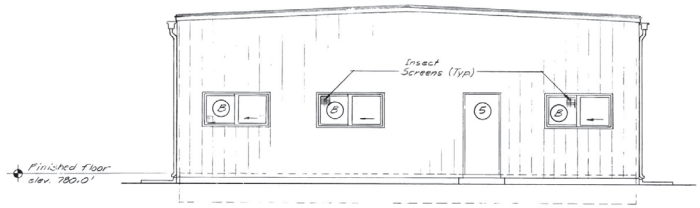
DRAWING OF WORK AS-BUILT



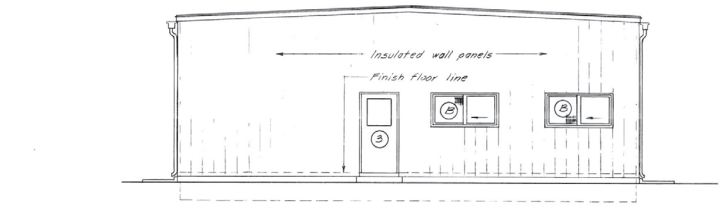
EAST ELEVATION
SCALE: 1/4" = 1'-0"



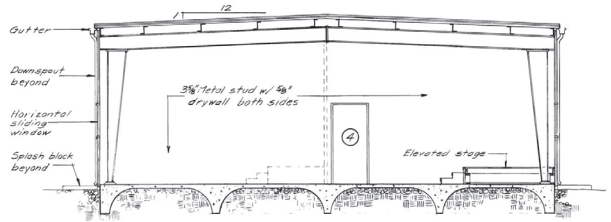
WEST ELEVATION
SCALE: 1/4" = 1'-0"



NORTH ELEVATION
SCALE: 1/4" = 1'-0"



SOUTH ELEVATION
SCALE: 1/4" = 1'-0"



See sheet S-1 for slab reinforcing and detailing

BUILDING SECTION A (A-3/A-5)
SCALE: 1/4" = 1'-0"

12" 0 5' 10"
SCALE: 1/4 INCH = 1 FOOT

DWG. NO. 00349.60

REVISION NO.	DATE	BY	DESCRIPTION OF REVISION
	7Nov85	RBV	REVISED AS-BUILT

Watkins and Associates, Inc.
engineers • architects • planners
445 East High Street • P.O. Box 951
Lexington, Kentucky 40588

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
CORPS OF ENGINEERS
FORT WORTH, TEXAS

DESIGNED BY: K.G.
DRAWN BY: A.R.M.
REVIEWED BY: P.K.B.

000250 FORT HOOD, TEXAS

PLATOON QUALIFICATION
AND SQUAD/CREW SUBCALIBER
DALTON MOUNTAIN FIELD FIRE

INSTRUCTIONAL BUILDING

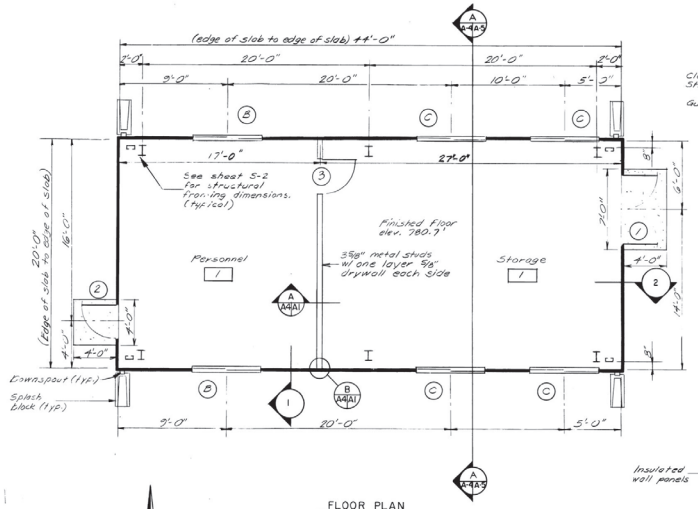
ELEVATIONS AND SECTION

SUBMITTED BY:
ENGINEER:

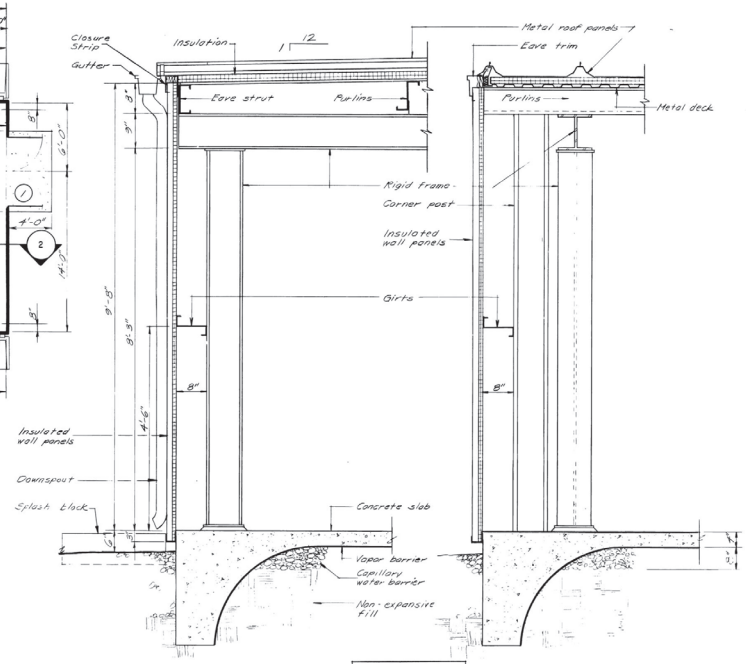
INV. NO. DACA63-84-B-0078 DATED: 1 Mar. 84
CONTR. NO. DACA63-84-C-0112
DRAWING NUMBER A-5 SHEET NO. 5 of 5
SEQUENCE NO. 58

CONTR. NO. DACA63-84-C-0112

DRAWING OF WORK AS-BUILT



FLOOR PLAN
SCALE: 1/4" = 1'-0"



WALL SECTION 1
SCALE: 1" = 1'-0"

WALL SECTION 2
SCALE: 1" = 1'-0"

ROOM FINISH SCHEDULE								
Room No.	Room Name	Floor	Base	Wall Material	Wall Finish	Ceiling Material	Ceiling Hgt.	Remarks
1	Storage	Conc.	Vinyl	Drywall	Paint	Exposed		
2	Personnel	Conc.	Vinyl	Drywall	Paint	Exposed		

Note: Finishes exclude interior of exterior walls

DOOR SCHEDULE									
Door No.	No. Of Doors	Door Size Width	Door Size Height	Door Size Thick.	Door Type	Material Door	Material Frame	Hdwr. Set No.	Remarks
1	2	6'-0"	7'-0"	1 3/4"	C	Steel	Steel	HW2	Insulated doors
2	1	3'-0"	7'-0"	1 3/4"	B	Steel	Steel	HW1	Insulated door
3	1	3'-0"	7'-0"	1 3/4"	A	Steel	Steel	HW5	

WINDOW SCHEDULE							
Window No.	No. Of Windows	Window Size Width	Window Size Height	Window Type	Material	Glazing	Remarks
C	4	6'-0"	2'-0"	Sliding	Aluminum	Acrylic Plastic	
B	2	6'-0"	3'-0"	Sliding	Aluminum	Acrylic Plastic	

12" 0 5' 10'
SCALE: 1/4 INCH = 1 FOOT

12" 0 1' 2'
SCALE: 1 INCH = 1 FOOT

12" 0 1'
SCALE: 1 1/2 INCH = 1 FOOT

DWG. NO. 00349170

REVISION NO.	ACTION	DATE	DESCRIPTION OF REVISION
		7NOV85	REVISED AS-BUILT

Watkins and Associates, Inc.
engineers • architects • planners
408 East High Street • P.O. Box 681
Lexington, Kentucky 40588

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
CORPS OF ENGINEERS
FORT WORTH, TEXAS

DESIGNED BY: K.G.
DRAWN BY: A.R.M. - J.D.G.
REVIEWED BY: P.K.B.
SUBMITTED BY:
ENGINEER:

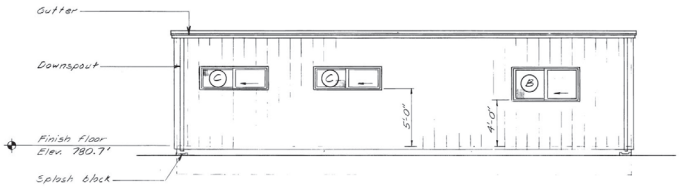
000250 FORT HOOD, TEXAS
PLATOON QUALIFICATION AND SQUAD/CREW SUBCALIBER DALTON MOUNTAIN FIELD FIRE

RANGE PERSONNEL / STORAGE BUILDING
FLOOR PLAN; SECTIONS, SCHEDULES AND DETAIL

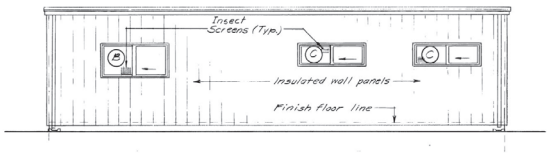
INV. NO. DACA63-84-B-0073 DATED: Mar. 84
CONTR. NO. DACA63-84-C-0112
DRAWING NUMBER
SHEET NO. 1 of 3
SEQUENCE NO. 59

CONTR. NO. DACA63-84-C-0112

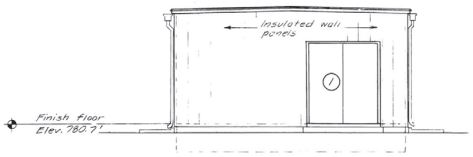
DRAWING OF WORK AS-BUILT



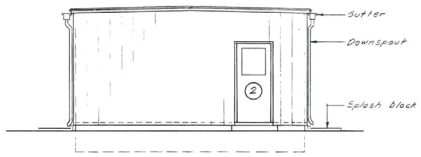
NORTH ELEVATION
SCALE: 1/4" = 1'-0"



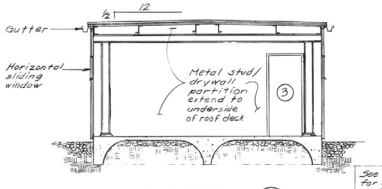
SOUTH ELEVATION
SCALE: 1/4" = 1'-0"



EAST ELEVATION
SCALE: 1/4" = 1'-0"



WEST ELEVATION
SCALE: 1/4" = 1'-0"



BUILDING SECTION (A / A-4A-5)
SCALE: 1/4" = 1'-0"

See sheet S-2 for slab reinforcing and detailing

12" 0 5' 10'
SCALE: 1/4 INCH = 1 FOOT

DWG. NO. 00349180

REVISION NO.	AUTHOR	DATE	DESCRIPTION OF REVISION
		7 Nov 85	REVISED AS-BUILT

Watkins and Associates, Inc
engineers • architects • planners
1400East High Street • P.O. Box 351
Lexington, Kentucky 40588

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
CORPS OF ENGINEERS
FORT WORTH, TEXAS

DESIGNED BY: K.G.
DRAWN BY: A.R.M.
REVIEWED BY: P.K.B.

000250 FORT HOOD, TEXAS
PLATOON QUALIFICATION
AND SQUAD/CREW SUBCALIBER
DALTON MOUNTAIN FIELD FIRE

RANGE PERSONNEL / STORAGE BUILDING

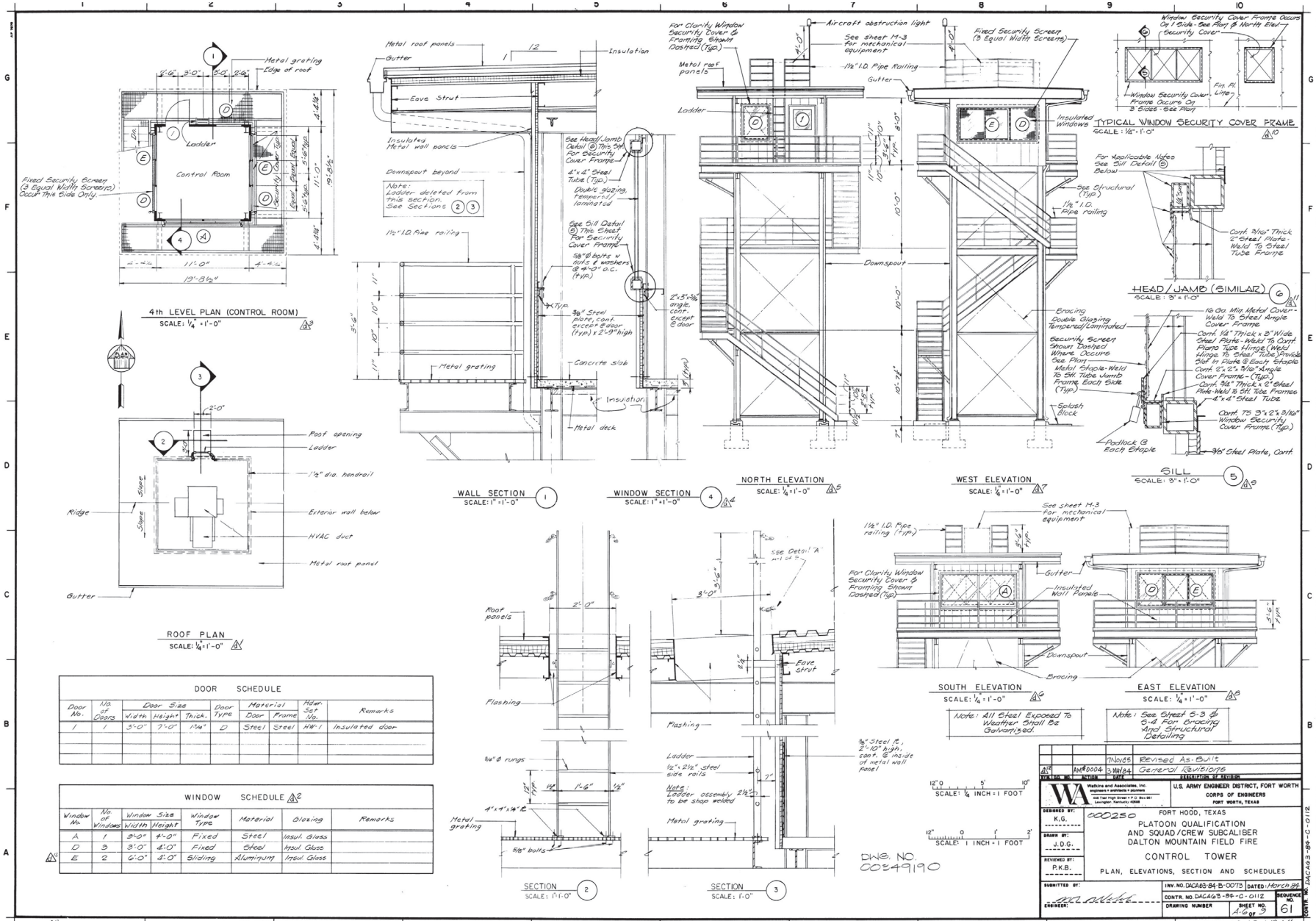
ELEVATIONS AND SECTION

SUBMITTED BY:
ENGINEER:

INV. NO. DACA63-84-B-0073 DATED: Nov. 84
CONTR. NO. DACA63-84-C-0112
DRAWING NUMBER
SHEET NO. A-5 OF 9
SEQUENCE NO. 60

CONTR. NO. DACA63-84-C-0112

DRAWING OF WORK AS-BUILT



DOOR SCHEDULE

Door No.	No. of Doors	Door Size Width	Door Size Height	Door Size Thick.	Door Type	Material Door	Material Frame	Hdwr. Set No.	Remarks
1	1	3'-0"	7'-0"	1¾"	D	Steel	Steel	HW-1	Insulated door

WINDOW SCHEDULE 2

Window No.	No. of Windows	Window Size Width	Window Size Height	Window Type	Material	Glazing	Remarks
A	1	3'-0"	4'-0"	Fixed	Steel	Insul. Glass	
D	3	3'-0"	4'-0"	Fixed	Steel	Insul. Glass	
E	2	6'-0"	4'-0"	Sliding	Aluminum	Insul. Glass	

REV. NO.	INIT.	DATE	DESCRIPTION OF REVISION
		7Nov85	Revised As-Built
2	AMR 00004	3 MAY 84	General Revisions

Watkins and Associates, Inc. engineers • architects • planners
440 East High Street • P.O. Box 987
Lexington, Kentucky 40588

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
CORPS OF ENGINEERS
FORT WORTH, TEXAS

DESIGNED BY: K.G.
DRAWN BY: J.D.G.
REVIEWED BY: P.K.B.
SUBMITTED BY:
ENGINEER:

000250 FORT HOOD, TEXAS

PLATOON QUALIFICATION AND SQUAD/CREW SUBCALIBER DALTON MOUNTAIN FIELD FIRE

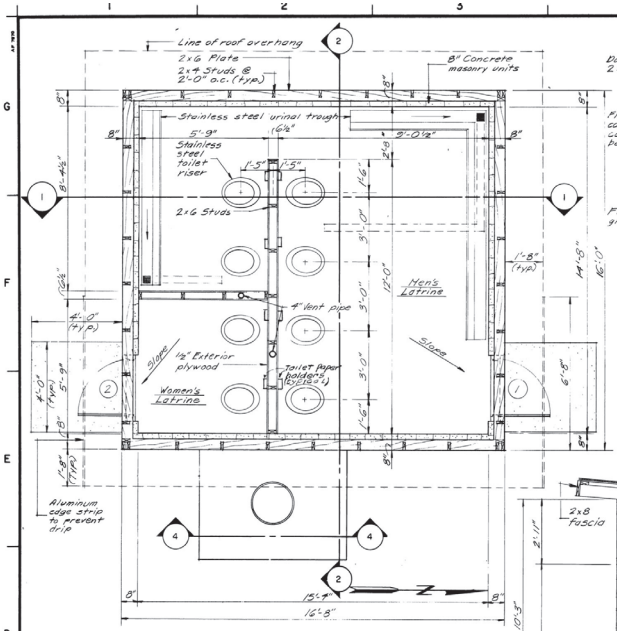
CONTROL TOWER

PLAN, ELEVATIONS, SECTION AND SCHEDULES

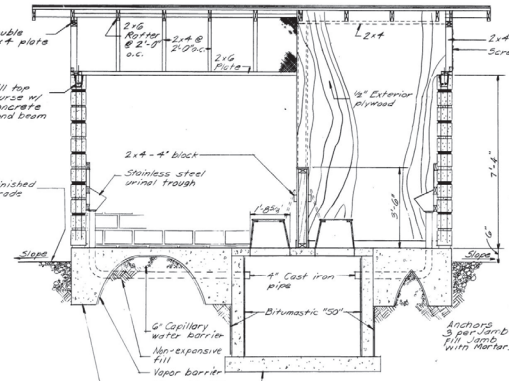
INV. NO. DACA63-84-B-0073 DATED: March 84
CONTR. NO. DACA63-84-C-0112
DRAWING NUMBER A-601
SHEET NO. 7 OF 9
SEQUENCE NO. 61

CONTR. NO. DACA63-84-C-0112

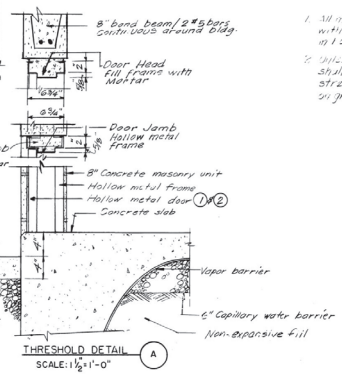
DRAWING OF WORK AS-BUILT



FLOOR PLAN
SCALE: 1/2" = 1'-0"



BUILDING SECTION (1)
SCALE 1/2" = 1'-0"

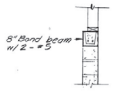


THRESHOLD DETAIL (A)
SCALE: 1 1/2" = 1'-0"

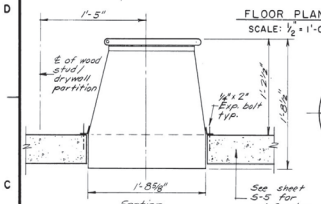
DOOR SCHEDULE									
Door No.	No. of Doors	Door Size Width	Door Size Height	Door Size Thick	Door Type	Material Door	Material Frame	Hdwr. Set No.	Remarks
1	1	3'-0"	6'-6"	1 3/4"	A	Metal	Metal	HW3	
2	1	3'-0"	6'-6"	1 3/4"	A	Metal	Metal	HW3	

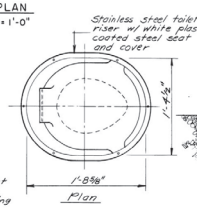
NOTES

1. All masonry bond beams and lintels shall be filled with 2500 psi grout. Cavities in walls shall be not filled in bond beams.
2. Unless otherwise noted, all concrete masonry units shall be a specified minimum compressive strength of 2500 psi on net area (1000 psi on gross area) at 28 days.



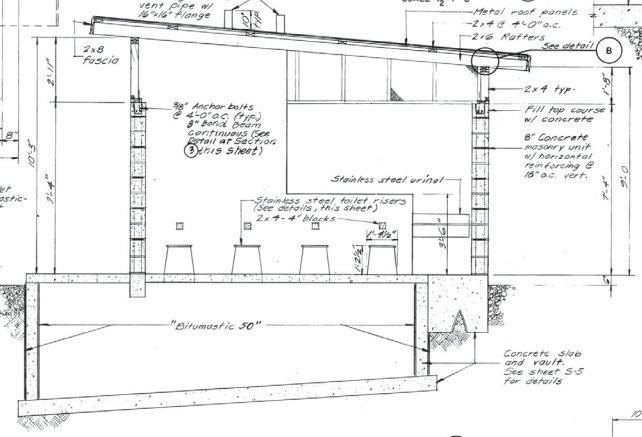
SECTION (3)
SCALE: 1 1/2" = 1'-0"



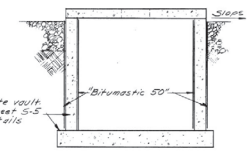


Note: Stainless steel toilet risers as manufactured by "Monogram Industries Inc." or equivalent

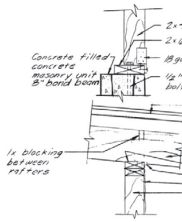
TOILET RISER DETAILS
SCALE: 1 1/2" = 1'-0"



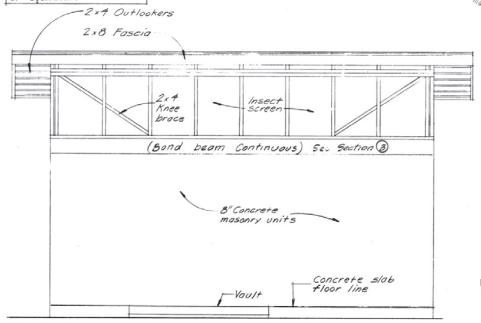
BUILDING SECTION (2)
SCALE: 1/2" = 1'-0"



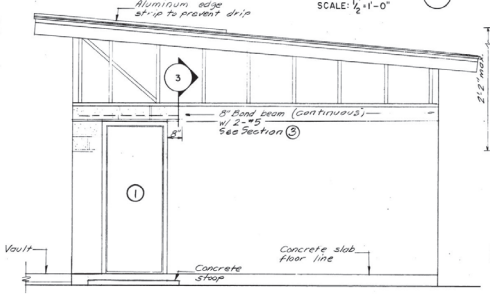
SECTION THRU PIT (4)
SCALE: 1/2" = 1'-0"



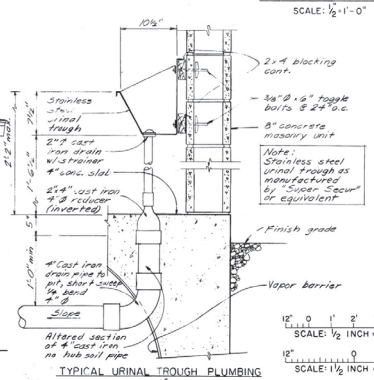
ANCHORAGE DETAIL (B)
SCALE: 1 1/2" = 1'-0"



WEST ELEVATION
SCALE: 1/2" = 1'-0"



SOUTH ELEVATION
SCALE: 1/2" = 1'-0"



Note: Stainless steel urinal trough as manufactured by "Super Saver" or equivalent

TYPICAL URINAL TROUGH PLUMBING
SCALE: 1 1/2" = 1'-0"

SCALE: 1/2 INCH = 1 FOOT

SCALE: 1 1/2 INCH = 1 FOOT

DWG. NO. 00349200

REV. NO.	DATE	DESCRIPTION OF REVISION
	7/10/85	REVISED AS-BUILT

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U.S. ARMY ENGINEER DISTRICT, FORT WORTH
CORPS OF ENGINEERS
FORT WORTH, TEXAS

DESIGNED BY: JG
DRAWN BY: JDG
REVIEWED BY: P.K.B.
SUBMITTED BY:
ENGINEER:

000250 FORT HOOD, TEXAS

PLATOON QUALIFICATION AND SQUAD/CREW SUBCALIBER DALTON MOUNTAIN FIELD FIRE

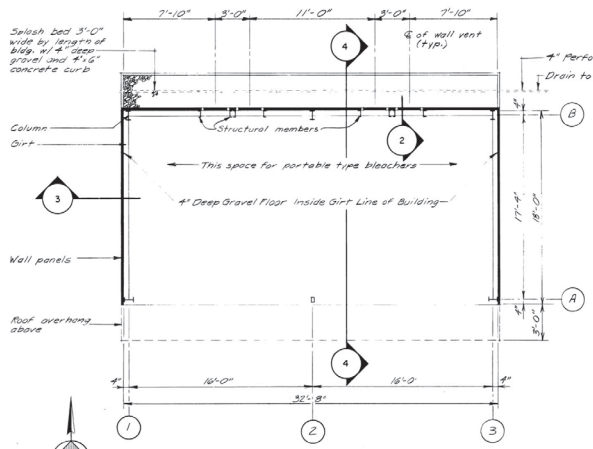
VAULT LATRINE

PLANS, ELEVATIONS, SECTIONS AND DETAILS

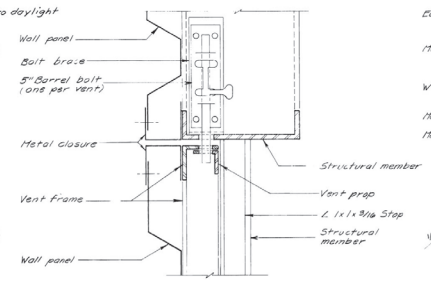
INV. NO. IWCA63-84-B-0073 DATED: Mar 84
CONTR. NO. DACA63-84-C-0112
DRAWING NUMBER A-1 SHEET NO. 3 OF 3
SEQUENCE NO. 62

CONTR. NO. DACA63-84-C-0112

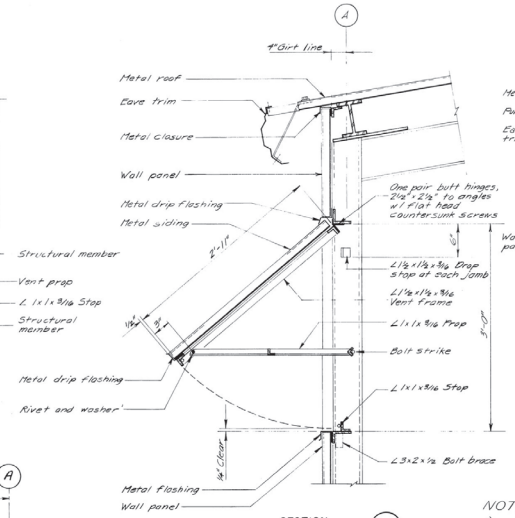
DRAWING OF WORK AS-BUILT



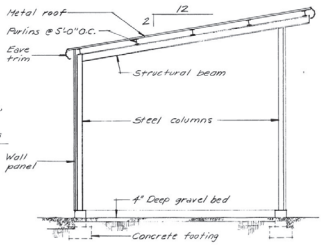
PLAN
SCALE: 1/4" = 1'-0"



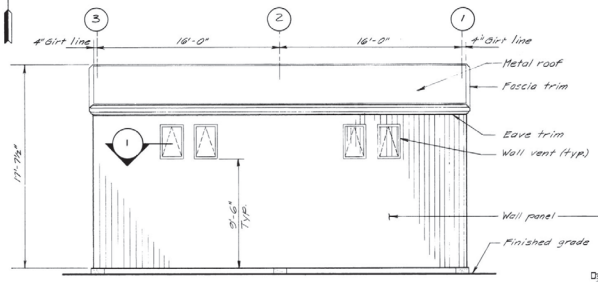
SECTION 1
SCALE: 6" = 1'-0"



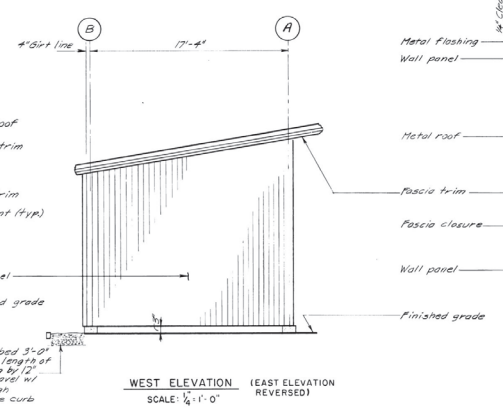
SECTION 2
SCALE: 1 1/2" = 1'-0"



SECTION 4
SCALE: 1/4" = 1'-0"



NORTH ELEVATION
SCALE: 1/4" = 1'-0"

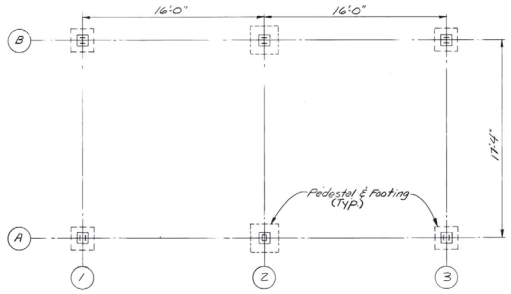


WEST ELEVATION (EAST ELEVATION REVERSED)
SCALE: 1/4" = 1'-0"

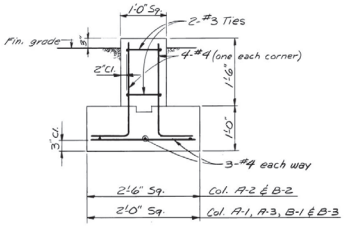
SECTION 3
SCALE: 1 1/2" = 1'-0"

NOTES:

1) All steel exposed to the weather shall be galvanized.
2) This structure shall be designed and fabricated according to the AISC, AISI and MBMA latest specifications, and shall comply w/ Dept. of Army Corps of Engineers guide specification for military construction, Metal Buildings CE-201.01.



FOUNDATION PLAN
Scale: 1/4" = 1'-0"



TYPICAL PEDESTAL AND FOOTING SECTION
Scale: 1" = 1'-0"

SCALE: 1/4 INCH = 1 FOOT
SCALE: 1 1/2 INCH = 1 FOOT
SCALE: 6 INCHES = 1 FOOT
SCALE: 1 INCH = 1 FOOT

DWG. NO. 00349210

REV. NO.	DATE	BY	DESCRIPTION OF REVISION
	7Nov85		REVISED AS-BUILT

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U.S. ARMY ENGINEER DISTRICT, FORT WORTH
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REVIEWED BY: P.K.B.
SUBMITTED BY:
ENGINEER:

000250 FORT HOOD, TEXAS

PLATOON QUALIFICATION AND SQUAD/CREW SUBCALIBER DALTON MOUNTAIN FIELD FIRE

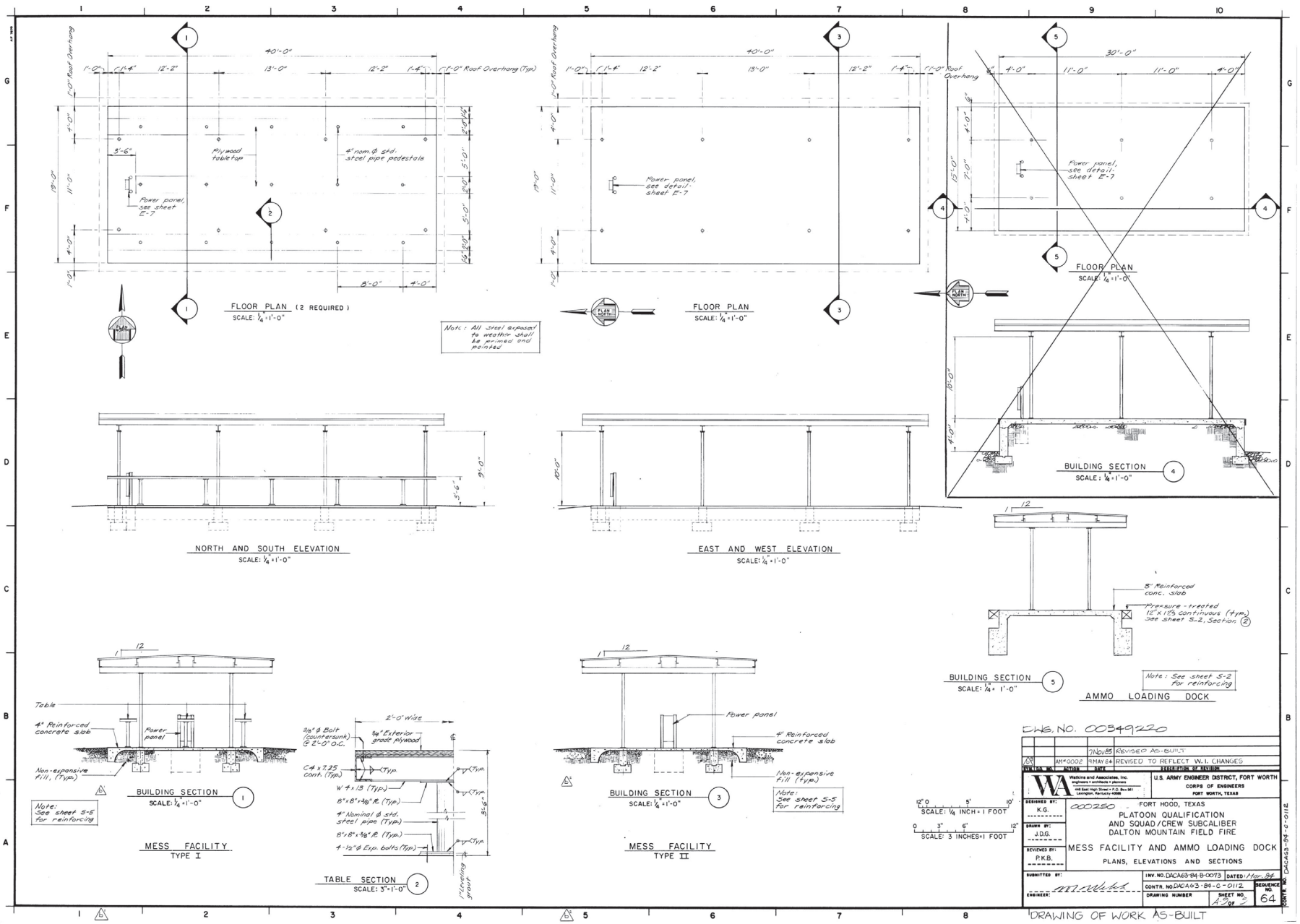
BLEACHER ENCLOSURE

PLANS, ELEVATIONS AND SECTIONS

INV. NO. DACA63-84-B-0073 DATED: Mar. 84
CONTR. NO. DACA63-84-C-0112
DRAWING NUMBER
SHEET NO. A-8 OF 9
SEQUENCE NO. 63

CONTR. NO. DACA63-84-C-0112

DRAWING OF WORK AS-BUILT



DWG. NO. 00349220

2	AM*0002	9 MAY 84	REVISED TO REFLECT W.I. CHANGES
1		7 Nov 83	REVISED AS-BUILT
NO.	BY	DATE	REVISION OF SHEET

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REVIEWED BY: P.K.B.
SUBMITTED BY:
ENGINEER:

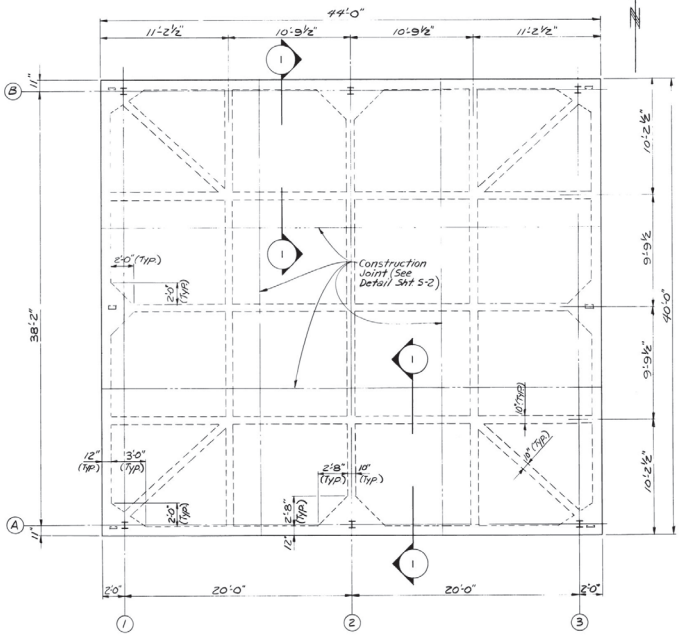
000250 FORT HOOD, TEXAS
PLATOON QUALIFICATION AND SQUAD/CREW SUBCALIBER DALTON MOUNTAIN FIELD FIRE

MESS FACILITY AND AMMO LOADING DOCK
PLANS, ELEVATIONS AND SECTIONS

INV. NO. DACA63-84-B-0073 | DATED: Mar. 84
CONTR. NO. DACA63-84-C-0112
DRAWING NUMBER | SHEET NO. A-5 OF 5 | SEQUENCE NO. 64

CONTR. NO. DACA63-84-C-0112

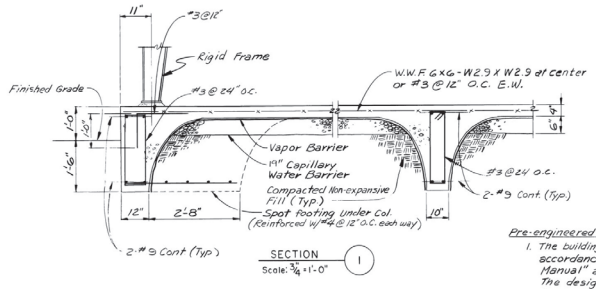
DRAWING OF WORK AS-BUILT



INSTRUCTIONAL BUILDING FOUNDATION PLAN

Scale: 1/4" = 1'-0"

Note: See Sheet S6a for Typical Corner, Intersection and Diagonal Reinforcing Details.



SECTION 1

Scale: 3/4" = 1'-0"

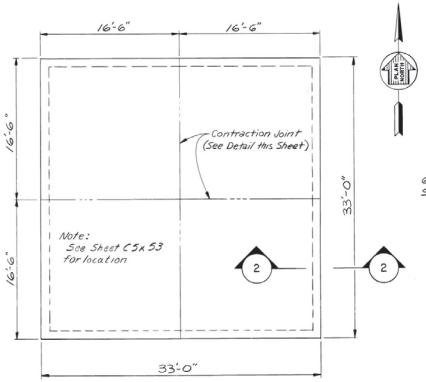
Foundation Notes:

1. All concrete shall have a minimum compressive strength of 3000 p.s.i. at 28 days, unless noted.
2. Concrete protection (cover) for reinforcement shall be as follows unless noted:
   Footing ..... 3" for bott steel & 2" for top steel
   Walls & Pedestals ..... 1½"
   Slabs on grade ..... 2" from top
3. Aggregate shall be a maximum of 1"
4. All exposed concrete edges shall have 3/4" chamfer unless noted.
6. Place 6" capillary water barrier and Vapor Barrier under all unsupported floor slabs on fill except as otherwise noted.
7. Fill:
   A. Remove 24" min. of existing material to constant elevation and replace with not less than 18" min. nonexpansive fill under the 6" capillary water barrier (Typical), except as otherwise noted.
   B. All fill placed under building slabs shall be nonexpansive and shall be compacted to not less than 92% density according to Mil. Std. 621a.
8. Minimum reinforcing in each direction for slabs on fill shall be as follows.
   A. Ribbed mat slab ..... 0.2% of cross sectional area
   B. All others ..... 0.1% of cross sectional area
9. All floor slab isolation joints shall be 30# felt, unless otherwise noted.
10. Contraction joints in slab (mat, fine layers) shall be placed as shown on plans.

GENERAL NOTES

Pre-engineered Buildings:

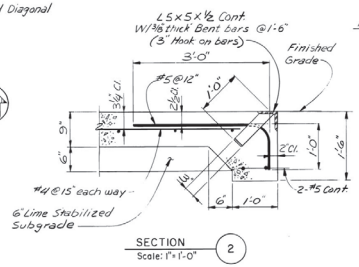
1. The buildings shall be pre-engineered metal buildings designed in accordance with the current edition of the "Metal Building Systems Manual" as published by the Metal Building Manufacturers Association. The design loads shall be a minimum of 20 p.s.f. for roof live load, 20 p.s.f. for wind loads and 10 p.s.f. for interior partitions. Maximum allowable soil bearing pressure is 2000 p.s.f.
2. The buildings shall be designed and fabricated according to AISC and AISI latest specifications. The dimensional tolerances outlined in the AWS code under workmanship and the tolerances applicable to roll form steel under the AISC "Standard Mill Practice" section shall be required in the fabrication of the steel building frames.
3. A complete design analysis showing all calculations for the rigid frames, girts and purlins, and a layout of anchor bolts and other embedded items shall be submitted for approval with the shop drawings. Shop drawings shall include details of all main members, typical connections (showings bolt holes and welds), and erection drawings.
4. The buildings shall be designed to support all mechanical equipment including heaters, sprinklers, exhaust systems, and all other such devices. Additional girts or purlins shall be placed in convenient locations for attachment of all mechanical equipment.
5. Unless cross bracing is used to take lateral loads, load test on metal panel walls and roof must be submitted where these are used as a diaphragm.
6. All foundation strata, forms and reinforcement shall be approved by the Contracting Officer before concrete is placed.
7. Contractor shall verify number, size and orientation of anchor bolts and base plate elevations with Metal Building Manufacturer.
8. All foundation dimensions shall be coordinated with Metal Building Manufacturer prior to construction.
9. Anchor bolt type, size and location shall be supplied by the Metal Building Manufacturer.
10. See sheet S-2a for design floor live loads for each structure, roof live load for Bunker and earth pressure coeff. for retaining walls and concrete walls.



CONCRETE HARD STAND PLAN

Scale: 3/16" = 1'-0"

Note: Use Class 'P' Concrete for Hard Stand (See specs. for strength requirements.)

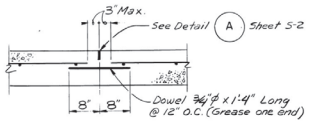


SECTION 2

Scale: 1" = 1'-0"

Reforcement

1. Detailing, fabrication, bending and placing of reinforcement shall be in accordance with the A.C.I. Manual of Standard practice for Detailing Reinforced Concrete Structures (A.C.I. 315-80).
2. All splices, laps, hooks and placing details shall be in accordance with the A.C.I. Standard Building Code (A.C.I. 318-77) and the C.R.S.I. Manual of Standard Practice, unless otherwise noted or detailed.
3. Reinforcing bars shall be deformed billet steel bars with fy = 40,000 PSI for stirrups and ties and fy = 60,000 PSI. for all others (A.S.T.M. A615-81a).
4. Welded wire fabric shall be in sheets and shall conform to A.S.T.M. A185 with fy = 65,000 p.s.i. Support wire fabric on concrete block to insure proper placement.



CONTRACTION JOINT DETAIL

Scale: 1" = 1'-0"

12" 0 1' 2'
SCALE: 1 INCH = 1 FOOT

12" 0 1' 2' 3'
SCALE: 3/4 INCH = 1 FOOT

12" 0 5' 10'
SCALE: 1/2 INCH = 1 FOOT

12" 0 5' 10' 15'
SCALE: 3/16 INCH = 1 FOOT

DWG. NO. 003492B0

REVISION NO.	DATE	BY	DESCRIPTION OF REVISION
	7 Nov 85		REVISED AS-BUILT

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CORPS OF ENGINEERS
FORT WORTH, TEXAS

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DRAWN BY: N.L.H.
REVIEWED BY: P.D.B.
SUBMITTED BY:
ENGINEER:

003230 FORT HOOD, TEXAS

PLATOON QUALIFICATION AND SQUAD/CREW SUBCALIBER DALTON MOUNTAIN FIELD FIRE

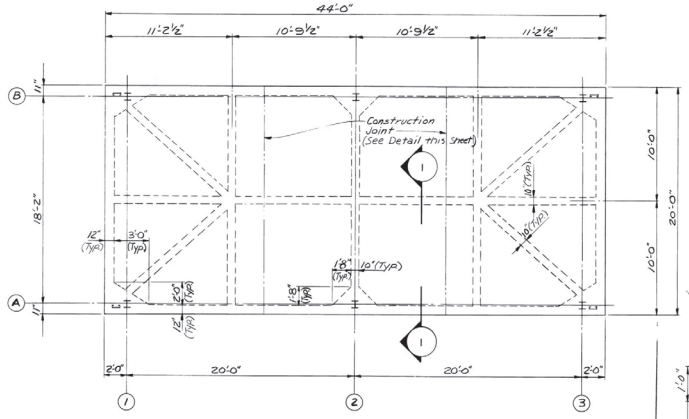
INSTRUCTIONAL BUILDING AND CONCRETE HARD STAND

FOUNDATION PLANS, SECTIONS AND DETAIL

INV. NO. DACA63-84-B-0075 DATED: Mar 84
CONTR. NO. DACA63-84-C-0112
DRAWING NUMBER S-1 SHEET NO. 1 OF 11
SEQUENCE NO. 65

CONT. NO. DACA63-84-C-0112

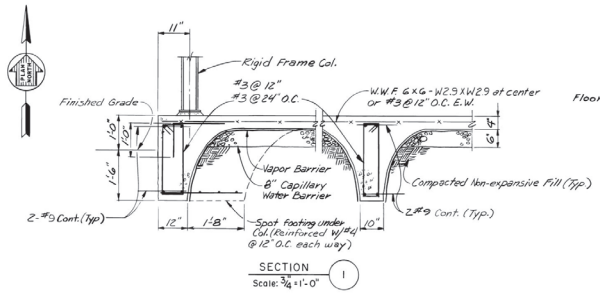
DRAWING OF WORK AS-BUILT



STORAGE BUILDING FOUNDATION PLAN

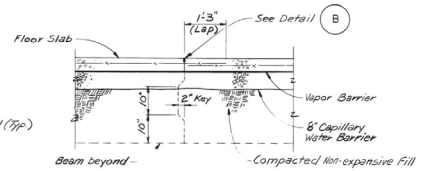
Scale: 1/4" = 1'-0"

Note: See Sheet S3a For Typical Corner, Intersection and Diagonal Reinforcing Details.



SECTION 1

Scale: 3/4" = 1'-0"



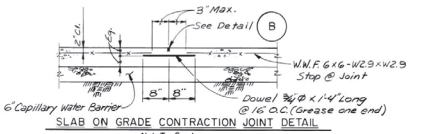
SLAB ON GRADE CONSTRUCTION JOINT DETAIL

(Ribbed Mat Construction)

Scale: 3/4" = 1'-0"

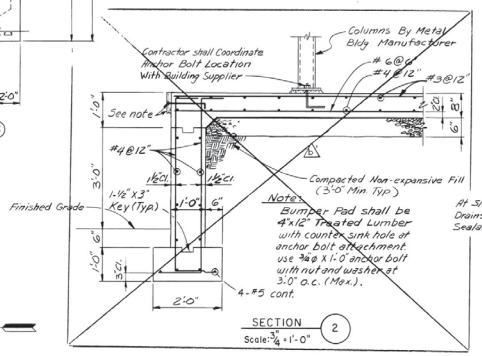
Note

Reinforcement shall be continuous across Construction Joint in Beams.



SLAB ON GRADE CONTRACTION JOINT DETAIL

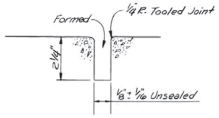
Not To Scale



Note: Bumper Pad shall be 4"x12" Treated Lumber with counter sink hole at anchor bolt attachment. use 3/4" Φ x 1'-0" anchor bolt with nut and washer at 3'-0" o.c. (Max.).

SECTION 2

Scale: 3/4" = 1'-0"

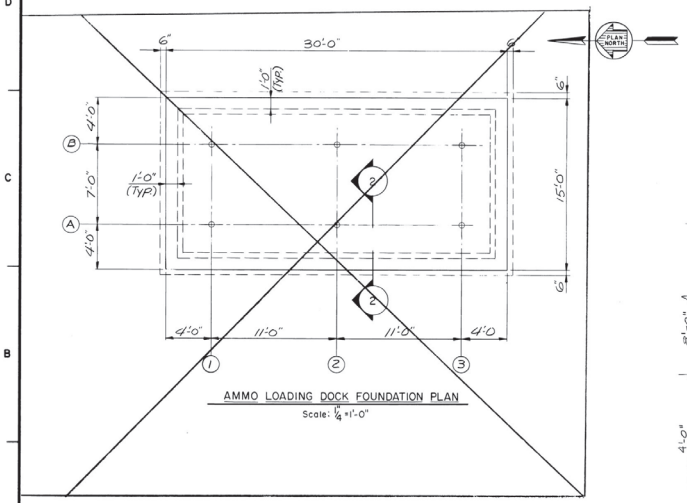


DETAIL A

Not to Scale

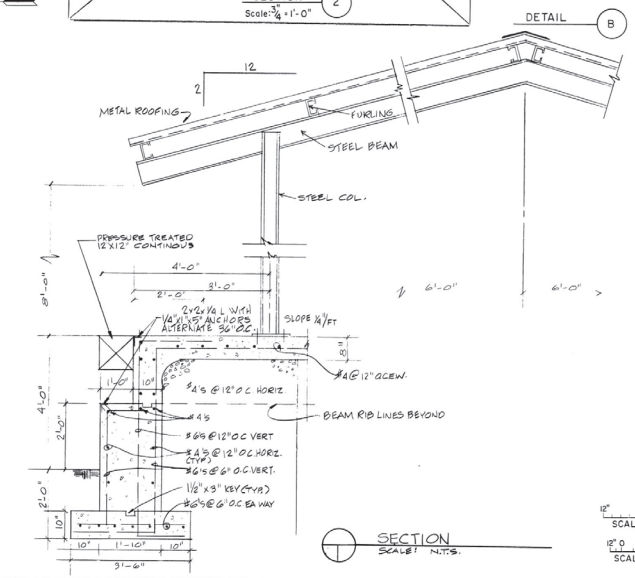
Note:

See General Notes on sheet S-1.



AMMO LOADING DOCK FOUNDATION PLAN

Scale: 1/4" = 1'-0"



SECTION

SCALE: N.T.S.

SCALE: 3/4 INCH = 1 FOOT

SCALE: 1/4 INCH = 1 FOOT

DWG NO. 00349240

		7NOV85	REVISED AS-BUILT
3	AM*0002	9MAY84	REVISED TO REFLECT W.I. CHANGES

NO.	DATE	REVISION	SPECIFICATION SECTION

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U.S. ARMY ENGINEER DISTRICT, FORT WORTH
CORPS OF ENGINEERS
FORT WORTH, TEXAS

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DRAWN BY: N.L.H.
REVIEWED BY: P.D.B.
SUBMITTED BY:
ENGINEER:

000250 FORT HOOD, TEXAS

PLATOON QUALIFICATION AND SQUAD/CREW SUBCALIBER DALTON MOUNTAIN FIELD FIRE

AMMO LOADING DOCK AND RANGE PERSONNEL STORAGE BUILDING

FOUNDATION PLANS AND SECTIONS

INV. NO. DACA63-84-B-0073 DATED: Mar. 84

CONTR. NO. DACA63-84-C-0112

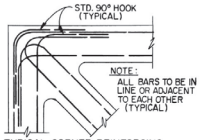
DRAWING NUMBER S-2 or 11

SHEET NO. 66

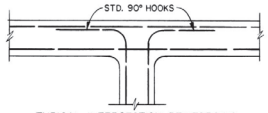
SEQUENCE NO.

CONTR. NO. DACA63-84-C-0112

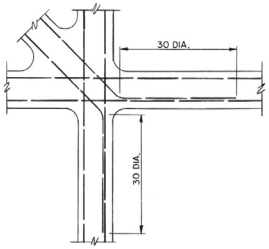
DRAWING OF WORK AS-BUILT



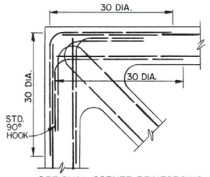
TYPICAL CORNER REINFORCING



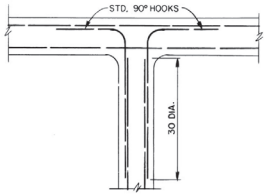
TYPICAL INTERSECTION REINFORCING



TYPICAL DIAGONAL REINFORCING
(FOR RIBBED MAT FOUNDATION ONLY)

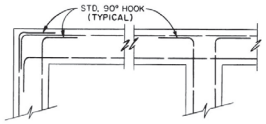


OPTIONAL CORNER REINFORCING
(FOR RIBBED MAT FOUNDATION ONLY)



OPTIONAL INTERSECTION REINFORCING
(FOR RIBBED MAT FOUNDATION ONLY)

Note:
Corner, Intersection and Diagonal Reinforcing shown applies to Top, Bottom and Intermediate Bars.



TYPICAL CORNER & INTERSECTION REINFORCING
(FOR CONCRETE BEAMS & WALLS AND REINFORCING MASONRY, UNLESS OTHERWISE NOTED.)

Design Floor Live Loads:

Control Tower	*100*	*P.S.F.*
Personnel / Storage Bldg.	*125*	*P.S.F.*
General Instruction Bldg.	*100*	*P.S.F.*
Covered Mess Facility	*100*	*P.S.F.*
Latrine	*40*	*P.S.F.*
Ammo Load	*200*	*P.S.F.*

Armor Storage Bldg.:

Roof Slab Live Load	*40*	*P.S.F.*
" " Dead Load	*480*	*P.S.F.*
Active Earth Pressure Coeff. (unyielding)	*1.0*	

Concrete And Timber Retaining Walls:

Active Earth Pressure Coeff. (yielding) *0.5*

DWG. NO. 00349250

SYM.	NO.	DATE	BY	DESCRIPTION OF REVISION
			7/16/85	REVISED AS-BUILT

Watkins and Associates, Inc.
engineers • architects • planners
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318 East High Street
Lexington, Kentucky 40588

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
CORPS OF ENGINEERS
FORT WORTH, TEXAS

DESIGNED BY: K.M.
DRAWN BY: N.L.H.
REVIEWED BY: P.D.B.
SUBMITTED BY:
ENGINEER:

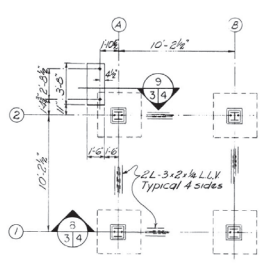
000250

FORT HOOD, TEXAS
PLATOON QUALIFICATION
AND SQUAD/CREW SUBCALIBER
DALTON MOUNTAIN FIELD FIRE

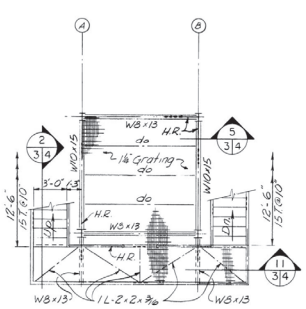
FOUNDATION DETAILS

INV. NO. DACA63-84-B-0075 DATED: Mar. 84
CONTR. NO. DACA63-84-C-0112
DRAWING NUMBER
SHEET NO. 8-2a of 11
SEQUENCE NO. 67
CONTR. NO. DACA63-84-C-0112

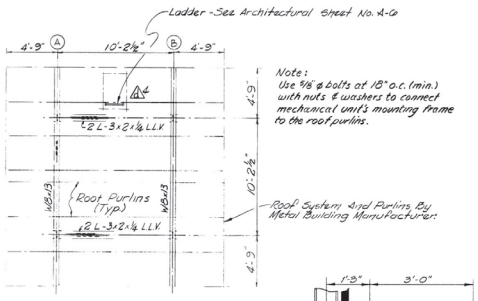
DRAWING OF WORK AS-BUILT



FOUNDATION PLAN
Scale: ¼" = 1'-0"

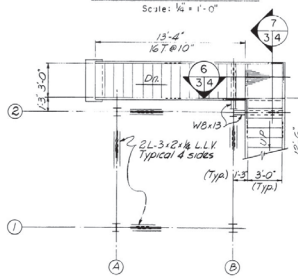


3rd LEVEL PLAN
Scale: ¼" = 1'-0"

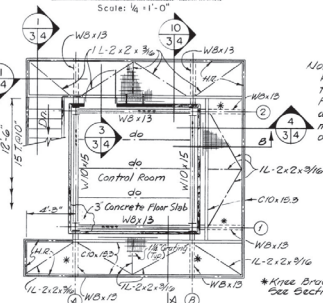


Note:
Use ⅝" ϕ bolts at 18" o.c. (min.) with nuts & washers to connect mechanical unit's mounting frame to the roof purlins.

ROOF PLAN
Scale: ¼" = 1'-0"



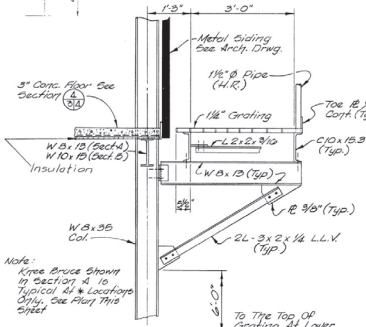
2nd LEVEL PLAN
Scale: ¼" = 1'-0"



Note:
Floor beams & or not purlins to be equally spaced. Provide additional purlins as required to support mechanical equipments on the roof.

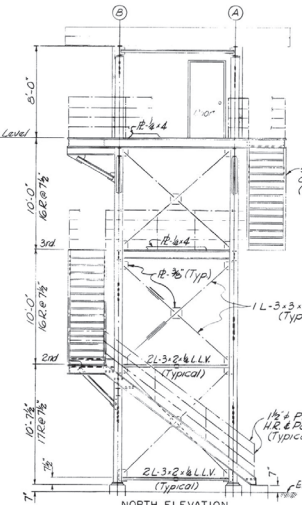
4th LEVEL PLAN
Scale: ¼" = 1'-0"

* Knee Brace is Not At 45° Angle See Section A This Sheet

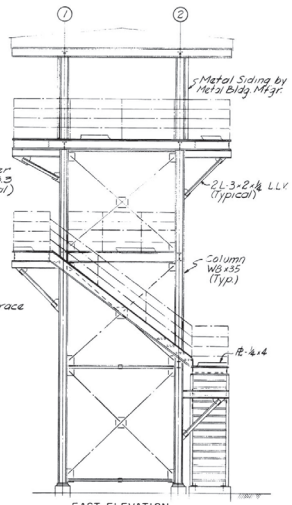


Note:
Knee Brace Shown In Section A is Typical At * Locations Only, See Plan This Sheet

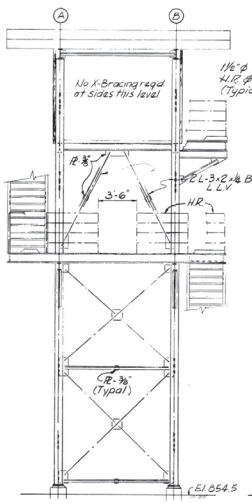
SECTION A
Scale: ¾" = 1'-0"
(TURN COL. 90° FOR SECTION B)



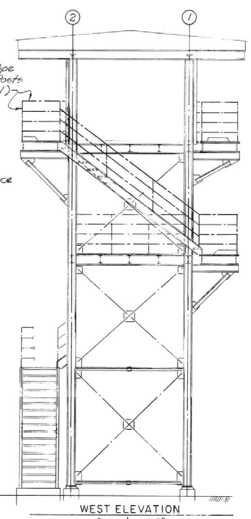
NORTH ELEVATION
Scale: ¼" = 1'-0"



EAST ELEVATION
Scale: ¼" = 1'-0"



SOUTH ELEVATION
Scale: ¼" = 1'-0"



WEST ELEVATION
Scale: ¼" = 1'-0"

SCALE: ¼ INCH = 1 FOOT

GENERAL NOTES
CONTROL TOWER STRUCTURAL STEEL

Design Specifications

1. A.I.S.C. Manual of Steel Construction, Eighth Edition.
2. American Welding Society Code for Welding in Building Construction. (Current Edition)

Structural Steel

1. All structural steel shall be ASTM A-36.
2. Bearing end of all columns shall be milled to bear.
3. Shop connections shall be welded. Weld sizes and lengths shall be detailed by the fabricator and approved by the Contracting Officer.
4. Field connections shall be bolted (friction-type) unless noted otherwise.
5. All bolts shall be ⅞" diameter high strength bolts (A325) unless noted.
6. Field connections for purlins, girts and secondary members which do not form part of the bracing system shall be ⅝" diameter unfinished bolts.
7. Field connections for main members, struts, purlins and girts which form part of the bracing system shall be ⅞" diameter high strength bolts.
8. Welding shall be performed using E70 electrodes for manually shielded metal-arc or submerged arc welding.
9. All connections not detailed or otherwise noted shall be standard A.I.S.C. welded or bolted connections.

Design Loads

Roof:

Live Load	20 p.s.f.
Mech & Electrical	12 p.s.f.
Roof Decking	5 p.s.f.
Purlins	7 p.s.f.

Floor:

Live Load	100 p.s.f.
Dead Load:	
Control Room	45 p.s.f.
Platform	15 p.s.f.

Stairs:

Live Load	100 p.s.f.
Treads (on center of Tread)	300 p.s.f.

Wind:

Braced Frame	15 p.s.f.
Control Room	28 p.s.f.

DWG. NO. 00349260

		7Nov85	Revised As-Built
	AM# 0004	3 MAY 84	EXTENDED WALKWAY HANDRAIL & SUPPORT, WALKWAY HANDRAILS, DOOR & LADDER
REV. NO.	NO.	DATE	REVISION BY REVISION

Watkins and Associates, Inc. engineers • architects • planners
444 East High Street • P.O. Box 861 Lexington, Kentucky 40588

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
CORPS OF ENGINEERS
FORT WORTH, TEXAS

DESIGNED BY: K.M.
DRAWN BY: W.J.D.
REVIEWED BY: P.D.B.
SUBMITTED BY:
ENGINEER:

000250 FORT HOOD, TEXAS

PLATOON QUALIFICATION AND SQUAD/CREW SUBCALIBER DALTON MOUNTAIN FIELD FIRE

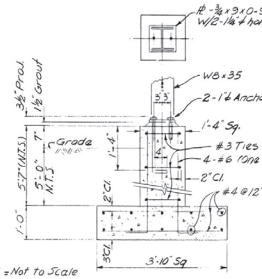
CONTROL TOWER

PLANS AND ELEVATIONS

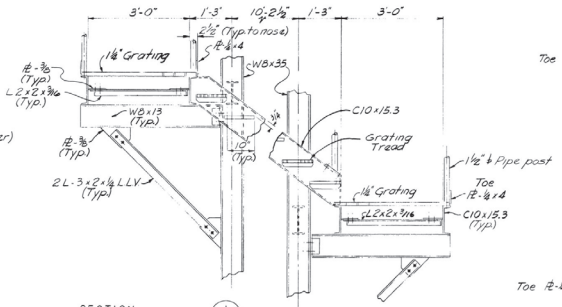
INV. NO. DACA63-84-B-0073 | DATED: Mar. 84
CONTR. NO. DACA63-84-C-0112
DRAWING NUMBER | SHEET NO. S-5 of 11 | SEQUENCE NO. 68

CONTR. NO. DACA63-84-C-0112

DRAWING OF WORK AS-BUILT

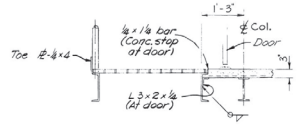


SECTION 8 / 3|4
Scale: 3/4" = 1'-0"



SECTION 1 / 3|4
Scale: 3/4" = 1'-0"

SECTION 2 / 3|4
Scale: 3/4" = 1'-0"



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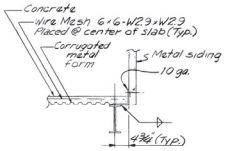
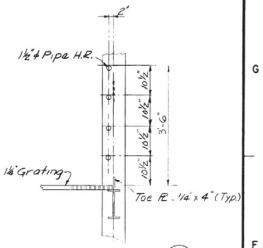
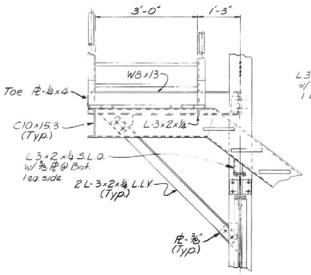


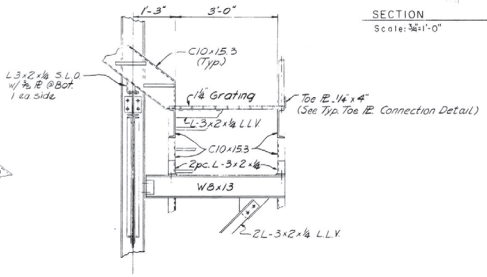
SECTION 4 / 3|4
Scale: 3/4" = 1'-0"



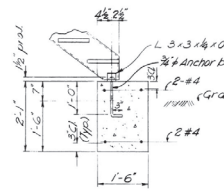
SECTION 5 / 3|4
Scale: 3/4" = 1'-0"



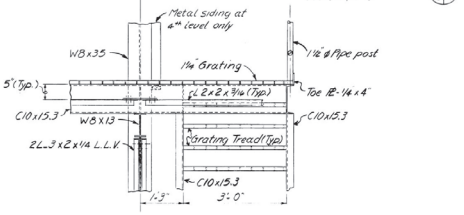
SECTION 6 / 3|4
Scale: 3/4" = 1'-0"



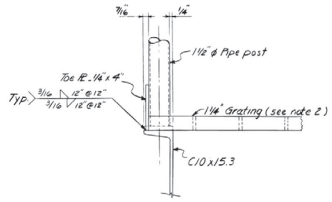
SECTION 7 / 3|4
Scale: 3/4" = 1'-0



SECTION 9 / 3|4
Scale: 3/4" = 1'-0"



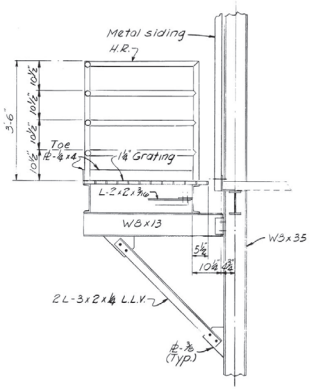
SECTION 11 / 3|4
Scale: 3/4" = 1'-0"



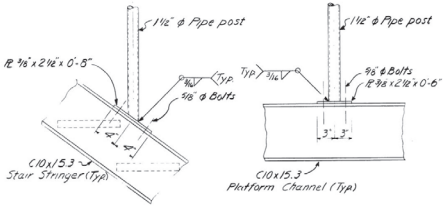
TYPICAL TOE PLATE CONNECTION DETAIL
Scale: 3" = 1'-0"

Note:

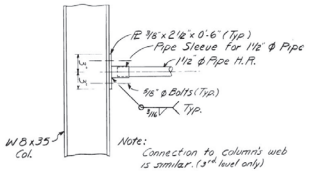
1. Concrete slab on metal form shall be 3" overall thickness and Reinforced with 6x6-W2.9xW2.9 W.W.F. Placed at center of slab. Metal form shall be galvanized and have F_y = 50,000 P.S.I. min. Floor hardener shall be used on exposed floors, metal form shall be installed according to the manufacturer's recommended practice.
2. Metal gratings shall be provided with positive welded or bolted clip fasteners per manufacturer's recommendation.



SECTION 10 / 3|4
Scale: 3/4" = 1'-0"



TYPICAL PIPE POST AND HANDRAIL CONNECTION DETAILS
Scale 1 1/2" = 1'-0"



Note:
Connection to column's web is similar. (3rd level only)

SCALE: 3/4 INCH = 1 FOOT

SCALE: 1 1/2 INCH = 1 FOOT

SCALE: 3 INCHES = 1 FOOT

DWG NO. 00349270

REVISION NO.	DATE	BY	DESCRIPTION OF REVISION
	7Nov85		Revised As-Built

Watkins and Associates, Inc. engineers • architects • planners
448 East High Street • P.O. Box 951
Lexington, Kentucky 40588

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
CORPS OF ENGINEERS
FORT WORTH, TEXAS

DESIGNED BY: K.M.
DRAWN BY: W.J.P.
REVIEWED BY: P.D.B.
SUBMITTED BY:
ENGINEER:

000250 FORT HOOD, TEXAS

PLATOON QUALIFICATION AND SQUAD/CREW SUBCALIBER DALTON MOUNTAIN FIELD FIRE

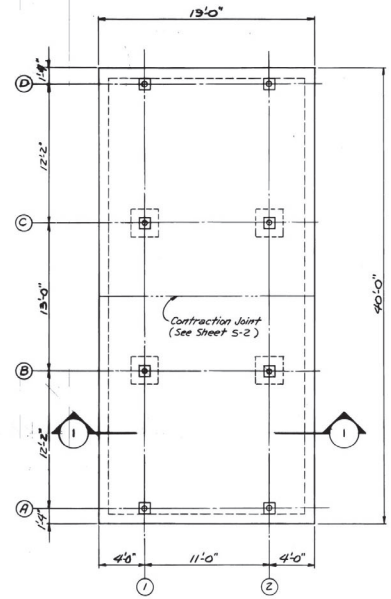
CONTROL TOWER

SECTIONS AND DETAILS

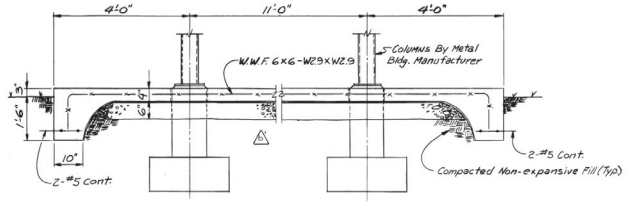
INV. NO. DACA63-84-B-0073 | DATED: Mar. 84
CONTR. NO. DACA63-84-C-0112
DRAWING NUMBER | SHEET NO. S-4 of 11 | SEQUENCE NO. 69

CONTR. NO. DACA63-84-C-0112

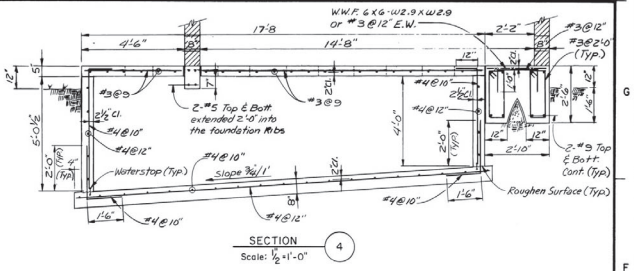
DRAWING OF WORK AS-BUILT



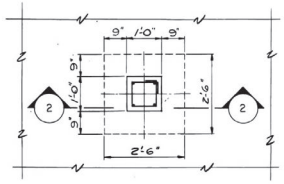
MESS FACILITY FOUNDATION PLAN
Scale: 1/4 = 1'-0"



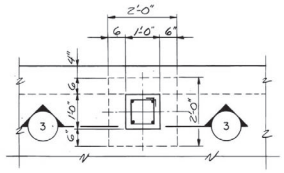
SECTION 1
Scale: 3/4 = 1'-0"



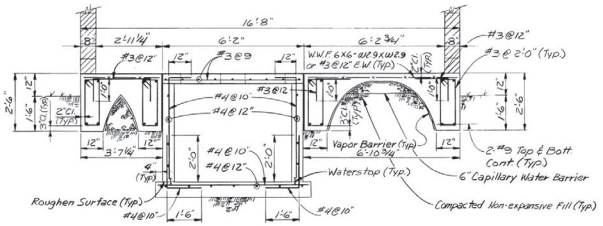
SECTION 4
Scale: 1/2 = 1'-0"



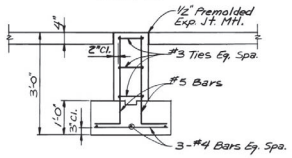
FOUNDATION PLAN AT B-1, B-2, C-1 & C-2
Scale: 3/4 = 1'-0"



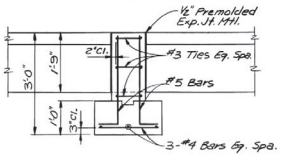
FOUNDATION PLAN AT A-1, A-2, D-1 & D-2
Scale: 3/4 = 1'-0"



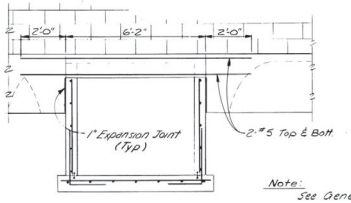
SECTION 5
Scale: 1/2 = 1'-0"



SECTION 2
Scale: 3/4 = 1'-0"

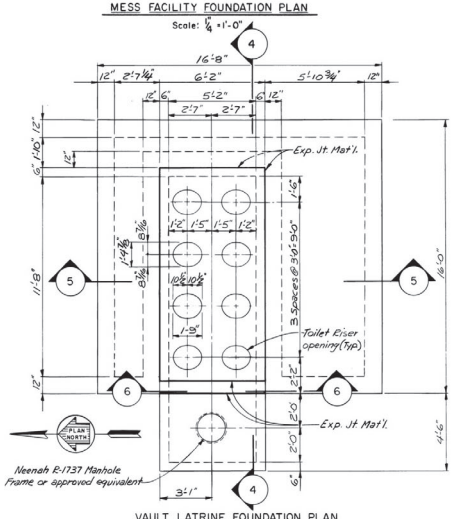


SECTION 3
Scale: 3/4 = 1'-0"

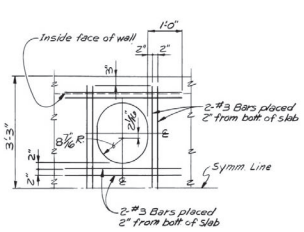


SECTION 6
Scale: 1/2 = 1'-0"

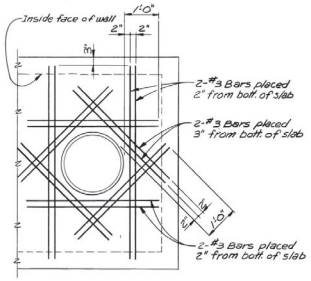
Note: See General Notes on sheet S-1



VAULT LATRINE FOUNDATION PLAN
Scale: 3/8 = 1'-0"



REINFORCING DETAIL FOR TOILET RISER OPENINGS
Scale: 3/4 = 1'-0"



REINFORCING DETAIL FOR MANHOLE FRAME OPENING
Scale: 3/4 = 1'-0"

SCALE: 1/2 INCH = 1 FOOT
SCALE 3/4 INCH = 1 FOOT
SCALE: 3/8 INCH = 1 FOOT
SCALE: 1/4 INCH = 1 FOOT

DWG. NO. 003492280

REV. NO.	PAGE	DATE	DESCRIPTION OF REVISION
2		7 NOV 85	Revised As-Built
1	AM 00002	8 MAY 84	REVISED TO REFLECT W.I. CHANGES

Watkins and Associates, Inc. engineers + architects + planners
440 East High Street • P.O. Box 351 • Lexington, Kentucky 40588

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
CORPS OF ENGINEERS
FORT WORTH, TEXAS

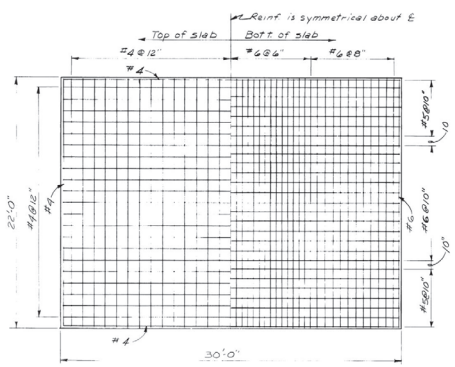
DESIGNED BY: K.M.
DRAWN BY: N.L.H.
REVIEWED BY: P.D.B.
SUBMITTED BY:
ENGINEER:

000280 FORT HOOD, TEXAS
PLATOON QUALIFICATION AND SQUAD/CREW SUBCALIBER DALTON MOUNTAIN FIELD FIRE
MESS FACILITY AND VAULT LATRINE
FOUNDATION PLANS AND SECTIONS

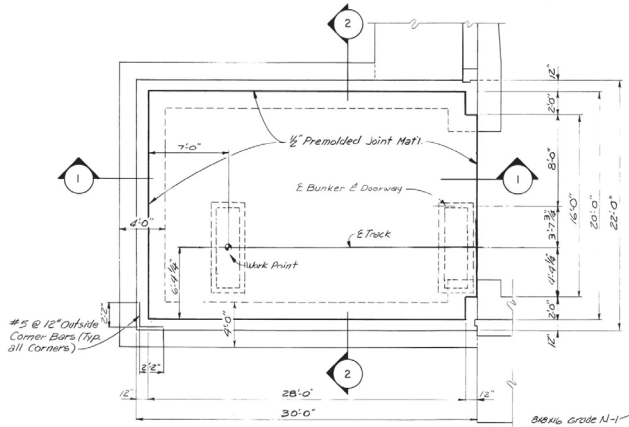
INV. NO. DACA63-84-B-0073 DATED: Mar. 84
CONTR. NO. DACA63-84-C-0112
DRAWING NUMBER
SHEET NO. S5 of 11
SEQUENCE NO. 70

CONTR. NO. DACA63-84-C-0112

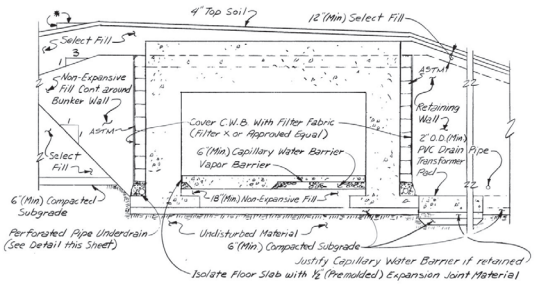
DRAWING OF WORK AS-BUILT



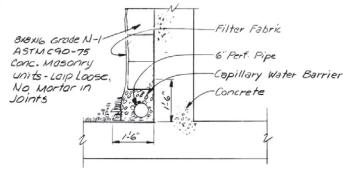
ROOF SLAB PLAN
Scale: 1/4"=1'-0"



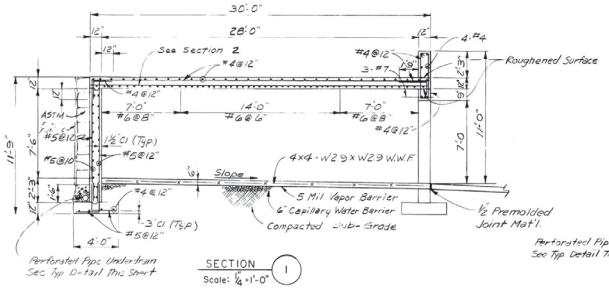
FLOOR PLAN
Scale: 1/4"=1'-0"



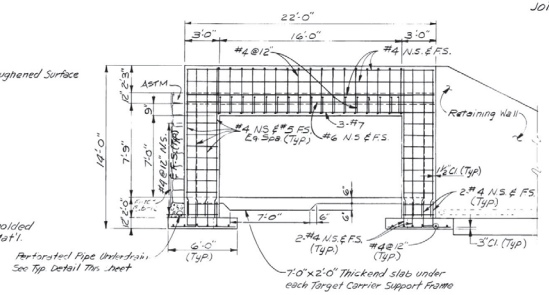
BUNKER STORAGE EXCAVATION & SUBSURFACE DRAINAGE DETAIL (TYPICAL)
N.T.S.



PERFORATED PIPE UNDERDRAIN TYPICAL DETAIL
N.T.S.



SECTION 1
Scale: 1/4"=1'-0"

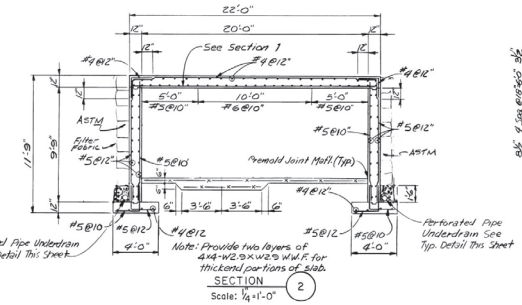


FRONT ELEVATION
Scale: 1/4"=1'-0"

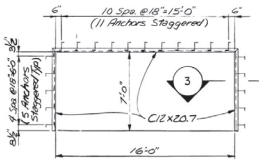
Note:

1. Concrete Bunker Roof Slab shall be supported on shores during construction and backfilling operation. No vehicular traffic shall be permitted on finished Bunker.

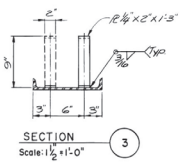
2. For foundation notes, reinforcement notes, and design loads see sheet S-1.



SECTION 2
Scale: 1/4"=1'-0"



DOOR FRAME DETAIL
Scale: 1/4"=1'-0
(For Door Details see sheet No. S-7)



SECTION 3
Scale: 1 1/2"=1'-0"

SCALE 1½ INCH = 1 FOOT

SCALE: 1/4 INCH = 1 FOOT

DWG. NO. 003491290

SYM	NO.	REVISION	DATE	REVISION OF REVISION
		7N0155		Revised As-Built
1	AM#0004	3 MAY 84		GENERAL REVISIONS

Watkins and Associates, Inc. engineers • architects • planners
448 East High Street • P.O. Box 351 Lexington, Kentucky 40588

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
CORPS OF ENGINEERS
FORT WORTH, TEXAS

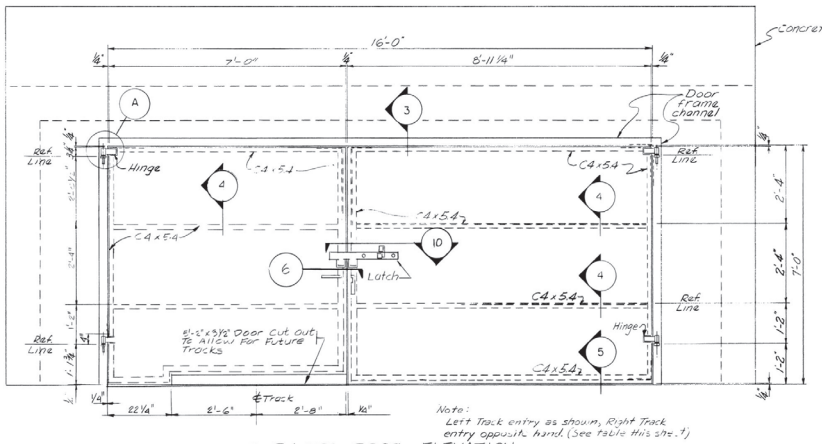
DESIGNED BY: K.M.
DRAWN BY: N.L.H.
REVIEWED BY: P.D.B.
SUBMITTED BY:
ENGINEER:

000250 FORT HOOD, TEXAS
PLATOON QUALIFICATION AND SQUAD/CREW SUBCALIBER DALTON MOUNTAIN FIELD FIRE
BUNKER
ROOF PLAN, FLOOR PLAN, ELEVATION AND SECTIONS

INV. NO. DACA63-84-B-0073 DATED: Mar 84
CONTR. NO. DACA63-84-C-0112 SEQUENCE NO. 71
DRAWING NUMBER SHEET NO. S-6 or 11

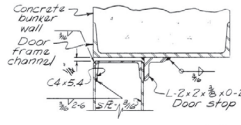
CONTR. NO. DACA63-84-C-0112

DRAWING OF WORK AS-BUILT

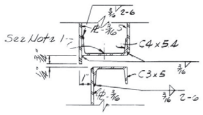


Note:
Left Track entry as shown, Right Track entry opposite hand. (See table this sht. 4)

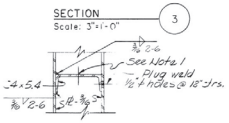
STORAGE BUNKER DOOR ELEVATION
SCALE: 3/4" = 1'-0"



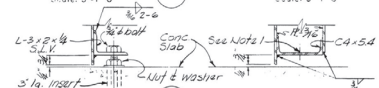
SECTION 3
Scale: 3"=1'-0"



SECTION 7
Scale: 3"=1'-0"

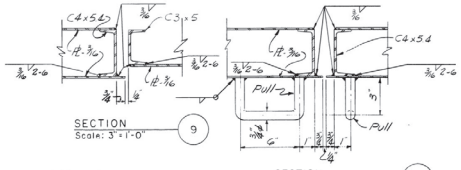


SECTION 4
Scale: 3"=1'-0"



SECTION 8
Scale: 3"=1'-0"

SECTION 5
Scale: 3"=1'-0"



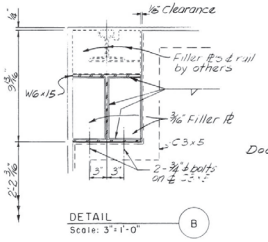
SECTION 9
Scale: 3"=1'-0"

SECTION 6
Scale: 3"=1'-0"

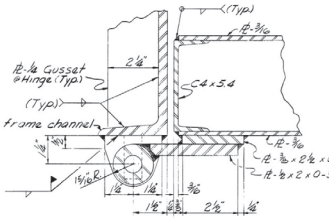
NOTES

1. Provide 1/2" ϕ holes @ 18" ctrs.
2. All steel shall be galvanized.
3. See Control Tower structural steel notes. (sht. S3)

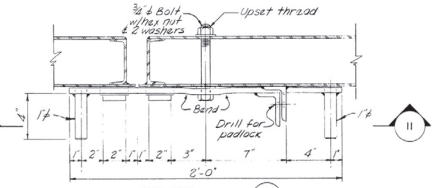
DOOR ORIENTATION TABLE	
Track No.	Entry
8A	Right
9A	Left
8B	Right
9B	Left



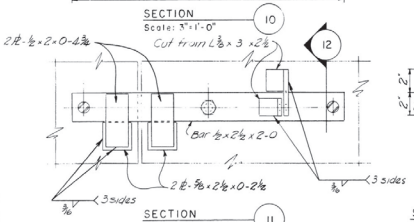
DETAIL B
Scale: 3"=1'-0"



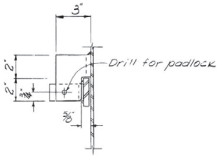
SECTION 2
Scale: 6"=1'-0"



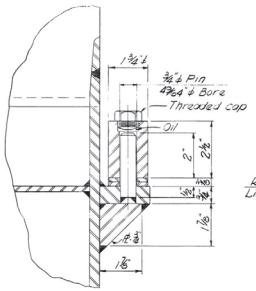
SECTION 10
Scale: 3"=1'-0"



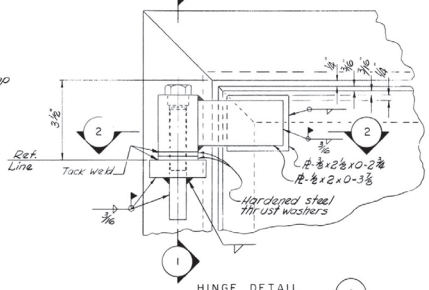
SECTION 11
Scale: 3"=1'-0"



SECTION 12
Scale: 3"=1'-0"



SECTION 1
Scale: 6"=1'-0"



HINGE DETAIL A
Scale: 6"=1'-0"

SCALE: 3/4 INCH = 1 FOOT
SCALE: 3 INCHES = 1 FOOT
SCALE: 6 INCHES = 1 FOOT

DWG. NO. 00349300

SYM.	DATE	REVISION	DESCRIPTION OF REVISION
		7Nov85	REVISED AS-BUILT

Watkins and Associates, Inc. engineers + architects + planners
148 East High Street • P.O. Box 951 Lexington, Kentucky 40588

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
CORPS OF ENGINEERS
FORT WORTH, TEXAS

DESIGNED BY: K.M.
DRAWN BY: W.J.D.
REVIEWED BY: P.D.B.
SUBMITTED BY:
ENGINEER:

000280 FORT HOOD, TEXAS
PLATOON QUALIFICATION
A AND SQUAD/CREW SUBCALIBER
DALTON MOUNTAIN FIELD FIRE

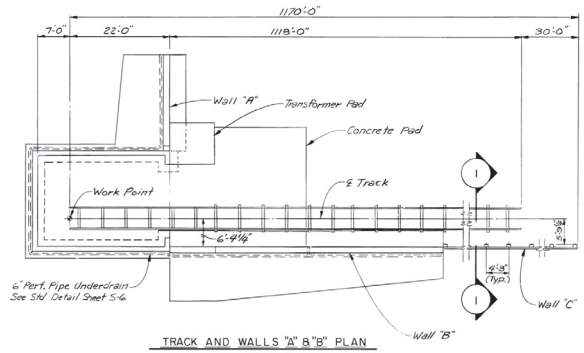
BUNKER DOORS

ELEVATION, SECTIONS AND DETAILS

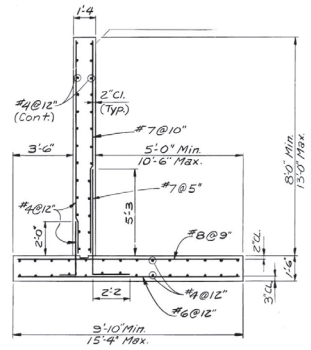
INV. NO. DACA63-84-B-0075 DATED: Mar. 84
CONTR. NO. DACA63-84-C-0112
DRAWING NUMBER
SHEET NO. S-7 of 11
SEQUENCE NO. 72

CONTR. NO. DACA63-84-C-0112

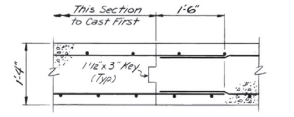
'DRAWING OF WORK' AS-BUILT



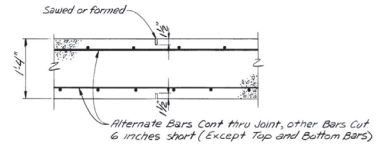
TRACK AND WALLS "A" & "B" PLAN
Scale: 1" = 10'-0"



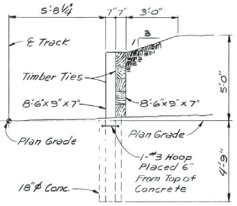
TYPICAL SECTION
Scale: 3/8" = 1'-0"



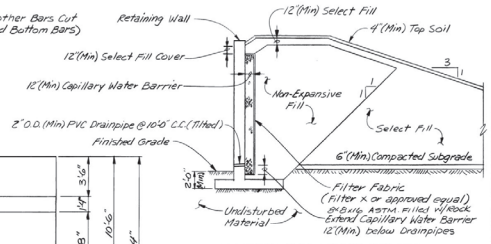
RETAINING WALL CONSTRUCTION JOINT DETAIL
Scale: 1" = 1'-0"



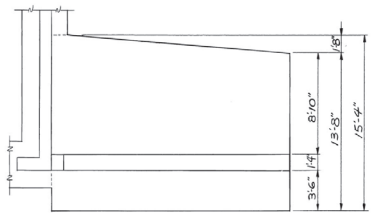
RETAINING WALL CONTROL JOINT DETAIL
Scale: 1" = 1'-0"



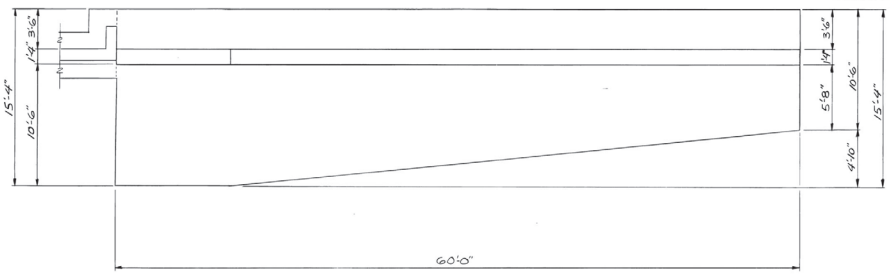
SECTION 1
Scale: 3/8" = 1'-0"



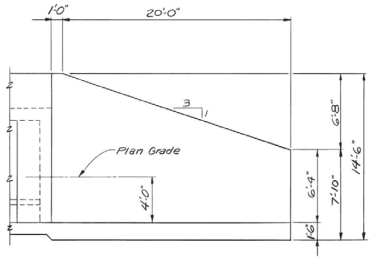
RETAINING WALL EXCAVATION AND SUBSURFACE DRAINAGE DETAIL
N. T. S.



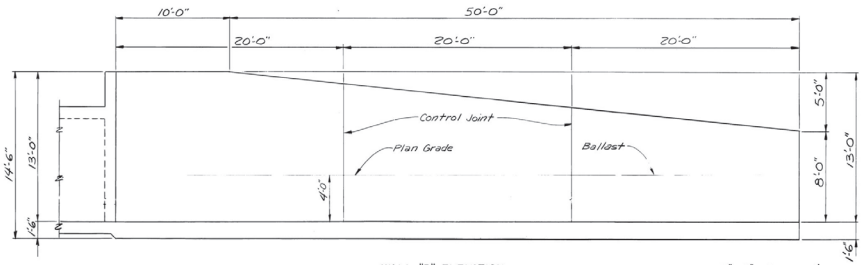
WALL "A" PLAN
Scale: 1/4" = 1'-0"



WALL "B" PLAN
Scale: 1/4" = 1'-0



WALL "A" ELEVATION
Scale: 1/4" = 1'-0"



WALL "B" ELEVATION
Scale: 1/4" = 1'-0"

12" 6" 0 1'
SCALE: 1 INCH = 1 FOOT

12" 0 5' 10'
SCALE: 1/4 INCH = 1 FOOT

10' 5' 0 10'
SCALE 1 INCH = 10 FEET

12" 0 4' 8'
SCALE: 3/8 INCH = 1 FOOT

DWG. NO. 0024932O

REVISION NO.	DATE	BY	DESCRIPTION OF REVISION
	7Nov85		REVISED AS-BUILT

Watkins and Associates, Inc.
engineers ▼ architects ▼ planners
401 East High Street ▼ P.O. Box 361
Lexington, Kentucky 40588

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
CORPS OF ENGINEERS
FORT WORTH, TEXAS

DESIGNED BY: K.M.
DRAWN BY: N.L.H.
REVIEWED BY: P.D.B.
SUBMITTED BY:
ENGINEER:

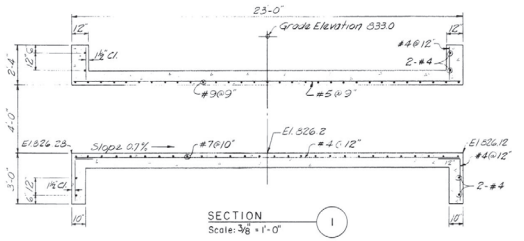
00028D FORT HOOD, TEXAS
PLATOON QUALIFICATION
AND SQUAD/CREW SUBCALIBER
DALTON MOUNTAIN FIELD FIRE

MOVING ARMOR TARGET SYSTEM RETAINING WALLS
PLANS, ELEVATIONS AND SECTION

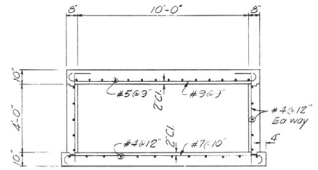
INV. NO. DACA63-84-B-0073 DATED: Mar 84
CONTR. NO. DACA63-84-C-0112
DRAWING NUMBER
SHEET NO. S-9 of 11
SEQUENCE NO. 74

CONTR. NO. DACA63-84-C-0112

DRAWING OF WORK AS-BUILT

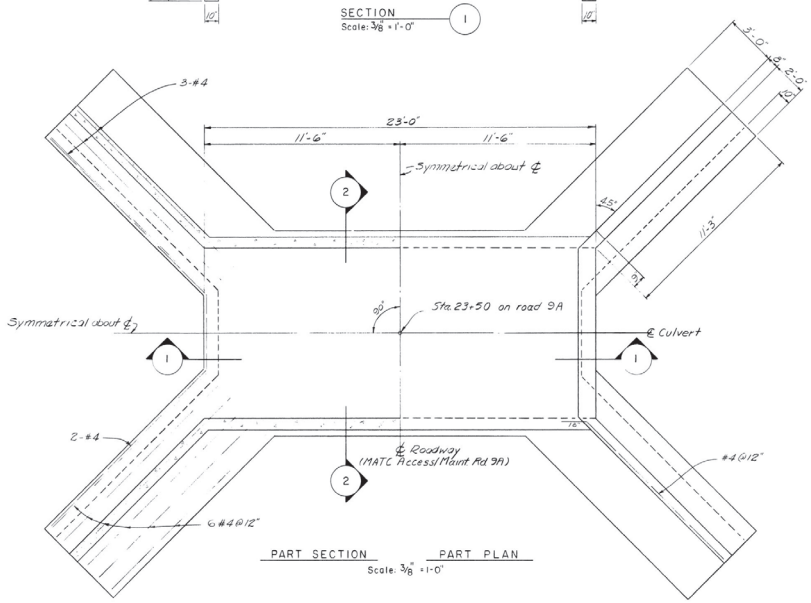


SECTION 1
Scale: 3/8" = 1'-0"

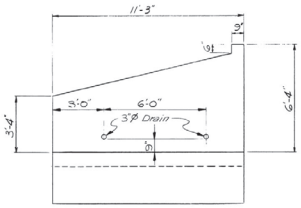


SECTION 2
Scale: 3/8" = 1'-0"

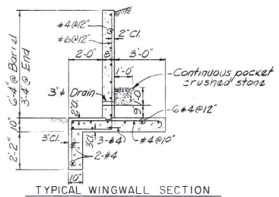
See General Notes Sheet No. S-1.



PART SECTION PART PLAN
Scale: 3/8" = 1'-0"



TYPICAL WINGWALL ELEVATION
Scale: 3/8" = 1'-0"



TYPICAL WINGWALL SECTION
Scale 3/8" = 1'-0"

SCALE: 3/8 INCH = 1 FOOT

DWG. NO. 00349330

REV. NO.	REVISED BY	DATE	DESCRIPTION OF REVISION
		26-85	REVISED AS-BUILT

Watkins and Associates, Inc.
engineers • architects • planners
448 East High Street • P.O. Box 961
Lexington, Kentucky 40588

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
CORPS OF ENGINEERS
FORT WORTH, TEXAS

DESIGNED BY: P.D.B.
DRAWN BY: W.J.D.
REVIEWED BY: K.M.
SUBMITTED BY:
ENGINEER:

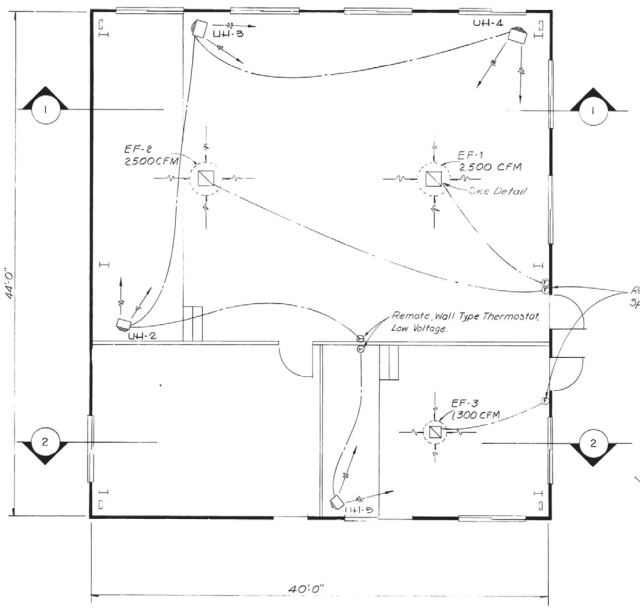
000250

FORT HOOD, TEXAS
PLATOON QUALIFICATION
AND SQUAD/CREW SUBCALIBER
DALTON MOUNTAIN FIELD FIRE

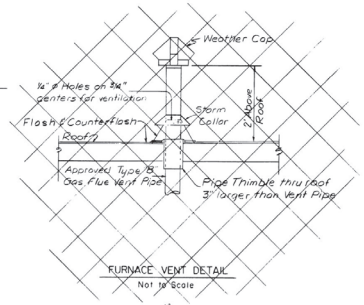
10' x 4' BOX CULVERT
PLAN, SECTIONS AND ELEVATION

INV. NO. DACA63-84-B-0018 DATED: Mar. 84
CONTR. NO. DACA63-84-C-0112
DRAWING NUMBER
SHEET NO. S10 of 11
SEQUENCE NO. 75
CONTR. NO. DACA63-84-C-0112

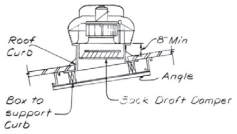
DRAWING OF WORK AS-BUILT



FLOOR PLAN
SCALE 1/4"=1'-0"



FURNACE VENT DETAIL
Not to Scale



ROOF MOUNTED EXHAUST FAN DETAIL
Not to Scale

SCHEDULE OF L.P. GAS FURNACE

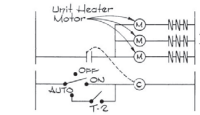
LOCATION	AREA SERVED	BTUH OUTPUT	HIGH STATIC IN. WG.	PIPE SIZE	BLOWER HP	VOLTS	HZ	PH	FLUE SIZE	INTERLOCK WITH	REMARKS
Large Classroom	Large Classroom	20,500	0.20	1½"	1/3	120	60	1	4"	Thermostat	Furnace is Forced Air Up-flow Type
Small Classroom	Small Classroom & Storage Room	34,500	0.20	1½"	1/3	120	60	1	4"	Thermostat	Furnace is Forced Air Up-flow Type

SCHEDULE OF EXHAUST FANS

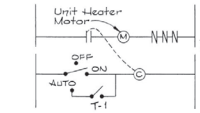
MARK	LOCATION	CFM MINIMUM	S.P. IN.	MAX RPM	HP	VOLTS	PH	HZ	DRIVE	INTERLOCK WITH	REMARKS
EF-1	Large Classroom	2500	1/4	1160	1/2	115	1	60	Direct	Switch by Door	Back Draft Damper Solid State Speed Controller
EF-2	Large Classroom	2,500	1/4	1160	1/2	115	1	60	Direct	Switch by Door	Back Draft Damper Solid State Speed Controller
EF-3	Small Classroom	1300	1/4	1160	1/6	115	1	60	Direct	Switch by Door	Back Draft Damper Solid State Speed Controller

SCHEDULE OF UNIT HEATERS

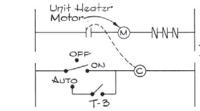
LOCATION	MARK	CFM (MIN)	ELECTRICAL DATA	MOTOR HP	KW-HEAT	BTU/HR (MINIMUM)	REMARKS
Large Classroom	UH-2	400	208V, 3Φ	1/50	3.7	12,500	8' Max. Mounting Hgt., 6" Min. Wall & Roof Clearance
Large Classroom	UH-3	700	208V, 3Φ	1/10	7.5	25,600	8' Max. Mounting Hgt., 6" Min. Wall & Roof Clearance
Large Classroom	UH-4	700	208V, 3Φ	1/10	7.5	25,600	8' Max. Mounting Hgt., 6" Min. Wall & Roof Clearance
Small Classroom	UH-5	700	208V, 3Φ	1/50	5.6	19,200	8' Max. Mounting Hgt., 6" Min. Wall & Roof Clearance



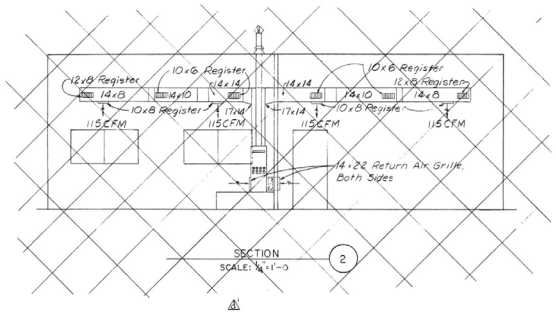
UNIT HEATER CONTROL DIAGRAM FOR CLASSROOM (UH-2,3,4)



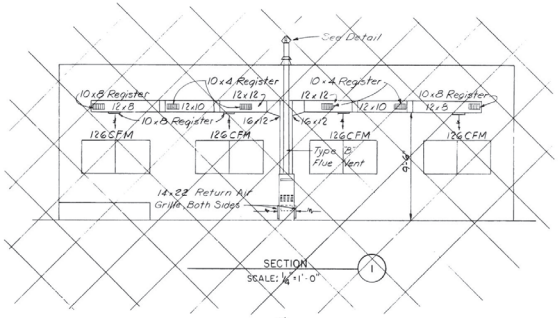
UNIT HEATER CONTROL DIAGRAM FOR PERSONNEL ROOM (UH-1)



UNIT HEATER CONTROL DIAGRAM FOR CLASSROOM (UH-5)



SECTION 2
SCALE: 1/4"=1'-0"



SECTION 1
SCALE: 1/4"=1'-0"

12' 0' 5' 10'
SCALE: 1/4 INCH = 1 FOOT

DWG. NO. 00349340

REVISION NO.	MAJOR	MINOR	DATE	DESCRIPTION OF REVISION
			7Nov85	REVISED AS-BUILT
	AM	0004	3MAR84	deleted gas furnaces & add elec. unit htrs & diagrams

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
CORPS OF ENGINEERS
FORT WORTH, TEXAS

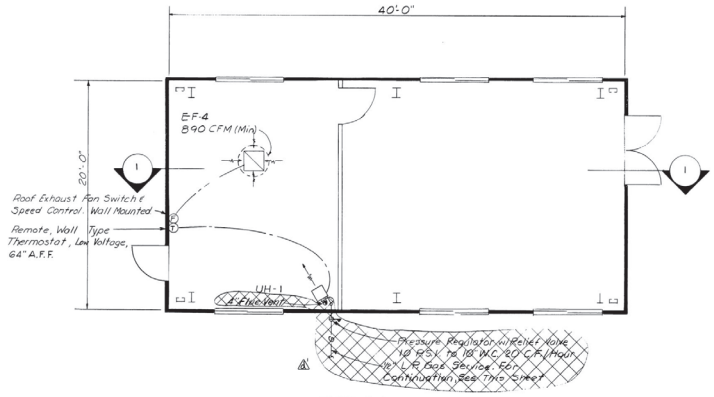
DESIGNED BY: RGE
DRAWN BY: JGH
REVIEWED BY: DJS
SUBMITTED BY:
ENGINEER:

000250 FORT HOOD, TEXAS
PLATOON QUALIFICATION AND SQUAD/CREW SUBCALIBER DALTON MOUNTAIN FIELD FIRE
INSTRUCTIONAL BLDG.
HEATING/VENTILATION DETAILS

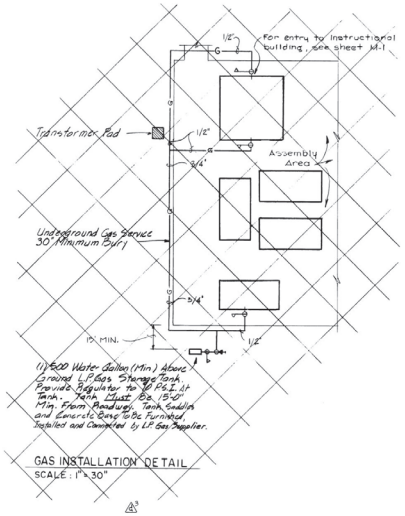
INV. NO. DACA65-84-B-0073 DATED: Mar 84
CONTR. NO. DACA63-84-C-0112
DRAWING NUMBER
SHEET NO. M-1 of 3
SEQUENCE NO. 76

CONTR. NO. DACA63-84-C-0112

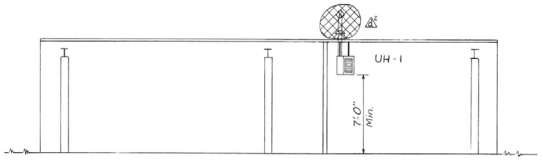
DRAWING OF WORK AS-BUILT



FLOOR PLAN
SCALE: 1/4" = 1'-0"



GAS INSTALLATION DETAIL
SCALE: 1" = 30"



SECTION 1
SCALE: 1/4" = 1'-0"

SCHEDULE OF L.P. GAS UNIT HEATERS

MARK	LOCATION	CFM (MIN.)	BTUH OUTPUT	RPM	PIPE SIZE	FAN HP	VOLTS	HZ	PH	FLUE SIZE	INTERLOCK WITH	REMARKS
UH-1	Personnel Room	300	16,000 Min.	1050	1/2	1/40	120	60	1	4"	Remote Thermostat	

SCHEDULE OF EXHAUST FANS

MARK	LOCATION	CFM (MINIMUM)	S.P. IN	MAX RPM	HP	VOLTS	PH	HZ	DRIVE	INTERLOCK WITH	REMARKS
EF-4	Personnel Room	890	1/4	1160	1/8	115	1	60	Direct	Switch by Door	Back Draft Damper Solid State Speed Controller

SCHEDULE OF UNIT HEATERS

LOCATION	MARK	CFM (MIN)	ELECTRICAL DATA	MOTOR HP	KW-HEAT	BTU/HR (MINIMUM)	REMARKS
Personnel Room	UH-1	400	208V., 3Φ	1/50	3.7	12,800	8' Max. Mounting Ht., 6" Min. Wall & Roof Clearance

30 0 30 60
SCALE: 1" = 30'

12" 0' 5' 10'
SCALE 1/4 INCH = 1 FOOT

DWG. NO. 00349850

REVISION NO.	PLOT	DATE	DESCRIPTION OF REVISION
		7 NOV 85	REVISED AS-BUILT
3	AW8 0004	3 MAY 84	Change UH-1 from gas to elec. & delete gas system.

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
CORPS OF ENGINEERS
FORT WORTH, TEXAS

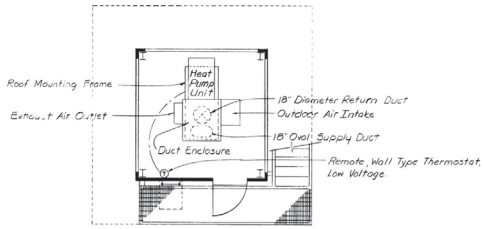
DESIGNED BY: RGE
DRAWN BY: JGH
REVIEWED BY: DJS
SUBMITTED BY: [signature]
ENGINEER:

000280 FORT HOOD, TEXAS
PLATOON QUALIFICATION AND SQUAD/CREW SUBCALIBER DALTON MOUNTAIN FIELD FIRE
RANGE PERSONNEL / STORAGE BLDG.
HEATING DETAILS

INV. NO. DACA63-84-B-0073 DATED: Mar. 84
CONTR. NO. DACA63-84-C-0112
DRAWING NUMBER
SHEET NO. M-2 of 3
SEQUENCE NO. 77

CONTR. NO. DACA63-84-C-0112

DRAWING OF WORK AS-BUILT



ROOF PLAN
SCALE: 1/4" = 1'-0"

HORIZONTAL SINGLE PACKAGE HEAT PUMP SCHEDULE ①																	
SUPPLY AIR C.F.M.	OUTSIDE AIR C.F.M.	⑤ E.S.P. INCHES	INSIDE COIL BLOWER MOTOR ELECTRIC DATA				COOLING CAPACITY BTUH	② HIGH TEMP. HEATING CAPACITY BTUH @ 47°db/45°wb	② LOW TEMP. HEATING CAPACITY BTUH @ 17°db/15°wb	TOTAL UNIT WATTS						OUTSIDE COIL FAN H.P.	ELECTRICAL DATA	REMARKS
			HP	VOLT	PH	HZ				COOLING	③ S.E.E.R. BTU/WATT	HIGH TEMP. HEATING	④ H.S.P.F.	LOW TEMP. HEATING			
740	60	0.30	1/4	208 230	1	60	16,900 Sensible 23,100 Total	26,200	15,400	3,685	9.0	3,196	5.8	2,726	1/6	208/230V-1Ø-60Hz 23.1 Minimum Circuit Ampacity 7.4 LRA Compr. 2.9 LRA Fan 4.5 LRA Blower	Interlock with Thermostat & Speed Control

① Design Temperatures:

	Summer	Winter
Outside	99°Fdb, 75°Fwb	25°Fdb
Inside	78°Fdb, 50% RH	65°Fdb

Air temp. entering indoor cooling coil : 80°F db/67°F wb
Air temp. entering indoor heating coil: 120°F db

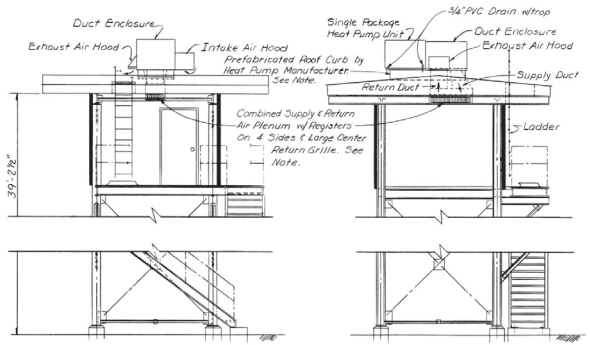
② Provide emergency supplemental electric heat (Resistance); 208V/1Ø/60Hz, 3.5 Kw Capacity.

③ Seasonal Energy Efficiency Ratio. (SEE NOTE 1)

④ Heating Seasonal Performance Factor. (SEE NOTE 1)

⑤ External Static Pressure consists of ductwork, combination supply & return diffuser, & electric heating coil.

△ NOTE 1. MIN COMBINATION S.E.E.R. and H.S.P.F. MAY TOTAL 14.5.



NORTH ELEVATION
SCALE: 1/4" = 1'-0"

EAST ELEVATION
SCALE: 1/4" = 1'-0"

NOTE: Return Air Grille Size To Be 30" x 18" (Min). Supply Air Register Sizes (Min) To Be As Follows: 2 - 42" x 4" & 2 - 18" x 4".

NOTE: Metal Building Manufacturer shall provide additional purlins to support heat pump and shall provide flashing and details for installation and sealing of curb on roof.

12" 0" 5' 10"
SCALE: 1/4 INCH = 1 FOOT

DWG NO. 00349580

REV BLOCK NO.	MADE BY	DATE	DESCRIPTION OF REVISION
		7 NOV 85	R6V1580 AS-BUILT
△	AM Poo04	3 MAY 84	Added Note

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
CORPS OF ENGINEERS
FORT WORTH, TEXAS

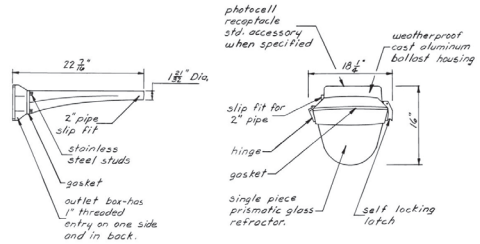
DESIGNED BY: RSE
DRAWN BY: LWH
REVIEWED BY: D.J.S.
SUBMITTED BY:
ENGINEER:

000250 FORT HOOD, TEXAS
PLATOON QUALIFICATION AND SQUAD/CREW SUBCALIBER

CONTROL TOWER
HEATING/AIR CONDITIONING DETAILS

INV. NO. DACA63-84-B-0073 DATED: Nov. 84
CONTR. NO. DACA63-84-C-0112
DRAWING NUMBER
SHEET NO. M-3 of 3
SEQUENCE NO. 78
CONTR. NO. DACA63-84-C-0112

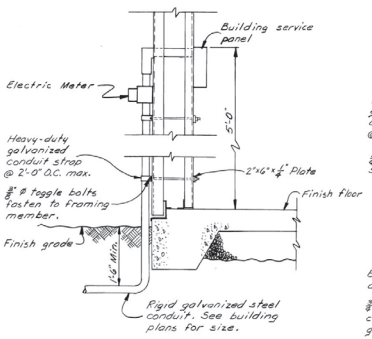
DRAWING OF WORK AS-BUILT



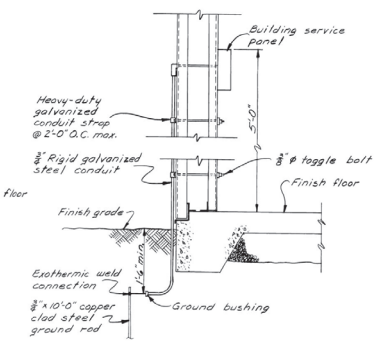
TYPE "H" - 400 watt H.P.S., assymetric distribution, 2" diameter mounting arm for pole mounting, mounted on 25', class 4 wood pole, 20'-0" above grade.

TYPE "J" - 400 watt H.P.S., long and narrow distribution, 2" diameter mounting arm for pole mounting, mounted on 30' class 4 wood pole, 25'-0" above grade.

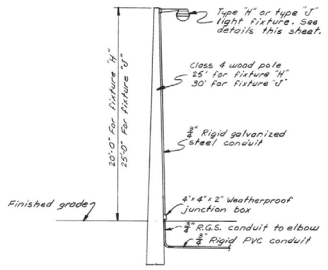
POLE MOUNTED LIGHT FIXTURE DETAILS
NO SCALE



TYPICAL UNDERGROUND ELECTRICAL SERVICE DETAIL
NO SCALE



TYPICAL ELECTRICAL SERVICE ENTRANCE GROUNDING DETAIL
NO SCALE



POLE MOUNTED LIGHT FIXTURE DETAIL
NO SCALE

EXTERIOR LEGEND

- —AP— New aerial primary
- —AS— New aerial secondary
- —UP— New underground primary
- —US— New underground secondary
- —UT— New underground telephone
- --AP-- Existing aerial primary
- --AS-- Existing aerial secondary
- MH-1 Manhole, electric
- PM-1 Pad mounted transformer
- Pole mounted transformer
- Pole mounted light fixture
- Existing pole to remain
- New pole
- Existing pole to be replaced with new pole.
- Pole number — Detail reference; Height — Class
- Down guy
- HH-1 4'x4' concrete hand hole, electric, telephone, and control.

INTERIOR LEGEND

- Duplex receptacle. 15A, 125V, grounded type mounted 12" A.F.F. unless otherwise noted.
- WP Duplex receptacle. 15A, 125V, grounded type mounted 4'-0" A.F.F. WP indicates weatherproof.
- 220 volt, 20 amp outlet for window A.C. units
- Single pole wall switch mounted 4'-0" A.F.F.
- 3 3-way wall switch mounted 4'-0" A.F.F.
- D Single pole dimmer switch mounted 4'-0" A.F.F.
- R Safety switch. Unfused unless otherwise noted. R indicates raintight.
- Lighting panelboard
- Power panelboard
- Branch circuit homerun to panelboard with circuit numbers shown. Number of arrows indicates number of circuits.
- Junction box
- Telephone outlet mounted 12" A.F.F.
- Telephone cabinet
- T Empty telephone conduit home run to telephone cabinet.
- G Wall mounted exit light. Letter denotes type in fixture schedule.
- E Battery powered emergency lights set. Triangles indicate number of light heads and direction of aim. Letter denotes type in fixture schedule.
- Ground connection
- 3/8"x10'-0" copper clad steel ground rod.
- M 1/2 Motor. Number indicates horsepower.
- M Meter
- C Clock
- T Thermostat
- Service head
- A Fluorescent light fixture. Letter denotes type in fixture schedule. Circle is outlet box.
- C Incandescent or high pressure sodium light fixture. Letter denotes type in fixture schedule.
- D Wall mounted incandescent light fixture. Letter denotes type in fixture schedule.

LIGHTING FIXTURE SCHEDULE

FIXTURE MARK	VOLTS	DWG 40-06-04 TYPE	SHEET NO.	LAMPS NO.	WATTS	HEIGHT	REMARKS
A	120	229	30	2	35		See note no. 1 & 9
A-1	120	229	30	2	35		See note no. 1, 2 & 9
B	120	229	30	2	35		See note no. 1, 3 & 9
C	120	124-B	15	1	100		See note no. 4
D	120	107-A	3	1	150		See note no. 1
D-1	120	107-A	3	1	150		See note no. 5
E	120	603	54				See note no. 6
F	120	230-A-1	31	2	35		See note no. 1 & 9
G	120	604-A-3	55	2	20		See note no. 7
H	120	See detail this sheet		1	400		
J	120	See detail this sheet		1	400		
K	120	221-B	26	2	40		See note no. 8 & 9
L	120	306-E	38	1	150		H.P.S. Lamp

NOTES:

1. Pendant mounted - support from building roof structure 8'-0" A.F.F. to bottom.
2. Provide dimming ballast.
3. Provide 1/8" thick no. 1 red filter acrylic overlay lens to be installed on top of standard fixture acrylic lens. This red lens to be used to reduce light glare output of the fluorescent fixture.
4. Wall mounted on latch side of door.
5. Stanchion mounted on railing. See detail sheet
6. Wall mounted 7'-6" A.F.F. to bottom.
7. Wall mounted above door 7'-6" A.F.F. to bottom.
8. Surface mounted on ceiling.
9. Provide energy saving ballast.

DWG. NO. 00349370

DW. NO.	ACTION	DATE	DESCRIPTION OF REVISION
		7Nov85	Revised As-Built

Watkins and Associates, Inc. engineers • architects • planners
148 East High Street • P.O. Box 981
Lexington, Kentucky 40588

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
CORPS OF ENGINEERS
FORT WORTH, TEXAS

DESIGNED BY: LTV
DRAWN BY: RDG
REVIEWED BY: MJG
SUBMITTED BY:
ENGINEER:

00250 FORT HOOD, TEXAS

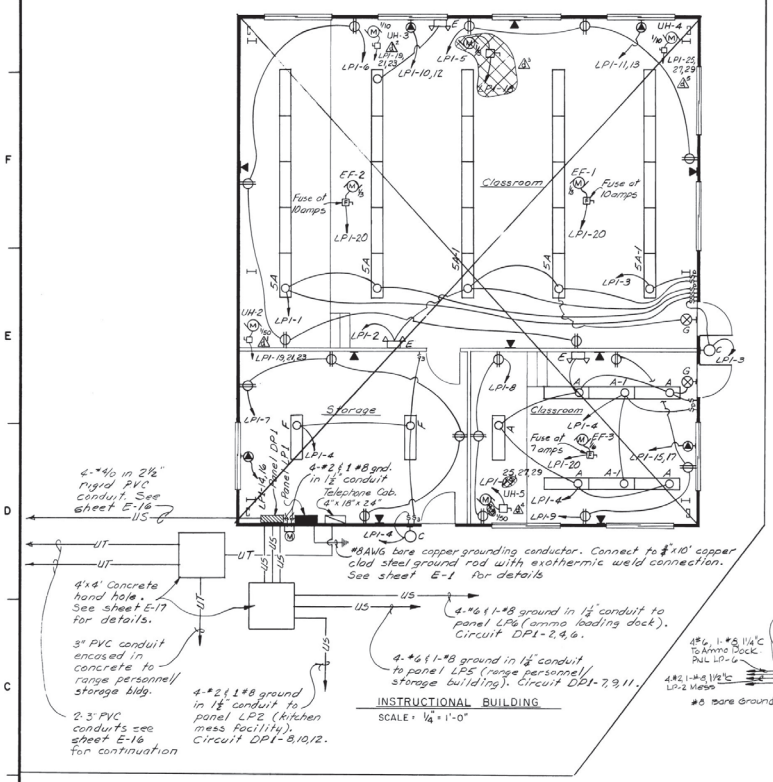
PLATOON QUALIFICATION AND SQUAD/CREW SUBCALIBER DALTON MOUNTAIN FIELD FIRE

MISCELLANEOUS ELECTRICAL DETAILS

INV. NO. DACA63-84-B-0073 DATED: Mar. 84
CONTR. NO. DACA63-84-C-0112
DRAWING NUMBER
SHEET NO. E-1 OF 29
SEQUENCE NO. 79

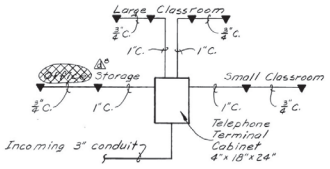
CONTR. NO. DACA63-84-C-0112

DRAWING OF WORK AS-BUILT



INSTRUCTIONAL BUILDING

SCALE: ¼" = 1'-0"



TELEPHONE RISER DIAGRAM

NO SCALE

NOTES:
1. For light fixture schedule and legend see sheet E-1.
2. All one pole 15 and 20 amp circuits to be 2-#12 and 1-#12 ground in ¾" E.M.T. conduit.
3. All one pole 30 amp circuits to be 2-#10 and 1-#10 ground in ¾" E.M.T. conduit.
4. All two pole 20 amp circuits to be 2-#12 and 1-#12 ground in ¾" E.M.T. conduit.
5. All three pole 20 amp circuits to be 3-#12 and 1-#12 ground in ¾" E.M.T conduit.
6. All three pole 30 amp circuits to be 3-#8 and 1-#8 ground in 1" E.M.T. conduit.

PANEL COMPUTATION — PANEL NO. LP1 BUILDING NAME Instructional Building

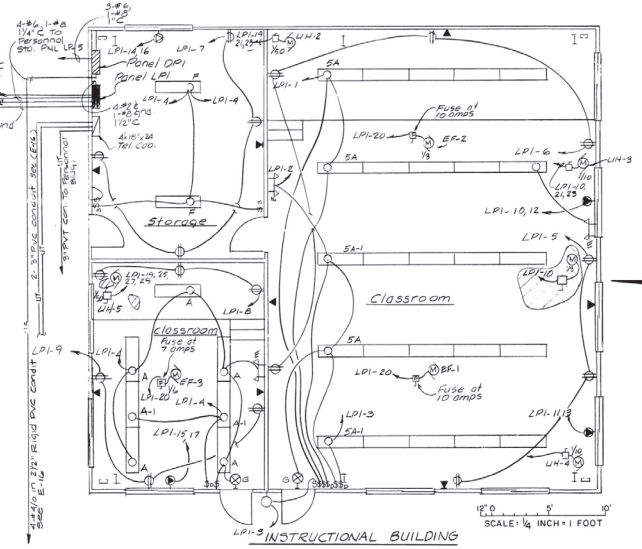
PANEL 100 Amp VOLTS 120/208 PHASE 3 WIRES 4 MAIN LUGS ONLY

CIRC. NO.	TRIP AMPS	NO. POLES	LOAD SERVED	PHASE LOAD V.A. A	B	C	LOAD SERVED	CIRC. NO.	TRIP AMPS	NO. POLES
1	20	1	Lights	940 / 980			Lights	2	20	1
3	20	1	Lights		620 / 990		Lights	4	20	1
5	20	1	Receptacles			600 / 800	Receptacles	6	20	1
7	20	1	Receptacles	800 / 600			Receptacles	8	20	1
9	20	1	Receptacles		600 / 1445		A.C. Receptacle	10	20	2
11	20	2	A.C. Receptacle			1445 / 1445		12		
13				1445 / 500			A.C. Receptacle	14	20	2
15	20	2	A.C. Receptacle		500 / 500			16		
17						500 / 500	Spare	18	20	1
19	50	3	UH-2 & UH-3	2219 / 2100			EF-1, EF-2, EF-3	20	30	1
21	50	3	UH-2 & UH-3		2219 / 2100		Spare	22	20	1
23	50	3	UH-2 & UH-3			2219	Space Only	24		
25	50	3	UH-4 & UH-5	2427				26		
27	50	3	UH-4 & UH-5		2427			28		
29	50	3	UH-4 & UH-5			2427		30		
TOTAL CONNECTED LOAD 32.88 KVA				12,611	9,731	9,936	TOTAL DEMAND LINE AMPS 68.00			
ESTIMATED DEMAND LOAD 24.50 KVA				FEEDER 4-#2			LENGTH 5 ft. VOLTAGE DROP			

PANEL COMPUTATION — PANEL NO. DP1 BUILDING NAME Instructional Building

PANEL 225 Amp VOLTS 120/208 PHASE 3 WIRES 4 MAIN LUGS ONLY

CIRC. NO.	TRIP AMPS	NO. POLES	LOAD SERVED	PHASE LOAD V.A. A	B	C	LOAD SERVED	CIRC. NO.	TRIP AMPS	NO. POLES
1	100	3	Panel LP1	10,780 / 7,350			Panel LP6	2	60	3
3					10,780 / 8,900			4		
5						10,780 / 8,200		6		
7	60	3	Panel LP5	2,487 / 2,400			Panel LP2	8	100	3
9					2,487 / 2,100			10		
11			Panel LP7			2,487 / 2,100		12		
13							Space Only	14		
15			Security Lights				Security Lights	16		
17								18		
TOTAL CONNECTED LOAD 68.85 KVA				22,947	22,947	22,947	TOTAL DEMAND LINE AMPS 188.31			
ESTIMATED DEMAND LOAD 67.84 KVA				FEEDER 4-#4/0			LENGTH 25 ft. VOLTAGE DROP			



INSTRUCTIONAL BUILDING

DWG. NO. 00849880

REV. & NO.		DATE	DESCRIPTION OF REVISION
		7 Nov 85	REVISED AS-BUILT
	AM#0004	22 JUNE 84	REVISED TO REFLECT W.I. CHANGES
	AM#0004	3 MAY 84	Delete furnaces & add elec. unit heaters & notes

Watkins and Associates, Inc. engineers • architects • planners 448 East High Street • P.O. Box 951 Lexington, Kentucky 40588

U.S. ARMY ENGINEER DISTRICT, FORT WORTH CORPS OF ENGINEERS FORT WORTH, TEXAS

DESIGNED BY: LTV
DRAWN BY: RDG
REVIEWED BY: MJG
SUBMITTED BY:
ENGINEER:

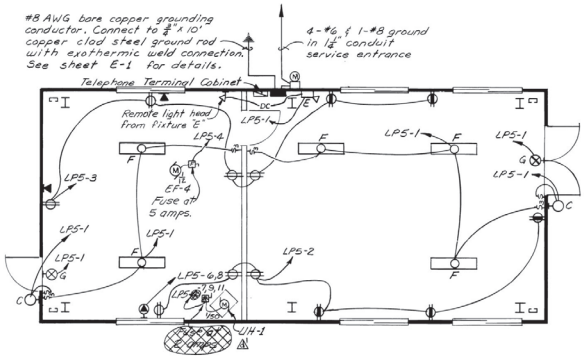
000250 FORT HOOD, TEXAS

PLATOON QUALIFICATION AND SQUAD/CREW SUBCALIBER DALTON MOUNTAIN FIELD FIRE

INSTRUCTIONAL BUILDING ELECTRICAL PLAN

INV. NO. DACA63-84-B-0073 DATED: Mar. 84
CONTR. NO. DACA63-84-C-0112
DRAWING NUMBER
SHEET NO. E-2 of 29
SEQUENCE NO. 80
CONTR. NO. DACA63-84-C-0112

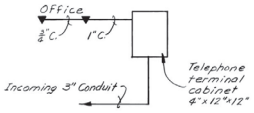
DRAWING OF WORK AS-BUILT



Note: For light fixture schedule and legend see sheet E-1

RANGE PERSONNEL / STORAGE BUILDING ELECTRICAL PLAN

SCALE: ¼" = 1'-0"



TELEPHONE RISER DIAGRAM.

NO SCALE

PANEL COMPUTATION

PANEL NO. LP5 BUILDING NAME Range Personnel/Storage Bldg.

PANEL 60 Amp VOLTS 120/208 PHASE 3 WIRES 4 MAIN CIRCUIT BREAKER 60 AMPS

CIRC. NO.	TRIP AMPS	NO. POLES	LOAD SERVED	PHASE LOAD V.A. A	B	C	LOAD SERVED	CIRC. NO.	TRIP AMPS	NO. POLES
1	20	1	Lights	900 / 1200			Receptacles	2	20	1
3	20	1	Receptacles		1850 / 900		EF-4	4	20	1
5	20	1	Spare			500 / 500	A.C. Receptacles	6	30	2
7	20	3	UH-1	763 / 208			↓	8	↓	↓
9	20	3	UH-1		763		Space Only	10		
11	20	3	UH-1			763	↓	12		
13			SPACE ONLY					14		
TOTAL CONNECTED LOAD 7.46 KVA				3,233	2,463	1,763	TOTAL	DEMAND LINE AMPS 17.93		
ESTIMATED DEMAND LOAD 6.46 KVA				FEEDER 4-#6		LENGTH 120 FT.		VOLTAGE DROP 1.89%		

NOTES:
1. ALL ONE POLE 20 AMP CIRCUITS TO BE 2-#12 AND 1-#12 GROUND IN 3/4" E.M.T. CONDUIT.
2. ALL TWO POLE 30 AMP CIRCUITS TO BE 2-#10 AND 1-#10 GROUND IN 3/4" E.M.T. CONDUIT.
3. ALL THREE POLE 20 AMP CIRCUITS TO BE 3-#12 AND 1-#12 GROUND IN 3/4" E.M.T. CONDUIT.

DWG. NO. 00849390

REVISION NO.	DATE	DESCRIPTION OF REVISION
	7 NOV 85	REVISED AS-BUILT
	AM*0004 23 JUNE 84	REVISED TO REFLECT W.I. CHANGES
	AM*0004 5 MAY 84	Changed UH-1 from gas to elec. Add note

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U.S. ARMY ENGINEER DISTRICT, FORT WORTH
CORPS OF ENGINEERS
FORT WORTH, TEXAS

DESIGNED BY: LTV
DRAWN BY: RDG
REVIEWED BY: MJG

000250 FORT HOOD, TEXAS

PLATOON QUALIFICATION AND SQUAD/CREW SUBCALIBER DALTON MOUNTAIN FIELD FIRE

RANGE PERSONNEL / STORAGE BUILDING ELECTRICAL PLAN

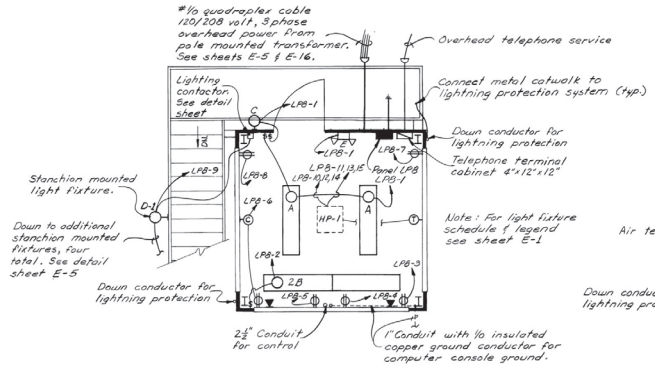
SUBMITTED BY: ENGINEER:

INV. NO. DACA63-84-B-0073 DATED: Mar. 84
CONTR. NO. DACA63-84-C-0112
DRAWING NUMBER
SHEET NO. E-3 OF 29
SEQUENCE NO. 81

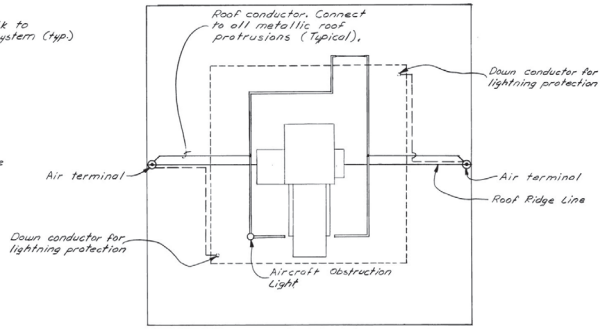
CONTR. NO. DACA63-84-C-0112

12' 0' 5' 10'
SCALE: ¼ INCH = 1 FOOT

DRAWING OF WORK AS-BUILT



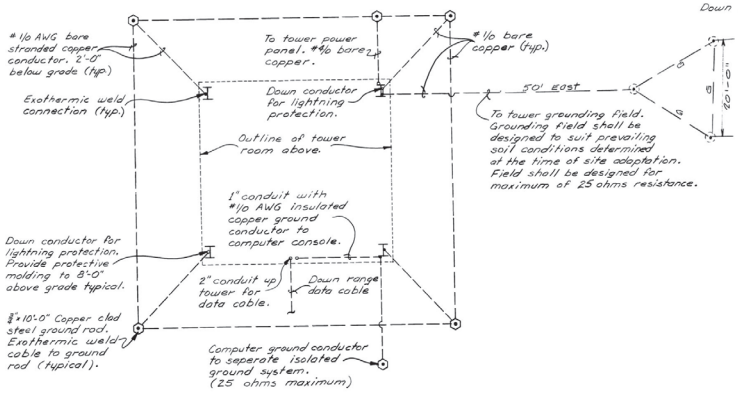
CONTROL TOWER FLOOR PLAN
SCALE: 3/8" = 1'-0"



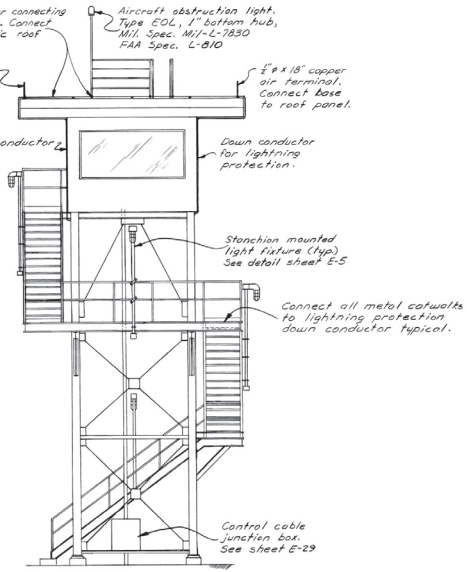
ROOF PLAN
SCALE: 3/8" = 1'-0"

PANEL COMPUTATION												
PANEL NO. LP8 BUILDING NAME Control Tower												
PANEL 100 Amp VOLTS 120/208 PHASE 3 WIRES 4 MAIN CIRCUIT BREAKER 100 AMPS												
CIRC. NO.	TRIP AMPS	NO. POLES	LOAD SERVED	PHASE LOAD V.A. A	B	C	LOAD SERVED	CIRC. NO.	TRIP AMPS	NO. POLES
1	20	1	Lights	320 / 180			Lights	2	20	1
3	20	1	Receptacle		180 / 360		Receptacle	4	20	1
5	20	1	Receptacle			360 / 360	Receptacles	6	20	1
7	20	1	Receptacle	180 / 360			Receptacle	8	20	1
9	20	1	Lights (outside)		420 / 1,689		Isolated 110V Hup	10	20	3
11	20	3	Space			1,974 / 1,689	Spare	12	20	1
13		2	HP-1 Elect Heat	1,974 / 1,689			HP-1 Elect. Heat	14	20	2
15	↓	↑	↑		1,974 / 500		↓	16	↓	↓
17	20	2	Resist. Elec. Heat			1,974 / 500	Spare	18		
19	↑	↑	Spare Only	1,720			Space Only	20		
21								22		
23								24		
25								26		
27								28		
29								30		
TOTAL CONNECTED LOAD 17.03 KVA				6,059	4,903	6,073	TOTAL	DEMAND LINE AMPS 34.26		
ESTIMATED DEMAND LOAD 12.34 KVA				FEEDER 4-#1/0			LENGTH 100 ft.	VOLTAGE DROP 0.44%		

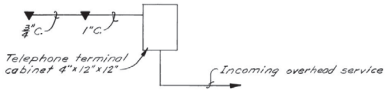
NOTES:
1. All one pole 20 amp circuits to be 2-#12 and 1-#12 ground in ¾" E.M.T. conduit unless otherwise noted.
2. Circuit LP8-9 shall be 2-#12 and 1-#12 ground in ¾" rigid steel conduit.
3. Circuit LP8-17,19 shall be 2-#12 and 1-#12 ground in ¾" E.M.T. conduit.
4. Circuit LP8-11,13,15 shall be 3-#12 and 1-#12 ground in ¾" rigid steel conduit.
5. Circuit LP8-10,12,14 shall be 4-#12 and 1-#12 ground in ¾" rigid steel conduit.



CONTROL TOWER PLAN AT GRADE
SCALE: 3/8" = 1'-0"



ELEVATION
SCALE: ¼" = 1'-0"



TELEPHONE RISER DIAGRAM
NO SCALE

SCALE: 3/8 INCH = 1 FOOT

DWG. NO. 00349400

REVISION NO.	AUTHOR	DATE	DESCRIPTION OF REVISION
			REVISED AS-BUILT

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U.S. ARMY ENGINEER DISTRICT, FORT WORTH
CORPS OF ENGINEERS
FORT WORTH, TEXAS

DESIGNED BY: LTV
DRAWN BY: RDG
REVIEWED BY: MJG
SUBMITTED BY:
ENGINEER:

000250 FORT HOOD, TEXAS

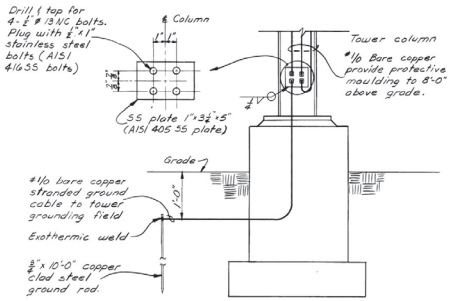
PLATOON QUALIFICATION AND SQUAD/CREW SUBCALIBER DALTON MOUNTAIN FIELD FIRE

CONTROL TOWER ELECTRICAL PLAN

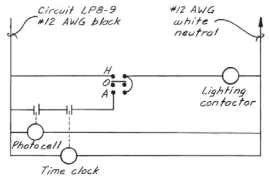
INV. NO. DACA63-84-B-0073 DATED: Mar. 84
CONTR. NO. DACA63-84-C-0112
DRAWING NUMBER
SHEET NO. E-4 OF 29
SEQUENCE NO. 82

CONTR. NO. DACA63-84-C-0112

DRAWING OF WORK AS-BUILT

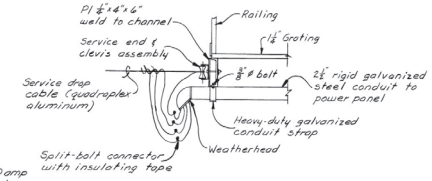


SINGLE GROUND POINT DETAIL
NO SCALE

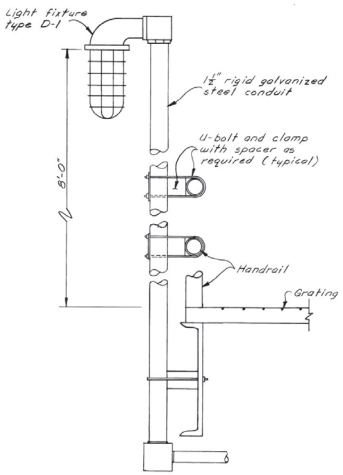


Note: Lighting contactor shall be 2 pole 20 amp with 110 volt coil and hand-off-auto selector switch.

STANCHION MOUNTED LIGHT FIXTURES
CONTROL WIRING DIAGRAM
NO SCALE



ELECTRICAL SERVICE ENTRANCE DETAIL
NO SCALE



STANCHION MOUNTED LIGHT FIXTURE DETAIL
NO SCALE

DWG. NO. 00349410

REVISION NO.	ACTION	DATE	DESCRIPTION OF REVISION
		7Nov85	REVISED AS-BUILT

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Lexington, Kentucky 40588

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
CORPS OF ENGINEERS
FORT WORTH, TEXAS

DESIGNED BY: LTV
DRAWN BY: RDG
REVIEWED BY: LTV
SUBMITTED BY:
ENGINEER:

000250 FORT HOOD, TEXAS

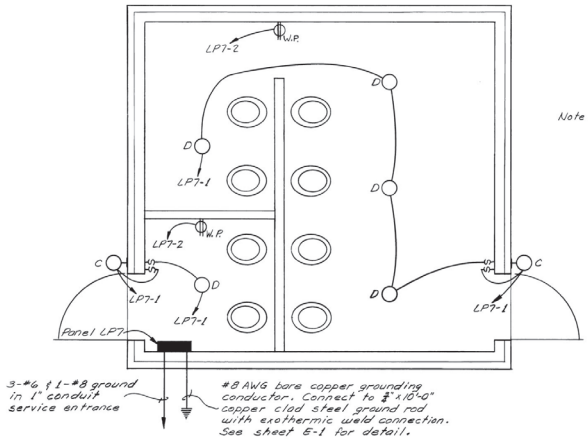
PLATOON QUALIFICATION
AND SQUAD/CREW SUBCALIBER
DALTON MOUNTAIN FIELD FIRE

CONTROL TOWER DETAILS

INV. NO. DACA63-84-B-0073 DATED: Mar. 84
CONTR. NO. DACA63-84-C-0112
DRAWING NUMBER
SHEET NO. E-5 OF 29
SEQUENCE NO. 83

CONTR. NO. DACA63-84-C-0112

DRAWING OF WORK AS-BUILT



Note: For light fixture schedule and legend see sheet E-1

STAGING AREA LATRINE

SCALE: ½" = 1'-0"

PANEL COMPUTATION

PANEL NO. LP7 BUILDING NAME Staging Area Latrine

PANEL 60 Amp VOLTS 120/208 PHASE 1 WIRES 3 MAIN CIRCUIT BKR. 15 AMPS

CIRC. NO.	TRIP AMPS	NO. POLES	LOAD SERVED	PHASE LOAD V.A A	PHASE LOAD V.A B	LOAD SERVED	CIRC. NO.	TRIP AMPS	NO. POLES
1	20	1	Lights	950 / 400		Receptacles	2	20	1
3	20	1	Spare		500	Space Only	4		
5			Space Only				6		
7							8		
TOTAL CONNECTED LOAD 1.85 KVA				1,350	500	TOTAL	VOLTAGE DROP 0.51%		

ESTIMATED DEMAND LOAD 1.35 KVA

DEMAND LINE AMPS 6.49 FEEDER 3-#6 LENGTH 185 ft.

NOTE: All one pole 20 amp circuits to be 2-#12 and 1-#12 ground in ¾" rigid steel conduit.

DWG. NO CO249420

SYM.	NO.	ACTION	DATE	DESCRIPTION OF ACTION
			7/26/85	REVISED AS-BUILT

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U.S. ARMY ENGINEER DISTRICT, FORT WORTH
CORPS OF ENGINEERS
FORT WORTH, TEXAS

DESIGNED BY: LTV
DRAWN BY: RDG
REVIEWED BY: MJG
SUBMITTED BY:
ENGINEER:

000250 FORT HOOD, TEXAS

PLATOON QUALIFICATION
AND SQUAD/CREW SUBCALIBER
DALTON MOUNTAIN FIELD FIRE

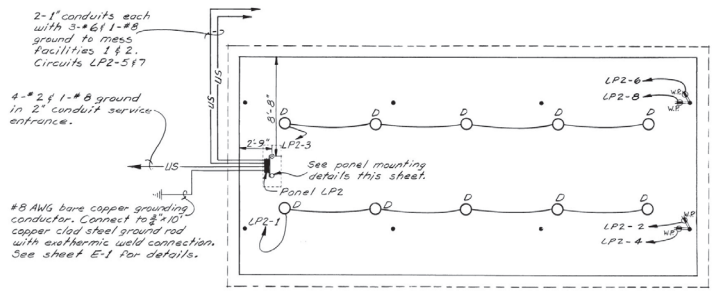
VAULT LATRINE ELECTRICAL PLAN

INV. NO. DACA63-84-B-0073 DATED: Mar 84
CONTR. NO. DACA63-84-C-0112
DRAWING NUMBER
SHEET NO. E-6 of 29
SEQUENCE NO. 84

CONTR. NO. DACA63-84-C-0112

12" 0 1' 2' 3' 4' 5'
SCALE: ½ INCH = 1 FOOT

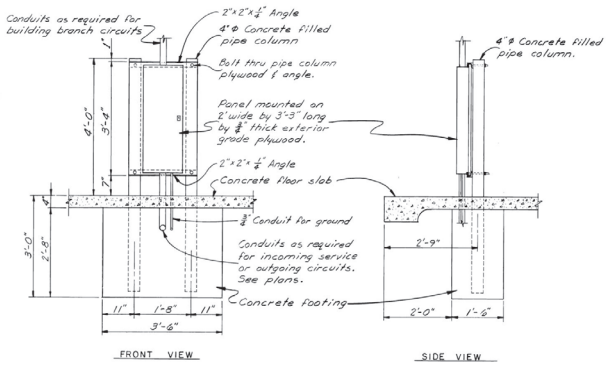
DRAWING OF WORK AS-BUILT



Note: For light fixture schedule and legend see sheet E-1

MESS FACILITY ELECTRICAL PLAN

SCALE: 1/4" = 1'-0"



PANEL MOUNTING DETAILS

NO SCALE

PANEL COMPUTATION

PANEL NO. LP2 BUILDING NAME Mess Facility (Kitchen)

PANEL 100 Amp VOLTS 120/208 PHASE 3 WIRES 4 MAIN CIRCUIT BREAKER 100 AMPS

CIRC. NO.	TRIP AMPS	NO. POLES	LOAD SERVED	PHASE LOAD V.A A	B	C	LOAD SERVED	CIRC. NO.	TRIP AMPS	NO. POLES
1	20	1	Lights	720 1000			Receptacle	2	20	1
3	20	1	Lights		720 1000		Receptacle	4	20	1
5	40	2	Panel LP3			3300 1000	Receptacle	6	20	1
7	↑	↑	↑	3300 1000			Receptacle	8	20	1
9	40	2	Panel LP4		3300 200		Spare	10	20	1
11	↑	↑	↑			3300	Space Only	12		
13	20	1	Spare Only				↑	14		
14	↑	↑	↑				↑	16		
TOTAL CONNECTED LOAD 19.20 KVA				6,050	5,550	7600	TOTAL DEMAND LINE AMPS 51.91			
ESTIMATED DEMAND LOAD 18.70 KVA				FEEDER 4-#2			LENGTH 40 ft. VOLTAGE DROP 0.69%			

NOTES: 1. Circuit breakers to be rated for switching duty.

2. All one pole 20 amp circuits to be 2-#12 and 1-#12 ground in ¾" rigid steel conduit.

SCALE: 1/4" INCH = 1 FOOT

DWG. NO. 00349430

FOR USA NO.	ACTION	DATE	DESCRIPTION OF REVISION
		7 NOV 85	REVISED AS-BUILT

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U.S. ARMY ENGINEER DISTRICT, FORT WORTH CORPS OF ENGINEERS FORT WORTH, TEXAS

DESIGNED BY: LTV

DRAWN BY: RDG

REVIEWED BY: MJG

SUBMITTED BY:

ENGINEER:

000250 FORT HOOD, TEXAS

PLATOON QUALIFICATION AND SQUAD/CREW SUBCALIBER DALTON MOUNTAIN FIELD FIRE

MESS FACILITY ELECTRICAL PLAN (KITCHEN)

INV. NO. DACA63-84-B-0073 DATED: Mar. 84

CONTR. NO. DACA63-84-C-0112

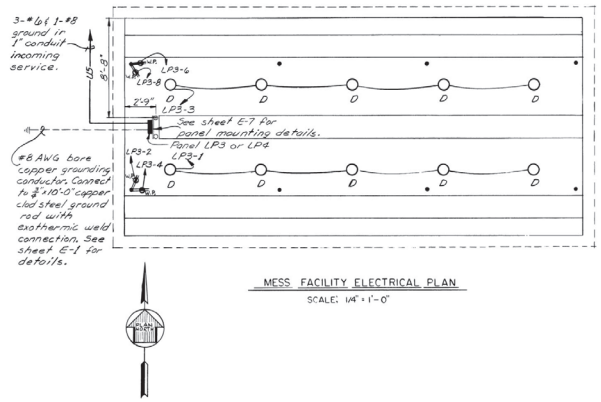
DRAWING NUMBER

SHEET NO. E-7 OF 29

SEQUENCE NO. 85

CONTR. NO. DACA63-84-C-0112

DRAWING OF WORK AS-BUILT



MESS FACILITY ELECTRICAL PLAN

SCALE: 1/4" = 1'-0"

Note: For light fixture schedule and legend see sheet E-1

PANEL COMPUTATION

PANEL NO. LP314 BUILDING NAME Mess Facility 112

PANEL 100 Amp VOLTS 120/208 PHASE 1 WIRES 3 MAIN CIRCUIT BKR. 40 AMPS

CIRC. NO.	TRIP AMPS	NO. POLES	LOAD SERVED	PHASE LOAD V.A. A	PHASE LOAD V.A. B	LOAD SERVED	CIRC. NO.	TRIP AMPS	NO. POLES
1	20	1	Lights	750 / 1000		Receptacle	2	20	1
3	20	1	Lights		750 / 1000	Receptacle	4	20	1
5	20	1	Spare	500 / 1000		Receptacle	6	20	1
7			Space Only		1000	Receptacle	8	20	1
9						Space Only	10		
11							12		
TOTAL CONNECTED LOAD 6.00 KVA				3,250	2,750	TOTAL	VOLTAGE DROP 0.33% / 0.67%		
ESTIMATED DEMAND LOAD 5.50 KVA						FEEDER 3-#2	LENGTH 35' and 65'		
DEMAND LINE AMPS 26.44									

NOTES: 1. Circuit breakers to be rated for switching duty.

2. All one pole 20 amp circuits to be 2-#12 and 1-#12 ground in ¾" rigid steel conduit.

SCALE: 1/4 INCH = 1 FOOT

DWG. NO. 00349440

SYM.	NO.	ACTION	DATE	DESCRIPTION OF REVISION
			7Nov85	REVISED AS-BUILT

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U.S. ARMY ENGINEER DISTRICT, FORT WORTH CORPS OF ENGINEERS FORT WORTH, TEXAS

DESIGNED BY: LTV

DRAWN BY: RDG

REVIEWED BY: MJG

000250 FORT HOOD, TEXAS

PLATOON QUALIFICATION AND SQUAD/CREW SUBCALIBER DALTON MOUNTAIN FIELD FIRE

MESS FACILITY ELECTRICAL PLAN

SUBMITTED BY:

ENGINEER: M.J. Welch

INV. NO. DACA63-84-B-0073 DATED: Mar 84

CONTR. NO. DACA63-84-C-0112

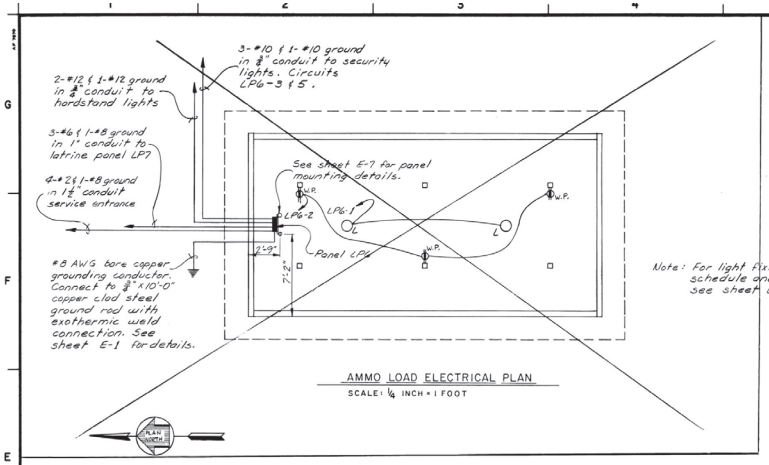
DRAWING NUMBER

SHEET NO. E-5 OF 29

SEQUENCE NO. 86

CONTR. NO. DACA63-84-C-0112

DRAWING OF WORK AS-BUILT



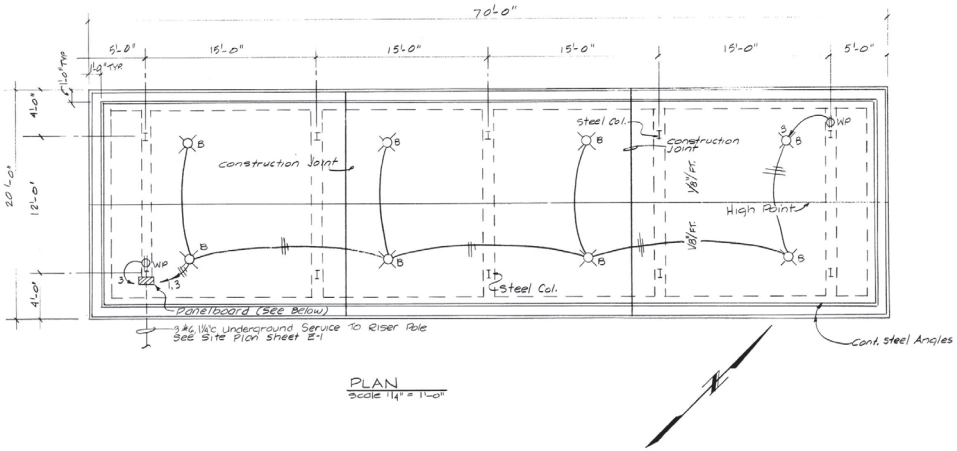
AMMO LOAD ELECTRICAL PLAN

SCALE: 1/4 INCH = 1 FOOT

PANEL COMPUTATION											
PANEL NO. LP-6 BUILDING NAME Ammo Loading Dock											
PANEL 100 Amp VOLTS 120/208 PHASE 3 WIRES 4 MAIN CIRCUIT BREAKER 60 AMPS											
CIRC. NO.	TRIP AMPS	NO. POLES	LOAD SERVED	PHASE LOAD V.A. A	B	C	LOAD SERVED	CIRC. NO.	TRIP AMPS	NO. POLES
1	20	1	Lights	900			Receptacles	2	20	1
3	20	1	Spare		1200		Spare	4	20	1
5	20	1	Spare			1200	Spare	6	30	2
7	20	1	Spare	800		1200	Space	8		
9			Space Only	2500			Space Only	10		
11								12		
TOTAL CONNECTED LOAD 9.90 KVA				4200	2,000	3,700	TOTAL	DEMAND LINE AMPS 26.09		
ESTIMATED DEMAND LOAD 3.40 KVA				FEEDER 4-#2			LENGTH 210 ft.	VOLTAGE DROP 2.08%		

NOTES: 1. Circuit breakers to be rated for switching duty.

2. All one pole 20 amp circuits to be 2-#12 and 1-#12 ground in 3/4" rigid steel conduit.



PLAN

Scale 1/4" = 1'-0"

12' 0' 5' 10'

SCALE: 1/4 INCH = 1 FOOT

DWG. NO. 00849450

SYM.	DATE	ACTION	DATE	DESCRIPTION OF REVISION
			7Nov85	REVISED AS-BUILT

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U.S. ARMY ENGINEER DISTRICT, FORT WORTH
CORPS OF ENGINEERS
FORT WORTH, TEXAS

DESIGNED BY: LTV
DRAWN BY: RDG
REVIEWED BY: MJG
SUBMITTED BY:
ENGINEER:

000250 FORT HOOD, TEXAS

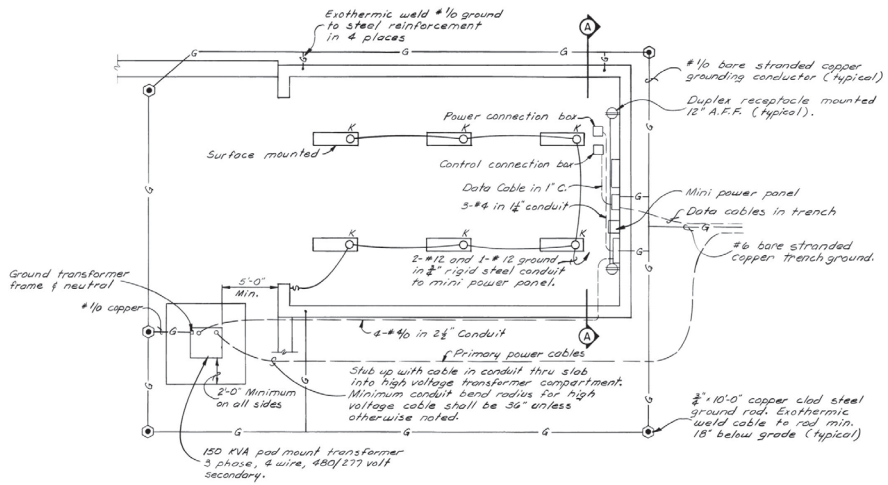
PLATOON QUALIFICATION AND SQUAD/CREW SUBCALIBER DALTON MOUNTAIN FIELD FIRE

AMMO LOADING DOCK ELECTRICAL PLAN

INV. NO. DACA63-84-B-0073 DATED: Mar. 84
CONTR. NO. DACA63-84-C-0112
DRAWING NUMBER
SHEET NO. E-9 of 29
SEQUENCE NO. 87

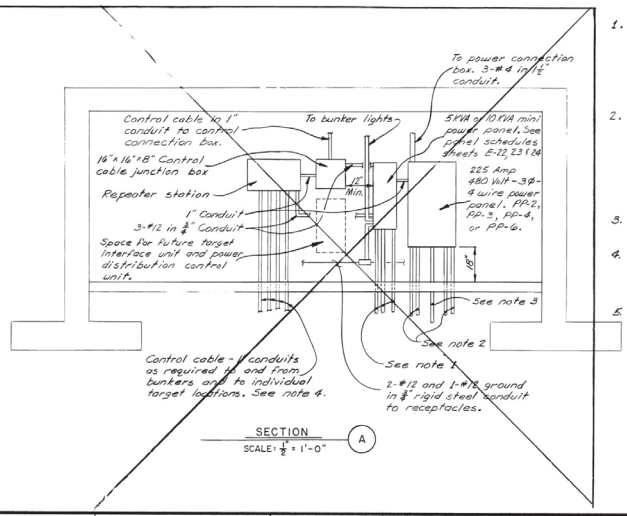
CONTR. NO. DACA63-84-C-0112

DRAWING OF WORK AS-BUILT



PLAN

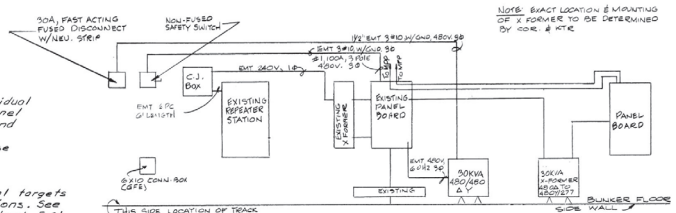
SCALE: ¼" = 1'-0"



SECTION A

SCALE: ¼" = 1'-0"

1. 110 volt circuit power cable conduits to individual targets directly fed from the mini power panel located in the bunker. See plan sheet E-19 and panel schedule sheets E-22, E-23, & E-24 for number and size of feeders. Terminate these conduits 10 ft. outside bunker with an insulated bushing.
2. 480 volt circuit power cable conduits to individual targets fed from mini power panels at target locations. See plan sheets E-18 & E-19, single line diagram sheet E-21, and panel schedule sheets E-22, E-23 & E-24 for number and size of feeders. Terminate these conduits 10 ft. outside bunker with an insulated bushing. Provide one spare conduit extended as above.
3. 4-#4/0 in 2½" conduit from 150 KVA pad mounted transformer outside bunker.
4. Terminate conduits to individual targets 10 ft. outside bunker with an insulated bushing. Control cables to and from other bunkers shall be in conduit their entire length.
5. See schedule sheet E-20 for panel descriptions and sizes.



MOVING TARGET BUNKER BACK INSIDE WALL (4 TOTAL)

(N.T.S.)

SECTION A

SCALE (N.T.S.)

SCALE: ¼" INCH = 1 FOOT

12" 0 1' 2' 3' 4'

SCALE: ¼" INCH = 1 FOOT

12" 0 5'

DWG. NO. 00349460

SYM.	NO.	REVISION	DATE	DESCRIPTION OF REVISION
			7 NOV 85	REVISED AS-BUILT

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U.S. ARMY ENGINEER DISTRICT, FORT WORTH
CORPS OF ENGINEERS
FORT WORTH, TEXAS

DESIGNED BY: LTV
DRAWN BY: RDG
REVIEWED BY: MJG
SUBMITTED BY:
ENGINEER:

000260 FORT HOOD, TEXAS

PLATOON QUALIFICATION AND SQUAD/CREW SUBCALIBER DALTON MOUNTAIN FIELD FIRE

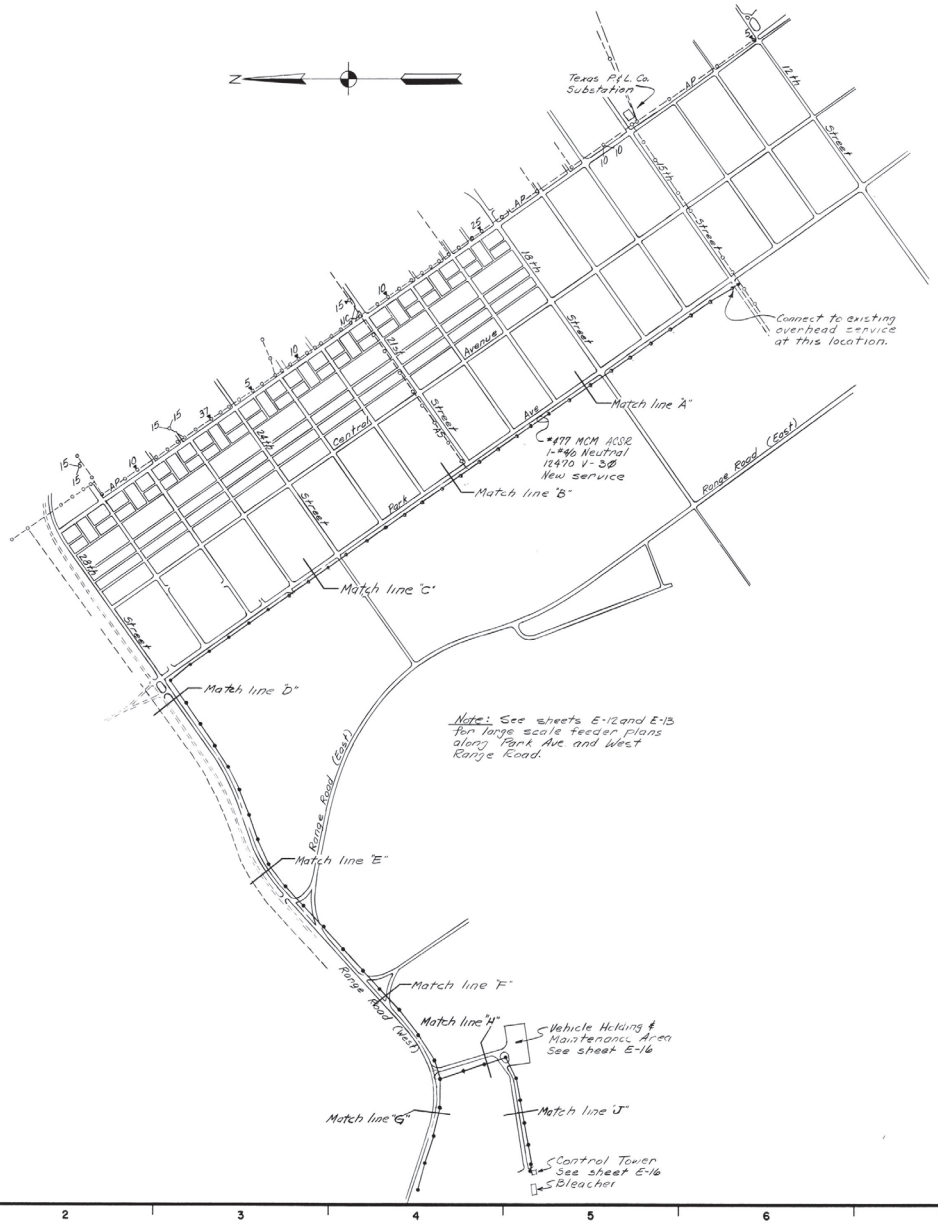
M.A.T.C. BUNKER/STORAGE

ELECTRICAL PLAN

INV. NO. DACA63-84-B-0073 DATED: Mar. 84
CONTR. NO. DACA63-84-C-0112
DRAWING NUMBER
SHEET NO. E-10 of 29
SEQUENCE NO. 88

CONTR. NO. DACA63-84-C-0112

DRAWING OF WORK AS-BUILT



DWG. NO. 00349470

REVISION NO.	DATE	REVISION	DESCRIPTION OF REVISION
		7Nov85	REVISED AS-BUILT

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U.S. ARMY ENGINEER DISTRICT, FORT WORTH
CORPS OF ENGINEERS
FORT WORTH, TEXAS

DESIGNED BY: LTV
DRAWN BY: RDG
REVIEWED BY: MJG
SUBMITTED BY:
ENGINEER:

00250 FORT HOOD, TEXAS

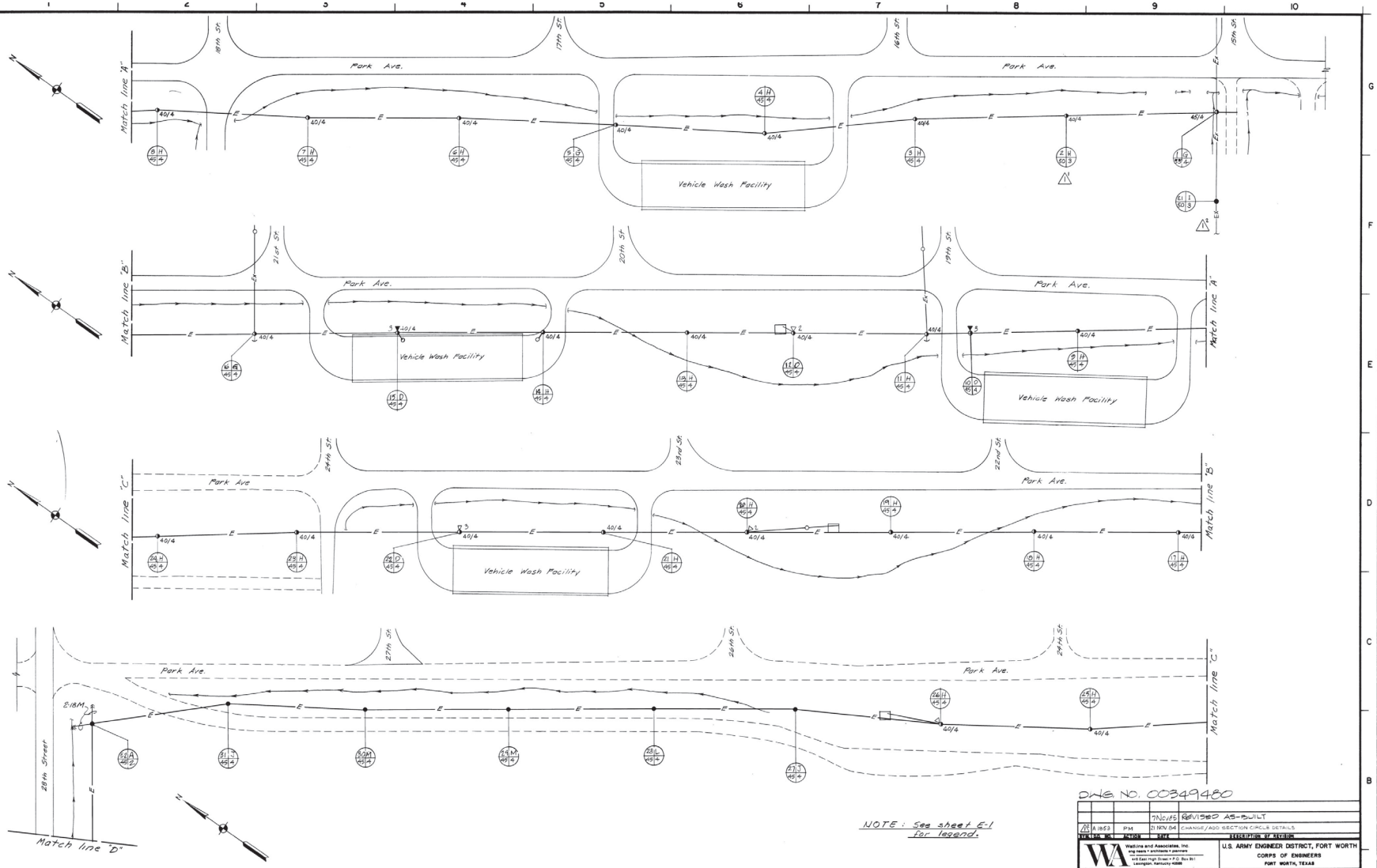
PLATOON QUALIFICATION
AND SQUAD/CREW SUBCALIBER
DALTON MOUNTAIN FIELD FIRE

OVERHEAD ELECTRICAL DISTRIBUTION

INV. NO. DACA63-84-B-0073 DATED: Mar 84
CONTR. NO. DACA63-84-C-0112
DRAWING NUMBER
SHEET NO. E-11 of 29
SEQUENCE NO. 894

CONTR. NO. DACA63-84-C-0112

DRAWING OF WORK AS-BUILT



NOTE: See sheet E-1 for legend.

50' 0 50' 100' 150'

SCALE: 1 INCH = 50 FEET

DWG. NO. 00349480

			7 NOV 85	REVISED AS-BUILT
A 1852	PM	21 NOV 84	CHANGE/ADD SECTION CIRCLE DETAILS	
SYM.	INIT.	REVISION	DATE	DESCRIPTION OF REVISION

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415 East High Street • P.O. Box 351
Lexington, Kentucky 40588

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
CORPS OF ENGINEERS
FORT WORTH, TEXAS

DESIGNED BY: MJG
DRAWN BY: JDG
REVIEWED BY: LTV
SUBMITTED BY: W.A. Wilder
ENGINEER:

000250 FORT HOOD, TEXAS

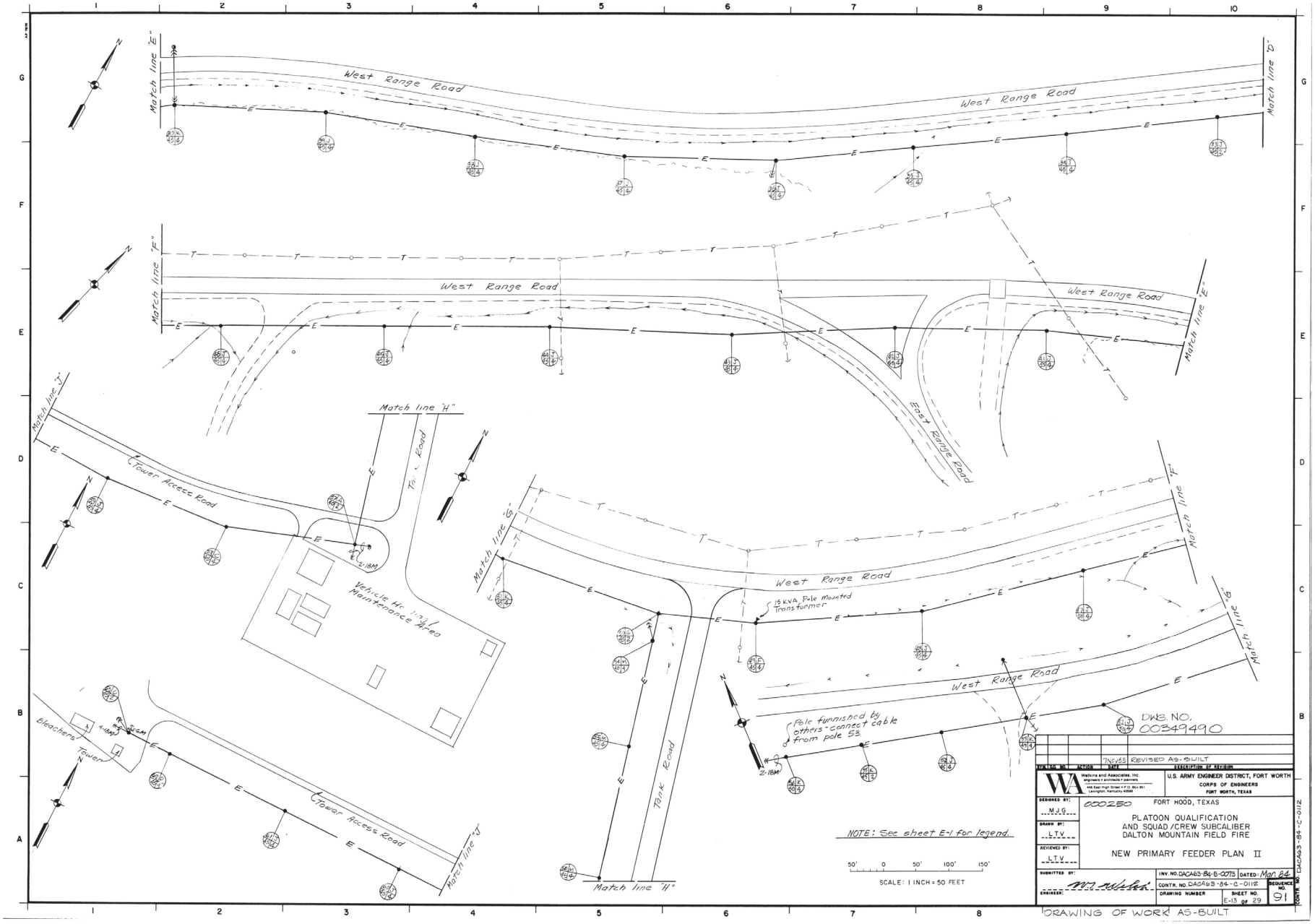
PLATOON QUALIFICATION
AND SQUAD/CREW SUBCALIBER
DALTON MOUNTAIN FIELD FIRE

NEW PRIMARY FEEDER PLAN I

INV. NO. DACA63-84-B-0073 DATED: Mar. 84
CONTR. NO. DACA63-84-C-0112
DRAWING NUMBER
SHEET NO. E-12 of 29
SEQUENCE NO. 90
CONTR. NO. DACA63-84-C-0112

DRAWING OF WORK AS-BUILT

SUPERSEDES SHEET E-12 OF 29



DWG. NO. 00349490

REVISION NO.	ACTION	DATE	DESCRIPTION OF REVISION
		7/16/85	REVISED AS-BUILT

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U.S. ARMY ENGINEER DISTRICT, FORT WORTH
CORPS OF ENGINEERS
FORT WORTH, TEXAS

DESIGNED BY: MJG
DRAWN BY: LTV
REVIEWED BY: LTV
SUBMITTED BY:
ENGINEER:

000250 FORT HOOD, TEXAS

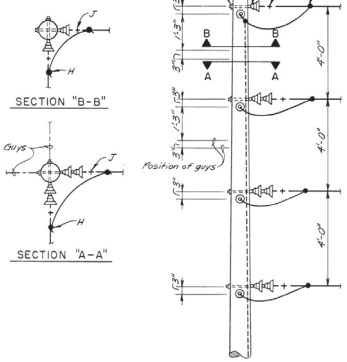
PLATOON QUALIFICATION AND SQUAD/CREW SUBCALIBER DALTON MOUNTAIN FIELD FIRE

NEW PRIMARY FEEDER PLAN II

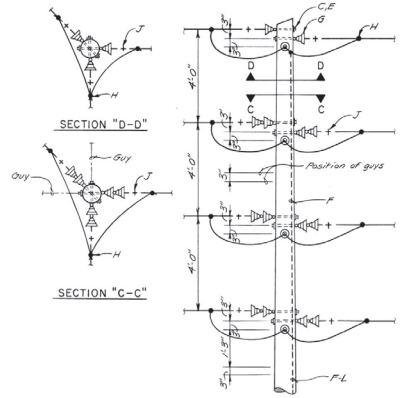
INV. NO. DACA63-84-B-0073 DATED: Mar 84
CONTR. NO. DACA63-84-C-0112
DRAWING NUMBER
SHEET NO. E-13 of 29
SEQUENCE NO. 01

CONTR. NO. DACA63-84-C-0112

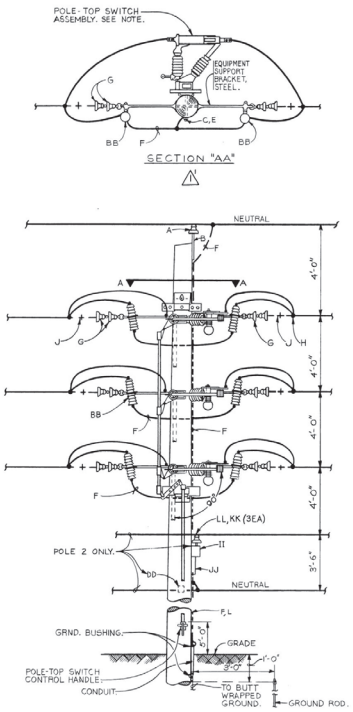
DRAWING OF WORK AS-BUILT



VERTICAL CORNER POLE "A"
N.T.S.

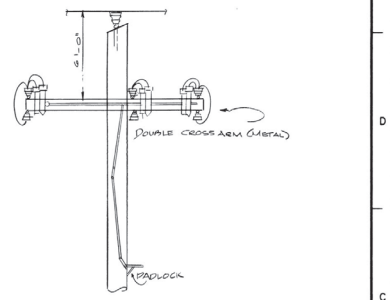


VERTICAL CORNER POLE "B" WITH TAP
N.T.S.



DETAIL "I"
POLE-TOP SWITCH
N.T.S.

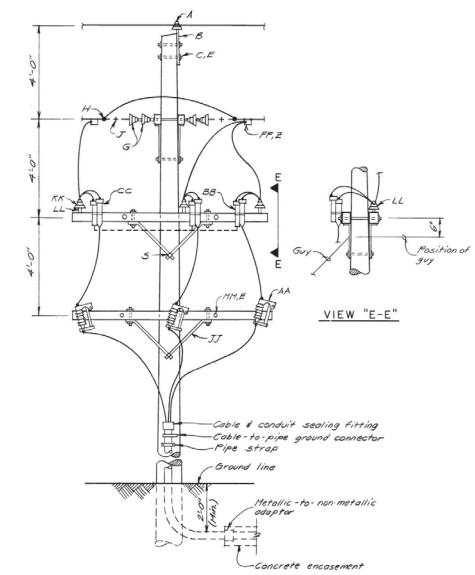
NOTE:
POLE-TOP SWITCH ASSEMBLY SHALL BE GROUP-OPERATED LOAD INTERRUPTER SWITCHES OF THE 3-POLE, SINGLE THROW, NON-FUSED TYPE RATED 600 AMPS, 14.4 KV.



INSTALL GROUP OPERATED LOAD INTERRUPTER SWITCHES (POLE TOP SWITCH) SHALL BE SKU 6004. THE NON-GAP SWITCHES SHALL BE HORIZONTAL, VERTICAL BREAK, THREE-POLE, SINGLE-THROW, GANG OPERATED ROTATING-INSULATOR TYPE NON-GAP SWITCHES SHALL BE DESIGNED TO (BEAR 3/8" COATING OF ICE BEFORE CONTACTS ARE OPENED OR CLOSED. NON-GAP SWITCHES SHALL BE MOUNTED ON POLES W/DOUBLE METAL CROSSARM, COMPLETE W/GANG-OPERATING MECHANISM & PADLOCK. OPERATING HANDLE SHALL BE LOCATED 8' ABV. GROUND ON FIELD SIDE. IF POLE-MECHANISM TO BE INSULATED & GROUNDED - DIAGONAL OPERATING MECH. OF THE POLE-TOP SWITCHES, & NON-CURRENT-CARRYING PARTS SHALL BE GROUNDED

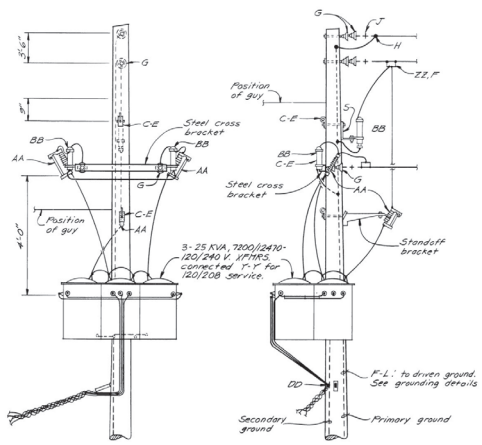
GROUP OPERATED LOAD INTERRUPTER SWITCH "L"
N.T.S.
DWG. NO. 00E49500

NO.	SYM.	DATE	REVISION OF REVISION
		7NOV65	REVISED AS-BUILT
2	A1863	P.M.	21 NOV64 ADD POLE-TOP SWITCH DETAIL

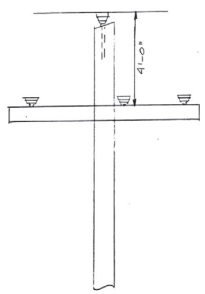


AERIAL TO UNDERGROUND POLE "C"
N.T.S.

VIEW "E-E"



3Φ TRANSFORMER DEADEND POLE "D"
N.T.S.



INLINE POLE "M"
(N.T.S.)

MATERIAL LIST

ITEM	DESCRIPTION
A	Pin Insulator, Top Tie
B	Pole Top Pin, 20"
C	Machine Bolt, 5/8" x Required Length
D	Post Insulator, Horizontally Mounted
E	Washer, 2-1/4" x 2-1/4" x 3/16" w/ 11/16" Hole
F	Ground Wire to Butt Wrapped Ground (Ground Plate)
G	Suspension Insulator
H	Solderless Connector
I	Angle Clamp
J	Dead End Clamp
L	Ground Wire Holding - 1 1/4"
M	Grounding Bushing
N	Pipe Strap
O	Conduit
P	Ground Rod
Q	Guy Hook
R	Strain Plate
S	Lag Screw, 1/2" x 5"
T	Guy Clamp
U	Guy Strand
V	Anchor Rod, 3/4" x 8'-0" Min. Dimension
W	Anchor
X	Plastic Guy Marker
Y	Pole Bond Adjustable
Z	Hot Line Clamp
AA	Primary Fuse Cutout
BB	Surge Arrestor
CC	Cable Terminator
DD	Secondary Spool Clevis and Insulator
EE	Pipe Strap
FF	Stirrup
GG	Machine Bolt 1/2" x Required Length
HH	Washer, 2" x 1/8" w/ 5/16" Hole
II	Crossarm, 3 1/2" x 4 1/2" x 8'-0"
JJ	Crossarm Brace
KK	Crossarm Pin, Steel
LL	Pin Insulator, Top Tie
MM	Double Arming Bolt

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U.S. ARMY ENGINEER DISTRICT, FORT WORTH
CORPS OF ENGINEERS
FORT WORTH, TEXAS

DESIGNED BY: M.J.G.
DRAWN BY: J.D.G.
REVIEWED BY: L.T.V.

000250 FORT HOOD, TEXAS

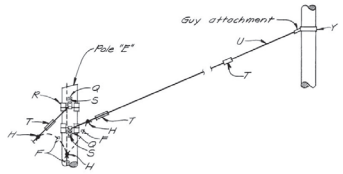
PLATOON QUALIFICATION
AND SQUAD/CREW SUBCALIBER
DALTON MOUNTAIN FIELD FIRE

POLE DETAILS

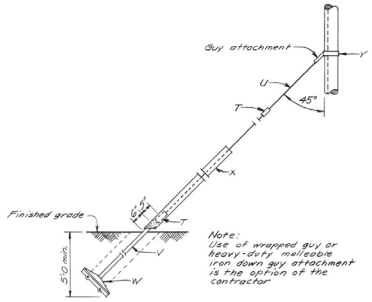
SUBMITTED BY: ENGINEER:

INV. NO. DACA63-84-B-0073 DATED: Mar 84
CONTR. NO. DACA63-84-C-0112
DRAWING NUMBER
SHEET NO. E-14 of 29
SEQUENCE NO. 92
CONTR. NO. DACA63-84-C-0112

DRAWING OF WORK AS-BUILT SUPERSEDES SHEET E-14 OF 29

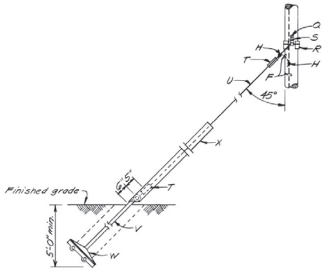


SPAN GUY POLE "E"
N.T.S.

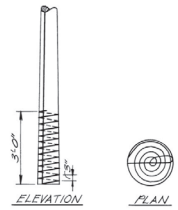


Note:
Use of wrapped guy or heavy-duty malleable iron down guy attachment is the option of the contractor

DOWN GUY
STRENGTH GREATER THAN 10,000 LBS.
N.T.S.

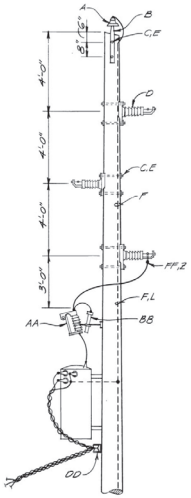


DOWN GUY
N.T.S.

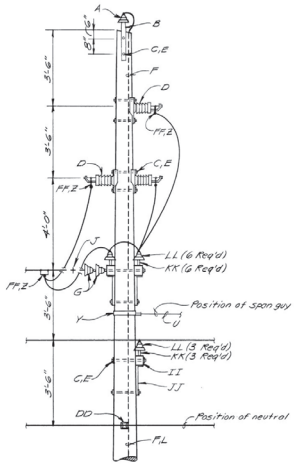


Notes:
1) Grounding plate may be used in lieu of B.R.G.
2) Butt wrapped ground shall be installed on all new poles.
3) Extend ground wire up pole and bond to neutral.

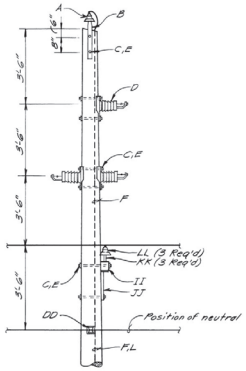
BUTT WRAPPED GROUND (B.R.G.)
N.T.S.



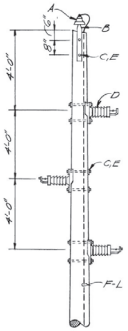
3-Φ TANGENT POLE "F"
W/1Φ TRANSFORMER
N.T.S.



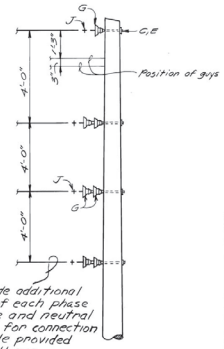
VERTICAL TANGENT POLE "G"
WITH 3Φ PRIMARY CROSSOVER
N.T.S.



VERTICAL TANGENT POLE "H"
WITH 3Φ PRIMARY CROSOVER
N.T.S.



VERTICAL TANGENT POLE "J"
N.T.S.



Provide additional coil of each phase cable and neutral cable for connection to pole provided by others.

VERTICAL END POLE "K"
N.T.S.

DWG. NO 0034951 0

REVISION NO.	DATE	DESCRIPTION OF REVISION
	7/6/85	REVISED AS-BUILT

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U.S. ARMY ENGINEER DISTRICT, FORT WORTH
CORPS OF ENGINEERS
FORT WORTH, TEXAS

DESIGNED BY: M.J.G.
DRAWN BY: J.D.G.
REVIEWED BY: L.T.V.

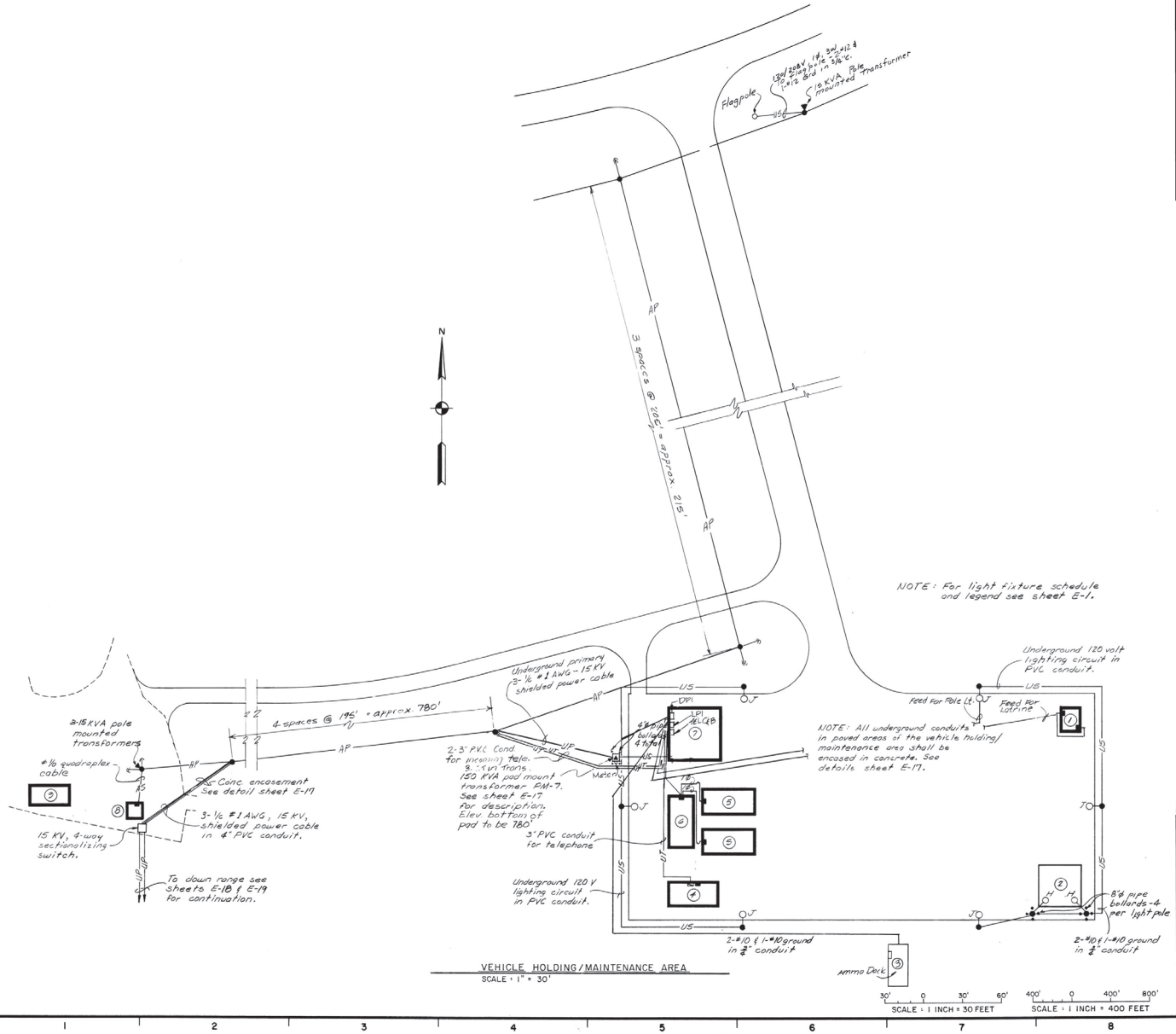
000250 FORT HOOD, TEXAS

PLATOON QUALIFICATION
AND SQUAD/CREW SUBCALIBER
DALTON MOUNTAIN FIELD FIRE

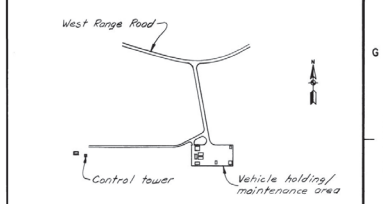
POLE DETAILS

SUBMITTED BY: ENGINEER:
INV. NO. DACA63-84-B-0073 DATED: Mar. 84
CONTR. NO. DACA63-84-C-0112
DRAWING NUMBER
SHEET NO. E-15 of 29
SEQUENCE NO. 93
CONTR. NO. DACA63-84-C-0112

'DRAWING OF WORK' AS-BUILT



VEHICLE HOLDING / MAINTENANCE AREA
SCALE : 1" = 30'



KEY PLAN
SCALE : 1" = 400'

LEGEND

1. VAULT LATRINE - see sheet E-6
2. HARDSTAND
3. AMMO LOAD - see sheet E-9
4. RANGE PERSONNEL / STORAGE BLDG - see sht. E-3
5. MESS FACILITY (1 & 2) - see sheet E-8
6. MESS FACILITY (KITCHEN) - see sheet E-7
7. INSTRUCTIONAL BLDG. - see sheet E-2
8. CONTROL TOWER - see sheet E-4
9. BLEACHER ENCLOSURE

DWG. NO. C0349520

SYMBOL	DATE	BY	DESCRIPTION OF REVISION
		7Nov85	REVISED AS-BUILT

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U.S. ARMY ENGINEER DISTRICT, FORT WORTH
CORPS OF ENGINEERS
FORT WORTH, TEXAS

DESIGNED BY: J.T.V.
DRAWN BY: J.G.
REVIEWED BY: M.J.S.
SUBMITTED BY:
ENGINEER:

000250

FORT HOOD, TEXAS

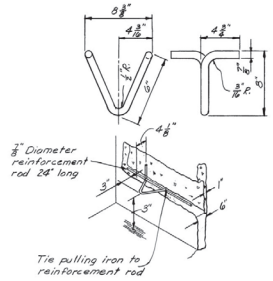
PLATOON QUALIFICATION AND SQUAD/CREW SUBCALIBER DALTON MOUNTAIN FIELD FIRE

ELECTRICAL DISTRIBUTION
VEHICLE HOLDING/MAINTENANCE AREA

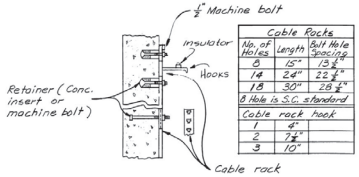
INV. NO. DACA63-84-B-0073 DATED: Mar. 84
CONTR. NO. DACA63-84-C-0112
DRAWING NUMBER
SHEET NO. E-16 OF 29
SEQUENCE NO. 94

CONTR. NO. DACA63-84-C-0112

DRAWING OF WORK AS-BUILT

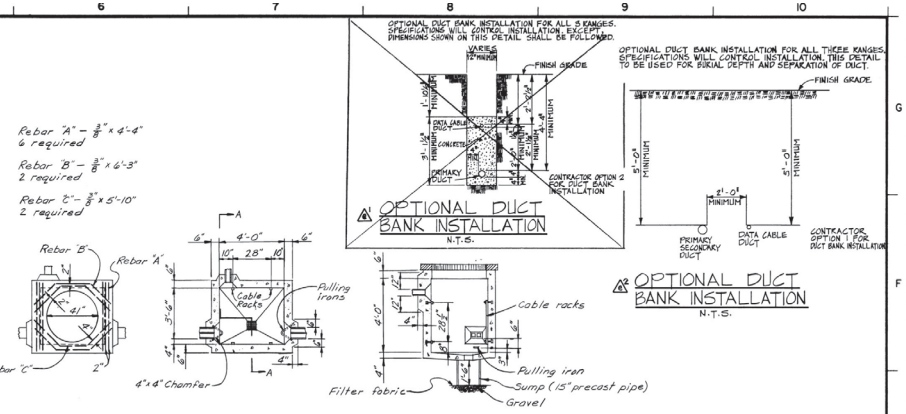


PULLING IRON DETAILS
NO SCALE

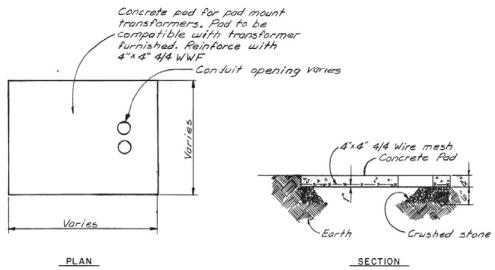


Cable Racks		
No. of Holes	Length	Bolt Hole Spacing
0	15"	13 1/2"
14	24"	22 1/2"
18	30"	28 1/2"
0 Hole is S.C. standard		
Cable rack hook		
1	4"	
2	7 1/2"	
3	10"	

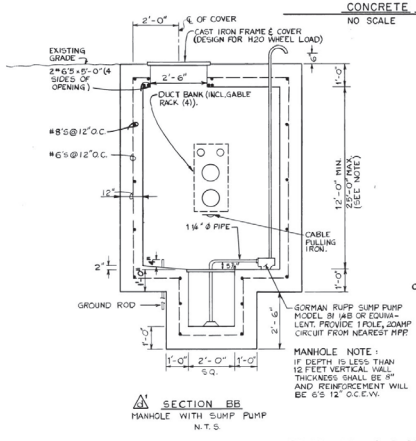
CABLE RACK INSTALLATION
NO SCALE



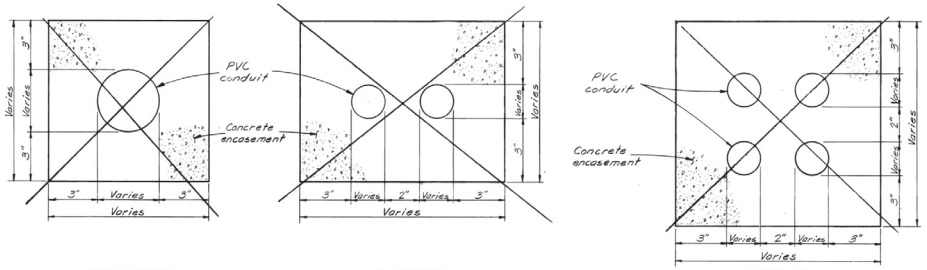
CONCRETE HAND HOLE DETAILS
NO SCALE



TRANSFORMER PAD DETAILS
NO SCALE



ELECTRICAL MANHOLE DETAILS
NO SCALE



CONCRETE ENCASEMENT DETAILS
NO SCALE

DWG. NO. 0034930

REV. NO.	DATE	REV. BY	DESCRIPTION OF REVISION
2	—		
1	AM*0005	15 JUN 84	REVISED TO REFLECT W.I. CHANGES
0	AM*0004	2 JUNE 84	REVISED TO REFLECT W.I. CHANGES

Watkins and Associates, Inc.
Engineers • Architects • Planners
448 East High Street • P.O. Box 951
Lexington, Kentucky 40588

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
CORPS OF ENGINEERS
FORT WORTH, TEXAS

DESIGNED BY: 000250
DRAWN BY:
REVIEWED BY:

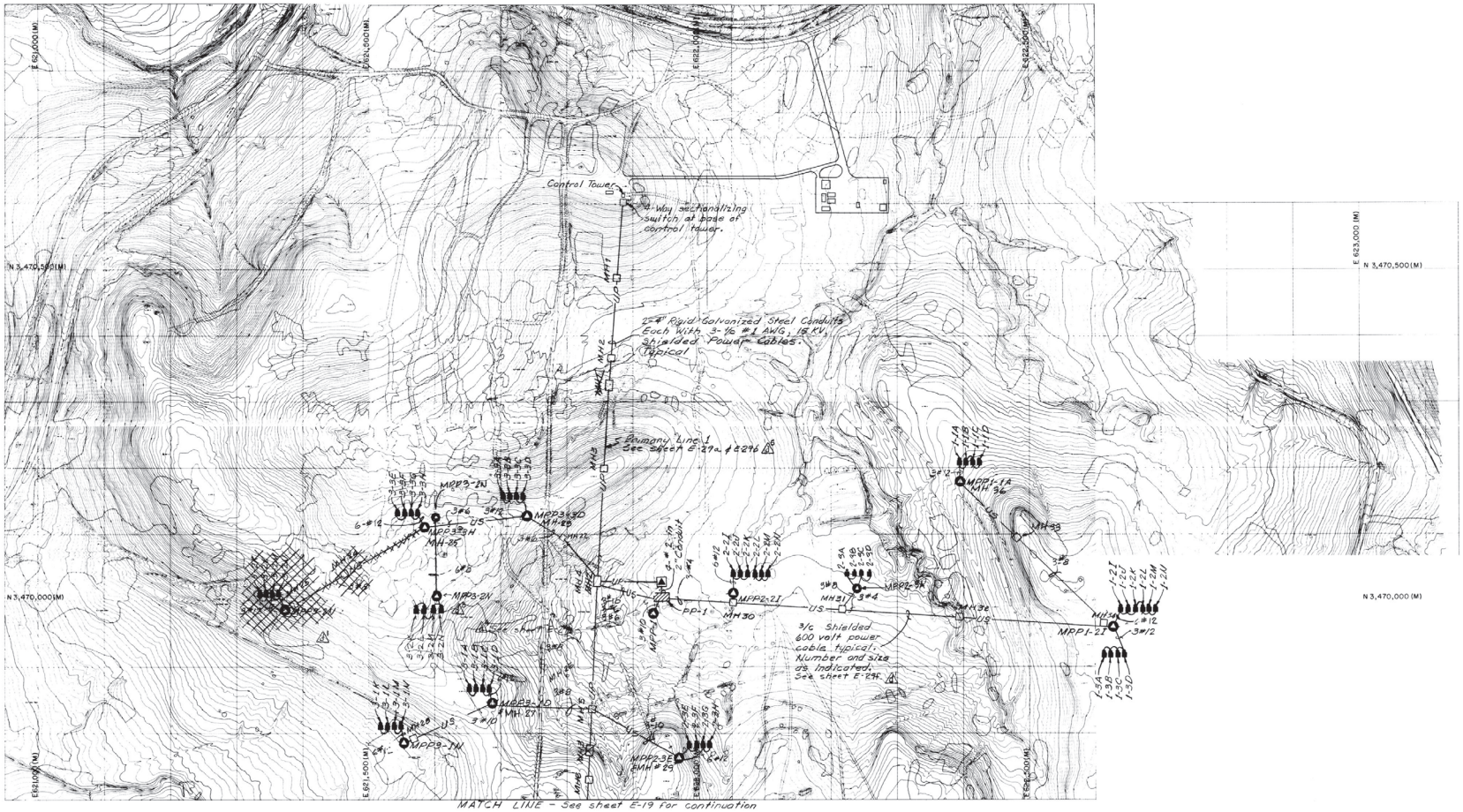
FORT HOOD, TEXAS

PLATOON QUALIFICATION
AND SQUAD/CREW SUBCALIBER
DALTON MOUNTAIN FIELD FIRE

EXTERIOR ELECTRICAL DETAILS

SUBMITTED BY:
ENGINEER:
INV. NO. DACA63-84-B-0073 DATED: Mar. 84
CONTR. NO. DACA63-84-C-0112
DRAWING NUMBER
SHEET NO. E-17 of 29
SEQUENCE NO. 95
CONTR. NO. DACA63-84-C-0112

DRAWING OF WORK AS-BUILT



LEGEND

- Personnel Target (Static)
- Armor Target (Static)
- Armor Target (Moving)
- Mini Power Panel
- Power Panel (480/277 Volt)
- Pad Mount Transformer
- —US— Underground Secondary (Direct Burial Cable)
- —UP— Underground Primary (In Conduit)
- Electrical Manhole

NOTES

1. All mini power panels are shown separate from the targets for clarity. Actual location shall be at the targets indicated.
2. Wire size from mini power panels to the individual targets shall be 3#12 AWG (2phase, 1ground) unless otherwise indicated on the drawings.
3. Adjust voltage tap settings on mini power panels until 230 volts is available at individual targets under full load.
4. Wire all mini power panels inside bunkers with 3#10 from bunker power panel.

N

200 0 200 400
SCALE: 1" = 200'

DWG. NO. 00349540

REVISION NO.	PLATE	NOTE	DESCRIPTION OF REVISION
		7Nov85	REVISED AS-BUILT
A6	AM# 0004	3 MAY 84	GENERAL REVISION OF ELEC. PRIMARY

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Lexington, Kentucky
448 East High Street P.O. Box 951

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
CORPS OF ENGINEERS
FORT WORTH, TEXAS

DESIGNED BY: MJG
DRAWN BY: RDG
REVIEWED BY: LIV
SUBMITTED BY: W. Welch
ENGINEER:

000250 FORT HOOD, TEXAS

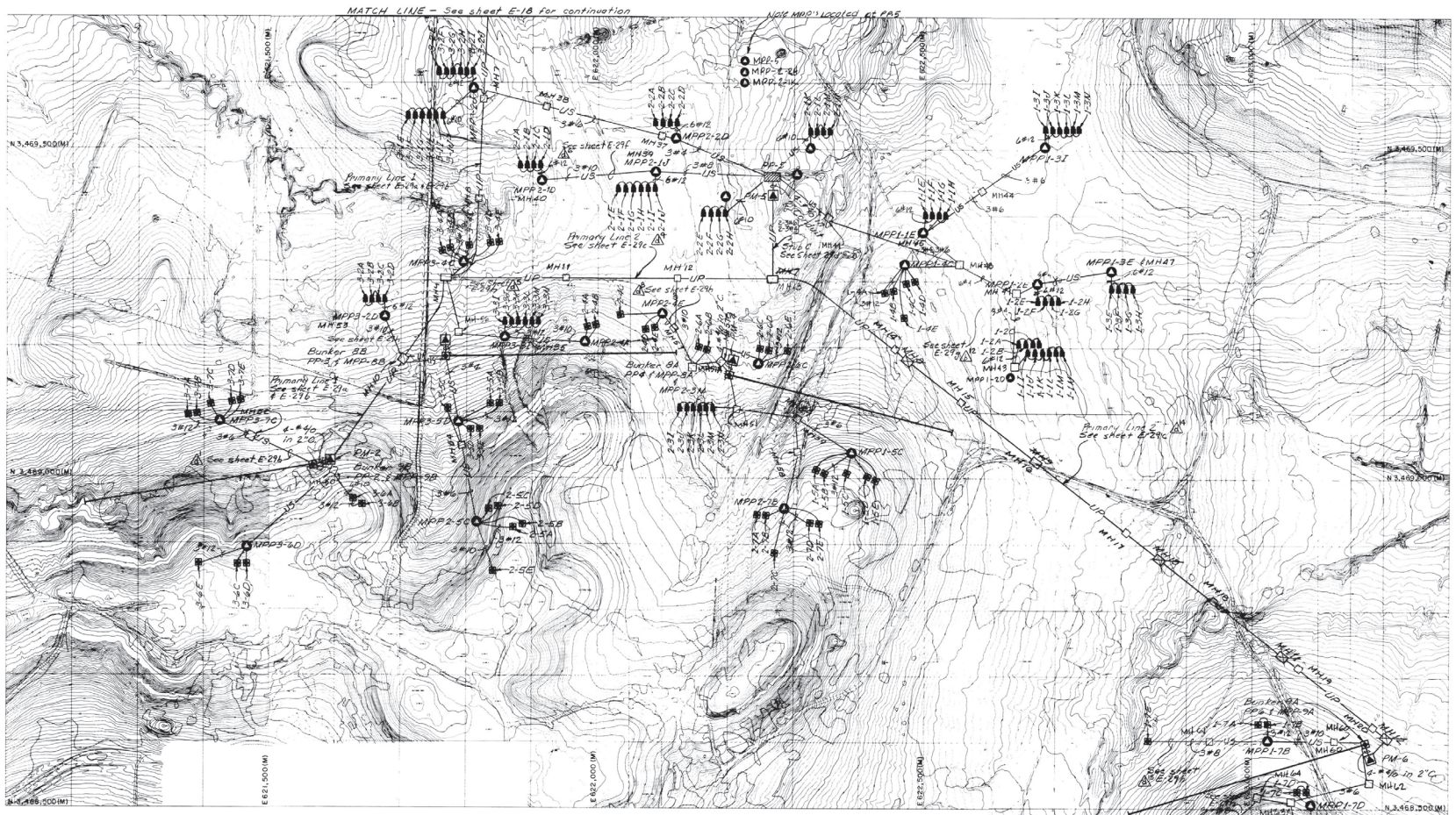
PLATOON QUALIFICATION
AND SQUAD/CREW SUBCALIBER
DALTON MOUNTAIN FIELD FIRE

ELECTRICAL DISTRIBUTION
DOWN RANGE

INV. NO. DACA63-84-B-0073 DATED: Mar 84
CONTR. NO. DACA63-84-C-0112
DRAWING NUMBER
SHEET NO. E-18 of 29
SEQUENCE NO. 96

CONTR. NO. DACA63-84-C-0112

DRAWING OF WORK AS-BUILT



DWG. NO. 00349350

SCALE: 1" = 200'

3	7NOV85	REVISED AS-BUILT	
2	AMG2 P00003	25FEB85	DELETED & ADDED UNDERGROUND SECONDARY LINE.
1	AM#20004	13MAY84	GENERAL REVISION OF ELEC PRIMARY
REVISION NO.	PROJ. NO.	DATE	REVISION OF 1 FOR

Watkins and Associates, Inc.
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U.S. ARMY ENGINEER DISTRICT, FORT WORTH
CORPS OF ENGINEERS
FORT WORTH, TEXAS

DESIGNED BY: MJG
DRAWN BY: RDG
REVIEWED BY: LTV
SUBMITTED BY:
ENGINEER:

000250

FORT HOOD, TEXAS

PLATOON QUALIFICATION
AND SQUAD/CREW SUBCALIBER
DALTON MOUNTAIN FIELD FIRE

ELECTRICAL DISTRIBUTION
DOWN RANGE

INV. NO. DACA63-84-B-0073 DATED: May 84
CONTR. NO. DACA63-84-C-0112
DRAWING NUMBER
SHEET NO. E-19 of 29
SEQUENCE NO. 97
CONTR. NO. DACA63-84-C-0112

DRAWING OF WORK AS-BUILT SUPERSEDES SHEET E-19 OF 29

PAD MOUNT TRANSFORMER DESCRIPTION

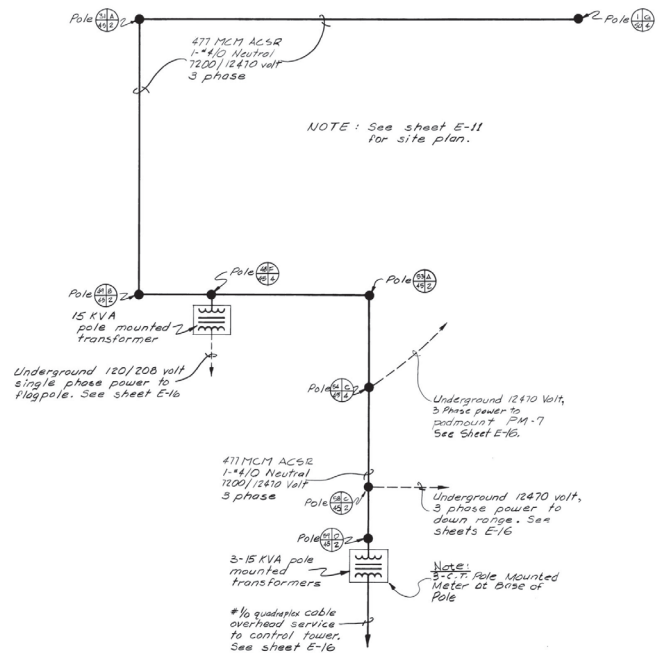
General: All pad mount transformers shall have loop feed 15 KV primary switching, dead front construction, draw-out load-break current limiting fuses and load-break gang operated oil switch having 200 amp continuous rating, 200 amp load-break, 10,000 amp close-in, 10,000 amp momentary rating and secondary lightning arrestors.
Transformers shall have 7200/12470 volt, 3 phase as specified below.

Transformers shall be oil filled with 65°C temperature rise.

Designation	Description
PM-1	75 KVA - 3 phase - 4 wire - 480/277 volt secondary
PM-2, PM-5 & PM-6	112 KVA - 3 phase - 4 wire - 480/277 volt secondary
PM-3 & PM-4	150 KVA - 3 phase - 4 wire - 480/277 volt secondary
PM-7	150 KVA - 3 phase - 4 wire 120/208 volt secondary

PANEL DESCRIPTIONS

Designation	Description
PP-1	100 amp main lugs w/100 amp main breaker, 480/277 volt, 3 phase, 4 wire, 24 poles, 26" (min) wide enclosure, 14,000 amps integrated equipment short circuit rating, bottom feed, surface mounted, outdoor NEMA-3R rain-tight enclosure.
PP-3 & PP-4	225 amp main lugs w/200 amp main breaker, 480/277 volt, 3 phase, 4 wire, 24 poles, 26" (min) wide enclosure, 14,000 amps integrated equipment short circuit rating, bottom feed, surface mounted, NEMA-1 enclosure.
PP-2, PP-5* & PP-6	225 amp main lugs w/150 amp main breaker, 480/277 volt, 3 phase, 4 wire, 24 poles, 26" (min) wide enclosure, 14,000 amps integrated equipment short circuit rating, bottom feed, surface mounted, NEMA-1 enclosure. * PP5 to have outdoor NEMA-3R raintight enclosure.
MPP-1, 3-3D, 3-3H, 3-1D, 3-2N, 3-1N, 2-2I, 2-3E, 2-3A, 1-1A, 3-2D, 3-3I, 2-3N, 5, 2-2H, 2-1J, 2-1D, 2-2D, 2-1K, 1-3I, 1-1E, 1-2E & 1-3E	5 KVA mini power center, 1 phase, 480 volt primary, 120/240 volt secondary, 5 KVA epoxy encapsulated dry type transformer, 115°C temperature rise, transformer w/2-5% taps, 2 pole - 20 amp primary breaker, 2 pole - 25 amp main secondary breaker, 4 pole secondary panel, surface mounted, outdoor construction enclosure.
MPP-3-7C, 3-5D, 2-7B, 1-5C, 1-4C, 1-7D, 3-4C, 2-5C	15 KVA mini power center, 1 phase, 480 volt primary, 120/240 volt secondary, 15 KVA epoxy encapsulated dry type transformer, 115°C temperature rise, transformer w/2-5% taps, 2 pole - 60 amp primary breaker, 2 pole - 80 amp main secondary breaker, 12 pole secondary panel, surface mounted outdoor construction enclosure.
MPP-1-2I, 9B, 3-6D, 8B, 1-6D, 2-9A, 1-7B, 8A, 2-4E, 2-6C, 3-2J, 1-2D, 9A	10 KVA mini power center, 1 phase, 480 volt primary, 120/240 volt secondary, 10 KVA epoxy encapsulated dry type transformer, 115°C temperature rise, transformer w/2-5% taps, 2 pole - 40 amp primary breaker, 2 pole - 50 amp main secondary breaker, 8 pole secondary panel, surface mounted, outdoor construction enclosure.



OVERHEAD ELECTRICAL DISTRIBUTION SINGLE LINE DIAGRAM

DWG. NO. 00349560

SYM.	NO.	APPROV.	DATE	DESCRIPTION OF REVISION
			7Nov85	REVISED AS-BUILT

Watkins and Associates, Inc. engineers ▪ architects ▪ planners
448 East High Street ▪ P.O. Box 961
Lexington, Kentucky 40588

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
CORPS OF ENGINEERS
FORT WORTH, TEXAS

DESIGNED BY: N.J.G.
DRAWN BY: R.O.G.
REVIEWED BY: L.T.V.
SUBMITTED BY:
ENGINEER:

000250 FORT HOOD, TEXAS

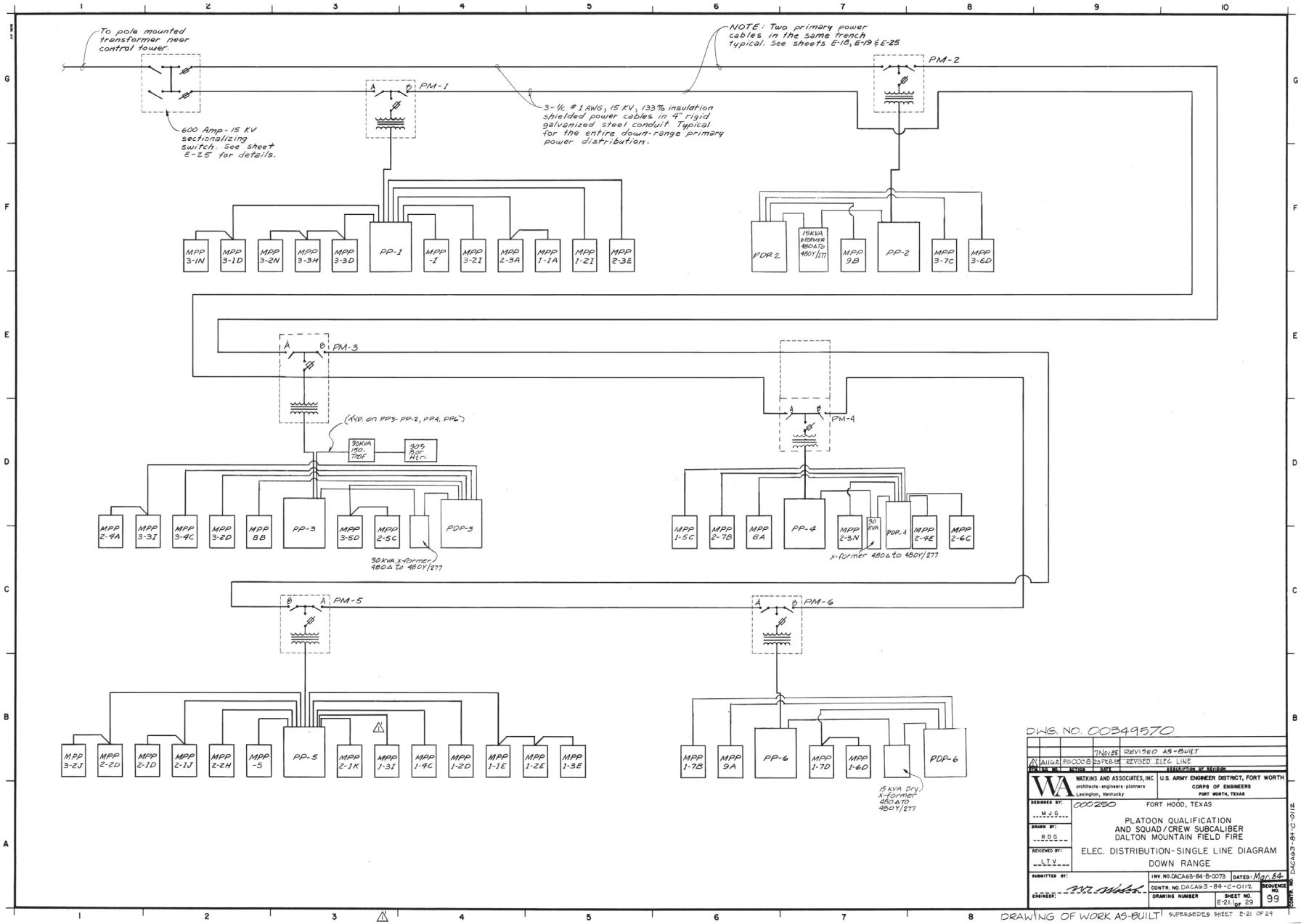
PLATOON QUALIFICATION
AND SQUAD/CREW SUBCALIBER
DALTON MOUNTAIN FIELD FIRE

OVERHEAD ELECTRICAL DISTRIBUTION
SINGLE LINE DIAGRAM

INV. NO. DACA63-84-B-0073 DATED: Mar. 84
CONTR. NO. DACA63-84-C-0112
DRAWING NUMBER
SHEET NO. E-20 of 29
SEQUENCE NO. 98

CONTR. NO. DACA63-84-C-0112

DRAWING OF WORK AS-BUILT



DWG. NO. 00349570

			7 NOV 85	REVISED AS-BUILT
1	A1162	R9000B	25 FEB 85	REVISED ELEC. LINE
REV. NO.		AUTHR	DATE	DESCRIPTION OF REVISION

WATKINS AND ASSOCIATES, INC.
architects · engineers · planners
Lexington, Kentucky

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
CORPS OF ENGINEERS
FORT WORTH, TEXAS

DESIGNED BY: M.J.G.
DRAWN BY: R.D.G.
REVIEWED BY: L.T.V.
SUBMITTED BY:
ENGINEER:

000250 FORT HOOD, TEXAS

PLATOON QUALIFICATION
AND SQUAD/CREW SUBCALIBER
DALTON MOUNTAIN FIELD FIRE

ELEC. DISTRIBUTION - SINGLE LINE DIAGRAM
DOWN RANGE

INV. NO. DACA63-84-B-0073 DATED: Mar. 84
CONTR. NO. DACA63-84-C-0112
DRAWING NUMBER
SHEET NO. E-21 of 29
SEQUENCE NO. 99
CONTR. NO. DACA63-84-C-0112

DRAWING OF WORK AS-BUILT SUPERSEDES SHEET E-21 OF 29

PANEL COMPUTATION PANEL NO. PP-1
LOCATION PM-1
PANEL 100 Amp VOLTS 480/277 PHASE 3 WIRES 4 MAIN BREAKER 100 Amps

CIRC. NO.	TRIP AMPS	NO. POLES	LOAD SERVED	PHASE LOAD V.A. A	B	C	LOAD SERVED	CIRC. NO.	TRIP AMPS	NO. POLES
1	20	2	MPP-1	2500 / 7500			MPP 3-3D, 3-3H & 3-2N	2	40	2
					2500 / 7500					
3	30	2	MPP 3-1D & 3-1N			5000 / 2500	MPP 2-2I	4	20	2
				5000 / 2500						
5	30	2	MPP 2-3A & 1-1A		5000 / 5000		MPP 1-2I	6	40	2
						5000 / 5000				
7	20	2	MPP 2-3E	2500						
					2500					
			TOTAL CONNECTION LOAD 60 KVA	20,000	22,500	17,000	TOTAL DEMAND LINE AMPS 50			

ESTIMATED DEMAND LOAD 41 KVA FEEDER 4-#2 in 1¼" C.

PANEL COMPUTATION PANEL NO. PP-2
LOCATION Bunker 9B
PANEL 225 Amp VOLTS 480/277 PHASE 3 WIRES 4 MAIN BREAKER 150 Amps

CIRC. NO.	TRIP AMPS	NO. POLES	LOAD SERVED	PHASE LOAD V.A. A	B	C	LOAD SERVED	CIRC. NO.	TRIP AMPS	NO. POLES
1	100	3	MAT-9B							
3	20	3	POP-2				FE-TER	6	30	3
			TOTAL CONNECTION LOAD 75 KVA				TOTAL DEMAND LINE AMPS 91			

ESTIMATED DEMAND LOAD 75 KVA FEEDER 4-#0 in 2" C.

Location PT 3-3D 5KVA
Mini Power Panel MPP 3-3D

CIRC. No.	PH.	POLE	CB Trip	Load Served	V.A.
1	A B	2	20	PT 3-3D & PT 3-3C	1,660
1	A B	2	20	PT 3-3B & PT 3-3A	1,660

Location PM-1 5KVA
Mini Power Panel MPP-1

CIRC. No.	PH.	POLE	CB Trip	Load Served	V.A.
1	A B	2	20	DRS-1	1,000
	A B			Space Only	
Sump Pump MH2					

Location PT 3-3H 5KVA
Mini Power Panel MPP 3-3H

CIRC. No.	PH.	POLE	CB Trip	Load Served	V.A.
1	A B	2	20	PT 3-3H & PT 3-3G	1,660
2	A B	2	20	PT 3-3F PT 3-3E	1,660

Location Bunker 9B Sump Pump 10 KVA
Mini Power Panel MPP 9B

V.A.	CIRC. No.	Load Served	CB Trip	POLE	PH.	POLE	CB Trip	Load Served	CIRC. No.	V.A.
600	1	Bunker Light	20	1	A B	2	20	DRS-2	2	1,000
600	3	Bunker Recep.	20	1						
2,820	5	SAT 3-6A	20	1	A B	2	20	SAT 3-6B	4	2,820

Location PT 3-1D 5KVA
Mini Power Panel MPP 3-1D

CIRC. No.	PH.	POLE	CB Trip	Load Served	V.A.
1	A B	2	20	PT 3-1D & PT 3-1C	1,660
2	A B	2	20	PT 3-1B & PT 3-1A	1,660

Location PT 3-2N 5KVA
Mini Power Panel MPP 3-2N

CIRC. No.	PH.	POLE	CB Trip	Load Served	V.A.
1	A B	2	20	PT 3-2N & PT 3-2M	1,660
2	A B	2	20	PT 3-2L & PT 3-2K	1,660

Location PT 3-1N 5KVA
Mini Power Panel MPP 3-1N

CIRC. No.	PH.	POLE	CB Trip	Load Served	V.A.
1	A B	2	20	PT 3-1N & PT 3-1M	1,660
2	A B	2	20	PT 3-1L & PT 3-1K	1,660

Location SAT 3-6D 10 KVA
Mini Power Panel MPP 3-6D

V.A.	CIRC. No.	Load Served	CB Trip	POLE	PH.	POLE	CB Trip	Load Served	CIRC. No.	V.A.
2,820	1	SAT 3-6D	20	2	A B	2	20	SAT 3-6C	2	2,820
2,820	3	SAT 3-6E	20	2	A B	2	20	Spare		

Location PT 2-2I 5KVA
Mini Power Panel MPP 2-2I

CIRC. No.	PH.	POLE	CB Trip	Load Served	V.A.
1	A B	2	20	PT 2-2I, PT 2-2J & PT 2-2K	2,490
2	A B	2	20	PT 2-2L, PT 2-2M & PT 2-2N	2,490

Location PT 2-3E 5KVA
Mini Power Panel MPP 2-3E

CIRC. No.	PH.	POLE	CB Trip	Load Served	V.A.
1	A B	2	20	PT 2-3E & PT 2-3F	1,660
2	A B	2	20	PT 2-3G & PT 2-3H	1,660

Location PT 2-3A 5KVA
Mini Power Panel MPP 2-3A

CIRC. No.	PH.	POLE	CB Trip	Load Served	V.A.
1	A B	2	20	PT 2-3A & PT 2-3B	1,660
2	A B	2	20	PT 2-3C & PT 2-3D	1,660

Location SAT 3-7C 15 KVA
Mini Power Panel MPP 3-7C

V.A.	CIRC. No.	Load Served	CB Trip	POLE	PH.	POLE	CB Trip	Load Served	CIRC. No.	V.A.
2,820	1	SAT 3-7C	20	2	A B	2	20	SAT 3-7B	2	2,820
2,820	3	SAT 3-7D	20	2	A B	2	20	SAT 3-7A	4	2,820
2,820	5	SAT 3-7E	20	2	A B	2	20	Spare		

Location PT 1-1A 5KVA
Mini Power Panel MPP 1-1A

CIRC. No.	PH.	POLE	CB Trip	Load Served	V.A.
1	A B	2	20	PT 1-1A & PT 1-1B	1,660
2	A B	2	20	PT 1-1C & PT 1-1D	1,660

Location PT 1-2I 10 KVA
Mini Power Panel MPP 1-2I

V.A.	CIRC. No.	Load Served	CB Trip	POLE	PH.	POLE	CB Trip	Load Served	CIRC. No.	V.A.
2,490	1	PT 1-2I, PT 1-2J & PT 1-2K	20	2	A B	2	20	PT 1-2L, PT 1-2M & PT 1-2N	2	2,490
1,660	3	PT 1-3A & PT 1-3B	20	2	A B	2	20	PT 1-3C & PT 1-3D	4	1,660

PANEL COMPUTATION PANEL NO. POP-2
LOCATION BUNKER 9B
MAIN BREAKER 20A, VOLTS 480/277 PHASE 3 WIRES - 4

CIRC. NO.	TRIP AMPS	NO. POLES	LOAD SERVED	PHASE A	LOAD B	V.A. C	LOAD SERVED	CIRC. NO.	TRIP AMPS	NO. POLES
1	30	2	MPP 9-B							
3	40	2	MPP 3-6D							
5	60	2	MPP 3-7C							

DWG. NO. 00349580

SYMBOL NO.	DATE	SYM.	DESCRIPTION OF REVISION
	7-6-85		REVISED AS-BUILT

Watkins and Associates, Inc. engineers • architects • planners
448 East High Street • P.O. Box 951 Lexington, Kentucky 40588

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
CORPS OF ENGINEERS
FORT WORTH, TEXAS

DESIGNED BY: MJG
DRAWN BY: RDG
REVIEWED BY: LTV
SUBMITTED BY:
ENGINEER:

000250 FORT HOOD, TEXAS

PLATOON QUALIFICATION
AND SQUAD/CREW SUBCALIBER
DALTON MOUNTAIN FIELD FIRE

PANEL SCHEDULES

INV. NO. DACA63-84-B-0075 DATED: Mar. 84
CONTR. NO. DACA63-84-C-0112
DRAWING NUMBER
SHEET NO. E-22 of 29
SEQUENCE NO. 100

CONTR. NO. DACA63-84-C-0112

DRAWING OF WORK AS-BUILT

PANEL COMPUTATION PANEL NO. PP-3
LOCATION BUNKER BB
PANEL 225 Amps VOLTS 480/277 PHASE 3 WIRES 4 MAIN BREAKER 200 Amps

CIRC. NO.	TRIP AMPS	NO. POLES	LOAD SERVED	PHASE LOAD V.A. A	B	C	LOAD SERVED	CIRC. NO.	TRIP AMPS	NO. POLES
1	100	3	MAT-BB							
3	50	3	PDP-3							
							Heater	8		

TOTAL CONNECTION LOAD 120 KVA TOTAL DEMAND LINE AMPS 125
ESTIMATED DEMAND LOAD 104 KVA FEEDER 4-#3/0 in 2"C.

PANEL COMPUTATION PANEL NO. PP-4
LOCATION Bunker BA
PANEL 225 Amps VOLTS 480/277 PHASE 3 WIRES 4 MAIN BREAKER 200 Amps

CIRC. NO.	TRIP AMPS	NO. POLES	LOAD SERVED	PHASE LOAD V.A. A	B	C	LOAD SERVED	CIRC. NO.	TRIP AMPS	NO. POLES
1	100	3	MAT-BA				PDP-4	2	50	3
					5000		Heater	10	50	3

TOTAL CONNECTION LOAD 110 KVA TOTAL DEMAND LINE AMPS 124
ESTIMATED DEMAND LOAD 103 KVA FEEDER 4-#3/0 in 2"C.

PANEL COMPUTATION PANEL NO. PDP-4
LOCATION Bunker BA
MAIN BKR 45 Amps VOLTS 480/277 PHASE 3 WIRES 4

CIRC. NO.	TRIP AMPS	NO. POLES	LOAD SERVED	LOAD SERVED	CIRC. NO.	TRIP AMPS	NO. POLES
1	30	2	MPP 2-4E	MPP 8A	2	30	2
3	60	2	MPP 2-7B	MPP 2-3N	4	20	2
				MPP 1-5C	6	60	2
				MPP 2-6C	8	30	2

Location PT 3-2D 5KVA
Mini Power Panel MPP 3-2D

CIR. #	PHASE	POLE	CB Trip	Load Served	V.A.
1	A/B	2	20	PT 3-2D & PT 3-2C	1,660
2	A/B	2	20	PT 3-2B & PT 3-2A	1,660

Location PT 3-3I 5KVA
Mini Power Panel MPP 3-3I

CIR. #	PHASE	POLE	CB Trip	Load Served	V.A.
1	A/B	2	20	PT 3-3I, PT 3-3J & PT 3-3K	2,490
2	A/B	2	20	PT 3-3L, PT 3-3M & PT 3-3N	2,490

Location Bunker "8A" 5KVA
Mini Power Panel MPP 2-3N

CIR. #	PHASE	POLE	CB Trip	Load Served	V.A.
1	A/B	2	20	PT 2-3N, PT 2-3M & PT-2-3L	2,490
2	A/B	2	20	PT 2-3K, PT 2-3J & PT-2-3I	2,490

Location Bunker BB 10KVA
Mini Power Panel MPP BB

V.A.	CIR. #	Load Served	CB Trip	POLE	PHASE	POLE	CB Trip	Load Served	CIR. #	V.A.
600	1	Bunker Light	20	1	A	2	20	DRS-2	2	1,000
600	3	Bunker Recep	20	1	B					

Sump Pump MH 10

Location SAT 2-4A 10KVA
Mini Power Panel MPP 2-4A

V.A.	CIR. #	Load Served	CB Trip	POLE	PHASE	POLE	CB Trip	Load Served	CIR. #	V.A.
2,820	1	SAT 2-4A	20	2	A/B	2	20	SAT 2-4B	2	2,820

Location Bunker BA 10KVA
Mini Power Panel MPP BA

V.A.	CIR. #	Load Served	CB Trip	POLE	PHASE	POLE	CB Trip	Load Served	CIR. #	V.A.
600	1	Bunker Light	20	1	A	2	20	DRS-4	2	1,000
600	3	Bunker Recep	20	1	B					
2,820	5	SAT 2-6B	20	2	A/B	2	20	SAT 2-6A	4	2,820

Location SAT 2-4E 10KVA
Mini Power Panel MPP 2-4E

V.A.	CIR. #	Load Served	CB Trip	POLE	PHASE	POLE	CB Trip	Load Served	CIR. #	V.A.
2,820	1	SAT 2-4E	20	2	A/B	2	20	SAT 2-4D	2	2,820
2,820	3	SAT 2-4C	20	2	A/B	2	20	Spare		

Sump Pump MH 57

Location SAT 3-5D 15KVA
Mini Power Panel MPP 3-5D

V.A.	CIR. #	Load Served	CB Trip	POLE	PHASE	POLE	CB Trip	Load Served	CIR. #	V.A.
2,820	1	SAT 3-5D	20	2	A/B	2	20	SAT 3-5C	2	2,820
2,820	3	SAT 3-5E	20	2	A/B	2	20	SAT 3-5A	4	2,820
2,820	5	SAT 3-5B	20	2	A/B	2	20	Spare		

Location SAT 2-5C 15KVA
Mini Power Panel MPP 2-5C

V.A.	CIR. #	Load Served	CB Trip	POLE	PHASE	POLE	CB Trip	Load Served	CIR. #	V.A.
2,820	1	SAT 2-5C	20	2	A/B	2	20	SAT 2-5D	2	2,820
2,820	3	SAT 2-5A	20	2	A/B	2	20	SAT 2-5B	4	2,820
2,820	5	SAT 2-5E	20	2	A/B	2	20	Spare		

Location SAT 2-6C 10KVA
Mini Power Panel MPP 2-6C

V.A.	CIR. #	Load Served	CB Trip	POLE	PHASE	POLE	CB Trip	Load Served	CIR. #	V.A.
2,820	1	SAT 2-6C	20	2	A/B	2	20	SAT 2-6D	2	2,820
2,820	3	SAT 2-6E	20	2	A/B	2	20	Spare		

Location SAT 3-4C 15KVA
Mini Power Panel MPP 3-4C

V.A.	CIR. #	Load Served	CB Trip	POLE	PHASE	POLE	CB Trip	Load Served	CIR. #	V.A.
2,820	1	SAT 3-4C	20	2	A/B	2	20	SAT 3-4A	2	2,820
2,820	3	SAT 3-4B	20	2	A/B	2	20	SAT 3-4D	4	2,820
2,820	5	SAT 3-4E	20	2	A/B	2	20	Spare		

Sump Pump MH 8

Location SAT 2-7B 15KVA
Mini Power Panel MPP 2-7B

V.A.	CIR. #	Load Served	CB Trip	POLE	PHASE	POLE	CB Trip	Load Served	CIR. #	V.A.
2,820	1	SAT 2-7B	20	2	A/B	2	20	SAT 2-7A	2	2,820
2,820	3	SAT 2-7D	20	2	A/B	2	20	SAT 2-7E	4	2,820
2,820	5	SAT 2-7C	20	2	A/B	2	20	Spare		

Location SAT 1-5C 15KVA
Mini Power Panel MPP 1-5C

V.A.	CIR. #	Load Served	CB Trip	POLE	PHASE	POLE	CB Trip	Load Served	CIR. #	V.A.
2,820	1	SAT 1-5C	20	2	A/B	2	20	SAT 1-5B	2	2,820
2,820	3	SAT 1-5A	20	2	A/B	2	20	SAT 1-5D	4	2,820
2,820	5	SAT 1-5E	20	2	A/B	2	20	Spare		

PANEL COMPUTATION PANEL NO PDP-3
LOCATION Bunker BB

CIRC. NO.	TRIP AMPS	NO. POLES	LOAD SERVED	LOAD SERVED	CIRC. NO.	TRIP AMPS	NO. POLES
1	20	2	MPP 3-2D	MPP 3-3I/2-4A	2	30	2
3	40	2	MPP 3-4C	MPP 8B	4	30	2
				MPP 3-5D/2-5C	6	60	2

DWG. NO. 00349590

		7Nov85	REVISED AS-BUILT
TV NO.	PROJ.	INIT.	DESCRIPTION OF REVISION

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Lexington, Kentucky 40588

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
CORPS OF ENGINEERS
FORT WORTH, TEXAS

DESIGNED BY: MJG
DRAWN BY: RDG
REVIEWED BY: LTV
SUBMITTED BY:
ENGINEER:

000250 FORT HOOD, TEXAS

PLATOON QUALIFICATION
AND SQUAD/CREW SUBCALIBER
DALTON MOUNTAIN FIELD FIRE

PANEL SCHEDULES

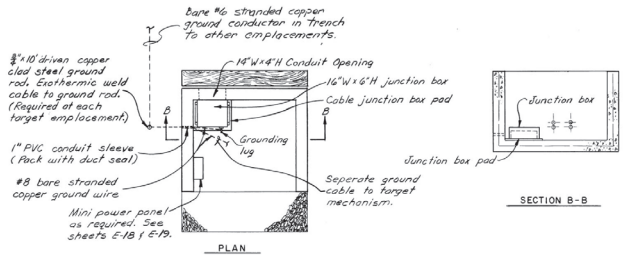
INV. NO. DACA63-84-B-0073 DATED: Mar. 84
CONTR. NO. DACA63-84-C-0112
DRAWING NUMBER
SHEET NO. E-23 of 29
SEQUENCE NO. 101

CONTR. NO. DACA63-84-C-0112

DRAWING OF WORK AS-BUILT

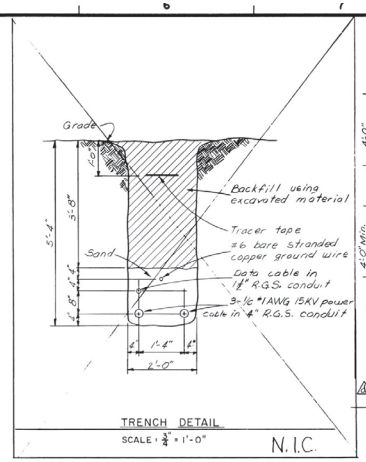
PANEL COMPUTATION PANEL NO. PP-5
LOCATION - PM-5
PANEL 225 Amp VOLTS 480/277 PHASE 3 WIRES 4 MAIN BKR 150 AMP

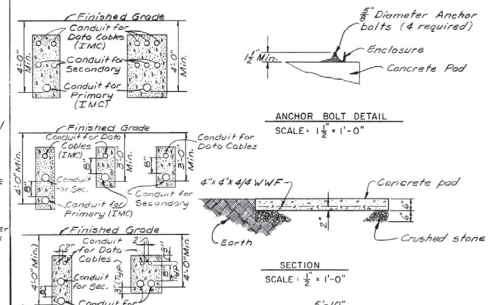
CIRC. NO.	TRIP AMPS	NO. POLES	LOAD SERVED	PHASE LOAD V.A. A	B	C	LOAD SERVED	CIRC. NO.	TRIP AMPS	NO. POLES
1	30	2	MPP-5	7500 / 7500			MPP 2-2H	2	20	2
					7500 / 7500					
3	30	2	MPP 2-1J & 2-1D			5000 / 7500	MPP 2-2D & 3-2J	4	60	2
5	40	2	MPP 2-1E & 1-3I	5000 / 7500						
					5000 / 7500		MPP 1-1E, 1-2E & 1-3E	6	40	2
7	60	2	MPP 1-4C	7500 / 5000						
					7500 / 5000		MPP 1-2D	8	60	2

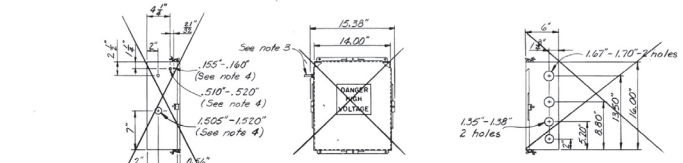


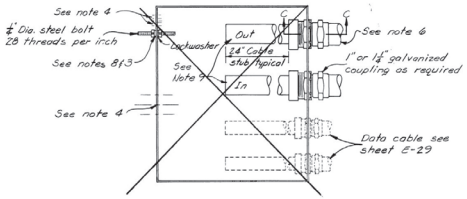
STATIONARY TARGET EMPLACEMENT

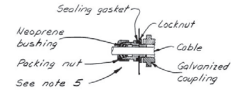
SCALE : 1/2" = 1'-0"











NOTES:

1. Enclosure shall be galvanized steel, sheet metal NEMA type 4, box of the dimensions shown. Enclosure should have means for mounting as shown. Bolt down enclosure at each emplacement. Enclosure supplier shall predrill penetrations, shall seal noted penetrations and shall install ground terminal.
2. Provide laminated plastic labels as shown. Laminated plastic shall be 1/8" thick, black with white center core. Labels shall be a minimum of 1" x 2" with a minimum of 1/2" block lettering.
3. Terminate ground rod wire to ground terminal.
4. Seal penetration.
5. Fittings shall provide a watertight seal around cable. Fittings shall be corrosion resistant with a sealing gasket. Fittings shall be appropriately sized for hole diameter and cable size.
6. At the last target emplacement in a circuit, this penetration, fitting, and cable are not required.
7. Conduit sizes vary with cable junction box configuration from emplacement to emplacement. Each 1.67"-1.70" penetration will require 1 1/2" coupling as shown. Each 1.35"-1.38" penetration will require 1" coupling as shown.
8. Weld junction to provide positive bond and waterproof.

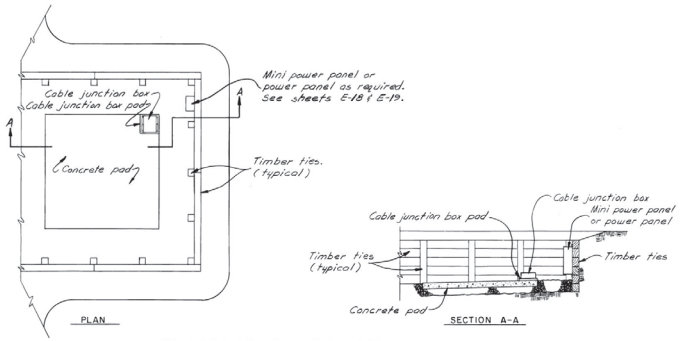
Notes: (con't.)

9. In "cable to be marked red and out" cable to be marked blue. Also the destination of both cables shall be clearly identified.

NOTE: FOR CABLE JUNCTION BOX DETAILS E-19, SEQ 89 VOL. I OF III

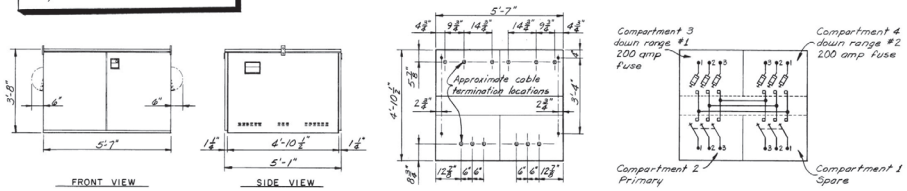
CABLE JUNCTION BOX DETAILS

NO SCALE



ATS STATIONARY TARGET EMPLACEMENT DETAILS

NO SCALE



4-WAY SECTIONALIZING SWITCH DETAILS

SCALE : 1/2" = 1'-0"

NOTE: All sectionalizing switch dimensions are approximate and may vary depending on the manufacturer selected.

4-WAY SECTIONALIZING SWITCH PAD DETAILS

SCALE : 1/2" = 1'-0"

SCALE : 3/4 INCH = 1 FOOT

SCALE : 1/2 INCH = 1 FOOT

SCALE : 1 1/2 INCH = 1 FOOT

DWG. NO. 0034961O

REVISION NO.	PAGES	DATE	DESCRIPTION OF REVISION
1		7 NOV 85	REVISED AS-BUILT
0	AM# 0004	5 NOV 84	GENERAL ELECTRICAL REVISION

Watkins and Associates, Inc. engineers • architects • planners, 148 East High Street • P.O. Box 361, Lexington, Kentucky 40588

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
CORPS OF ENGINEERS
FORT WORTH, TEXAS

DESIGNED BY: LTV
DRAWN BY: RDG
REVIEWED BY: MJG
SUBMITTED BY:
ENGINEER:

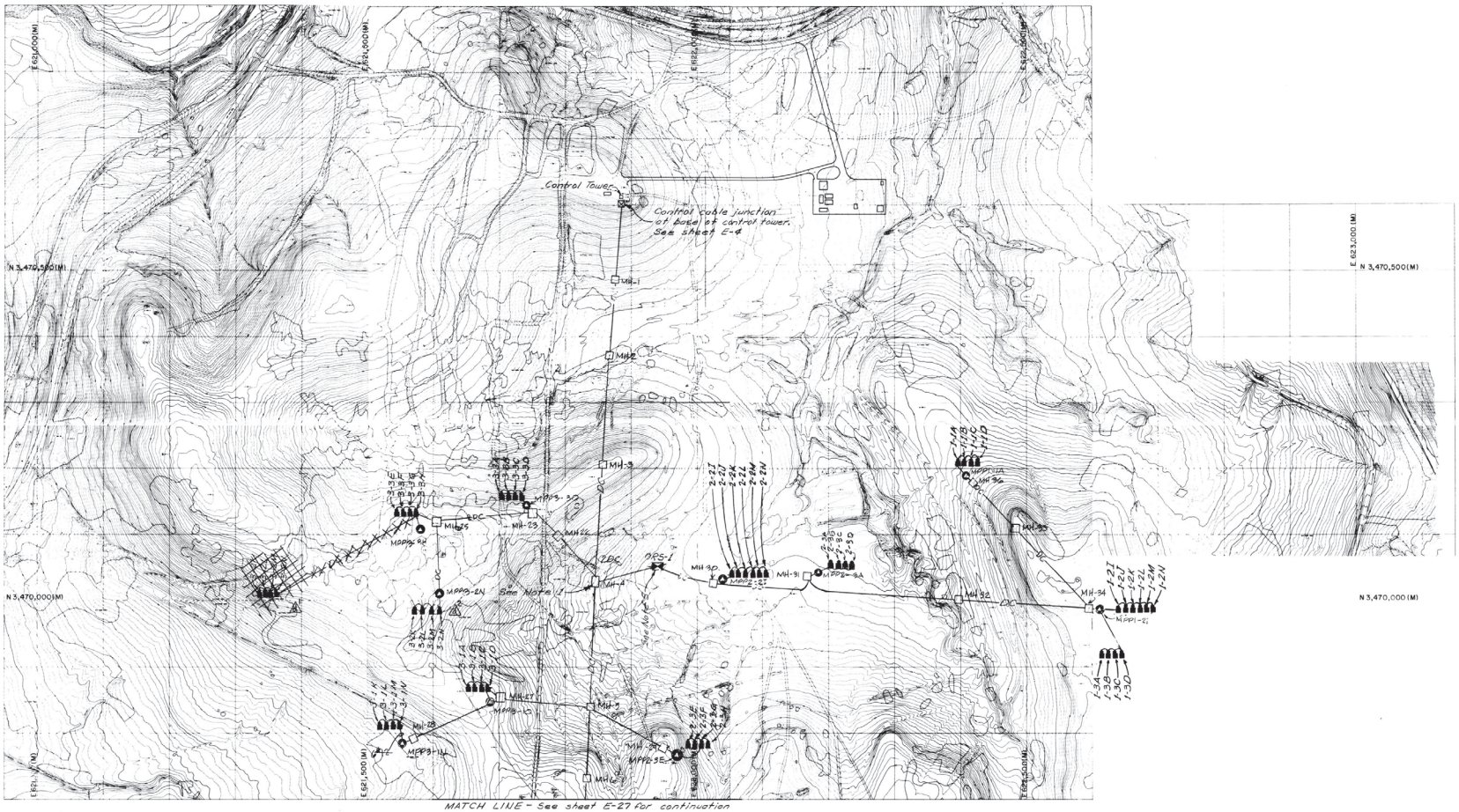
000250 FORT HOOD, TEXAS

PLATOON QUALIFICATION AND SQUAD/CREW SUBCALIBER DALTON MOUNTAIN FIELD FIRE

EXTERIOR ELECTRICAL DETAILS

INV. NO. DACA63-84-B-0073 DATED: Mar. 84
CONTR. NO. DACA63-84-C-0112
DRAWING NUMBER
SHEET NO. E-25 of 29
SEQUENCE NO. 103
CONTR. NO. DACA63-84-C-0112

DRAWING OF WORK AS-BUILT



LEGEND

- Personnel Target (Static)
- Armor Target (Static)
- Armor Target (Moving)
- 4'x4' Concrete Handhole
- Data Repeater Stations
- —DC— Data Cable

NOTES

1. Power distribution manhole shown on this sheet is for reference only to illustrate the relative positions of power system manholes and control system hand holes.
2. Contractor may use, and is encouraged to do so, the power distribution trench whenever possible.
3. Refer to control distribution single line diagram sheet # E-28 for the sequential target connections and size of cable.
4. Control cable from tower to all data repeater stations (DRS 1 thru 6) shall be run in 1½" rigid galvanized steel conduit. Control cable from data repeater stations to individual targets shall be direct burial except for road crossings. At road crossings cable shall be installed in 1½" rigid galvanized steel conduit.
5. Provide support for DRS-1 and DRS-5 similar to panel mounting detail shown on sheet E-7.

N

200 0 200 400
SCALE: 1" = 200'

DWG. NO. 00049620

		7 Nov 85	REVISED AS-BUILT
2	AMF 0004	5 MAY 84	GENERAL REV. TARGET 5-2, K-N
REV. NO.	BY	DATE	DESCRIPTION OF REVISION

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U.S. ARMY ENGINEER DISTRICT, FORT WORTH
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FORT WORTH, TEXAS

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DRAWN BY: RDG
REVIEWED BY: LIV
SUBMITTED BY: [signature]
ENGINEER:

000250 FORT HOOD, TEXAS

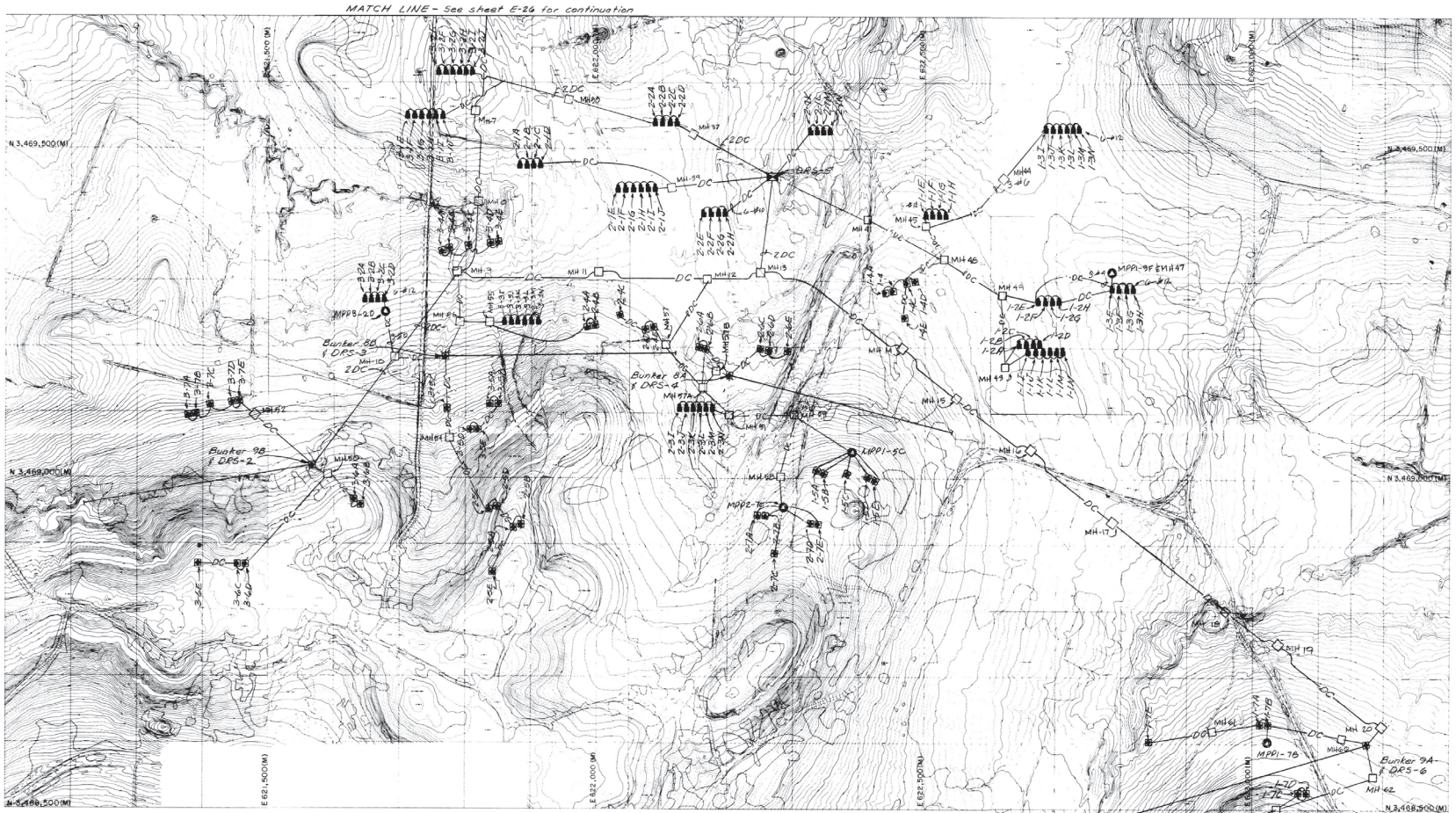
PLATOON QUALIFICATION AND SQUAD/CREW SUBCALIBER DALTON MOUNTAIN FIELD FIRE

CONTROL DISTRIBUTION DOWN RANGE

INV. NO. DACA63-84-B-0073 DATED: Mar. 84
CONTR. NO. DACA63-84-C-0112
DRAWING NUMBER
SHEET NO. E-26 of 29
SEQUENCE NO. 104

CONTR. NO. DACA63-84-C-0112

DRAWING OF WORK AS-BUILT



DWG. NO. 00249ESO

SCALE: 1" = 200'

		7NOV85	REVISED AS-BUILT
1	A1162	F0000 B	KSFEBB5 CHANGED DC & ZDC LINES
REVISION NO.	MADE BY	DATE	DESCRIPTION OF REVISION

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U.S. ARMY ENGINEER DISTRICT, FORT WORTH
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REVIEWED BY: LTV
SUBMITTED BY:
ENGINEER:

000250 FORT HOOD, TEXAS

PLATOON QUALIFICATION
AND SQUAD/CREW SUBCALIBER
DALTON MOUNTAIN FIELD FIRE

CONTROL DISTRIBUTION
DOWN RANGE

INV. NO. DACA63-84-B-0073 DATED Mar 84
CONTR. NO. DACA63-84-C-0112
DRAWING NUMBER
SHEET NO. E-27 of 29
SEQUENCE NO. 105

CONTR. NO. DACA63-84-C-0112

DRAWING OF WORK AS-BUILT

SUPERSEDES SHEET E-27 OF 29

DWG. NO. 00349640

STA. NO.	REVISION	DATE	DESCRIPTION OF REVISION
		7NOV85	REVISED AS BUILT

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U.S. ARMY ENGINEER DISTRICT, FORT WORTH
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FORT WORTH, TEXAS

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DRAWN BY: RDG
REVIEWED BY: LTV
SUBMITTED BY:
ENGINEER:

000250 FORT HOOD, TEXAS

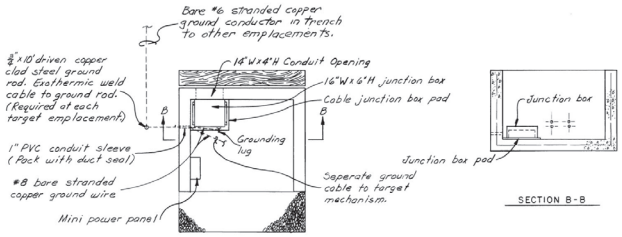
PLATOON QUALIFICATION AND SQUAD/CREW SUBCALIBER DALTON MOUNTAIN FIELD FIRE

CONTROL DISTRIBUTION-SINGLE LINE DIAGRAM DOWN RANGE

INV. NO. DACA63-84-B-0073 DATED: Mar. 84
CONTR. NO. DACA63-84-C-0112
DRAWING NUMBER
SHEET NO. E-28 of 29
SEQUENCE NO. 106

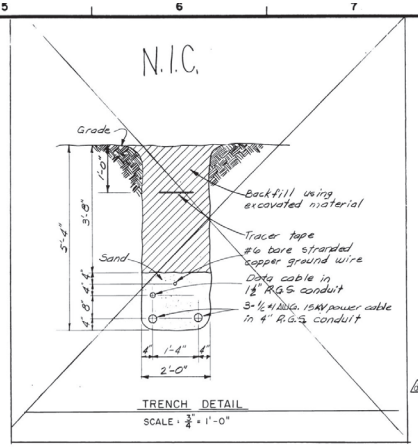
CONTR. NO. DACA63-84-C-0112

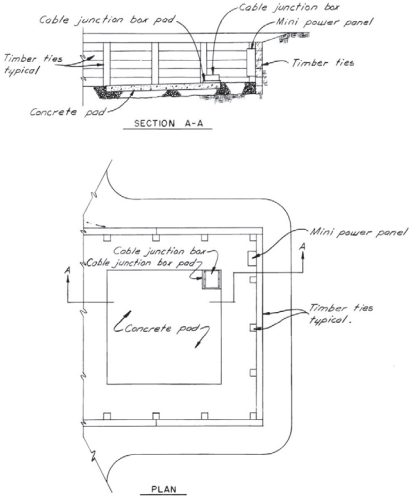
DRAWING OF WORK AS-BUILT



STATIONARY TARGET EMPLACEMENT

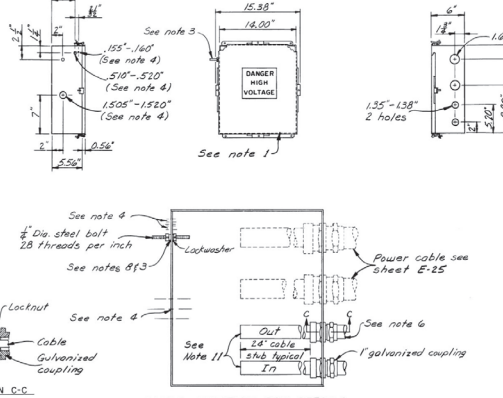
SCALE : 1/2" = 1'-0"





ATS STATIONARY TARGET EMPLACEMENT DETAILS

SCALE : 1/4" = 1'-0"

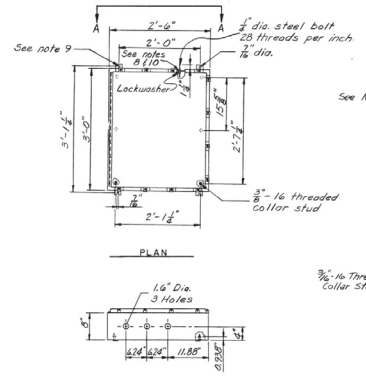


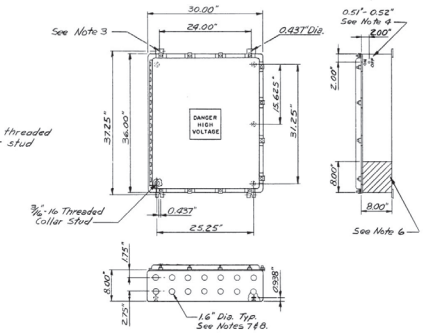
CABLE JUNCTION BOX DETAILS

NO SCALE

NOTES:

1. Enclosure shall be galvanized steel, sheet metal NEMA type 4, box of the dimensions shown. Enclosure should have means for mounting as shown. Bolt down enclosure at each emplacement. Enclosure supplier shall predrill penetrations, shall seal noted penetrations and shall install ground terminal.
2. Provide laminated plastic labels as shown. Laminated plastic shall be 1/8" thick, black with white center core. Labels shall be a minimum of 1"x2" with a minimum of 1/4" block lettering.
3. Terminate ground rod wire to ground terminal.
4. Seal penetration.
5. Fittings shall provide a watertight seal around cable. Fittings shall be corrosion resistant with a sealing gasket. Fittings shall be appropiately sized for hole diameter and cable size.
6. At the last target emplacement in a circuit, this penetration, fitting, and cable are not required.
7. Conduit sizes vary with cable junction box configuration from emplacement to emplacement. Each 1.67"-1.70" penetration will require 1 1/2" coupling as shown. Each 1.35"-1.38" penetration will require 1" coupling as shown.
8. Weld junction to provide positive bond and waterproof.
9. Bolt enclosure to tower. See sheet E-4.
10. Connect ground wire to terminal.
11. "In" cable to be marked red and "out" cable to be marked blue. Also the destination of both cables shall be clearly identified.





DATA REPEATING STATION DETAILS

NO SCALE

NOTES:

1. Enclosure shall be a galvanized steel sheet metal NEMA type 4 enclosure with EMI/RFI shielding Dimensions as shown.
2. Bolt down enclosure.
3. Connect ground wire to bolt down location.
4. Seal penetration.
5. Provide laminated plastic lables as shown. Laminated plastic shall be 0.125" thick, black with white center core. Lables shall be a minimum 1"x2" with minimum of 0.25" block lettering.
6. If mounting horizontally, this area (both sides) may be used for penetrations.
7. Total data penetrations may not exceed 13. One penetration shall be provided for power circuit.
8. Fitting shown in cable junction box details, this sheet, shall be used to seal all cable penetrations.

DWG. NO. CO34-9650

REVISION NO.	PAGE	DATE	DESCRIPTION OF REVISION
1	AM 6004	7 NOV 85	REVISED AS-BUILT
0		3 MAY 84	GENERAL REVISION

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U.S. ARMY ENGINEER DISTRICT, FORT WORTH
CORPS OF ENGINEERS
FORT WORTH, TEXAS

DESIGNED BY: LTV
DRAWN BY: RDG
REVIEWED BY: MJG
SUBMITTED BY: M. Miller
ENGINEER:

000250 FORT HOOD, TEXAS

PLATOON QUALIFICATION AND SQUAD/CREW SUBCALIBER DALTON MOUNTAIN FIELD FIRE

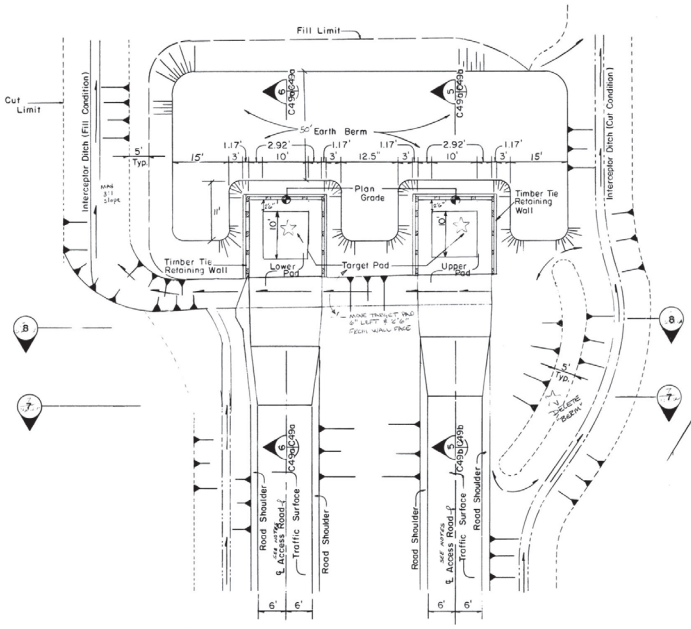
CONTROL DETAILS

DOWN RANGE

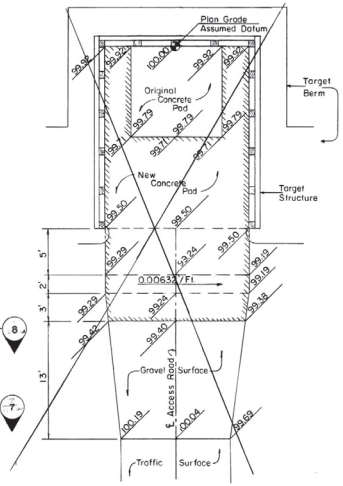
INV. NO. DACA63-84-B-0073 DATED: Mar. 84
CONTR. NO. DACA63-84-C-0112
DRAWING NUMBER
SHEET NO. E-29 of 29
SEQUENCE NO. 107

CONTR. NO. DACA63-84-C-0112

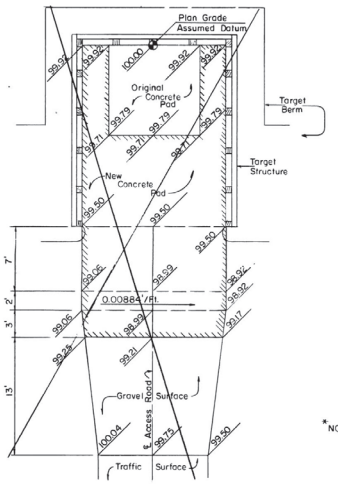
DRAWING OF WORK AS-BUILT



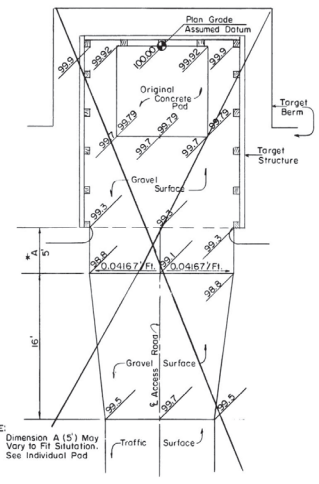
TYPICAL PLAN DUAL STATIONARY ARMOR TARGET EMPLACEMENT
Scale: 1" = 10'-0" (SEE SINGLE TARGET FOR TYPICAL SECTION BERM/STRUCTURE)



TYPICAL ELEVATION PLAN UPPER PAD
Scale: 1" = 5'-0"

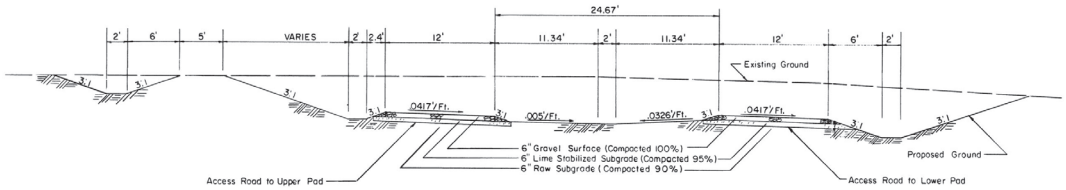


TYPICAL ELEVATION PLAN LOWER PAD
Scale: 1" = 5'-0"

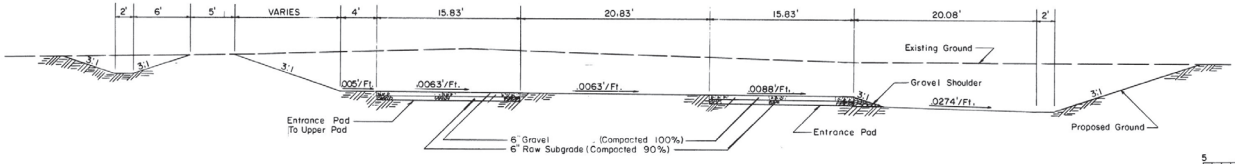


*NOTE:
Dimension A (5') May Vary to Fit Situation. See Individual Pad

TYPICAL ELEVATION PLAN GRAVEL PAD
Scale: 1" = 5'-0"



TYPICAL SECTION ACCESS ROAD (7)
Scale: 1" = 5'-0"



TYPICAL SECTION ENTRANCE TO TARGET (8)
Scale: 1" = 5'-0"

SCALE: 1" = 5'-0"

SCALE: 1" = 10'-0"

DWG. NO. 00349660

SYM.	REVISION NO.	DATE	DESCRIPTION OF REVISION
		7 Nov 85	REVISED AS-BUILT
	26143	15 FEB	REVISIONS TO REFLECT NEGOTIATIONS 15 FEB
	AM-0005	Dec 84	~~General Drainage Revisions ATS Targets~~

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U.S. ARMY ENGINEER DISTRICT, FORT WORTH
CORPS OF ENGINEERS
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DESIGNED BY: C.A.S.
DRAWN BY: I.G.H.
REVIEWED BY: A.O.L.
SUBMITTED BY:
ENGINEER:

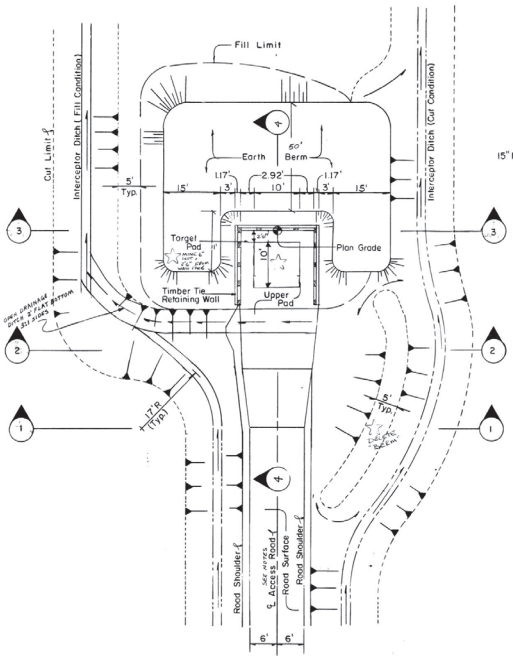
000250 FORT HOOD, TEXAS

PLATOON QUALIFICATION
AND SQUAD/CREW SUBCALIBER
DALTON MOUNTAIN FIELD FIRE

TYPICAL SECTION DUAL TARGET

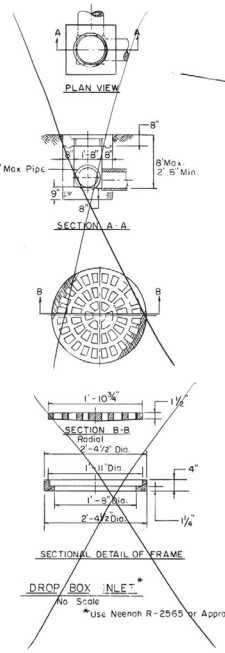
INV. NO. DACA 63-84-B-0073 DATED: Dec. 84
CONTR. NO.
DRAWING NUMBER C 40 Sgr 53
SHEET NO.
SEQUENCE NO. 116
CONTR. NO.

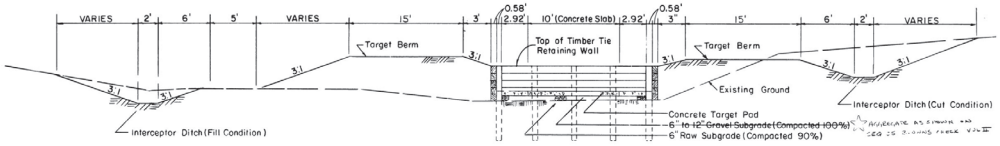
DRAWING OF WORK AS-BUILT



TYPICAL SECTION SINGLE STATIONARY ARMOR TARGET EMPLACEMENT

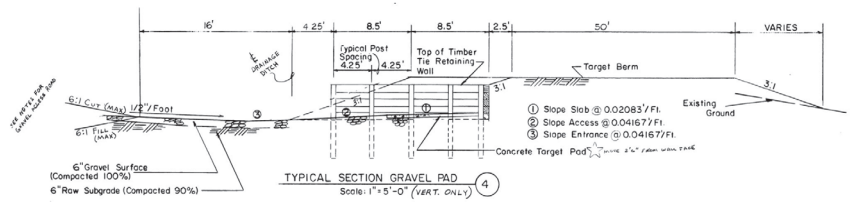
Scale: N.T.S





TYPICAL SECTION BERM / STRUCTURE

Scale: 1" = 5'-0" (VERT. ONLY)



TYPICAL SECTION GRAVEL PAD

Scale: 1" = 5'-0" (VERT. ONLY)

SCOPE CHANGE

Vol I, Dalton (Henson) Mountain ☆ BERMS TO BE AS PER CONTRACT DRAWINGS

1. Add 23.5' x 3.75' [illegible] (all ATS's [illegible] 93).
2. Delete 35 LF 8" PVC on ATS #'s 5, 6, 7, 8, 9, and 12.
3. Add 67 CY road excavation at 12 ea ATS.
4. Delete 31 CY ATS excavation at 12 ea ATS.
5. Add 40 SY of 6" gravel access road for ATS #'s 2, 3, [illegible], 4, [illegible], 9, and 11.
6. Delete requirement for french drain PVC pipe at ATS #'s 5, 6, [illegible], 9, and 12.
7. Add requirement for open-pitch 2' flat bottom 3:1 side slope ditch at ATS's 5, 6, 7, 8, 9, and 12.
8. Change wing-wall configuration [illegible] as per contract drawing sequence 119 and 117 increased length reflected in 1. above.

SCOPE CHANGE

Vol II, Browns Creek ☆ BERM ELEVATIONS TO BE AS PER CONTRACT DRAWINGS - SLOPE 3:1 & 1:1V AT X-TIE ELEVATIONS

1. Delete 35' long rein conc retain wall (all ATS).
2. Delete 35' railroad tie (all ATS).
3. Delete 6" PVC drain pipe to daylight (all ATS).
4. Add 2' [illegible] bottom ditch to daylight (all ATS).
5. Add 3'-[illegible] x 42.6" wood X-tie revetment (all ATS).
6. Add 30' X 12' gravel access road (see 9.) [illegible] 25, 6, 1[illegible], 28, 13, 57 only).
7. Add 22.5 SY X 12" excavation [illegible] (see 9. [illegible], 17, 28, 13, 57 only).
8. Delete 24' X 19' X 8" gravel pad all ATS).
9. Move ATS #'s 25, 6, 12, 28, 13, and 57, 30' forward to provide for service access at rear.

SCOPE CHANGE

Vol III, Dalton Mountain

Single ATS (all):

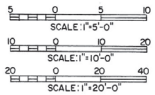
1. Increase berm front dimension 25.5-feet X 55-feet - slope same. ☆ SIDES ON ATS # 1-6 GATE, 2-5 GATE, AND 3-6 GATE T. W. 2 H - 1V
2. Increase side berm 2.5-feet, slope same, 12.5' LENGTH (X2 sides)
3. Delete 4'3" long X 2'3" height X-tie with 1 post each side (X2)
4. Delete 12" X 12" underdrain with filter fabr 17.3'.
5. Delete access road width 2' X 20'.
6. Add 5' X 50' hang [illegible] (increased width includes both sides)

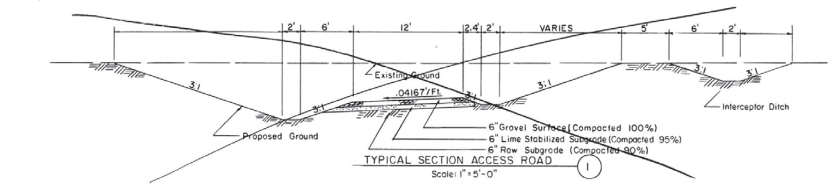
Double ATS (all)

1. Same as 1. 25.5' X 92'
2. Same as 2. above
3. Same as 3. above, X2
4. Same as 4. above X2
5. Same as 5. above X2
6. Same as 6. above

Relocations

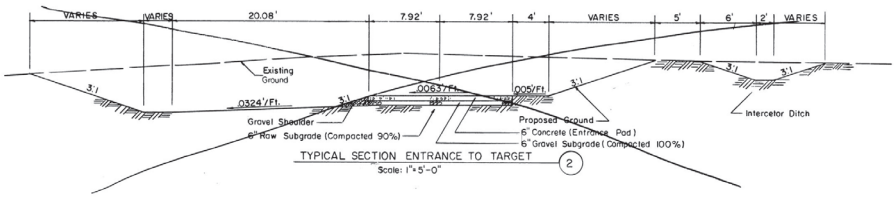
1. Locate double ATS 3-6 A & B parallel in line of stagger. Provide 12' wide access road on right side of entry only.
2. Locate double ATS 2-5 A & B parallel with double access road.
3. Locate double ATS 2-5 C & D " " " " " ".
4. Relocate double ATS 2-4 A & B 20' further from parallel service road.
5. Realign 50 LF open ditch at double ATS 1-4 A & B.
6. Relocate ATS 1-7 A & B 20' further from parallel service road.
7. Clear cedar trees in conflict with berm expansion ATS 1-6 C & D.
8. Realign 50 LF open ditch at double ATS 3-4 D & E.





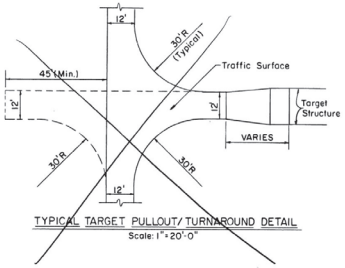
TYPICAL SECTION ACCESS ROAD

Scale: 1" = 5'-0"



TYPICAL SECTION ENTRANCE TO TARGET

Scale: 1" = 5'-0"



TYPICAL TARGET PULLOUT / TURNAROUND DETAIL

Scale: 1" = 20'-0"

DWG. NO. 00349670

REV. NO.	REVISED	DATE	DESCRIPTION OF REVISION
3	2/93	Revised	7 NOV 85 REVISED AS-BUILT
2		15 FEB	REVISED TO REFLECT ELEVATIONS 15 FEB '85
1		JAN 2000	~~Dec. 84 General Drainage Revisions ATS Targets~~

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SUBMITTED BY:
ENGINEER:

000250 FORT HOOD, TEXAS

PLATOON QUALIFICATION AND SQUAD/CREW SUBCALIBER DALTON MOUNTAIN FIELD FIRE

TYPICAL SECTION SINGLE TARGET

INV. NO. DACA 63-84-B-0073 DATED: Dec. 84
CONTR. NO.
DRAWING NUMBER
SHEET NO. C49b of 53
SEQUENCE NO. 117
CONTR. NO.

DRAWING OF WORK AS-BUILT