





**STRUCTURAL DESIGN CRITERIA (CONT)**

ALL DESIGNS SHALL CONFORM TO THE PROVISIONS OF THE IBC 2006 AS APPLICABLE

**1.5 WIND LOADS (PER IBC 2006)**

**1.5.1 DESIGN PARAMETERS**

BASIC WIND SPEED	137 Km/h
WIND IMPORTANCE FACTOR	1.0
WIND EXPOSURE CATEGORY	D
DIRECTIONALITY COEFFICIENT (Kd)	0.85
TOPOGRAPHIC FACTOR (Kzt)	1.0

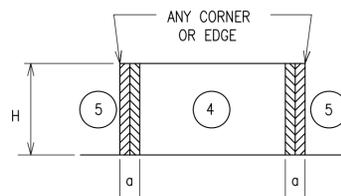
**1.5.2 DESIGN WIND PRESSURE – MAIN WINDFORCE RESISTING SYSTEM**

LOCATION	CORNER ZONE WIDTH "a"	MEAN ROOF HEIGHT (h)	WINDWARD WALL (@ MEAN ROOF HEIGHT)	LEEWARD WALL (@ MEAN ROOF HEIGHT)	ROOF
FIELD ZONE	N/A	4455 mm	680 N/m <sup>2</sup>	-480 N/m <sup>2</sup>	-470 N/m <sup>2</sup>
CORNER ZONE	1440mm	4455 mm	800 N/m <sup>2</sup>	-418 N/m <sup>2</sup>	-750 N/m <sup>2</sup>

a = 10% OF LEAST HORIZONTAL DIMENSION OR 0.4h, WHICHEVER IS SMALLER, BUT NOT LESS THAN EITHER 4% OF LEAST HORIZONTAL DIMENSION OR 0.9M.  
 h = MEAN ROOF HEIGHT, IN METERS, EXCEPT THAT EAVE HEIGHT SHALL BE USED FOR ANGLE GREATER THAN 10°.

**1.5.3 DESIGN WIND PRESSURE – WALL COMPONENTS AND CLADDING**

EXTERIOR WALL SYSTEMS & THEIR ATTACHMENTS TO THE PRIMARY STRUCTURE SHALL BE DESIGNED FOR THE PRESSURES SHOWN IN THE DIAGRAM BELOW:



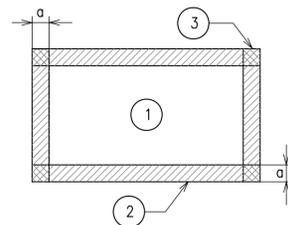
LOCATION	WINDWARD PRESSURE N/m <sup>2</sup> (inward)		LEEWARD PRESSURE N/m <sup>2</sup> (outward)		a
	④	⑤	④	⑤	
MAIN BUILDING					(mm)
AREA = 1 m <sup>2</sup>	788	788	-850	-1050	1440
AREA = 2 m <sup>2</sup>	748	748	-815	-967	1440
AREA = 5 m <sup>2</sup>	700	700	-765	-880	1440
AREA = 10 m <sup>2</sup>	648	648	-715	-750	1440

**NOTES:**  
 1. DESIGN WIND PRESSURES ABOVE REPRESENT THE NET PRESSURE (SUM OF INTERNAL AND EXTERNAL PRESSURE) APPLIED NORMAL TO ALL SURFACES.  
 2. LINEAR INTERPOLATION BETWEEN VALUES OF TRIBUTARY AREA IS PERMISSIBLE.  
 3. PLUS AND MINUS SIGNS SIGNIFY PRESSURE TOWARD AND AWAY FROM THE EXTERIOR SURFACE, RESPECTIVELY.

**1.5 WIND LOADS (CONT)**

**1.5.4 DESIGN WIND PRESSURE – ROOF COMPONENTS AND CLADDING**

ROOF COMPONENTS & THEIR ATTACHMENTS SHALL BE DESIGNED FOR THE PRESSURES SHOWN IN THE ADJACENT DIAGRAM & TABLE BELOW:



**ROOF MEAN HEIGHT**

LOCATION	GROSS UPLIFT PRESSURE N/m <sup>2</sup> (upward)			a
	①	②	③	
MAIN BUILDING				(mm)
AREA = 1 m <sup>2</sup>	-787	-931	-1738	-1440
AREA = 2 m <sup>2</sup>	-787	-931	-1738	-1440
AREA = 5 m <sup>2</sup>	-787	-931	-1738	-1440
AREA = 10 m <sup>2</sup>	-787	-931	-1738	-1440

**NOTES:**  
 1. DESIGN WIND PRESSURES ABOVE REPRESENT THE NET PRESSURE (SUM OF INTERNAL AND EXTERNAL PRESSURE) APPLIED NORMAL TO ALL SURFACES.  
 2. LINEAR INTERPOLATION BETWEEN VALUES OF TRIBUTARY AREA IS PERMISSIBLE.  
 3. PLUS AND MINUS SIGNS SIGNIFY PRESSURE TOWARD AND AWAY FROM THE EXTERIOR SURFACE, RESPECTIVELY.

**2.0 FOUNDATION DESIGN CRITERIA (TO BE CONFIRMED BY THE CONTRACTOR)**

THE GEOTECHNICAL ANALYSIS FOR THIS PROJECT IS THE RESPONSIBILITY OF THE CONTRACTOR AWARDED THE WORK. DESIGN VALUES USED IN THE STRUCTURAL ANALYSIS OF THE BUILDINGS HEREIN INDICATED HAVE BEEN ASSUMED AND SHALL BE CONFIRMED AND VERIFIED AS PART OF THE GEOTECHNICAL INVESTIGATION. VALUES WHICH DO NOT MEET THE REQUIREMENTS INDICATED BELOW SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE CONTRACTING OFFICER FOR CONSIDERATION AND DETERMINATION ON THE NEXT APPROPRIATE COURSE OF ACTION.

**2.1.1 SOIL DESIGN PARAMETERS**

NET ALLOWABLE SOIL BEARING CAPACITY	96.0 KPa
UNIT WEIGHT OF SOIL (moist)	1800 Kg/m <sup>3</sup>
COEFF ACTIVE EARTH PRESSURE (Kpa)	0.30
COEFF PASSIVE EARTH PRESSURE (Kpp)	3.33
COEFF AT-REST EARTH PRESSURE (Kpr)	.55
COEFF OF SOIL FRICTION	.35
SUBGRADE MODULUS	4120 g/m <sup>3</sup>
MINIMUM BEARING DEPTH BELOW GRADE	800mm
SEISMIC SITE CLASS (based on in-situ soil)	D

**CONCRETE BEAM SCHEDULE**

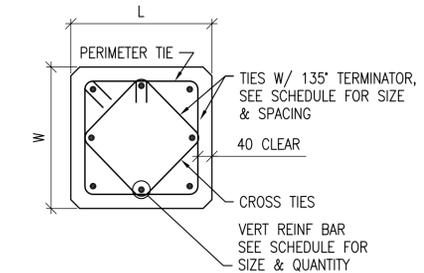
GRADE BEAM						
MARK	SIZE (BxH)	REINFORCING			REMARKS	
		TOP	BOTTOM	STIRRUPS		
GB1	400x750	(3)-#22	(3)-#22	#13 @ 200	(1) #22 EF	TOP BAR LAP AT CENTER BOT BAR LAP PAST COL
ROOF BEAM						
MARK	SIZE (BxH)	REINFORCING			REMARKS	
		TOP	BOTTOM	STIRRUPS		
RB1	400x600	(2)-#19	(2)-#19	#13 @ 250	N/A	TOP BAR LAP AT CENTER BOT BAR LAP PAST COL

**NOTE:**  
 1. DIMENSIONS NOTED ARE MILLIMETERS (mm) UON.

**CONCRETE COLUMN SCHEDULE**

MARK	SIZE (LxW)	REINFORCING	
		VERT BARS	TIES
C1	400x400	(8)-#25	#13 @ 100 (CORE OF EXT & CORNER COLUMNS) #13 @ 150 (CORE OF INTERIOR COLUMNS) #13 @ 200 (OTHER)

**NOTE:**  
 1. DIMENSIONS NOTED ARE MILLIMETERS (mm) UON.  
 2. SECOND STORY COLUMNS ARE SAME AS FIRST STORY COLUMNS.  
 3. CORE INDICATES THE AREA OF COLUMN & BEAM INTERSECTION.  
 4. TIE INDICATES PERIMETER & CROSS TIE COMBINED.



**1 COLUMN DETAIL**  
 SCALE: 1:10

**SPREAD FOOTING SCHEDULE**

MARK	FOOTING SIZE			FOOTING REINFORCING	REMARKS
	LENGTH	WIDTH	THICKNESS		
F1	2000	2000	300	(6)-#22 EW BOTT	-----

**NOTES:**  
 1. DIMENSIONS NOTED ARE MILLIMETERS (mm) UON.

US Army Corps of Engineers  
 Afghanistan Engineer District

NO.	DATE	DESCRIPTION	SYMBOL

DESIGNED BY: DATE: 09-30-09  
 MMY SUBMITTED BY: BAKER  
 RCN RCG  
 CHK BY: CWV FILE NO: ANPSDS-02XXXX

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 Moon Township, PA 15108  
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AFGHAN NATIONAL POLICE  
 STANDARD DESIGN  
 TOILET ABLUTION BUILDING  
 DESIGN CRITERIA & SCHEDULES

SHEET REFERENCE NUMBER:  
**S2**

UNLESS OTHERWISE NOTED, LINEAR DIMENSIONS SHOWN ARE IN MILLIMETERS (MM)  
 0 200 400 600  
 SCALE: 1: 10



SYMBOL	DESCRIPTION	DATE	APP

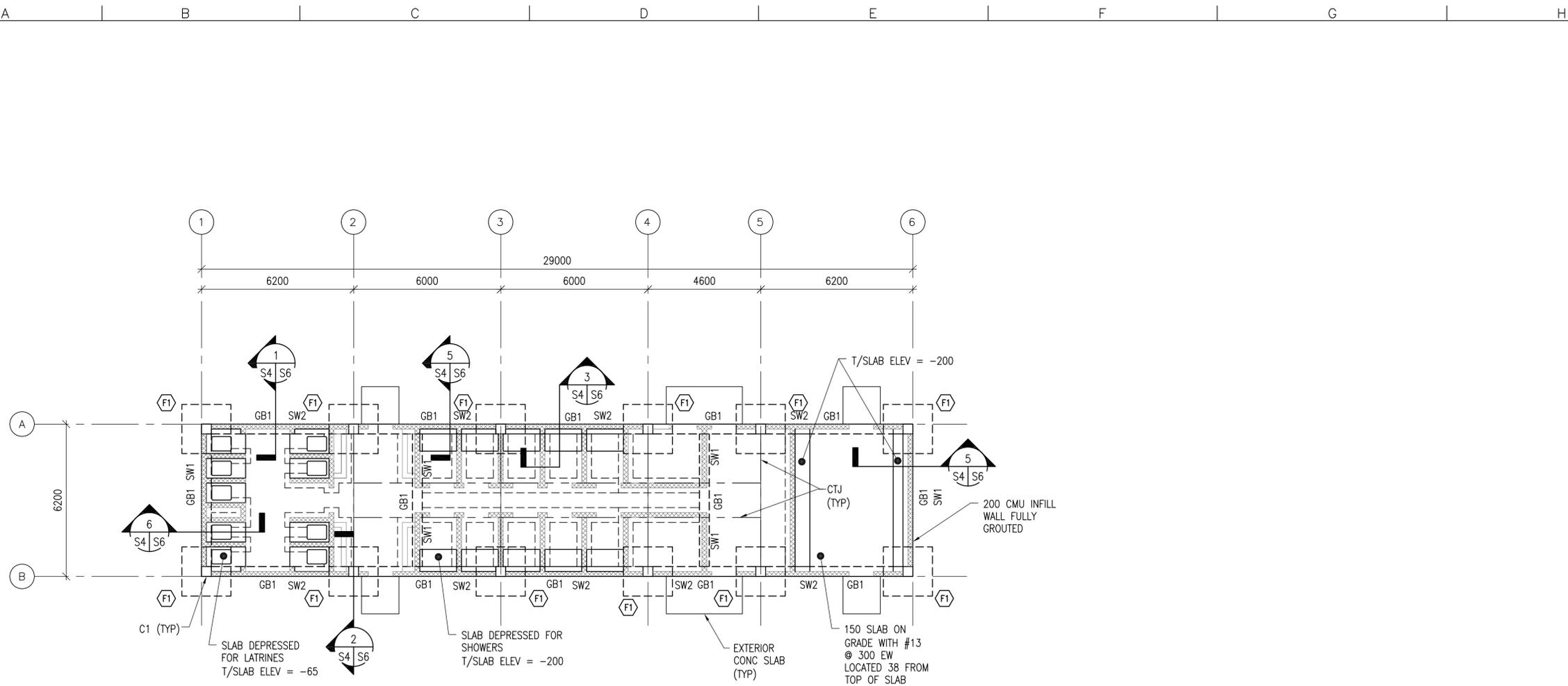
DESIGNED BY: MMY	DATE: 09-30-09
DWN BY: RCG	SUBMITTED BY: BAKER
CHK BY: CWV	FILE NO: ANFSDS-104XXX

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AFGHAN NATIONAL POLICE  
STANDARD DESIGN  
TOILET ABLUTION BUILDING  
FOUNDATION PLAN

SHEET REFERENCE NUMBER:  
**S4**

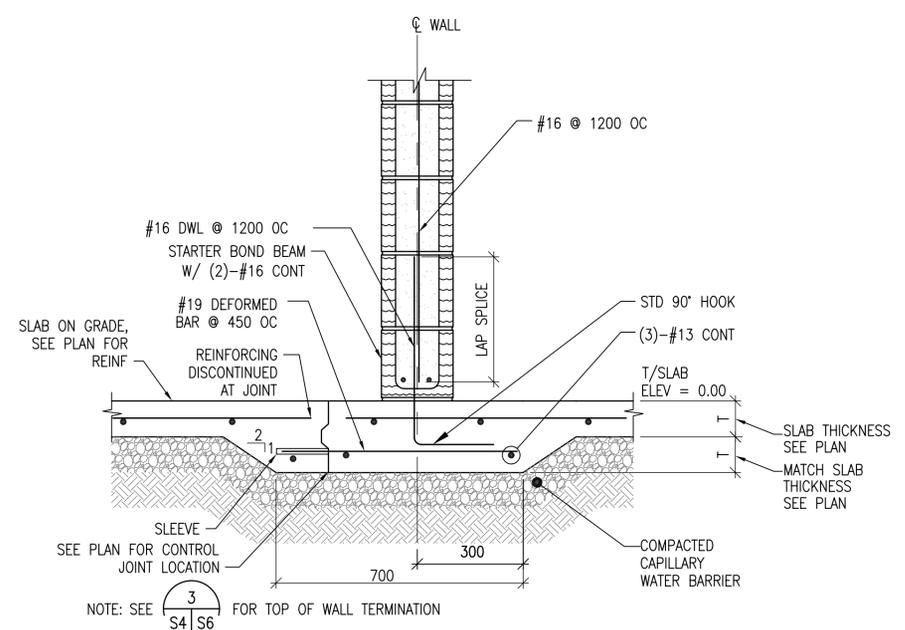
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**1 FOUNDATION PLAN**  
SCALE: 1:100

**PLAN NOTES:**

1. FINISH FIRST FLOOR ELEVATION SHALL BE (DATUM 0.0). ALL PLUS OR MINUS DIMENSIONS INDICATED ON PLAN OR REFERRED TO IN NOTES RELATE TO FINISH FIRST FLOOR ELEVATION.
2. TOP OF FOOTINGS SHALL BE -950 UNLESS OTHERWISE INDICATED.
3. SPREAD FOOTINGS INDICATED BY F# ON PLAN. REFER TO SPREAD FOOTING SCHEDULE ON SHEET S2.
4. COLUMNS INDICATED THUS C# ON PLAN. REFER TO COLUMN SCHEDULE ON SHEET S2.
5. REFER TO SHEETS S1 TO S3 FOR STRUCTURAL NOTES AND BASIS OF DESIGN.
6. CTJ & CSJ INDICATES SLAB CONTROL OR CONSTRUCTION JOINTS. RESPECTIVELY, REFER TO SHEET S8 FOR DETAILS.
7. SEE CMU WALL REINFORCING SCHEDULE ON SHEET S3.
8. REFER TO ARCHITECTURAL SHEETS FOR MASONRY PARTITION TYPES.
9. SEE MECHANICAL AND ELECTRICAL SHEET FOR CONCRETE PAD LOCATIONS, SIZES, AND THICKNESS NOT SHOWN. SEE SHEET S8 FOR DETAILS.



**TYPICAL CONTROL JOINT AT WALL SECTION**  
SCALE: 1:10

UNLESS OTHERWISE NOTED, LINEAR DIMENSIONS SHOWN ARE IN MILLIMETERS (MM)

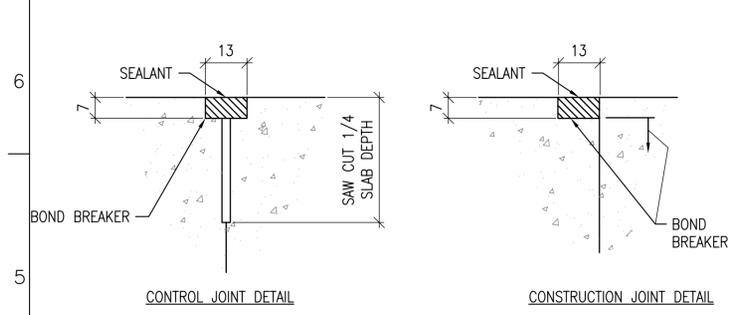
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SCALE: 1: 100





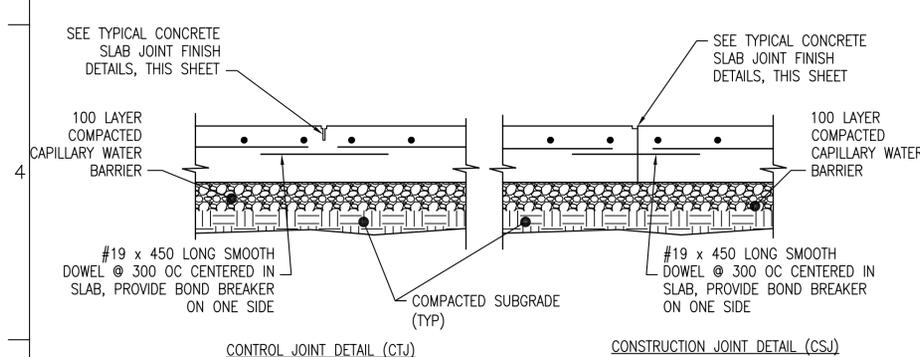


A B C D E F G H



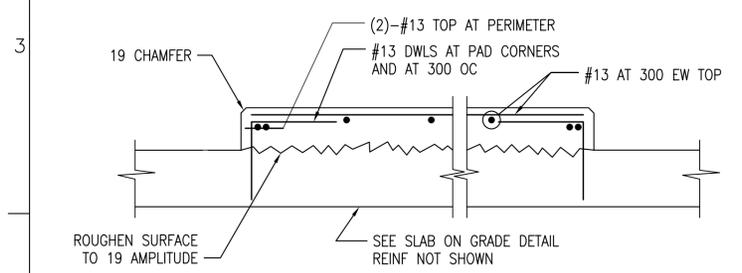
**TYPICAL CONCRETE SLAB JOINT FINISH DETAIL**

1 S8 SCALE: NTS



**TYPICAL SLAB ON GRADE JOINT DETAILS**

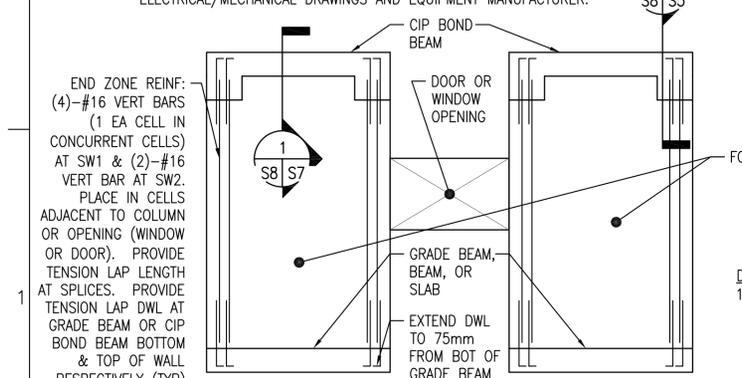
2 S8 SCALE: NTS



**INTERIOR EQUIPMENT PAD DETAIL**

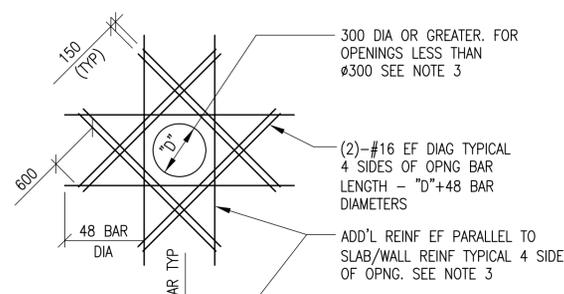
3 S8 SCALE: NTS

DETAIL NOTE:  
1. COORDINATE EQUIPMENT PAD SIZE AND LOCATIONS W/ ELECTRICAL/MECHANICAL DRAWINGS AND EQUIPMENT MANUFACTURER.

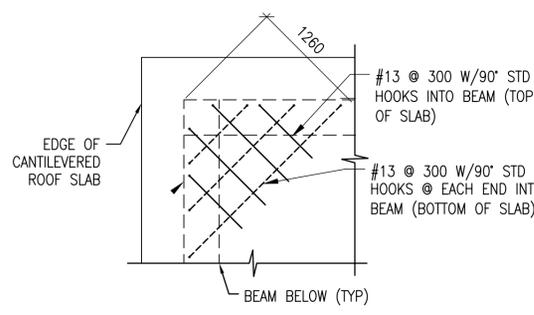


**SPECIAL REINFORCED MASONRY SHEAR WALL ELEVATION**

4 S8 SCALE: NTS



**SLAB OPENINGS**



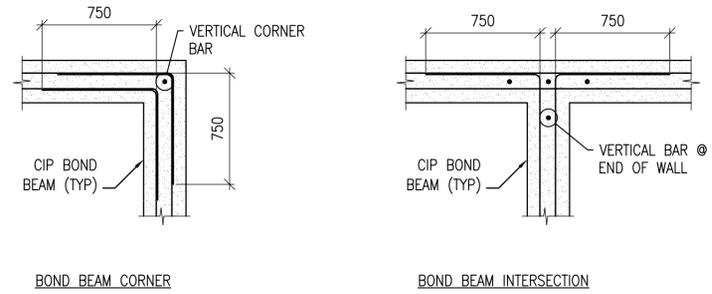
**ELEVATED SLAB CORNERS**

**ADD'L REINFORCEMENT DETAILS**

5 S8 SCALE: NTS

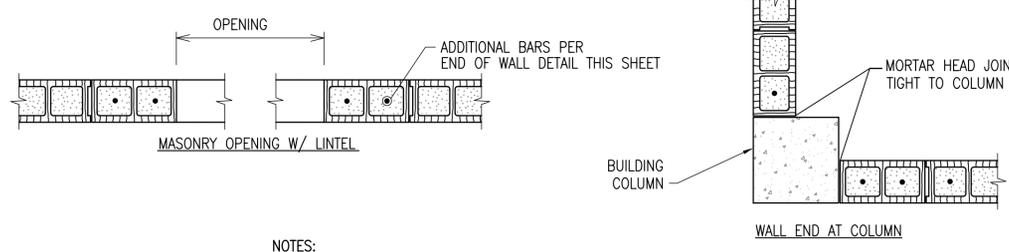
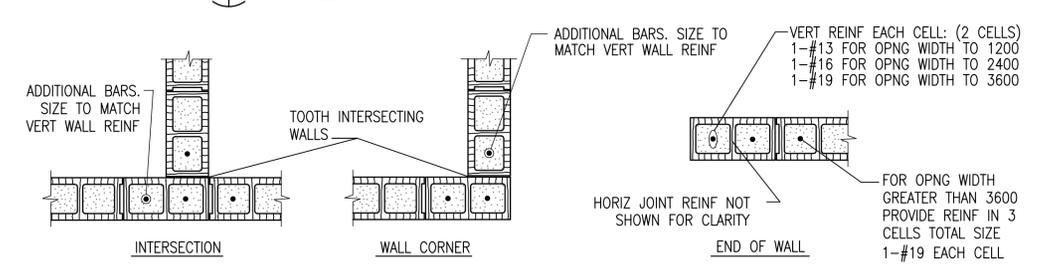
DETAIL NOTES:  
1. WHERE MORE THAN ONE ADDITIONAL BAR IS REQUIRED PARALLEL TO THE EXISTING SLAB/WALL REINFORCING THE ADDITIONAL REINFORCING BARS SHALL BE SPACED AT 100 ON CENTER.  
2. ADDITIONAL REINFORCING PARALLEL TO THE SLAB/WALL REINFORCING SHALL BE #16 BARS THAT PROVIDE A STEEL AREA ON EACH SIDE OF THE OPENING EQUAL TO 1/2 THE AREA OF THE REINFORCING CUT BY THE OPENING.  
3. FOR OPENINGS WITH SIDES OR DIAMETERS LESS THAN 300 SPREAD THE SLAB/WALL REINFORCING TO CLEAR THE OPENING.

DETAIL NOTES:  
1. PROVIDE (2)-#16 IN BOND BEAMS AT 1200 OC, NOT SHOWN.



**CIP BOND BEAM DETAILS**

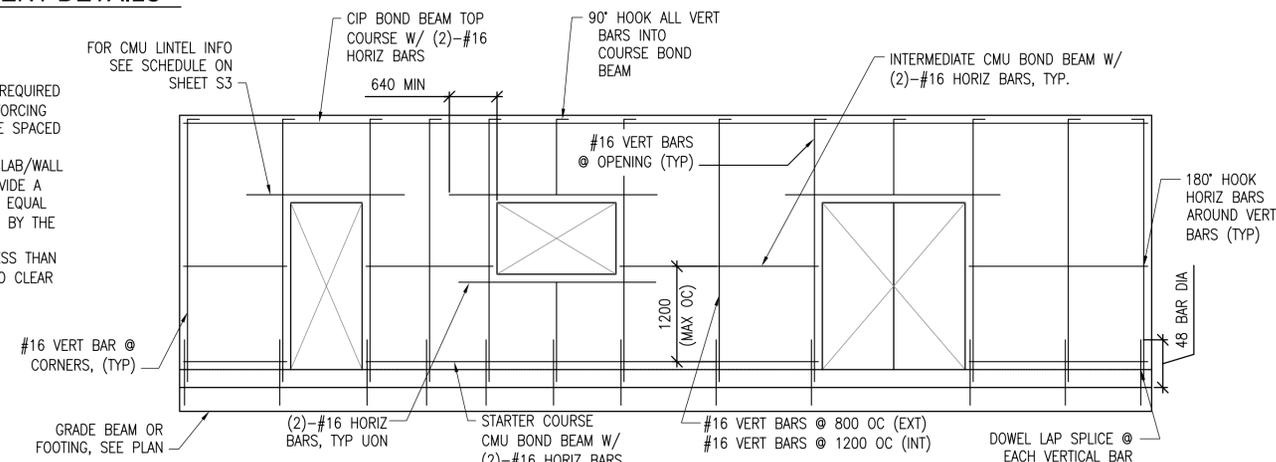
6 S8 SCALE: NTS



NOTES:  
1. OPENING WIDTH SHALL NOT EXCEED 3600 FOR THIS TYPE OF JAMB  
2. ALL CELLS FULLY GROUTED

**TYPICAL CMU DETAILS**

7 S8 SCALE: NTS



**MIN CMU WALL REINFORCING**

8 S8 SCALE: NTS

LINTEL NOTES:  
MASONRY LINTEL REINFORCEMENT AS PER SCHEDULE ON SHEET S3

UNLESS OTHERWISE NOTED, LINEAR DIMENSIONS SHOWN ARE IN MILLIMETERS (MM)

US Army Corps of Engineers  
Afghanistan Engineer District

DATE	DESCRIPTION
APR	

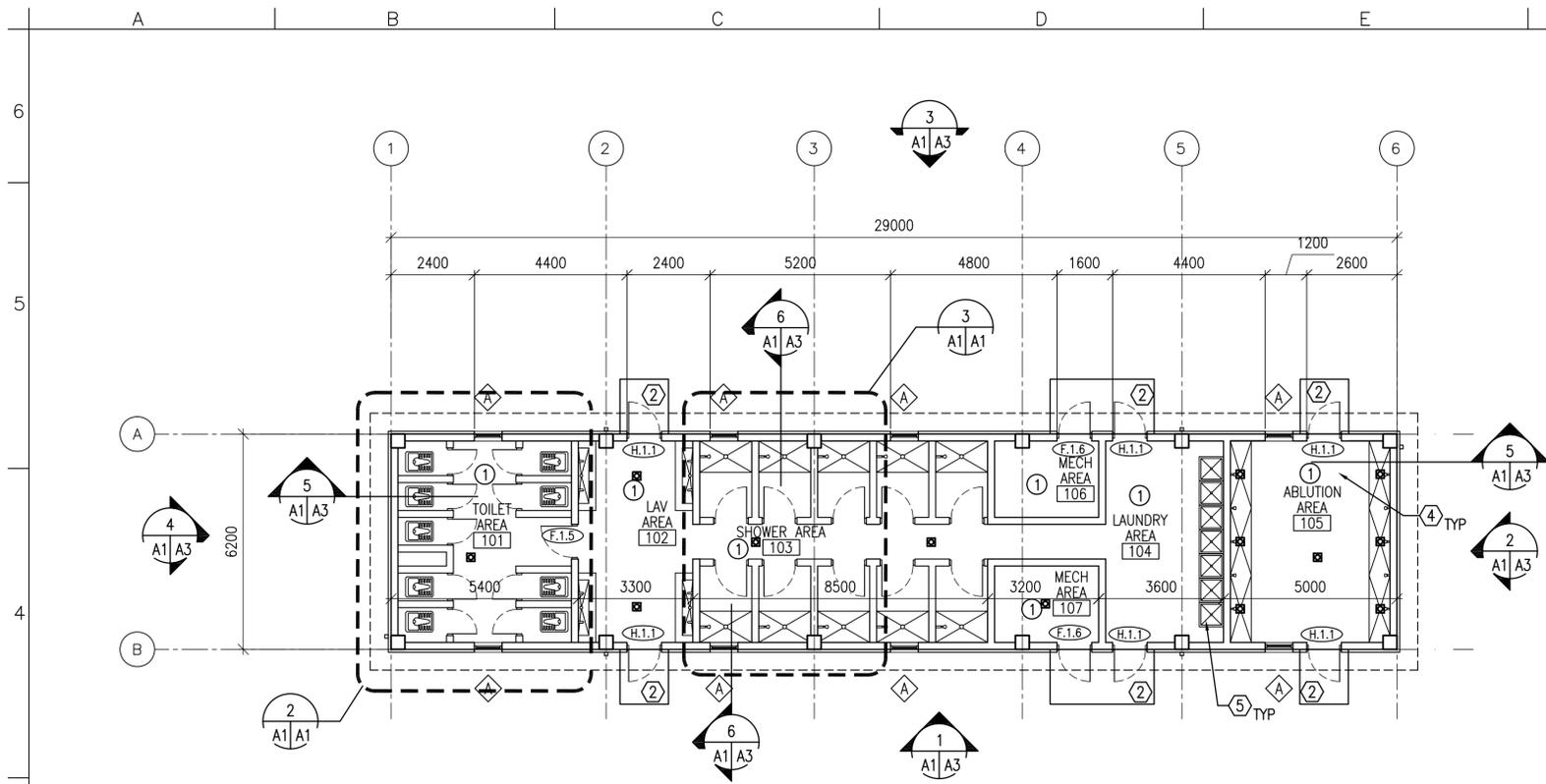
DESIGNED BY: MMY	DATE: 09-30-09
DWN BY: RCG	SUBMITTED BY: BAKER
CHK BY: CWV	FILE NO: ANPSDS-508XXX

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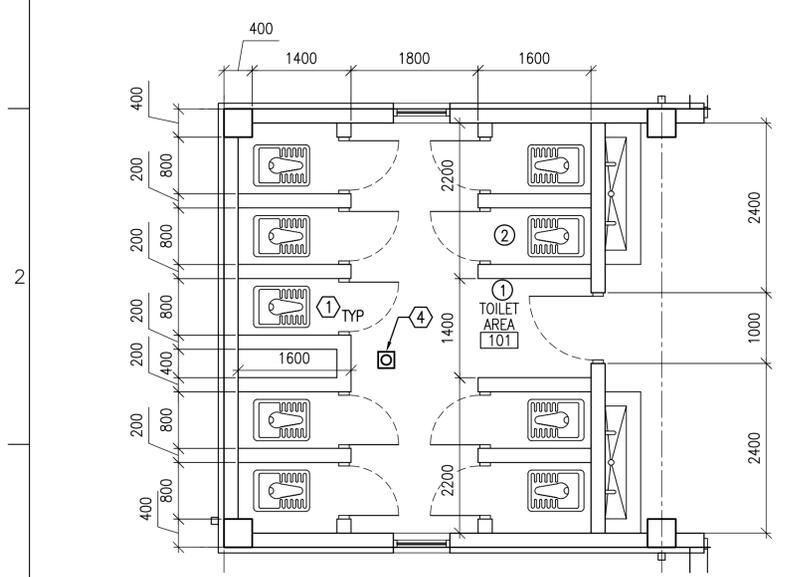
AFGHAN NATIONAL POLICE  
STANDARD DESIGN  
TOILET ABLUTION BUILDING  
TYPICAL DETAILS

SHEET REFERENCE NUMBER:  
**S8**

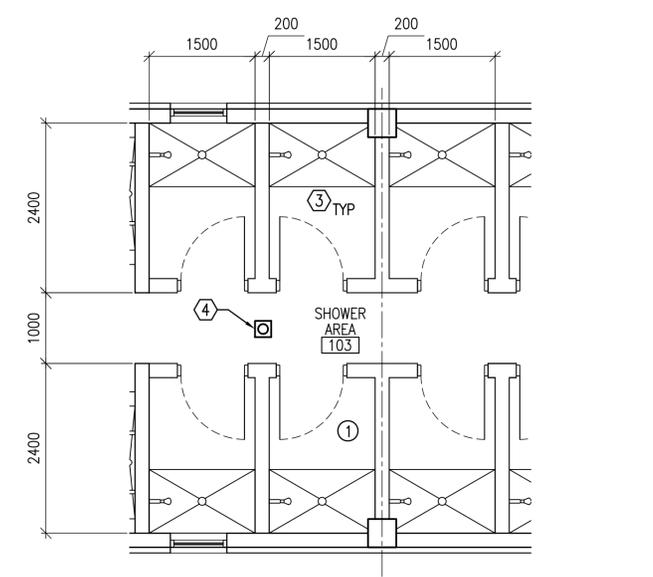
100% SUBMISSION



**1 FLOOR PLAN**  
SCALE: 1:100  
179.8 GSM



**2 ENLARGED TOILET PLAN**  
SCALE: 1:50



**3 ENLARGED SHOWER PLAN**  
SCALE: 1:50

**GENERAL NOTES:**

- A. INTERIOR PARTITIONS SHALL BE 200 MM CMU UNLESS NOTED OTHERWISE.
- B. SURFACES TO BE PAINTED SHALL BE CLEAN AND FREE OF FOREIGN MATTER BEFORE APPLICATION OF PAINT. CLEANING SHALL BE SCHEDULED SO THAT DUST AND OTHER CONTAMINANTS WILL NOT FALL ON WET, NEWLY PAINTED SURFACES.
- C. CONCRETE AND INTERIOR MASONRY SURFACES GROUTED SOLID SHALL BE ALLOWED TO DRY AT LEAST 30 DAYS BEFORE PAINTING EXCEPT CONCRETE SLAB ON GRADE WHICH SHALL BE ALLOWED TO CURE 90 DAYS BEFORE PAINTING.
- D. PAINTS CONTAINING LEAD IN EXCESS OF 0.06 PERCENT BY WEIGHT OF THE TOTAL NONVOLATILE CONTENT SHALL NOT BE USED.
- E. MERCURIAL FUNGICIDES SHALL NOT BE USED IN OIL-BASE PAINT.
- F. REMOVE LOOSE DIRT AND CLEAN SURFACES BEFORE PAINTING. APPLY PAINT TO INTERIOR STRUCTURAL RIGID FRAMINGS AND CEILINGS AND TEST FOR ADHESION. PRIMER COAT FOR MASONRY. INITIAL FIRST COAT WITH AN ACRYLIC LATEX PAINT FOR EXTERIOR SURFACES AND A SECOND COAT WITH A WATER REPELLENT ACRYLIC LATEX PAINT.
- G. METAL DOORS AND FRAMES SHALL RECEIVE A PRIMER COAT PLUS TWO COATS OF PAINT.
- H. DIMENSIONS ARE TO STRUCTURAL COLUMN GRID, EDGE OF WINDOW OPENINGS, AND TO HINGE SIDE OF DOOR OPENINGS.
- I. ALL SHOWER STALL DOORS SHALL BE F.1.5 UNLESS NOTED OTHERWISE. SEE A5 FOR DOOR/FRAME AND HARDWARE TYPES.
- J. ALL TOILET STALL DOORS SHALL BE T.1.5 UNLESS NOTED OTHERWISE. SEE A5 FOR DOOR/FRAME AND HARDWARE TYPES.
- K. INSTALL SHOWER CURTAINS AND RODS AT ALL SHOWERS.
- L. SEE PLUMBING DRAWINGS FOR FLOOR DRAIN LOCATIONS.
- M. PROVIDE CERAMIC TILE AT ALL SHOWER PANS AND SHOWER SURROUNDS.
- N. PROVIDE CERAMIC TILE AT ALL ABLUTION AREAS PANS AND SURROUNDS.
- O. SLOPE 1500 MM AREA AROUND DRAINS DOWN TO DRAIN AT 1:50 SLOPE. DRAIN SHALL BE SITUATED 30MM BELOW FINISH FLOOR.
- P. SHOWER STALL WALLS AND TOILET STALL WALLS ARE 2400 MM HIGH. ALL OTHER WALLS ARE FULL HEIGHT.

**ROOM FINISHES:**

1. WALLS: PAINTED PLASTER,  
FLOOR: SEALED CONCRETE  
CEILING: PAINTED PLASTER APPLIED TO STRUCTURE
2. WALLS: 2400 MM HIGH CERAMIC TILE WAINSCOT,  
PAINTED PLASTER ABOVE WAINSCOT  
FLOOR: CERAMIC TILE  
CEILING: PAINTED PLASTER

**KEY NOTES:**

1. TYPICAL TOILET STALL LAYOUT - RE: DETAIL 1/A6
2. CONCRETE STOOP - RE: DETAIL 7/A5
3. SHOWER CURTAIN AND CURTAIN ROD, TYP. AT EACH SHOWER
4. FLOOR DRAIN, TYP
5. (7) STAINLESS STEEL LAUNDRY TUBS

**LEGEND:**

- DOOR TYPE, SEE SHEET A5
- KEY NOTE
- FIRE EXTINGUISHER CABINET
- WINDOW TYPE, SEE SHEET A5
- ROOM FINISH TYPE DESIGNATION
- FLOOR DRAIN

UNLESS OTHERWISE NOTED, LINEAR DIMENSIONS SHOWN ARE IN MILLIMETERS (MM)

0 1000 2000 4000  
SCALE: 1: 50

0 2000 4000 8000  
SCALE: 1: 100

US Army Corps of Engineers  
Afghanistan Engineer District

NO.	DATE	DESCRIPTION	SYMBOL

DESIGNED BY: DATE: 09-30-09  
NLJ  
DWN BY: SUBMITTED BY: BAKER  
KJG  
CHK BY: FILE NO: ANPSDA-101XXX  
KOB

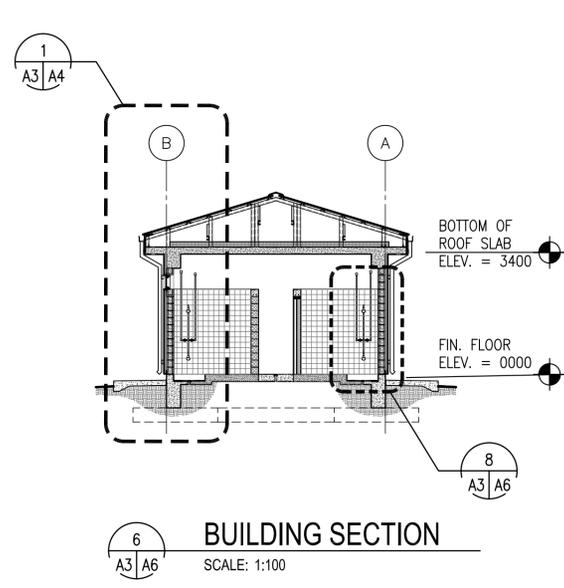
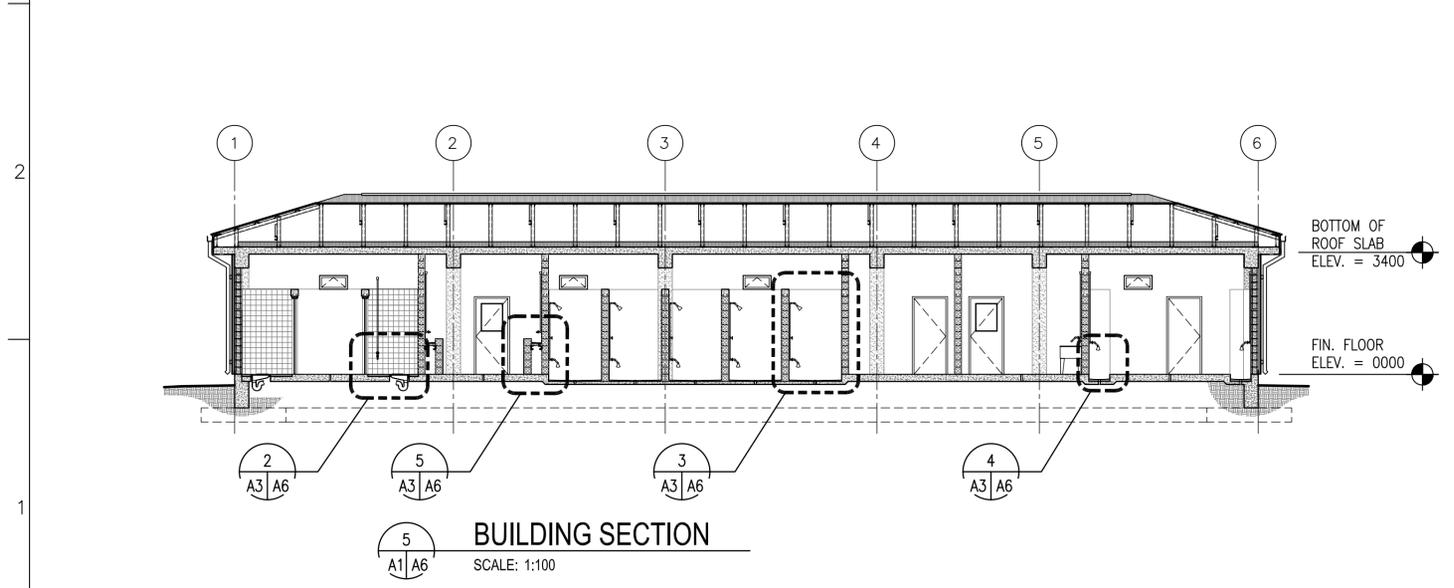
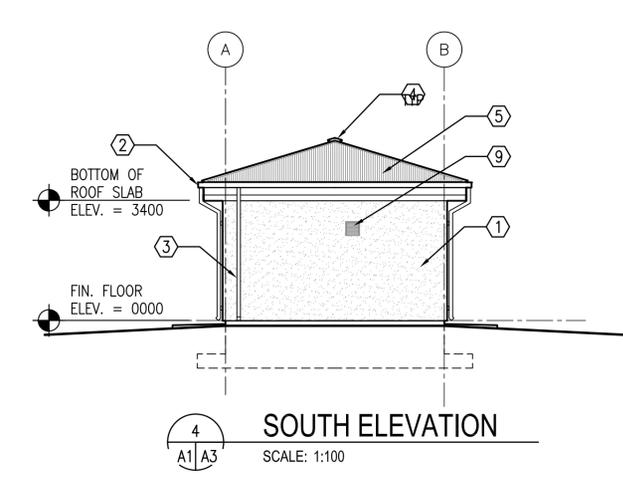
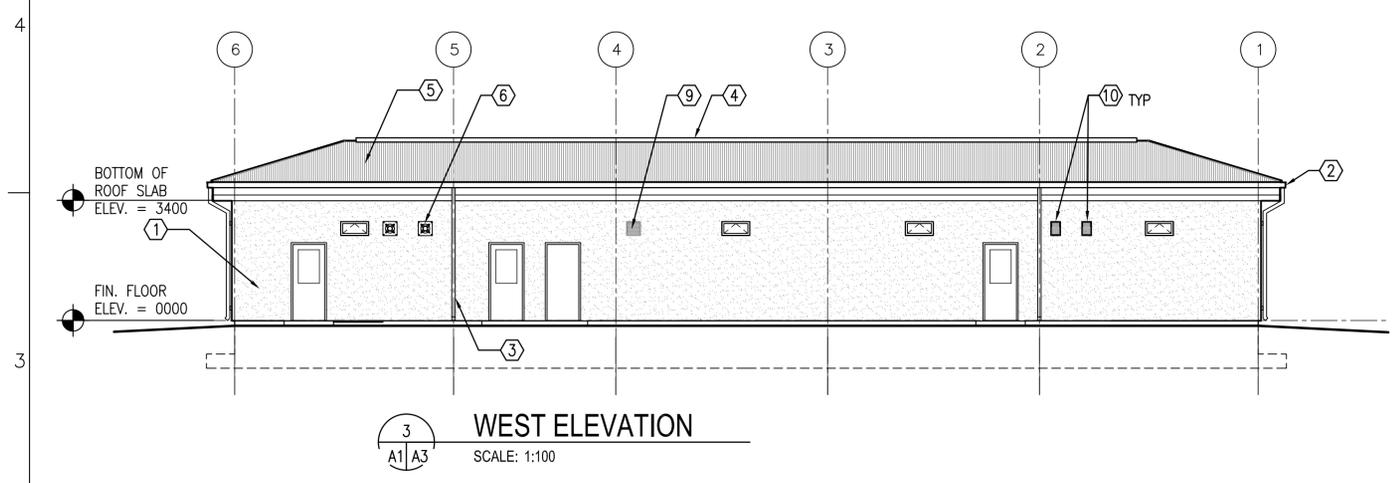
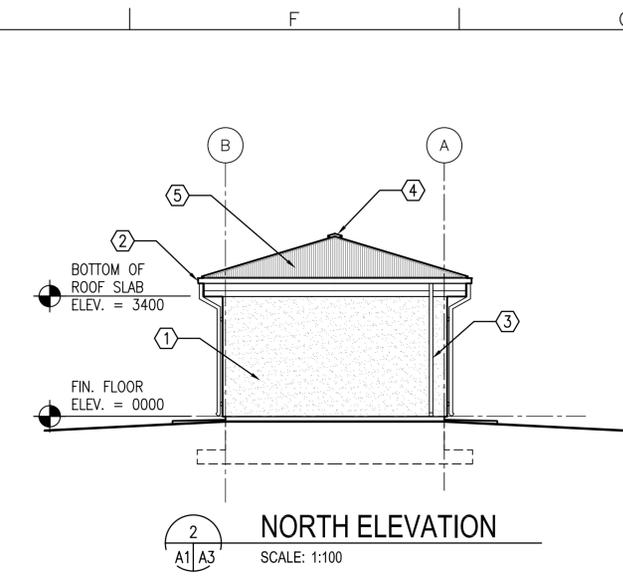
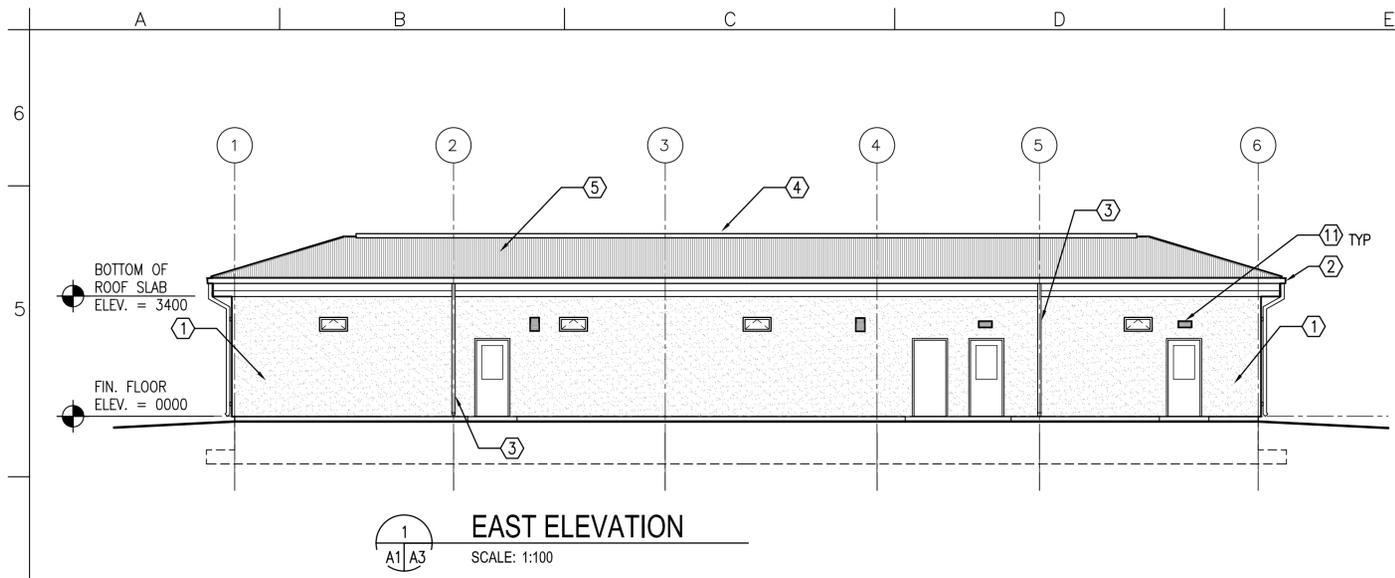
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Moon Township, PA 15108  
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AFGHAN NATIONAL POLICE  
STANDARD DESIGN  
TOILET ABLUTION BUILDING  
FLOOR PLAN AND ENLARGED PLANS

SHEET REFERENCE NUMBER:  
**A1**

100% SUBMISSION





**KEY NOTES:**

1. STUCCO AND RIGID INSULATION SYSTEM ON CMU AND CONCRETE.
2. METAL GUTTER
3. METAL DOWNSPOUT WITH SPLASH BLOCK
4. CONTINUOUS RIDGE VENT
5. CORRUGATED METAL ROOF PANELS ON COLD-FORMED METAL FRAMING
6. EXHAUST FAN - RE: MECH
7. CONCRETE SLAB CEILING
8. SEE STRUCTURAL DRAWINGS FOR FOUNDATION
9. EXHAUST FAN WITH DUCT WALL CAP - RE: MECH
10. SUPPLY AIR LOUVER - RE: MECH
11. INTAKE LOUVER - RE: MECH

**GENERAL NOTES:**

1. COORDINATE SIZE AND LOCATION OF OPENINGS FOR MECHANICAL ITEMS WITH MECHANICAL DRAWINGS.
2. PROVIDE STRUCTURAL LINTELS AS REQUIRED - RE: STRUCT

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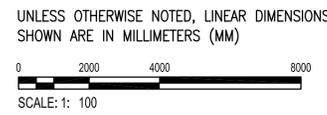
SYMBOL	DESCRIPTION	DATE	APP

DESIGNED BY:	DATE:	09-30-09
DLN BY:	SUBMITTED BY:	BAKER
CHK BY:	FILE NO.:	ANPSDA-203XXX

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AFGHAN NATIONAL POLICE  
STANDARD DESIGN  
TOILET ABLUTION BUILDING  
EXTERIOR ELEVATIONS

SHEET REFERENCE NUMBER:  
**A3**



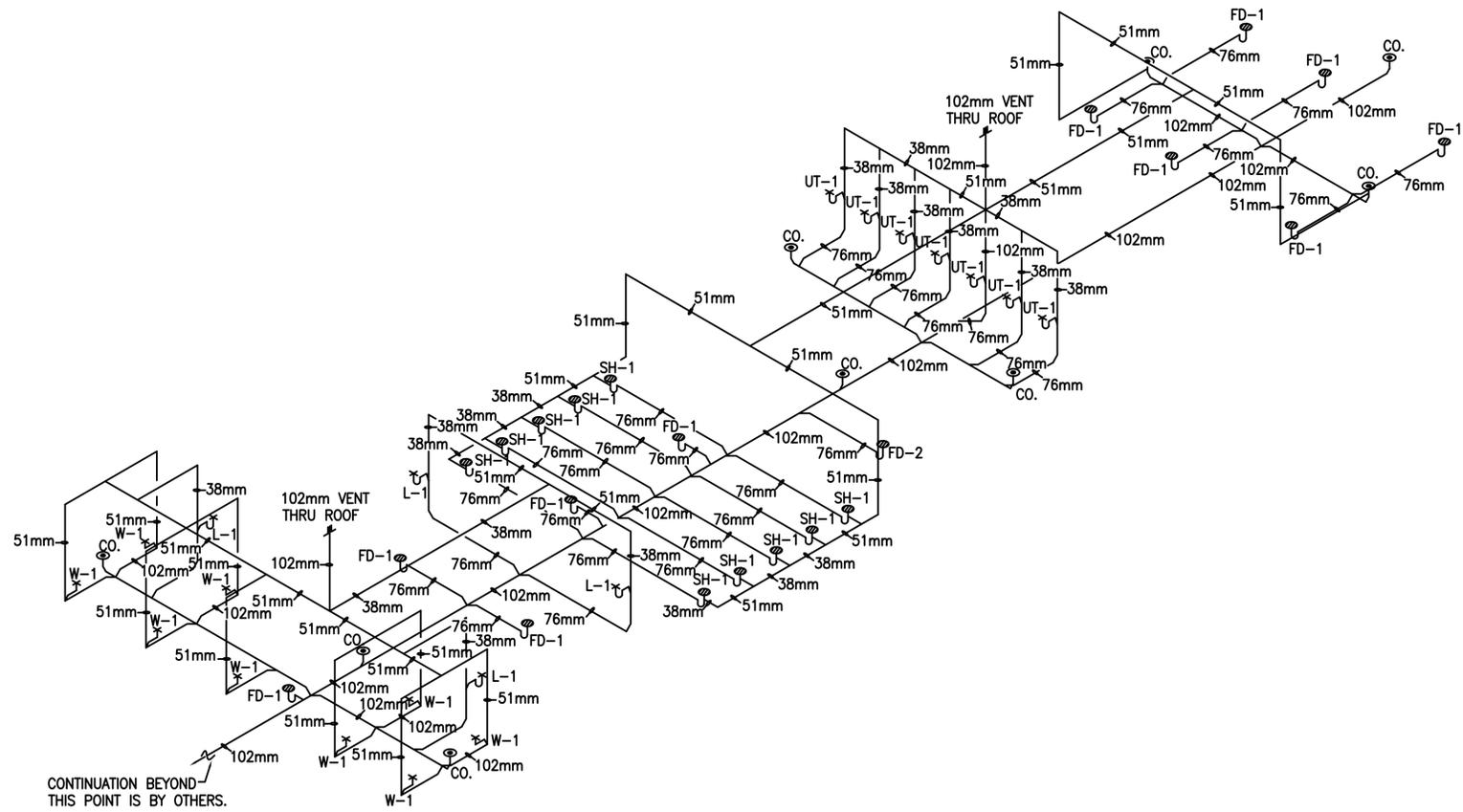
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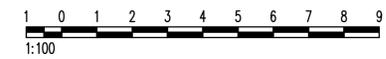
1  
P2 | P2

**SHOWER AND LATRINE BUILDING - DRAINAGE ISOMETRIC**

SCALE: NO SCALE

**LEGEND**

- COLD WATER -----
- HOT WATER -----
- SANITARY ABOVE GROUND -----
- SANITARY UNDER GROUND -----
- VENT LINE -----V-----



SYMBOL	DESCRIPTION	DATE	APP

DESIGNED BY: RMH	DATE: 09-30-09
DWN BY: RMH	SUBMITTED BY: BAKER
CHK BY: C.M. III	FILE NO.: ANFSDP-902XXX

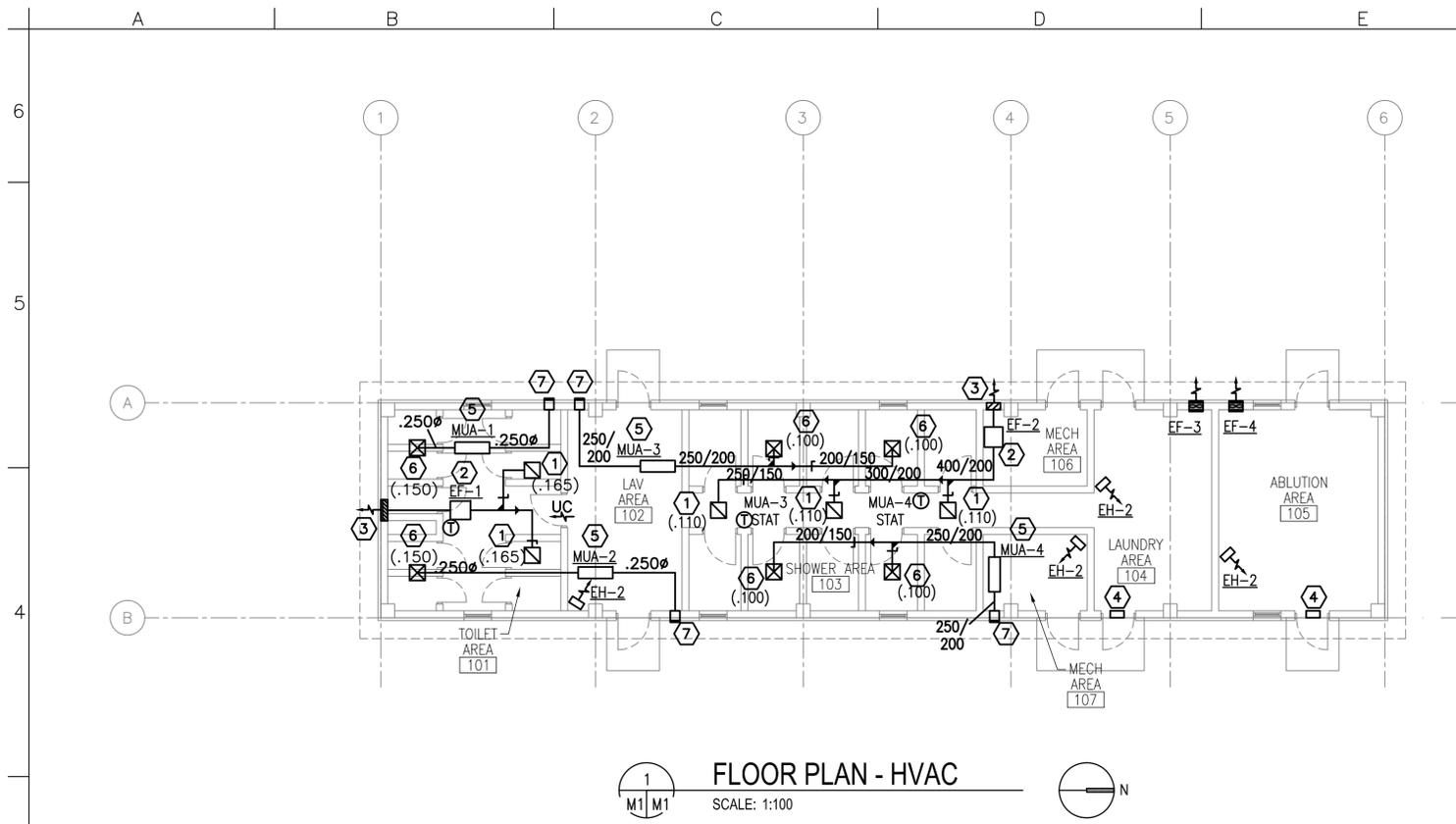
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AFGHAN NATIONAL POLICE  
STANDARD DESIGN  
TOILET ABLUTION BUILDING  
DRAINAGE ISOMETRIC

SHEET REFERENCE NUMBER:  
**P2**







**FLOOR PLAN - HVAC**  
SCALE: 1:100

**GENERAL NOTES:**

- DO NOT SCALE DRAWINGS – ALL DIMENSIONS AND CONDITIONS SHALL BE CHECKED AND VERIFIED BY THE CONTRACTOR AT THE SITE.
- ALL WORK PERFORMED ON THIS BUILDING SHALL BE IN COMPLIANCE WITH ALL PERTINENT CODES, RULES, ORDINANCES AND REGULATIONS OF THE GOVERNING AUTHORITIES.
- ALL WORK PERFORMED UNDER AND IN CONNECTION WITH THESE DRAWINGS AND SPECIFICATIONS SHALL BE IN STRICT COMPLIANCE WITH THE LATEST SAFETY AND HEALTH STANDARDS.

**SYMBOLS:**

- (X) KEY NOTE
- (.050) AIR VOLUME IN CUBIC METERS PER SECOND (CMS)
- VOLUME DAMPER
- (1) THERMOSTAT WITH LOCKING COVER  
MOUNT ALL THERMOSTATS AT 1.5M (5 FT) AFF.

**NUMBERED NOTE:**

- 300X300 (12X12) EXHAUST GRILLE CEILING, BALANCE TO CMS (CFM) IN PARENTHESIS.
- INLINE EXHAUST FAN, SECURED TO STRUCTURE ABOVE WITH SPRING ISOLATORS, DUCTED TO WALL CAP..
- 400X400 WALL CAP PER FAN MANUFACTURER.
- 200X400 (8X16) LOW LEAKAGE GRAVITY WALL LOUVER FOR INTAKE. PROVIDE WEATHER PROOF LOUVER W/0.05mm (2") WASH DOWN FILTER AND SAND TRAP.
- ELECTRIC MAKE UP AIR HEATER SECURED TO STRUCTURE ABOVE. ALL FINAL ELECTRICAL CONNECTIONS SHALL BE BY THE EC.
- 300X300 (12X12) SUPPLY DIFFUSER WITH 4-WAY BLOW, BALANCE TO CMS IN PARENTHESIS.
- 400X200 (16X8) LOW LEAKAGE GRAVITY WALL LOUVER FOR SUPPLY AIR. PROVIDE WEATHERPROOF LOUVER W/ 2" WASH DOWN FILTER AND SAND TRAP.

**FAN SCHEDULE**

NO.	TYPE	FAN CMS	DRIVE	HP	SP mmH2O	ELECT. CHAR.	SWITCH
EF-1	INLINE	0.330	DIRECT	1/4	13	220/1/50	⊗ WALL
EF-2	INLINE	0.330	DIRECT	1/4	13	220/1/50	⊗ WALL
EF-3	WALL	0.100	DIRECT	FRACT	13	220/1/50	⊗ WALL
EF-4	WALL	0.100	DIRECT	FRACT	13	220/1/50	⊗ WALL

**NOTE:**

- FANS SHALL BE CORROSION RESISTANT
- INLINE FANS SHALL BE SURFACE MOUNTED WITH SPRING ISOLATORS.

**ELECTRIC UNIT HEATER SCHEDULE**

NO.	CMS	KW	F.A.T. °C	ELECT. CHAR.	MOUNTING
EH-2	.200	2.6	38	370/1/50	WALL HUNG

**NOTE:**

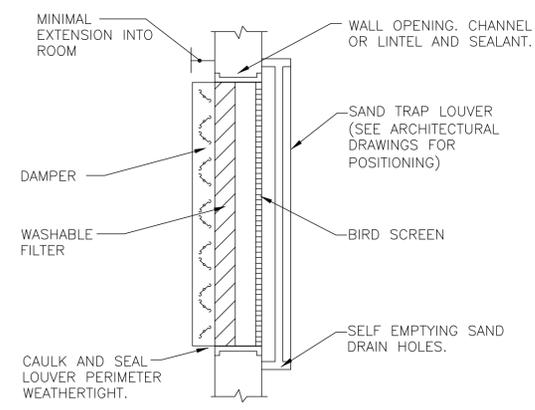
- ALL HEATERS SHALL BE CORROSION RESISTANT
- UNIT HEATERS SHALL BE MOUNTED AS HIGH AS POSSIBLE.
- UNIT HEATERS SHALL HAVE TAMPER PROOF INTEGRAL STATS.

**MAKE UP AIR HEATERS**

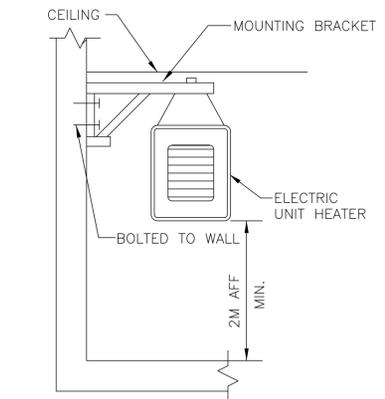
NO.	BLOWER CMS	FUSE	KW	MIN. TEMP RISE °C	SP mmH2O	ELECT. CHAR.	CONTROL
MUA-1	0.150	30	5	20	13	220/1/50	REMOTE
MUA-2	0.150	30	5	20	13	220/1/50	REMOTE
MUA-3	0.200	30	5	20	13	220/1/50	REMOTE
MUA-4	0.200	30	5	20	13	220/1/50	REMOTE

**NOTES:**

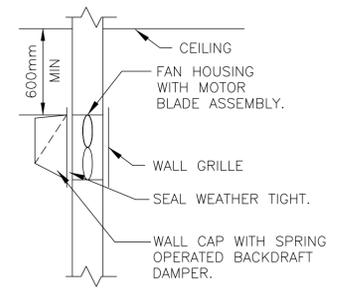
- PROVIDE REMOTE MOUNTED THERMOSTAT WITH LOCKING COVER.
- INTERLOCK BLOWER OPERATION WITH EXHAUST FANS.
- BLOWER SHALL BE SET TO ENERGIZE WITH EXHAUST FAN(S), HEAT SHALL BE CONTROLLED BY THERMOSTAT. PROVIDE AIR SENSING SWITCH FOR HEATING OPERATION.



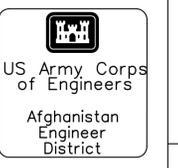
**FILTERED SAND TRAP LOUVER**  
N.T.S.



**ELECTRIC UNIT HEATER MOUNTING**  
N.T.S.



**WALL MOUNTED EXHAUST FAN DETAIL**  
N.T.S.



DATE	DESCRIPTION
APR	

DESIGNED BY: DATE: 09-30-09	RML
DWN BY: JUN	BAKER
CHK BY: CJM	FILE NO: ANPSDM-101XXX

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1000 Business Park  
1000 Parkside  
Moon Township, PA 15108  
www.mbakercorp.com

AFGHAN NATIONAL POLICE  
STANDARD DESIGN BUILDING  
TOILET ABLUTION BUILDING  
FLOOR PLAN - HVAC

SHEET REFERENCE NUMBER:  
**M1**

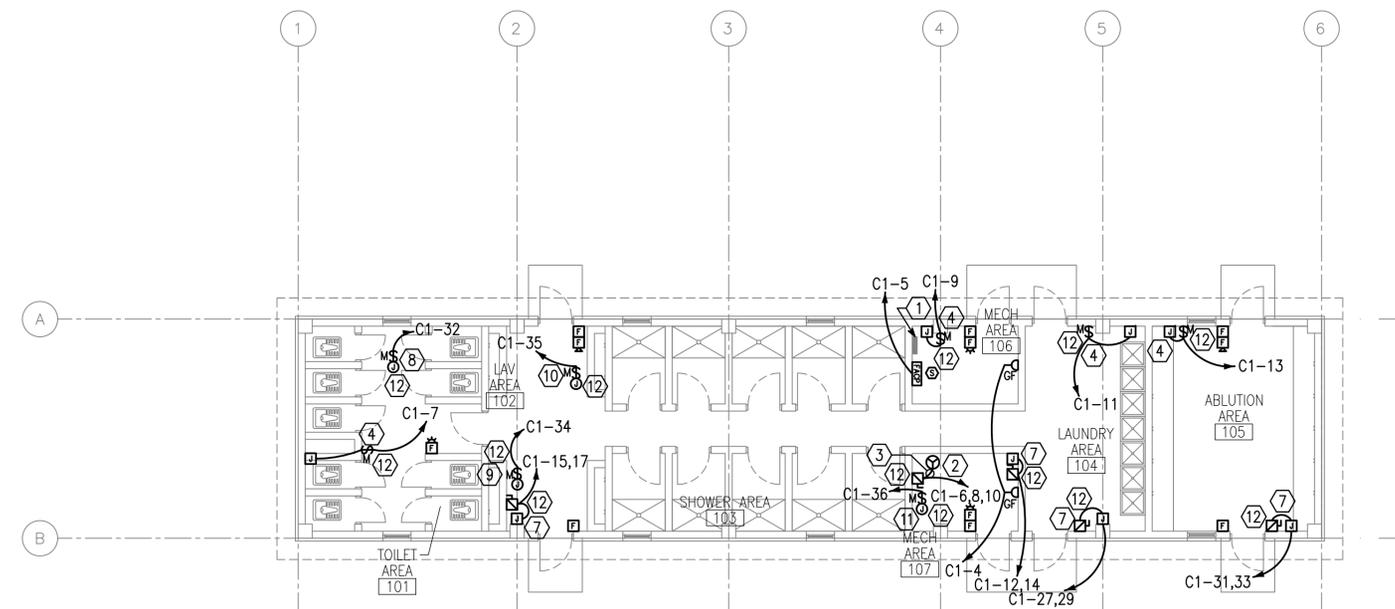
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A B C D E F G H

6  
5  
4  
3  
2  
1



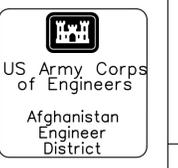
**POWER AND SYSTEMS PLAN**  
SCALE: 1:100

**GENERAL NOTES:**

1. REFER TO DRAWING #E0 FOR THE ELECTRICAL SYMBOLS LIST.
2. REFER TO DRAWING #E3 FOR THE POWER RISER.
3. REFER TO DRAWING #E5 FOR PANEL SCHEDULES.
4. COORDINATE EXACT MOUNTING LOCATION OF DISCONNECTING MEANS FOR MECHANICAL AND PLUMBING EQUIPMENT IN THE FIELD.
5. FUSIBLE SAFETY SWITCHES THAT ARE NOT OTHERWISE IDENTIFIED SHALL BE 380V, 1P, 30A FUSED SAFETY SWITCHES WITH 20A FUSES.

**NUMBERED NOTES:**

- ① PANEL C1.
- ② NEMA 3R, 380V, 3P, 60A FUSED DISCONNECT FUSED AT 60A. SEE PLUMBING DRAWINGS FOR EXACT LOCATION OF WATER HEATER.
- ③ SEE DRAWING #E5 FOR WIRE AND CONDUIT SIZE.
- ④ PROVIDE POWER CONNECTION TO EXHAUST FANS. SEE DRAWINGS #M1 AND #E5 FOR MORE INFORMATION.
- ⑤ PROVIDE POWER CONNECTION TO ELECTRIC UNIT HEATER #4. SEE DRAWINGS #M1 AND #E8 FOR MORE INFORMATION.
- ⑥ PROVIDE POWER CONNECTION TO ELECTRIC UNIT HEATER #5. SEE DRAWINGS #M1 AND #E8 FOR MORE INFORMATION.
- ⑦ PROVIDE POWER CONNECTION TO ELECTRIC UNIT HEATER #2. SEE DRAWINGS #M1 AND #E8 FOR MORE INFORMATION.
- ⑧ PROVIDE POWER CONNECTION TO MAKE UP AIR HEATER #1. SEE DRAWINGS #M1 AND #E8 FOR MORE INFORMATION.
- ⑨ PROVIDE POWER CONNECTION TO MAKE UP AIR HEATER #2. SEE DRAWINGS #M1 AND #E8 FOR MORE INFORMATION.
- ⑩ PROVIDE POWER CONNECTION TO MAKE UP AIR HEATER #3. SEE DRAWINGS #M1 AND #E8 FOR MORE INFORMATION.
- ⑪ PROVIDE POWER CONNECTION TO MAKE UP AIR HEATER #4. SEE DRAWINGS #M1 AND #E8 FOR MORE INFORMATION.
- ⑫ THE DISCONNECTING MEANS FOR THIS PIECE OF EQUIPMENT SHALL BE IN A NEMA 3R ENCLOSURE.

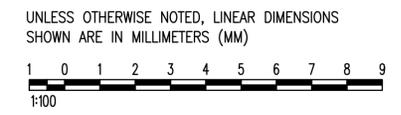


SYMBOL	DESCRIPTION	DATE

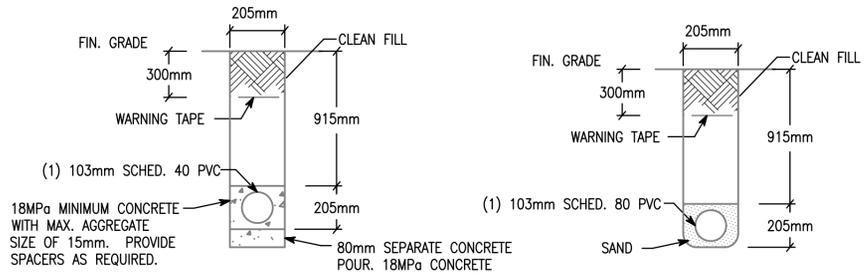
DESIGNED BY: JRG	DATE: 09-30-09
DWN BY: JRG	SUBMITTED BY: BAKER
CHK BY: JRG	FILE NO: ANPSDE-102XXX
Michael Baker, Jr. Inc. A Unit of Michael Baker Corporation 1000 Business Park Moon Township, PA 15108 www.mbakercorp.com	

AFGHAN NATIONAL POLICE  
STANDARD DESIGN  
TOILET ABLUTION BUILDING  
POWER AND SYSTEMS PLAN

SHEET REFERENCE NUMBER:  
**E2**

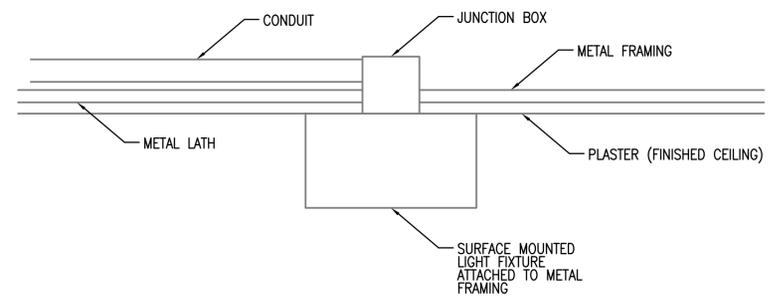


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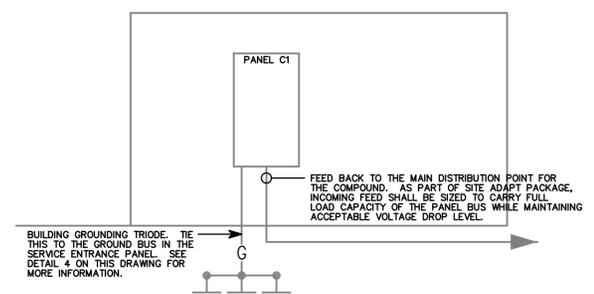


NOTE: PVC CONDUIT SHALL BE DIRECT BURIED SCHEDULE 80 FOR NO TRAFFIC AREAS AND CONCRETE-ENCASED SCHEDULE 40 FOR UNDER ROADWAYS OR TRAFFIC AREAS.

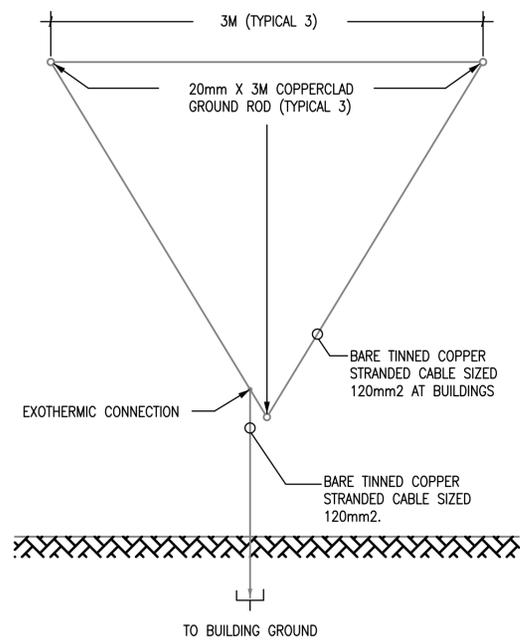
**1**  
E6 | E6  
**TYPICAL DUCT BANK DETAILS FOR CONDUIT IN SAND OR CONCRETE**  
SCALE: N.T.S.



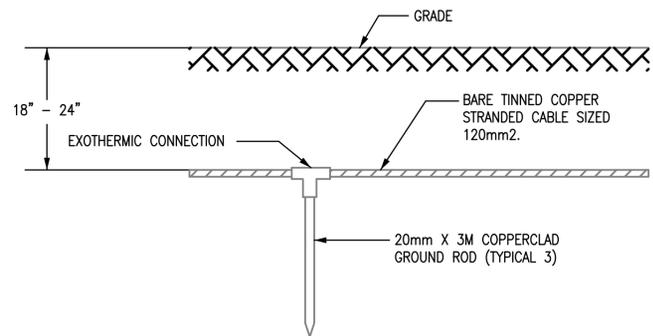
**2**  
E6 | E6  
**TYPICAL DETAIL FOR SURFACE MOUNTED LIGHT FIXTURES**  
SCALE: N.T.S.



**3**  
E6 | E6  
**TOILET/ABLUTION RISER DIAGRAM**  
SCALE: N.T.S.



**4**  
E6 | E6  
**GROUND TRIPOD SYSTEM DETAIL - PLAN**  
SCALE: N.T.S.



**5**  
E6 | E6  
**GROUND TRIPOD SYSTEM DETAIL - ELEVATION**  
SCALE: N.T.S.

US Army Corps of Engineers  
Afghanistan Engineer District

SYMBOL	DESCRIPTION	DATE	APP

DESIGNED BY: JRG	DATE: 09-30-09
DWN BY: JRG	SUBMITTED BY: BAKER
CHK BY: JRG	FILE NO: ANPSDE-503XXX
Michael Baker, Jr. Inc. A Unit of Michael Baker Corporation 1000 Business Park Moon Township, PA 15108 www.mbakercorp.com	

AFGHAN NATIONAL POLICE  
STANDARD DESIGN  
TOILET ABLUTION BUILDING  
DETAILS

SHEET REFERENCE NUMBER:  
**E3**

100% SUBMISSION

											DATE
											DESCRIPTION
											SYMBOL

DESIGNED BY:	DATE:	09-30-09
BAKER	SUBMITTED BY:	BAKER
DWN BY:	JRG	
CHK BY:	JRG	
	FILE NO.:	ANPSDE-604-XXX

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A Unit of Michael Baker Corporation  
1000 Business Park  
Moon Township, PA 15108  
www.mbakercorp.com

AFGHAN NATIONAL POLICE  
STANDARD DESIGN  
TOILET ABLUTION BUILDING  
LIGHT FIXTURE SCHEDULE

SHEET REFERENCE NUMBER:  
**E4**

100% SUBMISSION

### LIGHTING FIXTURE SCHEDULE

FIXTURE MARK	STYLE NUMBER AND TYPE	NUMBER AND TYPE OF LAMPS	VOLTAGE	MOUNTING	NOTES
B	WET LOCATION WRAP AROUND SURFACE/PENDANT MOUNTED FLUORESCENT FIXTURE WITH PRISMATIC ACRYLIC LENS AND ELECTRONIC BALLAST	(2) 32W 3500K	220V - 1ϕ 50HZ	PENDANT MOUNTED FROM SLOPED CEILINGS	FURNISHED WITH ELECTRONIC BALLAST, VIRGIN ACRYLIC WRAP AROUND LENS.
B2	SAME AS FIXTURE 'B' WITH EMERGENCY BALLAST	(2) 32W 3500K	220V - 1ϕ 50HZ	PENDANT MOUNTED FROM SLOPED CEILINGS	FURNISHED WITH ELECTRONIC BALLAST, VIRGIN ACRYLIC WRAP AROUND LENS. EMERGENCY BALLAST WITH SELF TEST SWITCH.
C	INCANDESCENT ONE PIECE W/ APPROVED LENS STABILIZED HIGH IMPACT POLY CARBONATE.	(1) A19 - 100W INCANDESCENT	220V - 1ϕ 50HZ	WALL MOUNTED ABOVE EXTERIOR DOORS	
H	REMOTE HEAD EXTERIOR LIGHT HEAD POWERED FROM EXIT SIGN BATTERY- 12V DOUBLE HEAD CORROSION RESISTANT WITH UL34 WEATHERPROOF CONSTRUCTION	(2) 12W/12V HALOGEN LAMP	12V - 1ϕ 50HZ	EXTERIOR WALL MOUNTED AT TOP OF DOOR HEIGHT	
E	UNIVERSAL MOUNT ENGINEER GRADE THERMOPLASTIC HOUSING EXIT SIGN WITH LED LAMPS, RED LETTERS 6" IN HEIGHT WITH ARROWS AS INDICATED, WITH 12V CADMIUM BATTERY WITH REMOTE HEAD CAPABILITY	LED LAMPS	220V - 1ϕ 50HZ	UNIVERSAL MOUNTING	

FIXTURE MARK 'B'



WET LOCATION WRAP AROUND SURFACE/PENDANT MOUNTED FLUORESCENT FIXTURE WITH PRISMATIC ACRYLIC LENS AND ELECTRONIC BALLAST.

FIXTURE MARK 'B2':  
SAME FIXTURE AS 'B' WITH EMERGENCY BALLAST.

FIXTURE MARK 'C'



INCANDESCENT ONE PIECE WITH APPROVED LENS, STABILIZED HIGH IMPACT POLY CARBONATE

FIXTURE MARK 'H'



REMOTE HEAD EXTERIOR LIGHT HEAD POWERED FROM EXIT SIGN BATTERY- 12V DOUBLE HEAD CORROSION RESISTANT WITH UL34 WEATHERPROOF CONSTRUCTION

FIXTURE MARK 'E'



UNIVERSAL MOUNT ENGINEER GRADE THERMOPLASTIC HOUSING EXIT SIGN WITH LED LAMPS, RED LETTERS 6" IN HEIGHT WITH ARROWS AS INDICATED, WITH 12V CADMIUM BATTERY

