



EUCOM Humanitarian Assistance Program

DESIGN AND BUILD NEW CLINIC IN MARCULESTI - MOLDOVA

OHASIS: MD-HA-2014-0024897

Marculesti, Moldova

May 2015

1. TAXATION

This construction/renovation contract is exempt from VAT. The contractor is required to coordinate with the US Embassy and with competent Moldova authorities in order to obtain the VAT TAX EXEMPTION that applies to this contract. Contractor shall start the tax exemption process immediately after award. Contractor is required to make all necessary coordination and to allow for time for approval of the VAT Tax Exception. A minimum of 3 months is estimated for processing all required documentation. The contractor should have the tax exemption process finalized before they start actual construction works or before they contract for any service related with this contract.

2. CONTRACT DESCRIPTION

This contract includes all necessary works in order to provide a perfectly finished and fully operational Health Center in Marculesti, located in the Floresti Region of Moldova, in the plot of land identified as Stefan Cel Mare number 52a.

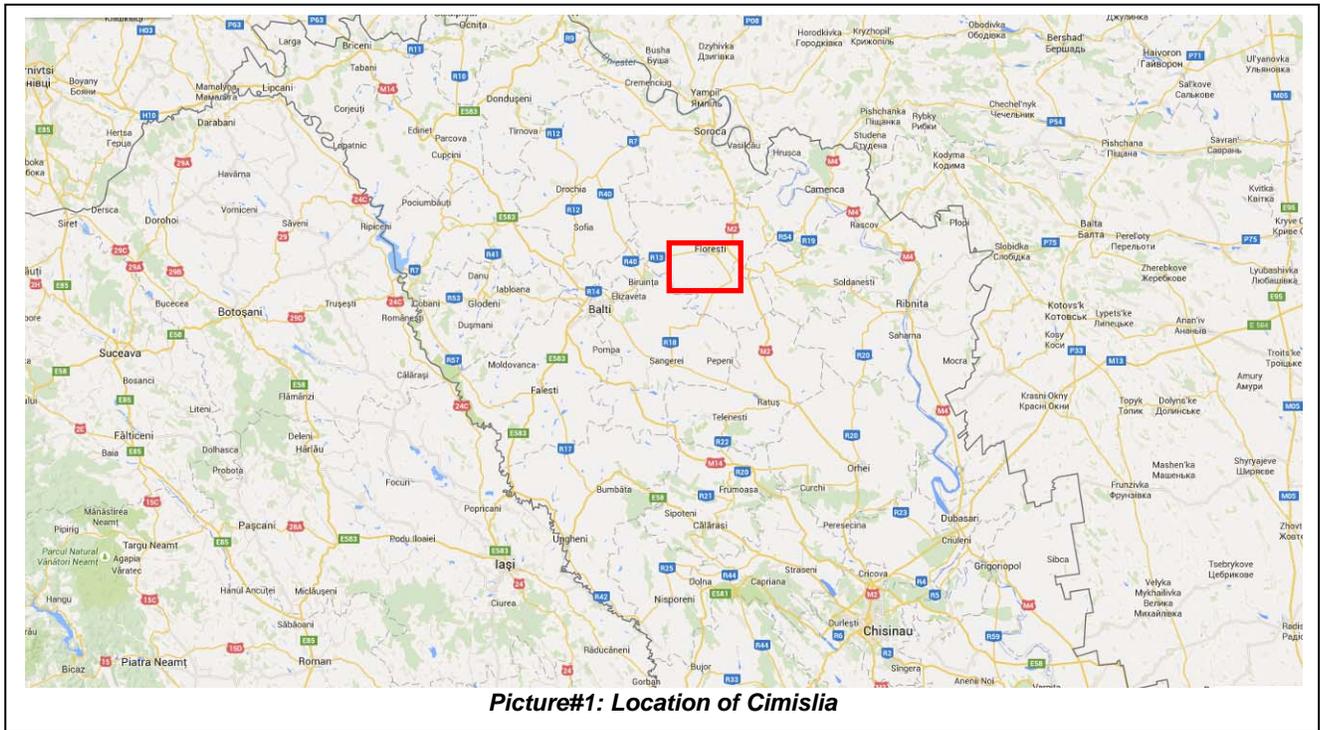
This contract includes all necessary administrative, design and construction works which are absolutely necessary in order to execute the construction project (technical design) provided by the Municipality to the US Embassy in Moldova, which is included in this document as Annex#3.

The contractor shall strictly follow the Moldovan technical and administrative regulations for all aspects of this project. The execution of the construction works requires a technical project, but also other administrative and technical works, such as obtaining the necessary construction licenses and permits, partial acceptances by the corresponding committee, expertise reviews, final acceptances, and other elements as well as other minor designs and calculations that may be required by Moldovan regulations. It is for this reason, that although the US Government is providing the technical design, the contract is considered a design-build contract.

The contractor can use the technical design provided in Annex#3, but they are responsible to provide the additional designs and technical reports which may be required in accordance with Moldovan regulations in order to provide a fully operational clinic facility.

2.1 Location of the Project

The project is located in the Marculesti, in the Moldovan region of Floresti. See drawings below for exact location of the job site. To be confirmed with the technical project included in Annex03



2.2 Legal and Technical Requirements

The contract is based on the following general requirements:

- Strict compliance with American Contracting Regulations, including the contracting requirements of the Department of Defense, the US Navy and the US Naval Facilities Engineering Command (NAVFAC).
- Strict compliance with Moldovan Technical, Legal and Administrative requirements, which are applicable for the scope of work described in this PTS.
- Compliance with Moldovan safety regulations unless US safety are more stringent and not contrary to Moldovan regulations.

The project is based on the principle of strict compliance with Moldovan technical and administrative regulations, with US Contracting Regulations and with Moldovan Safety regulations, unless US regulations are more strict and not in conflict with Moldovan safety regulations. In case of conflict between Moldovan and US safety regulations, the contractor shall apply the Moldovan regulations. If the US regulations are stricter and not contrary to the Moldovan regulations, then the contractor shall apply the US regulation. The contractor shall inform the Contracting Officer of any conflict between Moldovan and US safety regulations.

The contract execution requires completing the works as described in the technical project included in Annex#3. This Annex#3 is the design prepared by the design company hired by the Municipality.

The contractor shall hire the services of a licensed architect/engineer in Moldova to prepare a new complete technical project with the same requirements as the technical project included in Annex#3, or to perform any modifications or alternations to the technical project included in Annex#3 which may be necessary, or to use the technical design included in Annex#3 and design exclusively for any the remaining portions of work which are absolutely necessary in order to have a perfectly operational clinic, but which may not be included in Annex#3. Examples of this last case would be the design for the actual electrical connection or for the gas connection. It is the contractor's responsibility as part of this contract to prepare and provide and pay for any design, monitoring, expertise review, licensing, or connection fees to the utility companies, or any other related works which are absolutely necessary in order to obtain the final "Permit of Use" or "Act of Acceptance".

The technical project includes some quantities, as required by the Moldovan regulations. The US Government does not take responsibility for any omissions or mistakes in these measurements, and it is the contractor's responsibility to verify and quantify the measurements and quantities prior to submission of their offers.

The work shall meet all requirements of this document. Material selection, specifications and installation to be as described herein.

Provide the final work as a complete and usable clinic facility including all items which are required by Moldova regulations and which may not be described in this RFP. Technical details, items of work, permits or fees that are not explicitly described in this RFP, but which are necessary to provide a fully operational and finished clinic facility shall be considered part of this contract.

2.3 General Contract Description – Design and Construction Permit

The contractor shall obtain formal written authorization from the competent Moldovan authority (or authorities) to perform the works included in the scope of work of this project.

This is a design-build contract. However, in order to build the new clinic, the contractor is authorized to follow and complete (if necessary by Moldova regulations) the technical design provided by the Municipality in order to provide a fully operational clinic. This means that the contractor is responsible to review and modify if necessary the available technical project, in order to verify that it complies with the latest Moldovan regulations. If the available technical project complies 100% with all applicable Moldovan regulations, the contractor can utilize the technical project included in Annex#3, with the notes and exceptions described in this PTS document.

The contractor shall follow the Moldovan administrative and technical procedures to obtain the necessary Construction Permit for them to execute the construction works, in order to provide a fully certified and operational clinic in Marculesti.

It is absolutely necessary for the contractor to be familiar with the technical and administrative requirements of Moldovan legislation and regulations, in order to obtain all the necessary construction permits and licenses to execute this project.

2.4 Structure of the Contract

This contract includes the necessary designs, technical projects, permits and authorizations, third party inspections and acceptances, and construction works, which are necessary to provide a fully operational clinic facility. However, the contract is divided into a Base-Bid and a Contract Option-1. The Base-Bid is the minimum part of the contract that the US Government will award to the successful offeror. Contract Option-1 will be awarded or not, unilaterally depending upon availability of funds.

In summary, the Base-Bid includes providing a fully operational clinic and Contract Option-1 includes the landscape and gardening included in the technical project included in Annex#3, as indicated in the drawing below.



2.5 Utility Connections

In order to have a fully certified and operational clinic facility, this need to be provided with all necessary utilities, including water, sewer system, telecommunications, electricity and gas.

The contract includes making all necessary administrative, technical and construction works in order to provide the facility with these required utility services.

The contractor shall coordinate directly with the utility companies or agencies in order to make the necessary connections. The point of connection shall be directly coordinated with the water, electrical, communications and gas companies or agencies.

The contractor is responsible, as part of this contract, to coordinate with them the point of connection, to provide the necessary technical projects and technical information, to pay for any official connection fees, to provide the necessary meters (electrical, gas and water) and to make the actual connections.

The contractor shall follow the Moldovan regulations in general, but also the particular and specific regulations of the electrical, water and gas companies. It is necessary that the contractor is familiar with these requirements prior to submission of their bids. The US Government is not responsible for any mistake or erroneous assumptions made by the contractor with regards to the utility connections.

The contractor is not responsible for signing the final supply contract, as this needs to be signed by the competent Moldovan authority. The contractor will perform all works except signing the contract and paying for any utility supply, but they shall only pay for the connection fees.

2.6 Particularities from the Technical Project

The contractor can utilize the technical project included in Annex#3. However, this is an US Government project, and there are some minimum quality and characteristics that need to be implemented in US projects, some of which are listed below. If any of these elements are different from the corresponding elements included in the technical project (Annex#3), the contractor shall implement the elements as described in this paragraph. As previously stated, if the implementation of these elements requires modifications to the technical project, it shall be the contractor’s responsibility to modify these drawings as required by Moldovan regulations:

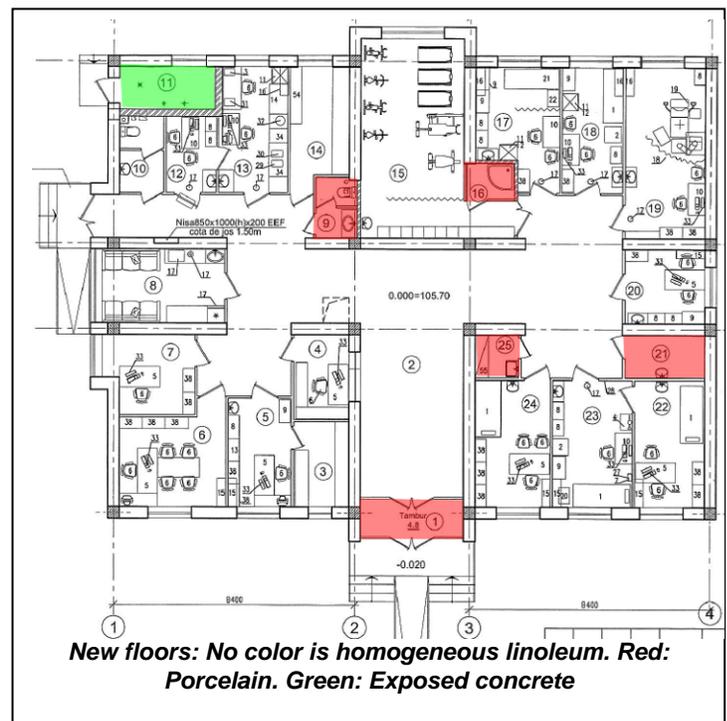
2.6.1 Thermal Insulation:

Building to be provided with thermal insulation on the exterior facade and roof. Minimum 10 cm of exterior thermal insulation in compliance with Moldova regulations. On the roof, if the contractor chooses to install the thermal insulation on the floor of the attic, this shall be provided with rigid and firm surface over the insulation in order to be able to use the space in the attic for storage. All areas of the attic shall be perfectly walkable without damaging the thermal insulation.

2.6.2 Flooring:

All floors shall be provided at the same elevation and without any tripping hazards or impediments for movements of wheelchairs. This means for example that the doors cannot be provided with a bottom threshold or bottom frame. There shall be 3 types of floors: Homogeneous linoleum/vinyl (2 mm thickness), grès ceramic and exposed concrete.

All colors and models of flooring to be selected by the representative from the Municipality among ample selection provided by the contractor. Transition between different types of flooring shall be done with the product recommended by the manufacturer of the homogeneous linoleum.



2.6.2.1 **Flooring: Grès Porcelain Flooring:**

Provide homogeneous grès porcelain tiles where indicated in the drawing in previous page. Include matching wall base board from the same model as the tiles. Install tiles diagonally with respect to the walls.

Grès Porcelain stoneware is a ceramic with a compact, hard, colored and non-porous body. Tiles shall be homogeneous or non-glazed. This means that all the material of the tile is made of the same material. If we cut a tile, there would be no difference between the bottom, the top of the middle of the tile. The word “grès” means that the ceramic body of the tile is extremely vitrified, that is to say compact, hence the exceptional great resistance. The result is a lean clay body, little refractory, fired in a kiln (at 1200-1400 C°) until it reaches a non-porous vitrification and a complete water-proofing.

The new ceramic tiles shall be high quality, provided with the following technical features:

- Scratch hardness of surface (Mohs) >8 (according to EN101)
- Resistant to impacts: Complies with ISO 10545-5
- Water Absorption: Tested by ISO 10545 - 3 $\leq 0.5\%$
- Deep abrasion resistance: Tested by ISO 10545 – 6: Max 175 mm3
- Frost resistance: Tested by ISO 10545 – 12: Tiles must not produce noticeable alteration to surface
- Chemical resistance: Tested by ISO 10545 – 13: Tiles must not produce noticeable signs of chemical attack
- Friction coefficient (slipperiness): Tested by ASTM C 1028 $\geq 0,60$
- Size: Minimum 20x20 cm



Typical installation of floor tiles with joints diagonal to the walls.

All floors shall be perfectly leveled, at the same height as the homogeneous vinyl flooring. In the toilet and boiler room the floors shall be sloped towards the new floor drains to be provided as part of this contract. Tile installation shall be done following manufacturer's instructions and recommendations.



Typical grès flooring



Typical grès base boards. Use same model as for the floor tiles

2.6.2.2 Homogeneous Linoleum (or vinyl) Flooring for medical use:

New 2 mm thickness homogeneous linoleum/vinyl for the areas highlighted in green in previous pictures, provided with combination of two colors in each room. Flooring material to be installed by specialized experienced workers, over self-leveling grout to be perfectly leveled, and to be accepted by manufacturer representative.

All colors and models of flooring to be selected by the Municipality among ample selection provided by the contractor.

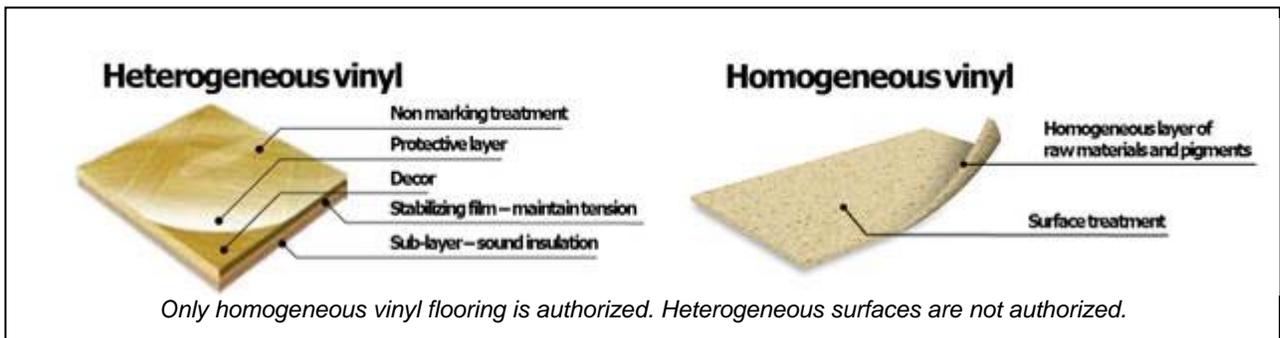
The surfaces to which apply the homogeneous linoleum shall be perfectly leveled, and provided with high quality solid homogeneous linoleum (2 mm thickness of wear thickness). Linoleum material shall have the minimum technical characteristics listed below:

- Officially rated in manufacturer's catalog as certified for use in medical and laboratory facilities.
- Description (EN 649): Homogeneous single layered vinyl flooring
- Reaction to fire: Bfl-s1
- Electrical behavior - body voltage (EN 1815) – kV: < 2
- Thermal resistance (EN 12667) - m² K/W: Approx. 0.01
- Thermal conductivity: Approx. 0.01
- Bacteria resistance (EN ISO 846 Part C): Does not favor growth
- Total thickness (EN 428): 2 mm
- Wear layer thickness (EN 429): 2 mm
- Total weight (EN 430): >2.95
- Abrasion group - volume loss (EN 660 – 2) – Group: T
- Abrasion group - volume loss (EN 660 – 2) – mm³: ≤ 2.0
- Classification - industrial (EN 685) – Class: 43

Install following manufacturer's instructions for a perfectly leveled finished surface. Installed over self leveling layer, using welded joints, and installed over the lower portion of the walls, as indicated in the model shown in picture#11. The material used for the floor shall be extended up to 10 cm along the walls, without any joints separating the floor and the wall portions. Linoleum shall be provided in rolls and not in tiles.

Definition of homogeneous linoleum: The linoleum or single layered vinyl flooring shall have a minimum thickness of the wear layer of 2 millimeters and a total thickness of 2 millimeters. This means that all the material of the linoleum flooring is wear layer. A linoleum flooring with less than 2 millimeters of wear surface and made up of several layers is not acceptable.





2.6.3 **Walls:**

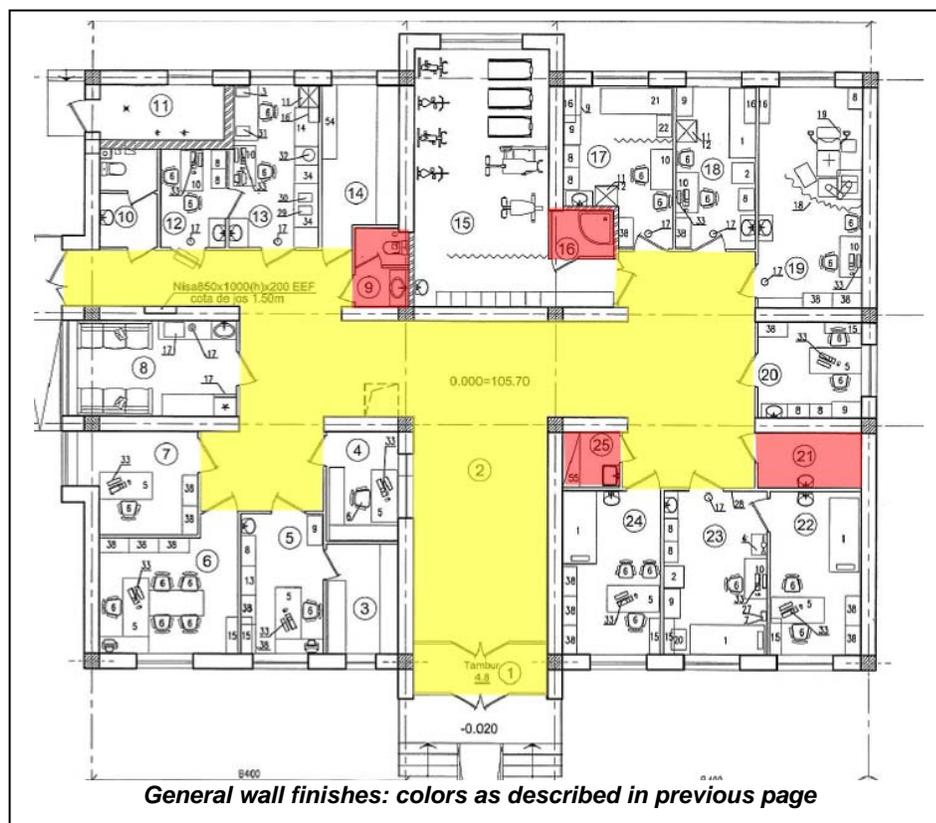
Note that all the installations (telephone, water, A/C, electricity,...) shall be installed recessed within the finished walls, and consequently the contractor shall estimate the necessary channels within the walls before they are provide with the finished layer.

Finished colors shall be selected by the beneficiary. Paint shall be rated and classified as washable, antibacterial and antifungal. Walls to be designed to cover all utilities (i.e. water, electrical, heating, fire alarm, drain and sewer lines,...). All corners shall be protected against impacts with stainless steel corner guards or other approved material.

All finished walls shall be perfectly leveled.

There shall be 3 different types of wall finishes, with minor potential differences to be proposed by the contractor's architect and accepted by the Contracting Officer.

- Where indicated without color in the drawing below: Plaster and paint finish. Use combination of two colors for lowest and highest sections of walls. Lowest 12 cm to be compatible with type of flooring (vinyl or ceramic wall base or nothing in the mechanical room)
- Where indicated in red: Ceramic tiles from floor to new ceiling surface
- Where indicated in yellow: Ceramic wall covering (wainscot) in lowest 1.5 meters, using wall ceramic tiles of minimum size 20x30 cm in combination of two colors.



Specific requirements for ceramic wall tiles and their installation:

Material: Non-glazed ceramic tiles (for walls) with water resistant joints, glued onto the surface of the wall. Provide with stainless steel corner guards embedded in the wall tiles. Provide combination of 3 colors and patterns for the wall tiles, to be selected by beneficiary among ample selection to be provided by the contractor. Minimum size of tiles to be 20x30 cm.

Properties: I class (best quality) tiles, suitable for use in hospitals, thickness according to ISO10545-2

Installation: All corners of all ceramic tiled walls shall be provided with metal corner protection.

The contractor shall propose a design for the approval of the beneficiary, using a combination of 3 different colors of wall tiles (2 colors for the hallways). Wall tiles to be provided with a decorative friso at the middle and top of the walls.



2.6.4 **Ceiling:**

There shall be two types of ceiling finishes: suspended ceiling of different types and plastered and painted ceiling.

- **Type 1:** For all areas except the mechanical room: Standard suspended acoustical ceiling
- **Type 2:** For the mechanical room: painted concrete with certified antibacterial/antifungal product.

Suspended Acoustical Ceiling

Use Mineral tiles 600/600/33mm on a metal sub-frame coated with a durable anti-bacterial finish.

Module (mm): 600 x 600 x 19 MMire reaction: EEA - Euroclass A2-s1,d0

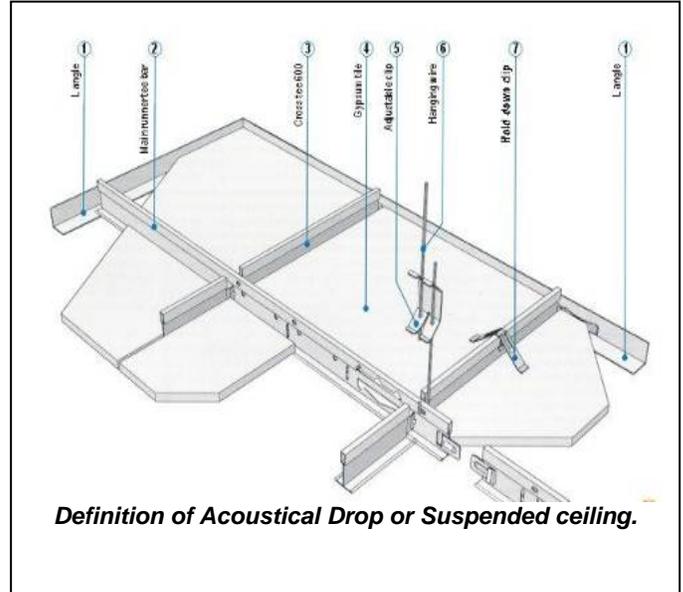
Humidity resistance (%): 95

Material: Mineral

Humidity resistance (RH%) 95

Fire reaction EEA Euroclass A2-s1,d0

Cleanability: With a moist cloth



2.6.5 **Lighting:**

Only LED Technology lighting is authorized.

2.6.6 **Electric General:**

All electrical installations shall be recessed within the walls, floors and ceilings. No electrical conduit or cable shall be exposed to the view. Direct burial of the cables on the plaster without conduits is not authorized.

The main electrical panel shall be recessed on the wall along one of the hallways.

The project includes the complete design and installation of a completely new electrical system starting at the electrical substation located adjacent to the kindergarten building.

The contractor shall prepare all documents and pay for any necessary connection fees. However, the actual electrical supply contract needs to be signed by the Municipality. The contractor is responsible to pay and sign the contract exclusively for the temporary electrical connection which the contractor may prepare in order to obtain electrical power for the construction phase of the contract.

All electrical equipment shall be CE certified (European Community certified)

Provide a new electrical feeder (circuit) from the nearest available point of connection with the electrical utility company. Provide the new cables connecting the substation to the clinic in underground PVC conduits, unless this is not authorized by the utility company. Provide the necessary electrical protection for the new circuit in the connection point.

Electric Meter: Provide the electric meter and the necessary protection and necessary auxiliary equipment and works in compliance with Moldovan regulations and with the requirements of the electrical utility company. Place the electric meter where proposed by the contractor's designer and allowed by the electrical utility company.

Electrical protection: All circuits shall be protected against short circuits and against indirect contacts with differential protection of maximum allowed current 30 mA.

Provide the necessary special appliances as required by Moldovan regulations, such as emergency lights, exit signs, etc

Provide exterior LED floodlights with photocells.

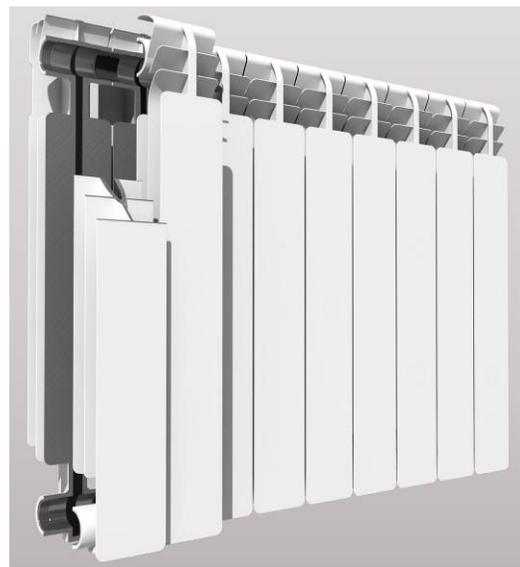


2.6.7 **Heating:**

Only the use of aluminum bimetal radiators with individual control valves (with bypass) are authorized for this contract.



Definition of bimetal type radiator



Definition of bimetal type radiator

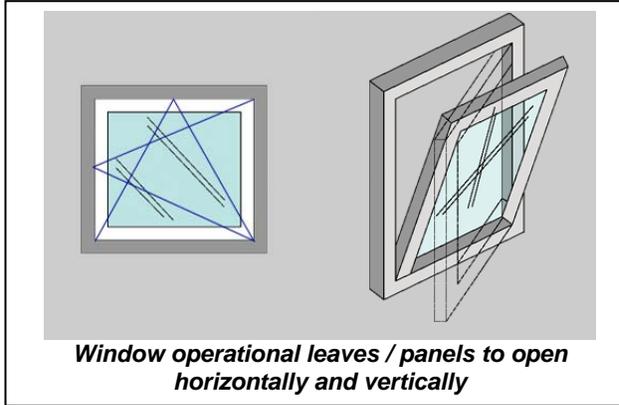
2.6.8 **Windows:**

New windows shall be provided with aluminum insect screens in the exterior of all operational window panels. The insect screens shall be removable and shall be provided by the manufacturer providing the new windows required by this project.

All windows to be provided with non-transparent glazing.

The new exterior windows shall be minimum of 5 chambered PVC profile with double glazing 6-12-6. They shall be provided with the quality certificate that may be required for the intended use of the windows. Provide with internal PVC sills and external aluminum or ceramic tile, with minimum 5% sloped away from the building.

Operational panels of the new windows shall open horizontally and vertically as shown in the picture below. At least 50% of the window surfaces shall be made of operational panels.



2.6.9 Exterior Doors:

The exterior doors shall be thermally insulated heavy-duty aluminum doors with glazing in the upper half. The new entrance door for the mechanical room shall be thermally insulated galvanized steel, with louver for ventilation.

These two doors shall be designed and built with the minimum requirements specified herein:

- European standard aluminum profiles with break in the thermal bridge, and must have three rubber dust protection seals.
- With double glazing in the upper half (8-12-8)
- With required locks and anti-panic hardware, all made of stainless steel.
- Glazing in the upper half to be minimum thickness of 8 millimeters thick for safety reasons. This is the thickness of each glazing panel.
- Provided with door closers and door stops to avoid damages by users.
- Heavy duty construction. Aluminum profiles shall be minimum 8 cm wide and minimum of 1.4 kg/m



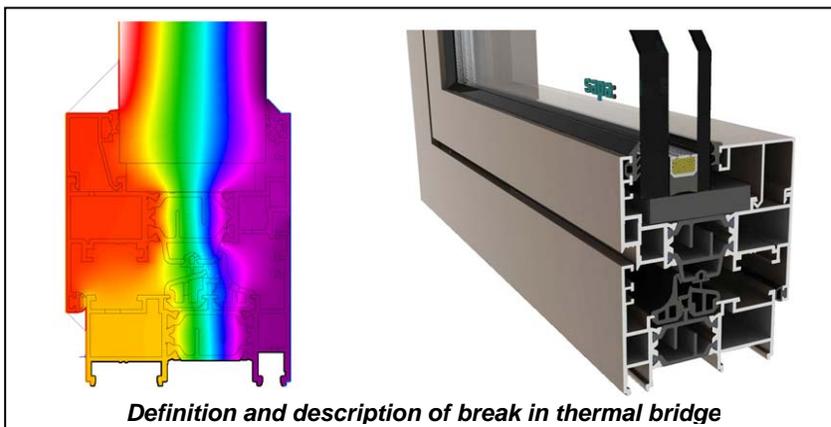
Example of acceptable design for the two main entrance doors



Typical Anti-panic hardware



Typical required metal door for the



Definition and description of break in thermal bridge

2.6.10 **Interior Doors:**

Use aluminum doors without bottom threshold (only three frames). Use doors rated and certified to be used in medical facilities. Doors shall be rated for heavy traffic use. Width of profiles to be minimum 7 cm.

The use of standard doors without the official certificate for medical facilities is not authorized, even if they are provided with similar finishes.

All hinges, locks, handles and accessories shall be made of stainless steel and installed by the door manufacturer in the assembly plant. Provide also door stops.

The use of solid hardwood doors, certified for medical use are also authorized, given that in addition they shall be provided with stainless steel kick plate.

The double door provided in the main entrance shall be provided with similar finishes as the exterior doors, but without the need to be thermally insulated.

Coordinate with Municipality the need for locks in all the doors. All doors shall be provided without bottom frame or threshold, in order to avoid any tripping hazard and easy movement of stretchers and wheelchairs and for required ventilation. All doors to be provided with all required accessories, such as door stops, locks or handles.



Required tubular stainless steel door handle required for solid hardwood doors



Typical acceptable required internal doors.

2.6.11 **Water Piping:**

The contractor shall install a metering device as required by the water supply company.

All water piping shall be HDPE piping running recessed within the walls or above the suspended ceiling.

The contractor shall provide cold and hot water as necessary for the intended use. The number and size and locations of the hot water boilers shall be proposed by the designer hired by the contractor. The contractor shall use the hot water boilers with the highest standard thermal insulation. However, it is not allowed to provide one hot water heater for each room.

Contractor to provide HDPE pipes and valves as necessary to isolate water supply to the facility and to each of the rooms with water supply.

Provide thermal insulation for hot and cold water piping. Thermal insulation is necessary for cold water to avoid condensation that may damage the new ceiling materials.

Each plumbing fixture shall be provided with a shut-off valve (toilets, sinks)
Each room with water supply shall be provided with an isolation valve
Each sink and shower to be provided with cold and hot water. All faucets be provided with a single monoblock or lever to control the flow and temperature of the water.

No drainage line shall be exposed to the view. In case the design and selection of the sinks and other appliances require the installation of exposed drainage lines, these shall be provided with stainless steel piping with p-traps.



2.6.12 **Sewer:**

The septic or sewage holding tank shall have a minimum capacity of 25 m² and shall be provided with possibility of measuring the level without the need to open the lid and provided with installation to avoid bad smell. It may be necessary to provide ventilation piping above the roof of the new building.

2.6.13 **Plumbing Fixtures:**

Toilets: Use wall mounted toilet seat, without contact with the floor for easy cleaning.

Sinks: Provide wall mounted sinks without pedestals for easy cleaning. Any exposed drainage piping to be stainless steel.

Hand driers: Provide a total of 2 in the contract. Provide stainless steel and hardwired to the wall, so that the cables are not visible.

Shower: Provide with ceramic materials for shower plate.



Typical stainless steel hand drier

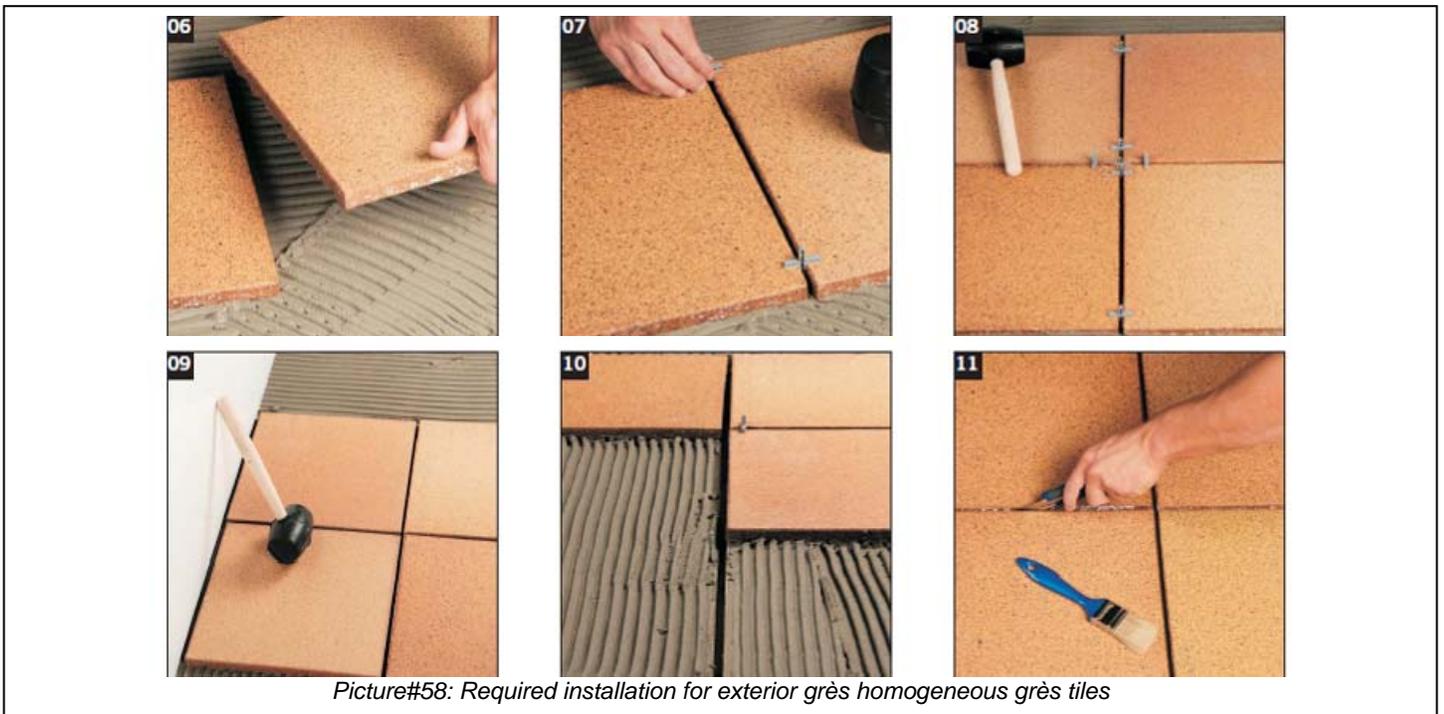


Typical required small wall mounted sink



Typical wall mounted toilet, European style.

Non glazed (homogeneous) grès tiles: Exterior tiles shall be rustic non glazed grès tiles. This means that the floor tiles shall be homogeneous, made of the same material on the surface, the bottom and the center. Exterior grès tiles are typically produced by a minimum of 44 hours single firing at a maximum temperature of 1.360°C, giving it a one-off look and a natural blend of shades as well as excellent technical performance.

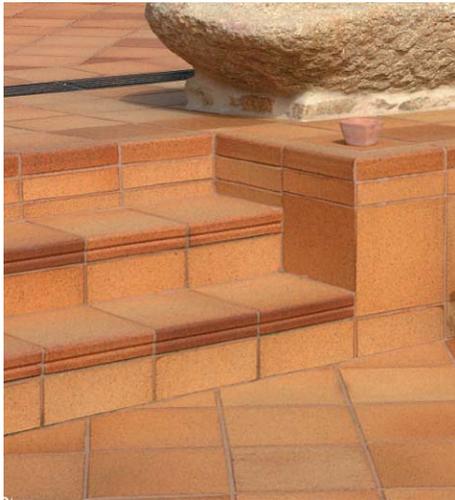




Typical steps with special grès tiles



Typical steps with snow



Typical acceptable use of special tiles



Required look for landing platforms



Typical Stainless steel railings



Typical Stainless steel railings

2.7 Items in the Technical Project and not in this contract.

This is a design-build contract to provide a new fully operational clinic. However, this contract does not include furniture or medical equipment. The list below shows some of the equipment and instruments that are included in the technical project description, but in general terms anything that is not permanently attached to the building cannot be included in this contract.

Utilaj tehnologic, aparate si mobilier Specificarea utilajului					
Nr. poz.	Denumirea și caracteristicile tehnice a materialelor și utilajului, producătorul	Tipul sau marca	Unit. de mas.	Masa unit. utilaj	Cantit.
1.	Bancheta de examinare medicala, prod. ORLA, dim: 1900x700x600	KM 2	buc.		4
2.	Măsuță examinare copii, prod. ORLA, dim: 600x550x1000	DB.01000P+SP+5x.PAPROLI	buc.		2
3.	Microscop de laborator, prod.CE1, spec.220V/50/60Hz	Max BINO-II	buc.		1
4.	Cintar medical cu antropometru pt. adulti, prod. ASIMED, dim.315x460x900	Asimed.modMC-660	buc.		1
5.	Masă de birou, dim: 1400x700x800	OG-OA-ON-352	buc.		7
6.	Scaun de birou semirigid, dim: 450x450x400	retea comert	buc.		26
7.	Support electrocardiograf	-	buc.		1
8.	MESUȚĂ tirox pt. instrumente medicale, prod.INMOCLIN, dim: 600x400x800	INMOCLIN, mod. 14116	buc.		11
9.	Dulap pr. medicamente, dim: 800x450x1800	retea comert	buc.		6
10.	Masa, dim.600x1100x800	retea comert	buc.		4
11.	Frigider medical, dim: 560x600x800, spec. 220V AC, 3kW	tip"Medika"	buc.		2
12.	Congelator, dim: 560x600x800, spec. 220V AC, 3kW	retea comert	buc.		1
13.	Dulap pt articole din sticla, dim: 800x350x1800	retea comert	buc.		1
14.	Dulap unitate pt. uscare dim: 1050x650x200, spec. 220V AC, 3kW	LA6-PRO-LIJB 90/70 A20	buc.		1
15.	Aparat de conditionare a aerului de camera, spec. 220V AC, 3kW	0	buc.		6
16.	Aparat de conditionare a aerului cu ionizator, spec. 220V AC, 3kW	0	buc.		4
17.	Lampa bactericida de perete, N=0,10 kw	OGH-150x30	buc.		6
18.	Paravan medical cu 2 sectii, dim: 2500x200x1560mm	retea comert	buc.		1
19.	Fotoliu examen ginecologic, prod.INMOCLIN, dim.1800x750x1000, spec. 220V AC, 3kW	Inmoclin,s.a, mod 14650/E	buc.		1
20.	Tanometru ocular, dim: 2500x200x1560mm	Riester,mod.5112	buc.		1
21.	Pat medical, dim: 2000x900x600mm	retea comert	buc.		1
22.	Noptiera medicala, dim: 400x500x600mm	retea comert	buc.		1
23.	Dulap, dim: 900x400x1800mm	retea comert	buc.		hol
24.	Bancheta de relaxare, dim: 1200x350x500mm	retea comert	buc.		hol
25.	Masa pt. receptie, dim: 1300x800x800	retea comert	buc.		6/n
					15627 -TF
Centrul de sănătate din raionul Florești, or. Mărculești Str. Ștefan cel Mare nr. 52a					
Sp. prin. Executat			Opadit L. 2013 Leanca N. 2013	2013	
Specificatia Utilajului			Faza PE	Planșa 1	Planșa 2
15627 - TP.SU			 URBANPROIE OR. CHEȘTI		

Utilaj tehnologic, aparate si mobilier					
Nr. poz.	Denumirea și caracteristicile tehnice a materialelor și utilajului, producătorul	Tipul sau marca	Unit. de mas.	Masa unit. utilaj	Cantit.
26.	Dulap pt. laborator medical, dim: 1500x300x1800	KM 2	buc.		-
27.	Electrocardiograf,prod.GEM-MED dim: 250x150x60,charger130x76x43	prod.GEM-MED	buc.		1
28.*	Poster pt. testarea vederii, 0,1 kw	Orla, AC-OA	buc.		1
29.	Analizator de urina,dim:150x290x65mm, 115V prod.ROCHE, spec.230V/50Hz-115V/60Hz	Roche,Cobas-Accutrend	buc.		1
30.	Incubator cu termostat, prod. SELECTA spec.220 V AC	Selecta,201616	buc.		1
31.	Centrifuga, prod. SELECTA spec.220 V AC	Selecta, mod.7002240	buc.		1
32.	Sterilizator, prod. SELECTA, dim.650x500x600 spec.220 V AC	Selecta.mod2001242	buc.		1
33.	Calculator(PC), spec.220V AC	retea comert	buc.		12
34.	Masa de laborator cu lavur cu doua cupe, dim: 1200x650x900	LA6- PRO -M120	buc.		1
35.	Scaun cu rotile,Ø320 mm,h=400/545		buc.		2
36.	Dulap pt.haune, dim: 1500x500x2300	retea comert	buc.		-
37.	Dulap pt.haune vizit, dim: 1500x500x2300	retea comert	buc.		-
38.	Dulap pt. documente, dim: 1000x500x1200mm	retea comert	buc.		18
39.	Autoclav N=3,0kw, dim: 430x500x650mm.	"Euroclav 23"-S	buc.		-
40.	Lampa (ghelogen) H=2m, tensiune- 230V	"Masterlight"	buc.		-
41.	Masa de palata, dim: 850x630x740	retea comert	buc.		-
42.	Aparat de casa,N=0,076kw, dim: 500x400x400	"Samsung"retea comert	buc.		-
43.	Stativ mobil	Inmoclin,mod22128	buc.		-
44.	Dulap pentru pastrarea solutiilor dezinfectante, dim.1000x500x2300 mm.	retea comert	buc.		1
45.	Dulap pentru pastrarea solutiilor dezinfectante, dim.3800x600x2300 mm.	retea comert	buc.		1
46.	Canitar medical pt.nouascuti, dim.590x270x230mm.	BHQ -20	buc.		-
47.	Set instrumente medicale	Orla, mod.7319134	buc.		-
48.	Analizator hemoglobina	Hemocue, mod201+	buc.		-
49.	Conteiner, dim. 600x640x900mm.	retea comert	buc.		-
50.	Conteiner, dim. 600x640x900mm.	retea comert	buc.		-
51.	SV cuspid, dim. 450x590x420mm. 220V AC, 1,2kW	LG	buc.		1
52.	Cainik, dim. 150x120x260mm. 220V AC, 0,8kW	LG	buc.		1
53.	Frigider, dim. 600x590x900mm. t=0+5,220V AC, 0,5 kW	LG	buc.		1
					buc.
* necesita iluminare					
15627 - TP.SU					Foia 2

Specifically, and describing exclusively the list above, these would be the elements that are included and the elements that are not included. This rule shall be used for the rest of equipment and instruments which are included in the technical project.

1. Medical checkup bench: NOT PART OF THE CONTRACT
2. Table for checking up children: NOT PART OF THE CONTRACT
3. Lab microscope: NOT PART OF THE CONTRACT
4. Medical scale with anthropometry for adults: NOT PART OF THE CONTRACT
5. Desk: NOT PART OF THE CONTRACT
6. Semi-rigid chair: NOT PART OF THE CONTRACT
7. Support for electrocardiograph: NOT PART OF THE CONTRACT
8. Stainless table for medical instruments: **PART OF THE CONTRACT**

9. Cabinet with medications: NOT PART OF THE CONTRACT
10. Table: NOT PART OF THE CONTRACT
11. Medical fridge: NOT PART OF THE CONTRACT
12. Freezer: NOT PART OF THE CONTRACT
13. Cabinet for glassware: NOT PART OF THE CONTRACT
14. Cabinet for drying: NOT PART OF THE CONTRACT
15. Air conditioner: PART OF THE CONTRACT
16. Ionizing Air conditioner: PART OF THE CONTRACT
17. Wall bactericide lamp: PART OF THE CONTRACT
18. Medical mobile partitions with 2 sections: PART OF THE CONTRACT
19. OB/GYN chair: NOT PART OF THE CONTRACT
20. Ocular tonometer: NOT PART OF THE CONTRACT
21. Medical bed: NOT PART OF THE CONTRACT
22. Medical drawer: NOT PART OF THE CONTRACT
23. Cabinet: NOT PART OF THE CONTRACT
24. Relaxation bench: NOT PART OF THE CONTRACT
25. Reception table: NOT PART OF THE CONTRACT
26. File cabinet: NOT PART OF THE CONTRACT
27. Electrocardiograph: NOT PART OF THE CONTRACT
28. Poster for eyesight checkup: NOT PART OF THE CONTRACT
29. Urine tester: NOT PART OF THE CONTRACT
30. Incubator with thermostat: NOT PART OF THE CONTRACT
31. Centrifuge: NOT PART OF THE CONTRACT
32. Sterilizer: NOT PART OF THE CONTRACT
33. Calculator (PC) : NOT PART OF THE CONTRACT
34. Lab table with a double sink: PART OF THE CONTRACT
35. Wheelchair: NOT PART OF THE CONTRACT
36. Wardrobe: NOT PART OF THE CONTRACT
37. Wardrobe for visitors: NOT PART OF THE CONTRACT
38. File cabinet: NOT PART OF THE CONTRACT
39. Autoclave: NOT PART OF THE CONTRACT
40. Lamp (Halogen) : PART OF THE CONTRACT
41. Bed table: NOT PART OF THE CONTRACT
42. Cash register: NOT PART OF THE CONTRACT
43. Mobile stand: NOT PART OF THE CONTRACT
44. Cabinet for disinfectants : NOT PART OF THE CONTRACT
45. Cabinet for disinfectants : NOT PART OF THE CONTRACT
46. Medical Scales for newborn: NOT PART OF THE CONTRACT
47. Medical instruments set: NOT PART OF THE CONTRACT
48. Hemoglobin tester: NOT PART OF THE CONTRACT
49. Container: NOT PART OF THE CONTRACT
50. Container: NOT PART OF THE CONTRACT
51. Heater: NOT PART OF THE CONTRACT
52. Electric kettle: NOT PART OF THE CONTRACT
53. Fridge: NOT PART OF THE CONTRACT



Typical lab table with sink



Typical lab table with sink



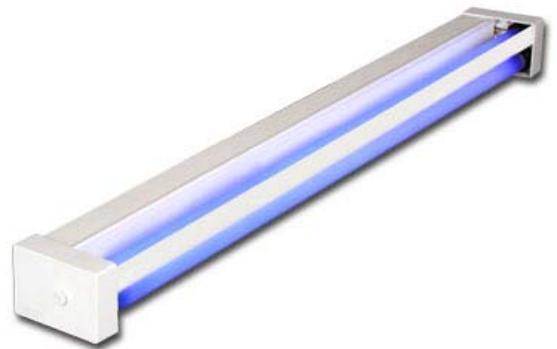
Typical lab table with sink



Typical stainless steel medical table, to be permanently attached to the walls.



Typical bactericidal lamp



Typical bactericidal lamp

2.8 Act of Acceptance

The contractor is responsible to obtain all necessary documents, to perform all necessary inspections by the pertinent committees and for any other related works which are necessary to obtain the final Act of Acceptance by the pertinent Moldovan authorities for a building to be used as a clinic, including paying for any applicable official fee.

The contractor is responsible to obtain the final Act of Acceptance. Final payment will not be authorized until an original copy of the Act of Acceptance is provided to the appointed representative from US Embassy in Moldova.

It is absolutely necessary that prior to submission of their bid, the contractor is perfectly informed of the required processes, works, testing, fees or inspections which are necessary to obtain this official document.

2.9 Site Visit

Several pictures are available of the plot of land to build the new clinic. These were taken in April 2014. The pictures do not guarantee the existing conditions of the area at the time to prepare the price proposal, and they are only a tool to describe the general conditions of the area. The contractor is responsible to visit the site in order to measure, verify field conditions (in particular with regards to the gas, water, sewer, telephone and electrical lines, prior to the submission of their cost proposal. The US Government is not responsible for any mistake in the contractor's measurements or assumptions of field conditions.

IT IS ABSOLUTELY NECESSARY FOR THE CONTRACTOR TO VISIT THE JOB SITE IN ORDER TO MEASURE AND TO QUANTIFY THE WORK INCLUDED IN THIS PROJECT AND TO VERIFY REAL FIELD CONDITIONS.

2.10 Existing Clinic

No work is included in the existing clinic of Marculesti.

3 PICTURES AND AVAILABLE OFFICIAL DOCUMENTS

Several pictures are available of the plot of land to build the new clinic. These were taken in April 2014. In the next pages, there are 6 pictures of the area where the clinic shall be built.







4 PROCEDURE:

4.1 DURATION

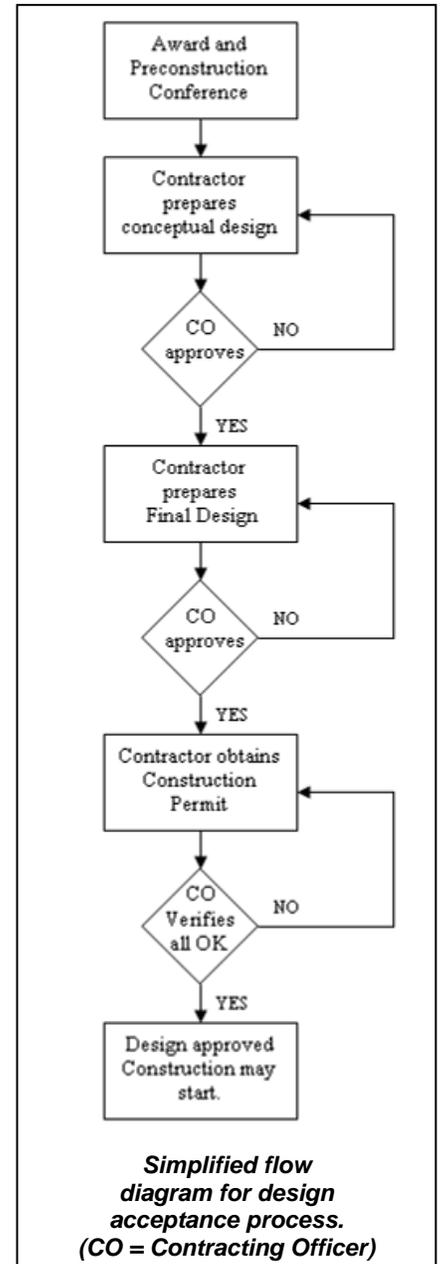
The contractor shall complete all works within 360 calendar days after project award

4.2 DESIGN

This paragraph is standard for design-build contracts. In case the contractor uses the technical project provided by the Municipality and included in Annex#3, this paragraph would be consequently reduced.

The design phase has different phases, which will require the contractor to provide, submit and process different documents, drawings, permits and/or calculations. The US Government representative shall not approve the design, but they shall “accept” the design. It is the contractor’s designing team responsibility to “approve” the design once “accepted” by the US Government representative. The contractor shall follow the required steps in Moldova for this type of design.

- **Conceptual/Initial design (or 35% design):** The contractor shall start with this phase immediately after contract award. The contractor shall provide a conceptual, initial or 35% design showing the general layout of the building to be based on the requirements of this performance specifications, which includes the minimum required spaces and some of their finishes and contents. The 35% design shall include the proposed materials and finishes, and it shall describe the proposed design in minimum detail to verify that the next phases of the design shall comply with the minimum requirements of this contract, including the Moldova regulations. The 35% Concept Design is intended to assure all lay-out requirements are clearly met before proceeding with the rest of the design. The contractor designing team shall coordinate with the beneficiary, the Monitoring Entity and the Soroca Municipality before submitting the 35% design to the US Government representative for acceptance. The US Government representative shall review the concept design submission for compliance to these Technical Requirements and to verify acceptance by the beneficiary and the local authorities, and with the RFP package. The Contracting Officer representative will provide written comments to the contractor.



- **Prefinal Design (or 100%):** After acceptance of the conceptual design, the contractor will provide a complete 100% design including all required calculation and construction details to show compliance with the requirements of this RFP (i.e. Central Heating system, A/C, solar power, electrical system, roofing, seismic, structure, etc). In this phase, the contractor shall include any geotechnical testing that may be required to justify the design of the foundations and compliance with seismic requirements. Prefinal design to be approved by Monitoring Entity and accepted by Municipality before submitted to the US Government representative.
- **Final Certified Design:** Once the Prefinal design has been accepted by the Contracting Officer, the contractor shall submit a copy properly approved, signed and certified by the "Revision Entity" and by the architect and different engineers that may have participated in the design, as required by Moldova Code and regulations. The Final Certified design shall be provided to the US Government representative together with the formal authorization or construction permits from the competent local Moldova authorities. The design phase shall not be considered to be complete, and therefore payment for the design shall not be authorized, until the contractor provides a copy of the required construction permits, authorizing the contractor to perform all the works included and detailed in the design.

4.3 Start of actual construction work

The Project Manager (PM) or Authorized Representative of the Contracting Officer shall authorize the start of construction. This authorization to start will not be given until the contractor:

- Provide written evidence that they comply with all legal requirements in Moldova in order to perform the works described in these PTS.
- Provides copy of the required construction permits or authorizations from the competent Moldovan authority authorizing the execution of the works.
- Provides technical information for the proposed materials and equipment to be used for the project. Only materials and equipment previously accepted by the Contracting Officer Representative shall be brought to the job site.
- The Contracting Officer Representative accepts their Accident Prevention Plan. See Annex 1 for the requirements of this Plan
- The Contracting Officer Representative accepts their Quality Control Plan. See Annex 2.
- The Contracting Officer Representative accepts their Construction Schedule
- Construction Sign is placed on site

4.4 Construction Schedule

Provide a bar chart within 45 days of contract award with a minimum of 50 activities. Indicate planned start and completion dates for design and construction.

Perform all work within 360 calendar days after contract award.

4.5 Accident Prevention Plan / Safety Plan

SAFETY SHALL BE THE FIRST PRIORITY OF THE CONTRACTOR. SAFETY OF THE WORKERS, GENERAL PUBLIC, AND PEDESTRIANS SHALL TAKE PRECEDENCE OVER ANY OTHER FACTOR.

The contractor shall use the format included in Annex 1 to prepare the Safety Plan or Accident Prevention Plan

Within the timeframe allowed for the final design submission, the Contractor will prepare and submit a Safety Plan (Accident Prevention Plan) describing procedures they plan to perform to ensure the safety of the children, workers, the staff of the facilities, the general public, the pedestrians and the equipment on the job site. The Plan shall clearly define the safety personnel assigned to this project and the measurements that the contractor will implement to guarantee that nobody will be exposed to any hazards as a result of this construction contract.

Additionally, the safety plan must address types of personnel protective equipment to be used by personnel, types and frequencies of safety inspections, hazard analysis plan to prevent safety incidents, and training utilized to familiarize employees with safety policies and practices. The contractor shall comply with the US Army Corps of Engineers Safety Manual EM385-1-1 wherever the requirements of this manual are more stringent than the requirements of the Moldova Safety Law.

No work shall start at the job site until the Safety Plan is received and approved by the US Government.

Moldovan Safety Code must be strictly followed. The contractor is responsible for the safety of the workers, the safety of the users of the facility and the general public.

Additional safety requirements for NAVFAC project can be found in Section 01525, which can be found here:

<http://www.aed.usace.army.mil/contracting/0093/01525%20Safety%20and%20Occupational%20Health%20Rqmnts.pdf>

4.6 Language

All communication and correspondence between the contractor and the Government personnel shall be in English. It shall be the responsibility of the Contractor to prepare proposals, invoices, shop drawings and submittals, quality control reports, computations, and all correspondence pertaining to this contract, in the English language; but the Contractor may, for his own record purposes, prepare them in the local language. All correspondence to and from the Contracting Officer shall be in the English language. In case of dispute or claim, the English version will govern.

Immediately after award, the contractor shall appoint an English speaking representative, with cellular phone and e-mail address.

For the visits of the Contracting Officer, the PM or their authorized representative to the job site, the contractor shall provide somebody capable of representing the construction company who can communicate in English language or the contractor shall provide a translator to translate from English to Romanian/Russian language.

4.7 Technical Documentation:

Among others, as a minimum the contractor shall provide technical information for Government approval for the following list of equipment/materials:

- Window, doors and glazing
- Floor materials
- Wall tiles and wall and corner protections
- Commemorative plaque
- Radiators
- Water and sewer piping
- Lighting fixtures
- Lighting switches
- Electrical conduits
- Water piping
- Plumbing fixtures
- Hand drying equipment
- Countertops

4.8 Pictures:

The contractor shall send weekly and representative digital pictures of their construction by e-mail once construction starts, showing construction progress. These pictures shall be used to monitor the contractor's performance and to validate the invoices.

Failure to provide updated pictures will impact the ability of the Contracting Officer to validate and therefore to pay for the invoices.

4.9 Quality Control Plan:

Within the timeframe allowed for the submission of documentation before starting the works, the Contractor will prepare and submit a Quality Control Plan describing personnel, procedures, tests and installation techniques that he plans to perform to ensure the quality required by these Technical Requirements and his design is obtained.

The Quality Control Plan shall include the name and qualifications of the person responsible for the quality of the works

In Annex 2, it is included a guideline to prepare this Plan.

4.10 CONSTRUCTION SIGN

Immediately after award the contractor shall prepare and install, at a very visible location, a construction sign with the following characteristics and information on it:

- Wood sign with minimum dimensions 2.5 meters wide by 1.5 meter high
- Letters and logos prepared by a specialized company and designed for outdoor installation
- Flags of Moldova and the United States of America
- The following text: THE RENOVATION AND CONSTRUCTION OF THE HEALTH CENTER IN THE ADJACENT AREA OF THIS HOSPITAL IS FUNDED BY THE UNITED STATES EUROPEAN COMMAND AND PROVIDED TO THE PEOPLE OF MOLDOVA IN COOPERATION WITH THE ADMINISTRATION OF MARCULESTI. EXECUTIVE AGENT: US EMBASSY IN MOLDOVA. CUSTOMER: US NAVAL FACILITIES ENGINEERING COMMAND. PRIME CONTRACTOR:?
- Logo of NAVFAC EURAFSWA
- Logo of EUCOM
- Start and completion dates.
- Same text in Romanian and/or Russian



Example of typical construction sign



Example of typical required construction sign

4.11 PAYMENT

Payment shall be performed as required by US Administrative Requirements. See Contract Clauses pertinent to Payment procedures.

**** NO ADVANCE PAYMENT IS AUTHORIZED ****

Payment shall be performed following the principle of payment for completed work. Payment shall be phased as detailed herein:

- Partial payments as agreed with the US Representative, as work is being completed and accepted. Maximum of 4% for design after official Construction Permit is provided.
- Maximum of 80% (cumulative) is authorized until the final inspection is completed and all potential deficiencies are corrected. No payment over 80% is authorized until all work included in the contract is completed and Act of Acceptance is provided.
- Final invoice (100%) shall be paid once final inspection is completed and all potential defects identified in the final inspection are properly corrected.

Together with each invoice, the contractor shall provide:

- Official invoice
- Cost breakdown justifying the requested amount for payment.
- Filled Contractor's Safety Self Evaluation Form
- Invoice Statement: With the text below signed by a responsible person from the company (ideally the one that signed the contract):

I hereby certify, to the best of my knowledge and belief, that:

(1) The amounts requested are only for performance in accordance with the specifications, terms, and conditions of the contract;

(2) All payments due to subcontractors and suppliers from previous payments received under the contract have been made, and timely payments will be made from the proceeds of the payment covered by this certification, in accordance with subcontract agreements and legal requirements of Moldova;

(3) This request for progress payments does not include any amounts which the prime contractor intends to withhold or retain from a subcontractor or supplier in accordance with the terms and conditions of the subcontract; and

(4) This certification is not to be construed as final acceptance of a subcontractor's performance.

4.12 Paying for Utilities

The contractor is required to pay for the electricity, water and heating that they may require for the execution of their work. The contractor shall coordinate with the utility company and with the municipality representative the installation of metering devices to quantify the energy consumption. Currently there is no water or electricity at the plot of land.

4.13 Close-Out Procedure

The contractor shall strictly follow this procedure in order to close-out the contract:

- 1) Work completed at the construction site. Contractor shall notify the Contracting Officer at least with one month advance noticed of when the project will be ready for final inspection.
- 2) Contracting Officer receives Acceptance Act signed by all required Moldovan Government agencies, as stated in the Law. This document should be available during the final inspection. Acceptance Act to be signed by the competent local authorities and the end user (the Mayor, Regional Council or Ministry).
- 3) Contracting Officer to receive copies of the warranty letter, a copy of the folder with all construction documents, the spare parts lists signed by the beneficiary, and other related documentation.
- 4) Final Inspection by NAVFAC and ODC Team.
- 5) If any defects are identified during final inspection, the contractor to show evidence of proper correction.
- 6) Once all defects (if any) are corrected, contractor to submit and NAFVAC to process final invoice.
- 7) Contractor shall not allow the Fire and Rescue Department to use the new spaces, unless authorized in writing by ODC Moldova or the Contracting Officer.
- 8) NAVFAC to send official acceptance letter.

5 GENERAL WORK REQUIREMENTS

The general requirements of this specification are contained in the previous pages. This paragraph includes some additional general requirements.

NOTE: This is an American document, and this note is to define the way in which numbers are presented herein:

1,000 = one thousand

3,500 = three-thousand five-hundred

1.08 = one and eight hundredths

0.1 = one-tenth

REFERENCE STANDARD

Construction shall be in accordance with sound construction practices, and shall conform to the latest revision/edition of the Moldova codes, criteria, and standards; except as otherwise indicated by this Request for Proposal. Construction shall also comply with applicable codes, ordinances and regulations of Moldova governing life/safety, fire protection, building construction, conveying, HVAC (heating ventilation and air conditioning) systems, solar domestic water, plumbing systems and electrical systems in effect during this contract, except where specifically stated herein. Any material installed that does not meet the requirements of this Technical Specification and/or applicable codes, ordinances and regulations will be removed and a new one reinstalled at Contractor's expense.

For those items required in order to provide a fully certified clinic facility, which are not specified herein or in the technical project, the contractor shall follow the applicable Moldova Code.

SPECIFIC TECHNICAL REQUIREMENTS

This is a design-build contract. Therefore the contractor shall hire the services of licensed architects and engineers to design the new construction and/or to amend or modify the existing technical project. The design team made up of these architects and engineers shall propose the materials, equipment, construction practices and installations in compliance with the requirements of this document, and in coordination with the Municipality of Marculesti and the Sanitation Authority of Moldova, and the Monitoring Entity.

5.1 PROHIBITED ITEMS

Use of the following items in this construction project is prohibited:

- Use of aluminum for electrical conductors.
- Embedding aluminum conduit in concrete.
- Use of fluorescent light ballasts and other products containing PCB's.
- Use of urea-formaldehyde foam insulation products.
- Use of any paint/coatings having a lead content of over 0.06 percent by weight of non-volatile content. The use of ozone depleting chemicals is prohibited. The use of zinc-chromate is prohibited.
- The use of materials containing asbestos is prohibited.

5.2 RESPONSIBILITY OF MATERIALS

All materials delivered to the construction site shall remain in the ownership and responsibility of Contractor. Contractor will be responsible to safeguard the possession and condition of the material until US Government takes possession of the finalized project.

Material that is not intended to become part of the project shall not be delivered, placed, retained nor stored on the project site.

All refuse or salvaged materials shall become the property of the Contractor and shall be disposed of, off-site, in accordance with applicable Moldova regulations. The Contracting Officer may ask for receipts of proper disposal of debris, removed roof materials, or excess materials.

5.3 SAFETY AND PROTECTION

- 5.3.1 The contractor is responsible to comply with the most stringent of Moldova and American (EM385-1-1) safety regulations. In case of conflict between both standards, the contractor shall apply the Moldovan regulations, after consultations with the Contracting Officer. All costs of compliance with safety regulations are the responsibility of the contractor.
- 5.3.2 The Army Corps of Engineers Safety Manual (EM385-1-1) can be used as a general guideline for job site safety. A digital copy of this manual can be found here: http://140.194.76.129/publications/eng-manuals/em385-1-1/2008_English/toc.html.

- 5.3.3 The contractor is responsible for the safety of the contractors employees, subcontractors, visitors and general public, as they could be affected by this construction project.
- 5.3.4 The construction areas shall be securely separated from those areas of free access to the general public by solid fences.
- 5.3.5 Within the context of his responsibilities, the contractor shall take the necessary actions to protect the safety and health of the employees, including the prevention of occupational risks, information and training measures, and measures for the organization of the health and safety at work and its necessary means as required by Montenegrin Code. The following general prevention principles shall be taken into account for the adoption and implementation of the measures provided above:
- a) avoiding risks;
 - b) evaluating the risks which cannot be avoided;
 - c) combating the risks at the source;
 - d) adapting the work to the individual, in particular as regards the design of the workplace and the choice of work and production equipment and methods, with a view, in particular, to alleviating monotonous and repetitive work, and its effects on health;
 - e) adapting to technical progress;
 - f) replacing the dangerous by the non-dangerous;
 - g) prevention planning;
 - h) giving collective protective measures priority over individual protective measures;
 - i) giving appropriate instructions to the employees.

An employer shall insure all employees against occupational accident and disease risks, under the terms of Montenegrin law. The contractor shall verify that all employees of the prime contractor or any subcontractor employed in this project meet the legal requirements of Moldova Law.

The contractor shall organize the employee training in the field of health and safety at work. This training must be provided to new employees, those changing the workplace or type of work and those resuming their activity after a break longer than 6 months. In all such cases, the training shall take place before the actual beginning of the activity. The contractor shall be responsible for the facilities related to the provision of first aid in case of occupational accidents, for fire prevention and the evacuation of the employees in special situations and imminent danger.

The contractor shall be responsible for a safe and hygienic work environment both on the project site and at off-site locations where work is done in conjunction with this project.

- 5.3.6 The contractor shall be responsible for the protection of all grounds, vegetation and improvements that exist and are to remain after the project is complete; with-in the project work areas, adjacent to the project work areas and along the common route of access to the site, outside of the work areas. The Contractor shall be responsible to have any damage caused by Contractor's employees, equipment or sub-contractors repaired and restored to pre-damage condition, as approved by the PM or navy Technical Representative, at no cost to the Government.
- 5.3.7 The contractor shall be responsible for adequate and safe traffic control in work areas and along the common route of access to the site outside of the work areas. Traffic control shall include; Contractor's workforce traffic, vehicular traffic interfacing with Contractor's traffic and pedestrian traffic interfacing with Contractor's traffic. Traffic controls shall include; signage, barriers, pavement markings and traffic control personnel. Additionally, the contractor shall also be responsible for the safety of the general public. The work will take place in an occupied building, and the contractor shall be responsible to provide proper fencing or other adequate mean to separate the general public from their construction site.
- 5.3.8 The Contractor shall comply with all applicable safety regulations of Moldova, including all required record keeping.
- 5.3.9 The Contractor shall provide and maintain in working order during the entire construction period, such fire protective equipment and devices as required by applicable safety standards and as deemed necessary and suitable for any possible class or type of fires. Extinguishers shall be non-freeze type of not less than ten pound (5KG) capacity each.
- 5.3.10 Provide protection against rain, wind, or heat so as to maintain all work, materials, apparatus, and fixtures, incorporated in the work or stored on the site, free from injury or damage. At the end of the day's work, cover all new work likely to be damaged.
- 5.3.11 Contractor shall acquaint themselves with the location of utilities, which may be encountered or be affected by work, and shall be responsible for damage caused by neglect to provide proper precautions or protection. If needed, the contractor shall contact any local authorities or utility companies to locate any utility service, (and pay for their services if needed).
- 5.3.12 Provide, erect and maintain all required barricades, of sufficient size and strength necessary for protection of material storage, as well as to prevent accidents to the public and the workmen at the job site.
- 5.3.13 Watchmen will not be provided. Contractor will be held responsible for loss or injury to persons or property where work is involved, and shall take such precautionary measures as they may deem necessary to protect their own interest. The contractor shall be responsible for the security of their materials and equipment.
- 5.3.14 Special precautions shall be taken to maintain the clinic clean for its intended sanitary service. The contractor must take into consideration that the clinic will remain in use at all times during the renovation project.
- 5.3.15 Special precaution shall be taken to perform the work on the faade, roof and training tower to avoid falls of personnel and/or construction materials and equipment that could provide injuries to other personnel. The EM 385-1-1 shall be

used. All personnel working on scaffolds (or any other elevated working platform) or working on the roof shall be properly tied to a lifeline (or other firm anchor point) using a full body harness. Only CE certified scaffolding shall be authorized.

- 5.3.16 Injuries to any person and damage to any property not belonging to the Contractor shall be reported immediately to the PM or COR. Compensation to any third party affected by the construction activities (such as damage to private property) shall be the exclusive responsibility of the contractor.

5.4 CERTIFICATIONS, LICENSES, PERMITS, FEES, ETC.

The Contractor shall be responsible for determining, processing and requesting and paying all fees associated with, and obtaining any required permits for this project including, but not necessarily limited to permits for on-site and off-site hauling, demolition/disposal, construction activity, construction permits, utilities, telecommunications, road improvements, etc. The contractor is responsible for acquiring any required certifications (licensing). Coordinate all permit requirements with the Contracting Officer and the Municipality of Marculesti. Submit all completed permit application material, and associated back-up material, required to operate facilities, to the Contracting Officer for approval prior to agency submission. Contractor shall be responsible for complying with environmental laws, regulations and requirements.

5.5 TECHNICAL DOCUMENTATION

The Contractor will submit to the Contracting Officer the technical characteristics of all materials and equipment to be incorporated into the job site. They shall also prepare a Quality Control Plan describing personnel, procedures, tests and installation techniques that he plans to perform to ensure the quality required by this RFP and his design is obtained.

5.6 COORDINATION

All coordination with the municipal, regional and national authorities shall be the responsibility of the contractor. The Contracting Officer shall be notified of any disputes between agencies or approvals that will affect Contract duration or Contract Price.

All works shall also be coordinated with the beneficiary (Municipality of Marculesti and Moldovan Sanitation authorities).

5.7 SPECIAL SITE CONDITIONS

Confine all operations, equipment, apparatus and storage of materials, to the immediate area of work to the greatest possible extent. Contractor shall ascertain, observe and comply with all rules and regulations in effect on the project site, including, but not limited to parking and traffic regulations, use of walks, security restrictions or hours of allowable ingress and egress.

5.8 CLEANING

Contractor shall keep premises free of accumulations of surplus materials and rubbish caused by their operations. Combustible rubbish shall be removed from the premises each day. Burning of rubbish on premises is not permitted. In addition, the Contractor shall perform final cleaning to remove all foreign matter, spots, soil and construction dust, so as to put the project in a complete and finished condition ready for acceptance and use intended.

All waste areas and storage areas will be cleaned up to the PM's satisfaction. All excess materials will be removed from the site and the Contractor will leave the premises free of debris and excess waste materials.

5.9 SPARE PARTS

The contractor shall leave spare parts at the job site, at the location to be indicated by the beneficiary. Spare parts shall include, but shall not be limited, to:

- 5 m² of each type of floor covering
- 2 m² of roof cover material
- 2 lighting fixtures of each type used at the job site
- 4 kg of each type or color of paint used
- Other materials typical for standard maintenance of the facility.

5.10 WARRANTY AND ACCEPTANCE

All works performed by the contractor shall have the warranty periods which are required by Moldovan regulations, but as a minimum they shall be one year for all works and 10 years against any water infiltration. The contractor shall provide the warranty letter to the Marculesti Municipality with a copy to the Contracting Officer. The start date for the warranty is the day when all works are accepted by the US Government, not when the different tasks are completed.

The contractor shall notify the US Government representative at least 45 days in advance of the proposed final inspection date.

For final acceptance of the facility, the contractor shall provide to the Contracting Officer representative:

- Warranty letter
- Certificate, signed by the beneficiary, that the contractor has provided all necessary training and maintenance information for them to maintain the facility.
- Certificate of occupancy by the Municipality of Soroca or other competent Moldovan authority.
- Project book (2 copies – one for Contracting Officer and one for beneficiary), including copies of all drawings, equipment, manufacturer's operating instructions, material certificates, construction permits, and other documentation necessary for maintenance of the facility.

--- end of technical specifications ---

Annex 1

Annex 1: Guideline to Prepare the Safety Plan / Accident Prevention Plan

Immediately after award, the contractor shall prepare a Safety Plan / Accident Prevention Plan following the guideline and format provided in this Annex. This is in addition to any safety plan of safety documentation that may be required by Bulgarian regulations for this type of construction activity. The Plan shall be accepted by the Contracting Officer before works are authorized to start at the job site.

NAVFAC EURAFSWA Contingency Engineering
ACCIDENT PREVENTION PLAN [APP]
Minimum Basic Outline

This first page is NOT to be included in the APP you're going to submit.

This document shall be customized in agreement to the instructions below, pages not applicable shall be removed, and the signed final document shall be submitted in pdf format.

Instructions

A. The contractor is required, at a minimum, to type-in information called for in areas denoted with a **RED arrow** and put a checkmark in the appropriate box or boxes corresponding to that section *(to check a box, double click on it, then select checked in the pop up window)*. By signing this plan, the contractor is agreeing to all checked information herein and the checkmark will signify:

- a) Contractor selected one or more items from a list of items
- b) Contractor agrees with the corresponding information,
- c) Contractor agrees to follow the requirement(s) listed herein and those contained in EM 385-1-1 dated 15 September 2008
- d) Contractor agrees to develop written plans based on the requirements listed herein when required by this accident prevention plan.

B. The plan must consist of the following 10 sections:

1. Signature Sheet	6. Training
2. Background Information	7. Safety and Health Inspections
3. Statement of Safety and Health Policy	8. Accident Reporting
4. Responsibilities and Lines of Authority	9. Plans (Programs, Procedures)
5. Subcontractors and Suppliers	10. Risk Management Processes (AHA – Activity Hazard Analysis)

C. In addition to completing each section listed above several sections require certain supporting documents (resumes, certificates of training, organization chart, specific plans (crane lift plan medical support plan, etc.)). The supporting documents and plans must be attached / inserted in the appendices listed below.

Appendix	Title	Required Contents
I	Signature Sheet	As required per Section 1
II	Background Information	Area map
III	Statement of Health Policy.	Copy of signed company Safety Policy if not using generic one
IV	Responsibilities and Lines of Authority	Resume' and NAVFAC online Construction Safety Course certificate for SSHO (http://cst.wbdg.org/start.html); Proof of competency / qualification (Resumes and certificates) for persons listed in Section 4; Organization Chart (with names) for Key Corporate and Project personnel.
V	Subcontractors and Suppliers	As required per Section 5
VI	Training	As required per Section 6
VII	Safety and Health Inspection	As required per Section 7
VIII	Accident Reporting	As required per Section 8
IX	Plans	Area map showing site location; Site layout map; Acknowledgement of applicable plan key elements or NA.
X	Risk Management Processes (AHA – Activity Hazard Analysis)	AHA form for each feature of work

The reviewer of the Accident Prevention Plan shall use this checklist. The preparer of the APP shall use it to verify that all necessary information was included in the APP.

CONTRACTOR:		DATE:		
CONTRACT:		SIGNATURE:		
	A qualified reviewer shall check to assure submitted copies of the following items applicable from EM 385-1-1 Appendix A are included in the APP.	YES	NO	REMARKS
1	SIGNATURE SHEET: Plan Preparer, Approval, Concurrence.			
2	BACKGROUND INFO: Contractor, Contract #, Project Name, Brief Project Description, Contractor Accident Experience (EMR, OSHA) Corp. Trend Analysis, list of activities requiring AHA.			
3	STATEMENT OF SAFETY & HEALTH POLICY.			
4	RESPONSIBILITIES & LINES OF AUTHORITY: Identification of personnel responsible for safety (Corp. & Project Level).			
5	SUBCONTRACTOR & SUPPLIERS: Identification of Subs and Suppliers; means for controlling & coordinating; safety responsibilities.			
6	TRAINING: List subjects in safety indoctrination; mandatory training & certification, emergency response, outline requirements for supv and employee safety meetings.			
7	SAFETY & HEALTH INSPECTIONS: Identify who will conduct inspections, when & how it will be conducted & recorded, deficiency tracking sys and follow-up procedures. Any external inspections/certifications (e.g., Coast Guard etc).			
8	SAFETY & HEALTH EXPECTATIONS, INCENTIVE PROGRAMS AND COMPLIANCE: Company's written safety program goals, objectives, and accident experience goals; description of company's safety incentive program; policy/procedures for non-compliance with safety requirements; written company procedures for holding mgr. /supvs accountable for safety.			
9	ACCIDENT REPORTING: Identify person who completes the following, how, and when; exposure data (m/hrs worked); accident investigations, reports & logs; immediate notification of major accidents.			
10	MEDICAL SUPPORT: Outline on-site medical support and off-site medical arrangements.			
11	PERSONAL PROTECTIVE EQUIPMENT: Outline procedures (who, when, how) for conducting hazard assessments & written certifications for use of personal protective equipment.			
12	PLANS (PROGRAMS, PROCEDURES) REQUIRED BY THE SAFETY MANUAL: a) Hazard Communication; b) emergency response plans; c) layout plans; d) respiratory protection plan; e) health hazard control program; f) lead/asbestos abatement plan; g) abrasive blasting; h) confined space; i.e.) hazardous energy control plan; j) critical lift procedures; k) contingency plan for severe weather; l) access/haul road plan; m) demolition plan (engineering and asbestos surveys); n) compressed air plan; o) formwork and shoring erection and removal plans; p) lift slab plans; q) SHP/SSHP (for HTRW work); r) diving plan; s) alcohol drug abuse prevention plan; t) fall protection plan.			a) k) b) l) c) m) d) n) e) o) f) p) g) q) h) r) i) s) j) t)
13	Information on how the contractor will meet the requirements of the major sections of EM 385-1-1 in the accident prevention plan. Particular attention shall be paid to a) excavations; b) scaffolding; c) medical/first aid requirements; d) sanitation; e) PPE; f) fire prevention; g) machinery and mechanized equipment; h) electrical safety; l) chemical, physical agent, and biological occupational exposure prevention requirements. Detailed site specific hazards and controls shall be provided in the activity hazard analysis for each phase of the operation. A list of anticipated AHAs should be submitted with the APP.			a) b) c) d) e) f) g) h) i.e.)
14	Plans for maintaining job cleanup and safe access			
15	Public safety requirements (e.g., fencing, signs)			

LANT Form 385-APP

ACCIDENT PREVENTION PLAN [APP]

Contract No.:
Project Name:
Location:

1. SIGNATURE SHEET

a. Plan preparer (Safety manager, site safety and health officer (SSHO), or quality control representative will fill this role).

Name:	Title:
Phone no.:	Date:
Signature:	

b. Plan approval (Company owner or Company / corporate officer authorized to obligate the company).

Name:	Title:
Phone no.:	Date:
Signature:	

c. Plan concurrence (e.g., Chief of Operations, Corporate Chief of Safety, Corporate Industrial Hygienist, project manager or superintendent, project safety professional, project QC).

Name:	Title:
Phone no.:	Date:
Signature:	

2. BACKGROUND INFORMATION

Prime Contractor:
Project name:
Contract no.:

a. Project description and location. Prime contractor will provide a brief description of the project to include its location.

b. A map of the project site general location and site plan – Insert in Appendix IX.

c. Prime contractor accident experience. Prime contractor will provide accident experience information, if available, on how many accidents he or she has experienced in the last two years and what type of accidents have occurred.

d. Phases of work / Definable Features of Work. (Examples: Grading, excavation, formwork & shoring, steel erection, etc). NOTE: Section 10 requires an AHA for each of these phases

G1 - Mobilization / General Construction
G2 - Demolition
G3 - Scaffolding / Fall Protection
G4 - Excavation / Trenching
G5 - Electrical
G6 – Cement Work
G7 – Masonry Work
G8 – Confined Spaces & Hazardous Atmosphere
G9 – Plumbing
G10 – Painting
G11 – Steel Structure Erection
G12 – Abrasive Blasting

3. STATEMENT OF SAFETY AND HEALTH POLICY

3. **STATEMENT OF SAFETY AND HEALTH POLICY.** Prime contractor will provide a safe and healthful project site which is free from recognized and anticipated hazards that could cause injury or death. The prime contractor and his subcontractor(s) and supplier(s), and visitor(s), will comply with the policies set forth in EM 385-1-1 'Safety and Health Requirements Manual' dated 15 September 2008. Include a copy of Company's Safety Policy at Appendix III.

4. RESPONSIBILITIES AND LINES OF AUTHORITY

a. **Resumes.** Prime contractor will provide resumes for safety and industrial hygiene personnel if the contract requires these positions. Competent person qualifications for the Site Safety and Health Officer (SSHO) will also be provided. At a minimum, the SSHO will have completed the OSHA 30 hour training and have one year experience. Provide training certificates for all designated competent personnel at Appendix IV.

b. **Accountability for personnel responsible for safety.**

Company owner will:

- Accept responsibility and accountability for the safety program.
- Provide leadership and guidance to supervisory personnel for the acceptance, maintenance, and enforcement of the safety program.
- Provide the necessary resources to maintain a safe and healthful project site.
- Conduct or attend monthly supervisory safety meetings.

Company owner name/phone no.

Project manager (superintendent) will:

- Implement the safety and health program at the project site.
- Conduct periodic project site inspections to verify accident prevention plan (APP) and EM 385-1-1 compliance.
- Review and act upon site safety and health inspection reports.
- Prepare man-hour reports, if applicable.
- Have authority to make spot corrections or stop work for safety purposes.
- Conduct or attend monthly supervisory safety meetings.
- Generate and/or sign ENG Form 3394 when required.

Project manager name/phone no.

Safety manager will:

- Accept administrative and oversight responsibility for the project site safety program.
- Provide technical guidance and support to the project manager, SSHO, supervisors, and foremen on safety and health issues.
- Conduct periodic worksite visits to verify APP and EM 385-1-1 compliance.
- Report observations and findings to the company owner.
- Purchase personal protective equipment (PPE) and safety supplies as necessary.
- Have authority to make spot corrections or stop work for safety purposes.
- Conduct or attend monthly supervisory safety meetings.
- Generate and/or sign ENG Form 3394 when required.

Safety manager name/phone no.

Site safety and health officer will:

- Be on site at all times when work is performed.
- Conduct frequent worksite inspections to verify APP and EM 385-1-1 compliance.
- Conduct or supervise on-site safety training.
- Investigate accidents and incidents as necessary.
- Purchase PPE and safety supplies as necessary.
- Have authority to make spot corrections or stop work for safety purposes.
- Conduct weekly employee safety meetings and attend monthly supervisory safety meetings.
- Generate and/or sign ENG Form 3394 when required.

Site safety and health officer name/phone no.

Supervisors (foremen) will:

- Cover appropriate activity hazard analysis before work begins.
- Conduct periodic project site inspections to verify APP and EM 385-1-1 compliance.
- Assist SSHO with accident and incident investigations.
- Have authority to make spot corrections or stop work for safety purposes.
- Conduct daily safety meetings with specific work crews.
- Conduct weekly employee safety meetings and attend monthly supervisory safety meetings.
- Generate and/or sign ENG Form 3394.

Workers will:

- Wear required PPE for each task.
- Inspect electrical cords daily before use.
- Inspect in-use hand and power tools daily before work begins. Guards will NOT be removed from tools equipped with guards.
- Inspect in-use machinery and mechanized equipment daily before work begins.
- Maintain good housekeeping at the worksite.
- Report accidents and incidents immediately to supervisor.
- Have authority to make spot corrections or stop work for safety purposes.
- Attend employee safety meetings.

c. **Lines of authority.** Prime contractor lines of authority will be as follows: Company owner, project manager, safety manager, SSHO, supervisors, and workers.

- i. **Company goal.** Prime contractor will provide a safe and healthful worksite that is free from recognized or anticipated hazards that could cause serious injury or death. We will strive for a zero accident rate and demand zero tolerance for unsafe acts, the workers who perpetrate them, and persons in positions of leadership who condone such actions.
- ii. **Incentive program.** Prime contractor will provide their incentive program, if any.
- iii. **Check the box if prime contractor will provide his own non-compliance program. If not, prime will put a check mark in paragraph's d and e.**
- iv. **Worker non-compliance with safety requirements.** The commission of unsafe acts will not be tolerated at the project site. In the event this type behavior occurs the following disciplinary actions will be taken:
 - **First offense.** The offending party will be verbally warned and asked to correct the unsafe act (mentoring will take place if necessary - action will be noted in the daily report).
 - **Second offense.** The offending party will be issued a written reprimand (action will be noted in the daily report).
 - **Third offense.** The offending party will be removed from the worksite (action will be noted in the daily report).
- v. **Supervisor non-compliance with safety requirements.** The condoning of unsafe acts at the worksite will not be tolerated. In the event this type behavior occurs the prime contractor will ensure disciplinary actions commensurate with the violation are taken.

5. SUBCONTRACTORS AND SUPPLIERS

a. Check the box if there aren't any subcontractors or suppliers working the site. If subcontractors will be onsite please identify them below, if not, continue to Section 6.

b. **Identification of subcontractors and suppliers.** Prime contractor will list subcontractors and suppliers, if known, and their phone numbers.

Co:	Ph:

c. **Means for controlling subcontractors and suppliers.** Prime contractor will meet with subcontractors and suppliers before work begins, and periodically thereafter, to coordinate activities and schedules, and to resolve any safety issues that may arise.

d. **Subcontractor and supplier safety responsibilities.** Subcontractors and suppliers will adhere to the requirements of the prime contractor's APP. Prime contractor will have subcontractors and suppliers sign the accident prevention plan signifying their understanding of, and compliance with, its provisions.

SUBCONTRACTOR AND SUPPLIER ACCEPTANCE OF ACCIDENT PREVENTION PLAN

Name:	Date:
Signature:	

Name:	Date:
Signature:	

Name:	Date:
Signature:	

Name:	Date:
Signature:	

Name:	Date:
Signature:	

6. TRAINING

a. Safety indoctrination subjects.

- Personal protective equipment requirements for project site.
- Review of accident prevention plan and activity hazard analyses.
- Weekly (employees) and monthly (supervisors) safety meetings.
- Location of portable fire extinguishers.
- Location of first-aid kits.
- Identification of first-aid/CPR qualified personnel (if applicable).
- Location of emergency phone numbers.
- Location of the nearest on-site/off-site medical facility.
- Emergency plans for fires/spills (if applicable).
- Accident notification and reporting procedures.
- Current project site safety issues.

Other safety indoctrination subjects.

b. Training or certifications applicable to the project. (Note: If the activity selected is in **bold** the prime contractor will provide employee names working the job along with their years of ‘on-the-job’ experience in **Appendix VI**. If workers have attended a specific training class or hold a certification in the job the prime will also annotate this information – **See Appendix VI.**)

- | | |
|---|---|
| <input type="checkbox"/> Abrasive blasting. | <input checked="" type="checkbox"/> Fall protection. |
| <input type="checkbox"/> Blasting. | <input checked="" type="checkbox"/> First-aid/CPR. |
| <input type="checkbox"/> Compressed gas cylinders. | <input checked="" type="checkbox"/> Formwork/shoring. |
| <input checked="" type="checkbox"/> Concrete/masonry. | <input checked="" type="checkbox"/> Hand/power tools. |
| <input type="checkbox"/> Confined space. | <input type="checkbox"/> Hazard communication. |
| <input type="checkbox"/> Cranes/derricks. | <input type="checkbox"/> Hazardous waste. |
| <input type="checkbox"/> Crane hand signals. | <input type="checkbox"/> Lockout/tagout. |
| <input checked="" type="checkbox"/> Electrical. | <input checked="" type="checkbox"/> Machinery/mechanized equipment. |
| <input type="checkbox"/> Elevating work platforms. | <input type="checkbox"/> Motor/all-terrain vehicles. |
| <input type="checkbox"/> Emergency response (fires/spills). | <input type="checkbox"/> Pneumatic tools. |
| <input checked="" type="checkbox"/> Excavation. | <input checked="" type="checkbox"/> Portable fire extinguishers. |
| <input type="checkbox"/> Explosive-actuated tools. | <input type="checkbox"/> Powered industrial trucks. |
| <input type="checkbox"/> Pressurized equipment/systems. | <input checked="" type="checkbox"/> Scaffold systems. |
| <input type="checkbox"/> Respiratory protection. | <input type="checkbox"/> Steel erection. |

- Rigging.
- Rotating work platform.
- Safe lifting techniques.
- Vehicle-mounted elevating platforms.
- Wearing/maintaining PPE.
- Welding/cutting.**

Other training and certifications.

c. Weekly employee safety meetings.

- Project manager, safety manager, site safety and health officer, or supervisor will conduct employee safety meetings.
- Prime contractor and subcontractor workers will attend employee safety meetings.

Day and time of employee safety meetings is listed below:

Day:	Time:
Day:	Time:

- Meetings will be documented with facilitator/attendee names, date, and subjects discussed.

d. Monthly supervisory safety meetings.

- Company owner, safety manager; or project manager will conduct supervisory safety meetings.
- Prime contractor and subcontractor supervisors will attend supervisory safety meetings.

Day and time of supervisory safety meeting is listed below:

Day:	Time:
Day:	Time:

- Meetings will be documented with facilitator/attendee names, date, and subjects discussed.

7. SAFETY AND HEALTH INSPECTION

a. Project site safety inspections.

- Company safety manager (periodically).
- Project manager (periodically).
- Supervisors and foremen (periodically).
- Site safety and health officer (SSHO) (frequently).
- Quality control representative (daily).
- Employees will conduct project site inspections of electrical cords, in-use hand and power tools, and in-use machinery/mechanized equipment (daily).

b. Inspector qualifications. Prime contractor will provide inspector qualifications for safety manager, SSHO, and quality control representative.

c. Deficiency log. A deficiency log will be generated after inspections using the criteria listed below. Follow-up inspections will be performed to ensure identified deficiencies have been corrected.

- Date deficiency identified.
- Description of deficiency.
- Name of person responsible for correcting deficiency.
- Projected resolution date.
- Date actually resolved.

d. External inspections. Are external inspections or certifications required? Yes No

If yes please explain.

8. ACCIDENT REPORTING

a. **Exposure data.** Man-hours worked will be reported to NAVFAC EURAFSWA Project Manager by the 25th of every month using the “Contractor Monthly Safety Self- Evaluation Form”(must insert in **Appendix VIII**).

b. **Accident notification.** Prime contractor will report accidents and incidents as soon as they happen to the contracting officer’s representative (COR). The COR, in turn, will notify the Safety Office according to the notification information below. For accidents and incidents that require immediate notification, the prime contractor will seal-off the site and wait for the NAVFAC Safety investigation team.

Immediate notification (telephonically):

- Fatality.
- Permanent total disability.
- Permanent partial disability.
- Three or more persons admitted to a hospital.
- Property damage of \$200,000 damage or more.

24-hour notification (telephonically and/or email):

- Lost time (**Note:** Lost time is defined as any loss of time away from work beyond the day or shift on which it occurred).
- Property damage not less than \$2,000 but no greater than \$200,000.
- Treatment of medical injuries not resulting in lost time.

c. **Accident recording.** Prime contractor will coordinate with the COR on forwarding the appropriate documents to the NAVFAC Safety Office.

Reportable accident and incident requirements: All accidents and incidents to include occupational injuries and illnesses that result in medical treatment with no lost time, and property damage of less than \$2,000, will be documented in an email and sent to the NAVFAC Safety Office within 24 hours.

Recordable accident and incident requirements: All accidents and incidents to include occupational injuries and illnesses that result in lost time (measured in days) or property damage of \$2,000 or more will be documented on ENG Form 3394 ‘U.S. Army Corps of Engineers Accident Investigation Report’ dated March 1999 and submitted to the NAVFAC Safety Office within five (5) days of the occurrence.

9. PLANS (PROGRAMS, PROCEDURES)

A. LAYOUT PLANS – MUST INSERT IN APPENDIX IX.

B. EMERGENCY RESPONSE PLANS – SEE APPENDIX IX.

C. MEDICAL SUPPORT.

a. General requirements.

An effective means of communication (hard-wired, cellular, or two-way radio and tested in the area of use for functionality) with emergency response source access will be provided along with transportation for injured workers.

Telephone numbers of medical facilities, physicians, and ambulances will be conspicuously posted (at a minimum these numbers will be posted near project-office telephones).

A map showing the best route to the nearest medical facility will be conspicuously posted.

Medical Facility Name:
Address:
Phone Number(s):

b. Type of medical support:

Less than 100 persons employed on any one shift. On sites with less than 100 workers, and where neither a first-aid station nor infirmary is available, prime contractor will provided a first-aid kit for every 25 persons. These kits will have latex gloves and a CPR shield.

Location of first-aid kits:

Trained first-aid/CPR employees. Prime contractor will have at least two employees on each shift trained to administer first-aid/CPR when a medical facility or physician is not accessible within five minutes of an injury to a group of two or more employees. Provide training certificates or copy of certification card.

Employee Name:	Certification expiration date:
Employee Name:	Certification expiration date:

More than 99 but less than 300 persons employed on any one shift. On sites with more than 99 but less than 300 workers the prime contractor will establish and equip, as directed by a licensed physician, a first-aid station. Identification signs and directional markers will be used to denote the station’s location. Emergency lighting will be provided and a first-aid attendant will be on duty at all hours when work is in progress.

300 or more persons employed on any one shift. On sites with 300 or more workers the prime contractor will establish and equip, as directed by a licensed physician, an infirmary. Identification signs and directional markers will be used to denote the infirmary’s location and emergency lighting will be provided.

Infirmaries will provide reasonably quiet conditions with some privacy, lighting, climate control, adequate toilet facilities, hot and cold water, drainage, and electrical outlets. Walls and ceilings will be finished with two coats of white paint, windows and doors screened, and the floors made of impervious construction.

A properly-equipped emergency vehicle, helicopter, or mobile first-aid unit will be provided during work hours (the emergency vehicle will not be used for any other purpose). A registered nurse, licensed physician’s assistant, certified emergency medical technician, or a licensed practical nurse (approval by a licensed physician) will be assigned on a full-time basis to each work site.

D. PERSONAL PROTECTIVE EQUIPMENT (PPE).

a. General Requirements.

- Prime contractor will conduct hazard assessments to find out the type(s) of PPE required.
- Prime contractor will ensure workers know how to put on, adjust, wear, remove, and use PPE. PPE will be inspected before each use, maintained in a serviceable and sanitary condition, and stored so the integrity of the equipment is protected. This training will be documented with the name of the facilitator/attendees, date, and subjects taught.
- Damaged and defective equipment will not be used but rather marked ‘out-of-service’ and removed from the project site.

b. PPE used on the project site.

- | | |
|--|--|
| <input checked="" type="checkbox"/> Minimum required clothing. | <input type="checkbox"/> Welding goggles. |
| <input checked="" type="checkbox"/> Hard hat. | <input type="checkbox"/> Welding hand-held shields. |
| <input checked="" type="checkbox"/> Safety glasses/goggles. | <input type="checkbox"/> Full-body harness w/lanyard(s). |
| <input type="checkbox"/> Face shield. | <input checked="" type="checkbox"/> Reflective vest. |
| <input checked="" type="checkbox"/> Ear plugs/muffs. | <input checked="" type="checkbox"/> Dust mask. |
| <input checked="" type="checkbox"/> Work gloves. | <input type="checkbox"/> Half-face/full-face respirator. |
| <input type="checkbox"/> Welding gloves. | <input type="checkbox"/> Personal floatation device. |
| <input checked="" type="checkbox"/> Steel-toed/hard-soled shoes. | <input type="checkbox"/> Life ring. |
| <input type="checkbox"/> Welding helmet. | <input type="checkbox"/> |

Other PPE used on the project site.

E. OTHER PLANS: Must check if “YES” or NA (not applicable) for all listed plans. If you check “YES” then you must complete Appendix IX boxes for that plan or insert your company plan. Sections in parenthesis refer to plan coverage in the 2008 EM 385-1-1.

PLAN NAME	YES	NA	PLAN NAME	YES	NA
Plan for prevention of alcohol and drug abuse (01.C.02)	×		Contingency plan for severe weather (19.A.03);	×	
Site sanitation plan (Section 02)	×		Float Plan (19.F.04);		×
Access and haul road plan (4.B)		×	Site-Specific Fall Protection & Prevention Plan (21.C);	×	
Respiratory protection plan (05.G)		×	Demolition plan (to include engineering survey) (23.A.01);	×	
Health hazard control program (06.A)		×	Excavation/trenching plan (25.A.01);	×	
Hazard communication program (06.B.01)		×	Emergency rescue (tunneling) (26.A.);		×
Lead abatement plan (06.B.05 & specifications);		×	Underground construction fire prevention and protection plan (26.D.01);		×
Asbestos abatement plan (06.B.05 & specifications);		×	Compressed air plan (26.I.01);		×
Safety Program (06.E.03.a);	×		Formwork and shoring erection and removal plans (27.C);	×	
Abrasive blasting (06.H.01);		×	Precast Concrete Plan (27.D);		×
Heat/Cold Stress Monitoring Plan (06.I.02)		×	Lift slab plans (27.E);		×
Crystalline Silica Monitoring Plan (Assessment) (06.M) ;		×	Steel erection plan (27.F.01);		×
Night operations lighting plan (07.A.08);		×	Site Safety and Health Plan for HTRW work (28.B);		×
Fire Prevention Plan (09.A);	×		Blasting Safety Plan (29.A.01);		×
Wild Land Fire Management Plan (09.K);		×	Diving plan (30.A.13);		×
Hazardous energy control plan (12.A.01);		×	Confined space Program (34.A).		×
Critical lift Plan (16.H);		×			

Temporary facilities/layout plan (Section 4.A). NA.
*****Written Company plan required**

- Trailers and other temporary structures used as field offices, personnel housing, or storage areas will be anchored with rods and cables or by steel straps attached to ground anchors.
- Temporary facility spacing requirements will be in accordance with (IAW) paragraph 09.A.19.
- Temporary power distribution requirements will be IAW paragraph 11.D.01.
- Temporary project fencing will be provided on projects located in areas used by the public.
- Signs warning of construction hazards will be posted on fencing every 300'.
- Temporary structures with an electrical capability will be grounded.
- Temporary work camps will be adequately drained (graded and ditched) and rendered free from depressions where water may settle.
- The area surrounding the structures will be free of debris, garbage, and rubbish.
- Temporary sleeping quarters will be heated, ventilated, lighted, and maintained in a clean and safe condition.

Emergency response plans for fires/spills (Section 01.E.01). NA.
*****Written Company plan required.**

- Discuss escape procedures and routes.
- Designate critical project site operations and discuss how the operations will be protected.
- Discuss employee accountability procedures following an evacuation.
- Discuss employee roles in emergencies to include responsibilities and equipment used.
- Discuss the location of emergency contact information to include reporting procedures.

Hazard communication plan (Section 06.B.01). NA.
*****Written Company plan required.**

- A current inventory of project site hazardous chemicals will be prepared.
- Material safety data sheets for hazardous substances will be kept at the project site.
- Containers will be labeled with the type of hazardous substance they contain.
- Workers will be notified about new substances that are brought onto the worksite to include the hazards associated with them.

Respiratory protection plan (Section 05.G.03). NA.
*****Written Company plan required.**

- Discuss the use of dust masks to protect workers from large particulate matter.
- Discuss the use of half-faced respirators to protect workers from small particulate matter to include fumes, mists, and aerosols.
- Discuss sealing a half-face respirator properly.
- Discuss cleaning a half-faced respirator properly
- Discuss inspecting and storing a half-face respirator properly.

Health hazard and control plan (Section 06.A.02(b)). NA.

An activity hazard analysis (AHA) will be completed for each applicable area.

- Discuss hazardous substances.
- Discuss hot substances (heating devices and melting kettles).
- Discuss harmful plants, animals, and insects.
- Discuss ionizing radiation.
- Discuss the use of lasers.
- Discuss ventilation and exhaust systems.

Abrasive blasting plan (Section 06.H.01(b)).
*****Written Company plan required.**

NA.

- Use Regulator to control Air supply.
- Change Filters at the advised frequency.
- Monitor the air supply and ensure adequate supply of air.
- Ensure the Dead Man's switch is in good operating condition.
- Make sure blasting is only done by trained personnel with the proper PPE.
- Barricade the area to prevent unauthorized entry.
 - Turn machine 'Off' prior to moving equipment. Follow 'Lock Out / Tag Out' procedures.
 - Ensure the Dead Man's switch is in good operating condition.
 - Maintain and ensure good housekeeping.
- Wear proper Respiratory PPE.
- Wear proper PPE (Gloves and Tyvek suit). Take breaks and hydrate when high temperatures are encountered while wearing PPE.
- Dispose of blasting residue according to all Environmental regulations.

Confined space plan (Section 34.A.06).
*****Written Company plan required.**

NA.

- Discuss responsibilities of attendants, entrants, and entry supervisors.
- Train workers how testing and monitoring equipment is used.
- Discuss the type of ventilating equipment needed to obtain acceptable entry conditions.
- Discuss the type of communication equipment to be used.
- Discuss the PPE to be used when engineering and/or administrative controls fail to protect workers adequately.
- Discuss the lighting equipment to be used.
- Discuss the equipment to be used for entrant ingress and egress.
- Discuss rescue procedures to include required equipment and emergency phone numbers.

Hazardous energy control plan (Section 12.A.12).
*****Written Company plan required.**

NA.

- Discuss why the lock out/tag out procedure is being used.
- Communicate and coordinate the lockout/tagout procedure with the workers being affected by the procedure and the government's designated authority.
- Discuss the procedural steps in place for shutting down, isolating, blocking, and securing systems to control the release of hazardous energy to include the person(s) responsible for performing this task.
- Discuss the procedural steps in place for placing, removing, and transferring lockout/tagout devices to include the person(s) responsible for performing this task.

- Discuss the procedural steps in place for placing and removing locks and/or tags to include the person(s) responsible for performing this task.
- Discuss the procedures for testing the effectiveness of isolating hazardous energy to include lockout/tagout.
- Discuss emergency scenarios that could arise during the lockout/tagout procedure to include the actions to be taken for safely responding to an emergency.
- Discuss the procedure for transferring removal authority from one person to another.

Critical lift plan (Section 16.H.02). **NA.**
*****Written Company plan required.**

- Designate a crane operator, lift supervisor, and rigger (and state their qualifications).
- Describe ground conditions and outrigger and crawler track requirements.
- Discuss crane position, height of the lift, load radius, and boom angle and length for the entire range of the lift.
- Discuss the size and weight of the load to include any crane and rigging components that add to the weight.
- Discuss the rigging plan to include lift points, hardware requirements, and procedures.
- Discuss coordination of the lift and how individual players will communicate with each other.
- Discuss tandem and tailing-crane lift procedures, if applicable.
- Describe environmental conditions which, when in effect, will stop the lift.

Access and haul roads plan (Section 04.B). **NA.**
*****Written Company plan required.**

- Discuss equipment to be used on the road, traffic density, and the hours of operation.
- Discuss road layout and widths, horizontal and vertical curve data, and sight distances.
- Discuss sign and signalperson requirements, road markings, and traffic-control devices.
- Discuss how drainage will be controlled.
- Outline contact between vehicles and the public to include implementing safety controls at each one of these places.
- Discuss the maintenance needed to keep the roads hard, smooth, and as dust-free as possible.

Demolition plan (Section 23.A.01). **NA.**
*****Written Company plan required.**

- A demolition plan based on engineering, lead, and asbestos surveys will be prepared.
- Utilities and other service lines will be shut-off, capped, or otherwise controlled outside the building line.
- Service lines will be temporarily relocated and protected if utilities are maintained.
- If hazardous building materials and chemicals, flammable materials, explosives, gases, or other dangerous substances have been used in building construction, pipes, tanks, or other equipment on the property they will be controlled or eliminated before demolition begins.
- Glass fragmentation will be controlled.
- Mechanical equipment will not be used on floors or other working surfaces unless the floors and surfaces are of sufficient strength to support the loads.
- Chute openings will be protected by a guardrail 42" in height. When debris is dropped through floor openings without chutes, the openings and the area onto which the material is dropped will be enclosed with barricades not less than 42" in height and not less than 6' back from the protected edge of the opening

above. Signs warning of the fall-material hazard will be posted at each side of the debris opening at each floor.

- No wall section more than 6' in height will stand without lateral bracing unless the wall was designed and constructed to stand without this support and its condition is determined safe enough to be self-supporting.
- Workers will not be allowed in the area directly underneath floor arches when they're being removed. The area will be barricaded to prevent access and signed to warn of the hazard.
- Steel construction will be dismantled column-by-column and tier-by-tier (columns may be in two-story lengths).

Compressed air and gas systems plan (Section 20.B).
No written plan required.

NA.

- Compressors and related equipment will be located so safe access is provided to all parts of the equipment for operation, maintenance, and repairs.
- Air hose, pipes, valves, filters, and other fittings will be pressure-rated by the manufacturer and not exceeded. Defective hose will be removed from service.
- Hose will not be laid over walkways, steps, ladders, and scaffolds to create a tripping hazard.
- Compressed air will not be used to blow dirt from the hands, face, or clothing.
- A speed governor independent of the unloaders will be installed on air compressors except those driven electrical induction or electrical synchronized motors.
- Piping will be equipped with traps or other means for removing liquid from the lines.
- Air receivers will be installed so that all drains, hand holes, and manholes are accessible.

Formwork/shoring (Section 27.C).
*****Written Company plan required.**

NA.

- Formwork, shoring, and bracing will be erected and maintained to safety support all vertical and lateral loads that might be applied until such loads can be supported by the structure.
- Sills will be sound, rigid, and capable of carrying the maximum intended load.
- Base plates, shore heads, extension devices, or adjustment screws will be in firm contact with the sill and form material and, as applicable, will be snug against the posts.
- Diagonal bracing will be provided in vertical and horizontal planes to provide stiffness and to prevent buckling of the individual members.
- Forms and shores (except those on slab or grade and slip forms) will not be removed until the concrete has gained sufficient strength to support its weight and all superimposed loads.

Lift-Slab Operations (Jacking plan) (Section 27.E).
*****Written Company plan required.**

NA.

- Manufacturer's rated capacity will be legibly marked on all jacks and not exceeded.
- Jacks will be designed and installed so they won't continue to lift when overloaded.
- Jacks will have a positive stop to prevent over-travel.
- Base of the jack will be blocked or cribbed. If there's a possibility of slippage a wood block will be placed between the jack's metal cap and the load.
- Maximum number of manually-controlled jacks on one slab will be limited to 14.
- During lifting all point of the slab support will be kept within 1/2" of that needed to maintain the slab in a level position.
- No one will be permitted under the slab during jacking operations.

Personal Fall Protection Program (Section 21.C.01).
*****Written plan required.**

NA.

- Workers will be protected by guardrail, personal fall protection, safety nets, catch platforms, or temporary floors in the following situations: Worker can fall 6' or more; on access ways or work platforms over water, machinery, or dangerous operations; on runways where workers can fall 4' or more; and on all exposed sides of stairways and ladder-floor openings.
- Top rails, mid rails, and toe boards will be able to withstand outward and downward forces of 200, 150, and 50 lbs., respectively.
- Wire rope can be used as a top or mid rail under the following conditions: When the posts are spaced no farther than 8"; deflection of the rope under 200 lbs. of force is less than 3"; and the rope is flagged for visibility. Synthetic and natural-fiber rope will not be used.
- Paneling and screening will be in place from the mid rail to the toe board when material is piled higher than the toe board.
- Personal fall protection will consist of a full-body harness (not chest-wait units or body belts), lifeline, and anchorage point.
- Two lanyards will be used when vertical movement is required and when a horizontal lifeline is inappropriate.
- Anchorages capable of supporting 5,000 lbs. per worker will be independent of anchorages used to support or suspend platforms. Lifelines will not be attached to guardrails or hoists but rather to the structure.
- Floor holes will be covered completely and securely. If the cover to an open hole is missing the hole will be barricaded with a guardrail. Workers laboring by wall openings 6' or more above a lower level will be protected by a guardrail or personal fall protection.
- Roofers will be protected by the following forms of fall protection: Guardrails; personal fall protection; a warning line 6' from the roof's edge, or a safety-monitoring system.
- Excavations will be guarded when they are 6' or more in depth and not readily seen because of plant growth or other visual barriers.

Steel Erection Plan (Section 27.F).
*****Written Company plan required.**

NA.

- Verify the Weight of the Objects to be picked.
- Inspect slings before each pick. Remove all cut or frayed slings.
- Check winch lines regularly.
- Make sure workers have proper skills and experience.
- Know hand signals; Use Tag Ropes and Pay Attention.
- Use Spud Wrench & Pull Pins.
- Know where steel is supposed to be landed.
- No lifting near energized wires and maintain proper clearances.
- If welding steel, wear Proper Eye Protection for High Energy Light Source as well as to protect from impact.
- Wear proper PPE (Gloves and Eye Protection). Take breaks and hydrate when high temperatures are encountered while wearing PPE.
- Follow erection plan and drawings. Ensure a sequential erection procedure is prepared, which has been approved by the erection engineer.

- Make provisions for positive connections between members of the structure that have been specified to resist imposed lateral and vertical force.
- Reinforcement required for in-service loads and temporary conditions. Ensure temporary guys or bracing are securely anchored
- Steel Members should be clearly marked and labeled.
- Verify the stability of the structure in accordance with the erection engineer’s specifications:
 - at the end of each work day
 - when fastenings may be incomplete
 - during strong winds or when strong winds are forecast.

Night operations lighting plan (Section 7.A.08). NA.
*****Written Company plan required.**

Site sanitation plan (Section 02.A). NA.
No written plan required.

- An adequate supply of drinking water (cool water during hot weather) will be provided.
- Portable drinking-water dispensers will have a tap – water will not be dipped. Dispensers will be clearly marked as “Drinking Water” and will be capable of being closed. Use of a common cup will be prohibited unless sanitized between uses.
- When sanitary sewers are not available porta-johns will be provided.
- Washing facilities will have running water, soap, and an individual means of drying (hand sanitizer will be used when running water is not practical).
- No food or beverage will be stored or consumed in a toilet room or in any area that is exposed to a toxic material.
- An adequate number of waste receptacles will be provided. Receptacles will have covers that fit tightly, be emptied at least daily, and be maintained in a sanitary condition.

Fire Prevention Plan (Section 09.A). NA.
*****Written Company plan required.**

- Discuss the major worksite fire hazards to include potential ignition sources.
- Describe the types of fire-suppression systems to be used (portable fire extinguishers, etc.).
- Discuss employee responsibilities for maintaining the fire-prevention equipment and systems.
- Discuss employee responsibilities for controlling fuel-source hazards.
- Discuss housekeeping procedures to include the removal of waste materials.

Excavations (Section 25.A). NA.

*****Written Company plan and AHA required for excavations or trenches greater than 5 ft (1.5 m) in depth. For excavations or trenches less than 5 ft (1.5 m) in depth, An AHA is required but plan is optional.**

- Workers will not labor in excavations in which there is accumulated water or where water is accumulating until the water hazard is controlled.
- Shoring will be used for unstable soil or depths greater than 5’ unless benching, lay-back, or another acceptable plan can be implemented.
- In excavations less than 20’ in depth the maximum slope will be 34 degrees measured from horizontal (1 1/2’ horizontal to 1’ vertical).
- Excavations will not go below adjacent structures unless they are underpinned or determined safe by a registered professional engineer.

- Excavated material will be placed a minimum of 2' from the excavation's edge.
- Stairs, ramps, or ladders will be provided to workers who are required to enter excavations greater than 4' in depth. This equipment will be located so no more than 25' of lateral travel is required to escape the excavation.
- Ladders will extend 3' past the excavation's edge.
- Personal access ramps will be 4' wide with guardrails while equipment ramps will be 12' wide with curbs of 8" X 8" timbers or equivalent.
- Protection for excavations exposed to the public will meet guardrail requirements while protection against vehicles will be able to withstand the impact forces with traffic.
- Excavations 6' or more in depth, or where workers are routinely exposed to a hazard (impalement or hazardous material), will have a barricade no closer to the edge than 6' with a warning (tape, flags, act.) located 3-4' above the ground.
- Excavations less than 6' in depth will have a barricade no closer than 6"/no farther than 6'.

Scaffolds (Section 21.J.01, 21.J.02 on page 509 and 22.A and 22.B). **NA.**
No written plan required (included as part of the Fall Protection Plan).

- Scaffolds will be level and plumb and erected with base plates upon mudsills or other adequate foundation. Rolling scaffolds will have wheels locked and/or outriggers secured in place.
- Work near overhead power lines will not commence until a survey is made to ascertain a safe clearance distance from the lines. Scaffolds will not be erected or used near power lines until the lines are insulated, de-energized, or rendered safe.
- Scaffolds and their components will be capable of supporting four times the maximum anticipated load. If a scaffold's height is more than four times the minimum base dimension (to include the width added by outriggers) it will be secured to the wall or structure.
- Guardrails will be installed on open sides and ends.
- Platforms will be a minimum of 18" in width and extend over their end supports by at least 6" but no more than 12", unless cleated or restrained by hooks or equivalent means. Platforms will overlap over supports by a minimum of 12" unless nailed together or restrained from movement.
- Platform area will be fully-planked with no greater than 1" gaps between adjacent platforms, and platforms and uprights.
- Scaffold access will be from ladders (bottom rung no greater than 24" in height), stair towers, ramps, and walkways but not from cross-braces.
- If a worker can fall 6' or more to a lower level they will be protected by a guardrail or a full-body harness with lifeline and anchorage point.

Machinery/mechanized equipment (Section 18.G). **NA.**
No written plan required.

- Before machinery and mechanized equipment is placed into service it will be inspected and certified as safe by a competent person.
- Front-end loaders, bulldozers, backhoes, cranes, and similar equipment will have at least one dry chemical or CO2 portable fire extinguisher on-board with a minimum rating of 5-B:C.
- Self-propelled construction equipment will have a reverse signal alarm.
- Belts, gears, chains, shafts, pulleys, drums, and other rotating and moving equipment parts will be guarded when exposed to contact by persons or when they otherwise create a hazard.
- Crane will operate at least 10' away from overhead power lines.
- An operating manual, log book, load chart, and document detailing operating limits in windy or cold weather conditions will be in the cab when the crane is operating.

- Crane will be within one degree of level and outriggers fully-extended when in use. Wheels will be off the ground at every setting.
- Crane outrigger floats will be securely attached. Float blocking will be of sufficient size and stability to support the total area. Blocking will not be performed under the outrigger beams.
- Crane's rear swing radius will be barricaded.
- Riding on or standing under loads is prohibited.

Electrical (Section 11).
No written plan required.

NA.

- Electrical work shall be performed by Qualified Personnel with verifiable credentials.
- An AHA and written work procedures must be prepared for unusual or complicated work activities or any activity identified by the Qualified Person.
- Work activity adjacent to energized overhead power lines will not be initiated until a survey has been made to ascertain the safe clearance distance from the lines.
- Whenever possible, all circuits and equipment will be de-energized before work is started and personnel protected by lockout/tagout and clearance procedures, and grounding.
- Live parts of wiring or equipment will be guarded.
- Transformer banks and high-voltage equipment will be protected against unauthorized access and those entrances not under constant observation will be kept locked. Metallic enclosures will be grounded and signs warning of high voltage and prohibiting unauthorized entrance posted.
- Flexible cords will be inspected by the user daily. Cord sets used on construction sites or in damp locations will contain an equipment ground wire and have a plug attached.
- Flexible cords will be protected from damage caused by vehicles, foot traffic, sharp corners, and pinching. Cords passing through holes will be protected by suitable means.
- Flexible cords will only be used in continuous lengths. Cords No. 12 or larger may be used with a splice if the splice is made by a qualified electrician, the insulation is equal to the cord being spliced, and the wire connections are soldered. No wire nuts will be used.
- Flexible cords and cables will not be secured by staples or hung from nails or bare wire.
- Enclosures containing over-current protective devices will be provided with lockable, close-fitting doors. Circuit-breakers, switches, fuse panels, and motor controllers located out-of-doors or in wet locations will be contained in weatherproof enclosures or cabinets. When receptacles are used in wet locations they will be contained in a weatherproof enclosure the integrity of which is not affected when a plug is inserted.
- All electrical circuits will be grounded.
- Portable and semi-portable electrical tools and equipment will be grounded by a multi-conductor cord having a polarized plug with a grounding conductor. Double-insulated tools do not have to be grounded.
- Grounding rods with pipe electrodes will be used in 8' lengths and driven to full depth.
- Temporary lights will not be suspended by their electric wire unless designed for suspension.
- Bulbs attached to temporary lighting strings and extension cords will be protected by guards. Empty light sockets (broken bulbs, etc.) will be immediately filled.
- All receptacle outlets that provide temporary electrical power during construction or demolition shall have GFCI protection.

10. RISK MANAGEMENT PROCESSES (AHA – ACTIVITY HAZARD ANALYSIS)

Instructions

1. List each definable feature of work / phase of work in the table below. NOTE: Definable feature of work / phase of work should be same as listed in Section 2.d. of this APP)
2. For each listed phase/feature complete an Activity Hazard Analysis form (See Figure 1-2 page 10 of EM 385-1-1) and insert into Appendix X.

ID No.	Feature of work / phase of work
1	G1 - Mobilization / General Construction
2	G2 - Demolition
3	G3 - Scaffolding / Fall Protection
4	G4 - Excavation / Trenching
5	G5 - Electrical
6	G6 – Cement Work
7	G7 – Masonry Work
8	G8 – Confined Spaces & Hazardous Atmosphere
9	G9 – Plumbing
10	G10 – Painting
11	G11 – Steel Structure Erection
12	G12 – Abrasive Blasting

APPENDIX I.

SIGNATURE SHEET

**(Reserved if more space is needed other than
Section 1)**

APPENDIX II.

BACKGROUND INFORMATION

Required Enclosures:

Optional:

Copy of project description from SOW, etc.

APPENDIX III.

STATEMENT OF SAFETY AND HEALTH POLICY

Required Enclosures:

- 1. Copy of signed company statement of Safety and Health Policy (if not using generic option in Section 3).**
- 2. The Contractor's written safety program goals, objectives, and accident experience goals for this contract (if not using generic option in Sections 2 and 3).**

Optional:

APPENDIX IV.

RESPONSIBILITIES AND LINES OF AUTHORITY

Required Enclosures:

- 1. Contractor's Resume and "USACE 30 hour Construction Safety Course certificate for SSHO" or equivalent certificate issued and acknowledged by local authorities.**
- 2. Proof of competency / qualification (Resumes and certificates) for the other persons listed in Section 4.**
- 3. Organization Chart (with names) for Key Corporate and Project personnel.**
- 4. Corporate/Company accountability policies and procedures (if not using generic option).**

Optional:

APPENDIX V.

SUBCONTRACTORS AND SUPPLIERS

Required Enclosures:

Optional:

Copies of Subcontractor Safety policies and procedures

APPENDIX VI.

TRAINING

Required Enclosures:

Company Safety and Occupational Health (SOH) Training policies, procedures, and plans (if not using generic option in Section 6).

Optional:

Company SOH training documents – such as training logs, certificates, etc.

SPECIFIC WORKER TRAINING

Abrasive blasting.

Name:	Training:
Name:	Training:
Name:	Training:

Blasting.

Name:	Training:
Name:	Training:
Name:	Training:

Confined space.

Name:	Training:
Name:	Training:
Name:	Training:

Cranes/derricks.

Name:	Training:
Name:	Training:
Name:	Training:

Electrical.

Name:	Training:
Name:	Training:
Name:	Training:

Explosive-actuated tools.

Name:	Training:
Name:	Training:
Name:	Training:

First-aid/CPR.

Name:	Training:
Name:	Training:
Name:	Training:

Lockout/tagout.

Name:	Training:
Name:	Training:
Name:	Training:

Machinery/mechanized equipment.

Name:	Training:
Name:	Training:
Name:	Training:

Scaffolding.

Name:	Training:
Name:	Training:
Name:	Training:

Welding/cutting.

Name:	Training:
Name:	Training:
Name:	Training:

APPENDIX VII.

SAFETY AND HEALTH INSPECTION

Required Enclosures:

- 1. Company safety and health inspection policies, procedures, and forms. (if not using generic option Section 7).**
- 2. Documents supporting Section 7 requirements.**

Optional:

APPENDIX VIII.

ACCIDENT REPORTING

Required Enclosures:

- 1. Company accident reporting policies, procedures, and forms. (if not using generic option in Section 8).**
- 2. Documents supporting Section 8 requirements.**

Optional:

APPENDIX IX.

PLANS

Required Enclosures:

- 1. Area map showing site location.**
- 2. Site layout map also showing site lay down areas, sanitation facilities, on-site medical support location (e.g. 1st Aid Kit), emergency telephone location and numbers.**
- 3. Acknowledgement of key provisions of all required plans – or copies of company SOH policies, procedures, or plans related to requirements.**

Optional:

APPENDIX X.

RISK MANAGEMENT PROCESSES (AHA – ACTIVITY HAZARD ANALYSIS)

Required Enclosures:

- 1. One completed AHA form for each phase of work / feature of work. Refer to AHA template and include the completed forms in Appendix X.**

Optional:

Activity Hazard Analysis Template

How to use this document

**This first page is NOT to be included in the APP you're going to submit.
PLEASE DELETE IT BEFORE PRINTING THE FILLED DOCUMENT**

Directions:

Activity Hazard Analysis [AHA] is required for each definable feature of work (DFOW). However, many if not all projects involve one or more of the following activities as part of one or more DFOWs.

Work Activities:

- a. Mobilization / General Construction
- b. Demolition
- c. Scaffolding / Fall Protection
- d. Excavation / Trenching
- e. Electrical
- f. Cement Work
- g. Masonry Work
- h. Confined Spaces
- i. Plumbing
- j. Painting
- k. Steel Structure Erection
- l. Abrasive Blasting

Contractors are authorized to utilize the attached **Generic AHAs** relevant to each of the above said activities in their submittal and then incorporate them into their Accident Prevention Plan (APP). The Contractor is responsible for reviewing this document in its entirety and to make any changes to adapt the document to their construction practices. The Contractor may substitute their own AHAs for submittal review if they have their own APP and AHAs.

NOTE: To use the Generic AHA you **MUST** complete the tables on the following pages (to be part of your submittal) and fill **all** blanks and areas denoted by the **RED** arrows in each generic AHA including checking the "Accepted as part of the APP" box at the bottom of the Generic AHA and completing the APP preparer signature box at the bottom right of each form. If any step or hazard reported in the AHA does not apply to your case it shall be deleted and or modified to meet the needs of the Contractor's operations.

In addition to the changes mentioned above, update the required information pertaining to Contractor Identity, Contract #, Project Name, Date, ID of Qualified Safety Official, and Signatures.

The AHA shall be submitted in pdf format and incorporated as Appendix X of the ACCIDENT PREVENTION PLAN [APP].

The Generic AHAs are not a substitute for full compliance with EM 385-1-1 requirement but are intended only to highlight selection items.

Activity Hazard Analysis

Contract No.:

Project Name:

Location:

Date:

Contractor's competent / qualified person:

The following Generic AHAs are incorporated into the site specific AHAs.

Generic AHA used in this APP	Yes	No/NA
G1 - Mobilization / General Construction		
G2 - Demolition		
G3 - Scaffolding / Fall Protection		
G4 - Excavation / Trenching		
G5 - Electrical		
G6 - Cement Work		
G7 - Masonry Work		
G8 - Confined Spaces & Hazardous Atmosphere		
G9 - Plumbing		
G10 - Painting		
G11 - Steel Structure Erection		
G12 - Abrasive Blasting		

ACTIVITY HAZARD ANALYSIS		
ID No.	G-1	FEATURE OF WORK: GENERIC AHA – Mobilization / General Construction Hazards
Contract No.	Project:	Location:
Date:	Activity:	Estimated Start Date:
PRINCIPAL STEPS	POTENTIAL SAFETY / HEALTH HAZARDS	RECOMMENDED CONTROLS
General Safety Requirements during mobilization and in general construction projects.	<ol style="list-style-type: none"> 1. Exposure to Cold or Hot Weather 2. Dehydration 3. Illnesses from improper sanitation 4. Injury from use of hand and power tools 5. Slip, Trip, Fall hazards 6. Back, shoulder, and other ergonomic injuries 7. Struck by / Caught between hazards from heavy equipment operations. 8. Injury from mines and unexploded ordnance. 	<ol style="list-style-type: none"> 1a. Minimum Personal Protective Equipment Dress: <ul style="list-style-type: none"> Long Pants Shirts with Sleeves Hardhat Covered Shoes (Steel Toe Preferred) Safety Glasses (Potential Eye Hazard Areas) Reflective Safety Vest if working around heavy equipment or on/near roadways. 1b. Weather: <ul style="list-style-type: none"> Wear appropriate clothing for hot or cold weather. Sun block Lip balm 2. Dehydration: <ul style="list-style-type: none"> Drink at least ½ liter of water an hour. Refer to Company quick sheet, SOPs, plan, etc. for specific details on heat stress signs and symptoms. 3. Provide approved potable water, toilet and hand washing facilities; food service, and waste disposal per EM 385-1-1 Section 2. 4a. Use hand and power tools only if in good working condition and only for intended use. Inspect prior to each use. 4b. Do not use any power tool that does not have the proper electrical grounding plug unless it is double insulated. 4c. Provide proper guarding on all power tools – especially abrasive and grinding wheels. 4d. Do not carry electrical power tools by the cord. 4e. Provide all personal protective equipment necessary to control eye, face, head, body, and foot protection for the task. 4f. Comply with other specific requirements of EM 385-1-1 Section 13. 5a. Maintain housekeeping – maintain the work area free from debris such as board, blocks, rocks, etc. that might create a tripping hazard. (EM 385-1-1 Sec 14.C.) 5b. Store all materials in a neat orderly manner. Do not stack beyond stable levels. (EM 385-1-1 Sec 14) 5b. Provide adequate lighting for the work area – especially at night or during the day in areas without adequate natural light. (EM 385-1-1 Sec 7.A.) 6a. Use proper lifting techniques for manual material handling. 6b. Limit one man lifts to no more than 25 kg. 7a. All vehicles and heavy equipment must be operated by qualified personnel and in accordance with manufacturer’s instructions. 7b. Inspect all heavy equipment prior to use (EM 385-1-1 Sec 18.A.03) 7c. Passengers must be seated and wearing seat belts during movement. 7d. Backup alarms or ground guides must be used whenever backing where worker are present in the area.

		<p>7e. Other provisions of EM 385-1-1 Section 18 must be followed.</p> <p>8a. Verify UXO clearance certificate in on file and to anticipated depth of construction for entire site area including lay-down yard.</p> <p>8b. Train all workers on 3Rs – Recognize, Retreat, Report for anticipated UXO. Use the clearance report to anticipate likely items to be found.</p> <p>8c. Train all workers in standard marking color code: White – safe, Blue – unexploded ordnance, Red – mines.</p> <p>All hazards – Post accident prevention signs, tags, labels, and signals at key points around project site in proximity to the hazard and at project entry of general site hazards. Conduct entry brief for all visitors to the site and provide all required PPE for safe entry.</p>
Ladders	<ul style="list-style-type: none"> • Defective ladders • Falling 	<ol style="list-style-type: none"> 1. Only OSHA approved ladders are to be used. 2. Defective and/or damaged ladders shall be removed from jobsite immediately. 3. Standing on top step of ladder is forbidden. Use of metal ladders around exposed energized electrical wiring is forbidden. 4. Always move the ladder to avoid overreaching. 5. Extension ladders are to be properly tied off at the top and rigidly secure at the bottom: The base of the ladder must be set back a safe distance from vertical approximately ¼ of the working length of the ladder. 6. Face the ladder at all times when ascending or descending. 7. Do not carry any material in your hand while using any ladder. Use Hand line.
EQUIPMENT	INSPECTION REQUIREMENTS	TRAINING REQUIREMENTS
Hand and power tools Heavy Equipment	<p>Hand and power tools inspected prior to use and per manufacturer's specifications.</p> <p>Heavy equipment when brought on site and per EM 385-1-1 Sec 18.</p>	<p>Proper use of hand and power tools</p> <p>Heavy equipment operator training for specific type, make, model of equipment.</p> <p>Specialized training for equipment as required by manufacturer.</p> <p>UXO hazard recognition, retreat, and report for probable site munitions.</p>
<p>Prepared by: <i>(Contractor's competent/qualified person signature)</i></p>		
<p><input checked="" type="checkbox"/> - AHA Accepted as part of project Accident Prevention Plan</p>		<p>Signature:</p> <p>Date:</p>

ACTIVITY HAZARD ANALYSIS		
ID No. G-2	FEATURE OF WORK: GENERIC AHA – Demolition	
Contract No.	Project:	Location:
Date:	Activity:	Estimated Start Date:
PRINCIPAL STEPS	POTENTIAL SAFETY / HEALTH HAZARDS	RECOMMENDED CONTROLS
1. Planning	1. Lead or asbestos exposure 2. Unplanned structural failure 3. Unplanned hazards from existing utilities	1. Conduct a lead and asbestos survey of the facility to be demolished prior to the start of work. 2. Evaluate the structural integrity of the building and prepare a demolition plan (See EM 385-1-1 Sec 23.A.01). 3. Identify all electric, gas, water, steam, sewer, and other service lines.
2. Demolition	1. General construction hazards. 2. Lead or asbestos exposure . 3. Unplanned structural failure. 4. Hazards from existing utilities. 5. Hazards from debris removal.	1. Follow mobilization and general construction generic AHA requirements. 2. Conduct lead and asbestos abatement per approved plan. 3a. Follow approved demolition plan for sequencing demolition. 3b. Unless specified otherwise in the demolition plan demolition of floors and exterior walls begin at the top of the structure and proceed downward. 3c. Control hazards from fragmentation of glass. 3d. Do not use mechanical equipment on floors that have not been structurally evaluated to support the imposed load. 3e. Competent person will make continuing inspections to detect hazards from weakened or deteriorating floors, wall, or loosened material. If detected do not work in area until hazard abated by shoring, bracing, or other means. 4. Shutoff, cap, or otherwise control outside the building line all utilities identified in Step 1 – planning. 5a. Manage debris removal IAW EM 385-1-1 Sec 23.B with regards to chutes, 5b. Never allow a vertical wall section more than 6 ft in height to stand without lateral bracing. 5c. Control dust exposure by wetting or other means. If this is not practical then provide respiratory protection to workers. 5d. Mark and manage area around demolition site to control falling debris hazard. 5e. Comply with other provisions of EM 385-1-1 Section 23 relevant to site specific demolition hazards.
EQUIPMENT	INSPECTION REQUIREMENTS	TRAINING REQUIREMENTS
Hand and Power tools. Sledge hammers, wrecking bars, and other demolition specific tools. Mechanical demolition equipment.	Inspect hand and power tools daily and per manufacturer's directions. Daily inspection of mechanical equipment per Sec 18 of EM 385-1-1.	Competent person training for demolition. Qualified operator training for all mechanical equipment.
Prepared by: <i>(Contractor's competent/qualified person signature)</i>		
<input checked="" type="checkbox"/> - AHA Accepted as part of project Accident Prevention Plan		Signature: Date:

ACTIVITY HAZARD ANALYSIS		
ID No. G-3	FEATURE OF WORK: GENERIC AHA – Scaffolding / Fall Protection	
Contract No.	Project:	Location:
Date: 9/11/13	Activity:	Estimated Start Date:
PRINCIPAL STEPS	POTENTIAL SAFETY / HEALTH HAZARDS	RECOMMENDED CONTROLS
1. Set-Up	1. Back Strain from uploading or moving scaffold components. 2. Lacerations on hands 3. Scaffold failure due to damaged scaffolding components. 4. Struck by mechanized equipment. 5. Loss of load. 6. Stuck by suspended loads or material. 7. Electrical Shock 8. Scaffold failure due to improper set-up	<p>NOTE: All items hazards and controls in generic AHA G1: Mobilization and General Construction Safety apply to this activity.</p> <p>1a. Utilize proper lifting techniques. 1b. Size up load before lifting. 1c. Ask for help when lifting heavy items more than 50 lbs.</p> <p>2. Wear leather gloves.</p> <p>3a. INSPECT all scaffolding components defects or damage such as cracks, excessive rust, metal fatigue, unauthorized repairs, bent tubing or frame, etc. Frames Tubing Base Plates Locking Pins Access Ladder Planking (Wood or Metal) Cross Braces</p> <p>3b. REMOVE damaged or defective scaffold components immediately. 3c. Attach tag or label “DO NOT USE” on scaffold component.</p> <p>4a. ALWAYS maintain eye contact with operator of equipment. 4b. NEVER stand behind (Blind Spots) equipment. 4c. NEVER stand near unloading or moving of scaffold components. 4d. ONLY qualified operators shall operate equipment.</p> <p>5a. Secure loads from displacement with ropes, cables, chains, etc. before movement. 5b. Ensure load to be lifted is secured, balanced, etc. 5c. Keep hands, fingers, or other body parts away from pinch points.</p> <p>6a. NEVER stand underneath suspended loads. 6b. Use taglines to control loads when elevated.</p> <p>7a. Check above for overhead power lines. 7b. NEVER erect scaffolding within 10 ft (3 m) of overhead power lines. Refer to EM 385-1-1, Table 11-1 for Minimum Clearance from Energized Overhead Electrical Lines 7c. NEVER string or hang temporary power cords, wires, etc. on metal scaffolding. Consult with Safety Officer.</p> <p>8a. Inspect ground conditions (level and firm). 8b. Stable base is necessary for proper scaffold assembly. 8c. Scaffold shall be tied into structure when the scaffold height exceeds four times the minimum scaffold base dimension per EM 385-1-1, para 22.B.09</p> <p><i>Develop specific controls to eliminate or reduce each hazard to an acceptable level of risk.</i></p>

<p>2. Assembly of Scaffolding</p>	<p>1 Fall from Elevated Heights 2. Scaffold Failure 3. Back Strain 4. Lacerations on hands</p>	<p>1a. 100 percent fall protection required during assembly. 1b. Personnel shall not be exposed to unprotected sides or falls greater than 6 ft (1.8 m). 1c. Scaffolding shall not exceed 14 inches (35.5 cm) from the planking to the face of the building or structure. 1d. Scaffolding more than 14 inches (35.5 cm) from the planking to the face of the building or structure shall be guardrails and/or the use of personal fall protection. 1e. Personnel shall be tied off to a vertical lifeline with a rope grab during assembly of scaffolding. 1f. Vertical lifeline shall be secured to an anchor point of at least 5,000 lbs (2,267.9 kg) per individual.</p> <p>1g. Contact Safety Officer for additional guidance on fall protection requirements.</p> <p>2a. See diagram below and refer EM 385-1-1, Section 22 for specific requirements (i.e., toe boards, guard rails, safe access, etc.) 2b. Scaffolding shall be assembled on mud sills and base plates. 2c. Mud sills shall be at least 2 times the size of the base plates to disperse total weight of scaffolding. 2d. Scaffolding shall be plumb and level. 2e. Working levels shall be fully decked and/or planked. 2f. Planking shall extend over the end supports not less than 6 in (30.4 cm), 2g. Planking shall be secured, supported, or braced to prevent excessive spring or deflection and secured to prevent loosening, tipping, or displacement. Use of tie wire, cleats, etc. are options. 2h. Planking shall overlapped at least 12 inches (30.4 cm) or secured from movement. 2i. Scaffold shall be capable of supporting without failure at least 4 times the maximum anticipated loads. 2j. Scaffolding shall be all required cross, horizontal, or diagonal braces to secure vertical members laterally. 2k. Scaffolding shall be rigid.</p> <p>3a. Utilize proper lifting techniques. 3b. Size up load before lifting. 3c. Ask for help when lifting heavy items more than 50 lbs.</p> <p>4. Wear leather gloves.</p>
<p>3. Use of Scaffolding</p>	<p>Scaffold Failure Falls from Heights Slips, Trips, or Fall</p>	<p>1a. DO NOT overload more than 4 times the maximum load rating. 1b. DO NOT attached hoists or other material lifting devices without Safety Officer approval. 1c. Scaffolding shall be tied into building whenever height of the scaffold exceeds 4 times the minimal base. Refer to EM 385-1-1, para 22.B.09 for additional guidance. 1d. Scaffold usage shall cease during high winds or severe inclement weather conditions.</p> <p>2a. Guardrails shall be used as primary fall protection. Guard rails shall installed IAW EM 385-1-1, para 21.B.02. 2b. Securing of personal fall protection devices to scaffolding is prohibited. 2c. Personnel shall have fall protection whenever above 6 ft (1.8 m). 2d. Climbing of braces or cross bracing is prohibited. 2e. Safe access (ladder) shall be provided. 2f. Personnel shall not stand on mid rails. 2g. Ladders shall extend at least 3 ft (0.9 m) past the work area.</p> <p>3. Walking surfaces on and around scaffolding shall be clear of debris.</p>
<p>4. Disassembling of Scaffolding</p>	<p>1 Fall from Elevated Heights 2. Back Strain</p>	<p>1a. 100 percent fall protection required during disassembly. 1b. Personnel shall not be exposed to unprotected sides or falls greater</p>

	3. Lacerations on hands	<p>than 6 ft (1.8 m).</p> <p>1c. Personnel shall be tied off to a vertical lifeline with a rope grab during assembly of scaffolding.</p> <p>1d. Vertical lifeline shall be secured to an anchor point of at least 5,000 lbs (2,267.9 kg) per individual.</p> <p>1e. Contact Safety Officer for additional guidance on fall protection requirements.</p> <p>2a. Utilize proper lifting techniques.</p> <p>2b. Size up load before lifting.</p> <p>2c. Ask for help when lifting heavy items more than 50 lbs.</p> <p>3. Wear leather gloves.</p>
EQUIPMENT	INSPECTION	TRAINING REQUIREMENTS
<p>Scaffold components</p> <p>Hammers</p> <p>Mud sills</p> <p>Full body harness</p> <p>Lanyard</p> <p>Lifeline</p> <p>Fall protection anchor points</p> <p>Float</p>	<p>Inspect scaffold components prior to use</p> <p>Inspect scaffold daily (Use Checklist)</p> <p>Inspect level and plumb of scaffoldings during erection and daily when in use.</p> <p>Daily Housekeeping of work areas and scaffolding</p>	<p>Competent Person qualification</p> <p>Scaffold Assembly</p> <p>Fall Protection</p> <p>Inspection of Work Platforms</p>
<p>Prepared by: <i>(Contractor's competent/qualified person signature)</i></p>		
<p><input checked="" type="checkbox"/> - AHA Accepted as part of project Accident Prevention Plan</p>		<p>Signature:</p> <p>Date: 9/11/13</p>

ACTIVITY HAZARD ANALYSIS		
ID No. G-4	FEATURE OF WORK: GENERIC AHA – Excavation / Trenching	
Contract No.	Project:	Location:
Date:	Activity:	Estimated Start Date:
PRINCIPAL STEPS	POTENTIAL SAFETY / HEALTH HAZARDS	RECOMMENDED CONTROLS
1. Prepare excavation / trench work area.	1. Struck by traffic in area. 2. Struck by / caught between heavy equipment. 3. UXO hazard.	NOTE: All items hazards and controls in generic AHA G1: Mobilization and General Construction Safety apply to this activity. 1a. Develop a traffic control plan for the work areas to keep traffic back from the planned excavation edge and work area. 1b. Wear proper reflective vest type for traffic. 1c. Use proper class perimeter protection (EM 385-1-1 pgs Q55-56 / Sec 25.B.) 2a. Plan for equipment laydown and operating area in traffic control plan. 2b. Perform initial and routine equipment inspections. 2c. Use ground guides in close proximity areas – no exceptions. 3. Verify UXO clearance certificate against work area location.
2. Open excavation / trench.	1. Struck by/ caught between traffic and heavy equipment. 2. UXO hazard. 3. Contact with buried utility lines (electrical, gas, etc.) 4. Cave in / Collapse.	1. Same as step 1 and 2 above controls. 2. Same as 3 above – plus regularly inspect dig for signs of buried UXO. 3a. Pre-locate all buried utilities. 3b. Observe for marking / signs of buried utilities during dig – barriers, warning tape, etc. 4a. Prepare excavation plan for all excavations over 5 ft (1.5m) in depth. Optional for excavations less than 5 ft – AHA is acceptable. (EM 385-1-1 Sec 25.A.01) 4b. Identify a Competent person for the planning and work. 4c. Evaluate soil type at all planned excavation depths. 4d. Design a protective system (e.g. Bench, slope, or shore) for the excavation per the soil type and other site conditions. 4e. Remove all overburden from edge of trench at least 2 ft. 4f. Protect the stability of adjacent structures including buildings, roadways, etc. 4g. Protect the excavation from water entry 4h. Do not work in excavations where there is standing water. 4i. Provide safe access to and from the excavation – ramps, stairs, ladders. 4j. When persons will be in or around an excavation, a Competent Person shall inspect the excavation, the adjacent areas, and protective systems daily: before each work shift; throughout the work shifts as dictated by the work being done; after every rainstorm; after other events that could increase hazards, e.g., snowstorm, windstorm, thaw, earthquake, etc.; when fissures, tension cracks, sloughing, undercutting, water seepage, bulging at the bottom or other similar conditions occur; when there is a change in size, location or placement of the spoil pile; and where there is any indication or change in adjacent structures. (EM 385-1-1 Sec 25.A.02)
3. Work in/around excavation/ trench.	1. Cave in / Collapse. 2. Fall from excavation / trench edge. 3. Inability to egress especially in an emergency.	1, 2, 3, and 4 – same controls as Step 2 above.

	4. Changes in soil conditions / atmospheric conditions in trench (confined space hazards). 5. Traffic hazards.	
4. Close excavation / trench.	1. Struck by/ caught between heavy equipment. 2. Cave in / Collapse. 3. Traffic hazard.	All controls outlined in steps 1, 2, and 3 above. All excavation hazards exist and must be controlled until the excavation is properly closed..
EQUIPMENT	INSPECTION REQUIREMENTS	TRAINING REQUIREMENTS
Hand shovels and tools Excavation equipment	Tool inspections Equipment Inspections Daily plus excavation inspection	Competent person qualification training (EM 385-1-1 Sec 25.A.02.b) Equipment operator training.
Prepared by: <i>(Contractor's competent/qualified person signature)</i>		
<input checked="" type="checkbox"/> - AHA Accepted as part of project Accident Prevention Plan		Signature:
		Date:

ACTIVITY HAZARD ANALYSIS		
ID No.	G-5	FEATURE OF WORK: GENERIC AHA – Electrical
Contract No.	Project:	Location:
Date:	Activity:	Estimated Start Date:
PRINCIPAL STEPS	POTENTIAL SAFETY / HEALTH HAZARDS	RECOMMENDED CONTROLS
1. Provide temporary power to the construction project and potentially the building occupants.	1. Falls 2. Electrocutation	NOTE: All items hazards and controls in generic AHA G1: Mobilization and General Construction Safety apply to this activity. 1a. Provide safe work platform and access to all work areas (see generic AHA G3 – scaffolding/fall protection). 1b. Protect all openings in work surfaces from falls. 1c. Do not use drums or other unstable objects as work platforms. 2a. Use only qualified person, electrical (EM 385-1-1, App Q) to perform all electrical work. 2b. Use only CE or UL approved wiring and equipment. 2c. All work must comply with NEC or CE code requirements. 2d. Insure that before work is begun the circuit is de-energized and free from stored energy. Comply with the specific requirements in EM 385-1-1 (e.g. Lockout/Tagout – Control of Hazardous Energy – Sec 12 and 11.A.02 – Isolation) 2e. Provide temporary power from a properly grounded source through a 10mA GFCI protected weatherproof panel. 2f. Protect all circuits from overload by circuit breakers or other approved overload protection methods. 2g. Maintain ground throughout the temporary power circuit to portable hand tools, and other equipment unless the tool is double insulated and marked as such. 2h. Comply with all other provisions of EM 385-1-1 Section 11 (e.g. 11.E temporary wiring and lighting – sketch of plan, testing, clearance, wet locations, etc.)
2. Remove / de-commission existing wiring and electrical equipment.	1. Falls 2. Electrocutation	All controls listed in Step 1 apply to this step also. 1a. Provide safe work platform and access to all work areas (see generic AHA G3 – scaffolding/fall protection). 1b. Protect all openings in work surfaces from falls. 1c. Do not use drums or other unstable objects as work platforms. 2a. All controls identified above – plus: 2b. Control of Hazardous energy – Lock Out / Tag Out. Due to potential for poor understanding of existing wiring service special care must be used to test all circuits prior to removal / de-commissioning. 2c. Warning: stored energy in capacitors and other electrical equipment can present an electrocution hazard even after it is disconnect from a power supply. Stored energy must be dissipated prior to handling.
3. Install new wiring and electrical equipment	1. Falls 2. Electrocutation	All controls listed in Step 1 apply to this step also. 1a. Provide safe work platform and access to all work areas (see generic AHA G3 – scaffolding/fall protection). 1b. Protect all openings in work surfaces from falls. 1c. Do not use drums or other unstable objects as work platforms. 2a. All controls identified above – plus: 2b. Exercise special care to identify energized temporary electrical wiring from non-energized new wiring. 2c. Do not use permanent wiring to provide temporary power without specific plan for identifying energized circuits.

<p>4. Remove temporary power and energize permanent system.</p>	<p>1. Falls 2. Electrocutation</p>	<p>All controls listed in Step 1 apply to this step also. 1a. Provide safe work platform and access to all work areas (see generic AHA G3 – scaffolding/fall protection). 1b. Protect all openings in work surfaces from falls. 1c. Do not use drums or other unstable objects as work platforms. 2a. All controls identified above – plus: 2b. De-energize all temporary power</p>
EQUIPMENT	INSPECTION REQUIREMENTS	TRAINING REQUIREMENTS
<p>Hand and power tools Specialized electrical tools and equipment</p>	<p>Tool and equipment inspections Lock-Out / Tag-Out inspections for stored energy</p>	<p>Competent person training and qualification</p>
<p>Prepared by: <i>(Contractor's competent/qualified person signature)</i></p>		
<p><input checked="" type="checkbox"/> - AHA Accepted as part of project Accident Prevention Plan</p>		<p>Signature: Date:</p>

ACTIVITY HAZARD ANALYSIS		
ID No.	G-6	FEATURE OF WORK: GENERIC AHA – Concrete
Contract No.	Project:	Location:
Date:	Activity:	Estimated Start Date:
PRINCIPAL STEPS	POTENTIAL SAFETY / HEALTH HAZARDS	RECOMMENDED CONTROLS
1. Cut Lumber; Set & Secure Lumber; Drive & Secure; Formwork	<ul style="list-style-type: none"> • Excessive Noise • Cuts/Lacerations • Electrical Shock • Flying Debris • Crush Hazard 	<p>NOTE: All items hazards and controls in generic AHA G1: Mobilization and General Construction Safety, AHA G3: Scaffolding and Fall Protection, and AGA G4: Excavation and Trenching apply to this activity.</p> <ol style="list-style-type: none"> 1. Hearing and eye protection will be worn while operating saws. 2. Inspect and test equipment and cords prior to use. 3. All guards must in place and operational, prior to use. 4. Ensure that no overhead hazards in the work area. 5. Tools that are not in use will be unplugged from their power source. 6. Worker using sledge hammer will ensure that his work area is clear of other workers prior to swinging the hammer. 7. Steel toed boots will be worn. 8. Visually inspect formwork for defects before use 9. Stage formwork as close to the work area as possible to minimize the material handling exposure. 10. Wear gloves, hardhats and proper PPE. 11. Use proper lifting methods when handling forms. 12. Use team lifting when handling awkward, bulky or heavy loads. 13. Make sure to shore forms properly and they are inspected by qualified individual.
2. Rebar Installation	<ul style="list-style-type: none"> • Struck By (Hot Metal) • Cuts/Lacerations • Mill scale • Sharp/Sheared Tire Wire Ends • Trips/Falls • Impalement Hazard • Overhead Power Lines 	<p>All controls listed in Step 1 apply to this step also.</p> <ol style="list-style-type: none"> 1. Workers cutting rebar will wear face shields, gloves, hearing protection, and hard hats. 2. Grinder guards must be in place and fully operational prior to use. 3. Lathers will wear safety glasses, gloves, and hard hats. 4. Construction debris will be removed on a daily basis. 5. All rebar ends shall be capped to protect workers from impalement/laceration hazards. 6. If possible, stack rebar in a location that is free from overhead power lines. If this is not possible, rebar will be moved forward and away from the power lines before being lifted. 7. No workers will be working under suspended rebar cages at any time.
3. Placing Concrete	<ul style="list-style-type: none"> • Mix Truck Placement • Struck By/Caught Between • Catch in Cement Mixer • Hand Injuries • Eye Injuries • Concrete Burns 	<p>All controls listed in Steps 1 & 2 apply to this step also.</p> <ol style="list-style-type: none"> 1. Use qualified flagmen to ensure a clear path to the work zone. 2. The mix truck will have an operational back-up alarm. 3. Only the truck's operator will place the chute and run the mixer. 4. Train mixer operator; Keep hands and loose clothing away from moving parts; Use of kill-switch on mixer 5. Wear safety glasses when working with wet concrete. 6. Wear impervious gloves, boots and pants when working with wet concrete. 7. Wash off any excess concrete from your skin as soon as possible.
4. Removing concrete	<ul style="list-style-type: none"> • Slips/Trips/Falls same level 	<p>All controls listed in Steps 1, 2 & 3 apply to this step also.</p>

forms.	<ul style="list-style-type: none"> • Fall from Elevation • Manual Material Handling • Struck by falling/flying materials 	<ol style="list-style-type: none"> 1. Visually inspect any tools or equipment to be used in the formwork removal operation for defects or damage before each use. 2. Stage formwork transportation cages as close to the work area as possible to minimize the material handling exposure. 3. Be sure the walking/working areas around the forms and the form cages are free from ruts, holes and accumulation of water. 4. Be sure that the formwork is in the firm grasp of the worker(s) before removing any of the form supports. 5. Safety glasses to be worn at all times when removing the forms due to the flying object exposure. 6. Use proper lifting methods when handling forms. 7. Personal fall arrest systems, PFAS, will be utilized to control fall hazards. 8. PFAS will be utilized whenever the workers are exposed to a fall greater than six feet. 9. Gloves will be worn when handling forms to prevent cuts and scrapes 10. Hardhats and safety glasses will be worn at all times to protect the workers from flying/falling objects. 11. All form removal work is to be performed at the direction of the competent person.
EQUIPMENT	INSPECTION REQUIREMENTS	TRAINING REQUIREMENTS
Power and hand tools; Rebar	Tool and equipment inspections Lock-Out / Tag-Out inspections for stored energy; Inspect hand tools for defects; Inspect PPE for wear or defects; Inspect rebar for sharp edges and impale hazards.	Competent person training and qualification
Prepared by: <i>(Contractor's competent/qualified person signature)</i>		
<input checked="" type="checkbox"/> - AHA Accepted as part of project Accident Prevention Plan		Signature: Date:

ACTIVITY HAZARD ANALYSIS		
ID No.	G-7	FEATURE OF WORK: GENERIC AHA – Masonry
Contract No.	Project:	Location:
Date:	Activity:	Estimated Start Date:
PRINCIPAL STEPS	POTENTIAL SAFETY / HEALTH HAZARDS	RECOMMENDED CONTROLS
1. Material Handling	<ul style="list-style-type: none"> • Back Injuries • Crush Injuries • Cuts, Bruises and Contusions • Eye Injuries 	<p>NOTE: All items hazards and controls in generic AHA G1: Mobilization and General Construction Safety, AHA G3: Scaffolding and Fall Protection, AGA G4: Excavation and Trenching and AHA G6: Concrete apply to this activity.</p> <ol style="list-style-type: none"> 1. Train employees in proper lifting techniques with bent knees and back erect. 2. Use equipment such as cable or jacks to lift heavy objects. 3. Ask for help from others. Think before lifting. 4. Proper hand protection shall be worn when handling sheet metal raw goods. 5. Hard hats shall be worn at all times. Eye protection shall be worn.
2. Material Installation and Rebar Installation	<ul style="list-style-type: none"> • Crush Injuries / Cuts / Lacerations • Mill Scale • Sharp/Sheared Tire Wire Ends • Trips/Falls • Impalement Hazard • Overhead Power Lines 	<p>All controls listed in previous steps apply to this step also.</p> <ol style="list-style-type: none"> 1. Workers cutting rebar will wear face shields, gloves, hearing protection, and hard hats. 2. Grinder guards must be in place and fully operational prior to use. 3. Lathers will wear safety glasses, gloves, and hard hats. 4. Construction debris will be removed on a daily basis. 5. All rebar ends shall be capped to protect workers from impalement/laceration hazards. 6. If possible, stack rebar in a location that is free from overhead power lines. If this is not possible, rebar will be moved forward and away from the power lines before being lifted. 7. No workers will be working under suspended materials at any time.
3. Placing Mortar	<ul style="list-style-type: none"> • Mix Truck Placement • Struck By/Caught Between • Catch in Mixer • Hand Injuries • Eye Injuries • Skin Irritation 	<p>All controls listed in previous steps apply to this step also.</p> <ol style="list-style-type: none"> 1. Use qualified flagmen to ensure a clear path to the work zone. 2. The mix truck will have an operational back-up alarm. 3. Only the truck's operator will place the chute and run the mixer. 4. Train mixer operator; Keep hands and loose clothing away from moving parts; Use of kill-switch on mixer 5. Wear safety glasses when working with wet concrete. 6. Wear impervious gloves, boots and pants when working with wet concrete. 7. Wash off any excess mortar from your skin as soon as possible.
EQUIPMENT	INSPECTION REQUIREMENTS	TRAINING REQUIREMENTS
Power and hand tools; Rebar;	Tool and equipment inspections Lock-Out / Tag-Out inspections for stored energy; Inspect hand tools for defects; Inspect PPE for wear or defects; Inspect rebar for sharp edges and impale hazards.	Competent person training and qualification

Prepared by: <i>(Contractor's competent/qualified person signature)</i>	
<input checked="" type="checkbox"/> - AHA Accepted as part of project Accident Prevention Plan	Signature: Date:

ACTIVITY HAZARD ANALYSIS		
ID No.	G-8	FEATURE OF WORK: GENERIC AHA – Confined Spaces and Hazardous Atmosphere
Contract No.	Project:	Location:
Date:	Activity:	Estimated Start Date:
PRINCIPAL STEPS	POTENTIAL SAFETY / HEALTH HAZARDS	RECOMMENDED CONTROLS
Confined Spaces (Examples) 1. Intake Structure 2. Outlet Works structures 3. Structural drainage galleries 4. Interior drainage structures 5. Steam Gage house 6. Septic Tanks	<ul style="list-style-type: none"> • Lack of Oxygen • Flammable or toxic atmosphere • Animals • Insects • Heights and Ladders • Slipping and Tripping potential • Temperature extremes 	NOTE: All items hazards and controls in generic AHA G1: Mobilization and General Construction Safety, AHA G3: Scaffolding and Fall Protection, AGA G4: Excavation and Trenching and AHA G6: Concrete apply to this activity. 1. Personnel entering confined spaces will be required to have the 4 hour confined space training class prior to entry. 2. Contact the appropriate project office to determine structures classified as confined spaces and the appropriate procedures prior to entry. This includes contacting the confined space coordinator and coordinating the confined space entry with him. 3. Where appropriate follow confined space procedures to test the atmosphere for lack of oxygen, flammable or toxic atmosphere. 4. Personnel should be wary of animals and pests lurking in the confined space – particularly outlet works and interior drainage structures. Inspect entrances for signs of animal habitation prior to entry. 5. Personnel should note all areas where the potential for falls may occur and ensure the fall protection appears sound before approaching the area. 6. Personnel should inspect ladders prior to their use and use safety equipment when needed. 7. Personnel should inspect areas where debris or slick surfaces are present to prevent tripping and slipping accidents. Appropriate footwear is needed to provide adequate traction. 8. Safety shoes are required for all personnel entering confined spaces to provide both adequate foot wear with traction and to protect the feet 9. Temperatures in confined spaces may vary dramatically from the outside atmosphere, personnel must dress accordingly for these extremes including both cold. 10. Equipment (combustion engine) shall not be allowed to idle near confined spaces. The contractor shall monitor equipment emissions utilizing appropriate data logging capable instruments. The instrument(s) shall be utilized by a qualified person who has been trained to utilize such instrument(s).
EQUIPMENT	INSPECTION REQUIREMENTS	TRAINING REQUIREMENTS
Power and hand tools; Rebar;	Tool and equipment inspections Lock-Out / Tag-Out inspections for stored energy; Inspect hand tools for defects; Inspect PPE for wear or defects; Inspect rebar for sharp edges and impale hazards.	Competent person training and qualification
Prepared by: <i>(Contractor's competent/qualified person signature)</i>		
<input checked="" type="checkbox"/> - AHA Accepted as part of project Accident Prevention Plan		Signature: Date:

ACTIVITY HAZARD ANALYSIS		
ID No.	G-9	FEATURE OF WORK: GENERIC AHA – Plumbing
Contract No.	Project:	Location:
Date:	Activity:	Estimated Start Date:
PRINCIPAL STEPS	POTENTIAL SAFETY / HEALTH HAZARDS	RECOMMENDED CONTROLS
<p>Preparing area for plumbing pipes and plumbing fixtures.</p> <p>Installation of plumbing pipes and plumbing fixtures.</p>	<ul style="list-style-type: none"> • Injury from use of hand and power tools • Slip, Trip, Fall hazards • Eye Injuries 	<p>NOTE: All items hazards and controls in generic AHA G1: Mobilization and General Construction Safety, AHA G3: Scaffolding and Fall Protection, AGA G4: Excavation and Trenching apply to this activity.</p> <ol style="list-style-type: none"> 1. Employees shall be directed to ensure that there is proper lighting in the work area. 2. Housekeeping in the area will need to be kept clean so that there are no tripping hazards created by the debris. 3. All tools and equipment will be inspected for damage and defects before use. 4. Materials to be utilized for this task are to be staged as close as possible to the work area. Carts and other mechanical devices will be used to minimize the manual handling of the materials, tools and equipment 5. Hard hats, safety glasses and hard-soled work boots are required for this and all operations. If power tools are used for the grinding operation, then a face shield will also be provided and it's use will be mandated. 6. Materials will be moved to and from the work area on carts and other mechanical devices to minimize the amount of manual material handling. 7. Workers using ladders, scaffolding or scissor lifts will follow all of the safe use requirements spelled out by the manufacturers and the guidelines from AHA G1: Mobilization and General Construction Safety, AHA G3: Scaffolding and Fall Protection, AGA G4: Excavation and Trenching. 8. Cords and hoses will be moved out of the walking and working areas. When possible, the cords and hoses will be suspended.
Soldering Piping	<ul style="list-style-type: none"> • Burns • Eye Injuries • Fires • Inhalation of Hazardous Vapors 	<ol style="list-style-type: none"> 1. All smelting pots will be set up in well ventilated areas. 2. Respirators will be supplied and used (with training) if required. 3. Contractor will provide a fire extinguisher in the immediate area around the pot. A Fire Watch will be posted. 4. Pots will be located away from water or areas likely to have water present. 5. All tools and equipment use in this operation will be free from water to prevent a boil-over accident. 6. Heavy leather gloves will be required on all workers handling the molten lead. 7. Hard hats, safety glasses and hard-soled work boots are required for this and all operations. If power tools are used for the grinding operation, then a face shield will also be provided and it's use will be mandated 8. Cords and hoses will be moved out of the walking and working areas. When possible, the cords and hoses will be suspended.
EQUIPMENT	INSPECTION REQUIREMENTS	TRAINING REQUIREMENTS
Power and hand tools; Rebar;	Tool and equipment inspections Lock-Out / Tag-Out inspections for	Competent person training and qualification

	stored energy; Inspect hand tools for defects; Inspect PPE for wear or defects; Inspect rebar for sharp edges and impale hazards.	
Prepared by: <i>(Contractor's competent/qualified person signature)</i>		
<input checked="" type="checkbox"/> - AHA Accepted as part of project Accident Prevention Plan	Signature: Date:	

ACTIVITY HAZARD ANALYSIS		
ID No.	G-10	FEATURE OF WORK: GENERIC AHA – Painting
Contract No.	Project:	Location:
Date:	Activity:	Estimated Start Date:
PRINCIPAL STEPS	POTENTIAL SAFETY / HEALTH HAZARDS	RECOMMENDED CONTROLS
Compressor and Sprayer Use	<ul style="list-style-type: none"> High Pressure Hazards Inhalation of Fumes and Particles Hazards Eye Injury 	<p>NOTE: All items hazards and controls in generic AHA G1: Mobilization and General Construction Safety, AHA G3: Scaffolding and Fall Protection, AGA G4: Excavation and Trenching apply to this activity.</p> <ol style="list-style-type: none"> Lock-Out / Tag-Out Procedures in place prior to using compressor. Proper Spray nozzles used for compressor pressure. Ventilate work area. Inspect compressor lines for any damage. Replace any damaged lines. Wear Respirator with proper filter for paints being used. Wear gloves and Tyvek suit. Take breaks and hydrate when high temperatures are encountered while wearing PPE.
Paint Storage	<ul style="list-style-type: none"> Volatile Organic Fumes Hazard Explosion Hazard 	<p>NOTE: All items hazards and controls in generic AHA G1: Mobilization and General Construction Safety, AHA G3: Scaffolding and Fall Protection, AGA G4: Excavation and Trenching apply to this activity.</p> <ol style="list-style-type: none"> Store paints in a properly designed (explosion proof) and well ventilated cabinet. Wear respirator. Wear proper PPE (Gloves and Tyvek suit). Take breaks and hydrate when high temperatures are encountered while wearing PPE. Adequate numbers of the extinguishers must be kept by exits in the storage building and in addition extinguishers kept outside of building. Exits clearly marked and kept free of obstructions. Signs posted to mark 'Flammable Material' and 'No Smoking'.
Paint Mixing and Use	<ul style="list-style-type: none"> Volatile Organic Fumes Hazard Respiratory Hazard Skin Exposure Hazard 	<p>NOTE: All items hazards and controls in generic AHA G1: Mobilization and General Construction Safety, AHA G3: Scaffolding and Fall Protection, AGA G4: Excavation and Trenching apply to this activity.</p> <ol style="list-style-type: none"> Wear respirator. Work in well ventilated work area. Wear proper PPE (Gloves and Tyvek suit). Take breaks and hydrate when high temperatures are encountered while wearing PPE. Adequate numbers of the extinguishers must be kept by exits in the storage building and in addition extinguishers kept outside of building. Exits clearly marked and kept free of obstructions. Signs posted to mark 'Flammable Material' and 'No Smoking'.
EQUIPMENT	INSPECTION REQUIREMENTS	TRAINING REQUIREMENTS
Power and hand tools; Rebar;	Tool and equipment inspections Lock-Out / Tag-Out inspections for stored energy; Inspect hand tools for defects; Inspect PPE for wear or defects; Inspect rebar for sharp edges and impale hazards.	Competent person training and qualification
Prepared by: <i>(Contractor's competent/qualified person signature)</i>		Signature:

<input checked="" type="checkbox"/> - AHA Accepted as part of project Accident Prevention Plan	Date:
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ACTIVITY HAZARD ANALYSIS		
ID No.	G-11	FEATURE OF WORK: GENERIC AHA – Steel Structure Erection
Contract No.	Project:	Location:
Date:	Activity:	Estimated Start Date:
PRINCIPAL STEPS	POTENTIAL SAFETY / HEALTH HAZARDS	RECOMMENDED CONTROLS
Rigging Steel for Picking	<ul style="list-style-type: none"> Under Rated Slings Cut Slings Damaged Winch Line Unqualified Personnel 	<p>NOTE: All items hazards and controls in generic AHA G1: Mobilization and General Construction Safety, AHA G3: Scaffolding and Fall Protection apply to this activity.</p> <ol style="list-style-type: none"> Verify the Weight of the Objects to be picked. Inspect slings before each pick. Remove all cut or frayed slings. Check winch lines regularly. Make sure workers have proper skills and experience.
Picking, Swinging and Guiding Steel Members Drifting and Bolting Steel Members	<ul style="list-style-type: none"> Under sized Crane or Winch Pinch or Crush Injuries Contact with Energized Bus or Wires 	<p>NOTE: All items hazards and controls in generic AHA G1: Mobilization and General Construction Safety, AHA G3: Scaffolding and Fall Protection apply to this activity.</p> <ol style="list-style-type: none"> Verify the Weight if the Objects to be lifted. Know hand signals; Use Tag Ropes and Pay Attention. Use Spud Wrench & Pull Pins. Know where steel is supposed to be landed. No lifting near energized wires and maintain proper clearances.
Drilling, Cutting and Welding Galvanized Steel	<ul style="list-style-type: none"> Metal in Eyes or Hand Burns to Eyes 	<p>NOTE: All items hazards and controls in generic AHA G1: Mobilization and General Construction Safety, AHA G3: Scaffolding and Fall Protection apply to this activity.</p> <ol style="list-style-type: none"> Wear Proper Eye Protection for High Energy Light Source as well as to protect from impact. Work in well ventilated work area. Wear proper PPE (Gloves and Eye Protection). Take breaks and hydrate when high temperatures are encountered while wearing PPE.
Collapse of Structure due to Member Failure from Temporary Loading during Erection	<ul style="list-style-type: none"> Crush Injuries Impalement Injuries Death 	<p>NOTE: All items hazards and controls in generic AHA G1: Mobilization and General Construction Safety, AHA G3: Scaffolding and Fall Protection apply to this activity.</p> <ol style="list-style-type: none"> Follow erection plan and drawings. Ensure a sequential erection procedure is prepared, which has been approved by the erection engineer. Make provisions for positive connections between members of the structure that have been specified to resist imposed lateral and vertical force. Reinforcement required for in-service loads and temporary conditions. Ensure temporary guys or bracing are securely anchored Members should be clearly marked and labeled. Verify the stability of the structure in accordance with the erection engineer's specifications: <ol style="list-style-type: none"> at the end of each work day when fastenings may be incomplete during strong winds or when strong winds are forecast
EQUIPMENT	INSPECTION REQUIREMENTS	TRAINING REQUIREMENTS
Power and hand tools; Rebar;	Tool and equipment inspections Lock-Out / Tag-Out inspections for stored energy; Inspect hand tools	Competent person training and qualification

	for defects; Inspect PPE for wear or defects; Inspect rebar for sharp edges and impale hazards.	
Prepared by: <i>(Contractor's competent/qualified person signature)</i>		
<input checked="" type="checkbox"/> - AHA Accepted as part of project Accident Prevention Plan	Signature: Date:	

ACTIVITY HAZARD ANALYSIS		
ID No.	G-12	FEATURE OF WORK: GENERIC AHA – Abrasive Blasting
Contract No.	Project:	Location:
Date:	Activity:	Estimated Start Date:
PRINCIPAL STEPS	POTENTIAL SAFETY / HEALTH HAZARDS	RECOMMENDED CONTROLS
Blasting Operation	<ul style="list-style-type: none"> Insufficient air for breathing Air contaminated. (Breathing problem) Improper supply of air. Ineffective filters Sand blasting on body part / Body injury Locking of dead man's device for intermediate inspection 	NOTE: All items hazards and controls in generic AHA G1: Mobilization and General Construction Safety apply to this activity. <ol style="list-style-type: none"> Use Regulator to control supply. Change Filter at the advised frequency. Monitor the air supply and ensure adequate supply of air. Ensure the Dead Man's switch is in good operating condition. Make sure blasting is only done by trained personnel with the proper PPE. Barricade the area to prevent unauthorized entry.
Changing Positions to Blast in New Area	<ul style="list-style-type: none"> Sand blasting on body part (body injury) Trip/fall Machine remain 'ON' Locking of dead man's device. Poor housekeeping 	NOTE: All items hazards and controls in generic AHA G1: Mobilization and General Construction Safety apply to this activity. <ol style="list-style-type: none"> Turn machine 'Off' prior to moving equipment. Follow 'Lock Out / Tag Out' procedures. Ensure the Dead Man's switch is in good operating condition. Maintain and ensure good housekeeping.
Hazardous Waste	<ul style="list-style-type: none"> Inhalation of blasted residue Ingestion of blasted residue 	NOTE: All items hazards and controls in generic AHA G1: Mobilization and General Construction Safety apply to this activity. <ol style="list-style-type: none"> Wear proper Respiratory PPE. Wear proper PPE (Gloves and Tyvek suit). Take breaks and hydrate when high temperatures are encountered while wearing PPE. Dispose of blasting residue according to all Environmental regulations.
EQUIPMENT	INSPECTION REQUIREMENTS	TRAINING REQUIREMENTS
Power and hand tools; Rebar;	Tool and equipment inspections Lock-Out / Tag-Out inspections for stored energy; Inspect hand tools for defects; Inspect PPE for wear or defects; Inspect rebar for sharp edges and impale hazards.	Competent training and qualification
Prepared by: <i>(Contractor's competent/qualified person signature)</i>		
<input checked="" type="checkbox"/> - AHA Accepted as part of project Accident Prevention Plan		Signature: Date:

ANNEX 2

Annex 2: Guideline to Prepare the Quality Control Plan

Immediately after award, the contractor shall prepare a Quality Control Plan following the guideline and format provided in this Annex 2. This is in addition to any quality control plan or documentation that may be required by Bulgarian regulations for this type of construction activity. The Plan shall be accepted by the Contracting Officer before works are authorized to start at the job site.

[Project Title]
[Contract Number]

QUALITY CONTROL PLAN

The purpose of this paper is to illustrate how our site organization, our staff and our procedures will help ensure the quality required by the technical requirements.

SITE ADMINISTRATION

[Describe how to carry out all formalities required by local law to open and run the worksite]

SITE FACILITIES

[Describe how the specific worksite is going to be delimited and organized]

STAFF SITE

[List the roles and relevant names of the staff to be employed on the worksite; provide a short description if necessary]

CONTROL ORGANIZATION

[Detail how it will work; who does what]

TESTING

[Describe how tests of soil and concrete will be conducted]

CHECKING THE QUALITY OF THE WORKS

[Describe]

CONTROL OF MATERIALS

[Describe]

GENERAL CONSTRUCTION CONTROL ACTIVITIES

[Describe]

SAFETY ON SITE

[Describe]

ANNEX 3

Annex 3: Document from Technical Project

These documents are copies of the technical project provided by the Municipality. Original copy is available in the Municipality available for consultation only.

This annex includes 12 files:

- Annex3-1
- Annex3-2
- Annex3-3
- Annex3-4-1
- Annex3-4-2
- Annex3-5-1
- Annex3-5-2
- Annex3-6
- Annex3-7-1
- Annex3-7-2
- Annex3-8-1
- Annex3-8-2