Technical Specifications

For

Basic Ordering Agreement

(BOA)

PAVING

May 2017

USAFE
Lajes Field, Azores, Portugal

65th Civil Engineer Squadron
APO AE 09720

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STATEMENT OF WORK

PART 01 – GENERAL

1.01 TITLE: Basic Ordering Agreement **(BOA)**

1.02 PROJECT DESCRIPTION:

a. All work shall be in performed in accordance with the drawings and specifications including the furnishing of all materials, labor, plant, tools, equipment, transportation, and services (including engineering/technical design support) and incidentals thereto.

b. The contract is for a broad range of paving projects in support of the 65th CES. The contract is Basic Ordering Agreement (BOA) and shall encompass a wide variety of individual construction tasks as listed in the "Bidding Schedule".

c. Performance of services will be accomplished by the contractor through individual task orders. The project scope on each task order will be identified by the Government.

d. All work, Specifications, Statement of Work, drawings, and other contract requirements shall be performed in strict accordance with the specifications written for this contract.

e. The work shall include tasks in a variety of trades such as pavement, excavation, underground conduits (for exterior electrical, plumbing, communications, storm and sanitary sewer), traffic markings, painting, demolition, and concrete work.

f. Examples of maintenance, repair and construction work, which may be required under this contract may include, but are not necessary limited to:

(1) Install/replace/repair road systems.
(2) Install/replace/repair storm and sewer lines, valves and distribution systems.
(3) Install/replace/repair curbs, gutters, sidewalks, and pavements either on roads or in the airfield.
(4) Install PVC and other necessary conduits.

g. It is the policy of the United States Air Force to use innovative and sustainable approaches to environmental management and technology to accomplish its mission. Sustainable projects do not deplete resources, cause environmental degradation, or negatively impact human health. The contractor shall incorporate pollution prevention and sustainability initiatives into this BOA. The contractor shall operate in a manner that promotes energy management to include energy efficiency, use of renewable energy, and water conservation. The contractor shall comply with the installation Environmental Management System (EMS).

1.03 ORDERING PROCEDURES:

a. As government requirements develop under the terms of this contract, the Contracting Officer (CO) or his/her representative will notify the contractor of the new requirement. The following are procedures for ordering from the contract CLINS (Contract Line Item Numbers) in the Unit Price Books.

b. Unit Price Clin:

(1) All (CLINS) allow the government to place a task order using the established bid schedule. This is accomplished using the process explained below:

(2) Upon receipt of this notification, the contractor(s) shall respond to the needs of the Government within the time established on each task order by visiting the proposed work site in the company of the CO (or authorized representative) and the government representative to conduct a scope validation site visit and conference during which the following will be discussed:

i. Site investigation

ii. Methods and alternatives for accomplishing work

iii. Definition and refinement of requirements

iv. Detailed scope of work

v. Requirements for plans, sketches, shop/design drawings, submittals, etc

vi. Preliminary quantities (NOTE: The contractor establishes his own detailed quantity estimates for use in developing his proposal.)

(3) Measurements shall be in accordance with units specified in the bid schedule.

(4) From the date of the site visit, the time allowed for submittal of the contractor's technical and cost proposal for individual requirements will be as follows, unless otherwise directed by the CO. Classification of projects as **routine or urgent** will be determined by the government.

Routine: Technical proposals shall be delivered to the CO no later than 10 working days after the site visit. Projects shall be classified as “routine” approximately 75% of the time.

Urgent: Technical proposals shall be submitted within 3 working days after the site visit unless mission dictates a shorter time period. Projects shall be classified as “urgent” approximately 25% of the time.

(5) Upon receipt of the contractor's technical and cost proposal, the government will evaluate the proposal as specified. The government will return the technical proposals with comments as required (including the cost proposal for adjustments).

(6) Non-Pre-priced Items:

i. Non-pre-priced items (NPIs) are items of work not covered in the Bid Schedule and within the scope and general intent of the contract. NPIs may be incorporated into task orders; however, the need to negotiate NPIs reduces the efficiency of the contract and may undermine the cost savings of pre-priced items. Therefore, the value of NPIs for an individual task order shall not exceed 10% of the total value of the task order unless this limitation is waived. NPIs may not exceed 25% regardless of approval.

ii. NPIs shall be incorporated into and made part of the task order and shall be performed at the unit price. The contractor shall submit three (3) verifiable quotes from sources approved by the contracting officer for each proposed NPI item.

iii. If NPIs will be recurring during the life of the contract, they may be added at the discretion of the CO and by supplemental agreement to the UP.

iv. Full hourly labor rates apply only to NPIs, and not the remaining IGE line items. Prices for listed items must include labor.

(7) Project Estimating:

i. The range of project magnitudes is as follows:

SMALL - €25,000.00 or less

MODERATE - €25,000.01 to €200,000.00

LARGE – above €200,000.00

ii. The project's magnitude as stated in paragraph 1.03.b.(7).i (Small, Moderate, Large) shall be stated in each Government request for project estimating. The contractor(s) shall immediately notify the CO if the PE will fall outside the project magnitude.

iii. The Government may accept the contractor(s)'s initial estimate without negotiations.

1.04 <u>SPECIAL CONSIDERATIONS</u>:

a. Contractor(s) must use and regard the most current and valid “Lajes Field Facilities Excellence Standards (LFFES)” for construction projects on Lajes Field, Azores. A copy of this standard will be provided to the contractor(s) by the CO upon request by each contractor. All project staging areas, construction sites, and storage areas shall be securely fenced around the entire perimeter of the job site. Fencing shall be completely secured at top and bottom to

prevent pedestrian access. Fences shall be screened with opaque screening material to prevent visibility of the fenced area (min 2 m in height) in areas where material storage, contractor work trailers, trash container and any debris that maybe collected as result of construction. Fences and screens shall be adequately staked and/or anchored to prevent blowing over during high wind conditions. Submit photos or samples of the screening material for approval prior to installation.
When the Contractor is executing pavement marking paintings outside the airfield, the dimensions of these (crosswalks, longitudinal lines, etc.) must be in compliance with the most updated version of the LFFES.

b. The contractor shall preserve and protect all structures, equipment, and vegetation (such as trees, shrubs, grass) on or adjacent to the work site, which are not to be removed and which do not unreasonably interfere with the work required under this contract. The contractor shall only remove trees when specifically authorized by 65 CES Environmental Management office to do so, and shall avoid damaging vegetation that will remain in place. If any limbs or branches of trees are broken during contract performance, or by the careless operation of equipment, or by workmen, the contractor shall trim those limbs or branches with a clean cut and paint the cut with a tree-pruning compound. The contractor shall return all areas disturbed during construction to its original condition.

c. The contractor shall request approval for laydown area and placing an office trailer at any project location. Any office trailer shall be no more than 10' x 32' in size, provided with a skirt on all sides, in like new condition, and painted Cream Beige or an equivalent color of similar tone approved by CO, if it is not obscured and hidden by the opaque fencing material. Office trailers in need of painting and / or repairs or, that are in an unsightly condition **will not** be allowed at the project site. A nameplate shall be displayed on the exterior of all trailers which lists the name of the contractor's company, contractor's point(s) of contact (POC) and telephone number where he/she can be reached, contract number, and title, and the date trailer was placed at the job site.

d. All contractor employees shall obey all traffic laws on installation. The contractor shall park all vehicles only in legally designated locations, or within the fence line of the construction site.

e. The contractor shall perform normal housekeeping functions inside and outside contractor job sites. Such functions include grounds maintenance, sweeping, mopping, dusting, disposal of accumulated waste materials and rubbish and other operations necessary to present a neat appearance at all times. All rubbish and waste materials shall be removed daily and shall be placed in contractor furnished containers. During construction, the contractor shall maintain all areas in a neat and orderly manner. The contractor shall clean the construction site and/or structure of all construction trash, trash generated by employees, debris, demolished building materials, combustible waste material, and/or dust daily or more frequently as necessary for safe operations. During the laying of asphalt roads, streets and/or parking surfaces, areas soiled by residual asphalt shall be cleaned daily. The contractor shall treat with lime entrances and exits to asphalt work site at their own expense. The contractor shall ensure all light or moderate weight debris at the construction site is properly secured in waste receptacles so that it does not blow to another area or onto the airfield. At the end of each project all equipment, rubble and rubbish shall be completely removed from the base by the contractor, leaving the area in a safe, clean and orderly manner to the satisfaction of the CO.

f. The contractor shall provide a haul route plan for approval for each project.

g. Trucks loaded with loose material that can create a dust, debris or falling hazard shall be secured and covered. Fasten a suitable cover, such as tarpaulin, over the load before entering surrounding streets. The contractor is solely responsible for spillage from his/her vehicles and such spillage shall be cleaned up immediately. For the duration of this contract and on a daily basis, the contractor shall remove from all base roads and/or streets asphalt, mud, soil, rocks, trash, and debris that result from their construction operation on base. All roads and/or streets affected shall be cleaned before close of business on the particular day affected. In the case of asphalt, roads will be cleaned and/or treated with lime immediately.

h. Grassy areas disturbed by any type of construction work including storage, equipment staging, and material delivery areas shall be sodded or seeded as required on each delivery order. Contractor shall be responsible for the successful growth and maintenance of all new grass areas under this contract for a period of thirty (30) days, or three mowings, after final acceptance of the work. All grass, shrubbery, and ornamental plants fenced by the construction site shall be maintained to base standards by the contractor.

i. All contractor owned items such as, but not limited to, stakes, traffic/safety cones, barriers, warning tape, erosion control fences that are erected during construction, shall be removed entirely after completion of project and prior to Government acceptance of the project site. The contractor, at his own expense, shall return to the site to remove any items left at or near the project site after this time period.

j. If there are any uncertainties with respect to elevations, location of new or existing utilities, or any other information in this contract, the contractor shall obtain clarification from the CO or his designated representative. See “Digging Permit”, paragraph 1.11.

k. The contractor shall coordinate the exact location of each item of work with the inspector, such as drainage systems, drop inlets, repairs, and so forth. Once a week, the contractor shall layout and stake the proposed work in the field, and then review the layout with the inspector, who shall make recommendations as to adjustments needed.
Prior to doing any work, the contractor shall receive approval from the inspector, who will coordinate with the CO, engineer, and environmental flight as required.

l. In addition to the compliance with the Unified Facilities Guide Specifications (UFGS) enumerated on this document, additional considerations should be taken into account when a contractor is executing concrete slabs in airfields.
Concrete slabs for airfields should be executed in compliance with the UFC 3-260-02 (Unified Facilities Criteria) in regards to the pavements flexural strength.

m. All vertical road signals to be applied by the Contractor must comply with Portuguese IMTT (Instituto da Mobilidade e dos Transportes Terrestres) (www.imtt.pt) regulations and standards - PDF, 51 pages

1.05 AIRFIELD WORK:

a. When performing work on the airfield, the airfield must remain functional. Work on the airfield must be performed so that contractor interference with aircraft movement is minimized. The contractor shall give right-of-way to aircraft at all times. Aircraft will be directed by the control tower to avoid routes where the contractor is working as much as practicable. Contractor shall provide and maintain all necessary cones, signs and flag persons as required to protect his work and operations. Closing of taxiways shall not be permitted.

b. Clean Up. The contractor shall continuously sweep and remove, with brooms and vacuum sweeper, any debris or materials which he spills, drops, dumps or vehicle tracks on any airfield surfaces and properly dispose of them. At the end of each work day, the airfield and vehicle access routes shall be cleaned of any debris left by the contractor.
Prior to departure each day, the contractor must receive approval from the airfield manager or inspector who shall check for any residual debris. If failure to adequately clean the airfield surface results in airfield closure, the contractor will be held liable for all costs associated with said closure.

c. Restricted Areas. Portions of the airfield are located in Restricted Areas delineated by red lines or ropes. Work in Restricted Areas requires a 30 day notice to Security Forces and Airfield Management and therefore the contractor must schedule his/her work accordingly. The contractor may not enter a restricted area unless accompanied by a government escort, which shall be arranged.

d. Radio. Each day when working on the airfield, the contractor shall obtain a hand-held two-way radio from Airfield Management (Portuguese Terminal Building). The contractor shall establish and maintain two-way communication with the control tower at all times while on the runway.

e. Driving. Prior to operating vehicles on the airfield, arrangements must be made with Airfield Management (535-1361) for a flightline driver pass and briefing for all Contractor personnel to be driving on the airfield. Additionally, the contractor must submit a list of all vehicles, drivers, and equipment to be used on the flightline to the CO and airfield management. All vehicles and equipment to be used on the airfield shall be equipped with pneumatic tires.

f. Photography is prohibited on the airfield.

g Coordination. When working on the airfield, coordination is required between the contractor, the inspector, the airfield manager, and with the base communications agency prior to beginning work. Note that contractor equipment vehicles could interfere with the "line-of-sight" operation of air traffic control equipment that is operated by the base communications agency.

1.06 AIRFIELD REQUIREMENTS:

a. Contractor shall contact the Lajes Field Airfield Management (AM Ops) for construction restrictions involving the flight line, taxiway, and runway areas and shall comply with applicable Air Force and base security requirements while construction is in progress. A mobilization/pre-construction meeting will be held between Airfield Management (AM), contracting, civil engineering and contractor prior to project start. At this meeting contractor

will be mandated to adhere to USAFE 32-1007 Attachment 16, Construction Phasing Plan and Operational Safety on the Airfield during Construction and in accordance with (IAW) ICAO (International Civil Aviation Organization) Annex 14, Chapter 7.4, ATT-16, Section 13, and Operational Risk Management provided by Airfield Management (ORM).

b. A construction phasing plan should be included in the contract documents. The construction phasing plan should be submitted for coordination and review at the concept and design stage.

c. The work area limits, barricades and temporary fencing requirements will be clearly delineated for each phase.

d. The work area limits should include identification of restricted areas requiring escorts and free zones with secure areas (if applicable).

e. Construction vehicle access roads, including access gates and haul routes will be shown on the work plan.

g. Temporary pavement marking and lighting details will be presented on the work plan.

h. The contractor's personnel shall identify vehicle parking area and access routes to the work area, as well as designated waste and disposal areas.

i. The contractor shall provide information about maximum height of construction equipment expected to be used during construction, debris cleanup responsibilities and schedule (if applicable).

j. Holes, trenches, obstacles, loose pavement, trash and other debris shall be identified, closed or marked and lit at the end of the working day.

k. Construction equipment should not penetrate the 50:1 approach departure clearance surface (if applicable).

l. The construction area will be closed off with barricades, fence and lights (if applicable) and shall be placed at intervals sufficiently close so as to delineate the construction area, IAW ICAO Annex 14, Section 7.4, ATT-16, Section 3 and Operational Risk Management provided by Airfield Management (ORM). Contractor shall ensure adequate marking and lighting is provided for the duration of the project.

m. The contractor should have a person on call 24hrs a day for emergency maintenance, if required during performance of each task order.

n. The contractor shall adhere to the Operational Risk Management (ORM) provided by AM with each task order for Airfield Work.

o. The contractor shall check with AM Ops for construction restrictions involving the airfield, taxiways, and runway areas, and shall comply with applicable Air Force, ICAO and Base requirements while the construction is in progress.

p. At the end of the work day, contractor shall stop by AM Ops to return the radio and sign out the Contractor's Tracking Sheet, and brief Airfield Management Personnel on duty about the work accomplished during the day.

q. AM, CES and Base Safety personnel will continue to monitor the construction area to ensure all safety precautions are still being adhered to and remain effective (missing fence, barriers, cleanup, etc).

r. AM Ops personnel will perform random construction checks to evaluate and ensure new hazards are identified, mitigated and proper risk assessment is accomplished.

1.07 QUALITY CONTROL:

a. Government Inspection: When the contractor considers that the work is acceptable to the government and is complete, the contractor shall inform the CO five (5) calendar days in advance of the final inspection that the work is complete and ready for inspection. The CO and his representative will inspect the work on site. In the event that the work is not acceptable, the contractor shall record a list of deficiencies noted by the government to be corrected. A subsequent inspection will take place in order to review the corrected items.

b. Government Approval of Work: The government will notify the contractor that work for a specific task order is, or is not, acceptable. Invoices for a task order shall not be permitted until the government has accepted the work. The contractor shall clean up prior to government acceptance.

1.08 SECURITY REQUIREMENTS:

a. The contractor shall comply with security regulations imposed by the Installation Commander and/or the agency occupying the space where the work is to be performed, including adhering to, or, obtaining any security clearances.

b. Closure of Openings: The contractor shall close every fence opening resulting from work in order to prevent outside intrusion at the end of each workday. The Closure(s) shall remain in place when contractor is not actively engaged in working on the site(s), including each and every day, night, weekends, and holidays, to reduce wind and weather intrusion. The closure(s) shall be constructed of mesh wire anchored in place to stud framing, if necessary, or similar construction as approved by a government representative through the CO.

c. Contractor Access to Air Force Installations: The contractor shall obtain temporary installation passes for all contractor/subcontractor personnel who visit or perform work on the Air Force Installations cited in the contract. The contractor shall obtain passes through the 65 CONF. Contractor personnel are required to wear or prominently display contractor furnished badges while visiting or performing work on the installation.

d. Work Performed in Secured Areas: Projects in secured areas may require a local agency check of contractor personnel and all sub-contractors prior to commencement of work. If a check is required, the contractor should allocate time in the work schedule to accomplish this check. The contractor shall price work performed in secured areas according to standard work hour rates unless prior approval to use non-standard work hour rates is obtained from the CO.

e. Escort in Restricted Areas: Contractor personnel must be escorted at all times in a controlled/restricted area by a government escort. Escorts for secured areas will be scheduled by the contractor at least 10 calendar days prior to starting work. The government will provide an escort as quickly as possible, but the contractor should expect delays due to the sensitive nature of secured areas.

f. Unauthorized Reconnaissance: The contractor shall inform all personnel working under his/her jurisdiction (including subcontractor and visiting supplier personnel) that access to areas outside the immediate work area (excluding cafeterias and rest rooms near the work site, direct haul and access routes, contracting and points of supply and storage) is strictly prohibited. Circulation of the above personnel shall be limited to official business only. Persons engaged in unauthorized reconnaissance of other contractor or government activity will be referred to the CO for disposition. Infractions involving possible compromise of national security will be turned over to the Office of Special Investigation (OSI) for disposition.

1.09 CONSTRUCTION SITE MAINTENANCE:

a. The contractor shall maintain each site in a neat and orderly manner. All supplies and equipment on the project site shall be stored to preclude mechanical and climatic damage. All grass, weeds, etc. shall be cut as necessary to prevent any fire/safety hazards and shall be no higher than 5 cm at any one time or as directed by the CO. All trash, debris, paper etc. shall be picked up immediately and placed in proper containers.

b. Contractor Parking: The contractor shall inform his employees, suppliers, and subcontractors that their vehicles shall not be parked on grass, in Fire Lanes or other restricted areas, parking spaces marked as “Handicapped” or “Government”, at any time.
In addition, vehicles may not be driven over grass surfaces, unless indicated during a site visit or pre-performance conference. Any damage done to lawns, shrubs, sidewalks etc. shall be repaired or replaced by the contractor at no additional cost to the government.

c. Clean-up of Installation Access Routes Outside of the Construction Limits and Staging Areas: All mud, dirt, debris, foreign objects, or spills of any kind from the contractor's operations (including subcontractors and suppliers) on (a) streets and parking lots, used as access to the work or staging areas, shall be cleaned up not less than daily, or as requested by the CO, and (b) parking aprons and hard surfaces used as access to the work or staging areas, shall be kept clean at all times.

d. Trucking: Loose debris on trucks leaving the site shall be loaded in a manner that will prevent dropping of materials on streets and conform to local ordinances and laws. Fasten suitable cover, such as a tarpaulin, over the load before entering surrounding streets. The contractor shall be responsible for immediately cleaning up any materials that fall from trucks.

e. Fencing of Construction Site: Fences will be used to isolate construction sites as per instructions by the CO and per recommendations of the Base Safety Office during the pre-construction conference.

f. Barricades:

(1) The contractor shall barricade access to all construction sites. Barricading shall be used to isolate areas from access. The barricades shall be maintained in good condition, and be installed such that people approaching from the predominant direction can clearly read the warning. Barricades on streets shall have battery powered flashers for night use. Construction fencing shall be used to isolate exterior areas from pedestrian access, and shall be maintained in good condition. Cones shall only be used to temporarily block pedestrian traffic. Extended pedestrian blockages or road traffic shall use rigid barrels/barricades. All barricades, barrels, cones, etc., are included in the contractor's supplied equipment/supplies and therefore shall not be a direct cost to any task order unless the CO deems the individual task order requirements so extensive as to warrant payment.

(2) All projects involving excavation shall be secured with flashing lights on all sides and have construction fencing completely surrounding the site at a minimum of five (5) feet from the hole.

1.10 DRAWING REQUIREMENTS:

a. Existing Condition Drawings and As-built Drawings (including utilities):

(1) Existing condition drawings showing existing underground utilities are available upon request. The contractor shall avail himself of the drawings. Any utility line shown on the record drawings (or made known to the contractor) and damaged during construction work shall be repaired immediately by the contractor at no additional cost to the government.

(2) The government does not guarantee the accuracy or adequacy of existing record drawings. It is the contractor's responsibility to verify all existing conditions prior to starting work on each task order.

(3) During the progress of the job, the contractor shall keep a careful record at the job site of all work accomplished from the layouts shown on the drawings. The contractor shall provide documents (drawings or sketches) to describe all of the work accomplished, and enter changes and corrections on contract or record drawings promptly and submit to the CO.

b. As-built Work Element in Progress Schedule:

(1) The contractor shall include as-builts as a work element on the AF Form 3064, Contract Progress Schedule. The total effort (labor, admin, etc.) for as-builts shall not exceed 3% of the total task order value when requested. Partial payment for the task order will be withheld from the contractor until as-builts are submitted and approved by the Government.

(2) As-builts shall be in the form of one (1) CD-ROM with all documents and drawings as .pdf-files and shall be turned over to the CO within 21 calendar days of final inspection.

(3) The as-builts shall be professionally drafted in AutoCAD and the contractor shall use conventional drafting techniques, nomenclature, symbols, lettering, noting, and dimensioning. Resolution of reproducible as-builts shall be legible.

(4) Computer-Aided Design and Drafting (CADD) drawings shall comply with the most current version of Department of Defense (DOD) Technical Report arcGIS.

(5) The as-built drawings shall indicate, in addition to all changes and corrections, the actual as-built condition. In order that the location of sub-surface utility lines and appurtenances may be determined in the event the surface openings or indicators become covered over or obscured, utility record drawings shall show by offset dimensions to two permanently fixed surfaced features, the end of each run including each change in direction. Valve, splice boxes, and similar appurtenances shall be located by dimensioning along the utility run from a reference point. The average depth below the surface of each run shall also be recorded.

1.11 PERMITS:

a. Welding Permit: No welding shall be started without first obtaining a permit issued by the 65 CES/CEFP, Fire Prevention and Emergency Service Office. Contractor shall request the welding permit not less than five (5) working days before the welding work starts.

b. Work Clearance Requests:

(1) In order to avoid damaging any underground utilities, such as sewer, water, gas, electrical, telephone, cable TV, and possibly others, the contractor must obtain digging permits. The contractor shall process, obtain and maintain a Work Clearance Request (AF Form 103) required, prior to beginning construction.

(2) The contractor is responsible for obtaining a Work Clearance Request for each task order right after Notice to Proceed (NTP) is issued. The contractor must fill out the request form (AF Form 103) with pertinent information and attach a plan showing the location of the respective work (contract drawings with areas highlighted is acceptable).

(3) Contractor shall submit to CO two (2) signed copies of the form (AF Form 103)

(4) Also, as a part of the work request process, the contractor shall be required to mark all locations of excavation work on site with white spray paint or stakes with flagging. Existing utilities will be marked in the field by the respective agency in proposed construction areas. The contractor is required to maintain these markings (or reference points) so that the pertinent agency does not have to duplicate their work.

1.12 PROGRESS REPORTS: The reports mentioned in FAR clause 52.236-15, "Schedules for Construction Contracts" shall be accomplished on AF Form 3064, Contracts Progress Schedule, and AF Form 3065, Contract Progress Report.

1.13 MATERIAL SUBMITTAL AND APPROVAL FORM: In accordance with FAR clause 52.236-5 “Materials and Workmanship,” all material requiring approval shall be submitted

by the contractor to the CO for approval on an AF Form 3000 within 10 calendar days after NTP (or as other-wise established by the CO).

1.14 UNIQUE PROJECT REQUIREMENTS:

a. Paving and Excavation Projects:

(1) Prior to start of any paving, striping and excavation under this contract, the contractor shall coordinate start and completion dates in writing with the CO or his/her designated representative, five (5) workdays prior to the scheduled start date.

(2) Special Requirements for Excavating Around or Locating Existing Utilities: Excavations for street and utility outages will also include the following requirements unless waived by the CO: Prior to the start of work, all valve locations will be identified/located so the utility can be shut off in the event of accidental damage. To preclude accidental damage, the contractor shall locate the exact location of all known utilities by hand digging within 1m in each direction of the marked utility prior to any excavation with power equipment. Any utilities discovered during excavations that are not shown on the drawings will be marked on the contract drawings and will be identified on the contractor's as-built drawings.

1.15 COORDINATION WITH GOVERNMENT ACTIVITIES:

a. If it becomes necessary to interrupt work activities due to construction, permission to do so must be requested in writing to the CO twenty-one (21) days in advance.

b. The contractor shall request street closings, both partial and/or total, twenty-one (21) days prior to the closing.

c. Work in conjunction with this contract which requires utility outages which will affect (as determined by the CO) normal activities in the building, construction area, or other work areas, shall be performed by the contractor at a time other than regular work periods of the organization occupying the facility or area.

d. Temporary construction for facilities used by the contractor for preventing interruption of normal work activity or loss of utilities shall be subject to approval of 65 CES/CEP through the CO.

e. Utility Outages:

(1) The contractor shall coordinate all utility outages with the using agency through the CO or his representative prior to the outage. Services shall not be interrupted until receipt of approval of proposed hours and dates from the 65 CES/CEP through the CO. All work shall be arranged to ensure that the outage will be of minimum duration. The contractor will provide notice to the CO, in writing, not less than ten (10) working days prior to the required outage or as determined by the CO. No response to the outage/interruption request shall be considered as disapproval for the outage/interruption. In the event a scheduled utility outage is canceled by the Government, notification shall be given to the

contractor at least 24 hours in advance of the time for the outage to start and the contractor waives his right to any claim for equitable adjustment or increased cost of performance under this contract as a result of this cancellation. Once a utility outage is arranged and work begun, work must go on continuously until the affected utilities are restored to the affected facility.

(2) The contractor's Interruption and Outage Requests shall include specific location of interruption/outage, hours and dates of interruption/outage, services affected by the interruption/outage.

(3) Water Mains. Operation of valves on water mains will be by government personnel only. Where shut-off of water lines interrupts service to fire hydrants or fire sprinkler systems, the contractor shall contact the CO and arrange his operations to have sufficient personnel available to restore service without delay in the event of an emergency as determined by the 65 CES/CEFP Fire Prevention Office.

(4) Fire Protection System. Where interruption of electrical power affects a fire protection system service, the contractor shall notify the CO ten (10) working days before making such interruptions and shall restore service prior to leaving the job site each day.

1.16 GOVERNMENT FURNISHED EQUIPMENT AND MATERIALS:

a. Government Furnished Materials (GFM) will not be furnished to the contractor as a general rule, however, the Government reserves the right to provide GFM and/or Government Furnished Equipment (GFE) to be used on any task order. In such cases, these materials will be receipted for by the contractor and excluded from the price of the task order.

b. The contractor, with his own forces, shall transport all GFE/GFM, if any, described on the task order from the Government storage area to the work site indicated on the task order. As unit prices include materials/equipment, work using GFE/GFM shall be accomplished by use of the non-standard hours item clause.

c. The contractor assumes the risk and responsibility for the loss or damage to GFE/GFM

d. The contractor shall follow the instructions of the COR regarding the disposition of all GFE/GFM not consumed in performance of a task order.

1.18 REMOVAL AND REPLACEMENT RESPONSIBILITY: The contractor shall be responsible for the replacement or repair of all existing finished surfaces, utilities, equipment, landscapes, grounds, and structures or parts thereof that he/she has damaged, removed, or cut into in order to perform work specified. Removed items to be reinstalled shall be stored by the contractor, free from damage, until reinstalled at no additional cost to the Government.

1.19 WARRANTY SERVICE REQUIREMENTS:

a. The contractor shall furnish, as a minimum, one (1) primary name and telephone number of an individual on his/her management staff, available twenty four (24) hours per day, seven (7) days per week, for the life of this task order to respond to warranty situations. In the event

the primary individual is unavailable, the contractor shall furnish an alternate individual and shall notify the CO of the alternate individual's telephone number.

b. Following notification by the CO or, the COR, the contractor shall respond to a warranty service requirement identified by the CO, or the COR, in accordance with the "Warranty Service Priority List" of this program. This list prioritizes warranty work into the following categories:

Emergency: Perform on-site inspection to evaluate situation, determine course of action, initiate work within 2 hours and work continuously to completion.

Urgent: Perform on-site inspection to evaluate situation, determine course of action, initiate work within 24 hours and work continuously to completion.

Routine: All other work to be initiated within 48 hours and work continuously to completion.

c. The "Warranty Service Priority List" is as follows:

Emergency: Emergency deemed as any damage on the active runway.

Urgent: All repairs on the airfield taxiways and/or parking aprons.

Routine: All other areas.

d. Should parts be required to complete the work and the parts are not immediately available the contractor shall have a maximum of 12 hours after arrival at the job site to provide the CO with firm, written proposals for emergency alternatives and temporary repairs for government participation with the contractor to provide emergency relief until the required parts are available on site for the contractor to perform permanent warranty repair. The contractor's proposals shall include a firm date and time that the required parts shall be available on site to complete the permanent warranty repair. The CO will evaluate the proposed alternatives and select the alternative considered to be in the best interest of the government to reduce the impact of the emergency condition. Alternatives considered by the CO will include the alternative for the contractor to "do nothing" while waiting until the required parts are available to perform permanent warranty repair.
Negotiating a proposal, which will require government participation and the expenditure of government funds, shall constitute a separate procurement action by the government.

1.20 SAFETY ASSURANCE:

a. Preconstruction Safety Meeting: Representatives of the contractor shall meet with the contracting officer and representatives prior to the start of repair, alteration or construction activities for the purpose of reviewing the contractor's safety and health provisions pertinent to the work to be performed under the contract. The contractor shall be prepared to discuss, in detail, the measures it intends to take in order to control any unsafe or unhealthy conditions associated with the work to be performed under the contract. This meeting may be held in conjunction with the preconstruction conference, if so directed by the contracting officer. The conduct of this meeting is not contingent upon a general preconstruction meeting. The

level of detail for the safety meeting is dependent upon the nature of the work and the potential inherent hazards. The contractor's principal on site representatives, the general superintendent, and its safety representatives shall attend this meeting.

b. Contractor Responsibility: The contractor shall assume full responsibility and liability for compliance with the applicable regulations pertaining to the health and safety of personnel during the execution of work, and shall hold the Government harmless for any action on its part or that of its employees or subcontractors, which results in illness, injury or death.

c. Inspections, Tests, and Reports: The inspections, tests and reports made by the contractor, subcontractors, specifically trained technicians, equipment manufacturers, and others as required by a task order, shall be furnished in accordance with the terms of the task order. A report shall consist of the results of lab tests.

d. Materials and Equipment: Special facilities, devices, equipment, clothing, and similar items used by the contractor in the execution of work shall comply with the applicable regulations.

e. Hazardous Materials: The contractor shall bring to the attention of the contracting officer any previously unknown material suspected of being hazardous which it encounters during execution of the work period. A determination may be made by the contracting officer as to whether the contractor shall perform tests to determine if the material is hazardous. If the Contracting officer directs the contractor to perform the tests, and/or if the material is found hazardous and additional protective measures are needed, a contract change may be required, subject to equitable adjustment under the terms of the contract.

1.21 HOLIDAY PERFORMANCE AND HOURS OF WORK:

a. Normal access to the job site shall be between the hours of 0800 to 1700 hrs, Monday through Friday. No work will be performed after hours, during the weekends, or on host nation / American holidays unless otherwise negotiated prior to task order award.

b. List of US Holidays:

(1) 1 January*	New Year's Day
(2) 3rd Monday in January	Martin Luther King's Day
(3) 3rd Monday in February	Presidents Day
(4) Last Monday in May	Memorial Day
(5) 4 July*	Independence Day
(6) 1st Monday in September	Labor Day
(7) 2nd Monday in October	Columbus Day
(8) 11 November*	Veteran's Day
(9) 4th Thursday in November	Thanksgiving Day
(10) 25 December*	Christmas Day

*When the holiday is on a Saturday, the preceding Friday will be the U.S. holiday. When the holiday is on a Sunday, the following Monday will be the U.S. holiday.

c. List of Host Country Holidays Lajes, Azores:

(1) 01 Jan	New Years
(2) **	Mardi Gras
(3) **	Good Friday
(4) 25 Apr	Day of Liberty
(5) 01 May	Day of the Worker
(6) **	Holy Spirit Monday
(7) **	Corpus Christi Day
(8) 10 Jun	Day of Portugal
(9) 11 Aug	Praia da Vitória Day
(10) 15 Aug	Assumption Day
(11) 05 Oct	Founding of the Republic
(12) 01 Nov	All Saints Day
(13) 01 Dec	Restoration of Independence
(14) 08 Dec	Immaculate Conception
(15) 25 Dec	Christmas

**Indicates dates change each year.

d. Request for deviation from these specified hours and days must be submitted in writing to the CO.

1.22 **SAFETY PLAN:** The contractor shall submit a safety plan and procedure to the CO for review and approval within 21 calendar days of contract award.

1.23 **CERTIFICATION**: Certified tests on materials and/or equipment to be incorporated into this project will be acceptable provided they are conducted in accordance with the standards established by the authority cited in the referenced specifications and the tested materials or equipment meet the specified requirements. Preprinted certifications are not acceptable. All certifications shall be in the original form and shall itemize the specified material and/or equipment for the specified quality and the test method used. Attach certified copies of all test reports to such certifications.

1.24 **CONTRACTOR PERSONNEL:** Contract Manager: The contractor shall provide a contract manager and at least one alternate. The contract manager and alternate shall have full authority to act for the contractor in all contractual matters. The contract manager or alternate shall be available during standard work hours. The contract manager and alternate shall be able to read, speak and write English fluently.

1.25 **GOVERNMENT PERSONNEL:** Personnel from 65 CES/CEP are designated as the representative of the CO for the purpose of technical surveillance of workmanship and inspection of materials for work being performed under this contract. This designation in no way authorizes anyone other than the CO to commit the Government to changes in the terms of the contract. No oral statement of any person and no written statement of anyone other than the CO shall modify or other-wise affect the terms or meaning of this contract. All requests by the contractor for interpretations, modifications, or changes shall be made in writing to the CO. The Government shall not be liable for any costs incurred by the government or any action taken by the contractor, which are not in conformance with this statement.

1.26 **E-MAIL CAPABILITY:** The contractor shall have e-mail capability, via Internet or other means. This will allow the CO and 65 CES/CEP to communicate with contractor via email.

1.27 **GOVERNMENT LIABILITY:** The Government shall not be liable for any loss or damage to the contractor's property, including stock, or for expenses incidental to such loss or damage. The contractor shall file a report with the Base Security Forces immediately as is practicable to report loss.

PART 2 - PRODUCTS - Not Applicable

PART 3 - EXECUTION - Not Applicable

End of Section

SECTION 01 33 00

SUBMITTAL PROCEDURES

PART 01 – GENERAL

1.01 SCOPE: The Contracting Officer may request submittals in addition to those specified when deemed necessary to adequately describe the work covered in the respective sections. Units of weights and measures used on all submittals are to be the same as those used in the contract drawings and/or specifications. Each submittal is to be complete and in sufficient detail to allow ready determination of compliance with contract requirements. Contractor's Quality Control (CQC) System Manager and the Designer of Record, if applicable, to check and approve all items prior to submittal and stamp, sign, and date indicating action taken. Proposed deviations from the contract requirements are to be clearly identified. Include within submittals items such as: Contractor's, manufacturer's, or fabricator's drawings; descriptive literature including (but not limited to) catalog cuts, diagrams, operating charts or curves; test reports; test cylinders; samples; O&M manuals (including parts list); certifications; warranties; and other such required submittals. Submittals requiring government approval are to be scheduled and made prior to the acquisition of the material or equipment covered thereby. Picked up and disposed of in accordance with manufacturer's Safety Data Sheets (SDS) and in compliance with existing laws and regulations samples remaining upon completion of the work.

1.01 DEFINITIONS:

a. Submittal Descriptions (SD): Submittals requirements are specified in the technical sections. Submittals are identified by Submittal Description (SD) numbers and titles as follows:

SD-01 Preconstruction Submittals
Submittals which are required right after the notice to proceed commencing work on site.
Submittals required prior to the start of the next major phase of the construction on a multi-phase contract.
Schedules or tabular list of data or tabular list including location, features, or other pertinent information regarding products, materials, equipment, or components to be used in the work, submitted prior to contract notice to proceed or next major phase of construction.
Certificates of insurance Surety bonds
List of proposed subContractors
List of proposed products
Construction Progress Schedule
Network Analysis Schedule (NAS)
Submittal register
Schedule of prices
Health and safety plan
Work plan
Quality control (QC) plan
Environmental protection plan

SD-02 Shop Drawings
Drawings, diagrams and schedules specifically prepared to illustrate some portion of the work. Diagrams and instructions from a manufacturer or fabricator for use in producing the product and as aids to the contractor for integrating the product or system into the project. Drawings prepared by or for the contractor to show how multiple systems and interdisciplinary work will be coordinated.

SD-03 Product Data
Catalog cuts, illustrations, schedules, diagrams, performance charts, instructions and brochures illustrating size, physical appearance and other characteristics of materials, systems or equipment for some portion of the work. Samples of warranty language when the contract requires extended product warranties.

SD-04 Samples
Fabricated or unfabricated physical examples of materials, equipment or workmanship that illustrate functional and aesthetic characteristics of a material or product and establish standards by which the work can be judged. Color samples from the manufacturer's standard line (or custom color samples if specified) to be used in selecting or approving colors for the project. Field samples and mock-ups constructed on the project site establish standards by which the ensuring work can be judged. Includes assemblies or portions of assemblies which are to be incorporated into the project and those which will be removed at conclusion of the work.

SD-05 Design Data
Design calculations, mix designs, analyses or other data pertaining to a part of work.
Design submittals, design substantiation submittals and extensions of design submittals.

SD-06 Test Reports
Report signed by authorized official of testing laboratory that a material, product or system identical to the material, product or system to be provided has been tested in accord with specified requirements. (Testing must have been within three years of date of contract award for the project.) Report which includes findings of a test required to be performed by the contractor on an actual portion of the work or prototype prepared for the project before shipment to job site. Report which includes finding of a test made at the job site or on sample taken from the job site, on portion of work during or after installation. Investigation reports. Daily logs and checklists. Final acceptance test and operational test procedure.

SD-07 Certificates
Statements printed on the manufacturer's letterhead and signed by responsible officials of manufacturer of product, system or material attesting that product, system or material meets specification requirements. Must be dated after award of project contract and clearly name the project. Document required of contractor, or of a manufacturer, supplier, installer or subcontractor through contractor, the purpose of which is to further quality of orderly progression of a portion of the work by documenting procedures, acceptability of methods or personnel qualifications. Confined space entry permits. Text of posted operating instructions.

SD-08 Manufacturer's Instructions

Preprinted material describing installation of a product, system or material, including special notices and Material Safety Data sheets concerning impedances, hazards and safety precautions.

SD-09 Manufacturer's Field Reports
Documentation of the testing and verification actions taken by manufacturer's representative at the job site, in the vicinity of the job site, or on a sample taken from the job site, on a portion of the work, during or after installation, to confirm compliance with manufacturer's standards or instructions. The documentation must be signed by an authorized official of a testing laboratory or agency and must state the test results; and indicate whether the material, product, or system has passed or failed the test. Factory test reports.

SD-10 Operation and Maintenance Data
Data that is furnished by the manufacturer, or the system provider, to the equipment operating and maintenance personnel, including manufacturer's help and product line documentation necessary to maintain and install equipment. This data is needed by operating and maintenance personnel for the safe and efficient operation, maintenance and repair of the item. This data is intended to be incorporated in an operations and maintenance manual or control system.

SD-11 Closeout Submittals
Documentation to record compliance with technical or administrative requirements or to establish an administrative mechanism. Special requirements necessary to properly close out a construction contract. For example, Record Drawings and as-built drawings. Also, submittal requirements necessary to properly close out a major phase of construction on a multi-phase contract.

b. Approving Authority: Office or designated person authorized to approve submittal.

c. Work: As used in this section, on- and off-site construction required by contract documents, including labor necessary to produce submittals, construction, materials, products, equipment, and systems incorporated or to be incorporated in such construction.

1.02 **SUBMITTALS:** Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for contractor QC approval.

Submit the following in accordance with this section:
SD-01 Preconstruction Submittals
Submittal register; G

1.03 **SUBMITTAL CLASSIFICATION:** Submittals are classified as follows:

a. Designer of Record Approved (DA): Designer of Record (DOR) approval is required for extensions of design, critical materials, any deviations from the solicitation, the accepted proposal, or the completed design, equipment whose compatibility with the entire system must be checked, and other items as designated by the Contracting Officer. Within the terms of the Contract Clause entitled "Specifications and Drawings for Construction," they are considered to be "shop drawings." Contractor to provide the Government with the number of

copies designated hereinafter of all DOR approved submittals. The government may review any or all Designer of Record approved submittals for conformance to the Solicitation, Accepted Proposal and the completed design. The government will review all submittals designated as deviating from the Solicitation or Accepted Proposal, as described below. Design submittals to be in accordance with Section DESIGN AFTER AWARD. Generally, design submittals should be identified as SD-05 Design Data submittals.

b. Government Approved: Government approval is required for extensions of design, critical materials, deviations, equipment whose compatibility with the entire system must be checked, and other items as designated by the Contracting Officer. Government approval is required for any deviations from the Solicitation or Accepted Proposal and other items as designated by the Contracting Officer. Within the terms of the Contract Clause entitled "Specifications and Drawings for Construction," they are considered to be "shop drawings."

c. Government Conformance Review of Design (CR)
The government will review all intermediate and final design submittals for conformance with the technical requirements of the solicitation. Section DESIGN AFTER AWARD covers the design submittal and review process in detail. Review will be only for conformance with the applicable codes, standards and contract requirements. Design data includes the design documents described in Section DESIGN AFTER AWARD. Generally, design submittals should be identified as SD-05 Design Data submittals.

d. Designer of Record Approved/Government Conformance Review (DA/CR)

(1) Deviations to the Accepted Design Designer of Record approval and the Government's concurrence are required for any proposed deviation from the accepted design which still complies with the contract before the contractor is authorized to proceed with material acquisition or installation. Within the terms of the Contract Clause entitled "Specifications and Drawings for Construction", they are considered to be "shop drawings." If necessary to facilitate the project schedule, the contractor and the DOR may discuss a submittal proposing a deviation with the Contracting Officer's Representative prior to officially submitting it to the government. However, the Government reserves the right to review the submittal before providing an opinion, if deemed necessary. In any case, the Government will not formally agree to or provide a preliminary opinion on any deviation without the DOR's approval or recommended approval. The Government reserves the right to non-concur with any deviation from the design, which may impact furniture, furnishings, equipment selections or operations decisions that were made, based on the reviewed and concurred design.

(2) Substitutions: Unless prohibited or provided for otherwise elsewhere in the Contract, where the accepted contract proposal named products, systems, materials or equipment by manufacturer, brand name and/or by model number or other specific identification, and the contractor desires to substitute manufacturer or model after award, submit a requested substitution for government concurrence. Include substantiation, identifying information and the DOR's approval, as meeting the contract requirements and that it is equal in function, performance, quality and salient features to that in the accepted contract proposal.

e. Designer of Record Approved/Government Approved (DA/GA): In addition to the above stated requirements for proposed deviations to the accepted design, both Designer of Record and Government Approval and, where applicable, a contract modification are required before the Contractor is authorized to proceed with material acquisition or installation for any proposed deviation to the contract (the solicitation and/or the accepted proposal), which constitutes a change to the contract terms. Within the terms of the
Contract Clause entitled "Specifications and Drawings for Construction", they are considered to be "shop drawings". The government reserves the right to accept or reject any such proposed deviation at its discretion.

f. Information Only: Submittals not requiring government approval will be for information only. For Design-build construction all submittals not requiring Designer of Record or government approval will be for information only. They are not considered to be "shop drawings" within the terms of the Contract Clause referred to above.

1.04 PREPARATION:

a. Transmittal Form: Transmit each submittal, except sample installations and sample panels to office of approving authority. Transmit submittals with transmittal form prescribed by Contracting Officer (AF Form 3000, unless specified otherwise by the CO) and standard for project. On the transmittal form identify Contractor, indicate date of submittal, and include information prescribed by transmittal form and required in paragraph entitled "Identifying Submittals." Process transmittal forms to record actions regarding samples.

b. Identifying Submittals: When submittals are provided by a lower tier Contractor the Prime Contractor is to prepare, review and stamp with Contractor's approval all specified submittals prior to submitting for Government approval. Identify submittals, except sample installations and sample panels, with the following information permanently adhered to or noted on each separate component of each submittal and noted on transmittal form. Mark each copy of each submittal identically, with the following:

(1) Project title and location.

(2) Construction contract number.

(3) Date of the drawings and revisions.

(4) Name, address, and telephone number of sub-Contractor, supplier, manufacturer and any other second tier Contractor associated with submittal.

(5) Section number of the specification section by which submittal is required.

(6) Submittal description (SD) number of each component of submittal.

(7) When a resubmission, add alphabetic suffix on submittal description, for example, submittal 18 would become 18A, to indicate resubmission.

(8) Product identification and location in project.

c. Format for SD-02 Shop Drawings (digital, no paper submittals allowed)

(1) Shop drawings are not to be less than 8 1/2 by 11 inches nor more than 30 by 42 inches, except for full size patterns or templates. Prepare drawings to accurate size, with scale indicated, unless other form is required. Drawings are to be suitable for reproduction and be of a quality to produce clear, distinct lines and letters with dark lines on a white background.

(2) Present A4 8 1/2 by 11 inches sized shop drawings as part of the bound volume for submittals required by section. Present larger drawings in sets.

(3) Include on each drawing the drawing title, number, date, and revision numbers and dates, in addition to information required in paragraph entitled "Identifying Submittals."

(4) Number drawings in a logical sequence. Each drawing is to bear the number of the submittal in a uniform location adjacent to the title block. Place the Government contract number in the margin, immediately below the title block, for each drawing.

(5) Reserve a blank space, no smaller than 4 inches on the right hand side of each digital sheet for the Government disposition stamp.

(6) Dimension drawings, except diagrams and schematic drawings; prepare drawings demonstrating interface with other trades to scale. Use the same unit of measure for shop drawings as indicated on the contract drawings. Identify materials and products for work shown.

(7) Include the nameplate data, size and capacity on drawings. Also include applicable federal, military, industry and technical society publication references.

d. Format of SD-03 Product Data and SD-08 Manufacturer's Instructions (digital, no paper submittals allowed)

(1) Present product data submittals for each section as a complete, bound volume. Include table of contents, listing page and catalog item numbers for product data.

(2) Indicate, by prominent notation, each product which is being submitted; indicate specification section number and paragraph number to which it pertains.

(3) Supplement product data with material prepared for project to satisfy submittal requirements for which product data does not exist. Identify this material as developed specifically for project, with information and format as required for submission of SD-07 Certificates.

(4) Provide product data in metric dimensions. Where product data are included in catalogs with English units only, submit metric dimensions on separate sheet.

(5) Include the manufacturer's name, trade name, place of manufacture, and catalog model or number on product data. Also include applicable federal, military, industry

and technical society publication references. Should manufacturer's data require supplemental information for clarification, submit as specified for SD-07 Certificates.

(6) Where equipment or materials are specified to conform to industry and technical society reference standards of the organizations such as American National Standards Institute (ANSI), ASTM International (ASTM), National Electrical Manufacturer's Association (NEMA), Underwriters Laboratories (UL), and Association of Edison Illuminating Companies (AEIC), submit proof of such compliance. The label or listing by the specified organization will be acceptable evidence of compliance. In lieu of the label or listing, submit a certificate from an independent testing organization, competent to perform testing, and approved by the Contracting Officer. State on the certificate that the item has been tested in accordance with the specified organization's test methods and that the item complies with the specified organization's reference standard.

(7) Collect required data submittals for each specific material, product, unit of work, or system into a single submittal and marked for choices, options, and portions applicable to the submittal. Mark each digital copy of the product data identically. Partial submittals will not be accepted for expedition of construction effort.

(8) Submit manufacturer's instructions prior to installation.

e. Format of SD-04 Samples

(1) Furnish samples in sizes below, unless otherwise specified or unless the manufacturer has prepackaged samples of approximately same size as specified:

i. Sample of Equipment or Device: Full size.
ii. Sample of Materials Less Than 50mm by 75mm: Built up to A4.
iii. Sample of Materials Exceeding A4: Cut down to A4 and adequate to indicate color, texture, and material variations.
iiii. Sample of Linear Devices or Materials: 254mm length or length to be supplied, if less than 10 inches. Examples of linear devices or materials are conduit and handrails.
iiiii. Sample of Non-Solid Materials: Pint. Examples of non-solid materials are sand and paint.
iiiiii. Color Selection Samples: 50mm by 100mm. Where samples are specified for selection of color, finish, pattern, or texture, submit the full set of available choices for the material or product specified. Sizes and quantities of samples are to represent their respective standard unit.
iiiiiii. Sample Panel: 1,20 by 1,20 meters.
iiiiiiii. Sample Installation: 30 square meters.

(2) Samples Showing Range of Variation: Where variations in color, finish, pattern, or texture are unavoidable due to nature of the materials, submit sets of samples of not less than three units showing extremes and middle of range. Mark each unit to describe its relation to the range of the variation.

(3) Reusable Samples: Incorporate returned samples into work only if so specified or indicated. Incorporated samples are to be in undamaged condition at time of use.

(4) Recording of Sample Installation: Note and preserve the notation of area constituting sample installation but remove notation at final cleanup of project.

(5) When color, texture or pattern is specified by naming a particular manufacturer and style, include one sample of that manufacturer and style, for comparison.

f. Format of SD-05 Design Data and SD-07 Certificates: Provide design data and certificates on digital format. Provide a bound volume for submittals containing numerous pages.

g. Format of SD-06 Test Reports and SD-09 Manufacturer's Field Reports (digital, no paper submittals allowed)

(1) Provide reports on 8 1/2 by 11 inches digital format in a complete bound volume.

(2) Indicate by prominent notation, each report in the submittal. Indicate specification number and paragraph number to which it pertains.

1.05 DIGITAL SUBMITTALS:

a. SD-02 Shop Drawings: Submit shop drawings requiring review and approval only by QC organization and shop drawings requiring review and approval by Contracting Officer.

b. SD-03 Product Data and SD-08 Manufacturer's: Instructions Submit in compliance with quantity requirements specified for shop drawings.

c. Number of Samples SD-04 Samples

(1) Submit two samples, or two sets of samples showing range of variation, of each required item. One approved sample or set of samples will be retained by approving authority and one will be returned to Contractor.

(2) Submit one sample panel or provide one sample installation where directed. Include components listed in technical section or as directed.

(3) Submit one sample installation, where directed.

(4) Submit one sample of non-solid materials.

d. SD-05 Design Data and SD-07 Certificates: Submit in compliance with requirements specified for shop drawings.

e. SD-06 Test Reports and SD-09 Manufacturer's Field Reports:
Submit in compliance with quality requirements specified for shop drawings other than field test results that will be submitted with QC reports.

f. SD-10 Operation and Maintenance Data: Submit O&M Data to the Contracting Officer for review and approval.

g. SD-01 Preconstruction Submittals and SD-11 Closeout Submittals:
Unless otherwise specified, submit a set of administrative submittals.

1.06 **INFORMATION ONLY SUBMITTALS:** Normally submittals for information only will not be returned. Approval of the Contracting Officer is not required on information only submittals. The Government reserves the right to require the contractor to resubmit any item found not to comply with the contract. This does not relieve the contractor from the obligation to furnish material conforming to the plans and specifications; will not prevent the Contracting Officer from requiring removal and replacement of nonconforming material incorporated in the work; and does not relieve the contractor of the requirement to furnish samples for testing by the Government laboratory or for check testing by the Government in those instances where the technical specifications so prescribe.

1.07 **VARIATIONS / SUBSTITUTION REQUESTS:** Variations from contract requirements require government approval pursuant to contract, FAR Clause 52.236-21 (Specifications and Drawings for Construction) and will be considered where advantageous to government.

a. Considering Variations: Discussion with Contracting Officer prior to submission, will help ensure functional and quality requirements are met and minimize rejections and resubmittals. When contemplating a variation which results in lower cost, consider submission of the variation as a Value Engineering Change Proposal (VECP).
Specifically point out variations from contract requirements in transmittal letters. Failure to point out deviations may result in the government requiring rejection and removal of such work at no additional cost to the government.

b. Proposing Variations: When proposing variation, deliver written request to the Contracting Officer, with documentation of the nature and features of the variation and why the variation is desirable and beneficial to Government. If lower cost is a benefit, also include an estimate of the cost savings. In addition to documentation required for variation, include the submittals required for the item. Clearly mark the proposed variation in all documentation. Check the column "variation" of Transmittal Form (ENG Form 4025) shown on attachment 1 of this section for submittals which include proposed deviations requested by the contractor. Set forth in writing the reason for any deviations and annotate such deviations on the submittal. The government reserves the right to rescind inadvertent approval of submittals containing unnoted deviations.

c. Warranting That Variations Are Compatible: When delivering a variation for approval, Contractor warrants that this contract has been reviewed to establish that the variation, if incorporated, will be compatible with other elements of work.

d. Review Schedule Is Modified: In addition to normal submittal review period, a period of 10 working days will be allowed for consideration by the government of submittals with variations.

1.08 **SCHEDULING:** Schedule and submit (AF Form 66, Schedule of Material Submittals, or other specified by the CO) concurrently submittals covering component items forming a

system or items that are interrelated. Include certifications to be submitted with the pertinent drawings at the same time. No delay damages or time extensions will be allowed for time lost in late submittals.

a. Coordinate scheduling, sequencing, preparing and processing of submittals with performance of work so that work will not be delayed by submittal processing. Allow for potential resubmittal of requirements.

b. Submittals called for by the contract documents will be listed on the register. If a submittal is called for but does not pertain to the contract work, the Contractor is to include the submittal in the register and annotate it "N/A" with a brief explanation. Approval by the Contracting Officer does not relieve the contractor of supplying submittals required by the contract documents but which have been omitted from the register or marked "N/A".

c. Re-submit register and annotate monthly by the contractor with actual submission and approval dates. When all items on the register have been fully approved, no further resubmittal is required.

d. Carefully control procurement operations to ensure that each individual submittal is made on or before the contractor scheduled submittal date shown on the approved "Submittal Register."

e. Except as specified otherwise, allow review period, beginning with receipt by approving authority, that includes at least 20 working days for submittals for Contracting Officer approval. Period of review for submittals with Contracting Officer approval begins when government receives submittal.

f. For submittals requiring review by fire protection engineer, allow review period of 30 working days, beginning when government receives submittal.

g. Period of review for each resubmittal is the same as for initial submittal. Within 15 calendar days of notice to proceed, provide, for approval by the Contracting Officer, the following schedule of submittals:

(1) A schedule of shop drawings and technical submittals required by the specifications and drawings. Indicate the specification or drawing reference requiring the submittal; the material, item, or process for which the submittal is required; the "SD" number and identifying title of the submittal; the contractor's anticipated submission date and the approval need date.

(2) A separate schedule of other submittals required under the contract but not listed in the specifications or drawings. Schedule will indicate the contract requirement reference; the type or title of the submittal; the contractor's anticipated submission date and the approved need date (if approval is required).

1.09 <u>GOVERNMENT APPROVING AUTHORITY</u>: When approving authority is Contracting Officer, the Government will:

a. Note date on which submittal was received.

b. Review submittals for approval within scheduling period specified and only for conformance with project design concepts and compliance with contract documents.

c. Identify returned submittals with one of the actions defined in paragraph entitled "Review Notations" and with markings appropriate for action indicated. Upon completion of review of submittals requiring government approval, stamp and date approved submittals. Digital copy of the approved submittal will be retained by the Contracting Officer, Digital copy by CE and all other copies of the submittal will be returned to the Contractor. If the government performs a conformance review of other Designer of Record approved submittals, the submittals will be so identified and returned, as described above.

d. Review Notations: Contracting Officer review will be completed within 14 calendar days after date of submission. Submittals will be returned to the Contractor with the following notations:

(1) Submittals marked "approved" or "accepted" authorize the contractor to proceed with the work covered.

(2) Submittals marked "approved as noted" "or approved except as noted, resubmittal not required," authorize the contractor to proceed with the work covered provided he takes no exception to the corrections.

(3) Submittals marked "not approved" or "disapproved," or "revise and resubmit," indicate noncompliance with the contract requirements or design concept, or that submittal is incomplete. Resubmit with appropriate changes. No work shall proceed for this item until resubmittal is approved.

(4) Submittals marked "not reviewed" will indicate submittal has been previously reviewed and approved, is not required, does not have evidence of being reviewed and approved by contractor, or is not complete. A submittal marked "not reviewed" will be returned with an explanation of the reason it is not reviewed. Resubmit submittals returned for lack of review by contractor or for being incomplete, with appropriate action, coordination, or change.

1.10 **DISAPPROVED OR REJECTED SUBMITTALS:** The contractor shall make corrections required by the Contracting Officer. If the contractor considers any correction or notation on the returned submittals to constitute a change to the contract drawings or specifications; notice as required under the clause FAR 52.243-4 entitled, "Changes" is to be given to the Contracting Officer. The contractor is responsible for the dimensions and design of connection details and construction of work. Failure to point out deviations may result in the Government requiring rejection and removal of such work at the contractor's expense. If changes are necessary to submittals, the contractor shall make such revisions and submission of the submittals in accordance with the procedures above. No item of work requiring a submittal change is to be accomplished until the changed submittals are approved.

1.11 **APPROVED/ACCEPTED SUBMITTALS:** The Contracting Officer's approval or acceptance of submittals is not be construed as a complete check, and indicates only that the general method of construction, materials, detailing and other information are satisfactory

design, general method of construction, materials, detailing and other information appear to meet the SOW. Approval or acceptance will not relieve the contractor of the responsibility for any error which may exist, as the contractor under the Contractor Quality Control (CQC) requirements of this contract is responsible for dimensions, the design of adequate connections and details, and the satisfactory construction of all work. After submittals have been approved or accepted by the Contracting Officer, no resubmittal for the purpose of substituting materials or equipment will be considered unless accompanied by an explanation of why a substitution is necessary.

1.12 APPROVED SAMPLES: Approval of a sample is only for the characteristics or use named in such approval and is not be construed to change or modify any contract requirements. Before submitting samples, the contractor to assure that the materials or equipment will be available in quantities required in the project. No change or substitution will be permitted after a sample has been approved. Match the approved samples for Materials and equipment incorporated in the work. If requested, approved samples, including those which may be damaged in testing, will be returned to the contractor, at his expense, upon completion of the contract. Samples not approved will also be returned to the contractor at its expense, if so requested. Failure of any materials to pass the specified tests will be sufficient cause for refusal to consider, under this contract, any further samples of the same brand or make of that material.

The government reserves the right to disapproved any material or equipment which previously has proved unsatisfactory in service. Samples of various materials or equipment delivered on the site or in place may be taken by the Contracting Officer for testing. Samples failing to meet contract requirements will automatically void previous approvals. The contractor to replace such materials or equipment to meet contract requirements. Approval of the Contractor's samples by the Contracting Officer does not relieve the contractor of his responsibilities under the contract.

1.13 WITHHOLDING OF PAYMENT: Payment for materials incorporated in the work will not be made if required approvals have not been obtained. No payment for materials incorporated in the work will be made if all required Designer of Record or required Government approvals have not been obtained. No payment will be made for any materials incorporated into the work for any conformance review submittals or information only submittals found to contain errors or deviations from the Solicitation or Accepted Proposal.

1.14 PROGRESS SCHEDULE:

a. Bar Chart

(1) Submit the progress chart, for approval by the Contracting Officer, at the Preconstruction Conference in digital format.

(2) Prepare the progress chart in the form of a bar chart utilizing form "Construction Progress Chart" or comparable format acceptable to the Contracting Officer.

(3) Include no less than the following information on the progress chart:

i. Break out by major headings for primary work activity.

ii. A line item break out under each major heading sufficient to track the progress of the work.

iii. A line item showing contract finalization task which includes punch list, clean-up and demolition, and final construction drawings.

iv. A materials bar and a separate labor bar for each line item. Both bars will show the scheduled percentage complete for any given date within the contract performance period. Labor bar will also show the number of men (man-load) expected to be working on any given date within the contract performance period.

v. The estimated cost and percentage weight of total contract cost for each materials and labor bar on the chart.

vi. Separate line items for mobilization and drawing submittal and approval. (These items are to show no associated costs.)

(4) Update the progress schedule in digital format every 30 calendar days throughout the contract performance period.

b. Project Network Analysis: Submit the initial progress schedule within 21 calendar days of notice to proceed. Schedule is to be updated and resubmitted monthly beginning 7 calendar days after return of the approved initial schedule. Updating to entail complete revision of the graphic and data displays incorporating changes in scheduled dates and performance periods. Redlined updates will only be acceptable for use as weekly status reviews. Contractor to provide a single point contact from his on-site organization as his Schedule Specialist. Schedule Specialist is to have the responsibility of updating and coordinating the schedule with actual job conditions. Schedule Specialist to participate in weekly status meetings and present current information on the status of purchase orders, shop drawings, off-site fabrication, materials deliveries, Subcontractor activities, anticipated needs for government furnished equipment, and any problem which may impact the contract performance period. Include the following in the project network analysis:

(1) Graphically display with the standard network or arrow diagram capable of illustrating the required data. Drafting to be computer generated on standard 24 by 36 inch (nominal size) drafting sheets or on small (11 by 17 inch minimum) digital sheets with separate overview and detail breakouts. Provide a project network analysis that is legible with a clear, consistent method for continuations and detail referencing. Clearly delineate the critical path on the display. Clearly indicate the contract milestone date on the project network analysis graphic display.

(2) Data is to be presented as a separate digital file. Data is to be organized in a logical coherent display capable of periodic updating.

(3) Include within the data verbal activity descriptions with a numerical ordering system cross referenced to the graphic display. Additionally, costs (broken down into separate materials and costs), duration, early start date, early finish date, late start date, late finish date, and float are to be detailed for each activity. A running total of

the percent completion based on completed activity costs versus total contract cost is to be indicated. A system for indicating scheduled versus actual activity dates and durations is also to be provided.

(4) Sufficient detail to facilitate the Contractor's control of the job and to allow the Contracting Officer to readily follow progress for portions of the work should be shown within the schedule.

PART 2 - PRODUCTS - Not Applicable

PART 3 - EXECUTION - Not Applicable

TRANSMITTAL OF SHOP DRAWINGS, EQUIPMENT DATA, MATERIAL SAMPLES, OR MANUFACTURER'S CERTIFICATES OF COMPLIANCE *(Read instructions on the reverse side prior to initiating this form)*	DATE	TRANSMITTAL NO.

SECTION I - REQUEST FOR APPROVAL OF THE FOLLOWING ITEMS *(This section will be initiated by the contractor)*

TO:	FROM:	CONTRACT NO.	CHECK ONE: ☐ THIS IS A NEW TRANSMITTAL ☐ THIS IS A RESUBMITTAL OF TRANSMITTAL _____
SPECIFICATION SEC. NO. *(Cover only one section with each transmittal)*	PROJECT TITLE AND LOCATION		

ITEM NO. *a.*	DESCRIPTION OF ITEM SUBMITTED *(Type size, model number/etc.)* *b.*	MFG OR CONTR. CAT., CURVE DRAWING OR BROCHURE NO. *(See instruction no. 8)* *c.*	NO. OF COPIES *d.*	CONTRACT REFERENCE DOCUMENT		FOR CONTRACTOR USE CODE *g.*	VARIATION *(See instruction No. 6)* *h.*	FOR CE USE CODE *i.*
				SPEC. PARA. NO. *e.*	DRAWING SHEET NO. *f.*			

REMARKS

I certify that the above submitted items have been reviewed in detail and are correct and in strict conformance with the contract drawings and specifications except as other wise stated.

_____

NAME AND SIGNATURE OF CONTRACTOR

SECTION II - APPROVAL ACTION

ENCLOSURES RETURNED *(List by Item No.)*	NAME, TITLE AND SIGNATURE OF APPROVING AUTHORITY	DATE

ENG FORM 4025, May 91 *(ER 415-1-10)* EDITION OF AUG 89 IS OBSOLETE. SHEET ___ OF ___ (Proponent: CEMP-CE)

SECTION 01 57 50

ENVIRONMENTAL COMPLIANCE AND PROTECTION

PART 01 – ENVIRONMENTAL COMPLIANCE

1.01 **SCOPE**: This section specifies the requirements applicable to the environmental compliance.

1.02 **ENVIRONMENTAL REFERENCES:** The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

The contractor is responsible for strict adherence to any Federal, or local environmental regulations relating to this project. The critical environmental regulations for this project are as follows: Final Governing Standards for Portugal (FGS-P), Lajes Field Hazardous Waste Management Plan (HWMP), AFI32-7042 Waste Management, 21 April 2009, AFPM 32-7043 Hazardous Waste Management, 14 June 1999, the European Agreement Concerning the International Carriage of Dangerous Goods by Road (ADR) and Portuguese Laws and Decrees. This is not intended to be an exclusive listing of contractor legal responsibilities and cannot in any way release the contractor from any regulatory requirements not listed. 65 Environmental office is the base expert on environmental compliance/noncompliance issues and will provide assistance to the contractor or the contracting office whenever interpretations of environmental regulations and procedures are required.

1.03 HAZARDOUS MATERIAL (HAZMAT) DETERMINATION AND AUTHORIZATION PROCEDURES FOR CONTRACTORS:

1. Contractors using hazardous materials on Air Force installations must comply with the authorizations procedures established in the most current AFI32-7086 Hazardous Materials Management and Chapter 5, Hazardous Materials, Final Governing Standards (FGS). For the purposes of this project hazardous material shall be defined as any substance or preparation of materials that presents one or more may danger property to the public health or safety or the environment and included in Appendix C5.A1, Chapter 5 of the most current version of the FGS Portugal.

2. Prior to the final closeout of the construction project any hazardous material brought onto Lajes Field by the contractor must have a current copy of the manufacturer's Safety Data Sheet (SDS). The contractor must ensure through certification that the SDS contains at minimum, the following information:

a) Manufacturer's Name
b) List 100% of the hazardous chemical components
c) Chemical Abstract Number (CAS Number) for each chemical component
d) Specific Gravity/Unit Volume and or Unit Weight
e) Ph (Acidity or Alkalinity) if applicable
f) Flash Point/Ignitability
g) Exact weight in pounds/ounces of the material initially brought on base

3. Reuse of Surplus Hazardous Materials: Surplus hazardous materials will be the responsibility of construction contractor. A certification of surplus hazardous material is required prior to construction project closeout certifying both the quantity and reuse of that hazardous material.

4. Prior to final acceptance of this project the contractor shall compile a listing of all hazardous materials relating to this project. The listing will include the product name, manufacturer, and exact weight of material remaining. All material tracking shall be done on the Hazardous Material Tracking List. Attachment 1 at the end of this section is a blank copy of the Hazardous Materials Tracking List.

5. Requirement for special haul routes to deliver or remove hazardous materials for this project shall be addressed by the Contractor.

1.04 HAZARDOUS WASTES MANAGEMENT AND DISPOSAL REQUIREMENTS:

1. All types of hazardous waste, to include, used petroleum, asbestos, Lead-Based Paint and PCB's that are generated by this project shall be managed and disposed of at contractor's expense, in the manner required by Chapter 6 and Chapter 7 of FGS-P and, the ADR and approved by the Contracting Officer. For this project hazardous waste shall be defined as any solid wastes satisfying the criteria listed in Appendixes C6.A1 and C6.A2 Chapter 6 of FGS-P and Table C7.T4 European Waste Catalogue (EWC) in Chapter 7.

2. The contractor shall be responsible for proper handling, containerization, labeling and storage of hazardous wastes created from this project.

3. The contractor shall be responsible for obtaining all necessary manifest forms and for proper completion of each form.

a. Each manifest line item must have the quantity listed on the manifest in the quantity listed in Kilograms.

b. Each manifest line item must have supporting documentation to allow proper chemical characterization of the hazards as defined in the FGS-P. Sampling and analysis will be required on all wastes that have been contaminated or altered during the course of this project.

c. The contractor shall ensure all hazardous wastes are moved off base in accordance with ADR.

1.05 INSPECTION LIABILITY:

1. The contractor should understand that any operations on Lajes Field property are fully inspected by the 65 Environmental office and other federal regulatory, Air Force, or local agencies. Compliance with all requirements in areas where called for in this project is mandatory.

2. By accepting this project the contractor will also permit no notice inspections of all activities related to the project by 65 Environmental office.

Issues of noncompliance will be addressed directly to the Contracting Officer to assure rapid correction of the unsatisfactory features.

3. Any breach of environmental regulations deemed serious by the Contracting Officer shall result in withholding of all progress or final payments related to this project until environmental compliance has been restored.

PART 02 - ENVIRONMENTAL PROTECTION

1.01 **SCOPE**: This section specifies the requirements applicable to the environmental protection.

1.02 **ENVIRONMENTAL REFERENCES:** The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only. This is not intended to be an exclusive listing of contractor legal responsibilities and cannot in any way release the contractor from any regulatory requirements not listed. 65 Environmental office is the base expert on environmental compliance/noncompliance issues and will provide assistance to the contractor or the contracting office whenever interpretations of environmental regulations and procedures are required.

1.03 APPLICABLE LAWS AND REGULATIONS:

a. Bases outside of the United States and its territories must comply with Air Force Instruction (AFI) 32-7006, Environmental Program in Foreign Countries. AFI 32-7006 states that FGS, as the sole compliance standard at installations and facilities in foreign countries, takes precedence over compliance with the AFI 32-7042, Waste Management, 21 April 2009. USAFE Instruction 32-7042, Hazardous Waste Management, 14 JUNE 1999 and Lajes Field Hazardous Waste Management Plan (HWMP).

b. The Final Governing Standards for Portugal (March 2006) requires the base (Lajes Field) to identify, collect, store, transport, treat, dispose, and recycle wastes they generate in a safe manner that is protective of human health and the environment. The FGS-P compiles requirements from Host Nation legislation as well as U.S. laws, selecting the more stringent requirements for each of the 18 media areas to apply to the DoD installations in Portugal.

c. The contractor must comply with the asbestos references below:

(1) Chapter 15 of Final Governing Standards for Portugal – March 2006

(2) Lajes Field Asbestos Management and Operating Plan – November 2007

d. The Contractor must comply with the LBP references stated below:

(1) Chapter 17 of Final Governing Standards for Portugal – March 2006

(2) Lajes Field Lead-Based Paint Management and Operating Plan – November 2007

e. The contractor shall be responsible for the proper identification, removal, handling, containerization, labeling and storage. All asbestos must be disposed of in an approved/certified asbestos landfill. The contractor should provide the Environmental office a copy of the waste disposal manifest (Modelo A) completely filled and signed by the landfill where the waste was received or disposed of.

1.04 DEFINITIONS:

a. Solid Waste: Rubbish, debris, garbage, and other discarded solid materials, except hazardous waste as defined in paragraph entitled "Hazardous Waste," resulting from industrial, commercial, and agricultural operations and from community activities.

b. Sanitary Wastes: Wastes characterized as domestic sanitary sewage.

c. Rubbish: Combustible and noncombustible wastes such as paper, boxes, glass, crockery, metal, lumber, cans, and bones.

d. Debris: Combustible and noncombustible wastes such as ashes and waste materials resulting from construction or maintenance and repair work, leaves, and tree trimmings.

e. Chemical Wastes: This includes salts, acids, alkalis, herbicides, pesticides, and organic chemicals.

f. Garbage: Refuse and scraps resulting from preparation, cooking, dispensing, and consumption of food.

h. Hazardous Waste (HW): Wastes that either present 1 or more hazardous properties listed in Appendix C6.A2 of Chapter 6, and table C7.T4 of Chapter 7 of FGS-P that are marked with an asterisk in the waste catalog, and in accordance with the European Agreement Concerning the International Carriage of Dangerous Goods by Roads (ADR), and any material or mixture of materials which may present a danger to the public health, safety or the environment.

i. Generator: Any person or entity that generates, treats or mixes wastes or conducts other operations that modify the nature or composition of wastes.

j. Hazardous Waste Accumulation Point (HWAP): A shop, site or other work center where hazardous waste are accumulated until removed to a Hazardous Waste Storage Area (HWSA). A HWSA may be used to accumulate per waste stream no more than one container as specified for the particular waste stream in the ADR. The HWAP must be at or near the point of generation and under the control of the operator.

k. Hazardous Waste Management: The systematic control of the collection, separation, storage, transportation, processing, treatment, recovery, and disposal of HW.

l. Hazardous Waste Storage Area: One or more locations on a DoD installation where HW is collected prior to shipment for treatment of disposal. A HWSA may store multiple containers per HW stream.

m. Treatment Storage of Disposal Facility (TSDF): Refers to any facility not located on a DoD installation that is used for the collection, source separation, storage, transportation, transfer, processing, treatment, or disposal of HW.

n. Asbestos Containing Materials (ACM): Any material containing more than one percent asbestos by weight.

(1) Adequately Wet: ACM sufficiently mixed or penetrated with liquid to prevent the release of particulates. If visible emissions are observed coming from ACM, then that material has not been adequately wetted. However, the absence of visible emissions is not sufficient evidence of being adequately wet.

(2) Airborne Asbestos Dust: (Poeiras de Amianto em Suspensão no Ar) (for measurement purposes). Dust particles measured by gravimetric assessment or other equivalent method.

o. Asbestos: Generic term used to describe six distinctive varieties of fibrous mineral silicates, including chrysotile, amosite, crocidolite, tremolite asbestos, anthophyllite asbestos, actinolite asbestos, and any other of these materials that has been chemically treated and/or altered.

p. Asbestos Action Level: A regulatory airborne concentration value set for asbestos at 0.1 fibers per cubic centimeter (f/cm3) as an 8-hour time-weighted average and that when exceeded generally requires additional actions to be taken (i.e., increased personal air monitoring, posting of warning/hazard signs, implementation of engineering controls).

q. Asbestos Dust (Poeiras de Amianto): Airborne particles of asbestos or settled particles of asbestos that are liable to become airborne in the working environment.

r. Breathable Asbestos Fibers (Fibras Respiráveis de Amianto): Asbestos fibers having a diameter of less than 3 μm (micrometers) and a length-to-diameter ratio greater than 3:1. Only fibers of a length greater than 5 μm shall be taken into account for purposes of measurement.

s. Exposed Worker (Trabalhador exposto): Any worker undertaking an activity that might present a risk of exposure to asbestos dust.

t. Exposure to Asbestos (Exposição ao Amianto): Exposure at work to airborne breathable asbestos fibers or asbestos dust, whether originating from asbestos or from minerals, materials or products containing asbestos.

u. Friable Asbestos: Any material containing more than one percent asbestos that, when dry, can be crumbled, pulverized or reduced to powder by hand pressure.

v. Lead Based Paint (LBP)**:** Any paint, plaster, or other surface encapsulation material containing more than 0.50 percent or greater than 5,000pm lead by weight calculated as lead metal in the dried solid, or more than 1.0 milligram per square centimeter.

(1) Abatement: Any set of measures designed to permanently eliminate lead-based paint or lead-based paint hazards. Abatement includes the removal of lead-based paint and lead-contaminated dust, the permanent enclosure or encapsulation of lead-based paint, the replacement of components or fixtures painted with lead-based paint, and the removal or covering of lead-contaminated soil. Abatement also includes all preparation, cleanup, disposal, and post-abatement clearance activities associated with such measures.

(2) Accessible Surface: An interior or exterior surface painted with lead-based paint that is accessible for a young child to mouth or chew.

(3) Bare Soil: Soil, including sand, not covered by grass, sod, or other live ground covers, or by wood chips, gravel, artificial turf, or similar covering.

(4) Child-Occupied Facility: A facility, or portion of a facility, visited regularly by the same child, 6 years of age or under, on at least 2 different days within any week, provided that each day's visit lasts at least 3 hours and the combined weekly visits last at least 6 hours, and the combined annual visits last at least 60 hours. Child-occupied facilities may include, but are not limited to, day-care centers, preschools, playgrounds, and kindergarten classrooms.

(5) Clearance: Visual evaluation and testing (collection and analysis of environmental samples) conducted after lead-based paint hazard reduction activities, interim controls, and standard treatments to determine that the work is complete and no lead-contaminated bare soil or lead-contaminated settled dust exists in a facility in which children under the age of 6 frequent.

(6) Deteriorated Paint: Any interior or exterior paint or other coating that is peeling, chipping, chalking, cracking or is otherwise damaged or separated from the substrate.

(7) Elevated Blood Lead Level: A confirmed concentration of lead in whole blood of 20 μg/dL (micrograms of lead per deciliter) for a single test, or of 15-19 μg/dL in two tests taken at least 3 months apart.

(8) Encapsulation: The application of any covering or coating that acts as a barrier between the lead-based paint and the environment. Encapsulation may be used as a method of abatement if it is designed to be permanent.

(9) Enclosure: The use of rigid, durable construction materials that are mechanically fastened to the substrate in order to act as a barrier between lead-based paint and the environment. Enclosure may be used as a method of abatement if it is designed to be permanent.

(10) Evaluation: A visual evaluation, risk assessment, risk assessment screen, paint inspection, paint testing, or a combination of risk assessment and paint inspection to determine the presence of deteriorated paint, lead-based paint, or a lead-based paint hazard.

(11) Friction Surface. An interior or exterior surface that is subject to abrasion or friction, including but not limited to, window, floor, and stair surfaces.

(12) Hazard Reduction. Measures designed to reduce or eliminate human exposure to lead-based paint hazards through methods including interim controls or abatement or a combination of the two.

(13) Impact Surface: An interior or exterior surface that is subject to damage by repeated sudden force, such as certain parts of doorframes.

(14) Interim Controls: A set of measures designed to temporarily reduce human exposure or likely exposure to lead-based paint hazards. Interim controls include, but are not limited to, repairs, occasional and ongoing maintenance, painting, temporary containment, specialized cleaning, clearance, ongoing activities, and the establishment and operation of management and resident education programs.

x. Lead (Chumbo): Metallic lead and all its ionic compounds.

(1) Lead Action Level: A regulatory airborne concentration value set for lead at 30 micrograms per cubic meter (µg/m3) as an 8-hour time-weighted average and that when exceeded generally requires additional actions to be taken (i.e., increased personal air monitoring, posting of warning/hazard signs, implementation of engineering controls).

(2) Lead-Based Paint Hazard. Any condition that causes exposure to lead from lead contaminated dust, lead-contaminated soil, or lead-contaminated paint that is deteriorated or present in accessible surfaces, friction surfaces, or impact surfaces, and that would result in adverse human health effects.

1.05 <u>SUBMITTALS</u>:

a. Submit the following in accordance with "Submittals."

(1) Statements

i. Environmental Protection Requirements

(2) Records

(3) Solid Waste Disposal Permit

(4) Environmental Training Documentation

(5) Hazardous Waste Certification

(6) Environmental Plan Review

b. Prior to the final close-out of the construction project any hazardous material brought onto Lajes Field by the contractor must have a current copy of the manufacturer's Safety Data

Sheet (SDS). The contractor must ensure through certification that the SDS contains at minimum, the following information:

(1) Manufacturer's Name

(2) List 100% of the hazardous chemical components

(3) Chemical Abstract Number (CAS Number) for each chemical component

(4) Specific Gravity/Unit Volume and or Unit Weight

(5) Ph (Acidity or Alkalinity) if applicable

(6) Flash Point/Ignitability

(7) Exact weight in pounds/ounces of the material initially brought on base

c. Reuse of Surplus Hazardous Materials: Surplus hazardous materials will be the responsibility of the contractor. A certification of surplus hazardous material is required prior to construction project close-out certifying both the quantity and reuse of that hazardous material.

d. Prior to final acceptance of this project the contractor shall compile a listing of all hazardous materials relating to this project. The listing will include the product name, manufacturer, and exact weight of material remaining. All material tracking shall be done on the Hazardous Material Tracking List. Attachment 2 at the end of this specification is a blank copy of the Hazardous Materials Tracking List.

e. The contractor must have a designated Accumulation Point Manager trained in accordance with Chapter 6 of FGS-P and Lajes Hazardous Waste Management Plan (HWMP).

f. Store waste materials in containers approved by the United Nations (UN) or ADR for the type of waste being stored. The Contacting Officer will assign an area for the interim storage of waste containers. Do not store any hazardous waste, asbestos or Lead-Based Paint in the interim storage longer than 3 calendar days from the date affixed to each waste container. The contractor cannot have more than 1 ADR container with the same waste stream.

1.06 ENVIRONMENTAL PROTECTION REGULATORY REQUIREMENTS:

a. Provide and maintain, during the life of the contract, environmental protection as defined in this Section. Plan for and provide environmental protective measures to control pollution that develops during normal construction practice. Plan for and provide environmental protective measures required to correct conditions that develop during the construction of permanent or temporary environmental features associated with the project. Comply with the FGS-P for DoD Operations, and local regulations pertaining to the environment, including but not limited to water, air, solid waste, and noise pollution.

b. Contents of Environmental Protection Plan:

(1) Include any hazardous materials (HM) planned for use on the station shall be included in the station HM Tracking Program maintained by the Safety Department. To assist this effort, submit a list (including quantities) of HM to be brought to the station and copies of the corresponding safety data sheets (SDS). Submit this list to the Contracting Officer. At project completion, remove any hazardous material brought onto the station. Account for the quantity of HM brought to the station, the quantity used or expended during the job, and the leftover quantity, which (1) may have additional useful life as a HM and shall be removed by the Contractor, or (2) may be a hazardous waste, which shall then be removed as specified herein.

(2) The Environmental Protection Plan shall list and quantify any Hazardous Waste (HW) to be generated during the project.

c. In accordance with station regulations, store HW near or at the point of generation up to a total quantity of (1L) one quart of acute hazardous waste or one ADR container. Move any volume exceeding these quantities to a HW permitted area within 3 days. Prior to generation of HW, contact Contracting Officer for labeling requirements for storage of hazardous wastes.

d. In accordance with station regulations, substitute materials as necessary to reduce the generation of HW and include a statement to that effect in the Environmental Plan.

e. Contact Contracting Officer for conditions in the area of the project, which may be subject to special environmental procedures. Include this information in the Pre-construction Survey. Describe in the Environmental Protection Plan any permits required prior to working the area, and contingency plans in case an unexpected environmental condition is discovered.

f. Obtain permits for handling HW, and deliver completed documents to Contracting Officer for review. File the documents with the appropriate agency, and complete disposal with the approval of Contracting Officer. Deliver correspondence with the FGS-P for DoD Operations in Portugal concerning the environmental permits and completed permits to Contracting Officer.

g. Environmental Protection Plan Format: The Environmental Protection Plan shall follow the following format:

ENVIRONMENTAL PROTECTION PLAN

Contractor Organization
Address and Phone Numbers

a. Hazardous materials to be brought onto the station.
b. SDS package.
c. Employee training documentation.
d. HW storage plan.
e. HW to be generated.
f. Pre-construction survey results.
g. Permitting requirements identified.

h. Environmental Permits

h. Environmental Plan Review: Fourteen days after the environmental protection meeting, submit the proposed environmental plan for further discussion, review, and approval.

i. Pre-construction Survey: Perform a pre-construction survey of the project site with the Contracting Officer, and take photographs showing existing environmental conditions in and adjacent to the site.

1.07 INSPECTION LIABILITY:

a. The contractor should understand that any operations on Lajes Field property are fully inspectable by the 65 Environmental office and other federal regulatory, Air Force, or local agencies.
Compliance with all requirements in areas where called for in this project is mandatory.

b. By accepting this project the contractor will also permit no notice inspections of all activities related to the project by 65 Environmental office. Issues of noncompliance will be addressed directly to the Contracting Officer to assure immediate correction of the unsatisfactory features.

c. Any branch of environmental regulations deemed serious by the Contracting Officer shall result in withholding of all progress or final payments related to this project until environmental compliance has been restored.

1.08 EXECUTION:

a. Protection of natural resources: Preserve the natural resources within the project boundaries and outside the limits of permanent work. Restore to an equivalent or improved condition upon completion of work. Confine construction activities to within the limits of the work indicated or specified.

b. Land Resources: Except in areas to be cleared, do not remove, cut, deface, injure, or destroy trees or shrubs without Contracting Officer's permission. Do not fasten or attach ropes, cables, or guys to existing nearby trees for anchorages unless authorized by Contracting Officer. Where such use of attach ropes, cables, or guys is authorized, the Contractor shall be responsible for any resultant damage.

c. Protection of Trees: Protect existing trees that are to remain and which may be injured, bruised, defaced, or otherwise damaged by construction operations. Remove displaced rocks from uncleared areas. By approved excavation, remove trees with 30 percent or more of their root systems destroyed. Removal of trees and the procedure for removal requires approval of the Contracting Officer.

d. Landscape Replacement: Remove trees and other landscape features scarred or damaged by equipment operations, and replace with equivalent, undamaged trees and landscape features. Obtain Contracting Officer's approval before removal or replacement.

1.09 HISTORICAL AND ARCHAEOLOGICAL RESOURCES: Carefully protect in-place and report immediately to the Contracting Officer historical and archaeological items or human skeletal remains discovered in the course of work. Stop work in the immediate area of the discovery until directed by the Contracting Officer to resume work. The Government retains ownership and control over historical and archaeological resources.

1.10 NOISE: Make the maximum use of low-noise emission products, as certified by the EPA. Blasting or use of explosives will not be permitted without written permission from the Contracting Officer, and then only during designated times.

1.11 RESTRICTIONS ON EQUIPMENT:

a. Electromagnetic Interference Suppression

(1) Electric motors must comply with MIL-STD-461 relative to radiated and conducted electromagnetic interference. A test for electromagnetic interference will not be required for motors that are identical physically and electrically to those that have previously met the requirements of MI-STD-461. An electromagnetic interference suppression test will not be required for electric motors without commutation or slip rings having no more than one starting contact and operated at 3,600 revolutions per minute or less.

(2) Equipment used by the Contractor shall comply with MIL-S-16165 for internal combustion engines and MIL-STD-461 for other devices capable of producing radiated or conducted interference.

(3) Conduct tests for electromagnetic interference on electric motors and Contractor's construction equipment in accordance with MIL-STD-461 and MIL-STD-462. Test location shall be reasonably free from radiated and conducted interference. Furnish testing equipment, instruments, and personnel for making the tests; a test location; and other necessary facilities.

b. Radio Transmitter Restrictions: Conform to the restrictions and procedures for the use of radio transmitting equipment, as directed. Do not use transmitters without prior approval.

1.12 EROSION AND SEDIMENT CONTROL MEASURES:

a. Burnoff: Burnoff of the ground cover is not permitted.

b. Temporary Protection of Erodible Soils: Use the following methods to prevent erosion and control sedimentation:

c. Mechanical Retardation and Control of Runoff: Mechanically retard and control the rate of runoff from the construction site. This includes construction of diversion ditches, benches, berms, and use of silt fences and straw bales to retard and divert runoff to protected drainage courses.

d. Borrow: Permit only in areas where suitable environmental controls are possible.

e. Vegetation and Mulch: Provide temporary protection on sides and back slopes as soon as rough grading is completed or sufficient soil is exposed to require erosion protection. Protect slopes by accelerated growth of permanent vegetation, temporary vegetation, mulching, or netting. Stabilize slopes by hydro seeding, anchoring mulch in place, covering with anchored netting, sodding, or such combination of these and other methods necessary for effective erosion control.

(1) Provide new seeding where ground is disturbed. Include topsoil or nutriment during the seeding operation necessary to re-establish a suitable stand of grass.

1.13 **CONTROL AND DISPOSAL OF SOLID WASTES:** Pick up solid wastes, and place in covered containers, which are regularly emptied. Do not prepare or cook food on the project site. Prevent contamination of the site or other areas when handling and disposing of wastes. At project completion, leave the areas clean. Dispose of solid waste generated at locations as directed.

a. Disposal of Rubbish and Debris: Dispose of rubbish and debris in accordance with the requirements specified below:

b. Removal from Government Property: Remove and dispose rubbish and debris from Government property.

c. Garbage Disposal: Place garbage in approved containers; the Government will provide pickup and disposal service.

d. Spills of Oil and Hazardous Materials: Take precautions to prevent spills of oil and hazardous material. In the event of a spill, immediately notify the Contracting Officer. Spill response shall be in accordance with Chapter 18 of FGS-P for DoD Operations in Portugal and all other applicable regulations.

e. Petroleum Products: Protect against spills and evaporation during fueling and lubrication of equipment and motor vehicles. Dispose of lubricants to be discarded and excess oil.

1.14 **DUST CONTROL:** Keep dust down at all times, including nonworking periods. Sprinkle or treat, with dust suppressants, the soil at the site, haul roads, and other areas disturbed by operations. Dry power brooming will not be permitted. Instead, use vacuuming, wet mopping, wet sweeping, or wet power brooming. Air blowing will be permitted only for cleaning nonparticulate debris such as steel reinforcing bars. Only wet cutting will be permitted for cutting concrete blocks, concrete, and bituminous concrete. Do not shake bags of cement, concrete mortar, or plaster unnecessarily.

-- End of Section –

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UNIFIED FACILITIES GUIDE SPECIFICATIONS (UFGS)

These Guide Specifications shall be used through the life of this contract. The contractor shall use the most updated version as of the date of solicitation of each division. These guide specifications can be found on the following address:

http://www.wbdg.org

FACILITY CONSTRUCTION SUBGROUP

Division 03 - Concrete (11-01-2016) ZIP

UFGS 03 01 30.71 Concrete Rehabilitation (04-2006) PDF, 13 Pages

UFGS 03 01 32 Concrete Rehabilitation for Civil Works (11-2009) PDF, 73 pages

UFGS 03 11 13.00 10 Structural Concrete Formwork (05-2014) PDF, 7pages

UFGS 03 15 00.00 10 Concrete Accessories (05-2014) PDF, 14 pages

UFGS 03 20 00.00 10 Concrete Reinforcement (01-2014) PDF, 15 pages

UFGS 03 23 00 Stressed Tendon Reinforcing (05-2016) PDF, 13 pages

UFGS 03 30 00 Cast-In-Place Concrete (05-2014) PDF, 71 pages

UFGS 03 30 53.00 Miscellaneous Cast-In-Place Concrete (05-2014) PDF, 22 pages

UFGS 03 31 01.00 10 Cast-In-Place Structural Concrete for Civil Works (05-2014) PDF, 35 pages

UFGS 03 31 29 Marine Concrete (08-2012) PDF, 68 pages

UFGS 03 35 00.00 10 Concrete Finishing (01-2014) PDF, 16 pages

UFGS 03 37 00 Preplaced-Aggregate Concrete (11-2009) PDF, 38 pages

UFGS 03 37 13 Shotcrete (11-2009) PDF, 19 pages

UFGS 03 37 23 Roller-Compacted Concrete for Mass Concrete Construction (11-2009) PDF, 67 pages

UFGS 03 37 29 Concrete for Concrete Cutoff Walls (11-2009) PDF, 38 pages

UFGS 03 39 00.00 10 Concrete Curing (05-2014) PDF, 6 pages

UFGS 03 41 16.08 Precast Concrete Slabs (MAX. SPAN 8 FEET O.C.) (05-2015) PDF, 15 pages

UFGS 03 42 13.00 10 Plant-Precast Concrete Products for Below Grade Construction (05-2016) PDF, 20 pages

UFGS 03 45 33 Precast [Prestressed] Structural Concrete (05-2016) PDF, 31 pages

UFGS 03 62 16 Metallic Non-Shrink Grouting (05-2015) PDF, 7 pages

UFGS 03 70 00 Mass Concrete (02-2010) PDF, 74 pages

Division 05 - Metals (08-01-2016) ZIP

UFGS 05 05 23.16 Structural Welding (05-2014) PDF, 13 pages

UFGS 05 51 00.00 40 Metal Stairs (02-2012) PDF, 18 pages

UFGS 05 51 33 Metal Ladders (02-2016) PDF, 12 pages

Division 07 - Thermal and Moisture Protection (11-01-2016) ZIP

UFGS 07 11 13 Bituminous Dampproofing (08-2011) PDF, 9 pages

UFGS 07 12 00 Built-Up Bituminous Waterproofing (02-2016) PDF, 17 pages

UFGS 07 13 53 Elastomeric Sheet Waterproofing (02-2016) PDF, 16 pages

UFGS 07 14 00 Fluid-Applied Waterproofing (04-2006) PDF, 15 pages

UFGS 07 16 19 Metallic Oxide Waterproofing (01-2007) PDF, 11 pages

UFGS 07 17 00 Bentonite Waterproofing (02-2016) PDF, 7 pages

UFGS 07 19 00 Water Repellents (05-2011) PDF, 17

UFGS 07 21 13 Board and Block Insulation (02-2016) PDF, 21 pages

UFGS 07 92 00 Joint Sealants (08-2016) PDF, 17 pages

SITE AND INFRASTRUCTURE SUBGROUP

Division 31 - Earthwork (11-01-2016) ZIP

UFGS 31 00 00 Earthwork (08-2008) PDF, 46 pages

UFGS 31 05 19 Geotextile (08-2008) PDF, 12 pages

UFGS 31 05 20 Geosynthetic Drainage Layer (08-2008) PDF, 10 pages

UFGS 31 05 21 Geogrid Soil Reinforcement (08-2008) PDF, 11 pages

UFGS 31 05 22 Geotextiles Used as Filters (08-2008) PDf, 16 pages

UFGS 31 10 00 Clearing for Civil Works (08-2008) PDF, 11 pages

UFGS 31 11 00 Clearing and Grubbing (08-2008) PDF, 11 pages

UFGS 31 21 00 Piping; Off-Gas (08-2008) PDf, 30 pages

UFGS 31 21 13 Radon Mitigation (08-2011) PDF, 37 pages

UFGS 31 23 00.00 20 Excavation and Fill (02-2011) PDF, 45 pages

UFGS 31 31 16.13 Chemical Termite Control (08-2016) PDF, 13 pages

UFGS 31 31 16.19 Termite Control Barriers (02-2016) PDF, 13 pages

UFGS 31 32 11 Soil Surface Erosion Control (08-2008) PDF, 37 pages

UFGS 31 32 23 Foundation Drilling and Grouting (08-2008) PDF, 28 pages

UFGS 31 32 39 Bioengineering Practices for Stream Bank and Shoreline Stabilization (08-2008) PDF, 74 pages

UFGS 31 36 00 Wire Mesh Gabions [And Mattresses] (08-2008) PDF, 27 pages

UFGS 31 41 16 Metal Sheet Piling (08-2009) PDF, 25 pages

UFGS 31 60 00 Foundation Preparation (11-2008) PDF, 15 pages

UFGS 31 62 13.13 Cast-In-Place Concrete Piles (04-2006) PDF, 14 pages

UFGS 31 62 13.20 Precast/Prestressed Concrete Piles (08-2009) PDF, 42 pages

UFGS 31 62 13.24 Concrete Cylinder Piles (08-2011) PDF, 49 pages

UFGS 31 62 13.26 Pressure-Injected Footings (04-2006) PDF, 13 pages

UFGS 31 62 16.16 Steel H Piles (11-2011) PDF, 28 pages

UFGS 31 62 19 Timber Piles (01-2008) PDF, 24 pages

UFGS 31 62 19.13 Timber Marine Piles (11-2016) PDF, 24 pages

UFGS 31 62 21 Piling: Composite, Wood and Cast In-Place Concrete (11-2008) PDF, 15 pages

UFGS 31 62 23.13 Cast-In-Place Concrete Piles, Steel Casing (11-2008) PDF, 14 pages

UFGS 31 63 16 Auger Cast Grout Piles (11-2008) PDF, 17 pages

UFGS 31 63 26 Drilled Caissons (08-2008) PDF, 18 pages

UFGS 31 63 29 Drilled Concrete Piers and Shafts (11-2014) PDF, 16 pages

UFGS 31 68 13 Soil and Rock Anchors (11-2008) PDF, 41 pages

UFGS 31 73 00 Tunnel and Shaft Grouting (11-2008) PDF, 26 pages

Division 32 - Exterior Improvements (11-01-2016) ZIP

UFGS 32 01 11.51 Rubber and Paint Removal From Airfield Pavements (05-2016) PDF, 12 pages

UFGS 32 01 13 Bituminous Seal and Fog Coats (08-2008) PDF, 19 pages

UFGS 32 01 13.63 Gilsonite modified Asphalt Emulsion Seal Coats (02-2016) PDF, 21 pages

UFGS 32 01 16.17 Cold Milling of Bituminous Pavements (08-2008) PDF, 6 pages

UFGS 32 01 17 Cold-Mix Recycling (08-2008) PDF, 19 pages

UFGS 32 01 17.16 Sealing of Cracks in Bituminous Pavements (08-2008) PDF, 12 pages

UFGS 32 01 17.62 Stress-Absorbing Membrane Interlayer (05-2011) PDF, 13 pages

UFGS 32 01 19.61 Resealing of Joints in Rigid Pavement (04-2006) PDF, 18 pages

UFGS 32 01 19 Field Molded Sealants for Sealing Joints in Rigid Pavements (08-2008) PDF, 17 pages

UFGS 32 01 22 Bituminous Rejuvenation (08-2008) PDF, 9 pages

UFGS 32 01 24 Hot In-Place Recycling of Bituminous Pavements (08-2008) PDF, 14 pages

UFGS 32 01 25 Heater Scarifying of Bituminous Pavements (08-2008) PDF, 8 pages

UFGS 32 01 26.71 Grooving for Airfield Pavements (08-2008) PDF, 6 pages

UFGS 32 01 29.61 Partial-Depth Patching of Rigid Pavements (11-2008) PDF, 27 pages

UFGS 32 01 29.62 Slabjacking Rigid Pavements (08-2008) PDF, 14 pages

UFGS 32 05 33 Landscape Establishment (02-2010) PDF, 18 pages

UFGS 32 10 00 [Pervious] Bituminous Concrete Pavement (08-2008) PDF, 21 pages

UFGS 32 11 10 Drainage Layer (08-2008) PDF, 22 pages

UFGS 32 11 16 [Base Course for Rigid] [and Subbase Course for Flexible] Paving (08-2008) PDF, 17 pages

UFGS 32 11 16.13 Sand-Clay [Base] [Subbase] Course (04-2006) PDF, 8 pages

UFGS 32 11 16.16 [Base Course for Rigid] [and Subbase Course for Flexible] [Subbase Course for Pervious] Paving (11-2011) PDF, 10 pages

UFGS 32 11 23 Aggregate and/or Graded-Crushed Aggregate Base Course (08-2008) PDF, 22 pages

UFGS 32 11 24 Graded Crushed Aggregate Base Course for [Pervious] [Flexible] Pavement (11-2011) PDF, 15 pages

UFGS 32 11 26.16 Bituminous Concrete Base Course (04-2006) PDF, 15 pages

UFGS 32 11 26 Bituminous Base Course (08-2008) PDF, 18 pages

UFGS 32 11 27 Bituminous-Stabilized Base Course, Subbase, or Subgrade (08-2008) PDF, 17 pages

UFGS 32 11 29 Lime-[Stabilized][Modified] Subgrade (11-2009) PDF, 21 pages

UFGS 32 11 30 Lime Treated Subgrade [Lime Modified Soils] (08-2008) PDF, 15 pages

UFGS 32 11 33 Cement Stabilized [Base] [Subbase] Course at Airfields and Roads (08-2008) PDF, 26 pages

UFGS 32 11 34 Portland Cement-Stabilized Base or Subbase Course (08-2008) PDF, 20 pages

UFGS 32 11 36.13 Lean Concrete Base Course (04-2006) PDF, 17 pages

UFGS 32 12 10 Bituminous Tack and Prime Coats (08-2008) PDF, 17 pages

UFGS 32 12 11 Bituminous Surface Treatment (11-2008) PDF, 15 pages

UFGS 32 12 15.13 Hot-Mix Asphalt (HMA) for Airfields (11-2015) PDF, 39 pages

UFGS 32 12 15.16 Warm-Mix Asphalt Airfield Paving (11-2012) PDF, 39 pages

UFGS 32 12 16 Hot-Mix Asphalt (HMA) for Roads (08-2009) PDF, 38 pages

UFGS 32 12 17 Hot Mix Bituminous Pavement (04-2008) PDF, 28 pages

UFGS 32 12 18 Resin Modified Pavement Surfacing Material (08-2008) PDF, 25 pages

UFGS 32 12 19 Bituminous Binder and Wearing Courses (Central-Plant Cold-Mix) (08-2008) PDF, 19 pages

UFGS 32 12 21 Bituminous Road-Mix Surface Course (08-2008) PDF, 19 pages

UFGS 32 12 22.00 10 Polymer Concrete-Micro-Overlay (PCMO) For Fuel and Abrasion Resistant Wearing Surfaces (08-2008) PDF, 18 pages

UFGS 32 12 36.19 Coal Tar Seal Coat with Unvulcanized Rubber (04-2006) PDF, 10 pages

UFGS 32 12 37 Fuel-Resistant (Coal Tar) Sealer (08-2008) PDF, 14 pages

UFGS 32 12 43.16 Porous Friction Course for Airfields and Roads (08-2008) PDF, 24 pages

UFGS 32 13 11 Concrete Pavement for Airfields and Other Heavy-Duty Pavements (11-2015) PDF, 84 pages

UFGS 32 13 13.06 [Pervious] Portland Cement Concrete Pavement for Roads and Site Facilities (11-2011) PDF, 32 pages

UFGS 32 13 16.16 Roller Compacted Concrete (RCC) Pavement (11-2008) PDF, 74 pages

UFGS 32 13 17 Stone Matrix Asphalt (SMA) for Airfield Pavements (08-2008) PDF, 35 pages

UFGS 32 13 73 Pervious Concrete Paving (11-2011) PDF, 23 pages

UFGS 32 13 73 Compression Joint Seals for Concrete Pavements (04-2008) PDF, 16 pages

UFGS 32 15 00 Aggregate Surface Course (04-2008) PDF, 13 pages

UFGS 32 16 13 Concrete Sidewalks and Curbs and Gutters (04-2008) FDF, 19 pages

UFGS 32 16 15 Concrete Block Pavements (04-2008) PDF, 11 pages

UFGS 32 17 23 Pavement Markings (08-2016) PDF, 37 pages

UFGS 32 18 16.13 Playground Protective Surfacing (04-2008) PDF, 25 pages

UFGS 32 31 13.53 High-Security Chain Link Fences and Gates (04-2008) PDF, 18 pages

UFGS 32 31 13 Chain Link Fences and Gates (11-2016) PDF, 21 pages

UFGS 32 31 26 Wire Fences and Gates (04-2008) PDF, 10 pages

UFGS 32 32 23 Segmental Concrete Block Retaining Wall (04-2008) PDF, 28 pages

UFGS 32 84 23 Underground Sprinkler Systems (04-2008) PDF, 25 pages

UFGS 32 84 24 Irrigation Sprinkler Systems (08-2011) PDF, 36 pages

UFGS 32 92 19 Seeding (10-2006) PDF, 19 pages

UFGS 32 92 23 Sodding (04-2006) PDF, 16 pages

UFGS 32 92 26 Sprigging (04-2006) PDF, 17 pages

UFGS 32 93 00 Exterior Plants (02-2010) PDF, 37 pages

UFGS 32 96 00 Transplanting Exterior Plants (02-2010) PDF, 25 pages

Division 33 - Utilities (08-01-2008) ZIP

UFGS 33 40 00 Storm Drainage Utilities (02-2010) PDF, 44 pages

UFGS 33 46 13 Foundation Drainage System (04-2008) PDF, 13 pages

UFGS 33 46 16 Subdrainage System (04-2008) PDF, 24 pages

Division 34 - Transportation (01-2008) 176 KB

UFGS 34 73 13.16 Vehicle Crash Barriers (02-2008) PDF, 12 pages

UFGS 34 73 13.19 Active Vehicle Barriers (04-2008) PDF, 26 pages

UFGS 34 73 13 Mooring and Grounding Points for Aircraft (04-2008) PDF, 11 pages

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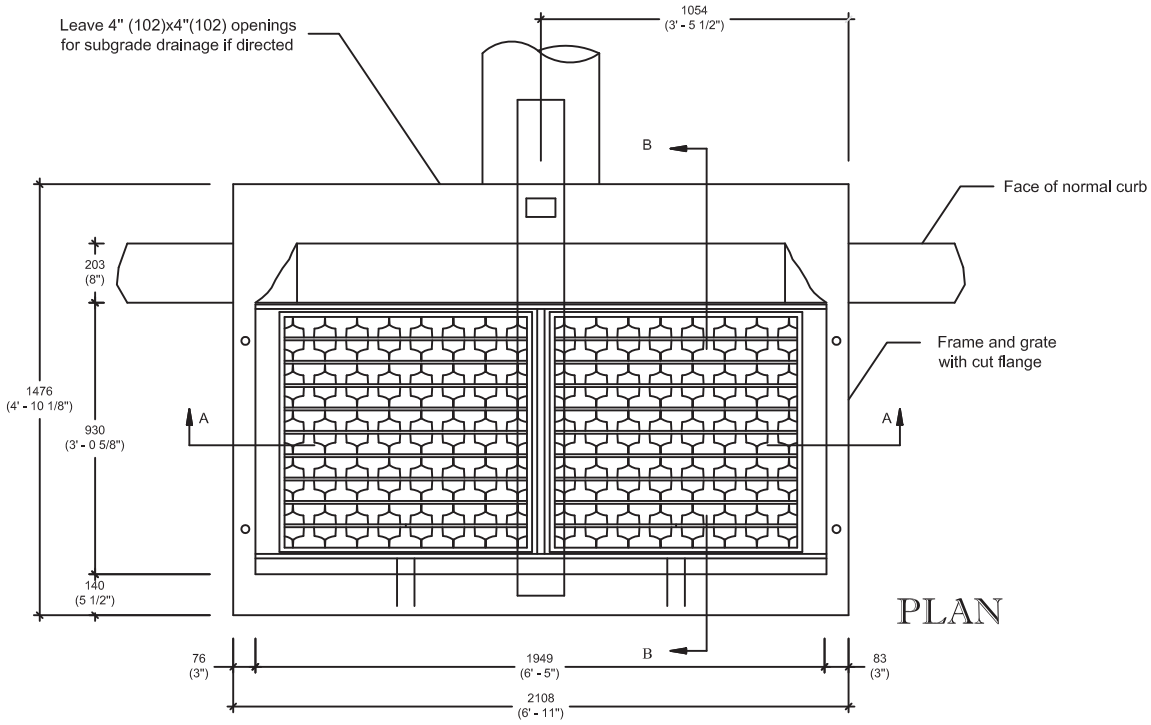
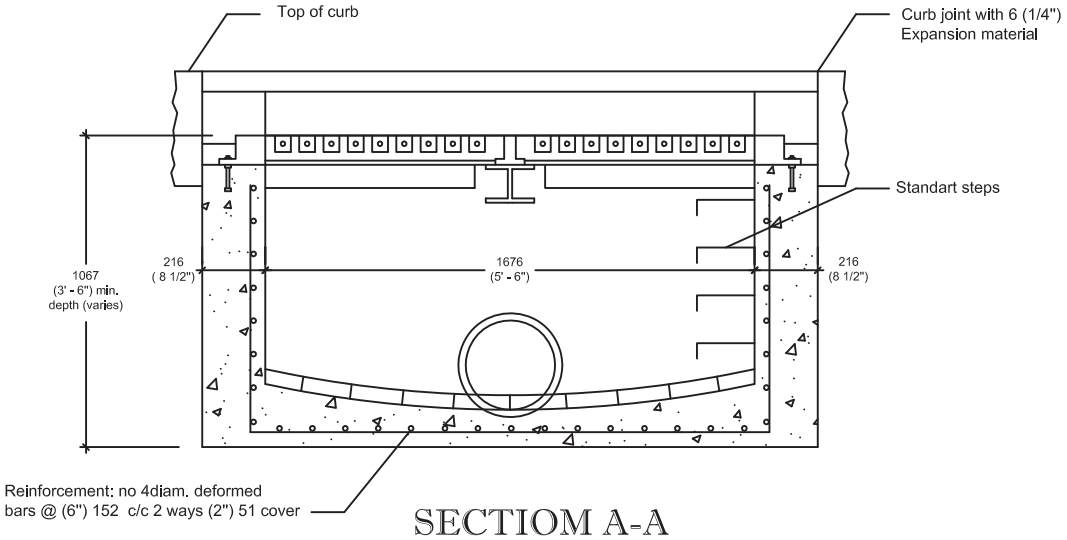


PLAN



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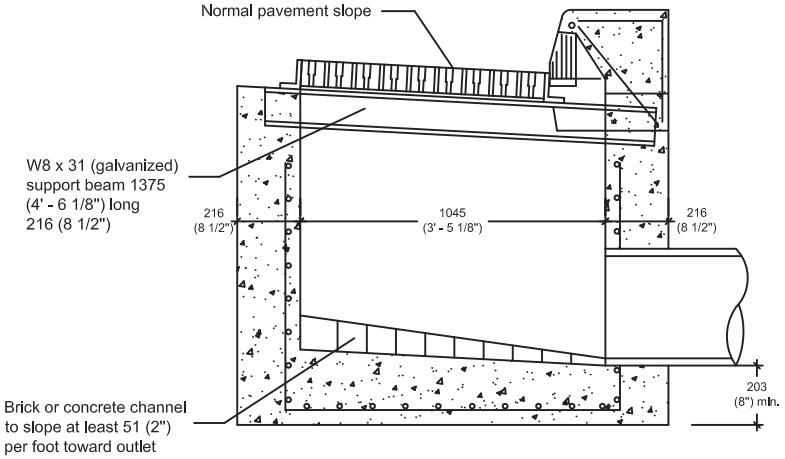
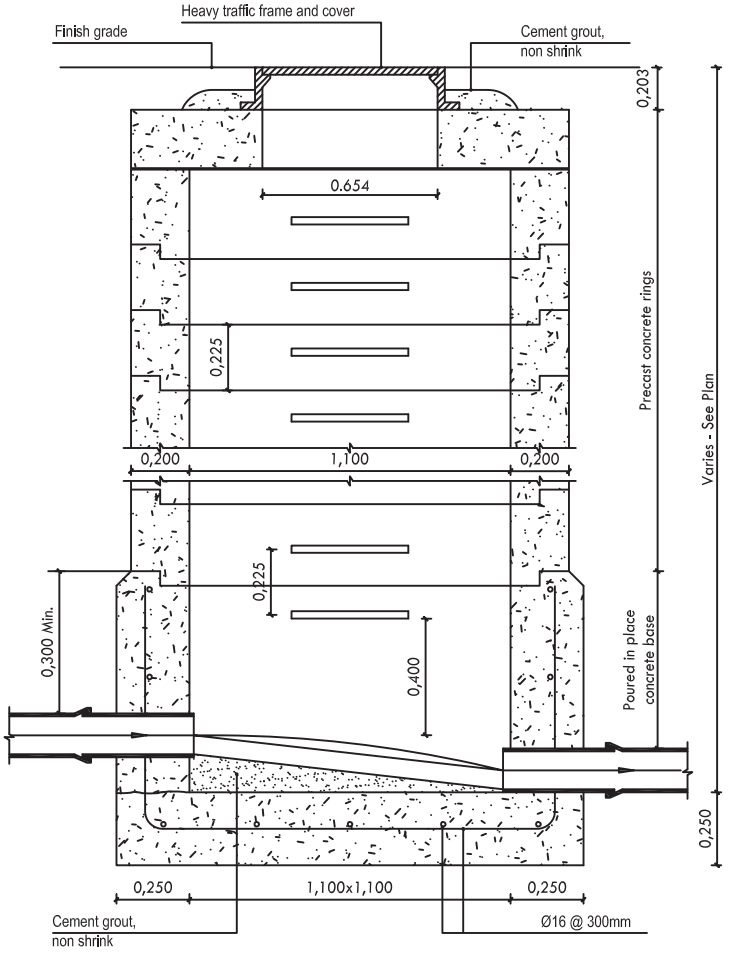


SECTION B-B

Notes:
Inlet shall be constructed of reinforced 3,5000 psi concrete. Place (1/4") 6 expansion material of same type approved for pavement between the frame and abutting rigid pavement, and between ends of inlet curb and normal curb for underpressed inlets, use normal pavement slope. dimensions shown are minimum dimensions.

STANDARD CURB INLET



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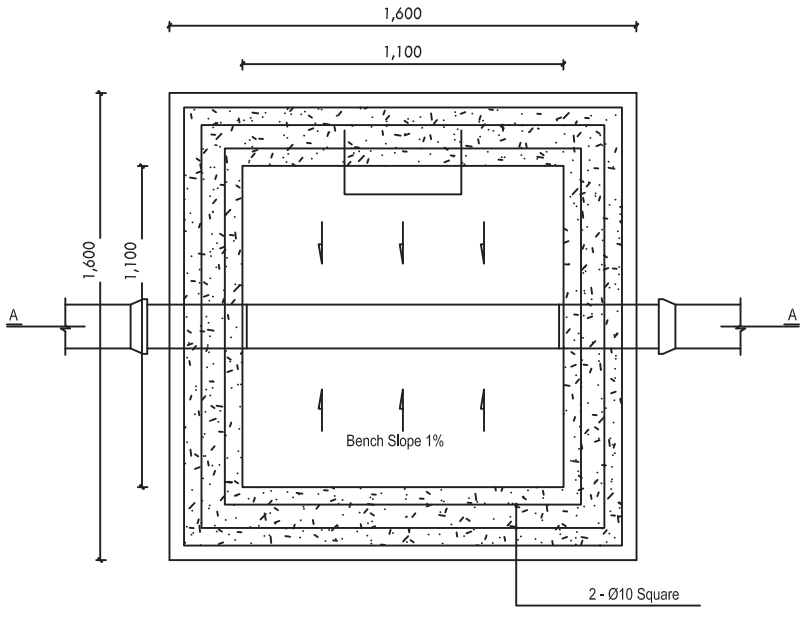
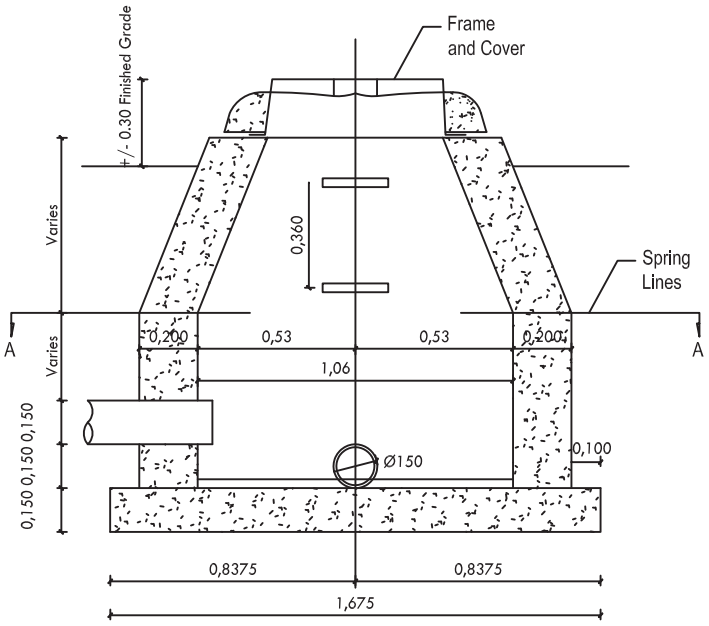
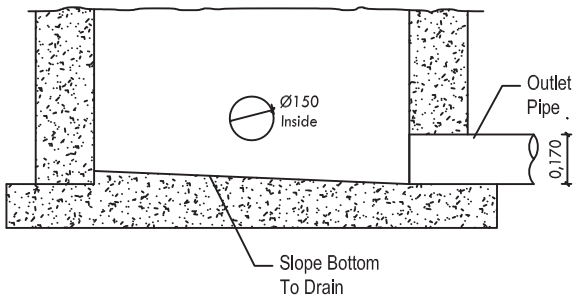


PLAN

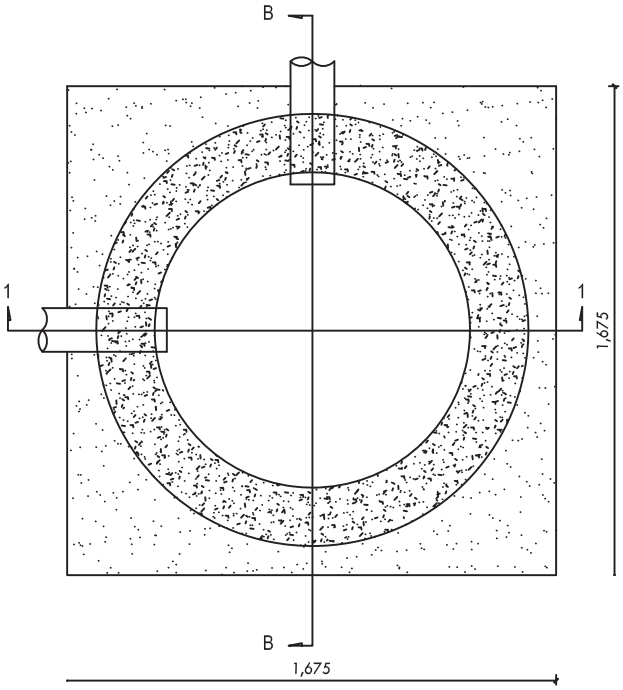
STANDARD STORM MANHOLE



SECTION 1-1

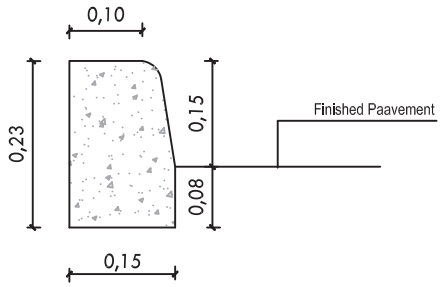


SECTION B-B (Partial)

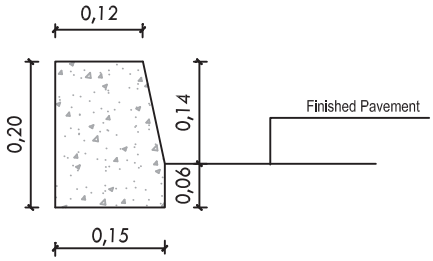


SECTION A-A

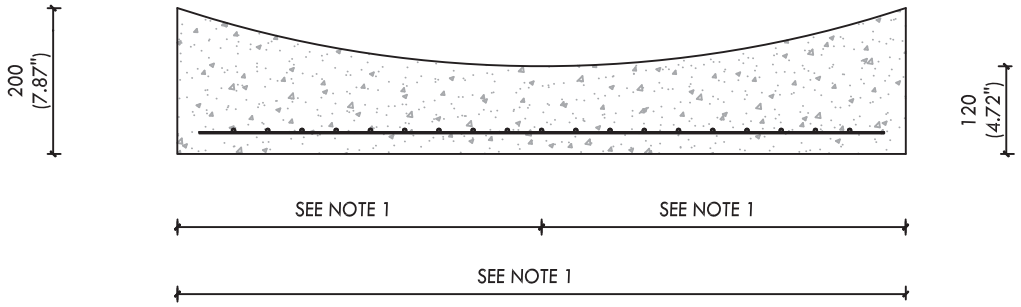
STANDARD SANITARY MANHOLE



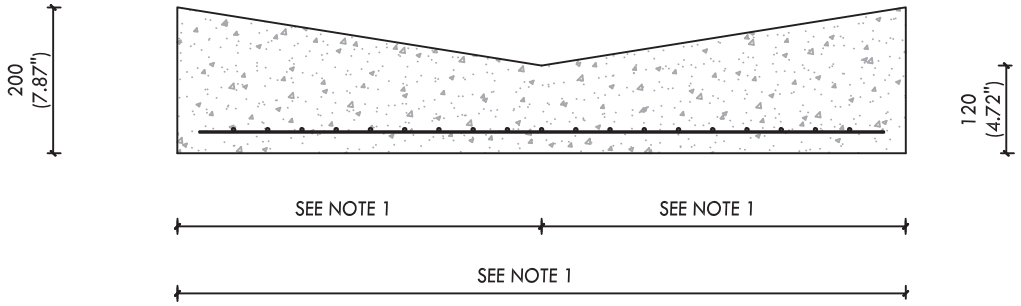
CAST-IN-PLACE CONCRETE CURBING



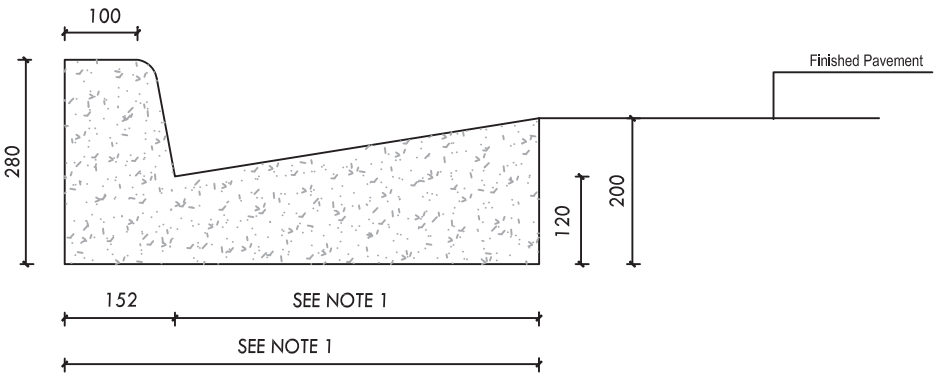
PRE-FAB CURBING



CONCRETE GUTTER - "ARC" SHAPE



CONCRETE GUTTER - "V" STYLE



CAST-IN-PLACE CURB AND GUTTER

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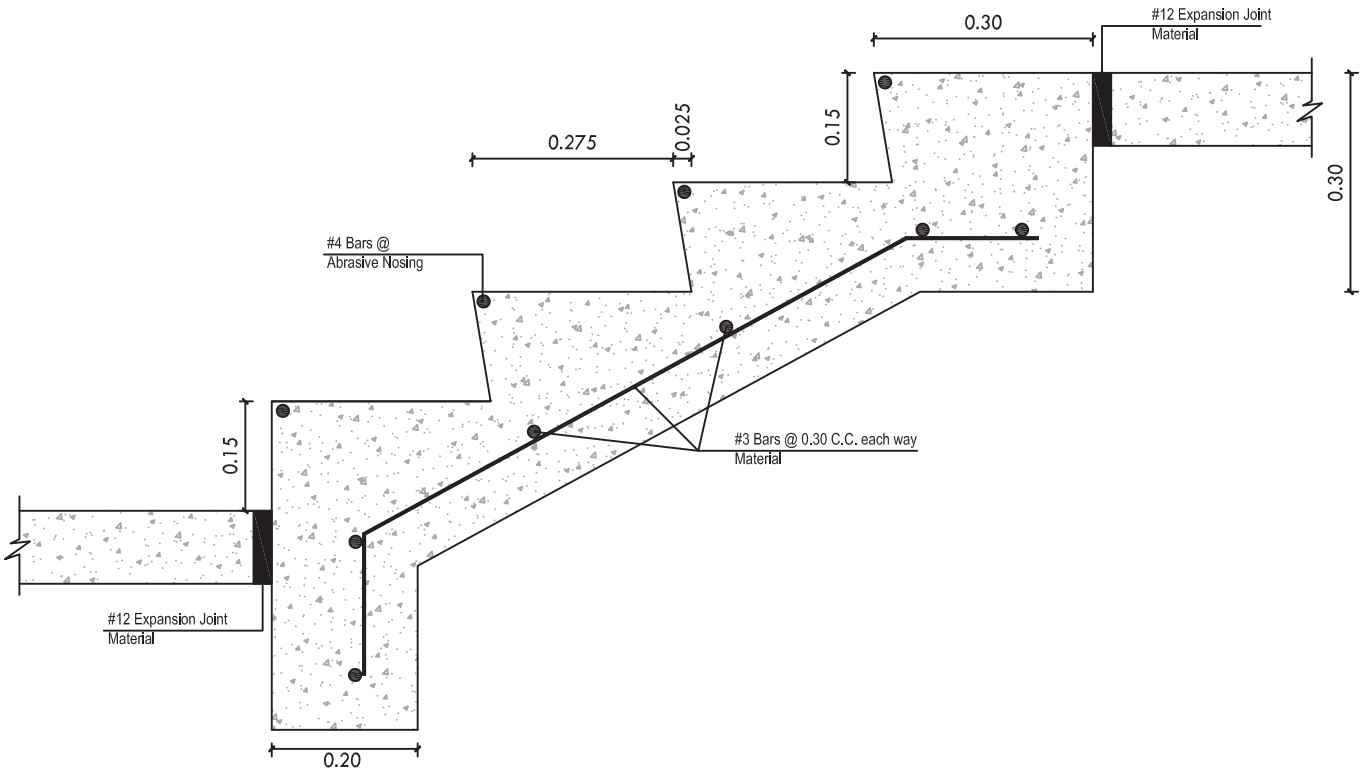
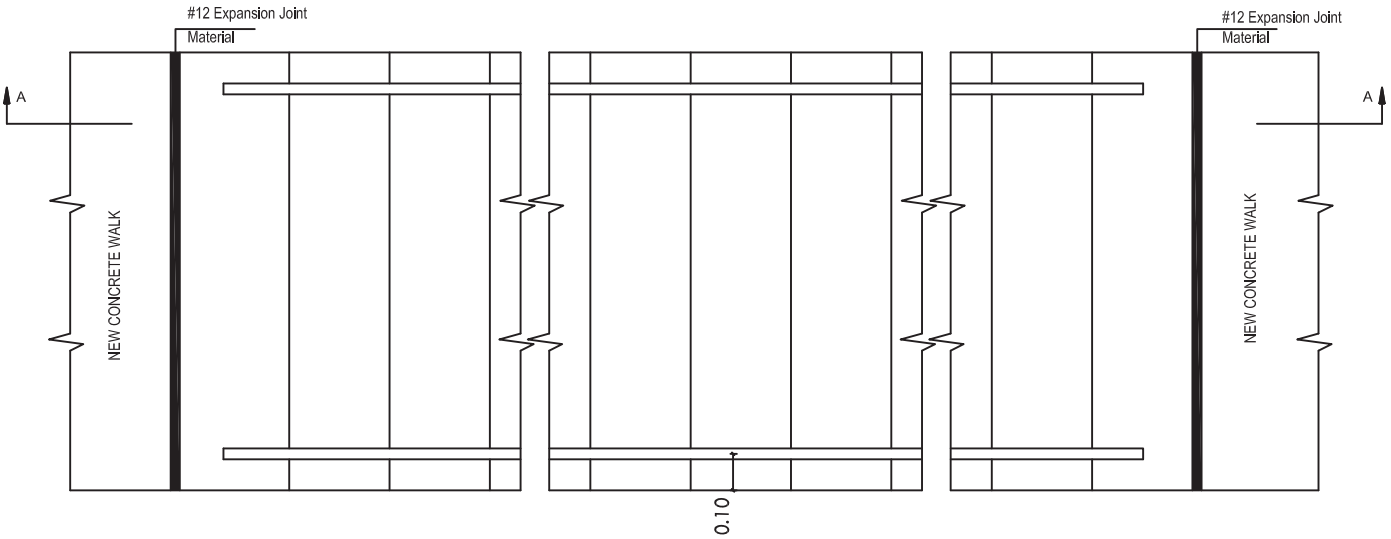
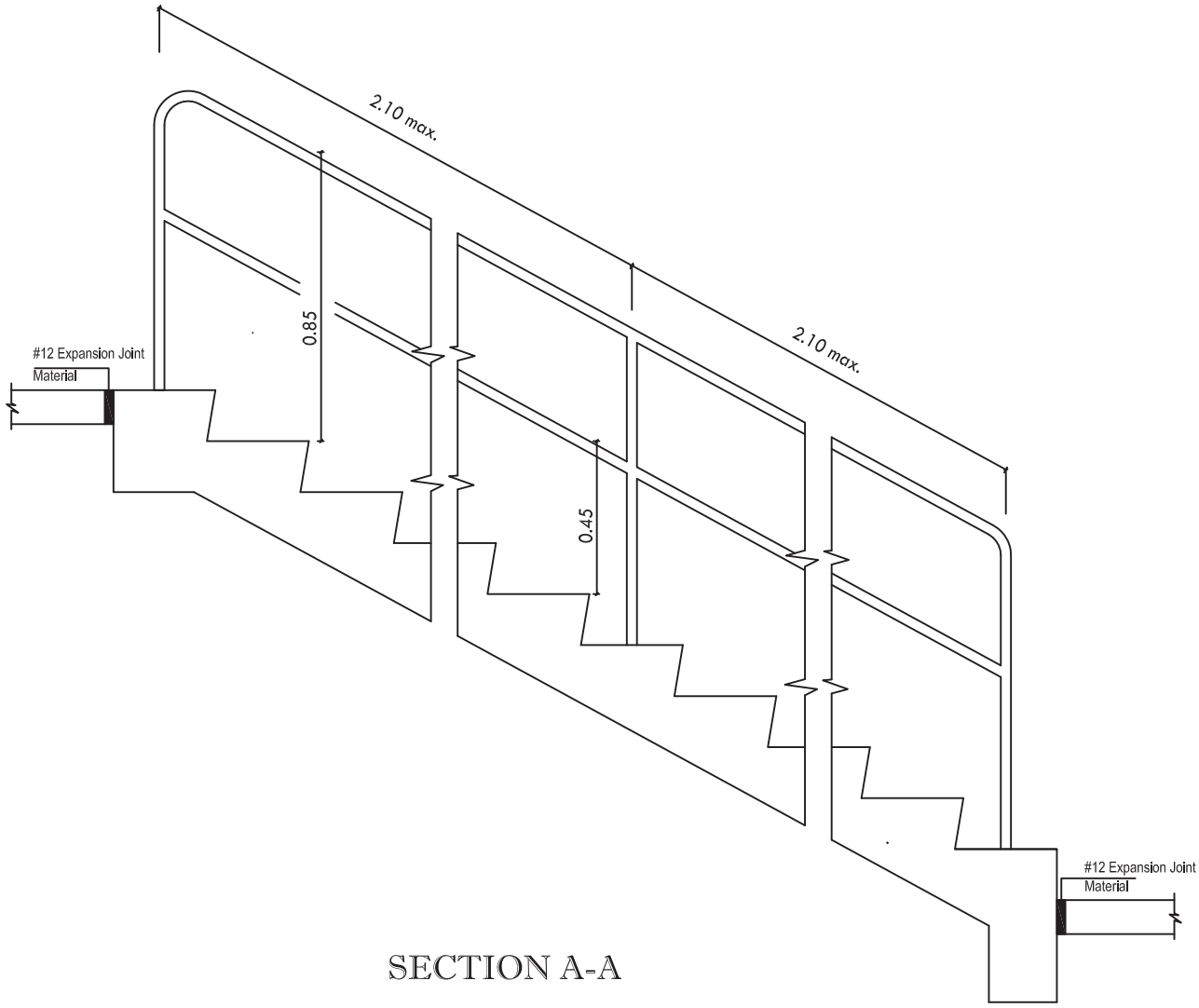

0.30
#12 Expansion Joint
Material
0.275
0.025
0.15
0.30
#4 Bars @
Abrasive Nosing
0.15
#3 Bars @ 0.30 C.C. each way
Material
#12 Expansion Joint
Material
0.20

STEP DETAIL

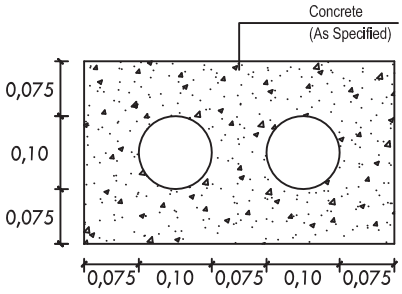


PLAN

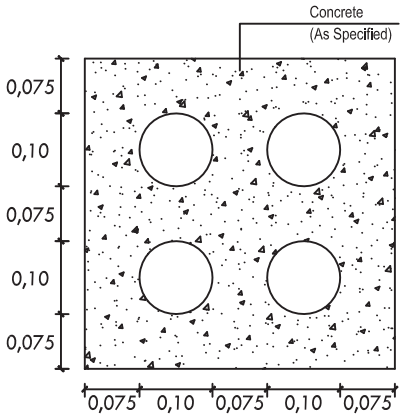


SECTION A-A

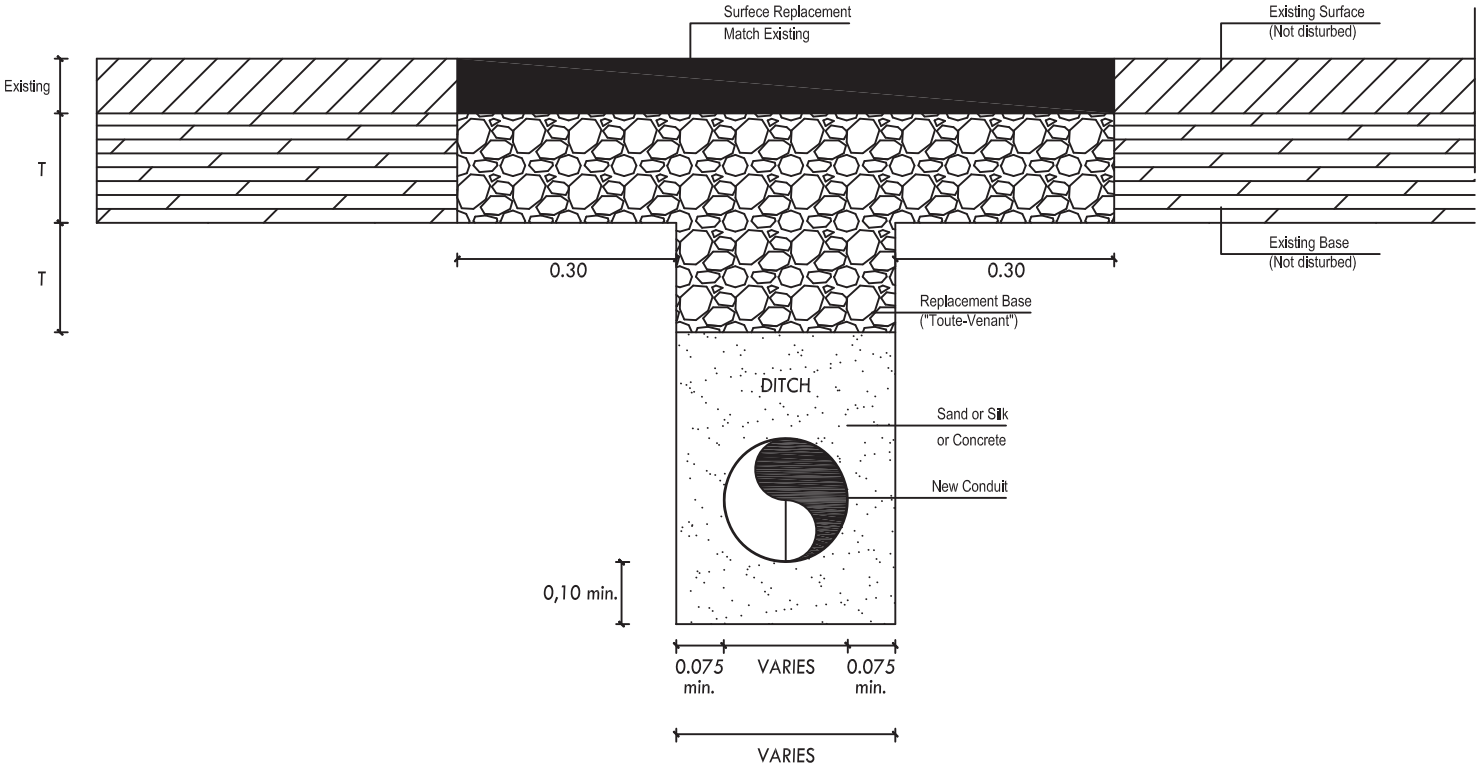
STANDARD STAIRS WITH HANDRAILS



2 (TWO) CONDUIT ARRANGEMENT

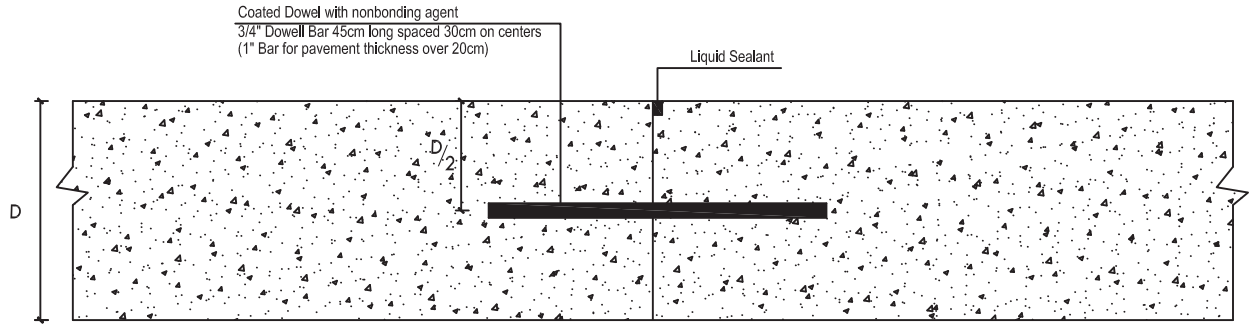


4 (FOUR) CONDUIT ARRANGEMENT

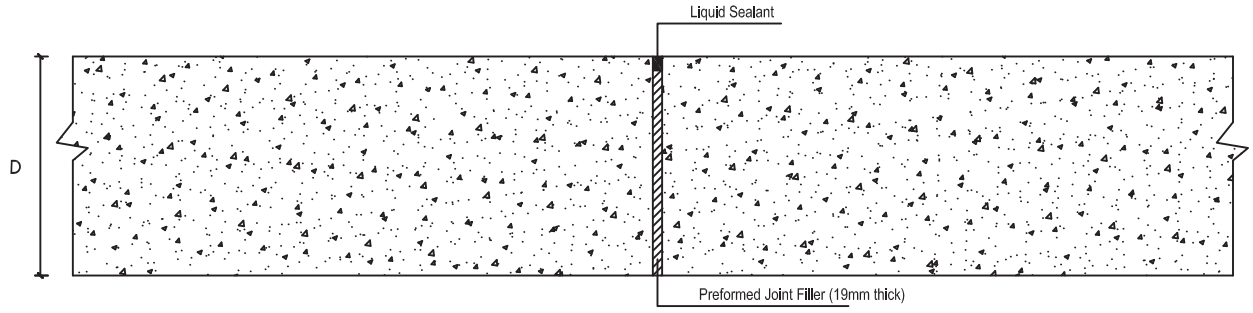


PAVEMENT RESTORATION DETAIL

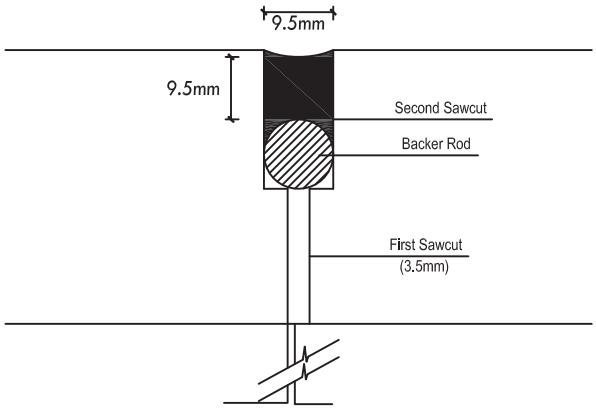
TRENCH DETAILS



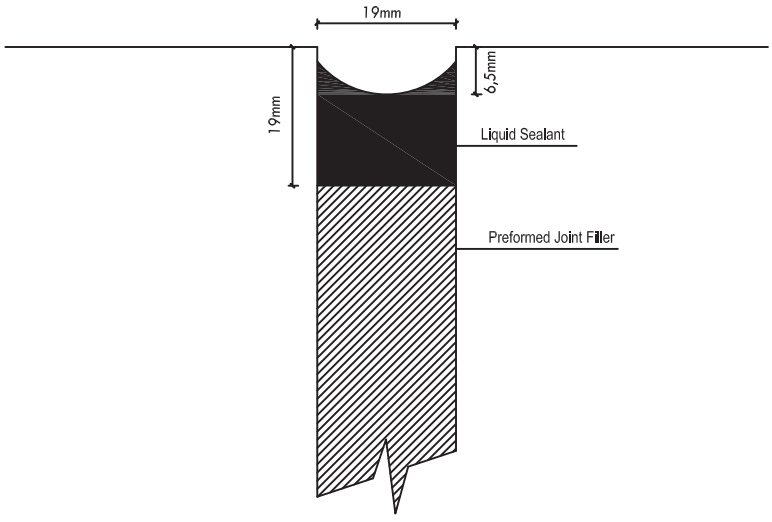
CONSTRUCTION JOINT



EXPANSION JOINT

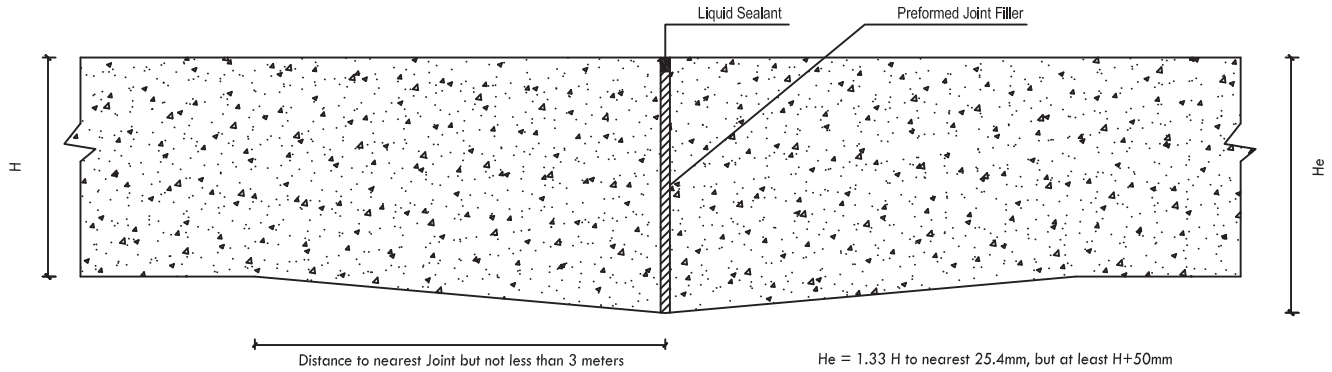


DETAILS OF SAWED GROOVES

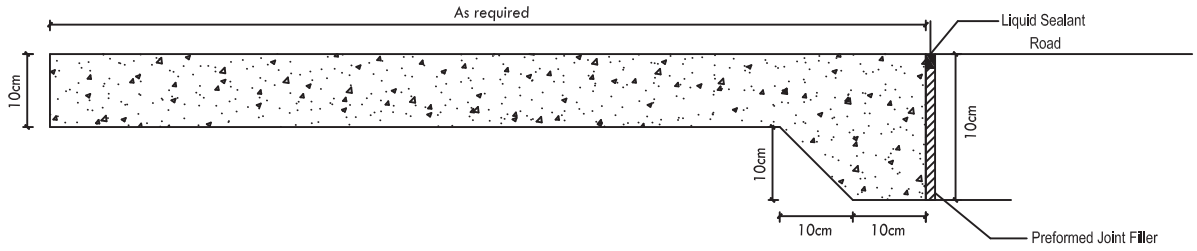


LIQUID FIELD POURED SEALANTS

STANDARD JOINT DETAILS

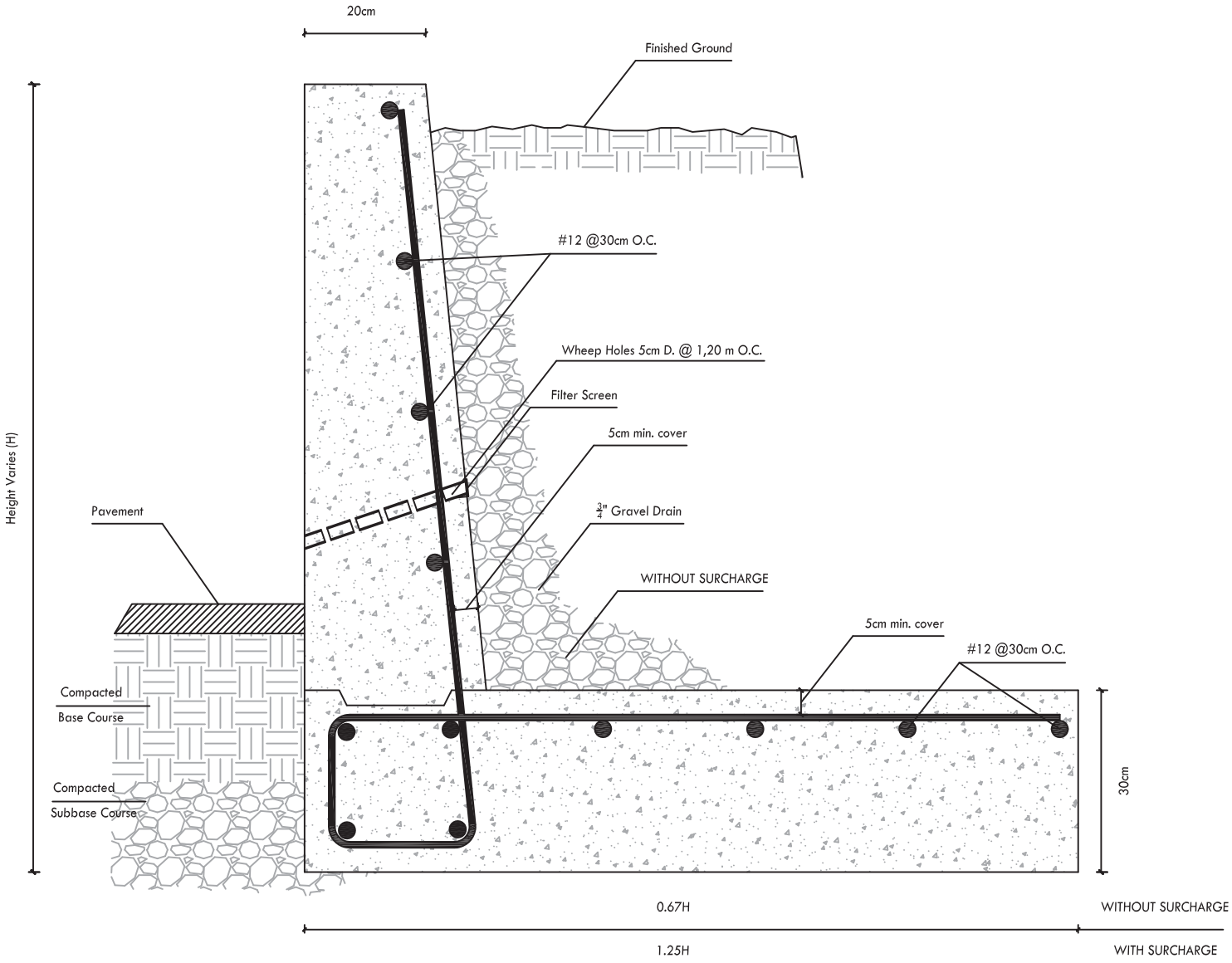


THICKENED EDGE



SIDEWALK WITH THICKENED EDGE

STANDARD THICKENED EDGE DETAIL



RETAINING WALL SECTION

STANDARD RETAINING WALL