



State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

Request for Quotation

RFQ NUMBER
DEFK6238

PAGE
1

ADDRESS CORRESPONDENCE TO ATTENTION OF
CHUCK BOWMAN
304-558-2157

VENDOR

RFQ COPY
 TYPE NAME/ADDRESS HERE

SHIP TO

DIV ENGINEERING & FACILITIES
 ARMORY BOARD SECTION

 1707 COONSKIN DRIVE
 CHARLESTON, WV
 25311-1099 341-6368

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
07/19/2006				

BID OPENING DATE: **08/10/2006** BID OPENING TIME **01:30PM**

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
	*****			ADDENDUM NO. 1	*****	
	ADDENDUM ISSUED TO DISTRIBUTE THE PRE-BID INFORMATION FOR THE WILLIAMSTOWN AASF TAXIWAY EXPANSION PROJECT. ENCLOSED IS THE PRE-BID SIGN-IN SHEET, THE MEETING MINUTES, MEETING QUESTIONS & ANSWERS, CONTRACT DOCUMENT REVISIONS, BIDDING REQUIREMENT REVISIONS, SPECIFICATION REVISIONS, TEST BORING LOGS, AND A TEST PIT LOCATION DRAWING PROVIDED FOR REFERENCE ONLY. THE BID DATE AND OPENING TIME REMAIN UNCHANGED FOR THIS PROJECT. BID DATE IS 08/10/06 OPENING AT 1:30 PM. ***** NO OTHER CHANGES *****					

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE
TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

**GENERAL TERMS & CONDITIONS
REQUEST FOR QUOTATION (RFQ) AND REQUEST FOR PROPOSAL (RFP)**

1. Awards will be made in the best interest of the State of West Virginia.
2. The State may accept or reject in part, or in whole, any bid.
3. All quotations are governed by the *West Virginia Code* and the *Legislative Rules* of the Purchasing Division.
4. Prior to any award, the apparent successful vendor must be properly registered with the Purchasing Division and have paid the required \$125.00 registration fee.
5. All services performed or goods delivered under State Purchase Orders/Contracts are to be continued for the term of the Purchase Order/Contract, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise available for these services or goods, this Purchase Order/Contract becomes void and of no effect after June 30.
6. Payment may only be made after the delivery and acceptance of goods or services.
7. Interest may be paid for late payment in accordance with the *West Virginia Code*.
8. Vendor preference will be granted upon written request in accordance with the *West Virginia Code*.
9. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.
10. The Director of Purchasing may cancel any Purchase Order/Contract upon 30 days written notice to the seller.
11. The laws of the State of West Virginia and the *Legislative Rules* of the Purchasing Division shall govern all rights and duties under the Contract, including without limitation the validity of this Purchase Order/Contract.
12. Any reference to automatic renewal is hereby deleted. The Contract may be renewed only upon mutual written agreement of the parties.
13. **BANKRUPTCY:** In the event the vendor/contractor files for bankruptcy protection, this contract is automatically null and void, and is terminated without further order.
14. **HIPAA Business Associate Addendum** - The West Virginia State Government HIPAA Business Associate Addendum (BAA), approved by the Attorney General, and available online at the Purchasing Division's web site (<http://www.state.wv.us/admin/purchase/vrc/hipaa.htm>) is hereby made part of the agreement. Provided that, the Agency meets the definition of a Covered Entity (45 CFR §160.103) and will be disclosing Protected Health Information (45 CFR §160.103) to the vendor.

INSTRUCTIONS TO BIDDERS

1. Use the quotation forms provided by the Purchasing Division.
2. **SPECIFICATIONS:** Items offered must be in compliance with the specifications. Any deviation from the specifications must be clearly indicated by the bidder. Alternates offered by the bidder as **EQUAL** to the specifications must be clearly defined. A bidder offering an alternate should attach complete specifications and literature to the bid. The Purchasing Division may waive minor deviations to specifications.
3. Complete all sections of the quotation form.
4. Unit prices shall prevail in cases of discrepancy.
5. All quotations are considered F.O.B. destination unless alternate shipping terms are clearly identified in the quotation.
6. **BID SUBMISSION:** All quotations must be delivered by the bidder to the office listed below prior to the date and time of the bid opening. Failure of the bidder to deliver the quotations on time will result in bid disqualifications.

SIGNED BID TO:

Department of Administration
Purchasing Division
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

PRE-BID SIGN-IN SHEET
DEFK6238

07/11/06
10:00 AM

002

WILLIAMSTOWN APRON EXPANSION & REHABILITATION
AASF #1
WILLIAMSTOWN, WV

BID DATE: 08/10/2006
BID TIME: 1:30 PM

NAME	COMPANY	ADDRESS	PHONE	FAX	EMAIL
DON NURZUM	Ryan Environmental	Rt 4 Box 260 Brookport WV 26330	304-842-3878	304-842-5131	dnurzum@ryanenviro.com
BOB STOUT	Schweider	57A GEORG ST. PARKERSBURG WV	304-422-3619	304-422-3602	R.LSTOUT@SCHWEIDERCONSTRUCTION.COM
BOB RYAN	ALBERS & ASS.	PO BOX 9367 S. CHAS, WV 25309	304-766-8817	304-766-7396	NFLCC1@APL.COM
Rick Johnson	WV Paving	P.O. Box 544 Dunbar WV 25064	304-768-9733	768-9357	rdjohnson@wvpaving.com
ALLEN CARMER	TEAR'S RIVER	P.O. Box 429 INSTITUTE 25112	776-0448	776-0451	TEARSRIVER@RIVERBREAK.COM
MARK URSD	BEAR CONTRACTING	601 HALL ST. BRIDGEPORT, WV 26330	842-9557	842-9433	MURSD@BEARCONTRACTING.COM
JEFF BOSLEY	J.C. Bosley	1 Bosley Ave Parkersburg WV	304-422-0025	422-0414	markw@bosleyrental.com
Mark Hook	"	"	"	"	markw@bosleyrental.com
Steve Longan	Longan OLC Corp	Rte 1 Box 84 Cumberlidge St East Cumbertown WV 26026	304-738-7388	304-738-3384	stevelongan@bosleyrental.com
BOB ARMSTRONG	B. ARMSTRONG ELECTRICAL SERVICE	1411 GRAND CENTRAL AVE SWEET B. VIENNA WV	304-481-6424	304-865-4236	BOB@ARMSTRONGELECTRIC.COM

Re: Pre-Bid Meeting; Williamstown Apron Expansion & Rehabilitation, Williamstown

003

The following constitutes Pre-bid Meeting Minutes for DEFK6238, Williamstown Apron Expansion & Rehabilitation.

During the pre-bid meeting conducted at 1000hrs 11 July 2006, MAJ Cottrell welcomed those present for expressing interest in the subject project. Key Owner representatives were introduced and the following agenda items were covered:

1. ADMINISTRATIVE:

- a. The Pre-bid meeting for the subject contract at 1000 hrs, 11 July 2006, at the West Virginia Army National Guard Office.
- b. Mandatory pre-bid attendance - Sign-In
- c. Funding: Federally funded, State administrated project.
- d. User: West Virginia Army National Guard
- e. Administrator: Construction & Facilities Management Office, WVARNG

2. INTRODUCTION:

a. C&FMO:

G. COTTRELL

- i. Address
1703 Coonskin Drive
Charleston, WV 25311
- ii. COL Melvin Burch, CFMO
(304) 561-6450
Contracting Officer
- iii. MAJ Garrett Cottrell, PE, Chief, Design & Construction
Garrett.b.cottrell@wv.ngb.army.mil
(304) 561-6452
Administrative Contracting Officer
- iv. Dan Clevenger, Project Manager
Email: Daniel.clevenger@WV.NGB.ARMY.MIL
561-6446 (o) 561-6458 (fax)
- v. LTC Harold Campbell, Facilities Manager
561-6156

vi. COL Gary Blackhurst, Environmental Program Management Officer
561-6445

b. DIVISION OF PURCHASING: PURCHASING REPRESENTATIVE

- i. Mr. Chuck Bowman (not present)
(304) 558-2157
(304) 558-4115 (f)

c. ENGINEER OF RECORD: CEI

- i. Address:
Capitol Engineering, Inc.
111 Wyoming Street, Suite 200
Charleston, WV 25302
Ph: 344-0720
- ii. Robert Fuller, Principal

3. BIDDING ISSUES G. COTTRELL

- a. Questions must be submitted to Purchasing Division, attention Mr. Chuck Bowman
NLT 1200hrs 18 July 2006.
- b. Direct discussion is not authorized with the Engineer, the Facilities Engineer, nor the
Project Manager.
- c. State Wage Rates Applies
- d. Bid Opening is set for 10 Aug 2006.

4. FEDERAL RELATIONSHIP G. COTTRELL

- a. Review General Provision 1, "Relationship of the Federal Government"

5. SECURITY/WORK HOURS/ ACCESS TO THE SITE/TEMPORARY FACILITIES G. COTTRELL

- a. The facility is an extended use facility providing aircraft support for both State and
Federal missions. Operations at the facility may be extensive, operating 24 hours per
day in emergencies. General operations occur from 0700 – 2300 hrs.
- b. The Contractor will have access to the site from 0700 to 1800 hrs, Monday to Friday.
If work hours must be modified, these will be approved on a case-by-case via the
Facilities Manager (LTC Campbell) and notification to the Project Manager (D.
Clevenger) and the Engineer of Record.
- c. Contractor is required to provide to the Project Manager, a listing of personnel, which
will be gaining access to the site. *(Section 01310-1.4.K)*
- d. Superintendence: In accordance with Contract documents, the Contractor must
maintain full-time, active superintendent on the job.

- e. Temporary Facilities:
 - i. Job trailer, equipment and material storage located adjacent to entrance to the flight facility. Power and water for such facility must be self-sufficient for facility.
 - ii. Water for Construction: Contractor may obtain water for construction activities from the facility.
 - iii. Contractor must provide port-a-johns for use of workers. Access to facility isn't authorized for such activities.

6. CONTRACT DURATION LIQUIDATED DAMAGES

G. COTTRELL

- a. Liquidated Damages
 - i. Duration of the contract is 365 days from the NTP.
 - ii. Liquidated Damages is \$500 per day plus one time fixed cost of \$250 for Staff Judge Advocate Review. Per Article 9.11.1 Supplement General Provisions and GP 54, "Liquidated Damages".

7. SAFETY

D. CLEVINGER

- a. All construction activities will be in conjunction with OHSA, Safety and Health Requirements Manual (US Army Corps of Engineers) and FFA. As noted, the Army safety and health standards mirror OHSA. All construction activities on site will be a hardhat area and marked as such.
- b. Access to the site will be restricted and controlled by the Contractor. A visitor's sign-in and hardhats to be made available for personnel visiting site.
- c. Temporary fueling operations: Any temporary fueling operation will be maintained in accordance with OHSA and WV Fire Marshall Standards to included secondary containment, fire extinguishers, and spill control.
- d. NOTAM- "Notice to Airman" The Contractor must coordinate with the Facilities Manager for issuances of NOTAMs. The Facilities Manager will issue any NOTAM and coordinate access to the taxiway area near the active runway.
- e. Cleanup required daily by each perspective sub and General Contractor: No open dumps of construction materials. Remove surplus soil material, unsuitable topsoil, obstructions, demolished materials, and waste materials including trash and debris, and legally dispose of them off Owner's property. Crushed pavement, gravel and clean soil may be given to nearby landowners with written approval from the C&FMO.

8. SUPERVISION OF WORK**D. CLEVINGER**

- a. Engineer of Record will have the responsibility for the observation of Contractor's quality of work. The Engineer of Record will provide recommendations for actions regarding progress payments, change orders, and acceptance of work.

9. ASPECTS OF CONTRACT**G. COTTRELL**

- a. Project Coordination (Correspondence) – Section 1040
- b. Meetings – Section 01200
- c. Submittals – 01300

10. SUBSTITUTIONS**CEI**

- a. Substitution requests must be submitted within 60 days of commencement of work.
- b. Substitution requests will only be considered when one or more of the following applies:
 - i. Proposed changes comply with general intent of Contractor Documents.
 - ii. Request is timely and is accompanied with all required documentation per specification section 01631.
 - iii. The specified product cannot be provided within Contract Time. This time will not be considered if Contractor fails to provide proper and timely coordination.
 - iv. Governing authority cannot approve the specific product and substitute product can be approved.

11. SUMMARY OF WORK**CEI**

- a. Project Description
 - i. Project consists of renovating the existing taxiway and expand the existing parking for Williamstown AASF #1, Parkersburg, West Virginia.
 - ii. Work will be constructed under a single prime contractor.
 - iii. Contractor shall have limited use of premises for construction operations, subject to limitations and requirements of the West Virginia Army National Guard.
 - iv. Runway: It is the intent to leave the taxiway available for approaches as much as possible.
 - v. Contractor shall comply with all FAA and Division 1, Section 01100 requirements in regards to taxiway and runway closures. This will include, but not be limited to:
 - Notifications for closing and opening taxiways.

- Temporary placement and removal of barricades, flagging, and flashers.
 - Use of flagman when working near Runway 3/21.
 - The contact/coordinator for the AASF #1 is LTC Campbell. He will provide coordination with the Wood County Airport Manager, Ms. Carolyn Strock.
- vi. Contractor is responsible for keeping driveways and entrances serving the premises clear and available for the Owner's use.

b. SCOPE OF WORK

CEI

- i. Reviewed the scope of work for subject project:
- ii. Removal and replacement of the taxiway at the Parkersburg Airport.
 - Demolition and removal of existing 40' x 1,050' long asphalt taxiway.
 - Placement of new 50' x 1,050' full-depth asphalt concrete pavement.
- iii. Expansion of existing concrete apron.
 - Five-foot edge strips.
 - Concrete pavement in place of existing asphalt infill areas.
- iv. Maintenance and repair of the existing concrete apron.
 - Cleaning and resealing all existing joints.
 - Spall and crack repair.
 - Full-depth concrete replacement.
 - Removal and replacement of several aircraft tie-downs.
 - Pavement marking.
- v. Installation of a new taxiway gate (Alternate Bid Item).
 - Clear and grub gate site.
 - Excavation and fill placement.
 - Pour concrete gate track.
 - Install gate and appurtenances.
- i. Insurance Certificates/Bonds
 - (1) General insurance/bonds from prime contractor are due prior to NTP. Copies to be provided to CFMO. For the subcontractors, copies of insurance due prior to start of work.
- ii. Environmental Issues/comments
 - (1) On-site Burning

- (2) Spills of fuels: The Contractor must notify the Owner of any fuel spills as soon as possible.
- (3) Reporting Procedure
- iii. Construction Storm Water Permit
- iv. Sediment Erosion Control Measures
 - (1) Need copies of inspections made by DEP
 - (2) Silt Fence must be maintained throughout project

Questions and Answers

During the Pre-bid meeting and walk through various questions were raised by attendees. These Questions and Answers are listed below:

Q: How will hauling be handled during Phase I around the Apron?

A: Hauling will be allowed on the Apron area as approved by the Project Manager in support of the Facility Manager.

Q: How is construction debris treated?

A: Construction debris is to be handled in accordance with state approved disposal sites. Organic and rock disposal is authorized on site all other materials/debris must be disposed off site. See Attachment #1 for specific contractual guidance.

Q: Does removal of old grounding points effect any ground loops?

A: No, the old grounding points do not affect any grounding points in other areas. The new grounding points will be individually grounded.

Q: Will Alternates be added after award of Bid?

A: Alternates prices need to be good for 45 days after bid award, see Attachment #1.

Q: A question was asked about blasting and quantities/finish grade for the cut area in regards to the new Taxiway Gate. In addition a question regarding using rock in the fill area was asked.

A: All issues are addressed in Attachment #1- Specification Revisions. Regarding quantity of fill, this item is a LUMP SUM Bid Item with the contractor responsible for his own estimates. The 11,000 cy was estimated by

the Engineer for budget development only. The contractor is responsible for his own take offs for obtaining their own cost for this LUMP SUM Bid Item.

Q: Can trees be burned, windrowed, or chipped?

A: Burning or windrowing is not authorized; chipping is authorized. See attachment #1 for additional information.

For clarification, unsuitable materials are defined in the specifications (including organic material). Material that has gotten too wet is NOT unsatisfactory due to this and is required to be dried before placement as per contract documents. Test pit data has been included as Attachment #2 as part of this package.

19. CLOSING COMMENTS

G. COTTRELL

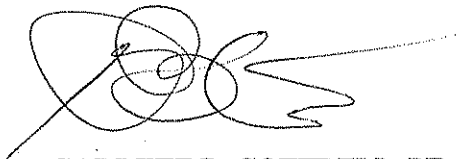
Meeting notes will be published through state purchasing , along with clarifications to contract documents. Any further question will be addressed through an Addendum released after the question period has closed. It was also stressed that any further questions between now and bid award must be directed to Chuck Bowman at State Purchasing.

As Prepared by:



Daniel Clevenger, EIT
Project Manager, C&FMO
WVARNG

Reviewed:



GARRETT B. COTTRELL, PE
MAJ, EN
Branch Chief, Design & Construction

ATTACHMENTS:

1. Contract Clarifications.
2. Soil Test Pit Information.
3. Pre-bid Meeting Sign In Sheet.

**AASF #1 APRON EXPANSION / REHABILITATION
AND TAXIWAY REPLACEMENT
CONTRACT DOCUMENT REVISIONS**

In response to questions generated by the Pre-bid attendees, the following revisions shall be incorporated into the Contract Documents.

Clarification to discussion at the prebid meeting – concerning earthwork for the taxiway force protection gate bid alternate.

The estimated 11,000 CY of fill required for the taxiway force protection gate is provided as a point of reference only, the Contractor is responsible for determining his own quantities and the item is paid as a lump sum.

BIDDING REQUIREMENTS REVISIONS

General Provisions, #54, Liquidated Damages (page GP-26)

Change dollar amounts to: \$500 for each day of delay, plus a one time fixed cost of \$250 for Staff Judge Advocate Review and contract modification.

Add the following sentence: Liquidated Damages for Phase I shall be ½ that of the overall contract (\$250 for each day of delay, plus a one time fixed cost of \$250 for Staff Judge Advocate Review and contract modification).

Bid Form Section I, Page 1, add the following sentence to the end of the first paragraph in the Alternates section:

Prices quoted for Alternate Bid Items shall be valid for 45 days after contract award.

Bid Form Section I, Page 2, add the following sentence to the end of the paragraph after the Compass Pad Rehabilitation Alternate Bid:

Total liquidated damages for Phase I are \$500 first day and \$250 per day thereafter for work not completed before December 31, 2006.

SPECIFICATION REVISIONS

Section 01010, "Summary of Work", Paragraph 1.2., "Work Phases", add Sub-paragraph "B":

- B. Phase II – 120-day performance period. This phase shall be completed within 120 days after commencement of construction on this phase.

Section 01010, "Summary of Work", Paragraph 1.3.A, "Use of Premises", add Sub-paragraph "2":

- 2. Contractor is limited to the area identified in the plans for that phase unless prior arrangements have been made with the facility manager. During Phase I, Contractor will be permitted to use the parking apron for access to Phase I work area. The portion of the apron allowed for use will be determined on a daily basis subject to operational requirements of the WVARNG.

Section 02230, "Site Clearing", Paragraph 3.7.A, "Disposal", Sub-paragraph "A" change to:

- A. Disposal: Remove obstructions, demolished materials, and waste materials including trash and debris, and legally dispose of them off-site.
 - 1. Burning is not authorized.
 - 2. Trees may be chipped and spread on-site. Wood chips shall be dispersed so that natural vegetation is not affected.

Section 02300, "Earthwork", Paragraph 1.5, "Submittals", add the following:

- D. Blasting plan approved by authorities having jurisdiction, for record purposes.
- E. Seismic survey agency report, for record purposes.
- F. Final Grading Plan: A grading plan shall be submitted by the Contractor for approval when performing earthwork outside areas of proposed grading on the Plans. The grading plan shall be at 1" = 50' scale or larger and a maximum contour interval of 2' with additional spot elevations or supplementary contours to define gently sloping areas.

Section 02300, "Earthwork", Paragraph 1.6, "Quality Assurance", add the following:

- B. Comply with applicable requirements of NFPA 495, "Explosive Materials Code."
- C. Seismic Survey Agency: An independent testing agency, acceptable to authorities having jurisdiction, experienced in seismic surveys and blasting procedures to perform the following services:
 - 2. Report types of explosive and sizes of charge to be used in each area of rock removal, types of blasting mats, sequence of blasting operations, and procedures that will prevent damage to site improvements and structures on Project site and adjacent properties prior to the start of blasting.
 - 3. Seismographic monitoring services during blasting operations.

Section 02300, "Earthwork", Paragraph 2.1.C, "Soil Materials", add Sub-paragraph "2":

- 2. Soils of these types may be approved by the Owner on a case-by-case basis. Suitable borrow material is available on site within the excavation shown on the Plans and the adjacent area.

Section 02300, "Earthwork", Paragraph 3.3, "Explosives", Sub-paragraph "A" change to:

- A. Explosives: Obtain written permission from authorities having jurisdiction before bringing explosives to Project site or using explosives on Project site.
1. Do not damage adjacent structures, property, or site improvements or weaken the bearing capacity of rock subgrade when using explosives.

Section 02300, "Earthwork", Paragraph 3.4, "Excavation, General", add Sub-paragraph "B":

- B. Borrow and Disposal Areas: On- or off-site borrow and disposal areas must be approved by the Owner prior to disturbance of those areas. Contractor shall submit a site grading plan to the Owner for review and approval which is compatible with the overall project. These areas shall be re-graded so that no slope is left steeper than 4H:1V. These areas shall be maintained so that they shall drain properly at all times. The Contractor shall construct and maintain any and all necessary channels, pipes, sumps, and or other temporary diversion and protective works. The Contractor shall be responsible for obtaining any and all permits, including a Construction Stormwater Permit (if required), for borrow and disposal areas.

Section 02300, "Earthwork", Paragraph 3.6.A, "Excavation for Utility Trenches", add:

2. Do not damage existing pavements during utility installation. Road crossings shall be accomplished by punching casing pipe under the paved area.

Section 02300, "Earthwork", Paragraph 3.13, "Compaction of Soil Backfills and Fills", add the following:

- D. General: No embankment shall be placed on frozen material. During the process of excavation and embankment construction, the work area shall be maintained in such a condition that it will be well-drained at all times. Depositing and compacting embankment in layers shall be started at the lowest point of the fill below grade, at the bottom of ravines, and at the foot of slopes on side hills. Unconsolidated soil or random material, unless removed under other provisions of the Specifications, shall be removed as directed by the Engineer, replaced and compacted as specified before placing embankment thereon. The layers shall be constructed approximately parallel with finished grade. Each layer, before starting the next, shall be leveled and smoothed by means of power driven grades, dozers or other suitable equipment with adequate weight, capacity and power to do the work. Layers shall be extended across the entire fill at the level of deposition unless otherwise authorized by the Engineer. Each layer, before starting the next, shall be compacted.
- E. The plan and sequence of operations shall make use of all the rock obtained from the excavation or borrow in accordance with the following provisions:
1. Rock occurring in the excavation shall be placed to form the base for embankments, to form select embankment layers, to form drainage systems, to form the outer edges of embankments under construction or to widen previously constructed embankments. In all rock slopes, the large rocks shall be placed at the outer face and the smaller rocks and spalls near the center. The rock shall not be dumped in placed but shall be distributed and placed the full width of the lift being formed by blading or dozing in a manner to assure proper placement in the final position in the embankment. The larger rock shall be well distributed and the voids, pockets, and bridging reduced to insure minimum deformation and still permit

drainage where required. When there is insufficient material, other than rock, encountered in the excavation to permit the other material being properly compacted in layers, the other material will be reserved to be placed as directed by the Engineer. Material that is too wet to be properly compacted shall not be used to fill the voids of previously placed rock. Random material that meets moisture requirements may be blended with rock and shall be placed in the embankment in lift thickness as prescribed.

2. To the extent that it is available and needed, sufficient suitable material shall be reserved from the unclassified excavation for use in filling voids in the top of the rock fill.
 3. Where rock is placed on an embankment of other material the top of the other material shall be sloped from the center to the sides at a rate of approximately 4 percent.
- F. Lift Thickness: The Contractor shall record material type and the lift thickness for all types of embankment. When embankments are to be constructed across low swampy grounds which will not support the weight of trucks or hauling equipment, the lower part of the fill may be constructed by dumping successive vehicle loads of rock, hard shale or granular material in a uniformly distributed layer. The thickness of a layer shall not be greater than that necessary to support the vehicle placing subsequent layers, after which the remainder of the embankment shall be constructed in layers and compacted as specified.
1. Random Material (Soil, Granular Material and Soft Shale): Random material as defined in Section 716 of the *West Virginia Division of Highways Standard Specifications, Roads and Bridges, Adopted 2000* shall be placed in embankments in successive layers not to exceed 6 inches in thickness after compaction.
 2. Hard Shale: This material is defined in the applicable provisions of Section 716 of the *West Virginia Division of Highways Standard Specifications, Roads and Bridges, Adopted 2000*. When suitable random material is to be mixed with hard shale, this mixture shall be placed in the embankment in lift thicknesses prescribed.
 - a. Mixtures which contain 66% or more of suitable random material shall be placed in lifts not to exceed 6 inches in thickness after compaction.
 - b. Mixtures which contain 35% - 65% (by visual inspection) of suitable random material shall be placed in lifts not to exceed 12 inches before compaction.
 - c. Mixtures which contain from 0% - 35% (by visual inspection) of suitable random material shall be placed in lifts not to exceed 24 inches.
 - d. The lift thickness shall be as thin as the excavated material will permit.
 3. Rock: This material, as defined in Section 716 of the *West Virginia Division of Highways Standard Specifications, Roads and Bridges, Adopted 2000* shall be placed in the embankment in layers of thickness as prescribed.
 - a. Mixtures which contain 66% or more (by visual inspection) of suitable random material shall be placed in lifts not to exceed 6 inches after compaction.
 - b. Mixtures which contain 35% - 65% (by visual inspection) of suitable random material shall be placed in lifts not to exceed 12 inches before compaction.
 - c. Mixtures which contain 0% - 35% (by visual inspection) of suitable random material shall be placed in lifts not to exceed 36 inches. The lift thickness shall be as thin as the excavated material will permit.

- d. Rock lifts in embankment shall be placed in approximately level layers of uniform thickness. The size of the rock lifts shall not exceed 36 inches. The rock shall not be greater in any dimension than 36 inches.

Section 02300, "Earthwork", Paragraph 3.21, "Disposal of Surplus and Waste Materials", remove subparagraph "B" and change sub-paragraph "A" to:

- A. Disposal: Surplus satisfactory soils and unsatisfactory soils may be disposed of on-site. Trash and debris must be legally disposed of off Owner's property.



Capitol Engineering, Inc.
 111 Wyoming Street, Suite 200
 Charleston, WV 25302

015

Project AASF-Taxiway
 Location Parkersburg WVARNG

LOG of BORING No. Test Pit #1
 Project No. 015-2000-07
 Field Engr./Geo. _____

DEPTH (INCHES.)	BLOWS PER SIX INCHES or SPT / FOOT	SAMPLE NO., TYPE or RECOVERY	PROFILE	DESCRIPTION	USCS or ROCK BROKENNESS		
1.0				Ashpalt			
2.0							
3.0							
4.0							
5.0							
6.0				Bank Run Gravel with Crushed Limestone			
7.0							
8.0							
9.0							
10.0							
11.0							
12.0							
13.0							
14.0							
15.0							
16.0				Recompacted Brown Clay and Reddish Brown Claystone Fragments			
17.0							
18.0							
19.0							
20.0							
21.0							
22.0							
23.0							
24.0				Hole Terminated @ 24" on Sandstone Some water drainage from subbase			

Surface Elevation _____ ft. Finished Depth _____ ft.
 Starting Date 6/1/2001 Ending Date 6/1/2001
 Starting Time _____ am pm Ending Time _____ am pm

Hammer Wt. _____ lbs.
 Hammer Drop _____ inches

Water Encountered _____ ft. @ _____
 Water Final Depth _____ ft. @ _____

Boring Method Terramite Backhoe
 Sampler Type _____

Remarks:



Capitol Engineering, Inc.
 111 Wyoming Street, Suite 200
 Charleston, WV 25302

016

Project AASF-Taxiway
 Location Parkersburg WVARNG

LOG of BORING No. Test Pit #2
 Project No. 015-2000-07
 Field Engr./Geo. _____

DEPTH (INCHES.)	BLOWS PER SIX INCHES or SPT / FOOT	SAMPLE NO., TYPE or RECOVERY	PROFILE	DESCRIPTION	USCS or ROCK BROKENNESS		
1.0				Ashpalt			
2.0							
3.0							
4.0							
5.0							
6.0				Bank Run Gravel with Crushed Limestone			
7.0							
8.0							
9.0							
10.0				Compacted Light Brown Clay with Sandstone Cobble			
11.0							
12.0				Compacted Light Brown Clay with Reddish Brown Claystor			
13.0				Cobbles			
14.0							
15.0							
16.0							
17.0							
18.0							
19.0							
20.0							
21.0							
22.0							
23.0							
24.0							
25.0							
26.0							
27.0							
28.0							
29.0							
30.0				Hole Terminated-Subbase Flooded, Test Pit Fille			
31.0							
32.0							
33.0							
34.0							
35.0							
36.0							

Surface Elevation _____ ft. Finished Depth _____ ft.
 Starting Date 6/1/2001 Ending Date 6/1/2001
 Starting Time _____ am pm Ending Time _____ am pm

Hammer Wt. _____ lbs.
 Hammer Drop _____ inches

Water Encountered _____ ft. @ _____
 Water Final Depth _____ ft. @ _____

Boring Method Terramite Backhoe
 Sampler Type _____

Remarks:



Capitol Engineering, Inc.
 111 Wyoming Street, Suite 200
 Charleston, WV 25302

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Project AASF-Taxiway
 Location Parkersburg WVARNG

LOG of BORING No. Test Pit #3
 Project No. 015-2000-07
 Field Engr./Geo. _____

DEPTH (INCHES)	BLOWS PER SIX INCHES or SPT / FOOT	SAMPLE NO., TYPE or RECOVERY	PROFILE	DESCRIPTION	USCS or ROCK BROKENNESS		
1.0				Ashpalt			
2.0				Bank Run Sand			
3.0				Bank Run/Limestone			
4.0							
5.0							
6.0				Remainder Compacted Brown Clay/Clayston			
7.0							
8.0							
9.0							
10.0							
11.0							
12.0							
13.0							
14.0							
15.0							
16.0							
17.0				Hole terminated on sandston			
18.0							
19.0							
20.0							
21.0							
22.0							
23.0							
24.0							
25.0							
26.0							
27.0							
28.0							
29.0							
30.0							
31.0							
32.0							
33.0							
34.0							
35.0							
36.0				Hole Terminated-Subbase Flooded, Test Pit Fille			
37.0							
38.0							
				Shelby Tube Sample Taker			

Surface Elevation _____ ft. Finished Depth _____ ft.
 Starting Date 6/1/2001 Ending Date 6/1/2001
 Starting Time _____ am pm Ending Time _____ am pm

Hammer Wt. _____ lbs.
 Hammer Drop _____ inches

Water Encountered _____ ft. @ _____
 Water Final Depth _____ ft. @ _____

Boring Method Terramite Backhoe
 Sampler Type _____

Remarks:



Capitol Engineering, Inc.
 111 Wyoming Street, Suite 200
 Charleston, WV 25302

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Project AASF-Taxiway
 Location Parkersburg WVARNG

LOG of BORING No. Test Pit #4
 Project No. 015-2000-07
 Field Engr./Geo. _____

DEPTH (INCHES)	BLOWS PER SIX INCHES or SPT / FOOT	SAMPLE NO., TYPE or RECOVERY	PROFILE	DESCRIPTION	USCS or ROCK BROKENNESS		
1.0				Ashpalt			
2.0				Bank Run Sand			
2.0				Bank Run Gravel/Limestone???			
3.0							
4.0				Remainder Compacted Brown Clay/Clayston			
5.0							
6.0							
7.0							
8.0							
9.0							
10.0							
11.0							
12.0				Compacted Light Brown Clay/Claystone with mar			
13.0				Sandstone cobbles			
14.0							
15.0				Hole terminated on sandston			
16.0							
17.0							
18.0							
19.0							
20.0							
21.0							
22.0							
23.0							
24.0							
25.0							
26.0							
27.0							
28.0							
29.0							
30.0							
31.0							
32.0							
33.0							
34.0							
35.0							
36.0							

Surface Elevation _____ ft. Finished Depth _____ ft.
 Starting Date 6/1/2001 Ending Date 6/1/2001
 Starting Time _____ am pm Ending Time _____ am pm

Hammer Wt. _____ lbs.
 Hammer Drop _____ inches

Water Encountered _____ ft. @ _____
 Water Final Depth _____ ft. @ _____

Boring Method Terramite Backhoe
 Sampler Type _____

Remarks:



Capitol Engineering, Inc.
 111 Wyoming Street, Suite 200
 Charleston, WV 25302

019

Project AASF-Taxiway
 Location Parkersburg WVARNG

LOG of BORING No. Test Pit #5
 Project No. 015-2000-07
 Field Engr./Geo. _____

DEPTH (INCHES.)	BLOWS PER SIX INCHES or SPT / FOOT	SAMPLE NO., TYPE or RECOVERY	PROFILE	DESCRIPTION	USCS or ROCK BROKENNESS		
1.0				Ashpalt			
2.0							
3.0							
4.0							
5.0							
6.0				Bank Run Gravel/Mixed with Limestone			
7.0				Light Brown and Reddish Brown Sandy Clayston			
8.0							
9.0							
10.0							
11.0							
12.0							
13.0							
14.0							
15.0							
16.0							
17.0							
18.0							
19.0							
20.0							
21.0							
22.0							
23.0							
24.0				Hole terminated @ 24" - Subbase flooded, filled test pi			
25.0							
26.0							
27.0							
28.0							
29.0							
30.0							
31.0							
32.0							
33.0							
34.0							
35.0							
36.0							
37.0							
38.0				Perforated corrugated PE pipe at hole (laid to drain wat away from taxiway			

Surface Elevation _____ ft. Finished Depth _____ ft.
 Starting Date 6/1/2001 Ending Date 6/1/2001
 Starting Time _____ am pm Ending Time _____ am pm

Hammer Wt. _____ lbs.
 Hammer Drop _____ inches

Water Encountered _____ ft. @ _____
 Water Final Depth _____ ft. @ _____

Boring Method Terramite Backhoe
 Sampler Type _____

Remarks:



Capitol Engineering, Inc.
 111 Wyoming Street, Suite 200
 Charleston, WV 25302

020

Project: AASF-Taxiway
 Location: Parkersburg WVARNG

LOG of BORING No. Test Pit #6
 Project No. 015-2000-07
 Field Engr./Geo. _____

DEPTH (INCHES)	BLOWS PER SIX INCHES or SPT / FOOT	SAMPLE NO., TYPE or RECOVERY	PROFILE	DESCRIPTION	USCS or ROCK BROKENNESS		
1.0				Ashpalt			
2.0							
3.0							
4.0							
5.0							
6.0				Bank Run Gravel/Mixed with Crushed Limeston			
7.0							
8.0							
9.0							
10.0							
11.0							
12.0				Brown Clay with Claystone Fragment			
13.0							
14.0							
15.0							
16.0				Brown Clay with Sandstone Cobble			
17.0							
18.0							
19.0							
20.0							
21.0							
22.0							
23.0							
24.0							
25.0							
26.0							
27.0							
28.0							
29.0							
30.0							
31.0							
32.0							
33.0							
34.0							
35.0							
36.0				Terminated @ 36" on Sandstone			
37.0							
38.0							
				Shelby Tube Taker No water in subbase			

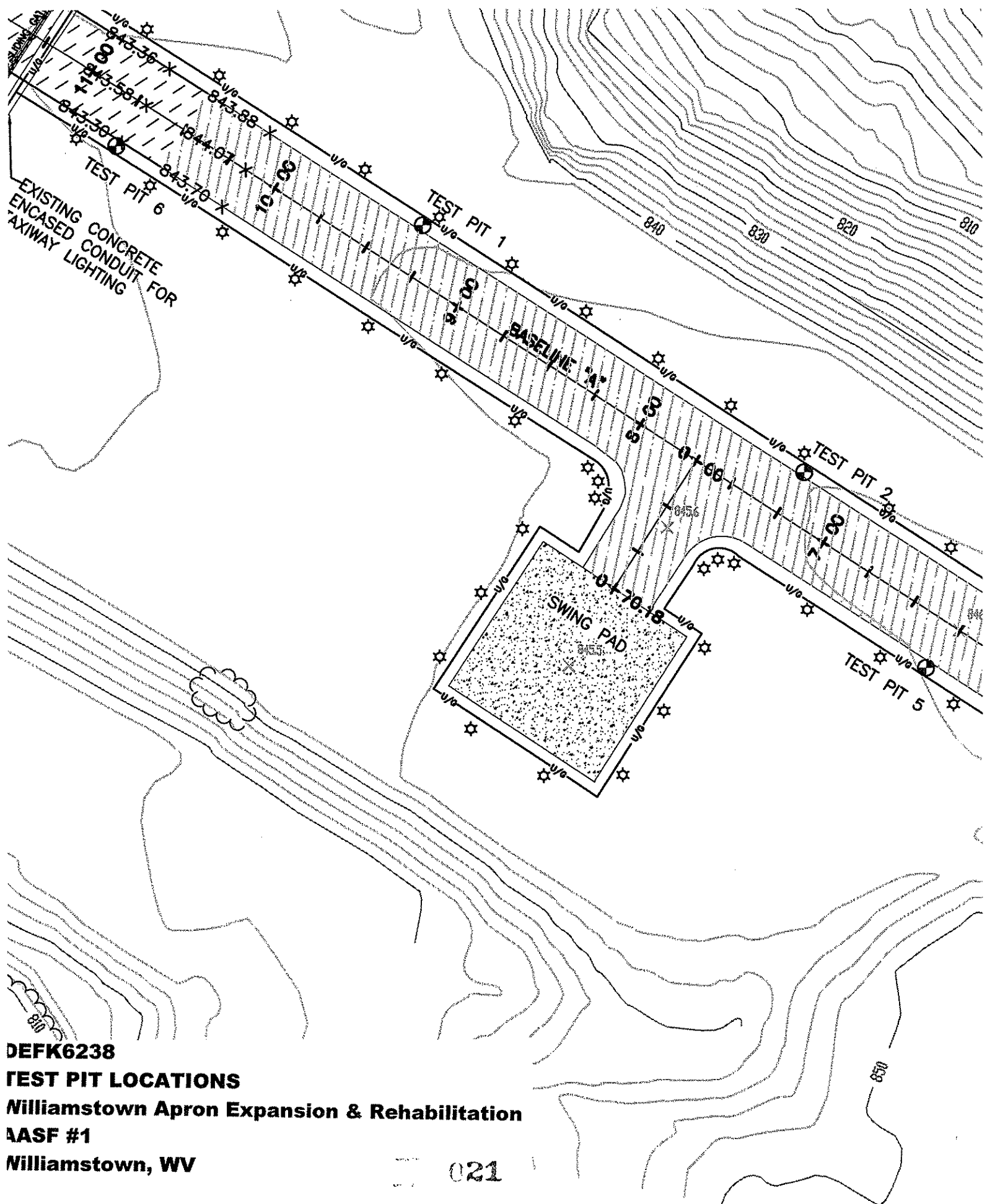
Surface Elevation _____ ft. Finished Depth _____ ft.
 Starting Date 6/1/2001 Ending Date 6/1/2001
 Starting Time _____ am pm Ending Time _____ am pm

Hammer Wt. _____ lbs.
 Hammer Drop _____ inches

Water Encountered _____ ft. @ _____
 Water Final Depth _____ ft. @ _____

Boring Method Terramite Backhoe
 Sampler Type _____

Remarks:



DEFK6238
TEST PIT LOCATIONS
Williamstown Apron Expansion & Rehabilitation
AASF #1
Williamstown, WV

021

FOR REFERENCE ONLY



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