

**STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
BUREAU OF AERONAUTICS**

MODIFICATION OF CONSTRUCTION STANDARDS

MODIFICATION NO.: 1

PROJECT NO.: 3-55-0070-19

AIRPORT: Rhineland-Oneida County Airport CONTRACT NO.: 1

PROJECT DESCRIPTION: Demolition and obliteration of Runway 5/23, including removal and reconstruction of radius fillet at intersection of Runway 27 and Taxiway D.

REQUEST FOR MODIFICATION OF CONSTRUCTION STANDARDS: This request for modification of construction standards to accommodate unique local conditions is as follows:

- A. List of standards requiring modification and a discussion of why the standard cannot be met: Specification P-501. Portland cement concrete pavement as specified in Specification P-501 of the Standard Specifications for Airport Construction, State of Wisconsin, 1998 Edition is specifically written for large paving projects such as runways, taxiways, and aprons. It would be difficult and unnecessarily expensive to use this specification for the small, 300 s.y. radius fillet to be reconstructed in this project.
- B. A description of the proposed modification: We propose to use Specification P-610, Structural Portland Cement Concrete, specifying Type 1 cement, 4,400 psi concrete in 28 days. The concrete will be tested using compressive strength and acceptance will be based on a specified formula. A copy of the proposed Special Provision is attached.
- C. A discussion of how proposed modification will provide an economical and feasible alternative to the FAA standard: The proposed specification will result in concrete of comparable quality to the existing concrete pavement. Based upon our own experience and discussions with local concrete contractors, we believe that a more economical unit price will be obtained using the proposed P-610 specification rather than the normal P-501 concrete pavement specification.

- D. A discussion of how proposed modification was successfully used under similar conditions: The same modification has been successfully used on previous projects by Becher-Hoppe Associates on similar small paving projects at Central Wisconsin Airport and other small paving projects. An identical Modification of Construction Standards was approved for Project No. 3-55-0052-17 at Central Wisconsin Airport in 1995. A copy of that approve modification is attached.

ASSURANCE STATEMENT:

This is to assure that the proposed modification of construction standards will provide a product that will meet or exceed FAA standards for acceptance and that the finished product will perform for its intended design life based on historical data:

ENGINEER

Becher-Hoppe Associates, Inc.

by: Russell O. Fish Title Sr. Project Manager Date June 21, 2001
Russell O. Fish, P.E.

BUREAU OF AERONAUTICS

C. M. Gelderman Date 6/27/01
C. M. Gelderman, P.E.
Specifications Development Chief

_____ Date _____
James A. Jensen, P.E., Chief
Airport Engineering Section

APPROVAL:

FEDERAL AVIATION ADMINISTRATION

Approved by: NA - prior approval Title _____ Date _____
at CWA (see attached)

Note: A copy of this approval will be attached to either the "SPONSOR CERTIFICATION FOR PROJECT PLANS AND SPECIFICATIONS" or "SPONSOR CERTIFICATION FOR CONSTRUCTION PROJECT FINAL ACCEPTANCE" as appropriate.

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**Proposed Special Provision, Rhinelander-Oneida County Airport
Project No. AIP 3-55-0070-19
Portland Cement Concrete Pavement, 12" Item No. X61001.**

A. Description.

This Item consists of constructing Portland Cement Concrete Pavement at the locations shown in the Plans and in accordance with Specification 610 - Portland Cement Concrete and this Special Provisions.

B. Material.

1. 610 - 2.4 Cement. Cement shall conform to ASTM C 150, Type I.
2. 610 - 3.2 Concrete Composition. The concrete shall develop a compressive strength of no less than 4,000 psi in 28 days as determined by test cylinders. Cylinders shall be made and tested by the Engineer. The concrete shall contain 6% of entrained air, plus or minus 1%.

C. Construction Methods.

1. 610 - 3.15 Surface Finish. The concrete surface shall be finished with a burlap finish conforming to 501 - 4.12.
2. Use dowels and tie bars conforming to 501 - 2.7.
3. Furnish and install dowels and tie bars as part of Bid Item X61001 and as shown on the construction Plans for the concrete radius area. No separate payment will be made for dowels and tie bars under Bid Item X61001.
4. The Joint Sealer to be utilized shall be Dow Corning 888, Silicone Joint Sealant. Install Joint Sealer in accordance with the details shown on the Plans. No separate payment will be made for Joint Sealer material.

D. Material Acceptance.

1. Four concrete cylinders shall be made and tested for the concrete placed each day when concrete is placed, regardless of the volume.
2. Two (2) cylinders shall be tested at 28 days for compressive strength to be utilized for determining acceptance/failure of the concrete.
3. The two (2) remaining cylinders shall be broken at 7 and 14 days to determine if the mix design is performing as expected. These cylinder breaks are for reference only and will not be considered in the determination of failure rate or acceptability.
4. Determination of Failure Rate. At least 80% of the cylinders tested at 28 days shall have a compressive strength of 4400 psi. Cylinder

tested at 28 days which have a compressive strength of less than 4400 psi shall be considered a failure. The method utilized in determining the failure rate or number of failed cylinders shall be the cylinders which are made for each day shall be tested and counted as one based on the average of the two cylinders.

5. **Modification of Bid Unit Price.** Should any failure rate in excess of 20% occur, a reduction in unit price will be made for all concrete placed under this Bid Item. The unit price will be reduced using the following formula:

Adjusted Unit Price =

$$\text{Bid Unit Price} \times (1.20) - \frac{\text{(No. of cylinders failed)}}{\text{(No. of cylinders tested)}}$$

6. This formula is to be used only in the event the failure rate exceeds 20%. It shall not be used to justify an increase in payment. This does not in any way limit the Engineer's authority to order removal and replacement of any concrete considered to be unsuitable.

- E. **Method of Measurement.** Portland cement concrete pavement will be measured by the number of square yards of either plain or reinforced pavement as specified in-place, completed and accepted.
- F. **Basis of Payment.** Payment for accepted concrete pavement will be made at the Contract unit price per square yard adjusted in accordance with Special Provision 15. D. Payment will be full compensation for all labor, materials, tools, equipment, and incidentals required to complete the Work as specified herein and on the Plans. Joint sealing filler shall be incidental and the cost included in the price for Portland Cement Concrete Pavement.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
BUREAU OF AERONAUTICS

MODIFICATION OF CONSTRUCTION STANDARDS

MODIFICATION NO.: 1

PROJECT NO.: 3-55-0052-17

AIRPORT: Central Wisconsin Airport

CONTRACT NO.: 1

PROJECT DESCRIPTION: Concrete Panel Repair on Taxiways B, C, and D and 6" Underdrain Discharge Piping.

REQUEST FOR MODIFICATION OF CONSTRUCTION STANDARDS: This request for modification of construction standards to accommodate unique local conditions is as follows:

- A. **List of standards requiring modification and a discussion of why the standard cannot be met:** Specification P-501. Portland cement concrete pavement as specified in the Standard Specifications for Airport Construction, State of Wisconsin, 1995 Edition is designed for large paving projects such as runway construction and would be difficult and costly to utilize for small 3' wide and 25' wide pavement repair areas.
- B. **A description of the proposed modification:** The intent is to utilize specification P-610, structural Portland cement concrete, specifying, Type 1 cement, 4400 psi concrete in 28 days, concrete to be tested utilizing compressive strength and acceptance based on a specified formula. A copy of the proposed specification is attached.
- C. **A discussion of how proposed modification will provide an economical and feasible alternative to the FAA standard:** The proposed specifications will provide a quality concrete that is comparable with the existing concrete pavement. Based on discussions with several concrete contractors, we feel that a more economical unit price can be obtained utilizing the proposed specification rather than the Standard P-501 specification.

- D. A discussion of how proposed modification was successfully used under similar conditions: Specifications of the type proposed have been utilized on several concrete pavement repair projects, small areas, in the recent past at Central Wisconsin Airport.

ASSURANCE STATEMENT:

This is to assure that the proposed modification of construction standards will provide a product that will meet or exceed FAA standards for acceptance and that the finished product will perform for its intended design life based on historical data:

ENGINEER:

Becher-Hoppe Associates, Inc.

Name of Firm

by: 

Alvin G. Fawley

Title: Managing Principal Date July 24, 1995

BUREAU OF AERONAUTICS

C.M. Gelderman

C.M. Gelderman, P.E.

Specifications Development Chief

Date 7-25-95

Keith F. Richardson

Keith F. Richardson, P.E., Chief

Airport Engineering Section

Date 7/28/95

APPROVAL:

FEDERAL AVIATION ADMINISTRATION

Approved by: Nancy Kopisak Title Asst. Mgr WI/SD Date 7/31/95

Note: A copy of this approval will be attached to either the "SPONSOR CERTIFICATION FOR PROJECT PLANS AND SPECIFICATIONS" or "SPONSOR CERTIFICATION FOR CONSTRUCTION PROJECT FINAL ACCEPTANCE" as appropriate.

AIP#

3-55-0052-17

Contract # 1