

**THE PORT AUTHORITY OF NEW YORK AND NEW JERSEY
TWO MONTGOMERY STREET - 1st FLOOR
JERSEY CITY, NJ 07302**

January 11, 2019

ADDENDUM NO. 9

TO PROSPECTIVE BIDDERS ON CONTRACT **GWB-244.236** – GEORGE WASHINGTON BRIDGE – INTELLIGENT TRANSPORTATION SYSTEM REPLACEMENT OF SIGNS AND FIELD DEVICES

The following changes are hereby made in the Contract Documents for the subject Contract.

This communication should be physically annexed to back cover of the book and initialed by each bidder before submitting his bid.

In case any bidder fails to conform to these instructions, his Bid will nevertheless be construed as though this communication had been so physically annexed and initialed.

CHANGES IN THE CONTRACT BOOKLET

- Page 1 - In the second line of the first paragraph, change the day and date for receipt of Bids to "Wednesday, January 23, 2019".
- Page 108 - In the clause entitled "Contract Drawings", immediately after
"S135 REMOVAL PLAN - CANTILEVER SIGN Structural"
STRUCTURE NO. NY-EW-104 SITE 20 AND
SIGN STRUCTURE AT SITE 21
insert the following new line:
"S136 REMOVAL PLAN - SIGN STRUCTURE NO. NY- Structural".
EW-104A SITE 20
- Page 109 - In the clause entitled "Contract Drawings", delete "S137 REMOVAL PLAN - SIGN STRUCTURE NO. NY-EW-101 SITE 20 Structural" with no substitution therefor.
- Pages 287 - Delete these pages in their entireties and substitute therefor new pages 287 through 298 (12 pages) which are attached hereto and made a part hereof.
- Pages 424G - Delete these pages in their entireties and substitute therefor new pages 424G through 424J (4 pages) which are attached hereto and made a part hereof.

REVISED CONTRACT DRAWINGS

Drawings G103, CS801, C101, C108, C109, C112, C113, ES314, ES813 and ES814 have been revised as of 01/10/2019. Copies of these drawings are forwarded herewith on CD. Destroy the drawings of these numbers now in your possession and substitute therefor the revised drawings.

ADDED CONTRACT DRAWINGS

Copy of new Drawing S136 dated 01/10/2019 is forwarded herewith on CD and is to be included in the set of Drawings.

DELETED CONTRACT DRAWINGS

Drawing S137 has been deleted. Destroy the drawings of this number now in your possession with no substitution therefor.

THE PORT AUTHORITY OF NEW YORK AND NEW JERSEY

James Starace, P.E.
Chief Engineer/Director

INITIALLED BY THE BIDDER:

DIVISION 2
SECTION 034200
PRECAST CONCRETE PAVEMENT SYSTEM

PART 1. GENERAL

1.01 SUMMARY

- A. This Section specifies requirements for furnishing and installing a continuous and/or intermittent reinforced precast concrete pavement system.
- B. Related Work specified in other Sections of the Specifications includes the following:
 - 025580 Diamond Grinding
 - 033010 Portland Cement Concrete, Long Form
 - 033110 Concrete Reinforcement
 - 036115 Grouting (Non-Metallic)
 - 037309 Concrete Spall Repairs
 - 261050 Weigh-in-Motion (WIM) Subsystem
 - 321123 Aggregate Base Course

1.02 REFERENCES

The following is a listing of the publications referenced in this Section:

American Society for Testing and Materials (ASTM)
ASTM A 775 Epoxy-Coated Reinforcing Steel Bars
ASTM D3574 Testing Equipment for Flexible Cellular Urethane Foams

Precast/Prestressed Concrete Institute Publication #PP-05-12
State-of-the-Art Report on Precast Concrete Pavements, First Edition Section 4.6-Repairs and
Surface Remediation

1.03 QUALITY ASSURANCE

- A. Manufacturer Qualifications
 - 1. The precast concrete pavement manufacturer shall have a minimum of 10 years' experience specializing in the fabrication of precast concrete pavement with at least three installations in New York or New Jersey installed at sites that have comparable traffic characteristics as the location shown on the Contract Drawings. Manufacturer shall have a longstanding history of financial stability with no bankruptcies, or other financial protections that impede their ability to complete the Work.

B. Installer Qualifications

1. Ensure that manufacturer's certified installer and manufacturer's certified inspector are present during all precast concrete pavement installations. If a certified installer and a certified inspector are not available, provide for training to be conducted by manufacturer's technical representative prior to installation for at least two (2) of the Contractor's personnel and at least two (2) of the Authority's personnel. Provide on-the-job instruction and training in all aspects of precast concrete pavement system installation, including: taking field measurements for purposes of developing detailed shop drawings; laying out saw cuts for the new slabs; sawing, cutting, and removing existing pavement without damaging pavement to remain; setting up rails for grading; installing bedding material; laying out panel point marks; placement of the slabs; and installation of the dowel and bedding grout material. At the conclusion of the training, coordinate and conduct required written test for the participants, and upon achieving a passing grade on the written test provide certification(s) to each trainee which indicates their successful completion of the training course.

C. Pre-Installation Conference

1. Prior to preparation of shop drawings or any fabrication of the precast slabs, schedule and attend a pre-construction meeting with the inspection personnel, project superintendent, project foreman, project surveyor, grout installers, the manufacturer's technical representatives, precast panel fabricator, and any subcontractor who will be involved in the precast pavement construction activities. The process for installing the precast slabs, determination of necessary slab sizes, developing a schedule and a plan for gathering field data necessary for shop drawing preparation, and identifying the equipment and materials necessary to complete the work shall be reviewed at the pre-construction meeting.

1.04 DELIVERY, STORAGE AND HANDLING

- A. Make appropriate arrangements for the movement of material, either at the time of delivery or subsequently until final installation including all costs associated with this movement.
- B. Make appropriate arrangements and coordinate with the Engineer for the proper acceptance, handling, protection, and storage of delivered materials.
- C. Safely store all equipment until final acceptance by the Engineer.
- D. Return all materials related to the delivery of materials to the manufacturer as shown on the Contract Drawings.

1.05 SUBMITTALS

See Appendix "A" for submittal requirements.

PART 2. PRODUCTS

2.01 MANUFACTURERS

- A. Furnish all precast concrete pavement slabs manufactured as manufactured by the following:
 1. The Fort Miller Co., Inc, Schuylerville, NY
 2. Or Approved Equal

2.02 MATERIALS

- A. All materials shall be as specified in the Contract Documents, and as per manufacturer requirements.

2.03 FABRICATON

- A. Panels shall be fabricated as shown on the approved Shop Drawings. The quality of all fabrication operations shall be controlled as specified in the National Precast Concrete Association (NPCA) compliant Precast Concrete Quality Control Plan. Membrane curing compounds shall not be permitted. Layout and Shop Drawings shall be submitted to the Engineer for approval.
- B. The concrete pavement in panels shall be cast for the length and width shown on the approved Shop Drawings.
- C. Bottom surface texture shall be smooth and the top surface texture shall be a broom or turf drag finish as shown on the Contract Drawings or as approved by the Engineer. The top surface texture shall be completed before applying curing materials.
- D. Dowels shall be cast square to the transverse end and parallel to the top surface of the slab as shown on the approved Shop Drawings.
- E. Tie bars shall be cast in the longitudinal edge of the slab as shown on the approved Shop Drawings. The female half of the tie bar shall be cast in the slab such that a headed anchor stud can be screwed into it in the field.
- F. The tie bars shall be cast square to the longitudinal edge and parallel to the top surface of the slab as shown on the approved Shop Drawings.
- G. Slots for the transverse dowels and longitudinal tie bars in the panels shall be cast to accommodate dowels and tie bars as shown on the approved Shop Drawings square to the edge of the slab.
- H. Lifting devices shall be placed at locations shown on the approved Shop Drawings. Recess each lifting device in the panel a minimum of 1 inch below the surface.
- I. The portion of the dowels cast into the precast slab shall be coated with a bond breaker.
- J. For each slab, a 1 inch thick by 1 inch wide foam gasket shall be attached to the underside edge of the slab, as shown on the approved Shop Drawings to prevent grout leakage and to create discrete grout chambers between corresponding ports.
- K. The slabs shall be cast to the following tolerances:
 - Length +/- 1/4 inch
 - Width +/- 1/4 inch
 - Thickness + 1/8 inch
 - Difference in diagonals not to exceed 3/16 inch
 - Edge Squareness 1/8 inch in 10 inches (in relation to top and bottom surfaces)

PART 3. EXECUTION

3.01 EXAMINATION

- A. Prior to the fabrication of any materials, perform an accurate “x”, “y”, “z” survey of the existing pavement surface, abutting existing pavement, walls, concrete shoulders, limit of pavement, and utility structures, using appropriate total-station surveying equipment or scanning devices as necessary. If total station equipment is used, take shots of the existing surface at approximate 15 foot centers, or as necessary, to capture existing crown lines and other features as necessary to provide an accurate depiction of the existing surface. Develop a digital surface model of the existing surface using the information taken during the field survey and which is compatible with the grading equipment being used. Evaluate the surface model of the existing pavement, as necessary, to develop a design surface model that will provide proper drainage, cross slope values, and crowns as the existing conditions. Submit the design surface model to the manufacturer prior to fabrication. Furnish lifting devices in accordance with the manufacturer’s written recommendations.
- B. Remove the existing sealant from the longitudinal joint between adjacent existing slabs/pavement and accurately locate the joint before measuring. Develop and submit a slab layout drawing for continuous installations showing the location and mark number of each slab. Consider lane/shoulder closings, durations of closings, and all maintenance and protection of traffic as shown on the Contract Drawings in preparing the slab layout.

3.02 PREPARATION

A. INSTALLATION PLAN

- 1. Prepare and submit a detailed installation plan to the Engineer and the manufacturer’s technical representative at least thirty (30) days before the planned start of slab installation. Provide the following information which meets the requirements of this Specification Section:
 - a. Size and location of the placement crane
 - b. Rigging to be used for lifting the slabs
 - c. Routes to be used by the delivery trucks
 - d. Details for maintenance and protection of traffic that meets the requirements shown on the Contract Drawings
 - e. Proposed method and equipment used for fine grading
 - f. Materials proposed for dowel and bedding grout
 - g. Grout mix designs to be used for each grout
 - h. Equipment to be used for mixing and installing the grouts

B. PRE-PLACEMENT MEETING

- 1. Hold pre-placement meeting at least ten (10) calendar days before the planned start of slab installation. Meeting attendees should include the Engineer, inspection personnel, project superintendent, project foreman, project surveyor, grout installers, the manufacturer’s technical representative, precast panel fabricator, and any subcontractor who will be involved in the precast pavement construction work. The manufacturer’s technical representative shall provide introductory training on the installation and inspection techniques and requirements of the precast concrete system. An approved Installation Plan is required prior to conducting the pre-placement meeting.

3.03 INSTALLATION

- A. Survey and Engineering. For single intermittent slabs, position the sawcut lines to allow for the size of the slab and the specified joint widths. For a series of intermittent slabs, position the sawcut lines as required for the slabs and the specified joint widths. Prior to placing the slabs, lay out the leading ends and edges of each slab taking into account the design joint width needed
- B. Sawcut and Removal of Existing Pavement. Perform full depth sawcut at the limits of the slab replacement. Remove the existing concrete or composite pavement without disturbance to the surrounding pavement and subgrade to remain. Spalling of the remaining concrete during the lifting is not permitted. Sawcut the slab and drill the lift out holes a maximum of five (5) days before the concrete removal. Only remove concrete and pavement that can be replaced during the same workday. Repair damaged existing pavement to the satisfaction of the Engineer, and at no additional cost to the Authority.
- C. Subbase Preparation. Examine underlying material to determine its condition after the existing concrete and pavement has been removed. Do not disturb the existing subbase unless it is to remove existing material to a required surface 1/4 inch to 1/2 inch below the theoretical bottom of the new concrete slab to accommodate the new slabs. If water or excess moisture exists in the area, remove the underlying material to the depth specified by the Engineer. Place 6" dense graded aggregate base course coarse aggregate and compact using the rolling and vibrating method as specified in Specification Section 321123 entitled "AGGREGATE BASE COURSE." Shape the surface of the existing subbase and compact to a firm and even surface within a tolerance of plus or minus 1/2 inch of grade and contour of the bottom of the new slabs.
- D. Placement of Bedding Material. In accordance with the manufacturer's written recommendations, furnish and install fine grading bedding material or furnish and inject bedding grout (high-density closed cell polyurethane foam or cementitious grout below the slabs).
- E. Pavement Slab Placement. Prior to placement of any slab, coat the dowel bars and the leading vertical edge of the previously placed slab and the longitudinal edges of existing pavement or previously-placed precast slabs with a bond breaker to break the bond between the concrete slab and the dowel grout. Also prior to placement of any slab, place a set of two (2) 1/16 inch thick, minimum, incompressible shims in each corner to the leading edge of the previously-placed slab to prevent slabs from touching during the placement process. Use tie off ropes and guide bars inserted in grout port holes to align the slabs to the marks during the placement process. The use of pry bars or wedges in joints for alignment purposes will not be permitted. If a differential of more than 1/4 inch is found after the slabs have been placed and driven upon, diamond grind the affected slabs in accordance with Specification Section 025580 entitled "DIAMOND GRINDING" as directed by the Engineer. Place each slab to the leading end and edge marks. Ensure that the joint width is 0 inches to 3/8 inch. If dowels are exposed at the end of a setting period, protect them with an approved method as directed by the Engineer. Protect the bars against bending and against damage to the epoxy coating. Ensure the texture of the top surface of the slabs is a light broom texture after diamond grinding in accordance with Specification Section 025580 entitled "DIAMOND GRINDING."
- F. Placing New Slabs Next to Existing Pavement. Prior to placement of new slabs adjacent to existing concrete or asphalt concrete pavement, anchor longitudinal tie and dowel bars into holes drilled into the existing pavement at locations that coincide with the slots shown on the approved Shop Drawings.

- G. Placement of Dowel and Tie Bar Grout. Install foam grout dams at the open ends of the transverse joint before installing dowel grout in order to prevent grout from escaping. Mix grout in strict accordance with the manufacturer's specifications and as demonstrated in the trial batching procedure. Install the grout by inserting the grout nozzle into the back port of the lowest slot on the joint. Pump grout into the first port until it comes out of the adjacent port and such that the grout flows along the transverse joint to the next port. Proceed to the back port of the next slot and repeat the same procedure. Monitor the grout level in previously grouted ports and add grout as required to keep the grout level even with the top of the slab. Minimize spilling of dowel and tie bar grout by using temporary grout dams during the grouting operation or by installing temporary backer rod grout dams in joints prior to grouting. Remove all spilled dowel grout from the slab surface immediately before it bonds.
- H. Provide and make available a backup pump in case of main pump failure. Finish off the top of the grout port with the same finish as the rest of the slab surface. The grout is to reach a minimum strength of 2,500 psi before allowing traffic on the slab.
- I. Placement of Bedding Grout. Mix Bedding grout in strict accordance with the instructions/specifications provided by the manufacturer of the flow cable admixture and as demonstrated in the trial batching procedure. Start bedding grout installation at the downhill chamber at the lowest port. Pump or pour the bedding grout into the grout port on the end of the slab until it exudes from the corresponding port at the other end of the slab insuring full bedding of the slab in that chamber. Fill all remaining ports in the same manner. Monitor the grout level in previously filled ports and add grout as required to keep it level with the top of the slab. Ensure spillage is kept to a minimum.

Remove any excess or spilled grout from the surface of the new slabs immediately. Provide and make available a backup pump in case of main pump failure. After the bedding grout has taken an initial set and before it hardens completely, remove the bedding grout from the top two (2) inches of each bedding grout port, and replace with a freeze-thaw durable dowel grout. The grout is to reach a minimum strength of 600 psi in 12 hours. Use dowel grout to fill all recessed lifting anchors cast into the top of each slab.

- J. Repair of Damaged Panels. Repair any slabs that are damaged or cracked as a result of the installation process as directed by the Engineer at no additional cost to the Authority, in accordance with this Section, and State-of-the-Art Report on Precast Concrete Pavements, First Edition, Section 4.6-Repairs and Surface Remediation, Precast/Prestressed Concrete Institute Publication #PP-05-12. Damage to panels during handling and installation will be evaluated by the Engineer on a case-by-case basis once the panels are installed. Of particular importance is damage to the top surface, and damage to panel edges and corners that occurs during installation. Recurring damage or distress will be cause for discontinuing installation until the cause of the recurring damage can be determined and the problem mitigated.
1. Repair surface damage around lifting anchor recesses, spalled areas larger than about 4 in. in diameter, and spalls greater than ¼ in. deep using partial depth repair techniques.
 2. Panel Edge and Corner Spalls. Repair spalling of panel edges and corners that abut adjacent pavement or other panels so that a durable joint is achieved. Use partial depth repair techniques as described in Specification Section 037309 entitled "CONCRETE SPALL REPAIRS" to repair the spalled areas. Spalling of the panel edges at an exterior edge or corner, along the pavement shoulder may not need to be repaired, as determined by the Engineer.

3. Cracks. Measure cracks that have occurred during or after panel installation to determine the widths and cored at locations determined by the Engineer, to determine the depth of the cracks.
 - a. Surface Cracks. Surface cracks not more than .006 inches in width include shallow longitudinal, transverse cracks or random cracks that do not penetrate more than 2 inches or to the top layer of reinforcing steel, whichever is less. Surface cracks may be repaired by first cleaning the crack by air or sand blasting and filling them with a low viscosity sealing material such as an approved methyl methacrylate through gravity flow or by troweling with a squeegee.
 - b. Core Full-Depth and Wide Cracks. Cracks wider than .006 inches to determine the width and the depth of the cracks. If it is determined the crack is not of structural concern, due to the presence of two layers of reinforcing steel or other factors, it may be repaired by using epoxy injection techniques described in the Precast/Prestressed Concrete Institute Publication #PP05-12, State-of-the-Art Report on Precast Concrete Pavements, First Edition, Section 4.6-Repairs and Surface Remediation. Remove structurally-damaged panels with wide full-depth cracks and replace at the discretion of the Engineer.
- K. Opening Slabs to Traffic. If slabs must be open to traffic before dowel and bedding grouts can be installed, install incompressible shims at two (2) locations (at approximate quarter points) in each transverse joint to prevent ungrouted slabs from hitting and spalling under traffic conditions. Ensure the thickness of the shims is approximately the width of the open ungrouted joint. Remove ungrouted slabs that settle or develop edge differentials under traffic conditions greater than 1/4 inch, re-grade the subgrade and reset the slabs before grouting. If the settled slab cannot be removed because it is in the middle of a run of new slabs, diamond grind the surface of the pavement in accordance with Specification Section 025580 entitled "DIAMOND GRINDING" as directed by the Engineer, until the edge differential is less than the allowable 1/4 inch. Do not grind more than 1/2 inch from the top surface of any slab as may be determined by taking cores – at the direction of the Engineer.
1. Traffic of any kind, including construction traffic, is not permitted to ride on any grouted slabs until the dowel grout has reached the minimum specified compressive strength of 2,500 psi. To safely maintain traffic during the installation process, install temporary pavement along the edges that do not match the adjacent pavement, when directed by the Engineer
- L. Sealing of Transverse and Longitudinal Joints. Seal joints in accordance with the details shown on the Contract Drawings and approved Shop Drawings.

3.04 FIELD QUALITY CONTROL

A. Installation Quality Control Plan by Contractor

Perform quality control (QC) of all materials and processes related to the installation of the precast slabs to ensure it meets the requirements of this specification. At least thirty (30) days prior to installation on the project, submit to the Engineer for review a proposed QC plan for installation of the panels at the project site. Include detailed step-by step descriptions of the work to be completed, a detailed procedure of how the panels are to be installed, and a detailed description of how quality control of the installation will be performed to ensure panels are installed in accordance with the specifications. Include the following in the QC plan:

1. The team including the names, titles, responsibilities, and authorities of the installation team leader, project manager, job site foreman, surveyor, or layout person and crew members.
2. Indicate the specific team member that will be responsible for removal of existing pavement without damaging surrounding pavement to remain.
3. Designate by name who will be responsible for compacting the subgrade to meet contract compaction requirements and to grade subgrade and bedding material or installing bedding grout (high-density polyurethane foam or cementitious grout) to ensure panels meet the elevations shown on the Contract Drawings.
4. The specific crew member responsible for placing pavement panels.
5. The specific crew member responsible for installing dowel and bedding grouts.
6. The name(s), title, responsibility and authority of the individual(s) responsible for performing quality assurance activities. Include example reports that will be filled out that will indicate panels are installed in accordance with these specifications.
7. The specific crew members with whom the Engineer is to interface in all matters.
8. If the Engineer determines any part of the QC Plan is not effective and does not ensure consistent quality of the installation, modify the plan and resubmit for review and approval before proceeding with further installation. Any installed panels not meeting the requirements of the Contract Documents shall be repaired or replaced in accordance with 3.03 of this Section at no additional cost to the Authority.

END OF SECTION

SECTION 034200

PRECAST CONCRETE PAVEMENT SYSTEM

APPENDIX "A"

SUBMITTALS

Submit the following in accordance with the requirements of "Shop Drawings, Catalog Cuts and Samples" of Division 1 - GENERAL PROVISIONS:

Shop Drawings

- 034200A01
1. Slab layout drawing that shows the location of slabs appropriately mark numbered and that shows replacement areas by stage of construction that accommodates the maintenance and protection requirements shown on the Contract Drawings.
 2. Detailed piece drawings showing the locations, spacing and sizes of dowels and tie bars as shown on the Contract Drawings, lifting inserts, grout ports, bedding grout channels, foam gasket locations, and all geometry related to widths, lengths and grades of each slab.
 3. Transverse and longitudinal joint details showing design joint width and theoretical lay-length information so leading ends and edges of the new panels may be laid out properly.
 4. Reinforcing size, and position, and class of concrete.

Catalog Cuts

- 034200B01
- Production note sheet showing the source of materials, testing methods, weights of each slab, tolerances and all details relating to yard storage, shipping and handling.

Certificates

- 034200E01
- Installer and Inspector Certification or Certificates of Successful Completion of the manufacturer's Training Course.

Calculations

- 034200H01
- Reinforcing size, type and position calculations signed and sealed by a New Jersey licensed Professional Engineer.

Schedules

- 034200J01
1. Training, as applicable.
 2. Delivery and handling of equipment and material to staging area.
 3. Delivery and handling of equipment and material to site.
 4. Installation of permanent and dummy slabs.

Qualifications

- 034200K01
- Documentation of experience the precast slab system in accordance with 1.03.

Quality Assurance-Quality Control

- 034200L01 Surface smoothness Testing Plan(s) and Test Procedures, a minimum of 30 days in advance of the first delivery.

- 034200L02 Certification(s) for each trainee which indicates their successful completion of the training course in accordance with Section 1.03.B.1

Record Documents

- 034200M01 Survey prior to installation

- 034200M02 Final grading and slab layout.

- 034200M03 Completed surface smoothness test results.

END OF APPENDIX "A"



NOT USED



NOT USED

SECTION 087100

APPENDIX "B"

FINISH HARDWARE SCHEDULE

The following schedule contains a listing of hardware for each door) by set number which corresponds with hardware set number shown on the Contract Drawings.

*Denotes manufacturers scheduled for Work of this Section, or approved equal.

**Denotes manufacturers scheduled for Work of this Section, with no substitution permitted.

<u>Item</u>	<u>Manufacturer</u>	<u>Symbol</u>
Locks/Latches	Best	B
	Corbin Russwin *	COR
	Schlage	S
Cylinders	Best	B
	Corbin Russwin	COR
	Schlage	S
	Medco*	MED
Butts/Hinges	Hager *	HAGAR
	McKinney	MC
	Stanley	ST
Electric Strike	ASSA ABLOY*	AC
	HES (Folger Adam)	HES
	Von Duprin	VP
Overhead Closers	Corbin Russwin	C
	Falcon	F
	LCN*	LCN
	Rixon Firemark	RF
Push/Pull Units and Protection Plates	Builders Brass Works	BW
	Ives*	IVES
	Quality Hardware Co.	QH
Door Trim/Stops	Builders Brass Works	BW
	Glynn-Johnson	GJ
	Ives*	IVES

Addendum No. 9

Addendum No. 7

087100 - 7

HARDWARE SETS

Door Hardware Set No. 1, Interior Door; Communications Desk with Reader; Electric Strike
 Door No. 101 each door to have the following:

No.	Item	Description	Finish
3	Hinge	HAGAR BB1191	606
1	Lockset	COR ML2059	606
1	Core-Permanent	MED LFIC	606
1	Core- Housing	MED 32 Series	606
1	Core-Temporary		
1	Floor Stop	IVES FS439	606
1	Closer	LCN 4040XP-3077CNS MC SNB	606
1	Kickplate	IVES K1050	606
1	Reader	By Security Vendor	NA
1	Electric Strike	AC AES-100	NA
1	Power Supply	AC APS-300	NA

Door Hardware Set No. 2, Interior Door,
 Door No. 102 to have the following:

No.	Item	Description	Finish
3	Hinge	HAGAR BB1191	606
1	Lockset	COR ML2053	606
1	Core-Permanent	MED LFIC	606
1	Core- Housing	MED 32 Series	606
1	Core-Temporary		606
1	Wall Bumper	IVES WS406 CCV	606
1	Closer	LCN 4040XP-3077CNS MC SNB	606
1	Set Silencers		Gray

END OF APPENDIX "B"

Addendum No. 9

Addendum No. 7

SECTION 087100

APPENDIX "C"

KEYING

1.01 Construction Key System

- A. Equip locks with cylinders for interchangeable core pin tumbler inserts.
 - 1. Furnish and install temporary cores for the construction period. Remove cores when directed by the Engineer.
 - 2. Furnish and install final cores.

1.02 Keying System

- A. General: Meet with the Engineer and the facility manager to finalize keying requirements and obtain final instructions in writing.
 - 1. Submit detailed keying schedule as required by Appendix "A" of this Specification Section to indicate final keying of locks. Provide the following:
 - a. Keying system schematic diagram and floor plan(s) with corresponding key symbols indicated for each door.
 - b. Copy of final keying schedule as transmitted to lock manufacturer.
 - c. When keying is an extension of an existing system, include all references and registry numbers of existing keying.
- B. Provide integrated keying system, with the existing system.

1.03 Keys

- A. Key Material: Nickel silver, without substitution.
- B. If a construction key system is required by 1.01 A hereof, deliver construction keys and the temporary cores from the lock manufacturer to the Engineer via registered mail. Schedule mail delivery to provide key and core receipt to the Engineer prior to construction site delivery of finish hardware items.
- C. Key Quantity: Deliver the following keys from the lock manufacturer to the Engineer via registered mail.
 - 1. Prior to construction site delivery of finish hardware items:
 - a. 2 change keys.
 - 2. Prior to issuance of the Certificate of Final Completion, 2 control keys for initial construction.

1.04 Key Control System

- B. The Contractor shall arrange for a direct representative of the key control system manufacturer to be available at the construction site for a minimum of 4 hours when requested by the Engineer. Provide full instructions to Authority personnel on required management procedures to issue, record, receive and maintain the keys and control system records.

END OF APPENDIX "C"

Addendum No. 9

Addendum No. 7



NOT USED