I. Scope

716-06.01, Disc-Design Structural Bridge Bearings and 716-07.01, Pot-Design Structural Bridge Bearings are considered for acceptance at the manufacturing location on a production lot, contract specific basis. This will detail the quality assurance procedure for these bridge bearings.

II. Contents

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Appendices - Measuring Flatness of Steel Plates For Bridge Bearings.

Examples of completed BR-240, Sample & Acceptance Transmittal for PTFE incorporated into the finished bearings. 13

Examples of completed BR-240, Sample & Acceptance Transmittal for Disc and Pot Design Structural Bridge Bearings. 14

Example of completed Materials Certification. 15

Example of completed Testing Certification. 17

Materials Certification Form 18

Testing Certification Form 20
III. Related References

A. Specifications:
   1. 716-06.01, Disc-Design Structural Bridge Bearings.
   2. 716-07.01, Pot-Design Structural Bridge Bearings.

B. Approved Drawings - Detailed shop drawings shall be drawn by the manufacturer and approved by the Deputy Chief Engineer, Structures.


F. SSPC Paint Specification No. 16.

G. ANSI B46.1 - Surface Texture (Surface Roughness, Waviness and Lay).

IV. Assignment/Notification

A. An inspection authority will be assigned by the Materials Bureau for each Department Contract subsequent to the approval of the bearing manufacturer's shop drawings by the DCES.

B. The bearing manufacturer shall notify the inspection authority of the following at least five days in advance so that inspection can be scheduled.
   1. The date, time and location of Rotation and Coefficient of Friction testing to be performed. The Department reserves the right to witness this testing.
   2. The date that completed lots of bearings will be ready for sampling and testing by the Department. The inspector will only sample completed lots of bearings that have been tested for the required properties and certified acceptable by the manufacturer.
V. Material Requirements - The manufacturer is required to maintain identity of all materials incorporated in the bearings from receipt from his supplier to the completion of the finished product.

A. Polyether Urethane Structural Element - Acceptance consideration of the elements will be based on Department testing of manufactured samples transmitted by a Department Representative.

1. Department testing will be performed on a lot basis. A lot is defined as the lesser of the following:
   a. A lot shall not exceed a single contract or project quantity.
   b. A lot shall not exceed one 459 batch of the polyether urethane material.

2. The manufacturer of the element shall supply with each batch of material the following sheets, molded from the batch, to represent the lot:
   a. One 10"x15" flat sheet 0.063" to 0.120" thick.
   b. One 4"x4" sheet, molded or cut to the thickness requirements of ASTM D395, Method B OR four die cut specimens in accordance with ASTM D395, Method B.

3. The bearing manufacturer shall certify that the above samples were taken from the same batch of polyether urethane as was used in the actual production bearings.

B. Elastomeric Rotational Element - Acceptance consideration of the elements will be determined by sampling and testing by the Department. (Note: The maximum number of pieces of elastomer in any single bearing shall be three.)

1. The Elastomeric Rotational Element(s) will be removed from one pot-design structural bridge bearing from each lot selected at random by a Department Representative.

2. The element(s) will be transmitted to the Materials Bureau along with the samples of pot-design structural bridge bearings. The element(s) will be destructively tested.

3. The manufacturer of the bearings shall supply and replace at his cost the rotational element(s) removed from the bearing prior to final Department approval consideration.

C. Polytetrafluoroethylene (PTFE) Sheet and Strip. - Acceptance consideration of the PTFE material will be based on testing by the Department.

1. Department testing will be performed on samples representing individual lots. A lot shall be defined as consisting of material of one thickness from an individual manufacturer.

2. The bearing manufacturer shall maintain identity of all material in a lot from receipt to fabrication.
Subject: QUALITY ASSURANCE PROCEDURE FOR 716-06.01 AND 716-07.01

3. Department accepted material inventoried for future Department Contracts must be segregated from all other material.

4. The bearing manufacturer shall cut one 10"x15" sample sheet of PTFE material from each lot. Note- When bearings have been fabricated with PTFE material and additional material remains from the same lot, the inspector, at his option, may use the manufacturer's cut sample or may randomly select the 10"x15" sheet from the inventoried material.

5. The bearing manufacturer shall certify that the above samples were taken from the same lot of PTFE material as was used in the actual production of the bearings.

VI. Testing Performed by the Manufacturer- The bearing manufacturer is required to perform tests on completed lots of bearings to determine their specification compliance prior to sampling for acceptance consideration by the Department representative. The tests required to be performed are: Sliding Coefficient of Friction and Rotation and may, at the option of the Materials Bureau, be witnessed by a Department representative. Testing shall be performed as specified in 716-06.01 or 716-07.01.

VII. Manufacturer's Certification- The manufacturer is required to prepare a "Materials Certification" and "Testing Certification" for each lot of 716-06.01, Disc-Design Structural Bridge Bearings and 716-07.01, Pot-Design Structural Bridge Bearings to be considered for acceptance by the Department.

A. Materials Certification - The bearing manufacturer shall issue a "Materials Certification" for components and welding/welders used in the fabrication of the finished bearing. The certification shall contain all of the information as on the attached form (pages 18-19). The manufacturer should photocopy the attached form and use it for all future certifications. The bearing manufacturer is required to retain the manufacturer's certification(s) for the individual components for a period of seven years subject to review by the Department at any time.

B. Testing Certification - The bearing manufacturer shall issue a "Testing Certification" which contains the test results for the bearings tested. The certification shall contain all of the information as on the attached form (page 20). The manufacturer should photocopy the attached form and use it for all future certifications. The bearing manufacturer is required to retain all raw testing data for a period of seven years subject to review by the Department at any time.
VIII. Inspection of Materials Incorporated into the Finished Bearings.

A. When the inspector visits the manufacturing facility to sample the finished bearings, he must verify that the manufacturer has properly certified (see attached forms pages 18-19) the following items detailing the finished bearings.

1. Steel - All steel except stainless steel components of the bearing shall conform to the requirements of the type of steel on the Department approved drawings.

2. Stainless Steel - Stainless steel shall conform to the requirements of ASTM A-167, or ASTM A-240, Type 304. Stainless steel in contact with the PTFE sheet shall be polished to a No. 8, bright mirror finish (less than 10 micro-inches root mean square). The minimum thickness of the stainless steel shall be 0.050 inches.

3. Domesticity - The steel shall be certified as to its domesticity as follows:
   Either: Domestic-Conforms to NYS DoT EB83-10
   Or: Foreign-Does not conform to NYS DoT EB83-10

4. Welds - All welding shall be performed in accordance with 716-06.01, Disc-Design Structural Bridge Bearings or 716-07.01, Pot-Design Structural Bridge Bearings.

B. The manufacturer is required to maintain identity of the material from receipt by a supplier to completed fabrication of bearings. The inspector shall determine from the manufacturer the method used to maintain the identity of the materials.

IX. Sampling of Materials Incorporated Into the Finished Bearings

A. When the inspector visits the manufacturing facility to sample the finished bearings, he shall also sample the materials incorporated in their fabrication as follows.

1. Polyether Urethane Structural Element (used for the manufacture of 716-06.01, Disc-Design Structural Bridge Bearings).
   a. The manufacturer shall provide the inspector with the samples representing the elements used in the finished bearings.
   b. The inspector shall verify that all of the material designated and certified by the bearing manufacturer as belonging to a single lot, complies with the lot definition in Section V-A.
   c. The polyether urethane structural element samples shall be identified in box 16 of the BR-240 "Sample and Acceptance Transmittal" prepared for the disc-design structural bridge bearing of the same lot. (An example of a properly filled out BR-240 is detailed on page 14, Figure D.)
Subject: QUALITY ASSURANCE PROCEDURE FOR 716-06.01 AND 716-07.01

2. Elastomeric Rotational Element (used in the manufacture of 716-07.01, Pot-Design Structural Bridge Bearings).
   a. The Department representative shall sample at random the elastomeric rotational element(s) from one bearing of each completed lot of Pot-Design Structural Bridge Bearings. (See section X-A for lot definition.)
   b. The elastomeric rotational element shall be identified in box 16 of the BR-240 "Sample and Acceptance Transmittal" prepared for the pot-design structural bridge bearing of the same lot. (An example of a properly filled out BR-240 is detailed on page 14, Figure E.)
   c. The inspector shall package the samples and seal the package with Department red tape seals indicating "NYS DoT Sampled". The package will be transmitted with the sample bearings to the Materials Bureau by the manufacturer.
   d. The manufacturer shall replace the elastomer that was removed from the randomly selected bearing. This replacement must take place prior to acceptance consideration of the lot of bearings by the Department.

3. Polytetrafluoroethylene Sheet and Strip (PTFE)
   a. The bearing manufacturer shall provide the inspector with the samples representing identified individual lots of PTFE.
   b. The inspector shall verify that all of the material designated and certified by the bearing manufacturer as belonging to a single lot complies with the lot definition in Section V-C.
   c. When material is inventoried, the inspector at his option may obtain samples of the inventoried material representing the lot and submit that sample, rather than the manufacturer's sample. (See Section V-C for sample size.)
   d. The inspector shall prepare a separate Form BR-240, "Sample and Acceptance Transmittal", for each lot. The completed form shall be inserted in the "Sample Transmittal Envelope", Form BR-241. The following information shall be noted in box 16 of the form:
      1. The type of PTFE (unfilled or % filled)
      2. The lot number(s) of bearings in which the material has been incorporated.

(An example of a properly filled out BR240 is detailed on page 13, Figure C.)
a. The inspector shall package the samples and seal the package with Department red tape seals indicating "NYSDoT SAMPLED". The package shall be transmitted with the sample bearings to the Materials Bureau by the manufacturer.

f. Subsequent to Department acceptance, the PTFE when used in subsequent bearing fabrication, shall be identified by the date of acceptance and Department test number.

X. Inspection and Sampling of Completed Lots of Disc-Design & Pot-Design Structural Bridge Bearings (716-06.01, 716-07.01).

A. Sampling testing and acceptance consideration will be made on a lot basis. A lot shall be defined as the smallest number of bearings as determined by the following criteria:

1. A lot shall not exceed a single contract or project quantity.

2. A lot shall not exceed 25 bearings.

3. A lot shall consist of those bearings of the same type, regardless of load capacity. Bearing types shall be fixed type bearings or expansion type bearings. Guided and non-guided are expansion bearings and therefore included in the lot of expansion type bearings.

4. For disc-design bearings, a lot shall consist of those bearings that are manufactured with polyether urethane rotation elements from one batch of polyether urethane material. The weight of one batch shall not exceed 450 pounds of polyether urethane material.

B. The inspector shall verify that all bearings to be included in the individual lots are completely fabricated.

C. The inspector shall review the Manufacturer's Certification (completed examples are on pages 15-16) and determine that all appropriate information is properly entered and all testing has been completed and meets the specification requirements.

D. The Inspector shall verify that every bearing is indelibly marked on the side with the following information:

1. Project Identification Number.

2. NYS DoT Lot Number - Lot number 1 shall be issued at the beginning of each calendar year and each new additional lot within the year will be assigned the next consecutive number.
3. Individual bearing number - Every bearing within a lot shall be assigned a number beginning with 1 and numbered consecutively.

NOTE: The identification information on the bearings shall be accomplished by the manufacturer prior to sampling.

E. The inspector shall measure gross bearing dimensions on each bearing in the lot to determine if they are in accordance with the Department approved drawings. (Unless otherwise noted, gross bearing dimensions shall have a tolerance of $-0, +1/8''$.)

F. The manufacturer is required to maneuver the bearings to provide easy access for all measurements made by the inspector. The inspector shall determine by measurement that the top and bottom steel plate bearing surface of each pot or disc bearing in the lot is flat to the specified tolerance. The top face surface (sole plate) shall be flat within $\pm 0.016''$ and the bottom face surface (masonry plate) within $0.0625'' = 0.25 mm$

1. The inspector shall determine flatness in accordance with the procedure detailed in the appendix titled, Measuring Flatness of Steel Plates For Bridge Bearings pages 11-12 of this procedure.

2. The plate is considered acceptable if the inspector is unable to slide the feeler gauge of the specified thickness between the straight edge and the surface of the plate.

3. The inspector shall inform the manufacturer and the Materials Bureau immediately of a bearing plate not meeting the flatness requirement.

G. The inspector shall check each bearing for obvious defects and inform the manufacturer and the Materials Bureau prior to the shipment of sample bearings. Examples of defects that should be identified are as follows:

1. PTFE damage which may include bubbles, nicks, gouges, or foreign materials imbedded in the surface.

2. Stainless steel damage which may include weld spatter or scratches on the surface.

3. Poor machine shop practices that may be identified by gouges, grooves or other imperfections on the steel.

H. Upon completion of the above inspection, and the bearings found to be satisfactory, the inspector will stamp one (1) inspection agency stamp or, when the inspection is performed by the Department, each bearing will be stencilled "NYS DoT INSPECTED".
I. The inspector shall randomly select the bearing(s) from each lot to be transmitted to the Materials Bureau for testing.

1. For lots of three or less bearings, all of the bearings in the lot shall be selected. (The manufacturer shall supply at the time of sampling an elastomeric rotational element to replace the one removed by the inspector.)

2. For lots of four or more bearings, three bearings shall be randomly selected by the inspector. The bearing selected for removal of the elastomeric rotational element shall not be included in this random selection.

3. The manufacturer shall supply a single unattached matching beveled plate to be delivered with bearings which are selected containing tapered sole plates. This plate shall be made of the same material and be of the same size and thickness as the tapered plate. Additionally, the single beveled plate shall be so constructed that when placed in contact with the tapered sole plate the two shall form a single body, rectangular in shape and uniform in thickness.

J. The inspector shall prepare a Form BR240 "Sample and Acceptance Transmittal" for the bearing samples representing a lot. The completed form shall be inserted in the "Sample Transmittal Envelope", BR-241. The following information shall be included in box 16. (An example of a properly filled out BR-240 is detailed on page 14, Figures D-E.)

1. The test number and date of acceptance of the PTFE

OR

2. The BR240 serial number used to transmit the PTFE for acceptance consideration.

K. The packaged samples, respective certifications and the sample bearing shall be left with the manufacturer for transmission to the Materials Bureau. The cost of shipping shall be borne by the manufacturer/contractor.

XI. Accepted/Rejected Bearings - Acceptance/Rejection action will be transmitted to the inspection authority via the BR240 "Sample and Acceptance Transmittal", who will, in turn, notify the manufacturer.

A. Accepted Bearings - Upon approval, the Department Representative will stamp an additional inspection agency stamp adjacent to the first, or when the inspection is performed by the Department, each accepted bearing will be stencilled "NYS DoT ACCEPTED".
B. Rejected Bearings

1. Bearings not meeting Department specifications or containing rejected materials shall be rejected.

2. The manufacturer may at his option refabricate a rejected lot of bearings which shall be submitted as a new lot with the quality assurance procedure applied in its entirety.

3. If the manufacturer options to replace an item such as PTFE or the rotational element found by the Department not to conform to the specification, a request must be made to the Materials Bureau. Without prior approval, the bearings will be considered as a new lot with the quality assurance procedure applied in its entirety.

4. After informing the manufacturer of the rejection, the inspector's duties end.

XII. Shipment

A. No shipment shall be made prior to acceptance by the Department.

B. Shipments of accepted bearings may only be made subsequent to the inspector stamping each bearing as accepted and his execution of the "Shipment Authorization", Form BR195.

C. Each shipment of bearings shall be accompanied by a Form BR195 "Shipment Authorization", executed by the inspector. The card copies are sent with the shipment of bearings and the yellow, white and green copies shall be forwarded to the Materials Bureau for validation and forwarding to the project.

XIII. Evidence of Acceptability - The following is the Evidence of Acceptability of units received at the project site.

A. Buff copy of Shipment Authorization Form BR195 with each delivery.

B. The green copy of Form BR195 validated by the Materials Bureau subsequent to delivery.

C. One of the following combination of stencils on each unit.

1. Double Inspection Agency Stamp.

2. One Inspection Agency stamp with one "NYS DoT Accepted" stamp.

3. One "NYS DoT Sampled" and one "NYS DoT Accepted" stamp.
Measuring Flatness Of Steel Plates For Bridge Bearings.

**APPARATUS:**

1. A precision straight edge, at least 1" longer than the dimension to be checked.

2. A feeler gauge capable of readings to the nearest 0.001". Note: Because "layering" of shim type feeler gauges tends to distort accuracy, a single blade shall be used whenever possible.

**PROCEDURE:**

1. Place the plate to be measured on a flat surface, uniformly supported, with the surface to be checked in a horizontal position. (Complete bridge bearing assemblies are considered to meet this requirement.)

2. Plates shall be checked for flatness at the approximate center lines and also 1" from and parallel to, each outside edge, a total of six positions. The dotted lines in Figures A & B show where the straight edge shall be held.

3. Position the straight edge as parallel to the central axis of the plate as possible. On a surface with a raised center, it will be necessary to temporarily shim the straight edge for stability. See Figure B. (page 12)

4. Hold the blade of the straight edge perpendicular to the surface at the predetermined locations, with adequate pressure to hold it in position. Attempt to slide the desired blade of the feeler gauge between the surface being measured and the straight edge, along the entire length of the piece. On sole plates, the areas within 1" of the edges parallel to the center line of the girder will not normally be in bearing and need not be checked. (Figure "A"). Check drawings if in doubt. Masonry plates will be checked across the entire area.
Subject: QUALITY ASSURANCE PROCEDURE FOR 716-06.01 AND 716-07.01

FIGURE "A", SOLE PLATE

FIGURE "B", SOLE PLATE
EXAMPLES OF COMPLETED BR240,
SAMPLE AND ACCEPTANCE TRANSMITTAL FOR
PTFE INCORPORATED INTO THE FINISHED BEARINGS

TO:

NYSDOt MATERIALS BUREAU

ON _______________ For _______________

15% Glass Filled

-1/8" Thick Material

3.0mm

Material Represented by the Sample Described Below Was

U.S. Bearing, New York, NY

-150 lbs. 68 Kg

PTFE of America, New York, NY

J. Jones, PD Jones Insp.

Figure C
EXAMPLES OF COMPLETED BR240,
SAMPLE AND ACCEPTANCE TRANSMITTAL FOR DISC AND
POT DESIGN STRUCTURAL BRIDGE BEARINGS

Figure D

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<th>DATE REC'D</th>
<th>TEST NO.</th>
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<td>5/7/84</td>
<td>PD250000</td>
</tr>
<tr>
<td>56793</td>
<td>5/7/84</td>
<td>PD250000</td>
</tr>
<tr>
<td>56793</td>
<td>5/7/84</td>
<td>PD250000</td>
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TO:

Material Represented by the Sample Described Below Was

ON: Serial No 56

PTFE Serial No 56793
Bearings numbered
1, 4 & 5 sampled

Figure E
NEW YORK STATE DEPARTMENT OF TRANSPORTATION
MATERIALS BUREAU

Materials Certification

716-06.01, Disc-Design Structural Bridge Bearings
716-07.01, Pot-Design Structural Bridge Bearings

Manufacturer: U.S. Bearing
Location: New York, N.Y.

NYS DoT Contract No.: D350000
PIN: 7099.35
NYS DoT Lot No.: 10

Approved Shop Drawing No.: 12/2
Bearings Numbered 1 Thru 7

Bearing Type: Fixed
Guided Expansion
Non-Guided Expansion

Bearing Identification:
(Number-Capacity) 1-400 Kip, 2-3+4-450 Kip, 6+7-500 Kip

Steel: ASTM A588
Certifying Mill: Pittsburgh Steel
Location: Pittsburgh, Pa.
Date of Certification: 1/5/84

Elastomer: Neoprene
Natural Rubber
Location: Albany, N.Y.

Date of Cert.: 12/12/83

Polyether Urethane:
Certifying Mill: U.S. Stainless
Location: Detroit, Michigan

Date of Certification: 9/15/83

Stainless Steel: Polished No. 8, Bright Mirror Finish, Thickness 0.050" (0.050" Min.)
ASTM A-167
ASTM A-240 Type 304

Certifying Mill: U.S. Stainless
Location: Detroit, Michigan

Date of Cert. 9/15/83
P.T.F.E.: Unfilled □ Filled Glass(15% Max.) □ Filled Carbon(25% Max.) □
Bonded □ Thickness (1/16" Min.) ——/10 —— Inches
Recessed □ Thickness (1/8" Min.) ——/16 —— Inches
Certifying Manufacturer DIFE of America
Location New York, N.Y.
Date of Cert. 10/20/83

Sealing Rings: Brass □ Certifying Manufacturer U.S. Brass
Date of Cert. 5/20/83 Location Troy, N.Y.

Shop Paint: Coal Tar Epoxy Paint Thickness (40-mils wet Min.) ——/28 —— (mils)

Welding: All welds conform to and all welders are qualified in accordance with the requirements of the "New York State Steel Construction Manual" or as approved on the shop drawing by the D.C.E.S.

Domesticity: The steel contained in these bearings is domestic and conforms to EB 83-10 □
OR
The steel contained in these bearings if foreign and does not conform to EB 83-10 □

Additional Information:

I hereby certify that the above indicated welding and materials were incorporated in the finished bearings and comply with the Department Specifications. Individual Supplier's Certifications are on file subject to Department review at any time.

NAME John Smith TITLE Vice President DATE 2/3/84
NEW YORK STATE DEPARTMENT OF TRANSPORTATION
MATERIALS BUREAU

Testing Certification

716-06.01, Disc-Design Structural Bridge Bearings
716-07.01, Pot-Design Structural Bridge Bearings

Manufacturer U.S. Bearing
NYS Dot Location New York, N.Y.

Contract No. DAC50054 PIN 7099.35 Lot No. 10
Approved Shop Drawing No. 1212 Bearings Numbered 1 Thru 7
Bearing Type: Fixed Guided Expansion Non-Guided Expansion

1. ROTATION TEST - Performed on one production bearing each lot
   A. Bearing No. 3
   B. Tested By Manufacturer A.1.84 Manufacturer or other, include location & date
   C. Design Capacity Load 150 Kips (From Shop Drawing)
   D. Vertical Testing Load 45.75 Kips
   E. Rotational Range Tested At 0.02 Radian (0.02 Radian or 1.1456 Degree Minimum)
   F. Visual Defects During Test? Yes No
   G. Observed "Lift Off" During Test? Yes No
   H. Visual Defects After Test? Yes No
   I. Description

2. SLIDING COEFFICIENT OF FRICTION TEST - Performed on one production expansion bearing each lot.
   A. Tested By Manufacturer A.1.84 Manufacturer or other, include location & date
   B. Bearing No. 1 779.2 KN
   C. Design Capacity Load 400 Kips (From Shop Drawing)
   D. Vertical Testing Load 1779.2 Kips (Continuous For 12 Hrs. Min. Before Test)
   E. Maximum Design Coefficient Of Friction 5.7% (From Shop Drawing)
   F. Actual Horizontal Load Required To Maintain Continuous Sliding On:
      Fifth Cycle 45.10 Kips KN  Fiftieth Cycle 358.8 Kips KN
   G. Maximum Allowable Sliding Coefficient Of Friction 3.75% (75% of Design Max.)
   H. Actual Sliding Coefficient Of Friction On:
      Fifth Cycle 2.5% Fiftieth Cycle 2.0%
      *Actual Sliding Coefficient = Horizontal Load (F) Vertical Load (C)
   I. Visual Examination During And After Test
      1. Bond Failure Yes No 2. Physical Destruction Yes No
      3. P.T.F.E. Cold Flow Yes No 4. Damaged Components Yes No
      5. Remarks

I certify that the above testing was completed as stated and that the bearings tested, conform to specification.

NAME John Smith TITLE Vice President DATE 3/13/34
NEW YORK STATE DEPARTMENT OF TRANSPORTATION
MATERIALS BUREAU

Materials Certification

716-06.01, Disc-Design Structural Bridge Bearings
716-07.01, Pot-Design Structural Bridge Bearings

Manufacturer ______________ Location ______________

NYS DoT ______________ NYS DoT ______________ NYS DoT ______________
Contract No. ______________ PIN ______________ Lot No. ______________

Approved Shop Drawing No. __________________ Bearings Numbered 1 Thru ______

Bearing Type: Fixed ______ Guided Expansion ______ Non-Guided Expansion ______

Bearing Identification: ____________________________
(Number-Capacity ) ____________________________

Steel: ASTM ______ Certifying Mill ______________ Location ______________

Date of Certification ______________

Elastomer: Neoprene ______ Natural Rubber ______ Date of Cert. ______

Certifying Manufacturer ____________________________
Location ____________________________

Polyether Urethane: Certifying Manufacturer ____________________________

Location ____________________________

Date of Certification ______________

Stainless Steel: Polished No. 8, Bright Mirror Finish, Thickness ______-(0.050" Min.)

ASTM A-167 ______ ASTM A-240 Type 304 ______

Certifying Mill ____________________________
Location ____________________________

Date of Cert. ____________________________
P.T.F.E.: Unfilled ______ Filled Glass(15% Max.) ______ Filled Carbon(25% Max.) ______
Bonded ______ Thickness (1/16" Min.) ______ Inches
Recessed ______ Thickness (1/8" Min.) _______ Inches
Certifying Manufacturer __________________________
Location ______________________________________
Date of Cert. _________________________________

Sealing Rings: Brass ______ Certifying Manufacturer __________________________
Date of Cert. ___________________ Location _________________________

Shop Paint: Coal Tar Epoxy Paint Thickness (10-mils wet Min.) _______ (mils)

Welding: All welds conform to and all welders are qualified in accordance with the requirements of the "New York State Steel Construction Manual" or as approved on the shop drawing by the D.C.E.S.

Domesticity: The steel contained in these bearings is domestic and conforms to EB 83-10 ______

OR

The steel contained in these bearings if foreign and does not conform to EB 83-10 ______

Additional Information:

I hereby certify that the above indicated welding and materials were incorporated in the finished bearings and comply with the Department Specifications. Individual Supplier's Certifications are on file subject to Department review at any time.

NAME __________________ TITLE ______________________ DATE _____________
NEW YORK STATE DEPARTMENT OF TRANSPORTATION  
MATERIALS BUREAU  

Testing Certification

716-06.01, Disc-Design Structural Bridge Bearings
716-07.01, Pot-Design Structural Bridge Bearings

Manufacturer Location
NYS Dot NYS Dot
Contract No. PIN Lot No.

Approved Shop Drawing No. Bearings Numbered 1 Thru

Bearing Type: Fixed Guided Expansion Non-Guided Expansion

1. ROTATION TEST - Performed on one production bearing each lot
   A. Bearing No. 
   B. Tested By Manufacturer or other, include location & date
   C. Design Capacity Load Kips (From Shop Drawing)
   D. Vertical Testing Load Kips
   E. Rotational Range Tested At + (0.02 Radian or 1.1456 Degree Minimum)
   F. Visual Defects During Test? Yes No
   G. Observed "Lift Off" During Test? Yes No
   H. Visual Defects After Test? Yes No
   I. Description

2. SLIDING COEFFICIENT OF FRICTION TEST - Performed on one production expansion bearing each lot.
   A. Tested By Manufacturer or other, include location & date
   B. Bearing No.
   C. Design Capacity Load Kips (From Shop Drawing)
   D. Vertical Testing Load Kips (Continuous For 12 Hrs. Min. Before Test)
   E. Maximum Design Coefficient Of Friction (From Shop Drawing)
   F. Actual Horizontal Load Required To Maintain Continuous Sliding On:
      Fifth Cycle Kips Fiftieth Cycle Kips
   G. Maximum Allowable Sliding Coefficient Of Friction (75% of Design Max.)
   H. Actual Sliding Coefficient Of Friction * On:
      Fifth Cycle Fiftieth Cycle
      *Actual Sliding Coefficient = Horizontal Load (F) Vertical Load (C)
   I. Visual Examination During And After Test
      1. Bond Failure Yes No
      2. Physical Destruction Yes No
      3. P.T.F.E. Cold Flow Yes No
      4. Damaged Components Yes No
      5. Remarks

I certify that the above testing was completed as stated and that the bearings tested, conform to specification.

NAME TITLE DATE