# Table of Contents

**INTRODUCTION** ...................................................................................................................... 4  
**DEFINITIONS** ............................................................................................................................. 4  
**PROCEDURE** ............................................................................................................................. 5  

I. **Fabricator Working Drawings** ................................................................................................. 5  
   A. **General Drawing Requirements** ......................................................................................... 6  
      1. Drawing Size........................................................................................................... 6  
      2. Font Size .............................................................................................................. 6  
      3. Title Box .............................................................................................................. 6  
      4. Revision Box........................................................................................................ 6  
      5. NYSDOT Approval Box...................................................................................... 6  
      6. Professional Engineer’s Stamp and Signature ..................................................... 7  
      7. General Notes....................................................................................................... 7  
      8. Table of Units....................................................................................................... 8  
      9. Sections and Views .............................................................................................. 8  
     10. Miscellaneous Details .......................................................................................... 8  
   B. **General Requirements for Design Calculations** .............................................................. 9  
      1. Cover Sheet.......................................................................................................... 9  
      2. Calculation Sheets................................................................................................ 9  
   C. **Drawing Submission, Review and Routing Responsibilities** ........................................ 10  
      1. Working Drawing Sheet....................................................................................... 10  
      2. General Review Requirements............................................................................. 10  
      3. Fabricator Responsibilities................................................................................... 10  
      4. Contractor Responsibilities.................................................................................. 10  
      5. Region Responsibilities ....................................................................................... 11  
      6. Structural Design Review Responsibilities......................................................... 11  
      7. Geotechnical Design Review Responsibilities .................................................... 12  
      8. Materials Bureau Responsibilities ....................................................................... 12  
   D. **Drawing Revisions Prior To Drawing Approval** ............................................................... 13  
      1. Minor Revisions ................................................................................................... 13  
      2. Major Revisions .................................................................................................. 13  
   E. **Drawing Revisions After Drawing Approval** .................................................................. 14
II. Department Standard Sheets ................................................................. 14
   A. Submission, Review and Routing Responsibilities ......................... 14
      1. Fabrication Request Sheet ............................................................... 14
      2. Fabricator Responsibilities ............................................................... 14
      3. Contractor Responsibilities ............................................................. 14
      4. Region Responsibilities .................................................................... 15

III. Cut Sheets .................................................................................................. 15
   A. Drawing Requirements ............................................................................ 15
      1. Drawing Size ...................................................................................... 15
      2. Font Size .......................................................................................... 15
      3. Title Box .......................................................................................... 15
      4. Sections and Views ............................................................................ 15
   B. Submission, Review and Routing Responsibilities .............................. 16
      1. Fabrication Request Sheet ............................................................... 16
      2. Fabricator Responsibilities ............................................................... 16
      3. Contractor Responsibilities ............................................................. 16
      4. Region Responsibilities .................................................................... 16

IV. Fabricator Standard Drawing .................................................................... 17
   A. Initial: Submission, Review and Routing Responsibilities ................. 17
      1. Fabricator Responsibilities ............................................................... 17
      2. Materials Bureau Responsibilities .................................................. 17
   B. Contract Specific: Submission, Review and Routing Responsibilities ... 17
      1. Fabrication Request Sheet ............................................................... 17
      2. Fabricator Responsibilities ............................................................... 17
      3. Contractor Responsibilities ............................................................. 18
      4. Region Responsibilities .................................................................... 18

V. Layout Drawings .......................................................................................... 18
   A. Drawing Requirements ............................................................................ 18
      1. In Conjunction with Fabricator Working Drawings ......................... 18
      2. In Conjunction with Fabricator Standard Drawings ........................ 18
      3. In Conjunction with Department Standard Sheets or Fabricator Standard Drawings ......................................................... 18
   B. Submission, Review and Routing Responsibilities .............................. 19
      1. In Conjunction with Fabricator Working Drawings ......................... 19
      2. In Conjunction with Fabricator Standard Drawings ........................ 19
      3. In Conjunction with Department Standard Sheets or Fabricator Standard Drawings ......................................................... 19

VI. Contract Plan Sheets .................................................................................. 19
   A. Submission, Review and Routing Responsibilities .............................. 20
      1. Fabrication Request Sheet ............................................................... 20
      2. Fabricator Responsibilities ............................................................... 20
      3. Contractor Responsibilities ............................................................. 20
      4. Region Responsibilities .................................................................... 20
VII. Previously Approved Fabricator Working Drawings .................................................. 20
   A. Submission, Review and Routing Responsibilities ................................................. 21
      1. Fabrication Request Sheet .............................................................................. 21
      2. Fabricator Responsibilities ............................................................................. 21
      3. Contractor Responsibilities ............................................................................ 21
      4. Region Responsibilities .................................................................................. 21

VIII. Record Plan Drawings ....................................................................................... 21
    A. Submission, Review and Routing Responsibilities .............................................. 21
       1. Materials Bureau Responsibilities .................................................................. 21
       2. Design Quality Assurance Bureau Responsibilities ........................................ 22

Appendix A: Working Drawing Sheet ......................................................................... A1
Appendix B: Fabrication Request Sheet ...................................................................... B1
Appendix C: Routing Flow Charts .............................................................................. C1
Appendix D: Contact Information .............................................................................. D1
INTRODUCTION

The Materials Bureau administers the drawing submission, review and approval procedures for items fabricated to Standard Specification '704-03 Precast Concrete - General. This specification contains requirements for various types of Fabrication Drawings. These drawings are approved for use by the Department on a Contract by Contract basis.

The following procedure details the drawing preparation, submission, review, approval and distribution for all fabrication requests for precast concrete products manufactured under the direction of the Materials Bureau in accordance with '704-03 Precast Concrete - General. Typical products include: box culverts, wingwalls, drainage units, median barriers, noise walls, retaining walls, curbs, etc. Adherence to this Materials Procedure will both aid in facilitating the review process and be used as a pre-qualifier for consideration to the drawing self certification program.

These drawing procedures do not apply to precast items manufactured under the direction of the Structures Division, as indicated by a reference to the DCES or Structures Division in the item specification. Questions regarding drawing preparation for these items should be directed to the Structures Division (See Appendix D for contact information).

DEFINITIONS

1. **Precast Concrete Working Drawing Sheet (WDS)** - The transmittal form, required with all Fabricator Working Drawing submissions, identifying the required drawing reviewers and their review responsibilities. This form also documents review dates and approval recommendations. (See Appendix A, May also be downloaded from the Department's web site at [www.dot.state.ny.us](http://www.dot.state.ny.us), “Site Index,” “M,” “Materials Bureau,” “Forms and Manuals.”

2. **Precast Concrete Fabrication Request Sheet (FRS)** - The form used to request approval to utilize Department Standard Sheets, Cut Sheets, Fabricator Standard Drawings, Layout Drawings, Contract Plan Sheets and Previously Approved Fabricator Working Drawings for the fabrication of a precast item. (See Appendix B, May also be downloaded from the Department's web site at [www.dot.state.ny.us](http://www.dot.state.ny.us), “Site Index,” “M,” “Materials Bureau,” “Forms and Manuals.”

3. **Fabrication Drawing** - A general term used to identify the drawing or sheet used to fabricate and inspect the precast product. All of the following are considered Fabrication Drawings:
   a. **Fabricator Working Drawing** - A working drawing, prepared by the fabricator, or their agent, for use on a specific Department Contract.
   b. **Department Standard Sheet** - A standard drawing, prepared by the Department, for an item which is fabricated to the same dimensions and details each time it is used in a Contract. The applicable Department Standard Sheets for a Contract are typically listed on the first sheet of the Contract Plans. Department Standard Sheets may be obtained by contacting the Plan Sales Office (See Appendix D for contact information) or on the Department's web site at [www.dot.state.ny.us](http://www.dot.state.ny.us), “Site Index,” “S,” “Standard Sheets.”
c. **Cut Sheet** - Drawing prepared by the fabricator, or their agent, typically for use in conjunction with a Department Standard Sheet. The cut sheet contains contract specific details, required for the fabrication of a unit, which are not contained on the Standard Sheet.

d. **Fabricator Standard Drawing** - A standard drawing, prepared by the fabricator, or their agent, for an item which is manufactured to the same dimensions and details each time it is used. Fabricators who can not manufacture an item in strict conformance to a Department Standard Sheet may produce a Fabricator Standard Drawing for the item. Fabricator Standard Drawings may also be used for items that are not covered by Department Standard Sheets.

e. **Contract Plan Sheet** - A sheet from the Department’s Contract Plans which contains enough detail to properly fabricate and inspect the precast item.

f. **Record Plan Drawing** - A drawing prepared by the fabricator, or their agent, and approved by the Department. Record Plan Drawings are used by the Department to incorporate information into the as-built documents.

4. **Layout Drawing** – A drawing prepared by the fabricator, or their agent, typically used for installation of the precast item.

5. **Region Reviewer** - Person or persons, designated by the Region Construction Engineer, as the review coordinator for precast concrete fabrication drawings covered by this procedure. The Region Reviewer coordinates region reviews and is responsible for signing the WDS and FRS.

6. **Materials Bureau** - The bureau, within NYSDOT, responsible for the review and final approval of Fabricator Working Drawings for precast products covered by this procedure. (See Appendix D for contact information)

**PROCEDURE**

I. **FABRICATOR WORKING DRAWINGS** - Fabricator Working Drawings are required for all precast items, unless one of the following conditions is met:

- There is a Department Standard Sheet for the item which satisfies the requirements in Section II. of this procedure.
- The fabricator has a Department approved Fabricator Standard Drawing which satisfies the requirements in Section IV. of this procedure.
- The Contract Plan Sheet showing the item satisfies the requirements in Section VI. of this procedure.

When it is determined that a Fabricator Working Drawing is required, the fabricator shall review the Contract Documents, resolve missing and unclear details with the Region, prepare working drawings, and when necessary, design calculations for the fabrication of the precast units. Design calculations are required when the precast design varies from the design shown in the Contract Documents or the Contract Documents do not contain a design. Fabricator Working Drawings shall
meet the following general drawing requirements. Drawings not meeting these requirements will be returned without review.

A. GENERAL DRAWING REQUIREMENTS

1. **Drawing Size** – Drawing size shall be one of the following:

   a. **560 mm x 865 mm (22" x 34")** - 560 mm x 865 mm (22" x 34") with a 15 mm (2") margin along the top, bottom and right edges and a 50 mm (2") margin along the left edge.

   b. **280 mm x 430 mm (11" x 17")** - 280 mm x 430 mm (11" x 17") with a 6 mm (3") margin along the top, bottom and right edges and a 25 mm (1") margin along the left edge.

2. **Font Size** - The minimum height of lettering and numbers as they appear on the drawing shall be 3 mm (\(\frac{3}{32}\)). All information on the drawings shall be clear and legible. Details on the drawings shall not be compressed together to the point where they become difficult to read and understand.

3. **Title Box** - Each drawing shall have a title box in the lower right corner, with the following information:

   a. Fabricator’s name, address and location where precast units are to be made.
   b. Unique drawing number.
   c. A title describing the precast item depicted on the drawing.
   d. Contract number.
   e. Date the drawing was prepared.
   f. Initials of the people who prepared and checked the drawing.
   g. Contractor’s name and address.
   h. Contract pay item number for the precast units shown on the drawing.
   i. Contract plan sheet numbers used to prepare the drawing.

4. **Revision Box** - Include a box, above the title box, for noting revisions to the drawing. The box should show the revision number, date and a brief description of the revision.

5. **NYSDOT Approval Box** - Include a box measuring 65 mm (2 2") wide by 50 mm (2") high containing the following information on the left side of the title box.
The Materials Bureau will use this box to show that they have approved the drawing.

6. **Professional Engineer’s Stamp and Signature** - When design calculations are required as part of the drawing submission, (reference Section I.B. General Requirements for Design Calculations) provide a Professional Engineer’s (PE) stamp and signature on each sheet of the fabrication drawings. The PE who signs the drawings must be licensed and registered to practice in New York State and must be the same engineer of record who signs the corresponding design calculations. Include, in the drawings submitted to the Materials Bureau, at least 1 set of drawings with an original PE stamp and signature.

7. **General Notes** - On the right side of the drawing include a list of general notes containing the following minimum information.

   a. Specification number to which the units are fabricated.
   b. Specification requirement for compressive strength of the concrete at twenty-eight days.
   c. Specification requirement for air content.
   d. The method of maintaining concrete cover, over reinforcing steel, during concrete placement.
   e. Anticipated method of curing the precast units.
   f. Typical legend showing the information to be marked on the finished piece. Unless noted otherwise in the specification the legend shall include fabricator’s name or trademark, date of manufacture, NYSDOT Contract Number, and unit identification.
   g. Brief description of any architectural treatments applied, such as color or surface texture.
   h. Description of all materials, to be incorporated into the precast units, which are not addressed in the Specification for the item (e.g. anchor bolts, embed plates, angle iron, etc.)
   i. List the applicable fabrication tolerances for the item depicted on the drawing. Tolerances can be found in the specification for the item.
8. **Table of Units** - Include a table of units identifying each different size or shape precast piece depicted on the drawings. List the mark number, quantity, weight and number of cubic meters of concrete per unit for each different size or shape unit.

9. **Sections and Views** - Provide sections and views of the precast units that accurately reflect the details shown in the Contract Documents. Detail each view with all dimensions and information necessary to fabricate and inspect the unit. Provide the following minimum details on the drawing.

   a. Plan, elevation and section views showing all dimensions and details necessary to fabricate and inspect the unit.
   b. Location, dimensions and a description of all embedded items. (Threaded inserts, plates, anchor bolts, etc.)
   c. Reinforcing details including the following items for each different size or shape unit depicted on the drawing.
      1. A unique mark number to identify each bar type or mesh mat.
      2. The size and spacing of each bar type.
      3. The wire size and spacing in both directions in each mesh mat (using industry standard methods of designation) and the orientation of the mat within the precast unit.
      4. The location of the reinforcing steel within the unit.
      5. Details for all bent reinforcing.
      6. The concrete cover over the reinforcing.
      7. A clear designation for all coated reinforcing.
      8. A table or detail of reinforcing for each different size or shape unit with the following information.
         i. Bar mark number.
         ii. Bar size.
         iii. Bar spacing.
         iv. Quantity of bars per unit.
         v. Bar lengths for straight and bent bars.
   d. Type, size and location of all lifting devices.

9. “Add steel” detail for each opening where the normal reinforcing steel in a precast unit is interrupted. *(A typical situation that would require an “add steel” detail is a pipe or manhole opening in a box culvert. Reinforcing steel, routinely added for cage stability only, should also be detailed.)*

10. **Brand name of mechanical connectors for reinforcing bar splices, when used.**

d. **Miscellaneous Details** - When it is anticipated that some dimensions on a unit may have to vary to avoid field interferences or make closures, the drawing should be detailed to allow for this. By doing this the need for some drawing revisions will be eliminated and delays will be avoided. The following are some examples where this would be appropriate.

   a. Median Barrier - The overall length of a typical unit may have to be varied. The drawing should show the minimum and maximum lengths the barrier may be fabricated to and the typical barrier length. Address how the length and location
of reinforcing steel will be varied when barrier length changes are made. Current Department Standard Sheets should be used to determine the minimum and maximum allowable lengths for the barrier.

b. Noise Barrier - Panel lengths (post to post spacing) may have to be varied. The drawing should indicate a typical panel length and the maximum panel length corresponding to the length used in the design calculations. This length should be labeled $A_{\text{Maximum}}$ and a note added to address how reinforcing lengths and locations will be varied when panel lengths vary.

**B. GENERAL REQUIREMENTS FOR DESIGN CALCULATIONS** - Design calculations are typically required when at least one of the following conditions exists:

- The item specification contains a requirement for design calculations.
- The submitted precast design does not match the design in the Contract Documents.
- The Contract Documents do not contain complete design details and there is not a Department Standard Sheet that can be used for guidance.

Items typically requiring design calculations include box culverts, wing walls, retaining walls and noise walls. Please note that alternates to designs shown in the Contract Documents will be considered for review only after the change has been approved by the Department on a conceptual level.

1. **Cover Sheet** – Include a cover sheet with each set of design calculations. Provide the following information on the cover sheet:

   a. Names of the designer and checker
   b. Designer’s mailing address, phone number and fax number
   c. Total number of sheets included in the package
   d. The applicable Department contract number
   e. A description of the precast item including applicable reference numbers, e.g. culvert number, site number, bridge identification number, wall number, etc.
   f. A Professional Engineer’s (PE) stamp and signature (Include, in the calculations submitted to the Materials Bureau, at least 1 set of calculations with an original PE stamp and signature)
   g. Name and version of computer program(s) used to prepare the design
   h. Design specifications used to develop the calculations
   i. Design loading used in the calculations

2. **Calculation Sheets** – Include the following information on each sheet of the design calculations:

   a. A sequential sheet number
   b. A common date, such as the submission or completion date, that will be used to distinguish the original sheets in the submission from subsequent revised sheets, should they be necessary
   c. Initials of the designer and checker with dates
C. DRAWING SUBMISSION, REVIEW AND ROUTING RESPONSIBILITIES

1. Working Drawing Sheet (WDS) - Every submission of a Fabricator Working Drawing shall include a WDS. The WDS states reviewer’s responsibilities and tracks review comments, approvals and dates. Each group responsible for a portion of the drawing review must sign the WDS, indicating drawing approval for their portion of the review, before the Materials Bureau will approve the drawing for fabrication. A copy of the WDS can be found in Appendix A.

2. General Review Requirements - The Regional Reviewer will coordinate all Region reviews and the Materials Bureau will coordinate Main Office Reviews. The Materials Bureau is responsible for the overall coordination of drawing and design reviews and the final drawing approval. Whenever possible, drawing reviews should be done concurrently. The Materials Bureau will not duplicate the review being done by the Region unless the review of specific drawing details is requested under comments on the WDS. Each reviewing group is required to sign off on the WDS indicating their approval or disapproval of the drawings. When drawings are approved, no further comments are required. When drawings are approved as noted the corrections should be made in red on the drawing and described briefly under comments on the WDS. When a drawing must be revised, the requirements in Section I.D. Drawing Revisions Prior To Drawing Approval shall be followed.

3. Fabricator Responsibilities - After preparing the working drawings the fabricator initiates a WDS. The general information on the top of the sheet is filled in by the fabricator. Under comments in the Fabricator Responsibilities section, identify any deviations between the working drawings and the Contract Documents and explain why they are necessary. When the drawing submission is for a revised drawing, identify what was revised under comments. See the requirements in Section I.D.2. Major Revisions for additional information on revised drawings. The Fabricator completes and signs their portion of the WDS and:
   - Submits 6 copies of the working drawings, a copy of the WDS and when required 3 sets of design calculations to the Materials Bureau. (When a PE stamp and signature are required, 1 copy of the working drawings and 1 set of the design calculations shall have original stamps and signatures.)
   - Submits 4 copies of the working drawings, a copy of the WDS and when required 2 sets of design calculations to the Contractor.

4. Contractor Responsibilities - Review the working drawings to insure they meet the requirements of the Contract Documents, and are compatible with plans for installation. Verify contract specific details including the following: unit dimensions, lengths and heights; layout; reinforcing size, spacing and concrete cover; embedded items; attachment details and locations for secondary pours or miscellaneous hardware; and opening sizes and locations. Verify that no conflicts exist with any utilities, above ground and under ground. If revisions to the drawing are needed, follow the requirements in Section I.D. Drawing Revisions Prior To Drawing Approval. The Contractor completes and signs their portion of the WDS and:
• Submits 3 copies of the working drawings, the signed WDS and when required 2
sets of design calculations, through the Engineer In Charge (EIC), to the Region
Reviewer for review.

OR

• When major drawing revisions are necessary, returns the drawing and the WDS to
the fabricator and notifies the Materials Bureau

(Allotted review time - 2 working days per drawing sheet, 10 working days minimum.)

5. Region Responsibilities - The Region Reviewer reviews the working drawings to
verify compliance with the Contract Documents. Regional review is to include
verification of all contract specific details, including those listed above under
Contractor Responsibilities and verification that an Item Number for the precast item
exists in the Contract Documents. When there is no item, indicate under comments
what item will be used and how it will be added to the Contract. When Department
design review is required and the Region cannot review the structural and/or
geotechnical design calculations, the Region Reviewer contacts the Materials Bureau
so these reviews can be progressed by the Main Office. When the Region can review
the structural and/or geotechnical design, this review is coordinated by the Region
Reviewer. The person(s) reviewing the design must complete and sign their portion
of the WDS. If revisions to the drawing are needed, follow the requirements in
section I.D. Drawing Revisions Prior To Drawing Approval. The Region Reviewer
completes and signs their portion of the WDS, indicating under comments any
specific drawing details they are requesting Materials Bureau assistance in reviewing
and:
• Submits 1 copy of the working drawings and the signed copy of the WDS to the
Materials Bureau with their recommendation for approval.

OR

• When major drawing revisions are necessary, returns the drawing and the signed
copy of the WDS to the Contractor so it can be forwarded to the fabricator, and
notifies the Materials Bureau.

(Allotted review time - 1 working day per drawing sheet, 5 working days minimum or
10 working days minimum when the Region performs structural and/or geotechnical
design review)

Regions which have been delegated drawing approval authority by the Materials
Bureau; complete the drawing review in the Region, make the final drawing approval,
note “Approved For Director, Materials Bureau” under comments on the WDS, cross
out the Materials Bureau box on the WDS, and:
• Distributes 5 copies of the approved drawings and WDS, 1 each, to the
Contractor, Fabricator, Materials Bureau, Materials Engineer (in Contract Region)
and Inspection Authority. In this case the review in Section I.C.8. below is not
applicable.

(Allotted review time - 2 working days per drawing sheet, 15 working days minimum)

6. Structural Design Review Responsibilities - A Structural Design Review is
typically required when the submitted precast design does not match the design in the
Contract Documents or the Contract Documents do not contain complete design
details and there is not a Department Standard Sheet that can be used for guidance. Items that may require structural design review include box culverts, wingwalls, noise walls and retaining walls. Structural design review can be done by the Region, the Consultant Designer for the Contract or the Main Office. The reviewer verifies that design calculations have been prepared in accordance with requirements in Section I.B. General Requirements For Design Calculations, they meet the requirements for design contained in the Contract Documents and the working drawings conform to the design calculations. The Design Reviewer completes and signs their portion of the WDS and:

- Returns the drawings, calculations and signed copy of the WDS, along with any comments, to the group requesting review.

(Allotted review time - 2 working days per drawing sheet, 10 working days minimum.)

7. Geotechnical Design Review Responsibilities - A Geotechnical Design Review is typically required when the submitted precast design does not match the design in the Contract Documents or the Contract Documents do not contain complete design details and there is not a Department Standard Sheet that can be used for guidance. Items that may require geotechnical design review include wingwalls and retaining walls. Geotechnical design review can be done by the Region, the Consultant Designer for the Contract or the Main Office. When design reviews are done by the Region or the Consultant Designer for the Contract, the person reviewing the design must contact the Main Office Geotechnical Engineering Bureau for guidance (See Appendix D for contact information). The reviewer verifies that design calculations have been prepared in accordance with requirements in Section I.B. General Requirements For Design Calculations, they meet the requirements for design contained in the Contract Documents and the working drawings conform to the design calculations. The Design Reviewer completes and signs their portion of the WDS and:

- Returns the drawings, calculations and signed copy of the WDS, along with any comments, to the group requesting review.

(Allotted review time - 2 working days per drawing sheet, 10 working days minimum.)

8. Materials Bureau Responsibilities - The Materials Bureau is responsible for the overall coordination of drawing and supporting design calculation reviews and the final drawing approval. The Materials Bureau reviews the working drawings to address comments from other reviewers, verify the details contain enough information to fabricate and inspect the units and are in compliance with applicable specifications. When Department review of a submitted design is required, and it has not been done by the Region, the drawings and design calculations are forwarded to the Structures Division and/or the Geotechnical Engineering Bureau for review and approval recommendations. The person(s) reviewing the designs must complete their portion of the WDS. The Materials Bureau makes the final drawing approval, completes and signs their portion of the WDS and:

- Distributes 5 copies of the approved drawings and WDS, 1 each, to the Contractor, Fabricator, EIC, Materials Engineer (in Contract Region) and Inspection Authority. (Due to concurrent reviews, there may be more than 1 copy of the WDS used to obtain the required approval signatures.)
• When major drawing revisions are necessary, returns the drawing and the signed copy of the WDS to the fabricator, and notifies the Region Reviewer.

(Allotted review time - 2 working days per drawing sheet, 10 working days minimum.)

D. DRAWING REVISIONS PRIOR TO DRAWING APPROVAL

1. Minor Revisions - When revisions are minor in nature they may be marked in red on the drawing. A brief description of the revision is noted under comments on the WDS, the "Approved As Noted" box is checked and the WDS is signed. The Materials Bureau marks up the distribution copies of the drawing with the revisions and approves the drawing as noted. A typical minor revision would be an omitted or incorrect note, dimension, etc. Excessive minor revisions should be treated as major revisions.

When drawings, which have been stamped and signed by the Contractor’s PE, are approved as noted, the Materials Bureau may require concurrence of the PE. This will typically be the case when revisions affect the design of the item. When PE concurrence is required, it will be so noted on the drawing and stated in the Materials Bureau’s letter transmitting the approved as noted drawings to the fabricator. Certification and shipment of units depicted on the drawing may not take place until concurrence of the PE has been documented in a letter to the fabricator, which is also copied to the Materials Bureau.

Although it will not always be required by the Department, it is recommended that the fabricator forward a copy of all approved as noted drawings to the preparer so the need for similar revisions on future submissions can be reduced.

2. Major Revisions - When major revisions are required the drawing must be returned to the Fabricator so a revised copy can be prepared. The reviewer notes a description of the problem or revision under comments on the WDS, the "Returned For Revision" box is checked and the WDS is signed. The drawing should also be marked up to indicate what needs to be revised. The drawing and signed WDS are returned to the Fabricator. When the Contractor or the Region Reviewer requests a revision the Fabricator must notify the Materials Bureau. When the Materials Bureau requests a revision they will notify the Region Reviewer who will notify the EIC and the Contractor. The Fabricator makes the necessary drawing revisions, the revision box is filled in on the drawing, a new WDS is filled out and the drawing review process is started over. A revision is considered major if it requires drawing or redrawing a detail such as a headwall on a culvert, a reinforcing detail for a special precast unit, etc.

(Allotted time for fabricator revisions - 2 working days per drawing sheet, 5 working days minimum.)
E. DRAWING REVISIONS AFTER DRAWING APPROVAL

When a drawing must be revised, after it has been approved by the Materials Bureau, the fabricator must prepare a revised detail in an acceptable format. An acceptable format for a minor revision would be a revised detail on a 220 mm x 280 mm (8"x11") or 280 mm x 430 mm (11"x17") sheet with a title box similar to the original drawing and a clear statement as to what is being revised. Major revisions require a complete revised drawing. When revisions are made to a drawing they should have a cloud drawn around them and be numbered to correspond to the description in the revision box on the drawing. Questions on whether a revision should be treated as a minor or major revision should be directed to the Materials Bureau. The drawing revision is submitted for review and approval with a WDS in the same manner as the original working drawing.

II. DEPARTMENT STANDARD SHEETS - Department Standard Sheets shall be used as the fabrication drawings when the Contract Documents specify precast units conforming to Department Standard Sheets and there are no details in the Contract Documents that deviate from the Department Standard Sheets. On such Contracts working drawings are not required and will not be processed. The applicable Department Standard Sheets for a Contract are typically listed on the first sheet of the Contract Plans.

A. SUBMISSION, REVIEW AND ROUTING RESPONSIBILITIES

1. Precast Concrete Fabrication Request Sheet (FRS) - Every request to use a Department Standard Sheet shall be made using a FRS. Additional letters of request are not required. The FRS states each reviewer's responsibilities and tracks review comments, approvals and dates. Each group responsible for a portion of the review must sign the FRS before units may be shipped to the Project. A copy of the FRS can be found in Appendix B.

2. Fabricator Responsibilities - After it is determined that Department Standard Sheets are appropriate for use, the fabricator initiates a FRS. The general information at the top of the sheet is filled in, the Department Standard Sheet box is checked and the Standard Sheet number is filled in. It is often necessary to incorporate contract specific details, not shown on the Standard Sheet, into standard precast units. Cut Sheets, prepared in accordance with Section III. Cut Sheets are used to show these details. When Layout Drawings are required for use in conjunction with the Standard Sheets they shall be prepared in accordance with Section V. Layout Drawings. The same FRS used for the Department Standard Sheets may also be used to transmit Cut Sheets and Layout Drawings by checking the appropriate box(s) and including the required number of copies of each. The FRS is then dated, signed and forwarded to the Contractor and Materials Bureau. Copies of the Standard Sheet need not be sent with the request.

3. Contractor Responsibilities - Reviews the Department Standard Sheet to insure it meets the requirements of the Contract Documents. Verifies the Department Standard Sheet number and item number shown on the FRS correspond to the numbers contained in the Contract Documents. The Contractor then completes and
signs their portion of the FRS and forwards it, through the EIC, to the Region Reviewer for review.

(When a signed FRS is received back from the Region Reviewer it must be forwarded to the Fabricator for production use.)

4. Region Responsibilities - The Region Reviewer reviews the request to use Department Standard Sheets, verifies compliance with the Contract Documents and verifies that the indicated Item Number is correct and appears in the Contract Documents. When no item number exists, the Region Reviewer notes under comments what item number will be used and how it will be added to the Contract. The Region Reviewer then completes and signs their portion of the FRS and returns 1 copy to the Contractor for production use.

III. CUT SHEETS - Cut Sheets are required when there are contract specific details, not shown on the Department Standard Sheet, which must be incorporated into a standard precast unit. Cut Sheets are typically used in conjunction with Department Standard Sheets.

A. DRAWING REQUIREMENTS

1. Drawing Size - The standard drawing size shall be not less than 220 mm x 280 mm (82 "x11").

2. Font Size - The minimum height of lettering and numbers as they appear on the drawing shall be 3 mm (1/32"). All information on the drawing shall be clear and legible.

3. Title Box - Each drawing shall contain a title box with the following information:
   a. Fabricator’s name.
   b. Contract number.
   c. Unique drawing number.
   d. Drawing prepared date.
   e. Description of item, including the unit or structure number from the Contract Plans.
   f. Piece identification (manufacturer’s designated number).
   g. Space for NYSDOT approval. NYSDOT Approved: Initial _____ Date _____@ (Only required on Cut Sheets containing deviations to requirements on the corresponding Department Standard Sheet.)

4. Sections And Views - Provide sections and views of the precast unit that accurately reflect contract specific information that will be used in conjunction with the Department Standard Sheet to fabricate the precast unit. As an example, a Cut Sheet for a drainage structure would include contract specific information such as pipe opening sizes and locations, wall heights and step locations. A Cut Sheet for highway median barrier might include details for lifting devices, beveled ends for units installed on a radius, etc. In addition, Cut Sheets shall identify all deviations to
requirements stated on Department Standard Sheets such as: less than minimum required concrete cover over pipe openings (ribband), corner pipe entries, etc. Deviations to Department Standard Sheets shall be clearly noted as a deviation on the Cut Sheet.

B. SUBMISSION, REVIEW AND ROUTING RESPONSIBILITIES

1. Precast Concrete Fabrication Request Sheet (FRS) - Every submission of a Cut Sheet shall be made using a FRS. One FRS may be used to transmit multiple Cut Sheets. Additional letters of request are not required. The FRS states each reviewer’s responsibilities and tracks review comments, approvals and dates. Each group responsible for a portion of the review must sign the FRS. A copy of the FRS can be found in Appendix B.

2. Fabricator Responsibilities - After it is determined that Cut Sheets are required, the fabricator initiates a FRS. When Cut Sheets are being used in conjunction with Department Standard Sheets, the same FRS should be used for both. The general information at the top of the FRS is filled in, the Cut Sheet box is checked and the total number of Cut Sheets in the submission is filled in. The drawing number of each Cut Sheet that contains a deviation to requirements on the Department Standard Sheet must be listed where indicated. The FRS is then dated, signed and forwarded, along with 3 sets of the Cut Sheets to the Contractor. One copy of the FRS only is also forwarded to the Materials Bureau.

3. Contractor Responsibilities - Verifies that information included on the Cut Sheet meets the requirements in the Contract Documents. If corrections are required they should be marked in red on all 3 copies of the Cut Sheet or a revised Cut Sheet should be prepared by the Fabricator. The drawing number of each Cut Sheet that is revised should be listed under comments on the FRS. The Contractor then completes and signs their portion of the FRS and forwards it along with 2 sets of the Cut Sheets, through the EIC, to the Region Reviewer for review. (When a signed FRS is received back from the Region Reviewer it must be forwarded, along with 1 set of the Cut Sheets, to the Fabricator for production use.)

4. Region Responsibilities – The Region Reviewer verifies that the information included on the Cut Sheet meets the requirements in the Contract Documents and all noted deviations to requirements on the Department Standard Sheets are acceptable. If corrections are required, they should be marked in red on both copies of the Cut Sheet or a revised Cut Sheet should be prepared by the fabricator. The drawing number of each Cut Sheet that is revised by the Region Reviewer should be listed under comments on the FRS. The Region Reviewer initials and dates all cut sheets containing deviations to the requirements on the Department Standard Sheet to indicate approval, then completes and signs their portion of the FRS and forwards a copy of it along with 1 set of the Cut Sheets to the Contractor for production use.
IV. **FABRICATOR STANDARD DRAWINGS** - Fabricator Standard Drawings may be used in place of Department Standard Sheets when the Fabricator is unable to manufacture a unit exactly to the Department Standard Sheet. They may also be used for a Fabricator’s standard item that is manufactured to the same details each time it is used.

A. **INITIAL: SUBMISSION, REVIEW AND ROUTING RESPONSIBILITIES**

1. **Fabricator Responsibilities** - Fabricator Standard Drawings shall meet the requirements set forth in Section I.A. *General Drawing Requirements*, except as follows. The drawing(s) shall not contain Contract specific information such as Contract Number, Contractor’s name, quantity, etc. They shall however have blank spaces provided so the Contract specific information identified in Section I.A. can be filled in each time the drawing is used on a Contract. The Fabricator shall submit 5 copies of each drawing to the Materials Bureau, along with 3 copies of any required design calculations.

2. **Materials Bureau Responsibilities** - The Materials Bureau is responsible for the overall coordination of drawing review and the final drawing approval. The Materials Bureau will coordinate Structures Division and/or Geotechnical Engineering Bureau review when required and verify that the drawing details contain enough information to fabricate and inspect the units and are in compliance with applicable specifications. The Materials Bureau will make the final drawing approval and:
   - Distributes 2 copies of the approved drawing, 1 each, to the Fabricator and Inspection Authority.
   - Retains 1 copy of the approved drawing for future use.

B. **CONTRACT SPECIFIC: SUBMISSION, REVIEW AND ROUTING RESPONSIBILITIES**

1. **Precast Concrete Fabrication Request Sheet (FRS)** - Every request to use a Fabricator Standard Drawing shall be made using a FRS. Additional letters of request are not required. The FRS states each reviewer’s responsibilities and tracks review comments, approvals and dates. Each group responsible for a portion of the review must sign the FRS before units may be shipped to the Project. A copy of the FRS can be found in Appendix B.

2. **Fabricator Responsibilities** - After it is determined that a Fabricator Standard Drawing is appropriate for use, the fabricator initiates a FRS. The general information at the top of the sheet is filled in, the Fabricator Standard Drawing box is checked and the Fabricator Standard Drawing number is filled in. When Layout Drawings are required for use in conjunction with the Fabricator Standard Drawings, they shall be prepared and processed in accordance with Section V. *Layout Drawings*. The FRS is then dated, signed and forwarded, along with 3 copies of the original Department approved Fabricator Standard Drawing, to the Contractor. One copy of the FRS only is also forwarded to the Materials Bureau.
3. **Contractor Responsibilities** - Reviews the Department approved Fabricator Standard Drawing to verify the drawing meets the requirements of the Contract Documents. The Contractor then completes and signs their portion of the FRS and forwards it, along with 2 copies of the Fabricator Standard Drawing, through the EIC, to the Region Reviewer for review.

   (When a signed FRS is received back from the Region Reviewer it must be forwarded, along with 1 copy of the drawing, to the Fabricator for production use.)

4. **Region Responsibilities** - The Region Reviewer verifies the Fabricator Standard Drawing meets the requirements of the Contract Documents and verifies the indicated Item Number is correct and appears in the Contract Documents. When no item number exists, the Region Reviewer notes, under comments, what item number will be used and how it will be added to the Contract. The Region Reviewer then completes and signs their portion of the FRS and returns 1 copy, along with 1 copy of the drawing, to the Contractor for production use. One copy of the Fabricator Standard Drawing is retained by the Region.

V. **LAYOUT DRAWINGS** – Layout Drawings are sometimes required for use in conjunction with Fabrication Drawings. They are typically required when precast pieces of varying shape or size must be installed in specific locations to construct the precast item as detailed in the contract documents. Examples of items typically requiring Layout Drawings include noise wall, retaining wall, box culvert and some median barrier applications such as pier protection, sign support protection and asymmetrical barrier.

A. **DRAWING REQUIREMENTS**

1. **In Conjunction With Fabricator Working Drawings** - When Layout Drawings are to be used in conjunction with Fabricator Working Drawings, the Layout Drawings shall meet the requirements in sections I.A. & B. of this procedure. (e.g. box culvert and noise wall)

2. **In Conjunction With Fabricator Standard Drawings** - When Layout Drawings are to be used in conjunction with Fabricator Standard Drawings and design calculations are required to prepare the Layout Drawings (e.g. retaining wall), the Layout Drawings shall meet the requirements in sections I.A. & B. of this procedure. In addition, Layout Drawings shall include a note referencing the approved Fabricator Standard Drawing numbers to be used for fabrication of precast units depicted in the layout.

3. **In Conjunction With Department Standard Sheets or Fabricator Standard Drawings** - When Layout Drawings are to be used in conjunction with Department Standard Sheets or Fabricator Standard Drawings and design calculations are not required to prepare the Layout Drawings (e.g. median barrier for pier protection), the Layout Drawings shall meet the requirements in section I.A. sub sections 1, 2, 3 and 4. In addition they shall include a space for NYSDOT approval. “NYSDOT
Approved: Initial _______ Date ______”. Layout Drawings shall also include a note referencing the Department Standard Sheet number or Fabricator Standard Drawing number to be used for fabrication of precast units depicted in the layout.

B. SUBMISSION, REVIEW AND ROUTING RESPONSIBILITIES

1. **In Conjunction With Fabricator Working Drawings** - When Layout Drawings are to be used in conjunction with Fabricator Working Drawings, they shall be submitted together in accordance with Section I.C. of this procedure.

2. **In Conjunction With Fabricator Standard Drawings** - When Layout Drawings are to be used in conjunction with Fabricator Standard Drawings and design calculations are required to prepare the Layout Drawings, the Layout Drawings shall be submitted in accordance with Section I.C. of this procedure.

3. **In Conjunction With Department Standard Sheets or Fabricator Standard Drawings** - When Layout Drawings are to be used in conjunction with Department Standard Sheets or Fabricator Standard Drawings and design calculations are not required to prepare the Layout Drawings, the following procedure shall be followed:
   
a. **Precast Concrete Fabrication Request Sheet (FRS)** – The same FRS requesting approval to use the Department Standard Sheet or Fabricator Standard Drawing shall be used to submit the Layout Drawings.

b. **Fabricator Responsibilities** – The information at the top of the FRS is filled in, the “Layout Drawing” box is checked and the drawing number is filled in. The FRS is then signed, dated and forwarded, along with 3 copies of the Layout Drawing, to the Contractor. One copy of the FRS only is also forwarded to the Materials Bureau.

c. **Contractor Responsibilities** – Reviews Layout Drawing to verify it meets requirements of the Contract Documents. The Contractor then fills out, signs and dates their portion of the FRS and forwards it along with 2 copies of the Layout Drawing, through the EIC, to the Region Reviewer for review.

   (When a signed FRS is received back from the Region Reviewer it must be forwarded, along with 1 copy of the approved Layout Drawing, to the Fabricator for production use.)

d. **Region Responsibilities** – The Region Reviewer verifies the Layout Drawing meets requirements of the Contract Documents. The Region Reviewer then completes and signs their portion of the FRS and initials and dates the Layout Drawing. One signed copy of the FRS and 1 copy of the approved Layout Drawing are returned to the Contractor, for production use.

VI. **CONTRACT PLAN SHEETS** - Contract Plan Sheets may be utilized as the fabrication drawings when they contain sufficient details for the units to be fabricated and inspected.
Sufficient details shall include: sections and views showing all dimensions required for the fabrication of the precast unit along with reinforcing details showing bar size, spacing and concrete cover. The Materials Bureau will determine if the level of detail in the Contract Plans is sufficient.

A. SUBMISSION, REVIEW AND ROUTING RESPONSIBILITIES

1. **Precast Concrete Fabrication Request Sheet (FRS)** - Every request to use a Contract Plan Sheet as the fabrication drawing shall be made using a FRS. Additional letters of request are not required. The FRS states each reviewer’s responsibilities and tracks review comments, approvals and dates. Each group responsible for a portion of the review must sign the FRS before fabrication of units may begin. A copy of the FRS can be found in Appendix B.

2. **Fabricator Responsibilities** – The Materials Bureau must be contacted to verify that the Contract Plan Sheet being proposed for use contains a sufficient level of detail. After it is determined that the Contract Plan Sheet is appropriate for use, the fabricator initiates a FRS. The general information at the top of the sheet is filled in, the Contract Plan Sheet box is checked and the Sheet number is filled in. Under comments indicate the Materials Specification units will be fabricated to. (e.g. 706-04 for drainage units, 704-05 for median barrier, etc.) The FRS is then dated, signed and forwarded to the Contractor and the Materials Bureau. Copies of the Contract Plan Sheet need not be sent with the request.

3. **Contractor Responsibilities** - The Contractor reviews the Contract Plan Sheet and verifies that no changes are required. (Changes would require the preparation of Fabricator Working Drawings.) Verifies that the Plan Sheet Number and Item Number on the FRS are correct, then completes and signs their portion of the FRS and forwards it, through the EIC, to the Region Reviewer for review.

   (When a signed FRS is received back from the Region Reviewer it must be forwarded to the Fabricator for production use.)

4. **Region Responsibilities** - The Region Reviewer verifies that there have been no changes to the Contract which affect the Contract Plan Sheet proposed for use. Changes that would prevent the plan sheet from being used as the fabrication drawing should be noted under comments on the FRS and returned to the Contractor. When the Contract Plan Sheets are acceptable for use, the Region Reviewer completes and signs their portion of the FRS and forwards 1 copy to the Contractor for production use.

VII. PREVIOUSLY APPROVED FABRICATOR WORKING DRAWINGS - Fabricator Working Drawings previously approved by the Department for use on a Contract may be used on subsequent Contracts provided the drawings meet all the requirements set forth in the Contract Documents.
A. SUBMISSION, REVIEW AND ROUTING RESPONSIBILITIES

1. Precast Concrete Fabrication Request Sheet (FRS) - Every request to use a Previously Approved Fabricator Working Drawing as the fabrication drawing shall be made using a FRS. Additional letters of request are not required. The FRS states each reviewer’s responsibilities and tracks review comments, approvals and dates. Each group responsible for a portion of the review must sign the FRS before units may be shipped to the Project. A copy of the FRS can be found in Appendix B.

2. Fabricator Responsibilities - After it is determined that a Previously Approved Fabricator Working Drawing is appropriate for use, the fabricator initiates a FRS. The general information at the top of the sheet is filled in, the Previously Approved Drawing box is checked and the drawing number and previous Contract number are filled in. The FRS is then dated, signed and forwarded to the Contractor, along with 3 copies of the Previously Approved Fabricator Working Drawing. (Drawing copies must contain the Department’s approval box indicating the drawing was approved or approved as noted, with a signature stamp and approval date.) One copy of the FRS only is also forwarded to the Materials Bureau.

3. Contractor Responsibilities - Reviews the Previously Approved Fabricator Working Drawing to verify it meets the requirements of the Contract Documents. The Contractor then completes and signs their portion of the FRS and forwards it along with 2 copies of the drawing, through the EIC, to the Region Reviewer for review. (When a signed FRS is received back from the Region Reviewer it must be forwarded, along with 1 copy of the drawing, to the Fabricator for production use.)

4. Region Responsibilities - The Region Reviewer verifies the Previously Approved Fabricator Working Drawing meets the requirements of the Contract Documents and verifies the indicated Item Number is correct and appears in the Contract Documents. When no item number exists, the Region Reviewer notes under comments, what item number will be used and how it will be added to the Contract. The Region Reviewer then completes and signs their portion of the FRS and returns 1 copy, along with 1 copy of the drawing, to the Contractor for production use. One copy of the Previously Approved Fabricator Working Drawing is retained by the Region.

VIII. RECORD PLAN DRAWINGS – Record Plan Drawings are necessary only when it is required in the specification for the item being produced. (For example, bridge size box culverts) Record Plan Drawings are used to incorporate details of the precast item into the as-built documents for the project.

A. SUBMISSION, REVIEW AND ROUTING RESPONSIBILITIES

1. Materials Bureau Responsibilities – A copy of the approved or approved-as-noted Fabricator Working Drawing is used as the Record Plan Drawing. Revisions marked in red on approved-as-noted Fabricator Working Drawings are copied in black ink.
onto the Record Plan Drawing. The Materials Bureau forwards 1 copy of the Record Plan Drawing to the Design Quality Assurance Bureau (DQAB). If subsequent drawing revisions are necessary, the Materials Bureau will forward a new Record Plan Drawing to the DQAB.

2. **Design Quality Assurance Bureau Responsibilities** - Incorporates the Record Plan Drawing into the as-built documents for the project.

Questions regarding this procedure should be directed to the Materials Bureau.
APPENDIX A
PRECAST CONCRETE WORKING DRAWING SHEET
(WDS)
**PRECAST CONCRETE WORKING DRAWING SHEET (WDS)**

<table>
<thead>
<tr>
<th>CONTRACT NO:</th>
<th>REGION:</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRAWING NO:</td>
<td></td>
</tr>
<tr>
<td>ITEM NUMBER:</td>
<td></td>
</tr>
<tr>
<td>DESCRIPTION:</td>
<td></td>
</tr>
<tr>
<td>FABRICATOR OR:</td>
<td></td>
</tr>
<tr>
<td>LOCATION:</td>
<td></td>
</tr>
<tr>
<td>CONTACT PERSON:</td>
<td></td>
</tr>
<tr>
<td>PHONE:</td>
<td>FAX:</td>
</tr>
</tbody>
</table>

**Design Review by DOT Required:**
- Structural: [ ] Yes [ ] No
- Geotechnical: [ ] Yes [ ] No

(When a [ ] Yes box is checked design calculations are required from the fabricator.)

**General Review Requirements:** The attached Fabricator Working Drawings are to be reviewed in accordance with Materials Procedure MP 05-04. MP 05-04 contains drawing review procedures, routing information and each group's review responsibilities. The Working Drawing Sheet (WDS) must be signed by each group responsible for drawing review before the Materials Bureau will approve the drawing.

**Fabricator Responsibilities:** Prepares drawings per MP 05-04 and:
- Submits 6 copies of the working drawings, a signed copy of the WDS and when required 3 sets of design calculations to the Materials Bureau.
- Submits 4 copies of the working drawings, a signed copy of the WDS and when required 2 sets of design calculations to the Contractor.

<table>
<thead>
<tr>
<th>Date Submitted:</th>
<th>Comments:</th>
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</table>

**Contractor Responsibilities:** Reviews drawings per MP 05-04 and:
- Submits 3 copies of the working drawings, the signed WDS and when required 2 sets of design calculations, through the EIC, to the Region Reviewer for review.

**Allotted Review Time**
- 2 Working Days Per Drawing Sheet, 10 Working Days Minimum

<table>
<thead>
<tr>
<th>Date Received:</th>
<th>Date Completed:</th>
</tr>
</thead>
<tbody>
<tr>
<td>[ ] Approved</td>
<td>[ ] Approved As Noted</td>
</tr>
<tr>
<td>By:</td>
<td>Comments:</td>
</tr>
</tbody>
</table>

**Region Responsibilities:** Reviews drawings per MP 05-04 and:
- Submits 1 copy of the working drawings and the signed WDS to the Materials Bureau.
- OR
- When major drawing revisions are required, returns the drawing and the signed WDS to the fabricator and notifies the Materials Bureau.

**Allotted Review Time**
- 1 Working Day Per Drawing Sheet, 5 Working Days Minimum OR 10 Working Days Minimum When Region Does The Structural and/or Geotechnical Design Review

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<tr>
<th>Date Received:</th>
<th>Date Completed:</th>
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<tbody>
<tr>
<td>[ ] Approved</td>
<td>[ ] Approved As Noted</td>
</tr>
<tr>
<td>By:</td>
<td>Comments:</td>
</tr>
</tbody>
</table>

**Structural Design Review Responsibilities:** Reviews drawings and design calculations per MP 05-04 and:
- Returns the drawings, calculations and signed WDS to the group requesting review along with any comments.

**Allotted Review Time**
- 2 Working Days Per Drawing Sheet, 10 Working Days Minimum

<table>
<thead>
<tr>
<th>Date Received:</th>
<th>Date Completed:</th>
</tr>
</thead>
<tbody>
<tr>
<td>[ ] Approved</td>
<td>[ ] Approved As Noted</td>
</tr>
<tr>
<td>By:</td>
<td>Comments:</td>
</tr>
</tbody>
</table>

**Geotechnical Design Review Responsibilities:** Reviews drawings and design calculations per MP 05-04 and:
- Returns the drawings, calculations and signed WDS to the group requesting review along with any comments.

**Allotted Review Time**
- 2 Working Days Per Drawing Sheet, 10 Working Days Minimum

<table>
<thead>
<tr>
<th>Date Received:</th>
<th>Date Completed:</th>
</tr>
</thead>
<tbody>
<tr>
<td>[ ] Approved</td>
<td>[ ] Approved As Noted</td>
</tr>
<tr>
<td>By:</td>
<td>Comments:</td>
</tr>
</tbody>
</table>

**Materials Bureau Responsibilities:** Reviews and approves drawings per MP 05-04 and:
- Distributes 5 copies of the approved drawings and the signed WDS, 1 each, to the Contractor, Fabricator, EIC, Materials Engineer (in contract region) and Inspection Authority.

**Allotted Review Time**
- 2 Working Days Per Drawing Sheet, 10 Working Days Minimum

<table>
<thead>
<tr>
<th>Date Received:</th>
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</tr>
</thead>
<tbody>
<tr>
<td>[ ] Approved</td>
<td>[ ] Approved As Noted</td>
</tr>
<tr>
<td>By:</td>
<td>Comments:</td>
</tr>
</tbody>
</table>
APPENDIX B
PRECAST CONCRETE FABRICATION REQUEST SHEET
(FRS)
# PRECAST CONCRETE FABRICATION REQUEST SHEET (FRS)

**FOR USE WITH:** DEPARTMENT STANDARD SHEETS, CUT SHEETS, FABRICATOR STANDARD DRAWINGS, CONTRACT PLAN SHEETS, LAYOUT DRAWINGS AND PREVIOUSLY APPROVED DRAWINGS

A SIGNED COPY OF THIS SHEET MUST BE RETURNED TO THE FABRICATOR FOR PRODUCTION

<table>
<thead>
<tr>
<th>Contract Number: ____________________</th>
<th>Region: __________</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contractor: _________________________</td>
<td>Address: _________________________</td>
</tr>
<tr>
<td>Item Number: ________________________</td>
<td>Description: _________________________</td>
</tr>
<tr>
<td>Fabricator: _________________________</td>
<td>Location: _________________________</td>
</tr>
<tr>
<td>Contact Person: _____________________</td>
<td>Date Submitted: _____________________</td>
</tr>
<tr>
<td>Phone: ____________________</td>
<td>Fax: ____________________</td>
</tr>
</tbody>
</table>

The following Cut Sheets, containing non-standard details, must be initialed and dated by the Region Reviewer to indicate approval:

(Fabricator completes above, checks applicable box(s) on right, completes corresponding information and initiates routing sequence as shown.)

## ROUTING SEQUENCE

### Fabricator Responsibilities
- Verifies fabrication drawing satisfies contract document requirements.
- Forwards FRS and drawings, when required, to the Contractor.
- Forwards FRS only to the Materials Bureau.

### Contractor Responsibilities
- Reviews drawing to ensure it meets contract document requirements and verifies the above Item Number is in the contract documents.
- Forwards signed FRS, through the EIC, to the Region Reviewer.
- When drawings are required - Retains 1 copy and forwards 2 with the FRS.

When the signed FRS is returned by the Region Reviewer it must be forwarded, along with 1 copy of the drawing, when required, to the Fabricator for production use.

### Region Responsibilities
- Region Reviewer reviews request to use drawing, verifies compliance with contract documents, verifies above Item Number is correct and then makes approval. **Cut sheets, listed above, for non-standard units must be initialed and dated indicating Region approval.**
- Returns signed FRS to the Contractor for production use.
- When drawings are required - Retains 1 copy and forwards 1 copy with FRS to the Contractor.
APPENDIX C

ROUTING FLOW CHARTS
Fabricator Working Drawing Routing Sequence
(No Design Review By NYSDOT Required)

Fabricator
(initiates drawings & WDS for review)

4 sets of drawings & WDS (for review)

Contractor

3 sets of drawings & WDS (for review)

Region Reviewer

1 set of drawings & WDS (recommended for approval)

Materials Bureau

6 sets of drawings & WDS (for review and approval)

Contractor Working Drawing Routing Sequence
(No Design Review By NYSDOT Required)

Contract Region - Materials Engineer - EIC

Contractor

Fabricator

Inspection Authority

Contract Region - Materials Engineer - EIC
Fabricator Working Drawing Routing Sequence
(Design Review By NYSDOT Required: Performed In The Main Office)

Fabricator
(initiates drawings, calcs & WDS for review)

Contractor

4 sets of drawings
2 sets of calcs & WDS (for review)

Region Reviewer

6 sets of drawings
3 sets of calcs & WDS (for review and approval)

Materials Bureau

3 sets of drawings
2 sets of calcs & WDS (for review)

Structures Engineer

1 set of drawings
1 set of calcs & WDS (for review)

Geotechnical Engineer

1 set of drawings
1 set of calcs & WDS (for review)
(typical for wingwalls and retaining walls)

Contractor

1 set of drawings
calcs & WDS (w/review comments)

1 set of drawings
calcs & WDS (w/review comments)

1 set of drawings
calcs & WDS (recommended for approval)

1 set of drawings
calcs & WDS (w/review comments)

5 sets of approved drawings & WDS
1 each to:

Contract Region
- Materials Engineer
- EIC

Fabricator

Inspection Authority
Fabricator Working Drawing Routing Sequence
(Design Review By NYSDOT Required: Performed In The Region)

Fabricator
(initiates drawings, calcs & WDS for review)

Contractor

4 sets of drawings
2 sets of calcs & WDS
(for review)

3 sets of drawings
2 sets of calcs & WDS
(for review)

6 sets of drawings
3 sets of calcs & WDS
(for review and approval)

Region Reviewer

1 set of drawings
1 set of calcs & WDS
(for review)

1 set of drawings
1 set of calcs & WDS
(for review)

1 set of drawings
1 set of calcs & WDS
(recommended for approval)

Materials Bureau

5 sets of approved drawings & WDS
1 each to:

Contractor

Fabricator

Inspection Authority

Contract Region
- Materials Engineer
- EIC

Structures Engineer

1 set of drawings
1 set of calcs & WDS
(for review)

Geotechnical Engineer

1 set of drawings
1 set of calcs & WDS
(for review)

(typical for wingwalls and retaining walls)

1 set of drawings
calcs & WDS (w/review comments)

1 set of drawings
calcs & WDS (w/review comments)

1 set of drawings
calcs & WDS (recommended for approval)
Fabricator
(initiates cut sheets & FRS)

3 sets of cut sheets & FRS
(for review)

Contractor

2 sets of cut sheets & FRS
(for review and approval)

Region Reviewer

1 set of approved cut sheets & FRS

Contractor

1 set of approved cut sheets & FRS

Fabricator

FRS
(for records)

Materials Bureau

Fabricator
(initiates FRS)

FRS
(for review)

Contractor

FRS
(for review and approval)

Region Reviewer

Approved FRS

Contractor

Approved FRS

Materials Bureau
Fabricator Standard Drawing

Initial Submission

Fabricator
(initiates drawings & calcs)

5 sets of drawings & 3 sets of calcs
(for review & approval)

when required

Materials Bureau

1 set of drawings & 1 set of calcs
(for review)

Structures Engineer

1 set of drawings & 1 set of calcs
(for review)

Geotechnical Engineer

1 set of drawings (w/review comments)

Inspection Authority

2 sets of approved drawings 1 each to:

Job Specific Submission

Fabricator
(initiates drawings & FRS)

FRS
(for records)

Materials Bureau

1 set of drawings
& 1 set of calcs
(for review & approval)

Contractor

2 sets of Fabricator Standard Drawings & FRS
(for review & approval)

Region Reviewer

1 set of drawings, approved for use & FRS

Contractor

1 set of drawings, approved for use & FRS

Fabricator
APPENDIX D

CONTACT INFORMATION
MATERIALS BUREAU:

Mail: New York State Department of Transportation
Materials Bureau, Field Engineering 1
50 Wolf Road, POD 34
Albany, NY 12232

Phone: 518-457-5956

STRUCTURES DIVISION:

Mail: New York State Department of Transportation
Structures Division, Concrete Engineering Unit
50 Wolf Road, POD 43
Albany, NY 12232

Phone: 518-457-4534

GEOTECHNICAL ENGINEERING BUREAU:

Mail: New York State Department of Transportation
Geotechnical Engineering Bureau, Structure Foundation
50 Wolf Road, POD 31
Albany, NY 12232

Phone: 518-457-4767

PLAN SALES OFFICE:

Mail: New York State Department of Transportation
Plan Sales Office
50 Wolf Road, Gr.-E
Albany, NY 12232

Phone: 518-457-2124