



Contract Award Notification

Title	:	Group 37700 - Culvert & Underdrain Pipe & Tubing (w/ Arches, Bands, Culverts & Accessories) - Metal & Plastic Based (Statewide) Classification Code(s): 30 & 40
Award Number	:	22719 RA (Succeeds Award 21142)
Contract Period	:	April 1, 2016 through March 31, 2020
Bid Opening Date	:	May 14, 2015
Date of Issue	:	April 1, 2016 (Revised May 14, 2018)
Specification Reference	:	As Incorporated in the Invitation For Bids
Contractor Information	:	Appears on Page 7 and Pages 10-17 of this Award

Address Inquiries To:

State Agencies & Vendors	Political Subdivisions & Others
Name : Brandy Alden Title : Contract Management Specialist Phone : 518-408-1140 Fax : 518-474-8676 E-mail : Brandy.Alden@ogs.ny.gov	Procurement Services Customer Services Phone : 518-474-6717 Fax : 518-474-2437 E-mail : customer.services@ogs.ny.gov

**Procurement Services values your input.
Complete and return "Contract Performance Report" at end of document.**

Description

This award is for specific equipment, associated accessories, parts and products manufactured and sold in the transportation and road construction industries for the building, maintenance, repair and rehabilitation of culverts and roadway drainage systems as defined by bid specifications and listed herein. It is a New York Statewide award.

PR #22719

(continued)

Table of Contents

SECTION 1: CONTRACTOR INFORMATION 7

 1.1 Contractor Information 7

 1.2 Small, Minority and Women-Owned Businesses 8

 1.3 Recycled, Remanufactured and Energy Efficient Products 8

 1.4 Note to Authorized Users..... 8

 1.5 Lot Awards 9

 1.6 Specification Reference Chart 9

 1.7 Contractor Directory 10

SECTION 2: INTRODUCTION 18

 2.1 Overview..... 18

 2.2 Scope..... 18

 2.3 Non-State Agencies Participation in Centralized Contracts..... 18

 2.4 “OGS Or Less” Guidelines Apply TO THIS CONTRACT AWARD 19

 2.5 Preferred Source Products..... 19

 2.6 Estimated Quantities 19

 2.7 Disputes 20

SECTION 3: PRICING 23

 3.1 Use of Contract Pricing Section..... 23

 3.2 Pricing & Shipping 23

 3.3 Price Adjustments & Updates 24

 3.3.1 Changes in Core List Item Pricing..... 24

 3.3.2 Changes in Core List Shipping Pricing..... 24

 3.3.3 Lower Pricing 25

 3.4 Use of Subcontractors 25

 3.5 Supply Coverage Areas..... 26

 3.6 Discounts 26

 3.7 Product Exclusions 26

SECTION 4: PRODUCT SPECIFICATIONS 27

 4.1 Technical Specifications 27

 4.2 Scope of Specifications..... 27

 4.3 Product Qualification 28

 4.4 NYSDOT Specifications Series 706 & 707 28

 4.4.1 706-1 Non-Reinforced Concrete Pipe..... 28

 4.4.2 706-2 Reinforced Concrete Pipe (Classes II, III, IV, V)..... 29

 4.4.3 706-3 Reinforced Concrete Elliptical Pipe (Classes HE-II, HE-III, HE-IV, VE-IV, VE-V & VE-VI)³²

 4.4.4 706-4 Precast Concrete Drainage Units..... 32

 4.4.5 706-5 Porous Concrete Pipe Underdrain 35

 4.4.6 706-7 Reinforced Concrete Pipe End Sections..... 36

(continued)

4.4.7	706-9 Cured In Place Pipe (CIPP) Liner	37
4.4.8	706-10 Polyvinyl Chloride Pipe (Relining)	37
4.4.9	706-11 High Density Polyethylene Pipe (Relining)	38
4.4.10	706-12 Smooth Interior Corrugated Polyethylene Pipe	38
4.4.11	706-13 Perforated Corrugated Polyethylene Underdrain Tubing	38
4.4.12	706-14 Corrugated Interior Polyethylene Pipe	39
4.4.13	706-15 PVC Plastic Drain Pipe System	39
4.4.14	706-16 Cellular Polystyrene Protective Cover	40
4.4.15	706-17 Precast Concrete Box Culverts	40
4.4.16	706-18 Perforated Polyvinyl Chloride Underdrain Pipe	42
4.4.17	707-02 Corrugated Steel Pipe	42
4.4.18	707-03 Ductile Iron Pipe (Non-Pressure)	45
4.4.19	707-04 Ductile Iron Pipe (Pressure)	46
4.4.20	707-05 Tunnel Liner Plate (Relining)	46
4.4.21	707-09 Corrugated Structural Steel Plate For Pipe, Pipe Arches & Underpasses	47
4.4.22	707-10 Galvanized Steel End Sections	48
4.4.23	707-11 Aluminum End Sections	48
4.4.24	707-13 Corrugated Aluminum Pipe	49
4.4.25	707-14 Corrugated Aluminum Structural Plate For Pipe and Pipe Arches	50
4.4.26	707-20 Anchor Bolts for Corrugated Culverts	51
4.4.27	Supplemental Specification 1 - HDPE Polyethylene Plastic Liner Pipe	52
4.4.28	Supplemental Specification 2 – Steel Culvert Rehabilitation System	53
4.5	Additional Catalog Requirements	55
SECTION 5: ADMINISTRATIVE REQUIREMENTS		57
5.1	Tax Law §5-A	57
5.2	M/WBE Participation and Goals	57
5.3	Service Requirements	60
5.3.1	Delivery	60
5.3.2	Product Delivery	60
5.3.3	Shipping Dates and Delivery Time	60
5.3.4	Delivery Condition	61
5.3.5	Delivery Certification	61
5.3.6	Expansion of Delivery Points	61
5.3.7	Commercial Price Lists and Catalogs	61
5.3.8	Format Requirements	61
5.3.9	Preferred Source Requirement	61
5.3.10	Optional Dedicated Contract Web Site	61
5.3.11	Customer Service	61

(continued)

	5.3.12	Technical Assistance	62
	5.3.13	Instruction Manuals	62
	5.3.14	New Accounts	62
	5.3.15	Purchase Order Instructions.....	62
	5.3.16	Purchase Orders and Invoicing.....	62
	5.3.17	Purchase Order Acceptance.....	62
	5.3.18	Purchase Order Contents	63
	5.3.19	Invoices.....	63
	5.3.20	Minimum Order	64
	5.3.21	Method of Payment	64
	5.3.22	Discrepancies.....	64
	5.3.23	Settlements	64
	5.3.24	Acceptance of Product.....	64
	5.3.25	Product Returns Because of Quality Problems.....	64
	5.3.26	Product Returns Due To Authorized User Error.....	64
	5.3.27	Warranties:	65
	5.3.28	Recalls	65
	5.3.29	Administrative and Service Requirements.....	65
	5.3.30	E-Mail & Telephone Contacts	65
	5.3.31	Toll-Free Number	65
	5.3.32	Emergency Service Number & Contact Information.....	65
5.4		Contract Modification (Including Contract Update) Guidelines.....	66
	5.4.1	Types of Contract Modifications	66
	5.4.2	Updates	66
	5.4.3	Amendments.....	66
	5.4.4	Contractor’s Submission of Contract Modifications	67
	5.4.5	Price Level Justification – Format	67
	5.4.6	Supporting Documentation.....	67
	5.4.7	Submittal of Modification Requests	67
5.5		Product Line Catalog Updates - Addition & Deletion Of Products	68
	5.5.1	Product Deletion, Discontinuation and Substitution.....	68
	5.5.2	Interim Government Program Adjustment	69
5.6		Administrative Reporting Requirements.....	69
	5.6.1	Report of Contract Purchases	70
	5.6.2	M/WBE Contractor Compliance & Payment Reports	71
	5.6.3	Authorized User Sales Reports.....	71
	5.6.4	Updated Certification of Required Insurances.....	71
5.7		Contract Period and Renewals	71

(continued)

5.7.1	Contract Renewals.....	71
5.7.2	Short Term Extensions	71
5.7.3	Cancellation for Convenience by the State.....	71
5.8	Extension of Use.....	71
5.9	New York State Procurement Card.....	72
5.10	Performance and Bid Bonds	72
5.11	Environmental Attributes and NYS Executive Order No. 4.....	72
5.12	Use of Recycled or Remanufactured Materials.....	72
5.13	Mercury-Added Consumer Products	72
5.14	EPA Energy Star Program	72
5.15	Surplus/Take-Back/Recycling	73
5.16	Americans with Disabilities Act (ADA).....	73
5.17	New York State Statewide Financial System.....	73
5.18	Encouraging Use of New York State Businesses In Contract Performance	74
5.19	Bulk Delivery & Alternate Packaging	74
5.20	Internet Websites	75
5.20.1	Web-Based Ordering System	75
5.20.2	Preferred Source Statement	75
5.20.3	Authorized User Note.....	76
5.20.4	Changes	76
5.20.5	Web Order Elements	76
5.20.6	Agency Access to Web-Based Ordering System.....	76
SECTION 6: TERMS AND CONDITIONS		77
6.1	Use of Resellers/Distributors	77
6.2	Catalogs, Products and Terms.....	77
6.3	Emergency Purchasing.....	77
6.4	Contract Migration.....	77
6.5	Reservation	77
6.6	Poor Performance	77
6.7	Insurance	78
6.7.1	Workers' Compensation Insurance and Disability Benefits Requirements	81

(continued)

SECTION 7: USE OF CONTRACT BY STATE AGENCIES, POLITICAL SUBDIVISIONS & OTHER

AUTHORIZED USERS	82
7.1 Overlapping Contract Products.....	82
7.2 Procurement Instructions	82
7.2.1 For Executive Agencies.....	82
7.2.2 For Non-Executive Agencies.....	82

(continued)

SECTION 1: CONTRACTOR INFORMATION

1.1 Contractor Information

NOTE: This Contract Award Notification is published as an informational aid for NYS OGS Procurement Services contract users to assist them in the use of Award 22719. It is not the contract document. The information herein is compiled from the actual contract documents individually executed with each of the contractors listed below. Contractors are reminded to refer to their specific contract for guidance or contact the Contract Management Specialist of record for assistance.

The State is awarding contracts for Lots 1, 2, 3, 4, 6, 8 and 9 of the Invitation for Bids. No responses were received for Lot 7. Lot 5 has been cancelled.

See Lot Directory herein and the Contract Pricing section of the OGS Contract Web for this award to determine actual lot awards.

The contract awardees are as follows:

CONTRACT #	CONTRACTOR, LOCATION & SIGNATORY OFFICIAL	PHONE	FEIN/ NYS VENDOR ID
PC67197	Advanced Drainage Systems Inc. 4640 Trueman Blvd. Hilliard, OH 43026 Rick Anderson, NY Regional Sales Manager <i>Accepts orders for less than the stated minimum order. Accepts the NYS Procurement Card for orders up to \$15,000.</i>	413/589-0515 Toll Free: 800/733-7473	51-0105665/ 1000009390
PC67198	Contech Engineered Solutions, LLC 16 Cassidy Drive Saratoga Springs, NY 12866 Patrick G. O'Rourke, N.E. Region Vice President <i>Does <u>not</u> accept orders for less than the stated minimum order. Does <u>not</u> accept the NYS Procurement Card.</i>	518/424-3236 Toll Free: 800/338-1122	31-1177165/ 1000009073
PC67341	ISCO Industries Inc. 100 Witherspoon Street 2 West P.O. Box 4545 Louisville, KY 40202 Donald LeBlanc, PE Regional Sales Manager <i>Accepts orders for less than the stated minimum order. Accepts the NYS Procurement Card for orders up to \$15,000.</i>	518/605-9320 Toll Free: 800/345-4726	61-0600157/ 1000009588
PC67199	Precision Pipe & Products, Inc. 5865 Old Leeds Road, Suite E Birmingham, AL 35210 Keith Nelson, President <i>Does <u>not</u> accept orders for less than the stated minimum order. Does <u>not</u> accept the NYS Procurement Card. Contractor offers 1% discount for payment within 15 days of receipt of invoice.</i>	205/327-8171 Toll Free: 877/327-8171	06-1704906/ 1100094387

Cash Discount, If Shown, Should be Given Special Attention.

(continued)

INVOICES MUST BE SENT DIRECTLY TO THE ORDERING AGENCY FOR PAYMENT.

(See "Contract Payments" and "Electronic Payments" in this document.)

AGENCIES SHOULD NOTIFY THE NEW YORK STATE PROCUREMENT PROMPTLY IF THE CONTRACTOR FAILS TO MEET DELIVERY OR OTHER TERMS OF THIS CONTRACT. PRODUCTS OR SERVICES WHICH DO NOT COMPLY WITH THE SPECIFICATIONS OR ARE OTHERWISE UNSATISFACTORY TO THE AGENCY SHOULD ALSO BE REPORTED TO THE PROCUREMENT SERVICES.

1.2 Small, Minority and Women-Owned Businesses

The letters SB listed under the Contract Number indicate the contractor is a NYS small business. Additionally, the letters MBE and WBE indicate the contractor is a Minority-owned Business Enterprise and/or Woman-owned Business Enterprise.

1.3 Recycled, Remanufactured and Energy Efficient Products

The Procurement Services supports and encourages the purchase of recycled, remanufactured, energy efficient and "energy star" products. If one of the following codes appears as a suffix in the Award Number or is noted under the individual Contract Number(s) in this Contract Award Notification, please look at the individual awarded items for more information on products meeting the suffix description.

RS,RP,RA	Recycled
RM	Remanufactured
SW	Solid Waste Impact
EE	Energy Efficient
E*	EPA Energy Star
ES	Environmentally Sensitive

1.4 Note to Authorized Users

When placing purchase orders under the contract(s), the authorized user should be familiar with and follow the terms and conditions governing its use which usually appears at the end of this document. The authorized user is accountable and responsible for compliance with the requirements of public procurement processes. The authorized user must periodically sample the results of its procurements to determine its compliance. In sampling its procurements, an authorized user should test for reasonableness of results to ensure that such results can withstand public scrutiny.

The authorized user, when purchasing from OGS contracts, should hold the contractor accountable for contract compliance and meeting the contract terms, conditions, specifications, and other requirements. Also, in recognition of market fluctuations over time, authorized users are encouraged to seek improved pricing whenever possible.

Authorized users have the responsibility to document purchases, particularly when using OGS multiple award contracts for the same or similar product(s)/service(s), which should include:

- a statement of need and associated requirements,
- a summary of the contract alternatives considered for the purchase,
- the reason(s) supporting the resulting purchase (e.g., show the basis for the selection among multiple contracts at the time of purchase was the most practical and economical alternative and was in the best interests of the State).

(continued)

1.5 Lot Awards

Lot 1	Metal Culvert Arches	Contech Engineered Solutions LLC
Lot 2	Metal Corrugated Culvert Pipe	Contech Engineered Solutions LLC
Lot 3	Metal Culvert End Sections	Contech Engineered Solutions LLC
Lot 4	HDPE Single Wall Underdrain Pipe – up to 24” Diameter	Advanced Drainage Systems, Inc.
Lot 5	HDPE Double Wall Underdrain Pipe – up to 48” Diameter	CANCELLED
Lot 6	HDPE Underdrain Pipe – above 48” Diameter	Advanced Drainage Systems, Inc.
Lot 7	No Award	
Lot 8	Snap-Tite System	ISCO Industries, Inc.
Lot 9	Steel Rehabilitation Systems	Precision Pipe & Products, Inc.

1.6 Specification Reference Chart

The following chart cross references the lots and core list items listed within Attachment 1, to corresponding specification information in Section V.

<u>LOT NUMBER AND GENERAL PRODUCT LINE</u>	<u>NYSDOT SPECIFICATION NUMBER</u>
LOT 1 – Metal Culvert Arches	706-10, 707-02, 707-03, 707-04, 707-05, 707-09, 707-10, 707-11, 707-13, 707-14, 707-20
LOT 2 – Metal Corrugated Culvert Pipe	706-10, 707-02, 707-03, 707-04, 707-05, 707-09, 707-10, 707-11, 707-13, 707-14, 707-20
LOT 3 – Metal Culvert End Sections	706-10, 707-02, 707-03, 707-04, 707-05, 707-09, 707-10, 707-11, 707-13, 707-14, 707-20
LOT 4 – HDPE Single Wall Underdrain Pipe – up to 24” Diameter	706-12, 706-13, 706-14
LOT 5 – HDPE Double Wall Underdrain Pipe – up to 48” Diameter	706-12, 706-13, 706-14
LOT 6 – HDPE Underdrain Pipe – above 48” Diameter	706-12, 706-13, 706-14
LOT 7 – Culvert Renew Systems	706-11
LOT 8 – Snap-Tite Systems	Supplemental Specification 1 - HDPE Plastic Liner Pipe & 706-11
LOT 9 – Steel Rehabilitation Systems	Supplemental Specification 2 – Steel Culvert Rehabilitation System
Products within a bidder’s Product Line Catalog, meeting the requirements of any detailed specification found in Section V.6 that is not listed within this chart would be contract eligible as a non-core item, and should be listed on your Final Offered Products List.	

(continued)

1.7 Contractor Directory

Entity's Legal Company Name	Advanced Drainage Systems, Inc.
Federal FEIN	51-0105665
NYS Vendor ID #	1000009390
Address	4640 Trueman Blvd.
City	Hilliard
State	OH
Zip Code	43026
Toll-Free Phone	866-691-2715
Lead Contract Administrator	
Name	Rick Anderson
Title	New York Regional Sales Manager
Phone	315-271-3479
Toll-Free Phone	866-691-2715
Fax	413-589-7926
E-Mail	Rick.Anderson@ads-pipe.com
Contact(s) for expediting New York State Contract Orders	
Name	Dave Enser
Title	New York Sales Representative
Phone	716-860-4608
Toll-Free Phone	866-691-2715
Fax	866-770-2981
E-Mail	Dave.Enser@ads-pipe.com

(continued)

1.7 Contractor Directory (Cont'd)

Contact(s) for technical information	
Name	Ian Kuchman
Title	Engineered Product Manager
Phone	585-472-1312
Toll-Free Phone	866-691-2715
E-Mail	Ian.Kuchman@ads-pipe.com
Contact(s) in the event of an emergency occurring after business hours or on weekend/holidays	
Name	Rick Anderson
Title	New York Regional Sales Manager
Phone	315-271-3479
Toll Free Phone	866-691-2715
E-Mail	Rick.Anderson@ads-pipe.com
List Normal Business Days of Operation - (Specify M-F, Sat, Sun)	Monday - Friday
List Normal Business Hours - per the Eastern Time Zone	8:00 AM - 5:00 PM EST
Does company utilize automated off hours telephone messaging?	Yes
Bidder's PRINCIPAL PLACE OF BUSINESS: "Principal Place of Business" is the location of the primary control, direction and management of the enterprise	4640 Trueman Blvd., Hilliard, OH 43026

(continued)

1.7 Contractor Directory (Cont'd)

Entity's Legal Company Name	Contech Engineered Solutions, LLC
Federal FEIN	31-1177165
NYS Vendor ID #	1000009073
Address	16 Cassidy Drive
City	Saratoga Springs
State	New York
Zip Code	12866
Phone	518-424-3236
Toll-Free Phone	800-338-1122
Lead Contract Administrator	
Name	Patrick G. O'Rourke
Title	Northeast Region Vice President
Phone	518-424-3236
Toll-Free Phone	800-338-1122
Fax	518-584-4365
E-Mail	porourke@conteches.com
Contact(s) for expediting New York State Contract Orders	
Name	Patrick G. O'Rourke
Title	Northeast Region Vice President
Phone	518-424-3236
Toll-Free Phone	800-338-1122
Fax	518-584-4365
E-Mail	porourke@conteches.com

(continued)

1.7 Contractor Directory (Cont'd)

Contact(s) for technical information	
Name	Patrick G. O'Rourke
Title	Northeast Region Vice President
Phone	518-424-3236
Toll-Free Phone	800-338-1122
Mobile/Cell	518-424-3236
E-Mail	porourke@conteches.com
Contact(s) in the event of an emergency occurring after business hours or on weekend/holidays	
Name	Patrick G. O'Rourke
Title	Northeast Region Vice President
Phone	518-424-3236
Toll Free Phone	800-338-1122
Pager	518-424-3236
E-Mail	porourke@conteches.com
List Normal Business Days of Operation - (Specify M-F, Sat, Sun)	Monday - Friday
List Normal Business Hours - per the Eastern Time Zone	7:30 AM - 5:30 PM EST
Does company utilize automated off hours telephone messaging?	Yes
Bidder's PRINCIPAL PLACE OF BUSINESS: "Principal Place of Business" is the location of the primary control, direction and management of the enterprise	16 Cassidy Drive, Saratoga Springs, NY 12866

(continued)

1.7 Contractor Directory (Cont'd)

Entity's Legal Company Name	ISCO Industries, Inc.
DBA	Snap-Tite
Federal FEIN	61-0600157
NYS Vendor ID #	1000009588
Address	926 Baxter Ave.
City	Louisville
State	Kentucky
Zip Code	40204
Toll-Free Phone	800-345-4726
Lead Contract Administrator	
Name	Larry Caple
Title	Territory Service Manager
Phone	502-318-6651
Toll-Free Phone	800-285-8378
Fax	502-238-8102
E-Mail	Larry.caple@isco-pipe.com
Contact(s) for expediting New York State Contract Orders	
Name	Larry Caple
Title	Territory Service Manager
Phone	502-318-6651
Toll-Free Phone	800-285-8378
Fax	502-238-8102
E-Mail	Larry.caple@isco-pipe.com

(continued)

1.7 Contractor Directory (Cont'd)

Contact(s) for technical information	
Name	Don LeBlanc
Title	Regional Sales Manager
Phone	518-605-9320
E-Mail	Don.leblanc@isco-pipe.com
Contact(s) in the event of an emergency occurring after business hours or on weekend/holidays	
Name	Don LeBlanc
Title	Regional Sales Manager
Phone	518-605-9320
E-Mail	Don.leblanc@isco-pipe.com
List Normal Business Days of Operation - (Specify M-F, Sat, Sun)	Monday - Friday
List Normal Business Hours - per the Eastern Time Zone	8:00 AM - 5:00 PM EST
Does company utilize automated off hours telephone messaging?	Yes
Bidder's PRINCIPAL PLACE OF BUSINESS: "Principal Place of Business" is the location of the primary control, direction and management of the enterprise	926 Baxter Ave., Louisville, KY 40204

(continued)

1.7 Contractor Directory (Cont'd)

Entity's Legal Company Name	<i>Precision Pipe & Products, Inc.</i>
Federal FEIN	06-1704906
NYS Vendor ID #	1100094387
Address	5865 Old Leeds Road, Suite E
City	Birmingham
State	Alabama
Zip Code	35210
Phone	205-327-8171
Toll-Free Phone	877-327-8171
Lead Contract Administrator	
Name	Cullom Walker
Title	Partner
Phone	205-327-8171
Toll-Free Phone	877-327-8171
Mobile/Cell	205-613-0072
Fax	205-327-8173
E-Mail	cwalker@precisionpipe.com
Contact(s) for expediting New York State Contract Orders	
Name	Cullom Walker
Title	Partner
Phone	205-327-8171
Toll-Free Phone	877-327-8171
Fax	205-327-8173
E-Mail	cwalker@precisionpipe.com

(continued)

1.7 Contractor Directory (Cont'd)

Contact(s) for technical information	
Name	Cullom Walker
Title	Partner
Phone	205-327-8171
Toll-Free Phone	877-327-8171
Mobile/Cell	205-613-0072
E-Mail	cwalker@precisionpipe.com
Contact(s) in the event of an emergency occurring after business hours or on weekend/holidays	
Name	Cullom Walker
Title	Partner
Phone	205-327-8171
Toll Free Phone	877-327-8171
Mobile/Cell	205-613-0072
Pager	
E-Mail	cwalker@precisionpipe.com
List Normal Business Days of Operation - (Specify M-F, Sat, Sun)	Monday - Friday
List Normal Business Hours - per the Eastern Time Zone	9:00 AM - 6:00PM EST
Does company utilize automated off hours telephone messaging?	Yes
Bidder's PRINCIPAL PLACE OF BUSINESS: "Principal Place of Business" is the location of the primary control, direction and management of the enterprise	5865 Old Leeds Road, Suite E, Birmingham, AL 35210

(continued)

SECTION 2: INTRODUCTION

2.1 Overview

This Contract Award Notification is issued by the New York State Office of General Services Procurement Services. These awarded commodity contracts are centralized contracts for use Statewide by Authorized Users, including but not limited to New York State Agencies, political subdivisions, local governments, public authorities, State and Local Parks, Counties, Municipalities, Educational Organizations and Facilities and certain other nonpublic/nonprofit organizations (see Section I.3 – Non-State Agencies Participation in Centralized Contracts). “Authorized User” shall have the meaning set forth in the State Finance Law section 163(1)(k). See Appendix B, § 2, Definitions.

2.2 Scope

The purpose of contracts is to provide Authorized Users with a means of acquiring equipment, associated accessories, parts and products manufactured and sold in the transportation and road construction industries for the building, maintenance, repair and rehabilitation of culverts and roadway drainage systems. Authorized Users are encouraged to purchase from Contractors who offer products and pricing that best meet their needs in the most practical and economical manner. Products covered under this Contract Award include but are not limited to those designed as Culvert and Underdrain Pipe, Tubing, Arches, Bands, Culverts, Accessories and Parts (Metal and Plastic Based).

Installation is not a part of this Contract Award. Authorized Users are responsible for providing or procuring installation of material purchased as needed.

The awarded vendors have each received a four-year agreement, with potential extension(s) under the same terms and conditions for additional time period(s) not to exceed a total contract term of five (5) years in accordance with “Contract Period and Renewals” as set forth herein.

The OGS web site includes a Contract Award Notification, Contractor’s contact information, contract modifications (including contract updates), and other information for Authorized Users including a link and login information (if needed) for the Contractor’s web site where contract pricing or ordering may be hosted.

2.3 Non-State Agencies Participation in Centralized Contracts

New York State political subdivisions and others authorized by New York State law (Authorized Users) may participate in this Contract Award. These Authorized Users include, but are not limited to local governments, public authorities, public school and fire districts, public and nonprofit libraries, and certain other nonpublic/nonprofit organizations. See Appendix B, § 27, Participation in Centralized Contracts. For purchase orders issued by the Port Authority of New York and New Jersey (or any other authorized entity that may have delivery locations adjacent to New York State), the terms of “Cost Proposal Requirement” shall be modified to include delivery to locations adjacent to New York State.

Upon request, all eligible non-State agencies must furnish the Contractor with the proper tax exemption certificates and documentation certifying eligibility to use State Contracts. Questions regarding an organization's eligibility to purchase from New York State Contracts may also be directed to OGS Procurement Services Customer Services at 518-474-6717.

(continued)

2.4 “OGS Or Less” Guidelines APPLY TO THIS CONTRACT AWARD

Purchases of the products included under these Contracts are subject to the "OGS or Less" provisions of State Finance Law §163(3) (a) (v). This means that State agencies can purchase products from sources other than the Contractor provided that such products are substantially similar in form, function or utility to the products herein and are: lower in price and/or available under terms which are more economically efficient to the State agency (e.g. delivery terms, warranty terms, etc.). Agencies are reminded that they must provide the State Contractor an opportunity to match the non-contract savings at least two business days prior to purchase. In addition, purchases made under "OGS or Less" flexibility must meet all requirements of law including, but not limited to, advertising in the New York State Contract Reporter, prior approval of the Comptroller's Office and competitive bidding of requirements exceeding the discretionary bid limit. State agencies should refer to Procurement Council Guidelines for additional information.

<http://www.ogs.ny.gov/procurecounc/pdfdoc/guidelines.pdf>

2.5 Preferred Source Products

Section 162 of the State Finance Law requires that governmental entities afford first priority to the products/services of preferred source suppliers such as Correctional Industries (Corcraft), New York State Preferred Source Program for People Who Are Blind, and the NYS Industries for the Disabled, when such products/services meet the form, function and utility of the Authorized User. An Authorized User must determine if a particular commodity or service is approved for a Preferred Source and follow the requirements of State Finance Law § 162(3) or (4)(b), respectively, before engaging the Contractor. Some products/services in the resultant contracts may be available from one or more preferred sources.

Contractors shall prominently display the following language on all price lists and contract modifications and updates to agencies relative to the award:

Agencies Note: Some products in these contracts may be available from one or more preferred sources. Agencies are reminded to comply with the statutory requirements under Section 162 of the State Finance Law and the guidelines issued by the State Procurement Council to afford first priority to products/services available from preferred sources which meet your form, function and utility.”

2.6 Estimated Quantities

These Contracts are Indefinite Delivery, Indefinite Quantity (IDIQ) Contracts.

Numerous factors could cause the actual volume of products purchased under these contracts to vary substantially from the estimates in the IFB. Such factors include, but are not limited to, the following:

- Such contracts are nonexclusive contracts;
- There is no guarantee of volume to be purchased in any lot group, and there is no guarantee that demand will continue in any manner consistent with previous purchases;
- The individual value of each contract is indeterminate and will depend upon actual Authorized User demand and actual quantities ordered during the contract period;
- The State reserves the right to terminate any contract for cause or convenience prior to the end of the term pursuant to the terms and conditions of the contracts.

(continued)

2.7 Disputes

Appendix B, §64, Disputes, is hereby deleted and replaced with the following:

I. Policy

It is the policy of OGS to provide Interested Parties with an opportunity to administratively resolve disputes related to OGS bid solicitations, contract awards or contract administration. Interested Parties are encouraged, but not required, to seek resolution of disputes through consultation with OGS staff through the Informal Dispute Resolution Process described herein, prior to filing a Formal Dispute. All Informal and Formal Disputes will be accorded full, impartial and timely consideration. OGS Dispute Resolution Procedures may be obtained by contacting the person identified in the Contract as a designated contact or through the OGS web site (www.ogs.ny.gov).

II. Dispute Resolution Procedures

A. Informal Dispute Resolution Process

1. In the event there is a dispute under this Centralized Contract, the Contractor, OGS and the Authorized User agree to exercise their best efforts to resolve the dispute as soon as possible. The Contractor, OGS and Authorized User shall, without delay, continue to perform their respective obligations under this Centralized Contract which are not affected by the dispute. Primary responsibility for resolving any dispute arising under this Centralized Contract shall rest with the Authorized User's Contractor Coordinators and the Contractor's Account Executive and the State & Local Government Regional General Manager.
2. In the event the Authorized User is dissatisfied with the Contractor's Products provided under this Centralized Contract, the Authorized User shall notify the Contractor in writing pursuant to the terms of the Contract. In the event the Contractor has any disputes with the Authorized User, the Contractor shall so notify the Authorized User in writing. If either party notifies the other of such dispute, the other party shall then make good faith efforts to solve the problem or settle the dispute amicably, including meeting with the party's representatives to attempt diligently to reach a satisfactory result through negotiation.
3. If negotiation between the Contractor and Authorized User fails to resolve any such dispute to the satisfaction of the parties within fourteen (14) business days or as otherwise agreed to by the Contractor and Authorized User, of such notice, then the matter shall be submitted to the State's Contract Administrator and the Contractor's senior officer of the rank of Vice President or higher as its representative. Such representatives shall meet in person and shall attempt in good faith to resolve the dispute within the next fourteen (14) business days or as otherwise agreed to by the parties. This meeting must be held before either party may seek any other method of dispute resolution, including judicial or governmental resolutions. Notwithstanding the foregoing, this section shall not be construed to prevent either party from seeking and obtaining temporary equitable remedies, including injunctive relief.
4. The Contractor shall extend the informal dispute resolution period for so long as the Authorized User continues to make reasonable efforts to cure the breach, except with respect to disputes about the breach of payment of fees or infringement of its or its licensors' intellectual property rights.

B. Formal Dispute Process

1. Definitions
 - a. Filed means the complete receipt of any document by OGS before its close of business.
 - b. Interested Party for the purpose of filing a dispute relating to a solicitation, as used in this section, means an actual or prospective bidder or offeror whose direct economic interest would be affected by the award of a Contract or by the failure to award a Contract.
 - c. Interested Party for the purpose of filing a dispute relating to a Contract award, as used in this section, means an actual bidder or offeror for the subject Contract.
 - d. Interested Party for the purpose of filing a dispute relating to the administration of the Contract, as used in this section, means the awarded Contractor for the subject Contract.

(continued)

- e. Issuance of award means the Date of Issue identified on the Contract Award Notification transmitted by OGS.
 - f. A Formal Dispute means a written objection by an Interested Party to any of the following:
 - i. A solicitation or other request by OGS for offers for a contract for the procurement of commodities, services or technology.
 - ii. The cancellation of the solicitation or other request by OGS.
 - iii. An award or proposed award of the Contract by OGS.
 - iv. A termination or cancellation of an award of the Contract by OGS.
 - v. Changes in the scope of the Centralized Contract by the Commissioner.
 - vi. Determination of “materiality” in an instance of nonperformance or contractual breach.
 - vii. An equitable adjustment in the Centralized Contract terms and/or pricing made by the Commissioner during a Force Majeure event.
2. Submission of Formal Disputes
- a. A Formal Dispute must be filed in writing with the Director of OGS Procurement Services by mail, email or facsimile, using the following contact information:

Director, New York State Procurement
A Division of the Office of General Services
38th Floor, Corning Tower
Empire State Plaza
Albany, NY 12242
Facsimile: (518) 474-2437
Email: Bruce.Hallenbeck@ogs.ny.gov
 - b. The Formal Dispute must include the following:
 - i. Name, address, e-mail address, fax and telephone numbers of the filer.
 - ii. Solicitation or Contract number.
 - iii. Detailed statement of the legal and factual grounds for the Formal Dispute, including a description of resulting prejudice to the filer.
 - iv. Copies of relevant documents.
 - v. Request for a ruling by the agency.
 - vi. Statement as to the form of relief requested.
 - vii. All information establishing that the filer is an Interested Party for the purpose of filing a Formal Dispute.
 - viii. All information establishing the timeliness of the Formal Dispute.
3. Formal Disputes concerning a solicitation shall be filed by an Interested Party (see II.B(1)(b)) with OGS no later than ten (10) business days before the date set in the solicitation for receipt of bids. If the date set in the solicitation for receipt of bids is less than ten (10) business days from the date of issue, Formal Disputes concerning the solicitation shall be filed with OGS at least twenty-four (24) hours before the time designated for receipt of bids.
4. Formal Disputes concerning a pending or awarded Contract must be filed within ten (10) business days by an Interested Party after the disputing party knew or should have known of the facts which form the basis of the Formal Dispute; however, a Formal Dispute may not be filed later than ten (10) business days after issuance of the Contract award.
5. Formal Disputes concerning the administration of the Contract after award (see II.B(1)(iv-vii)) must be filed within twenty (20) business days by an Interested Party (see II.B(1)(d)) after the disputing party knew or should have known of the facts which form the basis of the Dispute. However, if Contractor and Authorized User participate in the Informal Dispute Resolution Process, Formal Disputes concerning the administration of the Contract after award must be filed by Contractor within twenty (20) business days after the Contractor and Authorized User failed to reach resolution through the Informal Dispute Resolution Process set forth in Section II.A.

(continued)

6. Agency Response

- a. OGS will consider all information relevant to the Formal Dispute, and may, in its discretion, suspend, modify, or cancel the disputed procurement/Contract action prior to issuance of a Formal Dispute decision.
- b. OGS reserves the right to require the filer to meet or participate in a conference call with OGS to discuss the Formal Dispute when, in its sole judgment, circumstances so warrant.
- c. OGS reserves the right to waive or extend the time requirements for decisions and final determinations on appeals herein prescribed when, in its sole judgment, circumstances so warrant.
- d. OGS reserves the right to consider or reject the merits of any Formal Dispute.
- e. Notice of Decision: A copy of the decision, stating the reason(s) upon which it is based and informing the filer of the right to appeal an unfavorable decision to the Chief Procurement Officer shall be sent to the filer or its agent by regular mail within thirty (30) business days of receipt of the Formal Dispute.

7. Appeals

- a. Should the filer be dissatisfied with the Formal Dispute determination, a written appeal may be filed with the Chief Procurement Officer, by mail or facsimile, using the following contact information:

Chief Procurement Officer
New York State Procurement
A Division of the Office of General Services
38th Floor, Corning Tower
Empire State Plaza
Albany, NY 12242
Facsimile: (518) 474-2437

- b. Written notice of appeal of a determination must be received at the above address no more than ten (10) business days after the date the decision is received by the filer. The decision of the Director of OGS Procurement Services shall be a final and conclusive agency determination unless appealed to the Chief Procurement Officer within such time period.
- c. The Chief Procurement Officer shall hear and make a final determination on all appeals or may designate a person or persons to act on his/her behalf. The final determination on the appeal shall be issued within twenty (20) business days of receipt of the appeal.
- d. An appeal of the decision of the Director of OGS Procurement Services shall not include new facts and information unless requested in writing by the Chief Procurement Officer.
- e. The decision of the Chief Procurement Officer shall be a final and conclusive agency determination.

8. Legal Appeals

- a. Nothing contained in these provisions is intended to limit or impair the rights of any vendor or Contractor to seek and pursue remedies of law through the judicial process.

(continued)

SECTION 3: PRICING

3.1 Use of Contract Pricing Section

Each contractor has their own Pricing Tab under the Contract Pricing Section link on the OGS Procurement Services Contract Web Site. Each tab contains the vendor product and price information for the awarded contract, along with contract information, contractor and if applicable subcontractor information.

The pricing section for each vendor begins with **CORE ITEM PRICING** followed by the contractor's **Catalog Price & Product List for Non-Core (Catalog) Contract Items**.

There is only one **Catalog Price & Product List for Non-Core (Catalog) Contract Items** list per each lot.

To determine the unit price of a CORE ITEM being delivered by the contractor, use the column "**Core List Contract Pricing Delivered Price**" down the far right side of the list.

If the Authorized User is picking up the product directly from the contractor or arranging for alternate shipping, determine the unit price of a CORE ITEM by using the column headed as "**Core List Contract Pricing - Item Only**" found to the right of the "Core List Quoted List Price" column located to the right of center on the page. To determine the unit price of a Non-Core Catalog item, use the values listed under "**Contract Unit Price**" on the far right hand column of the "**Catalog Price & Product List for Non-Core (Catalog) Contract Items**" section of the tab.

Any additional earned volume discounts offered by a contractor should be noted separately below a sub total on your purchase order and not as a deduction from any individual line item.

3.2 Pricing & Shipping

Line Item pricing for this contract is detailed in the Contract Pricing Section of the OGS Contract Web page for this Award.

Pricing for CORE Contract Items is per Item and is listed as both of the following:

- a. Net, FOB Destination, Freight Prepaid and Included;
- b. Net, FOB Shipping Point – with Product Pick Up – whereby Alternate Shipping is arranged and provided for by the contract user.

Pricing for all NON – CORE Catalog Items is Net, FOB Destination, Freight Prepaid and included, regardless of whether product is shipped by the contractor or picked up by the contract user.

All products shall be shipped from a point within the United States to a delivery location in New York State as designated by the ordering Authorized User including dock delivery and tailgating of load. Additional shipping fees may be charged when delivery to the required delivery point is not possible via dock, any other door, stairway or elevator freight service and/or when specialized service is requested in writing by the purchaser. Authorized User must be informed of any additional shipping cost(s) prior to delivery and agree to the additional charge(s) in writing. Such cost(s) shall also be prepaid and added to the Contractor's invoice and the invoice must include a separate invoice from the carrier detailing the service premium. Any additional carrier charges for "extra" services may be disallowed. An Authorized User will not be additionally charged for delivery to the building location since shipping is FOB Destination. Any additional shipping charges are subject to post-audit. If it is determined that a Contractor is charging excessive amounts for any shipping or delivery services, the State may seek reimbursement for such amounts, may remove the Contractor from the list of eligible bidders, and may cancel the contract.

All costs relating to the importing of foreign produced components and/or finished goods including any transportation, customs fees, tariffs, taxes and charges are solely the responsibility of the seller, not that of the buyer. In addition, upon mutual agreement of the Contractor and OGS, delivery locations may be expanded per the "Extension of Use" clause.

Price includes ALL required insurance coverage costs.

(continued)

3.3 Price Adjustments & Updates

All percentage discounts shall remain firm (unchanged) or they may be increased by the Contractor for the duration of the Contract. Commercial Price Lists shall remain in effect for a minimum of one year from the contract start date. Following the first year of the contract, the Contractor may update their Commercial Price List twice annually to reflect manufacturer's price changes and to facilitate the possible addition of new products as established by the manufacturer in their normal course of business.

Contractor shall follow the Contract Modification Procedures above, and complete and submit a Contract Modification Form, identify and detail changes from the previous price list via a cover correspondence, along with rationale explaining and justifying said changes. Additionally, the Contractor shall submit the updated Commercial Price List upon which the contract pricing is based, and an updated Net Contract Price List. Both price lists shall be digitally supplied in Excel (.xls or .xlsx) format either on CD, DVD, Secure Digital High-Capacity (SDHC) Flash Memory Card or USB Flash Drive or via e-mail to the OGS Procurement Services Contract Management Specialist of record. The effective date of new Commercial Price Lists will be when they have been reviewed and approved by OGS Procurement Services and a notification to Authorized Users is published on the OGS/ OGS Procurement Services web site via a Purchasing Memorandum.

The review will include a comparison with market trends at the time of the submission versus those at the date and time of the bid opening and may include additional research data collected and published by both private sector and public sector agencies and services. This research may include, but is not limited to information obtained from NYMEX/ COMEX commodity futures, Steel Benchmark.com, American Metals Market, Plastics News or other private sector/open market pricing indices for raw materials such as Aluminum, Copper, Steel, PVC, Polyethylene and other materials, metals, plastics or resins, as well as US Department of Labor, Bureau of Labor Statistics Producer Price Indices for related commodities and industries. Should the new submission, or any pricing listed therein, be determined by OGS Procurement Services to be unreasonable, Contractor will be notified and may submit a revision. Contractor should submit new Commercial Price Lists prior to publishing date if possible. Unless otherwise specified, any price adjustment performed or transacted by a Contractor prior to receipt of a notice of approval by the OGS Procurement Services is prohibited and may be cause for cancellation of the contract.

3.3.1 Changes in Core List Item Pricing

Per the above, changes in the list price of core list items may be requested twice annually, at the same time as any other catalog or price list update, and will be addressed as follows:

1. Change of the list price shall be reviewed per the above paragraph for reasonableness.
2. Should the change be deemed acceptable by OGS Procurement Services, the new list price shall be applied to the original bid formula to determine the new price structure.

3.3.2 Changes in Core List Shipping Pricing

Per the above, changes in the shipping price of core list items may be requested twice annually by the contractor, at the same time as any other catalog, price list or core list pricing update, and will be addressed as follows:

1. A contractor may request an update in the core list shipping price. Requesting a pricing update for a Core List Item will not automatically result in OGS Procurement Services updating the shipping component.
2. The State reserves the right to independently implement a change in Core List Shipping Prices at any time that there is evidence indicating a significant change in freight or fuel pricing which would be in the best interests of the State. The State will notify contractors of any intent to exercise this provision 7 to 10 business days prior to implementation of any adjustment.
3. OGS Procurement Services shall adjust the originally awarded shipping rates by computing the percentage of change between the most recently published U. S. Department of Labor's Bureau of Labor Statistics Producer Price List Index for General Freight Trucking-Long Distance LTL Primary Services – Index number PCU484122484122P as compared to the index rate at the date and time of the bid opening ($\text{New Rate}/\text{Original Rate} = \text{Adjustment Percentage}$) which will be recorded at that time (whether or not noted as preliminary) and published in the Contract Award Notification.

(continued)

4. The adjustment percentage shall be applied (as either an increase or a decrease in rate depending upon the comparison) to the shipping rates originally awarded. Increases to the shipping rates are capped and shall not exceed 10% for any adjustment period.
5. The new shipping rates shall be inserted into the original bid formula to determine the new core list line item prices. Authorized Users and Contractors will then be notified via a Purchasing Memorandum published on the OGS Procurement Services contract web site.

As previously noted, unless otherwise specified, any change or update transacted by a Contractor prior to receipt of a notice of approval by the OGS Procurement Services is prohibited and may be cause for cancellation of contract.

3.3.3 Lower Pricing

The State reserves the right to negotiate lower pricing, or to advertise for bids, whichever is in the State's best interest as determined by the Commissioner, in the event of a significant decrease in market price of any product listed. In addition, if the Contractor's normal pricing to the public or to the trade in general is less than the net/contract pricing with the application of a contract discount, etc., then the normal pricing to the public or to the trade in general shall also be granted to Authorized Users.

3.4 Use of Subcontractors

Contractors may provide items included in the lot(s) directly or through Dealers to insure maximum service capability throughout the State. The State agrees to permit Contractors to utilize Dealers as Subcontractors to participate as alternative distribution sources.

If utilizing Subcontractors, Contractor has identified all Subcontractors. Contractors have indicated that orders may be placed directly with a specific Subcontractor or Subcontractors, in addition to being placed directly with the Contractor. If Contractors allow Subcontractors to accept and fulfill orders from Authorized Users on their behalf, subsequent payments are to be made to the Subcontractor for such orders. Subcontractors must adhere to all Contract pricing and terms at all times.

Contractor is fully liable for Subcontractor's performance and compliance with all Contract terms and conditions. Product(s) purchased through Subcontractors must be reported by the Contractor in the required quarterly reports to the State as a condition of payment.

Changes in Subcontractor Listing: If the Contractor allows Dealers to participate in the Contract in accordance with this Use of Subcontractors clause and wishes to add or delete Subcontractors or to modify Subcontractor information, requests must be submitted by the Contractor for prior approval by the State. Contractor may request changes quarterly to the designated Subcontractors List by submission of a completed, revised version of the tab of Attachment 1, Tab A – Identification contained in the original Invitation for Bids.

(continued)

3.5 Supply Coverage Areas

All Lots covered by this contract have been awarded on a statewide basis. Pricing is constant on all items, to all points of delivery within the State of NY and is reflected in the Contract Pricing Section.

3.6 Discounts

Discount rates awarded for core list and non-core list items shall be in effect for the entire contract period. Decreases of these discount rates will not be allowed at any time. However, discount rates may be increased at the Contractor's option on either an individual order or long term basis at any time. In the event of a long term increase in the discount rate, the Contract Management Specialist of record must be notified as to the discount rate and duration. The discount rate will return to the rate awarded at the end of any term increase.

Additional Volume Discounts: Optional volume discounts if offered are based on the Commercial Price List of record. Volume discounts shall not be evaluated. At the Contractor's option, volume discounts may be applied per purchase order, cumulatively per authorized user, and/or cumulatively statewide. Volume discounts shall be defined and applied as follows: Purchase order volume discounts shall be additional discounts applied to individual purchase orders over a specified dollar amount or based upon exceeding threshold quantities of individual items. Cumulative agency volume discounts shall be additional discounts applied to all future orders made by an individual agency once an established volume has been met by that agency. Cumulative statewide volume discounts shall be additional discounts applied to all future orders for all state and non-state orders once an established volume has been met under a contract. Any cumulative discounts shall be annually based with thresholds being reset annually at each anniversary date of the contract start date.

3.7 Product Exclusions

There may be overlapping products excluded from the scope of these contracts.

A summary of automatically excluded products are as follows:

1. Design and Engineering Services
2. Installation or Assembly
3. Excavation Services
4. Paving Services

OGS Procurement Services reserves the right to delete before or after award, any product included in the Contractor's awarded Product List. OGS Procurement Services also reserved the right to request a bidder add an item from either their Product Line Catalog or Commercial Price List which may not have been originally included by the bidder in the Final Offered Product List. The Final Offered Product List may list products covered by other State contracts, as well as those available from Preferred Sources. It is the obligation of the Authorized Users to order from the appropriate source.

(continued)

SECTION 4: PRODUCT SPECIFICATIONS

4.1 Technical Specifications

Technical Specifications in the form of excerpts from NYS Department of Transportation (NYSDOT) Detailed Specifications for contracting being let in January 2015, NYSDOT Engineering Bulletins, Qualified/Approved Products Lists from the NYSDOT Materials Division, NYSDOT and NYS Thruway Authority Standard Sheet Drawings, and references to official NYS web sites and Manufacturer's web sites pertaining to items in this Contract Award Notification are found herein. The complete NYSDOT Standard Specification for contracting being let in January 2015 may be found at <https://www.dot.ny.gov/main/business-center/engineering/specifications/english-spec-repository/espec1-8-15english.pdf>.

Users shall note that while the NYSDOT document is the guiding technical specification, the specifications herein may not be verbatim. The specifications and terms and conditions of the main IFB, and this Contract Award supersede all administrative guidelines that are contained within the NYSDOT Specification Publication.

Federal Certifications: Contractors awarded Lots 1, 2, 3 and 9, shall supply upon request documentation certifying that all steel supplied has been procured in accordance with the provisions of the Buy America and Buy American Acts in regards to the use of American produced Steel. The provisions are set forth in the Code of Federal Regulations under 49 C.F.R. § 661 et. seq. as required under the provisions of the Buy America Act (49 U.S.C. § 5323) and the provisions of the Buy American Act (41 U.S.C. §§ 8310 - 8305) as they apply to transportation projects.

NYS Department of Transportation Materials Lists: In addition to the general terms set forth by this IFB, due to the impact on public safety, NYSDOT may designate and require specific products be prequalified and listed on a NYSDOT Qualified or Approved Products List prior to their purchase and use by NYSDOT. This list as related to this procurement is found at the end of this section of the bid document.

While OGS Procurement Services and NYSDOT highly recommend that other Authorized Users take advantage of the benefits of the NYSDOT qualified lists, other Authorized Users have the option to determine and purchase the items of their choice based on their own requirements of utility, form and function, whether prelisted or not.

Specification Updates: Should updates be made to specifications by the State during the course of the contract term, Contractors are expected to update products as soon as possible in accordance with the provisions of Section VII.4 of this Invitation for Bids. No changes or substitution of products or pricing is permitted without the express approval of OGS Procurement Services.

4.2 Scope of Specifications

It is the intent of these specifications to cover the minimum requirements for plastic, polyethylene, polyvinylchloride, steel and aluminum culvert and drainage system pipe, tubing, arches, bands end sections, accessories and parts for culvert and underground drain installations, service and rehabilitations, for delivery to various locations throughout the State.

(continued)

4.3 Product Qualification

Prior to the initial purchase of any Transportation/Public Safety contract item by the New York State Department of Transportation, the Department reserves the right to request submission of product samples for testing, approval and subsequent listing on NYSDOT's Approved and or Qualified Products Lists. The existence of such a designation or listing restricts NYSDOT's purchase of such a product to the items contained therein. This requirement may be waived for products that have previously been appointed to and are currently on a list, however the State may at any time request a product be retested.

Testing of these items requires contractors to prepare and submit copies of drawings, specifications, test reports, and Federal acceptance letters as directed. The review process requires a minimum of 30 calendar days. Physical inspection of the product will be at the request of the State. Upon approval, the name of the manufacturer and the product will be placed on the Approved List. Failure of a product to qualify will result in the issuance of a Purchasing Memorandum to advise buyers of the test results.

The State also reserves the right to test any product and/or material supplied by a contractor at any time for compliance to specifications, and assess to the contractor total test cost for non-compliance.

Strict compliance with the NYSDOT's Quality Control and Quality Assurance requirements and standards is required of all contractors. These requirements include, but are not limited to, strict penalties for non-compliance, such as back-charging for Authorized User, costs to remove defective units, to install replacement units, to repackage and to ship defective units to contractor, etc.

Should updates be made to specifications by the State during the course of the contract term, contractors are expected to update products as soon as possible in accordance with the provisions of Section VII.4 of the Invitation for Bids. No changes or substitution of products or pricing is permitted without the express approval of OGS Procurement Services.

For items covered by specification numbers 706-10, 706-11, 706-12, 706-13, 706-14, 707-02, 707-05, 707-09, 707-10, 707-11, and 707-13, awards were made only to established manufacturers or their authorized dealers who were on the NYSDOT Materials Bureau Approved List.

Companies wishing to participate in future procurements for these areas who are not currently product qualified should submit a review request to the NYSDOT Material Bureau, 50 Wolf Road, Albany, NY 12232, containing the required product information and supply the Bureau with samples to begin the qualification process. Successful completion of the process with placement on the qualified list would enable participation in future bids for this commodity.

Non-approved manufacturers may submit material and products for consideration of approval for subsequent offerings to the Materials Bureau by following the submission requirements as found in the NYSDOT's Materials Bureau's Publication: Materials Procedure No.: 05-02, Issued August, 2005. Subject Code: 7.42-2, Subject: Quality Assurance Procedure for Standard Specifications, Construction and Materials Section 700 – Materials and Manufacturing.

4.4 NYSDOT Specifications Series 706 & 707

4.4.1 706-1 Non-Reinforced Concrete Pipe

SCOPE. This specification covers the material and quality requirements for non-reinforced concrete pipe 24 inches and smaller used for culverts.

GENERAL. The provisions of §706-02, Reinforced Concrete Pipe, shall apply except that all references to reinforcing steel shall be deleted. In addition, physical and dimensional requirements of concrete pipe under 12 inches in diameter shall be as stated in Table 1, Class 1, of ASTM C14. Plain concrete pipe 12 to 24 inches in diameter shall conform to Table 1, Class 2, of ASTM C14.

MATERIAL REQUIREMENTS. The Material Requirements contained in §706-02 shall apply except that all references to reinforcing steel shall be deleted.

FABRICATION REQUIREMENTS. The Fabrication Requirements contained in §706-02 shall apply except as noted herein.

Marking: No pipe class or wall designation shall be marked on the pipe.

(continued)

PHYSICAL REQUIREMENTS. The Physical Requirements contained in §706-02 shall apply except as noted herein.

Strength. The strength requirements for the respective diameter pipe sizes shall be as stated in Table 1 of ASTM C14. Details of the three-edge bearing test shall comply with ASTM C14.

SAMPLING AND TESTING. The Sampling and Testing requirements contained in §706-02 shall apply.

FINAL PRODUCTION INSPECTION. The Final Production Inspection requirements contained in §706-02 shall apply.

4.4.2 706-2 Reinforced Concrete Pipe (Classes II, III, IV, V)

SCOPE. This specification covers the material, fabrication, and physical requirements of reinforced concrete pipe and cattle pass.

GENERAL. Apply the requirements of AASHTO M 170, Reinforced Concrete Culvert, Storm Drain and Sewer Pipe, Classes II, III, IV, and V, except as modified by this specification. Produce reinforced concrete pipe by either machine made or wet cast methods in accordance with working drawings approved by the Department and in full compliance with the details of this specification. Pipe manufactured for a specific class will be acceptable for any class having a lower design strength.

Methods of manufacture include the following:

1. **Wet Cast Pipe & Cattle Pass.** Wet cast units are those made from concrete placed and consolidated by conventional equipment. These units develop resistance to freeze-thaw damage through the use of entrained air in the concrete. Air content in wet cast concrete shall range between 5.0% and 9.0%.

Manufacture wet cast pipe, for Department acceptance, in accordance with this specification and the current Materials Procedure for precast concrete titled "Procedures for Achieving and Maintaining Precast Concrete Manufacturer's Approved List Status".

2. **Machine Made Pipe.** Machine made units use very low slump concrete and methods of consolidation which produce a dense product with low permeability and good resistance to freeze-thaw damage.

Manufacture machine made pipe, for Department acceptance, in accordance with this specification and the current Materials Method titled "Quality Assurance Procedure for Concrete Pipe Items".

MATERIAL REQUIREMENTS

i. Materials

Portland Cement (Type 1, Type 2 or Type 3)	701-01
Concrete Repair Material	701-04
Concrete Repair Material - High Early Strength	701-12
Coarse Aggregate	703-02
Concrete Sand	703-07
Bar Reinforcement, Grade 60 (Reinforcement & Stirrups)	709-01
Wire Fabric for Concrete Reinforcement	709-02
Bar Reinforcement, Grade 40	709-03
Cold Drawn Wire for Concrete Reinforcement	709-09
Admixtures	711-08
Water	712-01
Concrete Pipe Joint Sealing Compound	705-16
Concrete Pipe Joint Elastomeric Gaskets	705-17
Fly Ash	711-10
Ground Granulated Blast Furnace Slag	711-12

(continued)

- ii. **Cementitious Content.** Use a minimum combined cementitious content of 565 lb./cy. This includes the Portland Cement and pozzolan (fly ash and/or ground granulated blast furnace slag). The maximum allowable total chloride content in concrete shall not exceed 0.10 percent by weight of cementitious material tested in accordance with written procedural directives of the Materials Bureau.
- iii. **Pozzolans.** Fly ash and/or ground granulated blast furnace slag may, in total, be substituted for cement up to a maximum of 20% by weight of the total amount of cement plus pozzolan in the mix.
- iv. **Admixtures.** Calcium Chloride is not allowed in concrete. Admixtures, other than an approved Air Entraining agent for wet cast pipe, are not allowed unless otherwise approved by the Materials Bureau.
- v. **Reinforcement.** Sample the reinforcement in accordance with the written directives of the Materials Bureau. Accept stirrups based on the manufacturer's certification, unless otherwise directed by the Materials Bureau.
- vi. **Pipe Joint Materials**
 - a. **Elastomeric Gaskets.** The gaskets used in the installation of round pipe shall meet the specification requirements of §705-17 and only those types and sizes designated by the pipe manufacturer on the approved drawings of the particular pipe.
 - b. **Sealing Compounds.** Concrete pipe joint sealing compound, meeting the specification requirements of §705-16, shall be used only on elliptical pipe and reinforced cattle pass.

FABRICATION REQUIREMENTS

Drawings. Submit detailed working drawings conforming to the Materials Bureau concrete pipe templates. All diameter sizes of a particular geometric shape can be included on one drawing. Separate drawings are required for cattle pass, jacking pipe and special designs. Full approval of the working drawings is required prior to the manufacture of any concrete pipe.

Design, Reinforcement and Dimensions

1. **General.** Apply the Design, Reinforcement and Permissible Variations requirements of AASHTO M 170 for Class II, III, IV and V pipe, walls B & C. The AASHTO tables show minimum reinforcement. The manufacturer may submit drawings detailing alternatives to the specified reinforcement and/or wall thickness for Materials Bureau consideration. To gain full approval of alternate designs, manufacture and test pipe samples in accordance with the written procedural directives of the Materials Bureau.
2. **Reinforced Concrete Cattle Pass.** Apply the requirements of applicable Standard Sheet with the following modification. A minimum length of 48 inches is required for each section. The maximum allowable variation in laying lengths of two opposite sides of a cattle pass section is 1/8 inch per 12 inches of diameter, not to exceed 5/8 inch in any length of cattle pass, except where beveled or curved cattle pass lengths have been specified.

Concrete Batch Placement

1. **Machine Made Pipe.** Clean and properly assemble the forms prior to placing any concrete. Transport and place the concrete mixture such that no segregation of the concrete materials or displacement of the reinforcing steel occurs within the form.
2. **Wet Cast Pipe And Cattle Pass.** Apply the Concrete Placement And Consolidation requirements contained in §704-03.

Curing. Include the type of curing, curing time and any temperature requirements on the drawing.

1. **Machine Made Pipe.** Cure the pipe in accordance with AASHTO M 170. Other methods of curing are subject to approval by the Director, Materials Bureau.
2. **Wet Cast Pipe And Cattle Pass.** Apply the Curing requirements contained in §704-03.

(continued)

Joints. Use either bell and spigot or tongue and groove design. Design the joints so as to permit effective jointing to reduce leakage and infiltration and to permit placement without irregularities.

Marking. The pipe markings must be identified on the inside barrel for pipe diameters of 1 1/2 feet and greater. If the diameter is less than 1 1/2 feet the markings may be stenciled on the outside of the pipe. Mark each piece of pipe with the following information, as applicable:

1. Name or trademark of manufacturer.
2. Date of manufacture.
3. Pipe class.
4. Wall designation.
5. Pipe diameter.
6. NYSDOT lot number ("NYSDOT") (Machine made pipe only.)
7. Indelibly mark the word "TOP" on the inside and outside of the barrel at the appropriate location on each pipe length with elliptical or quadrant reinforcing.

Repair

1. **Machine Made Pipe.** Pipe may be repaired at the plant or in the field using 701-04 Concrete Repair Material or §701-12 Concrete Repair Material - High Early Strength. Repairs to more than 10% of a lot will not be permitted. Repairs will be acceptable if, in the opinion of the Department, they are sound, properly finished and cured, and the repaired pipe conforms to the requirements of these Specifications and the written procedural directives of the Materials Bureau.
2. **Wet Cast Pipe & Cattle Pass.** Apply the Repair requirements contained in §704-03.

PHYSICAL REQUIREMENT

Strength. Apply the requirements of AASHTO M 170 except that the compressive strength requirements do not apply except for cattle pass. Conduct such number and type of three-edge bearing tests as the Materials Bureau deems necessary to establish the quality of pipe.

Reinforced concrete cattle pass will not require a three-edge bearing test. The minimum 28 day compressive strength for cattle pass, as determined by concrete cylinders, is 3000 psi.

Absorption Requirements For Machine Made Pipe. The maximum average absorption for all pipe is 8.0% by weight for the last three specimens tested.

Freeze-Thaw Requirements. The Materials Bureau reserves the right to test the pipe for durability by freeze-thaw testing. The test will be run in accordance with written procedural directives of the Materials Bureau.

SAMPLING AND TESTING. It is required that each manufacturer have a testing machine, of a type approved by the Materials Bureau, to carry out three edge bearing tests. Employ a commercial testing agency to calibrate the testing machine according to ASTM E4 at a minimum of once a year. Upon request of the Materials Bureau, furnish a record of this calibration. Sample and test reinforced concrete pipe and cattle pass units, manufactured under the requirements of this specification, as follows.

- A. **Machine Made Pipe.** Separate machine made reinforced concrete pipe into specific and identifiable production lots. Follow the written procedural directives of the Materials Bureau to determine the maximum number and type of units in a lot and the number of samples to be taken per lot. Test each lot of machine made reinforced concrete pipe as follows:
 1. **Three-Edge Bearing Test.** Follow the requirements for strength testing indicated above using the test procedure identified in the procedural directives issued by the Materials Bureau. Perform tests in the presence of a representative of the Department.
 2. **Absorption Test.** Cores from each lot, drilled by the manufacturer in the presence of a representative of the Department, will be used for this test. The cores will be tested by the Materials Bureau in accordance with the test method specified in ASTM C497 except that under "absorption test" the drying period will be 48 hours at a temperature of 230°F.

(continued)

Plug the holes when cores are taken. Ensure that plugs are sound, properly finished and cured according to the requirements of "Pipe Repair."

In addition to the above tests, pipe will be subject to inspection at any time prior to placing, and rejection may be made through failure to comply with the criteria shown in the written procedural directives of the Materials Bureau.

- B. Wet Cast Pipe & Cattle Pass.** Sample and test wet cast reinforced concrete pipe and cattle pass in accordance with Materials Bureau requirements contained in the current Materials Procedure for precast concrete, titled "Procedures for Achieving and Maintaining Precast Concrete Manufacturer's Approved List Status".

FINAL PRODUCTION INSPECTION. For wet cast units only, follow the Final Production Inspection requirements contained in §704-03.

4.4.3 706-3 Reinforced Concrete Elliptical Pipe (Classes HE-II, HE-III, HE-IV, VE-IV, VE-V & VE-VI)

SCOPE. This specification covers the material and quality requirements for both horizontal and vertical elliptical reinforced concrete pipe of the classes noted above for use as culvert pipe. Pipe designed for placement with the major axis horizontal is designated as horizontal elliptical pipe. Pipe designed for placement with the major axis vertical is designated as vertical elliptical pipe.

GENERAL. The provisions of §706-02, Reinforced Concrete Pipe Classes II, III, IV, V shall apply except as noted herein. All references to AASHTO M 170 contained in §706-02 shall be replaced with AASHTO M 207. All reference to Classes II, III, IV and V contained in §706-02 shall be deemed to include all classes of elliptical pipe.

MATERIAL REQUIREMENTS. The Material Requirements contained in §706-02 shall apply except that the pipe joint material shall be a sealing compound meeting the requirements of §705-16.

FABRICATION REQUIREMENTS. The Fabrication Requirements contained in §706-02 shall apply except as noted herein.

Design, Reinforcement and Dimensions. In the case of elliptical pipe, the working drawings indicate the equivalent round pipe diameter, rise, span and class. A tolerance of plus or minus 2% from the nominal rise and span of the pipe, as shown on the approved working drawing, will be permitted. Variations in laying lengths of two opposite sides of a pipe section shall not be more than 1/8 inch per foot of equivalent diameter, with a maximum of 5/8 inch in any length of pipe, except where beveled or curved lengths have been specified.

Marking. No wall designation shall be marked on the pipe. An equivalent round pipe diameter shall be used for markings.

PHYSICAL REQUIREMENTS. The Physical Requirements contained in §706-02 shall apply.

SAMPLING AND TESTING. The Sampling and Testing requirements contained in §706-02 shall apply.

FINAL PRODUCTION INSPECTION. The Final Production Inspection requirements contained in §706-02 shall apply.

4.4.4 706-4 Precast Concrete Drainage Units

SCOPE. This specification covers the material and fabrication requirements for precast concrete drainage units including transverse drainage interceptors.

MATERIAL REQUIREMENTS. The Material Requirements contained in §704-03 shall apply except as noted herein.

The concrete used to fabricate round precast concrete drainage units shall have a minimum compressive strength of 4000 psi @ 28 days. The concrete used to produce machine made units shall have a maximum absorption of 8.0% by weight and is not required to be air entrained.

(continued)

Additional materials listed below shall meet the requirements of the following subsections:

Frames and Grates	655
Concrete Grouting Material	701-05
Concrete Pipe Joint Sealing Compound	705-16
Concrete Pipe Joint Elastomeric Gaskets	705-17
Mortar For Concrete Masonry	705-21
Steps For Manholes	725-02

DRAWINGS. The Drawing requirements contained in §704-03 along with the following shall apply. Fabricator Working Drawings are required for all round drainage structures. Cut sheets, showing structure heights, the size and location of pipe openings and step locations are required for all drainage structures.

FABRICATION. The Fabrication requirements contained in 704-03, along with the following shall apply.

Manufacturing Process. Precast concrete drainage units shall be wet cast or machine made.

- A. **Wet Cast.** Wet cast units are manufactured from concrete, placed and consolidated by conventional equipment, containing entrained air to develop resistance to freeze-thaw damage.
- B. **Machine Made.** Machine made units are manufactured with very low slump concrete, consolidated to produce a dense product with low permeability and good resistance to freeze-thaw damage. Machine made units are those made by the following methods:
 - Packerhead
 - Roller suspension
 - Centrifugal
 - Machine tamped
 - Machine vibrated
 - Other methods as approved by the Materials Bureau

Reinforcing. Reinforcing bar splices shall be lapped a minimum of 30 bar diameters and tied securely. Wire fabric splices shall be secured by one of the following methods:

1. **Tying.** Under this method the ends shall lap to a length of not less than 30 diameters of the reinforcement and the lap shall contain a longitudinal member. A sufficient number of laps shall be tied to maintain continuity of the cage through the period of placement and curing of the concrete.
2. **Welding.** Each circular member shall be lapped a minimum of 2 inches and welded. The weld shall develop a minimum of 50 percent of the specified strength of the wire.

Round Units. Precast bases, floors, risers, conical top sections, grade rings and flat slab tops shall conform to the design, dimension and reinforcement requirements of ASTM C478. The C478 requirements for splices, laps and welds shall not apply.

Transverse Drainage Interceptors. Bar reinforcement shall be epoxy coated meeting the requirements of §709-04.

Joints. Joints between precast riser sections shall be formed with male and female ends so that when the sections are assembled they will make a continuous and uniform unit.

Joint Sealant Materials. Joints between precast sections are to be sealed with flexible watertight Elastomeric Gaskets, Pipe Joint Sealing Compounds, and Mortar for Concrete Masonry, Concrete Grouting Material or Concrete Repair Material meeting the requirements of the Standard Specifications. If elastomeric Gasket Sealers are used the shape, size and placement shall be recommended by the precast manufacturer.

Steps for Drainage Units. Steps for drainage units shall conform to §725-02, Steps for Manholes. Steps in risers and conical top sections shall be aligned to form a continuous ladder with rungs equally spaced vertically in the completed unit at a maximum spacing of 16 inches. All steps in a completed drainage unit shall be the same size. Steps shall be embedded into the walls of the section a minimum

(continued)

of 3 inches. The rung shall project a minimum clear distance of 4 inches from the walls of the section measured from the point of embedment. If the steps are grouted, the grouting material shall conform to §701-04 Concrete Repair Materials or §701-05 Concrete Grouting Material, or §701-12 Concrete Repair Material - High Early Strength. If plastic inserts are used for installing steps, they shall be approved by the Materials Bureau. Steps which are damaged during installation or handling shall be replaced.

Frames for Grates. Frames cast into the top slab or top of the uppermost riser shall be secured and held in place by a minimum of 4 stirrups or studs per frame, welded to the frame near the corners. Parallel bar frames shall contain shear stud anchors, for the purpose of transferring loads, as required and detailed on the standard sheet for parallel bar grates and frames. Shear stud anchors, when required, shall replace the frame securing stirrups or studs.

Dimensional Tolerances.

- A. Drainage Units (Rectangular / Square).
 - Internal dimensions +5/8 inch, -1/2 inch
 - Wall thickness
 - 6 inches +3/4 inch, -1/4 inch
 - ≥8 inches +3/4 inch, -1/2 inch
 - Reinforcing steel cover
 - Walls (inside face) 2 inches (min), 4 inches (max)
 - Base (inside face) 2 inches (min), 3 1/4 inches (max)
 - Roof (all faces) +5/8 inch, -1/4 inch
 - Pipe openings (2 inches) ±1 inch
 - Step spacing and alignment ±3/4 inch

- B. Drainage Units (Round).
 - Internal diameter
 - ≤60 inches ±5/8 inch,
 - >60 inches & ≤ 96 inches ±3/4 inch
 - >96 inches ±1 1/2 inches
 - Wall thickness
 - Internal diameter ≤60 inches +5/8 inch, -1/4 inch
 - Internal diameter >60 inches & ≤ 96 inch +3/4 inch, -1/2 inch
 - Internal diameter >96 inches +1 inch, -5/8 inch,
 - Reinforcing steel cover
 - Base, Roof and Walls +5/8 inch, -1/4 inch
 - Pipe openings (2 inches) ±1 inch
 - Step spacing and alignment ±3/4 inch

SAMPLING AND TESTING. The sampling and testing requirements contained in §704-03 shall apply except as noted herein.

A. Machine Made Units. Testing for air content is not required. Cores shall be taken from the hardened concrete and tested for absorption. A minimum of 3 cores per 5 batches of a single mix with a minimum of three cores per day per mix shall be used to measure absorption. The average absorption of the 3 cores shall not exceed the maximum absorption specified herein. Testing shall be in accordance with ASTM C497 except that the drying period shall be 48 hours at a temperature of 230°F.

MARKING. The Marking requirements contained in §704-03 shall apply except as noted herein.

Markings shall be placed on the inside face of all precast pieces. Each flat slab top that doesn't have an integral frame or a design that readily indicates the top surface shall have the words "INSTALL THIS SIDE UP" placed on its top surface.

The markings on rectangular drainage units, including base slabs, bases and risers, shall include the maximum placement depth in feet ("MPD...feet"). The maximum placement depth is based on wall

(continued)

thickness and reinforcement and shall be in accordance with the Department's Standard Sheets or the contract plans.

Instead of marking the contract number on each unit they may be marked with "NYSDOT".

FINAL PRODUCTION INSPECTION. The Final Production Inspection requirements contained in §704-03 shall apply.

4.4.5 706-5 Porous Concrete Pipe Underdrain

SCOPE. This specification covers the material and quality requirements for porous concrete pipe and extra strength concrete porous concrete pipe underdrains.

GENERAL. Porous concrete pipe and extra strength porous concrete pipe shall be manufactured in accordance with approved working drawings and in compliance with details set forth below.

MATERIAL REQUIREMENTS. All materials shall comply with the requirements of '706-02, Reinforced Concrete Pipe, except that reinforcement shall not be used.

FABRICATION. Porous concrete pipe and extra strength porous concrete pipe shall conform in size and shape to the details shown on the standard sheet for porous concrete pipe underdrain and the approved working drawing.

The inside surface of the pipe shall be straight and true to dimensions with a permissible variation from the true form of not more than 1 1/2 percent. A tolerance of 5% will be permitted in the diameter of the pipe. The wall thickness of the pipe may be greater than shown on the standard sheet, but it shall not be less than 95% of the stipulated wall thickness.

High early strength cement, calcium chloride or any other additive shall not be used unless otherwise approved by the Materials Bureau.

Concrete mix proportions will be such that will produce a concrete mix of such quality that the pipe will conform to the test and design requirements of these specifications.

Each length of pipe shall be clearly marked on the outside with the name or trademark of the manufacturer. Extra strength porous concrete pipe underdrain shall be clearly marked, "Extra Strength".

Curing. All pipe shall be cured in accordance with the provisions of §706-02.

Strength Requirements. The minimum ultimate strength for the size of the pipe being tested shall be as specified on the standard sheet. Requirements of §706-02 shall apply except that no determination of a 0.01 inch crack will be required and the ultimate strength values as determined on full-length specimens shall be as specified on the standard sheet.

Infiltration Requirements. Pipe shall be tested for rate of infiltration in accordance with the method of test outlined in AASHTO Designation M176. The minimum rate of infiltration shall not be less than 1 gallon per minute per inch of internal diameter per foot of pipe for all sizes.

All tests shall be performed by the manufacturer at their plant and shall be witnessed by a representative of the Department. The number of samples for test shall be as directed by the Materials Bureau.

Other Requirements. In addition to the above tests, the pipe shall be subject to inspection at all times prior to placing and rejection will be made through failure to comply with any of the following conditions:

- A. **Dimensions.** The pipe shall not vary in any dimensions more than permitted by this specification.
- B. **Fractures or Cracks.** The pipe shall have no fractures or cracks passing through the shell or socket of the pipe, except that a single crack not exceeding 2 inches in length at either end of a pipe shall not be considered cause for rejection unless the defect exists in more than 5% of the lot offered for sampling and testing.
- C. **Quality.** There shall be no defects that indicate imperfect mixing and molding.

(continued)

- D. **Strength.** There shall be no cracks that are sufficient to impair the strength, durability or serviceability of the pipe.
- E. **Shape.** The shape of the pipe shall be such that there shall be no variation in alignment of more than 1/8 inch per linear foot.

BASIS OF ACCEPTANCE. The material will be considered for acceptance in stock lot quantities at the manufacturing location in accordance with procedural directives of the Materials Bureau. In addition, the manufacturer shall furnish the Department representative at the plant a certification for each lot manufactured certifying that all pipe in the lot was manufactured in accordance with the terms of this specification and that the pipe details conform to drawings previously approved by the Department. Pipe shall be considered ready for acceptance when a lot conforms to the indicated test requirements. The manufacturer shall be permitted to retest to determine specification compliance. Pipe not used within two years after its original acceptance shall be retested by the Department before it can be used.

4.4.6 706-7 Reinforced Concrete Pipe End Sections

SCOPE. This specification covers the material and fabrication requirements for reinforced concrete pipe end sections.

MATERIAL REQUIREMENTS. The Material Requirements contained in §704-03 shall apply.

DRAWINGS. The Drawing requirements contained in §704-03 shall apply.

FABRICATION. The Fabrication requirements contained in §704-03, along with the following, shall apply. The barrel portion of the end section shall meet the Design, Reinforcement and Permissible Variations requirements of AASHTO M 170 for Class III Pipe, Wall Designation B.

SAMPLING AND TESTING. The Sampling and Testing requirements contained in §704-03 shall apply, unless otherwise approved by the Director, Materials Bureau.

MARKING. The Marking requirements contained in §704-03 shall apply.

FINAL PRODUCTION INSPECTION. The Final Production Inspection requirements contained in §704-03 shall apply, unless otherwise approved by the Director, Materials Bureau.

(continued)

4.4.7 706-9 Cured In Place Pipe (CIPP) Liner

SCOPE. This specification covers the material requirements for cured in place pipe liners, or a resin and hardener system, used in rehabilitation of culverts and storm drains.

GENERAL. The flexible liner will be fabricated from one or more layers of polyester felt, or from an alternate material approved by the Director of the Materials Bureau. An impermeable material will be bonded to one or both sides of the felt liner. A styrene or a non-styrene based thermoset resin and catalyst or an epoxy resin and hardener system, compatible with the proposed inversion process system and curing method must be used. If indicated in the contract documents, a resin containing less than five percent volatile organic compounds (VOCs) with less than 0.1 percent hazardous air pollutants (HAPs) and less than 0.1 percent of water quality pollutants as listed in 6 NYCRR Parts 700-705 shall be supplied. Proposed resin must be compatible with the proposed inversion process.

MATERIAL REQUIREMENTS. Supply a resin and hardener system material conforming to the following minimum values:

<u>Property</u>	<u>Standard</u>	<u>Required*</u>
Tensile Stress, psi	ASTM D638	2500
Flexural Stress, psi	ASTM D790	4500
Flexural Modulus, psi	ASTM D790	250000

* If the submitted design calculations indicate that higher values for the above listed material properties have been assumed, then the above listed values will become the minimum values for these liner material properties.

BASIS OF ACCEPTANCE. Acceptance of this material will be based on the manufacturer's / installer's name appearing on the Approved List for Rehabilitation of Culverts and Storm Drains. Application for approval and entering into the aforementioned list shall be in accordance with *Materials Procedure 04-001, "Approval Process for POLYESTER FORMED IN PLACE PIPE LINER 706-06"*.

4.4.8 706-10 Polyvinyl Chloride Pipe (Relining)

SCOPE. This specification covers the material requirements for polyvinyl chloride pipe when used in rehabilitation applications of culverts and storm drains.

GENERAL. The polyvinyl material from which the pipe and fittings are extruded or molded will not contain any reclaimed, recycled, reground or reworked material and will be comprised of virgin polyvinyl resins only. The resins used will meet the requirements contained in this specification. The pipe and fittings will be manufactured in such a manner so that all cross sections will be dense, homogeneous, and free from any imperfections.

MATERIALS REQUIREMENTS. The Polyvinyl Chloride pipe materials must conform to ASTM F1803 (Profile Wall), ASTM F949 (Corrugated), ASTM F679, or ASTM D3034. All materials supplied will be clearly marked with the appropriate ASTM as certified.

BASIS OF ACCEPTANCE. Acceptance of this material will be based on the manufacturer's name appearing on the Approved List for Rehabilitation of Culverts and Storm Drains.

(continued)

4.4.9 706-11 High Density Polyethylene Pipe (Relining)

SCOPE. This specification covers the material requirements for high density polyethylene pipe when used in rehabilitation applications of culverts and storm drains.

General. The high density polyethylene material from which the pipe and fittings are extruded will not contain any reclaimed, recycled, reground or reworked material and will be comprised of virgin high density polyethylene resins only. The resins used will meet the requirements contained in this specification. The pipe and fittings will be manufactured in such a manner so that all cross sections will be dense, homogeneous, and free from any imperfections.

MATERIAL REQUIREMENTS. The high density polyethylene pipe material must conform to ASTM F894 (Profile Wall) or ASTM F714 (Smooth Wall). All materials supplied will be clearly marked with the appropriate ASTM as certified.

BASIS OF ACCEPTANCE. Acceptance of this material will be based on the manufacturer's name appearing on the Approved List for rehabilitation of Culverts and Storm Drains.

4.4.10 706-12 Smooth Interior Corrugated Polyethylene Pipe

SCOPE. This specification covers the material and quality requirements for smooth interior corrugated polyethylene pipe and fittings.

MATERIAL REQUIREMENTS. The polyethylene material for the pipe and fittings shall meet the requirements of AASHTO M294, Type S or Type SP. In addition, when checked with a 12 inches straight edge the smoothness of the interior liner shall not deviate more than 1/4 inch. The material from which the pipe and fittings are extruded or molded will not contain any reclaimed, recycled, reground or reworked material and will be comprised of virgin material only.

BASIS OF ACCEPTANCE. Smooth interior, corrugated polyethylene pipe will be accepted on the basis of the manufacturer's name and location appearing on the Department's Approved List and a material certification that specifies the product conforms to this specification.

The supplier shall provide two copies of the approved Materials Details through the Contractor to the Engineer as part of the evidence of acceptability for the material at least 10 days prior to shipment of the product to the job site.

4.4.11 706-13 Perforated Corrugated Polyethylene Underdrain Tubing

SCOPE. This specification covers the material and quality requirements for corrugated polyethylene tubing and fittings.

MATERIAL REQUIREMENTS. The corrugated polyethylene tubing and fittings 4 thru 10 inches in diameter shall meet the requirements of AASHTO Designation: M252, Corrugated Polyethylene Drainage Tubing except that tubing manufactured from material meeting A.S.T.M. Designation D1248, Class B, shall also be acceptable. The material from which the pipe and fittings are extruded or molded will not contain any reclaimed, recycled, reground or reworked material and will be comprised of virgin material only.

Corrugated polyethylene tubing and fittings 12 inches in diameter shall meet the requirements of AASHTO M252 except the pipe stiffness requirement shall be 45 psi at 5% deflection.

BASIS OF ACCEPTANCE. Perforated corrugated polyethylene underdrain tubing will be accepted on the basis of the manufacturer's name and location appearing on the Department's Approved List and a material certification that specifies the product conforms to this specification.

(continued)

4.4.12 706-14 Corrugated Interior Polyethylene Pipe

SCOPE. This specification covers the material and quality requirements for corrugated interior polyethylene pipe and fittings.

MATERIAL REQUIREMENTS. The polyethylene material for the pipe and fittings shall meet the requirements of AASHTO M294, Type C. The material from which the pipe and fittings shall be extruded or molded shall not contain any reclaimed, recycled, reground or reworked material whatsoever, but shall be compounded from virgin resins, plasticizers, stabilizers, and such materials that when compounded, it shall meet the requirements contained in this specification

BASIS OF ACCEPTANCE. Corrugated interior polyethylene pipe will be accepted on the basis of the manufacturer's name and location appearing on the Department's Approved List and a material certification that specifies the product conforms to this specification.

4.4.13 706-15 PVC Plastic Drain Pipe System

SCOPE. This specification covers the material and quality requirements for poly (vinyl chloride) plastic drain pipe, fittings and solvent cement when used as a drain pipe system.

GENERAL. The PVC material from which the pipe and fittings shall be extruded or molded shall not contain any reclaimed, recycled, reground or reworked material whatsoever, but shall be compounded from virgin PVC resins, plasticizers, stabilizers, and such materials that when compounded, it shall meet the requirements contained in this specification.

The pipe and fittings shall be extruded or molded in such a manner that all cross sections shall be dense, homogeneous, and free from porosity or other imperfections.

The solvent cement shall be a solution of unplasticized PVC tetrahydrofuran and cyclohexanone.

MATERIAL REQUIREMENTS. The PVC material for the pipe and fittings shall meet the requirements of ASTM D1784 for Rigid Poly (Vinyl Chloride) Compounds and Chlorinated Poly (Vinyl Chloride) Compounds, Class 12444-B.

The molded or extruded pipe shall conform to ASTM D1785 for Poly (Vinyl Chloride) (PVC) Plastic Pipe, Schedule 80, PVC 1120.

The molded or extruded fittings shall conform to ASTM D2467 for Socket-Type Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80, PVC I.

The solvent cement shall meet the requirements of ASTM D2564 for Solvent Cements for Poly (Vinyl Chloride) (PVC) Plastic Pipe and Fittings.

Nominal Size	Outside Diameter (Inches)	Inside Diameter (Inches)	Wall Thickness Schedule 80 (Inches)
4	4.500	3.826	0.337
5	5.563	4.813	0.375
6	6.625	5.761	0.432
8	8.625	7.625	0.500
10	10.750	9.564	0.593

DIMENSIONS. The dimensions and tolerances of the pipe and fittings shall conform to ASTM D1785 and D2467 respectively.

MARKING. All material furnished shall be plainly marked in accordance with ASTM D1785, D2467, and D2564 for the pipe, fittings and solvent cement, respectively.

BASIS OF ACCEPTANCE. All pipe, fittings and solvent cement shall be accepted on the basis of the manufacturer's certification that the material conforms to this specification.

(continued)

4.4.14 706-16 Cellular Polystyrene Protective Cover

SCOPE. This specification covers the material and quality requirements for cellular polystyrene when used as protective cover for pipes.

GENERAL. The protective cover shall be fabricated from rigid extruded cellular polystyrene such that it shall meet the requirements contained in this specification.

The polystyrene shall be extruded in such manner that all cross sections shall be uniform and free from imperfections.

MATERIALS REQUIREMENTS. The fabricated cellular polystyrene protective cover shall meet the following requirements:

Property	ASTM Test Procedure	Requirement
Density, pcf	D1622	2.0 ± 0.15
Compressive Strength, psi	D1621	30 ± 5
Flammability	D1692	Self-Extinguishing

DIMENSIONS. The protective cover shall be fabricated in cylindrical half-sections of any convenient length for application to straight pipe and half-sections of suitable shape and length to protect any non-linear portions of the pipe or fittings.

The thickness of the protective cover shall be maintained within ± 1/16 inch of the thickness shown on the plans.

The protective cover shall be fabricated such that it mates with the pipe without leaving gaps at the seams. It shall have the following maximum clearance between outside diameter of nominal pipe and inside diameter of protective cover:

Nominal Pipe Size, Inches	Maximum Clearance, Inches
1/8 to 1 1/2 incl.	1/64
2 to 4 incl.	2/64
5 to 11 incl.	5/64
12 and over	6/64

BASIS OF ACCEPTANCE. All protective cover furnished shall be marked with the following information: manufacturer's name, type of material, and nominal size.

All protective cover shall be accepted on the basis of the Manufacturer's certification that the material conforms to this specification.

4.4.15 706-17 Precast Concrete Box Culverts

SCOPE. This specification covers the material and quality requirements for precast concrete box culverts.

MATERIAL REQUIREMENTS. The Material Requirements contained in §704-03 shall apply except as noted herein.

The concrete used to fabricate precast concrete box culverts shall have a minimum compressive strength of 5000 psi @ 28 days. Joint gasket material shall meet the requirements of ASTM D1056, Grade # 2A1 or # 2A2.

DESIGN. When the contract plans contain complete design details for the culvert, alternate designs will not be considered. When the contract plans do not contain complete design details for the culvert the Contractor shall be responsible for providing them. Precast concrete box culvert designs shall meet the requirements of Highway Design Manual Section 19.5 "Design Guidelines for Reinforced Concrete Culverts". Design details for bridge size culverts shall also include load rating information.

(continued)

The Load Rating shall be determined in accordance with the current AASHTO "Manual for Bridge Evaluation," with all interim provisions in effect. The contractor shall show which method (allowable stress or load factor) was used in load rating computations. Load ratings shall also be computed by the Load and Resistance Factor Rating (LRFR) method. The contractor shall include all load rating computations in the design calculation submittal. Design calculations shall be stamped by a Professional Engineer. The transmittal, processing and approval of box culvert designs will be in accordance with procedural directives of the Materials Bureau.

DRAWINGS. The Drawing requirements contained in §704-03, along with the following shall apply.

All fabrication drawings for Contractor provided designs shall be stamped by a Professional Engineer licensed, and registered, to practice in New York State. Fabrication drawings for bridge size culverts shall include load rating information. Reproducible drawings are required for bridge size culverts only.

FABRICATION. The Fabrication requirements contained in §704-03, along with the following shall apply.

Reinforcing. Unless noted otherwise in the contract plans or approved fabrication drawings the concrete cover over reinforcing steel shall be 1 inch minimum on the walls, floor slab and roof slab of culverts and 1 1/2 inches minimum on wingwalls. When fill heights over the box culvert are less than 24 inches the concrete cover on the outside face of the roof slab shall be 2 inches minimum and all reinforcing steel in the top mat of the roof slab shall be epoxy coated or the concrete shall contain corrosion inhibitor. Fill heights shall be measured from the top of pavement to the top of the culvert roof slab. All reinforcing steel in the wall section of wingwalls shall be epoxy coated or the concrete shall contain corrosion inhibitor.

Joints. Precast concrete box culvert sections shall be fabricated with a female joint on the upstream end and male joint on the downstream end. Joint depth shall be a minimum of 2 inches and a maximum of 4 inches. The ends of longitudinal reinforcing steel shall have 1/2 inch minimum concrete cover at the mating surface of the joint. The circumferential reinforcing steel shall have 1 inch minimum concrete cover, as measured to the outermost bars, at the mating surface of the joint. When interferences occur which prevent this, the concrete cover shall be increased accordingly as shown on the approved fabrication drawings. Joints shall be fabricated such that when box culvert sections are fully drawn together the gap between adjacent culvert sections is 3/4 inch maximum. The outside mating surface of the joint shall have a continuous 1 x 1 inch gasket installed at the precast plant.

Corrosion Inhibitor. Corrosion inhibitor may be used in lieu of epoxy coated reinforcing.

Dimensional Tolerances

- Internal Dimensions
 - < 48 inches: $\pm 1/2$ inch
 - ≥ 48 inches & ≤ 96 inches: $\pm 3/4$ inch
 - > 96 inches: ± 1 inch
- Wall & Slab Thickness
 - < 10 inches: $+5/8$ inch, $-1/4$ inch
 - ≥ 10 inches: $+3/4$ inch, $-1/4$ inch
- Design Laying Length $+1$ inch, $-1/2$ inch
- Variation in Laying Length of Opposite Faces
 - Span / Rise ≤ 84 inches: $\pm 5/8$ inch
 - Span / Rise > 84 inches: $\pm 3/4$ inch
- Surface Irregularities on Mating Surface of Joint $\pm 1/4$ inch
(when checked with a 3-foot straight-edge)

Repair. Minor defects in the mating surface of the joint, that do not come in contact with the joint gasket material and are 1/4 inch or less in depth, do not require repair.

SAMPLING AND TESTING. The Sampling and Testing requirements contained in §704-03 shall apply.

(continued)

MARKING. The Marking requirements contained in §704-03 shall apply except as noted herein. Markings shall be placed on the inside face of one wall of each culvert barrel section.

FINAL PRODUCTION INSPECTION. The Final Production Inspection requirements contained in §704-03 shall apply.

4.4.16 706-18 Perforated Polyvinyl Chloride Underdrain Pipe

SCOPE. This specification covers the material and quality requirements for smooth-wall perforated polyvinyl chloride (PVC) plastic pipe, couplings and fittings intended for use in underdrains.

MATERIAL REQUIREMENTS. Perforated polyvinyl chloride underdrain pipe and fittings shall conform to AASHTO M278 Class PS46.

BASIS OF ACCEPTANCE. Acceptance of the perforated polyvinyl chloride underdrain pipe will be based on the manufacturer's certification of compliance with these specifications.

4.4.17 707-02 Corrugated Steel Pipe

SCOPE. The material requirements of corrugated steel pipe with metallic, bituminous, Portland cement concrete/or polymer coating intended for use in construction of culverts and drainage systems.

GENERAL. The corrugated steel pipe covered by this specification is classified as follows:

1. Type I. A full circular cross-section, with a single thickness of corrugated sheet.
2. Type IR. A full circular cross-section, with a single thickness of smooth sheet, fabricated with helical ribs projecting outwardly.
3. Type II. A Type I pipe which has been reformed into a pipe-arch, having an approximately flat bottom.
4. Type IIR. A Type IR pipe which has been reformed into a pipe-arch having an approximately flat bottom.
5. Type III. A Type I pipe which has been perforated to permit the in-flow or out-flow of water.

MATERIAL REQUIREMENTS. Apply the requirements of AASHTO M 36 Types I, IR, II, IIR, and III except as modified herein for all metallic coated corrugated steel pipe. Apply the requirements of AASHTO M 190M except as modified herein for all bituminous coated corrugated steel pipe. Apply the requirements of AASHTO M 245M Types I and II except as modified herein for all polymer coated steel pipe.

When Type IR or Type IIR corrugated steel pipe (spiral rib) is specified, the nominal dimension of the ribs shall be 3/4 x 3/4 inch at 7 1/2 inch pitch.

A. **Coatings.** Coat pipe with one of the following:

1. **Metallic.** The steel sheet will have a protective coating of zinc galvanizing (AASHTO M 218) or of Aluminum-Coated (Type 2) (AASHTO M 274).
2. **Fully bituminous coated and paved invert (AASHTO M 190, Type C).** In addition to one of the metallic coatings, the pipe will be fully bituminous coated and have a bituminous paved invert.
3. **Fully bituminous coated and 100 percent paved (AASHTO M 190, Type D).** In addition to one of the metallic coatings, the pipe will be fully bituminous coated and have a fully paved, smooth bituminous interior.
4. **Polymer coated.** The steel sheet will have a protective coating of zinc (galvanizing). In addition, the pipe will have a minimum interior polymer coating thickness of 0.01 inch and an optional exterior polymer coating. If an exterior polymer coating is applied, it will have a minimum thickness of 0.003 inch.
5. **Polymer coated with a bituminous paved invert.** In addition to the zinc and polymer coatings, the pipe will have a bituminous paved invert.

TABLE 707-2-1 SHEET GAUGE NUMBERS & THICKNESS OF UNCOATED METAL

(continued)

Manufacturer's Standard Gauge #	Thickness Equivalent(*) Inches	Manufacturer's Standard Gauge #	Thickness Equivalent(*) Inches
1	0.27	15	0.067
2	0.25	16	0.060
3	0.24	17	0.054
4	0.224	18	0.048
5	0.21	19	0.042
6	0.20	20	0.036
7	0.18	21	0.033
8	0.164	22	0.030
9	0.150	23	0.027
10	0.134	24	0.024
11	0.120	25	0.021
12	0.104	26	0.018
13	0.090	27	0.016
14	0.074	28	0.015

*NOTE: Minimum thickness shall conform to the appropriate AASHTO specifications.

6. Portland Cement Concrete Lined. The steel sheet will be covered with dense, homogeneous, non-segregating concrete lining. The concrete will be a minimum thickness of 1/2 inch over the crest of the corrugations of the carrier pipe. In no case will the amount of Portland cement, blended cement, or Portland cement plus flyash be less than 17 pcf. Flyash in the mix may not exceed 20% by weight of the cementitious material. When type IP cement is used, no flyash will be added in batching. All concrete will have a water-cement ratio not exceeding 0.50 by weight. Cure the concrete lining prior to installation as per manufactures instructions.

The bituminous material for coating and/or paving will be homogeneous and have the following properties in addition to those specified by AASHTO M 190:

Penetration at 77°F, 100g, 5 seconds	AASHTO T49	25-50
Penetration Ratio (40°F/77°F x 100)	AASHTO T49	80-90
Softening Point °F(Ball & Ring)	AASHTO T53	88-110

Apply the requirements of AASHTO M 246 for polymer material. Polymer coating materials must appear on the Department's Approved List.

Apply the material requirements of ' 501-2.02 Materials for Portland cement concrete liner material.

- B. **Gauge.** The nominal metal thickness corresponding to any gauge is shown in Table 707-2-1.
- C. **End Finish.** To facilitate field joining, reroll the ends of all helical corrugated steel pipe with diameters of 12 inches or greater to form a minimum of two annular corrugations of no less than 2 2/3 inch pitch by 1/2 inch depth. Reroll the ends of Type IR and IIR pipe to form only two corrugations.
- D. **Coupling Bands.** Supply annular corrugated steel coupling bands for all round pipe sections (Types I, IR, and III) 12 inches or greater in diameter. The band corrugations will have the same dimensions as the pipe ends. Mesh the band with at least one full corrugation and lap it equally on each pipe end. The band width will be a minimum of 7 inches for pipe diameters up to and including 32 inches. The band width will be a minimum of 10 1/2 inches for pipe diameters greater than 32 inches. The thickness of the band cannot be less than 2 nominal sheet thicknesses thinner than the pipe and in no case thinner than 0.05 inch.

Pipe arches (Type II and IIR) may be joined by the annular corrugated bands described above or by special projection type coupling bands. The special projection bands will consist of two rows of projections at 3 inches center-to-center that will mesh with at least one full corrugation and will lap

(continued)

equally on each pipe end. The thickness of the special projection bands will not be less than 2 nominal sheet thicknesses thinner than the pipe and in no case thinner than 0.06 inch.

Regular projection type coupling bands (dimpled bands) will not be acceptable for 1 foot in diameter pipe and larger. Dimpled bands may be used on pipe diameters smaller than 1 foot, all sizes of perforated underdrain pipe (Type III), and for connecting pipe extensions to existing helical corrugated metal pipe without rerolled ends, unless otherwise shown on the plans.

Coupling bands may be one or two piece. Use two piece coupling bands on pipe 48 inches or greater in diameter.

Use one of the following coupling band connectors:

- Galvanized steel angles, 2 x 2 x 3/16 inches
- Lug connectors
- Bar and strap connectors

Rivet, bolt, or weld these connectors to the coupling bands. Any evidence of loose bolts or rivets, bearing failure, or weld or band tearing are cause for rejection and replacement of that coupling band. As an alternate to the coupling band connectors stated above, a corrugated angle which conforms to an approved Materials Detail may be used.

Coat the steel sheet used for coupling bands with a polymer or metallic coating. If polymer or metallic coated corrugated steel pipe is being joined, the bands must have the same coating as the pipe.

Joints for concrete lined pipe will meet the requirements of §603-3.06 Joints.

E. **Coating Repair.** Repair damaged metallic, bituminous, Portland cement concrete and/or polymer coating.

Metallic coating field repairs will be allowed only when the total damaged area on each piece is less than 2 sf of coated surface, excluding aluminum coated rerolled ends. Any piece having damaged areas totaling more than 2 sf, excluding aluminum coated rerolled ends, will be rejected.

Repair metallic coatings as follows:

- Power disk sand or mechanically wire brush areas of damaged coating to bright metal
- Remove oil, grease, and corrosion products from repair areas
- Spray or brush a zinc-rich paint on clean, dry repair areas.

The paint brand must appear on the Department's Approved List, Materials for Use in Repairing Galvanized Surfaces §719-01. The dry film paint thickness shall be at least 0.005 inch. Do not apply paint below 40°F.

Repair aluminum coatings damaged during rerolling at the manufacturing location. The rerolled ends may be either spot repaired or completely painted to repair small areas of damaged coating. Make repairs to the rerolled ends of aluminum coated pipe as referenced above. These rerolled end repairs, when properly completed, will not be counted toward the 2 sf of allowable damaged coating described above.

Repair damaged interior bituminous coatings using the original material or a Corrugated Metal Pipe Bituminous Coating Repair Material appearing in the Department's Approved List. Exterior damage to a bituminous coated pipe requires repair to the metallic coating only.

Repair damaged interior polymer coatings using Polymer Repair Materials for Steel Sheet used for Corrugated Pipe appearing in the Department's Approved List. Exterior damage to a polymer coated pipe requires repair to the metallic coating only.

Repair damaged Portland cement concrete linings with Item 701-08, vertical and overhead patching material. The lining will be free of cracks exceeding 0.04 inch in width or the pipe will be rejected.

F. **Marking.** Mark or tag each length of corrugated steel pipe over the coating as approved by the Department to properly cross-reference the supplier's certification.

(continued)

G. Additional Defects. In addition to coating damage and other criteria established in Materials Bureau procedural directives, the following additional defects along with those listed in AASHTO will be cause for rejecting the pipe when inspected at the project:

- Variation from a straight centerline of more than 3/4 inch in 20 feet.
- Any dents greater than 3 inches in diameter
- Any punctures
- Loosely formed or cracked lock seams
- Cracks through the metal
- Sharp bends in pipe arches that are less than the specified minimum corner radius for that size.

BASIS OF ACCEPTANCE. Corrugated steel pipe will be accepted on the basis of certified documentation issued by a supplier appearing on the Department's Approved List. Certification will accompany all shipments arriving at the project in accordance with Materials Bureau procedural directives. Shipments arriving without certification, or with improper certification will be rejected.

The Engineer will measure gauge and coating thicknesses at the project. The pipe will be rejected if the metal and/or coating thickness is less than required or certified. The Contractor will supply equipment required to measure metal and coating thicknesses as detailed in §603-3.02H, Thickness Measuring Equipment.

Acceptance requirements including thickness measurements, visual inspection instructions, certification format, and fabrication shop approval will be in accordance with Materials Bureau procedural directives. At the option of the Department, this material may be subjected to shop inspection. Polymer coatings, coating applicator facilities, and application methods are subject to Materials Bureau approval. Samples are required for laboratory and field testing. Field testing will be a minimum of two years duration. Upon approval, the brand of polymer coating and applicator will be placed on the Department's Approved List. Certifications for polymer coated pipe received at the project will include the brand and applicator of polymer coating, which must appear on the Department's Approved List. Corrugated connecting angles will be accepted provided an approved Materials Detail appears on the Department's Approved List from that supplier.

4.4.18 707-03 Ductile Iron Pipe (Non-Pressure)

SCOPE. This specification covers the material and quality requirements for 14 to 54 inches Ductile Iron Culvert Pipe.

GENERAL. Ductile Iron Pipe. (Non-Pressure) shall be a centrifugally cast iron pipe conforming to the requirements of ASTM A716, Ductile Iron Culvert Pipe.

BASIS OF ACCEPTANCE. Ductile Iron Pipe (Non-Pressure) shall be accepted on the basis of the Manufacturer's certification that the material conforms to this specification. The certification shall accompany the material delivered to the job site.

The Department reserves the right to sample and test this material subsequent to delivery at the project site.

(continued)

4.4.19 707-04 Ductile Iron Pipe (Pressure)

SCOPE. This specification covers the material, and quality requirements for 3 to 54 inches Ductile Iron Pipe (Pressure).

GENERAL. Ductile Iron Pipe (Pressure) shall be a centrifugally cast iron pipe conforming to the requirements of ANSI A21.51., Ductile-Iron Pipe, Centrifugally Cast In Metal Molds or Sand line Molds, for Water or Other Liquids.

BASIS OF ACCEPTANCE. Ductile Iron Pipe (Pressure) shall be accepted on the basis of the Manufacturer's certification that the material conforms to this specification. The certification shall accompany the material delivered to the job site.

The Department reserves the right to sample and test this material subsequent to delivery at the project site.

4.4.20 707-05 Tunnel Liner Plate (Relining)

SCOPE. This specification covers the material and fabrication requirements for tunnel liner plate.

MATERIAL REQUIREMENTS. Tunnel liner plate steel must conform to ASTM A569. Tunnel liner plate aluminum must conform to AASHTO M219 (ASTM B746). Before cold forming into tunnel liner plate the plates must conform to the following mechanical requirements:

	STEEL	ALUMINUM	
		(0.125-0.15 in.)	(0.173-0.25 in.)
Tensile Strength, psi	42,000 min.	35,000 min.	34,000 min.
Yield Point, psi	28,000 min.	24,000 min.	24,000 min.
Elongation in 2 inch, percent	30 min.	6 min.	8 min.

Prepare test specimens in accordance with ASTM A570 for steel sheets or ASTM A283 for steel plates and ASTM B209M for aluminum plates. Deliver the Mill test reports, for each heat and thickness to the Engineer with each shipment of liner plates.

Galvanizing. Galvanize steel plates in accordance with AASHTO M167 M. Galvanize after the plates are formed, punched and curved. Hot dip galvanize all bolts and nuts, when used with galvanized tunnel liner plate in accordance with ASTM A153.

Liner Plate. Punch all plate for bolting on both the longitudinal and the circumferential seams or joints and fabricate so as to permit complete erection from the inside of the tunnel liner plate structure. The minimum edge distance from the center of a bolt hole to the edge of a plate will be in accordance with the manufacture's standard spacing. Provide a sufficient number of plates with 2 inches, or larger, grouting holes with pipe plugs, and spaced so that when the plates are installed there will be one line of holes at the crown of the pipe and one line on each side at approximately the midpoint. The holes in each line will not be more than 6 feet apart, and they will be staggered along the tunnel length.

(continued)

Tunnel Liner Plate (Two-Flange). The minimum moment of inertia in inches⁴ per inch of plate width, based on the average of one ring of plates is as follows:

STEEL - Uncoated		ALUMINUM	
Plate Thickness (in.)	Moment of Inertia (in. ⁴ /in.)	Thickness (in.)	Moment of Inertia (in. ⁴ /in.)
0.135	0.064	0.125	0.0579
0.164	0.079	0.150	0.071
0.180	0.087	0.175	0.084
0.210	0.103	0.210	0.097
0.240	0.118	0.225	0.110

The longitudinal seams will be of the lap type. The depth of the offset will be equal to the thickness of the metal for the full width of plate, including flanges. Fabricate the lap to allow the cross section of the plates to be continuous through the seam. The lapped longitudinal joints will contain at least five (5) bolts per 18 inch plate width, with bolts in ridges and valleys staggered. Circumferential bolt spacing will be in accordance with the manufacturer's standard spacing and will be a multiple of the plate length so that the plates having the same curvature are interchangeable. Bolts and nuts for liner plate assemblies will not be less than 0.63 inch in diameter. Circumferential (flange) seams will conform to ASTM A307, with chemical and mechanical requirements conforming to Grade A and dimensions conforming to Grade B. Bolts and nuts for longitudinal seams will have square heads with a square shoulder to engage the plate. Longitudinal seams of plates 0.078 to 0.177 inches thick, inclusive will conform to ASTM A307, with chemical and mechanical requirements conforming to Grade A. Bolts for longitudinal seams of plates 0.2 to 0.25 inches or thicker will conform to the chemical and mechanical requirements of ASTM A449. Nuts, for use on ASTM A449 bolts, will conform to ASTM A307, with chemical and mechanical requirements conforming to Grade A, and dimensions conforming to Grade B.

BASIS OF ACCEPTANCE. Acceptance of this material will be based on the manufacturer's name appearing on the Approved List.

4.4.21 707-09 Corrugated Structural Steel Plate For Pipe, Pipe Arches & Underpasses

SCOPE. This specification covers corrugated structural steel plates intended for use in the construction of pipe, pipe arches and underpasses.

MATERIAL REQUIREMENTS. Structural steel plate, nuts and bolts shall conform to the requirements of AASHTO M167 except as herein specified, and shall be of the thickness and shape shown of the plans. When a gauge number is specified in the contract documents it shall conform to Table 707-2-1.

Plates shall have approximately a 2-inch lip beyond each end crest, which will result in the actual length of a given structure being approximately 4 inches longer than the nominal length, except where skewed or beveled.

If directed by the Engineer, the Contractor shall, at its own expense, repair damaged spelter on plate items as directed under §719-01, Galvanized Coatings and Repair Methods.

This repair method shall be allowed only when it is in the best interest of the Department. All repairs shall be made at no cost to the State.

BASIS OF ACCEPTANCE. This material will be accepted on the basis of certified documentation issued by a fabrication shop appearing on the Department's Approved List. Certification format and fabrication shop approval shall be in accordance with procedural directives issued by the Materials Bureau. At the option of the Department, this material may be subjected to shop inspection.

(continued)

4.4.22 707-10 Galvanized Steel End Sections

SCOPE. This specification covers galvanized steel end sections to be attached to the inlet and outlet ends of corrugated steel pipe.

MATERIAL REQUIREMENTS. Galvanized steel end sections shall be manufactured from material meeting the requirements of AASHTO M218. The units shall conform to the shape, dimensions, and thickness shown on the applicable standard sheet and/or contract plans. The nominal metal thickness corresponding to any gauge shall be as shown in Table 707-2-1. Marking and coating repair shall meet the requirements of §707-02, Corrugated Steel Pipe.

BASIS OF ACCEPTANCE. End sections will be accepted on the basis of certified documentation issued by a fabrication shop appearing on the Department's Approved List. All shipments shall arrive at the project with certification prepared in accordance with Materials Bureau procedural directives.

Shipments arriving without certification, or with improper certification, will be rejected.

Metal and coating thicknesses will be measured at the project by project inspectors. If the metal and/or coating thickness is less than required or certified, the material shall be rejected. Equipment required to measure metal and coating thickness shall be supplied by the contractor as detailed in §603- 3.02G, Thickness Measuring Equipment. Acceptance requirements including thickness measurements, visual inspection instructions, certification format, and fabrication shop approval shall be in accordance with Materials Bureau procedural directives. At the option of the Department, this material may be subjected to shop inspection.

4.4.23 707-11 Aluminum End Sections

SCOPE. This specification covers aluminum end sections to be attached to the inlet and outlet ends of corrugated aluminum pipe.

MATERIAL REQUIREMENTS. Aluminum end sections shall be manufactured from material meeting the requirements of AASHTO M197M. The units shall conform to the shape, dimensions, and thickness shown on the standard sheet for galvanized steel end sections and/or contract plans. The nominal metal thickness corresponding to any gauge shall be as shown in Table 707-2-1. Marking shall meet the requirements of §707-13, Corrugated Aluminum Pipe.

BASIS OF ACCEPTANCE. End sections will be accepted on the basis of certified documentation issued by a fabrication shop appearing on the Department's Approved List. All shipments shall arrive at the project with a certification prepared in accordance with Materials Bureau procedural directives. Shipments arriving without certification, or with improper certification, will be rejected.

Metal thickness will be measured at the project by project inspectors. If the metal thickness is less than required or certified, the material shall be rejected. Equipment required to measure thickness shall be supplied by the contractor as detailed in §603-3.02H, Thickness Measuring Equipment.

Acceptance requirements including thickness measurements, visual inspection instructions, certification format, and fabrication shop approval shall be in accordance with Materials Bureau procedural directives. At the option of the Department, this material may be subjected to shop inspection.

(continued)

4.4.24 707-13 Corrugated Aluminum Pipe

SCOPE. This specification covers corrugated aluminum pipe intended for use in the construction of culverts and drainage systems. The corrugated aluminum pipe covered by this specification is classified as follows:

Type I. This pipe shall have a full circular cross-section with a single thickness of corrugated sheet fabricated with annular (circumferential) or helical corrugations.

Type IA. This pipe shall have a full circular cross-section with an outer shell of corrugated sheet fabricated with helical corrugations and an inner liner of smooth (un-corrugated) sheet attached to the shell at helical lock seams.

Type IR. This pipe shall have a full circular cross-section with a single thickness of smooth sheet fabricated with helical ribs projecting outwardly.

Type II. This pipe shall be a Type I pipe which has been reformed into a pipe-arch having an approximately flat bottom.

Type IIR. This pipe shall be a Type IR pipe which has been reformed into a pipe-arch having an approximately flat bottom.

Type III. This pipe, intended for use as underdrains or for underground disposal of water, shall be a Type I pipe which has been perforated to permit the in-flow or out-flow of water.

MATERIAL REQUIREMENTS. Corrugated aluminum pipe shall conform to the requirements of AASHTO M196M Types I, IA, IR, II, IIR, and III except as modified herein. When Type IR and Type IIR corrugated aluminum pipe (spiral rib) is specified, the nominal dimension of the ribs shall be 3/4 x 3/4 inch at 7-1/2 inches spacing.

Gauge. The nominal metal thickness corresponding to any gauge shall be as shown in Table 707-2-1.

End Finish. To facilitate field joining, the ends of all helical corrugated aluminum pipe with 12 inches or greater diameters shall be rerolled to form a minimum of two annular corrugations of no less than 2-2/3 inch pitch by 1/2 inch depth. When the ends of Type IR or Type IIR pipe are rerolled, there shall be only two such corrugations. Rerolled pipe ends shall be uniquely and indelibly labeled so the pipe may be assembled in the field in the same order it was manufactured.

Coupling Bands. All round pipe sections (Types I, IA, IR, and III) 12 inches or greater in diameter shall be field joined with aluminum coupling bands. Helical corrugated pipe without rerolled ends may be joined with helical corrugated bands. Pipe with rerolled ends or annular corrugations shall be joined with annular corrugated coupling bands.

All bands shall have corrugations with the same dimensions as the pipe ends. Annular corrugated bands shall mesh with at least one full corrugation and shall lap equally on each pipe end. The band widths shall be a minimum of 7 inches for pipe diameters up to and including 32 inches. The band widths shall be a minimum of 10-1/2 inches for pipe diameters greater than 32 inches.

The bands shall not be more than 2 nominal sheet thicknesses thinner than the pipe and in no case thinner than 0.05 inch.

Pipe arches (Type II and Type IIR) may be joined by the annular corrugated bands described above or by special projection type coupling bands. The special projection bands shall consist of two rows of projections at 3 inches center-to-center that will mesh with at least one full corrugation and will lap equally on each pipe end. The special projection bands shall not be more than 2 nominal sheet thicknesses thinner than the pipe and in no case thinner than 0.063 inch.

Regular projection type coupling bands (dimpled bands) will not be acceptable for pipe 12 inches in diameter and larger. Dimpled bands may be used on pipe smaller than 12 inches in diameter, all sizes of perforated underdrain pipe, and for connecting pipe extensions to existing helical corrugated pipe without rerolled ends, unless otherwise shown on the plans.

Coupling bands may be one or two piece. Two piece coupling bands shall be used on pipe 48 inches or greater in diameter.

Coupling band connectors shall be one of the following types:

(continued)

- Aluminum angles, 2 x 2 x 3/16 inches
- Aluminum lug connectors
- Aluminum bar and strap connectors.

These connectors shall be riveted, bolted, or welded to the coupling bands. Evidence of loose bolts or rivets, bearing failure, or weld or band tearing shall be cause for rejection and replacement of that coupling band. As an alternate to the coupling band connectors stated above, an aluminum corrugated angle which conforms to an approved Materials Detail may be used.

MARKING. Each length of corrugated aluminum pipe shall be marked or tagged as approved by the Department to properly cross-reference the supplier's certification.

Additional Defects. In addition to criteria established in Materials Bureau procedural directives and defects listed in AASHTO, the following defects will be cause for rejecting the pipe when inspected at the project:

- Variation from a straight centerline of more than 3/4 inch in 20 feet.
- Any dents greater than 3 inches in diameter
- Loosely formed or cracked lock seams
- Any punctures
- Cracks through the metal
- Sharp bends in pipe arches that are less than the specified minimum corner radius for that size.

BASIS OF ACCEPTANCE. Corrugated aluminum pipe will be accepted on the basis of certified documentation issued by a supplier appearing on the Department's Approved List. All shipments shall arrive at the project with certification prepared in accordance with Materials Bureau procedural directives. Shipments arriving without certification, or with improper certification, shall be rejected. Gauge shall be measured at the project by project inspectors. If the gauge is less than required, the pipe shall be rejected. Equipment required to measure gauge shall be supplied by the contractor as detailed in §603-3.02H, Thickness Measuring Equipment.

Acceptance requirements including thickness measurements, visual inspection instructions, certification format, and fabrication shop approval shall be in accordance with Materials Bureau procedural directives. At the option of the Department, this material may be subjected to shop inspection. Corrugated connecting angles will be accepted provided an approved Materials Detail appears on the Department's Approved List from that supplier.

4.4.25 707-14 Corrugated Aluminum Structural Plate For Pipe and Pipe Arches

SCOPE. This specification covers corrugated aluminum structural plates for use in the construction of pipe and pipe arches.

MATERIAL REQUIREMENTS. Structural plate, nuts and bolts shall conform to the requirements of AASHTO M219 except as herein specified, and shall be of the thickness and shape shown on the plans. When a gauge number is specified in the contract documents, it shall conform to Table 707-2-1.

The corrugations shall run at right angles to the longitudinal axis of the structure. Plates shall have approximately a 1-3/4 inch lip beyond each end crest, which will result in the actual length of a given structure being approximately 3-1/2 inches longer than the nominal length, except where skewed or beveled.

All sections which are damaged from any cause, including handling, or where any dimension varies from that specified, shall be replaced at the Contractor's expense in a manner approved by the Engineer.

BASIS OF ACCEPTANCE. This material will be accepted on the basis of certification by the fabricator. Each fabricator shall furnish upon request by the Materials Bureau a certified analysis and guarantee executed by the manufacturer of the base metal as described in AASHTO M219.

(continued)

At the option of the Department, structural plates may be subjected to shop inspection or may be shipped to the project site accompanied by certified documentation executed in a form prescribed by the Department.

4.4.26 707-20 Anchor Bolts for Corrugated Culverts

SCOPE. This specification covers the material details and quality requirements for the anchorage system securing the ends of corrugated metal pipe, arch pipe, and structural plate to reinforced or plain concrete headwalls.

MATERIAL REQUIREMENTS. Anchor bolts shall be 3/4 inch diameter heavy hex bolts, ASTM A307. Grip shall be 5-1/2 inches threaded over at least the first 2-1/2 inches. The bolts shall be fitted with two nuts, ASTM A563 heavy hex. Nuts shall be chamfered on at least one face using a 1 inch spherical radii. The nuts and bolts shall be so assembled that in the final assembly, the bolt and one of the nuts is embedded in concrete that the chamfered faces of the nuts face each other, and secure the pipe between them. Nuts and bolts shall be galvanized as per ASTM A153 after all machining operations are completed. Following galvanization, threads shall be cleaned to produce a free running fit.

When 19-inch hook bolts are used as anchor bolts they shall be detailed on the plans and shall conform to the requirements of ASTM A36.

Anchor bolts shall be spaced around the periphery of the pipe at intervals not exceeding 18 inches. At least two anchor bolts shall be provided.

BASIS OF ACCEPTANCE. Anchor bolts and nuts for corrugated metal pipes, pipe arches, and structural plate pipe will be accepted on the Manufacturer's Certification that they conform with these specifications.

(continued)

4.4.27 Supplemental Specification 1 - HDPE Polyethylene Plastic Liner Pipe

SCOPE. These specifications cover the requirements for polyethylene plastic pipe liner for lining existing culvert pipes.

Material Requirements. The liner pipe shall be made of high density polyethylene resin in accordance with the requirements of ASTM D-3350-98a with a cell classification of PE 345464C and shall have a Plastic Pipe Institute designation of PE 3408. The liner pipe shall comply with the dimension of ASTM F-714 with a minimum DR of 32.5. The liner shall have a smooth, non-corrugated interior and exterior capable of maintaining a minimum flow rate equivalent to 100% of the original existing culvert. Liner size is also dependent upon condition of existing culvert. A liner with lower flow will be used if the condition of the culvert does not permit the use of a larger liner. The liner shall be resistant to the effects of UV rays. The material from which the pipe and fittings are extruded or molded will not contain any reclaimed, recycled, reground or reworked material and will be comprised of virgin material only.

Liner Pipe Joints or Couplings. The liner pipe shall be capable of being joined into continuous lengths by an approved method. The joints shall not create an increase in the outside diameter of the liner pipe to eliminate coupling hang-ups. The joints must contain a gasket and be water-tight and meet ASTM D-3212. The joining for the liner pipe shall be Snap-Tite or equal with either a straight or bell-shaped end.

Specific diameter and lengths are to be shown in the catalog.

Basis of Acceptance. The supplier shall furnish a Manufacturer’s Certification stating that the material in the pipe meets the requirements of ASTM -3350-98a with a cell classification of PE 345464C with the physical properties indicated above.

The supplier shall certify the dimensions meet the requirements of ASTM F-714 or as indicated in these specifications or drawings.

HDPE Resin Specifications:

Property	Specification	Unit	Nominal Value
Material Designation	PPI/ASTM		PE3408
Material Classification	ASTM D - 1248		III C 5 P34
Cell Classification	ASTM D - 3350-98A		345464C
Density	ASTM D - 1505	gm/cm ³	0.955
Melt Index	ASTM D - 1238	gm/10 min.	0.11
Flex Modus	ASTM D - 790	psi	135,000
Tensile Strength	ASTM D - 638	psi	3200
Slow Crack Growth			
ESCR	ASTM D - 1693	Hours in 100% igeval	>5000
PENT	ASTM F - 1473	hours	>100
HDB @73°F	ASTM D - 2837	psi	1600
U-V Stabilizer	ASTM D - 1603	% C	2.5%

(continued)

4.4.28 Supplemental Specification 2 – Steel Culvert Rehabilitation System

Standard for arc welded copper bearing corrosion resistant straight seam steel pipe (Round, Arch, Elliptical, and Special Shapes)

Scope. This specification covers arc-welded straight seam steel pipe with 0.20 minimum copper for improved corrosion resistance for use in culvert rehab under roadways.

The pipe may be round, elliptical, arch shaped or other special section as specified by the purchaser. Unless otherwise specified below, the requirements of this specification apply to both round pipe sections and the non-round pipe sections.

Manufacture.

All pipe must be compliant with Federal Buy America/Buy American requirements.

All pipe shall be made from new unused steel plates.

All pipe shall be straight seam pipe.

Straight seams welded after rolling must be automatic DSAW (Double Submerged Arc Weld) welds.

Midwelds done after rolling may be done by automatic or semi-automatic DSAW, FCAW (Flux-cored Arc Weld), or GMAW (Gas Metal Arc Weld) welding.

Splices done before rolling, and repair welds may be done by automatic, semi-automatic or manual DSAW, FCAW, or GMAW welding.

Specified Wall Thickness.

The wall thickness and structural design is the responsibility of the purchaser.

The purchaser shall specify the wall thickness required for his project as required by his design calculations, applicable specifications and pipe size.

The minimum thicknesses below are based on the pipe manufacture; a thicker wall thickness shall be specified by the purchaser if needed to meet his requirements.

1. **Round Pipe.** The minimum specified wall to be used for round pipe made to this specification shall be .500 nominal wall, and the wall thickness at any one point shall not be more than 12.5% under the specified nominal wall thickness. (i.e.: Min wall = .875 x specified wall thickness).
2. **Elliptical Pipe, Arch Pipe, and Other Non-Round Pipe Sections.** The minimum specified wall thickness to be used for these sections shall be .500 in., and the wall thickness at any point shall not be thinner than .015 in. under the specified wall thickness. (i.e. Min wall = specified wall thickness minus .015 in.).

Chemical Composition.

Each heat number of steel used for this product shall be tested for chemistry and shall conform to the following:

Carbon:	0.26 max
Manganese:	1.65 max (see note below)
Phosphorus:	0.035 max
Sulfur:	0.035 max
Copper:	0.20 min

Note: For each reduction of .01% carbon below the specified maximum concentration of carbon given above, an increase of .05% over the specified maximum concentration of manganese given above is permissible up to a maximum of 2.00% manganese.

Tensile Requirements for the Steel.

Tensile strength:	60000 psi min.
Yield strength:	36000 psi min.

(continued)

Each heat number used shall be tested for tensile and yield strength, and the results must meet the tensile and yield requirements above.

At the option of the purchaser, the Tensile test may be done on only one random sample taken from each 100 ft. of each pipe size on each purchase order and must meet the above tensile and yield requirements.

Test Report Requirements. A Pipe Material Test Report (MTR) shall be furnished by the pipe mill producing the pipe. The Pipe MTR shall provide the chemical test results of each heat number used in each pipe for the elements listed in section 5 above.

Chemical test results must conform to §5 of this specification.

The Pipe MTR shall also provide tensile and yield properties for each heat number used in each pipe; or if the purchaser specifies random sampling for tensile testing in accordance with §2.6 of this specification, the Pipe MTR will show random tensile test results as required by §2.6 of this specification.

The tensile test results shall conform to section 6 of this specification.

All pipe must be manufactured in the USA.

All pipe must be made from steel plates that were produced in the USA, and the Pipe Material Test Report shall certify that pipe was made from domestic steel.

If MMU pipe is specified by the purchaser, all plates used shall be “melted and manufactured in the USA”, and the Pipe Material Test Report will list all of the heat numbers or plate id numbers used for each pipe and will certify that pipe was “melted and manufactured in USA”.

Back up papers from the plate mill will be supplied to show that the plate was “melted and manufactured in the USA”.

Pipe Dimensional Tolerances.

- Length: The length of each pipe shall be within $\pm 1/2$ in. of the specified ordered length.
- Circumference: The outside circumference at any point in the length of the pipe shall be within 1% of the nominal circumference or within $\pm 1/2$ in., whichever is less.
- Straightness: The maximum allowable straightness deviation in any 10 ft. length shall be 1/8 in. For lengths over 10 ft. the maximum deviation of the entire length may be equal to $[1/8 \text{ in.} \times (\text{total length in ft.}/10 \text{ ft.})]$.
- Roundness (for round pipe sections): The difference between the major and minor outside diameters at each end of each pipe shall not exceed $1/4$ in. for diameters up to and including 48 in. OD and $1/2$ in. for diameters greater than 48 in. OD.
- Wall Thickness:
- Round Pipe: For round pipe sections the minimum wall thickness at any point shall be not less than 12.5% of the specified wall thickness.
- Elliptical, Arch Pipe, and other non-round sections: For Elliptical, Arch Pipe, and other non-round sections, the minimum wall thickness at any point shall not be less than .015 in. below the specified wall thickness.

Ends. Pipe ends shall be square cut or shall have a 30 degree bevel on OD or ID as specified by purchaser.

Basis of Acceptance. Welded steel pipe (non-pressure) will be accepted on the basis of the manufacturer’s certification that the materials conform to ASTM A-36 Grade B specifications. Certification shall also accompany material delivered to all delivery locations. Shipments arriving without certification or with improper certification will be rejected. The State reserves the right to sample and test this material subsequent to delivery at any location.

(continued)

4.5 Additional Catalog Requirements

Catalogs applying to supply items covered by specifications 706-12, 706-13, and 706-14 should contain the following available for sale. All connectors, joints, & capping accessories should be available to support the pipe diameters (Ø) contained in the product line.

Split Coupler - Connectors
T-Joints
Straight Inside Connectors
Straight Outside Connectors
45° Connectors
End Caps
Underdrain Pipe – 4" Ø - 20' Lengths
Underdrain Pipe – 6" Ø - 20' Lengths
Underdrain Pipe – 8" Ø - 20' Lengths
Underdrain Pipe – 10" Ø - 20' Lengths
Underdrain Pipe – 12" Ø - 20' Lengths
Storm Drain Pipe - 12" Ø, M294
Storm Drain Pipe - 15" Ø - M294
Storm Drain Pipe - 18" Ø - M294
Storm Drain Pipe - 24" Ø - M294
Storm Drain Pipe - 30" Ø - M294
Storm Drain Pipe - 36" Ø - M294
Storm Drain Pipe - 42" Ø - M294
Storm Drain Pipe - 48" Ø - M294

Catalogs applying to supply items specified to cover the HD Polyethylene Plastic Liner Pipe requirement should contain liner and accessories to support the following dimensional requirements:

Existing Pipe Size (ID) in.	Liner		Clearance* ID Minimum ** (in.)
	Clearance* OD of the Liner Pipe Minimum (in.)	Maximum (in.)	
12	1.25	1.25	1.910
15	1.61	2.25	3.034
18	2.00	4.00	4.872
21	2.00	3.00	4.108
24	2.40	4.00	5.230
27	2.70	3.00	4.476
30	3.00	6.00	7.476
33	3.30	5.00	6.724
36	3.60	4.00	5.970
42	4.20	6.00	8.216
46	4.60	4.00	6.584
48	4.00	6.00	8.584
54	5.00	6.00	9.664
60	6.00	6.00	9.324

* Clearance is the difference between the inside diameter (ID) of the existing pipe and the outside diameter (OD) of the Pipe liner.

** Distance between the ID of the existing pipe and minimum ID of the liner.

Contractor agrees that the following shall apply:

(continued)

The Contractor shall at all times during the contract term remain responsible. The Contractor agrees, if requested by the Commissioner of OGS or his or her designee, to present evidence of its continuing legal authority to do business in New York State, integrity, experience, ability, prior performance, and organizational and financial capacity.

The Commissioner of OGS or his or her designee, in his or her sole discretion, reserves the right to suspend any or all activities under this Contract, at any time, when he or she discovers information that calls into question the responsibility of the Contractor. In the event of such suspension, the Contractor will be given written notice outlining the particulars of such suspension. Upon issuance of such notice, the Contractor must comply with the terms of the suspension order. Contract activity may resume at such time as the Commissioner of OGS or her designee issues a written notice authorizing a resumption of performance under the Contract.

The Contractor agrees that if it is found by the State that the Contractor's responses to the Questionnaire were intentionally false or intentionally incomplete, on such finding, the Commissioner may terminate the Contract.

Upon written notice to the Contractor, and a reasonable opportunity to be heard with appropriate OGS officials or staff, the contract may be terminated by the Commissioner of OGS or his or her designee at the Contractor's expense where the Contractor is determined by the Commissioner of OGS or his or her designee to be non-responsible. In such event, the Commissioner of OGS or his or her designee may complete the contractual requirements in any manner he or she may deem advisable and pursue available legal or equitable remedies for breach.

In no case shall such termination of the contract by the State be deemed a breach thereof, nor shall the State be liable for any damages for lost profits or otherwise, which may be sustained by the Contractor as a result of such termination.

Contractor agrees it shall recertify its Questionnaire no later than the end of the eleventh month of each contract year.

(continued)

SECTION 5: ADMINISTRATIVE REQUIREMENTS

5.1 Tax Law §5-A

Tax Law § 5-a requires certain Contractors awarded State Contracts for commodities, services and technology valued at more than \$100,000 to certify to NYS Department of Taxation and Finance (DTF) that they are registered to collect New York State and local sales and compensating use taxes. The law applies to Contracts where the total amount of such Contractors' sales delivered into New York State is in excess of \$300,000 for the four quarterly periods immediately preceding the quarterly period in which the certification is made, and with respect to any affiliates and subcontractors whose sales delivered into New York State exceeded \$300,000 for the four quarterly periods immediately preceding the quarterly period in which the certification is made.

Website links to the Contractor certification forms and instructions are provided below. Form No. ST-220-TD must be filed with and returned directly to DTF and can be found at

http://www.tax.ny.gov/pdf/current_forms/st/st220td_fill_in.pdf. Unless the information upon which the ST-220-TD is based changes, this form only needs to be filed once with DTF. If the information changes for the Contractor, its affiliate(s), or its subcontractor(s), a new Form No. ST-220-TD must be filed with DTF.

Vendors may call DTF at 518-485-2889 for any and all questions relating to Section 5-a of the Tax Law and relating to a company's registration status with the DTF. For additional information and frequently asked questions, please refer to the DTF web site: <http://www.tax.ny.gov/>.

The State reserves the right to request any additional information deemed necessary for the proper evaluation of bids. All information must be submitted within the time frame set forth by the Contract Management Specialist of Record within a specific request.

5.2 M/WBE Participation and Goals

Contractor Requirements & Procedures for Equal Employment and Business Participation Opportunities for Minority Group Members and New York State Certified Minority & Women-Owned Business Enterprises

POLICY STATEMENT

The New York State Office of General Services (OGS), as part of its responsibility, recognizes the need to promote the employment of minority group members and women and to ensure that certified minority and women-owned business enterprises have opportunities for maximum feasible participation in the performance of OGS contracts. In 2006, the State of New York commissioned a disparity study to evaluate whether minority and women-owned business enterprises had a full and fair opportunity to participate in state contracting. The findings of the study were published on April 29, 2010, under the title "The State of Minority and Women-Owned Business Enterprises: Evidence from New York" ("Disparity Study"). The report found evidence of statistically significant disparities between the level of participation of minority and women-owned business enterprises in state procurement contracting versus the number of minority and women-owned business enterprises that were ready, willing and able to participate in state procurements. As a result of these findings, the Disparity Study made recommendations concerning the implementation and operation of the statewide certified minority and women-owned business enterprises program. The recommendations from the Disparity Study culminated in the enactment and the implementation of New York State Executive Law Article 15-A, which requires, among other things, that OGS establishes goals for maximum feasible participation of New York State Certified minority and women-owned business enterprises ("M/WBE") and the employment of minority groups members and women in the performance of New York State contracts.

Equal Employment Opportunity Requirements

By submission of a bid in response to the original solicitation, the Contractor agrees with all of the terms and conditions of Appendix A including Clause 12 - Equal Employment Opportunities for Minorities and Women. The Contractor is required to ensure that it and any subcontractors awarded a subcontract over \$25,000 for the construction, demolition, replacement, major repair, renovation, planning or design of real property and improvements thereon (the "Work") except where the Work is for the beneficial use of the Contractor, shall undertake or continue programs to ensure that minority group members and women are afforded equal employment opportunities without discrimination because of race, creed, color, national origin, sex, age, disability or marital status. For these purposes, equal opportunity shall apply in the areas of recruitment, employment, job assignment, promotion, upgrading, demotion, transfer, layoff, termination and rates of pay or

(continued)

other forms of compensation. This requirement does not apply to (i) work, goods, or services unrelated to the Contract; or (ii) employment outside New York State.

Contractor further agrees to submit upon request by the Contract Management Specialist of record, a staffing plan on Form EEO 100 identifying the anticipated work force to be utilized on the Contract and will, upon request, submit to OGS, a workforce utilization report on Form EEO 101 identifying the workforce actually utilized on the Contract if known. Form EEO 100 is available on line at <http://www.ogs.ny.gov/MWBE/Forms.asp>.

Further, pursuant to Article 15 of the Executive Law (also known as the "Human Rights Law"), all other State and Federal statutory and constitutional non-discrimination provisions, the Contractor and sub-contractors will not discriminate against any employee or applicant for employment because of race, creed (religion), color, sex (including gender expression), national origin, sexual orientation, military status, age, disability, predisposing genetic characteristic, marital status or domestic violence victim status, and shall also follow the requirements of the Human Rights Law with regard to non-discrimination on the basis of prior criminal conviction and prior arrest.

Business Participation Opportunities for M/WBEs

For purposes of this Contract Award, OGS has established a goal of 0% for Minority-owned Business Enterprises (MBE) participation and 5% for Women-owned Business Enterprises (WBE) participation (collectively referred to as MWBE) for a total contract MWBE goal of 5%. The total contract goal can be obtained by utilizing any combination of MBE and /or WBE participation for subcontracting and supplies acquired under this contract. The directory of New York State Certified MWBEs can be viewed at: <https://ny.newnycontracts.com/frontend/diversityusers.asp>.

Pursuant to 5 NYCRR § 142.8, a Contractor must document good faith efforts to provide meaningful participation by MWBEs as subcontractors or suppliers in the performance of this Contract and ensure that the MWBEs utilized under the Contract perform commercially useful functions. Contractor agrees that OGS may withhold payment pending receipt of the required MWBE documentation.

Pursuant to 5 NYCRR § 140.1(f), a MWBE performs a commercially useful function when it is responsible for execution of the work of the contract and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. To perform a commercially useful function, a MWBE must, where applicable and in accordance with any State Agency specifications, also be responsible, with respect to materials and supplies used on the contract, for ordering and negotiating price, determining quality and quantity and installing. A MWBE does not perform a commercially useful function if its role adds no substantive value and is limited to that of an extra participant in a transaction, contract, or project through which funds are passed in order to obtain the appearance of participation. OGS will assess whether a MWBE is performing a commercially useful function by considering the following:

- (1) the amount of work subcontracted;
- (2) industry practices;
- (3) whether the amount the MWBE is to be paid under the contract is commensurate with the work it is to perform;
- (4) the credit claimed towards MWBE utilization goals for the performance of the work by the MWBE; and
- (5) any other relevant factors.

In accordance with 5 NYCRR §142.13, Contractor acknowledges that if it is found to have willfully and intentionally failed to comply with the M/WBE participation goals set forth in the Contract, such finding constitutes a breach of Contract and OGS may withhold payment from the Contractor as liquidated damages.

Such liquidated damages shall be calculated as an amount equaling the difference between: (1) all sums identified for payment to M/WBEs had the Contractor achieved the contractual M/WBE goals; and (2) all sums actually paid to M/WBEs for work performed or materials supplied under the Contract.

By submitting a bid or proposal, Bidder/Contractor agrees to submit the following documents and information as evidence of compliance with the foregoing:

(continued)

- A. Bidders were required to submit a M/WBE Utilization Plan on Form MWBE 100. This form is mandatory and may have been submitted with the bid, or deferred and submitted upon request of the Contract Management Specialist. The form is available on line at <http://www.ogs.ny.gov/MWBE/Forms.asp>. The Utilization Plan shall list the MWBEs the Contractor intends to use to perform the State contract and a description of the Commercially Useful Function the Contractor intends the MWBE to perform to meet the goals on the State Contract, and the estimated or, if known, actual dollar amounts to be paid to and performance dates of each component of a State Contract that the Contractor intends to be performed by a MWBE. By signing the Utilization Plan, the Bidder acknowledges that the utilization of MWBEs that do not perform commercially useful functions may not be counted as meeting the MWBE goals of the Contract; and, that making false representations or including information evidencing a lack of good faith as part of, or in conjunction with, the submission of a Utilization Plan is prohibited by law and may result in penalties including, but not limited to, termination of a contract for cause, loss of eligibility to submit future bids, and/or withholding of payments. Any modifications or changes to the agreed participation by NYS Certified M/WBEs set forth in the Utilization Plan submitted with the original bid, after the Contract award and during the term of the Contract, must be reported on a revised M/WBE Utilization Plan and submitted to OGS.
- B. OGS will review the submitted MWBE Utilization Plan and advise the Contractor of OGS acceptance or issue a notice of deficiency within 20 days of receipt.
- C. If a notice of deficiency is issued, Contractor agrees that it shall respond to the notice of deficiency within seven (7) business days of receipt by submitting to OGS a written remedy in response to the notice of deficiency. If the written remedy that is submitted is not timely or is found by OGS to be inadequate, OGS shall notify the Contractor and direct the Contractor to submit, within five (5) business days, a request for a partial or total waiver of M/WBE participation goals on Form BDC 333.
- D. OGS may disqualify a Contractor as being non-responsive under the following circumstances:
- a) If a Contractor fails to submit a MWBE Utilization Plan;
 - b) If a Contractor fails to submit a written remedy to a notice of deficiency;
 - c) If a Contractor fails to submit a request for waiver; or
 - d) If OGS determines that the Contractor has failed to document good faith efforts.

A Contractor who documents good faith efforts to meet the goal requirements may submit a request for a partial or total waiver on Form BDC 333. If a request for waiver is submitted and is not accepted by OGS at that time, the provisions of clauses B-D above, will apply.

Contractors shall attempt to utilize, in good faith, any MBE or WBE identified within its M/WBE Utilization Plan, during the performance of the Contract. Requests for a partial or total waiver of established goal requirements made subsequent to Contract Award may be made at any time during the term of the Contract to OGS, but must be made no later than prior to the submission of a request for final payment on the Contract.

E. **Monthly MWBE Contractor Compliance Report**

Contractors are required to report Monthly MWBE Contractor Compliance to OGS during the term of the Contract for the preceding month's activity, documenting progress made towards achievement of the Contract MWBE goals. OGS requests that all Contractors use the New York State Contract System (NYSCS) to report subcontractor and supplier payments made by Contractor to MWBEs performing commercially useful functions under the Contract. The NYSCS may be accessed at <https://ny.newnycontracts.com/>. This is a New York State-based system that all State agencies and authorities will be implementing to ensure uniform contract compliance reporting throughout New York State. If a Contractor is unable to report MWBE Contractor Compliance via the NYSCS, Contractor must submit a Monthly MWBE Contractor Compliance Report on Form MWBE 102 to OGS.

Contractors Note: Failure to comply with the foregoing requirements may result in a finding of non-responsiveness, non-responsibility and/or a breach of the Contract, leading to the withholding of funds,

(continued)

suspension or termination of the Contract or such other actions or enforcement proceedings as allowed by the Contract.

ALL FORMS ARE AVAILABLE AT: <http://www.ogs.ny.gov/MWBE/Forms.asp>

5.3 Service Requirements

The following sets forth the mandatory service requirements for this contract. Contractor must affirm its ability to meet these service requirements.

5.3.1 Delivery

Delivery shall be made as specified and in accordance with instructions furnished with each order, unless otherwise directed in writing. Product will be required as soon as possible and delivery time may be considered by an Authorized User when issuing a purchase order. Deliveries must be made to the Authorized User within sixty (60) days of the Contractor's receipt of order.

There will be NO backordering. (Note that the 30 day delivery provision of Appendix B, Section 45 - PRODUCT DELIVERY is modified by this part of "DELIVERY".)

5.3.2 Product Delivery

Appendix B, § 33, Product Delivery, is hereby deleted and replaced with the following:

Product will be required as soon as possible and delivery time may be considered by an Authorized User when issuing a purchase order. Estimated delivery is the average (or usual) number of calendar days required to ship and complete the product delivery after receipt of a purchase order (ARO). The decision of the Commissioner as to compliance with delivery terms shall be final. If deliveries cannot be achieved within the stated time after receipt of order, the Authorized User must be advised immediately to facilitate possible use of an alternate source of supply. Deliveries must be made to the using Authorized User within sixty (60) days of the Contractor's receipt of order.

There will be NO backordering of any items.

5.3.3 Shipping Dates and Delivery Time

Contractor shall provide written acknowledgement of orders within five (5) business days after receipt of order which will include an anticipated shipping date of each order. The burden of proof for delay in receipt of a Purchase Order shall rest with the Contractor. The Contractor must notify the Authorized User at least forty-eight (48) hours in advance of shipment so that necessary receiving arrangements can be made.

If shipment will not be made within the delivery time, the Contractor is required to notify the Authorized User and the Contract Management Specialist of record in writing at least two weeks prior to the latest date of the original delivery obligation. This notification must include the reasons for the delay and the latest date the product will be shipped. Any extension of time for delivery must be requested in writing by the Contractor and approved in writing by the Authorized User. Failure to meet such a delivery time schedule may be grounds for cancellation of the order or, in the Commissioner's discretion, the Contract. Contractor must take appropriate action to avoid any subsequent late deliveries.

Should the delay not be acceptable to the Authorized User, appropriate contract default proceedings may be initiated. Failure to supply timely written notification of delay may be cause for default proceedings. All correspondence on shipping dates and delivery time shall be directed to the ordering Authorized User's contact person.

(continued)

5.3.4 Delivery Condition

The product delivered must be strictly in accordance with the one awarded. Contractor shall be responsible to make no shipment of the product that will be exposed to conditions during transit, detrimental to the product. Product must be delivered strictly in accordance with specifications and shall be “Ready for Use.”

5.3.5 Delivery Certification

Contractor shall secure a signed receipt from Authorized User certifying to physical delivery of product. In the event deficiencies are later noted and a properly signed receipt is not available, Contractor will be responsible to ship adequate additional product, as soon as possible, to resolve the deficiency. Such certification does not imply acceptance of product. Acceptance shall be made only after the inspection of goods by the Authorized User, typically performed within five (5) business days of delivery.

5.3.6 Expansion of Delivery Points

Upon mutual agreement, delivery locations may be expanded per the “Non-State Agencies Participation in Centralized Contracts” and “Extension of Use” clauses incorporated herein.

5.3.7 Commercial Price Lists and Catalogs

Contractor shall be required to furnish, without charge, catalogs and commercial price lists identical to those accepted with their bid, including any changes (additions, deletions, modifications etc.) pursuant to the contract, to all Authorized Users which request them. Such changes may be shown by including copies of the Final Offered Product List with your response.

5.3.8 Format Requirements

The Contractor shall provide, upon request and at no charge, sufficient awarded price lists and catalog(s) to service all Authorized Users. The publications may be furnished in either hard-copy or electronic format. If available in both formats, they shall be furnished in the format preferred by the requesting Authorized User. Upon request the Contractor shall assist Authorized Users in the use of catalogs and price lists. Contractor may refer the Authorized User to appropriate web locations containing the digital information.

5.3.9 Preferred Source Requirement

The Contractor shall also identify products available from Preferred Sources by placing a letter code in a column next to the Products on the Contractor's Net Price List(s) (hard copy and electronic media) distributed to customers.

5.3.10 Optional Dedicated Contract Web Site

If offering a dedicated NYS Contract Web Site, the Contractor shall provide, on this supplemental web site (and if applicable their web-based ordering system), separate and distinct price lists for the NYS Net prices. It shall also provide on its website an electronic version of the supplier's catalog. Such lists shall be maintained at separate locations within the Contractor's website or web-based ordering system, either on separate pages, or at separate URLs. See “INTERNET WEBSITES” in this document for additional information.

5.3.11 Customer Service

The Contractor shall provide a sufficient number of employees who are knowledgeable and responsive to customer needs and who can effectively service the contract. The Contractor shall also designate a customer service representative for Authorized Users. Bidders shall indicate the contact information for the customer service representative in Attachment 1 – “Bidder Information and Bid” Tab A – Identification.

(continued)

5.3.12 Technical Assistance

Generalized instruction and technical assistance for the offered products in the normal course of doing business, via a customer or technical service website or telephone hotline is to be available to Authorized Users on an as needed basis at no charge.

5.3.13 Instruction Manuals

Simultaneous with delivery, the Contractor shall furnish to the Authorized User, at no charge, a complete instruction manual for the product and for each component supplied. The manual shall include complete instructions for unpacking, inspecting, installing, adjusting and aligning the product, together with preventive and corrective maintenance procedures, and complete parts lists, manufacturer's catalog numbers, and ordering information, if applicable.

5.3.14 New Accounts

Contractor may ask State agencies and other Authorized Users to provide information, such as documentation of eligibility to use New York State contracts, agency code, name, address and contact person in order to facilitate the opening of a customer account. An Authorized User shall not be required to provide credit references.

5.3.15 Purchase Order Instructions

Delivery shall be made in accordance with instructions on purchase order from each Authorized User. If there is a discrepancy between the purchase order and what is listed on the contracts, it is the Contractor's obligation to seek clarification from the ordering party and, if applicable, from OGS Procurement Services.

5.3.16 Purchase Orders and Invoicing

Appendix B, § 32, Purchase Orders, is hereby deleted and replaced with the following:
All orders and invoices/vouchers should include the contract number and a line by line listing of separate items and charges. Orders must be accepted by the Contractor between the hours of 8:00 a.m. through 5:00 p.m. ET, Monday through Friday, except NYS Holidays. Contractor shall be capable of accepting orders: (1) verbally via toll-free number; (2) manually, via e-mail, facsimile or postal delivery; and, (3) if the Contractor exercises their option to provide a personal computer web-based system, electronically.

5.3.17 Purchase Order Acceptance

A purchase order shall be deemed to be received by the Contractor four (4) calendar days after placement of order by mail, or the same as day sent if submitted by electronic transmission. All purchase orders shall be confirmed by the Contractor as having been received.

(continued)

5.3.18 Purchase Order Contents

All orders (verbal, hard copied or electronic) shall reference contract number, requisition and/or purchase order number as required. Purchase Orders should include the detailed information stated as follows along with any delivery requirements, personnel contact numbers or additional information a contractor and shipping carrier may need to properly process and deliver the product in a timely manner.

- Contractor Name and Address
- Contract Award Description: [Group #37700 – Award 22719: Culvert & Underdrain Pipe & Tubing (w/Arches, Bands, Culverts & Accessories) - Metal & Plastic Based (Statewide)]
- Ordering Agency/Facility/Political Subdivision, etc. and Address
- Purchase Order/Requisition Numbers
- Contact (individual placing order)
- Delivery Location
- Delivery Instructions
- Anticipated Delivery Date
- Item or Stock Number
- Manufacturer Item Description
- Unit of Measure
- List Price (unit)
- NYS Net Price (unit),
- Extended and Total Amounts

5.3.19 Invoices

Authorized Users are instructed not to process invoices without needed information. Invoices must be detailed and include all of the following:

- Contract Number
- Purchase Order Number
- NYS Vendor ID Number
- Manufacturer's Item Number
- Should not be something that is "unique" to dealer or distributor.
- Should be something that can be tracked by a third party.
- Line item breakdown of all charges
- Line item breakdown of any deletion
- Shipped Date
- Shipping Company & Bill of Lading Number
- Any Agreed to, Applicable or Contracted Shipping Charges

Failure to comply may result in lengthy payment delays.

If the Contractor is using subcontractors (authorized dealer/distributors) to service Authorized Users and allows the subcontractor to directly invoice and receive payment, dealer invoices must clearly identify their standing as a subcontractor and indicate the actual Contractor along with their contact information.

(continued)

5.3.20 Minimum Order

Minimum order shall be \$500.00. Contractor may elect to honor orders for less than the minimum order.

5.3.21 Method of Payment

Cost centers or branch offices within an Authorized User may require separate invoicing as specified by each Authorized User. The Contractor's billing system shall be flexible enough to meet the needs of varying ordering systems in use by different Authorized Users.

Invoicing and payment shall be made in accordance with the terms set forth in Appendix B, §49, Contract Invoicing, contained within this document.

5.3.22 Discrepancies

The Contractor shall resolve all order and invoice discrepancies (e.g., shortages, incorrect item received, etc.) within seven (7) business days from notification.

5.3.23 Settlements

OGS has the right to determine the disposition of any rebate, settlement, restitution, liquidated damage, etc. which arise from the administration of these contracts.

5.3.24 Acceptance of Product

As noted above in Section, *Delivery Certification* – the receipt of goods does not constitute acceptance of product. Within five (5) business days of delivery of a shipment, the Authorized User will conduct an inspection of the goods received, confirming quantities received, accuracy of the shipment compared to the purchase order or requisition, and verify items received are as specified and suitable for use. If a shipment is in proper order, acceptance shall be indicated by the Authorized User's approving the order for payment. If there are discrepancies or product issues the Authorized User shall notify the Contractor immediately so as to facilitate the proper corrective action.

5.3.25 Product Returns Because of Quality Problems

Upon written notification by the Authorized User to the Contractor and the Contract Management Specialist of record, products determined to have quality problems, outdated product, damage, etc., shall be picked up by the Contractor within ten business days after notification with no restocking charge.

Understand that there is the potential for defects which may not become evident until a product is being unpacked and prepared for deployment. Product defects may not be identified until long after product acceptance. In the event that an item has been paid for prior to the discovery of a defect, the Authorized User shall elect whether to receive a replacement product or a credit/refund for the full purchase price.

The Authorized User shall elect whether to receive a replacement product or a credit/refund for the full purchase price. The Authorized User must conduct its inspection, and notify the Contractor within 30 calendar days of delivery. If a defect is not identified within 30 calendar days after delivery, the Authorized User may be required to contact the manufacturer directly. Contractor shall provide an Authorized User with the manufacturer's contact number.

5.3.26 Product Returns Due To Authorized User Error

Products ordered in error by an Authorized User shall be returned by Authorized User at its expense for credit within fifteen business days of delivery. Standard stock products must be in resalable condition (original container, unused). The Contractor may charge a restocking fee, not to exceed ten percent, for opened product returns due to Authorized User error. There shall be no restocking fee if returned products remain factory sealed.

(continued)

5.3.27 Warranties:

See Appendix B, §59, Warranties.

Normal wear and tear items shall be warranted in accordance with manufacturer's standard warranty.

Product offered must meet all requirements of this Contract Award including full commercial/retail availability. Product literature and specifications must also be available.

Where accessories are to be supplied, they must be compatible with the rest of the product.

5.3.28 Recalls

The Contractor must notify OGS Procurement Services of any recalls pertaining to a product on contract within seven (7) business days of the determination or manufacturer's notification of the recall.

5.3.29 Administrative and Service Requirements

The Contractor shall provide a sufficient number of employees who are knowledgeable and responsive to customer needs and who can effectively service the contract. The Contractor shall also designate a customer service representative for Authorized Users.

5.3.30 E-Mail & Telephone Contacts

Contractors will provide active e-mail addresses and telephone numbers for all personnel assigned by the Contractor to directly service the contract. Unless specifically designated as an emergency or after-hours contact the information should be adequate for the State to contact the party during normal working hours between 9:00 am and 4:30 pm EST, Monday through Friday. If opting to offer a NYS Contract Web Site the information should also be posted and accessible on line on the web site.

5.3.31 Toll-Free Number

Each Contractor must provide a toll-free telephone number for Authorized Users. Each Contractor must staff this toll-free number at a minimum from 9:00 am to 4:30 pm ET Monday through Friday.

5.3.32 Emergency Service Number & Contact Information

The Contractor will provide a toll-free -emergency service, available seven days a week, twenty-four hours a day. Given the nature of the products, an emergency contact including name, number, cell number, fax, and email must be provided.

(continued)

5.4 Contract Modification (Including Contract Update) Guidelines

Awarded Product Catalogs and Commercial Price Lists shall remain in effect for a minimum of one year from the contract start date. Following the first year of the contract, the Contractor may update these listings twice annually through the remaining term of the contract to reflect manufacturer's price changes and to facilitate the possible addition of new products as established by the manufacturer in their normal course of business.

The Contract Modification Guidelines found herein classify a number of different types of modifications available to the contractor, and requires a separate application for each. As only two modifications are allowed annually, the submission of multiple applications at a single time will constitute one request for modification.

For prompt processing and response, applications should be forwarded electronically, followed by the mailing of the notarized hard copy.

The Contractor shall submit all requests for price adjustments to add Products in accordance with the Contract Modification Procedures below. In connection with any contract modification, OGS reserves the right to request additional information, reject Contract Modifications and Updates, remove Products from Contract Modifications and Updates, and request additional discounts for new or existing products. The following guidelines are subject to change at the discretion of OGS.

A Contract Amendment requires a formally executed document by mutual agreement of the Parties, to be provided by OGS Contract Administrator, after submission and approval of the Contract Modification Form (a copy of which was supplied at the time of award). This form is subject to change at the sole discretion of OGS.

5.4.1 Types of Contract Modifications

In order to expedite processing of a contract modification, where proposed changes involve more than one category below, and each change should be submitted to OGS as a separate request.

5.4.2 Updates

"Updates" are changes that do not require a change to the established centralized contract terms and conditions. Updates may include Centralized Contract changes and updates made in accordance with the previously approved pricing formula (e.g. discount from list price); adding new products within the scope of the contract and within the established, previously approved pricing structure; lowering pricing of products already on contract, deleting products available through the centralized contract, adding products that do not fall under the previously established price structure or discounts under the contract, re-bundled products, and other updates not listed above that are deemed to be in the best interest of the State and do not result in a change to the established centralized contract terms and conditions. Updates must be submitted to OGS for review, and must be accompanied by a justification of reasonableness of price if the change results in a change in pricing methodology. OGS will notify Contractor in writing if approved.

5.4.3 Amendments

"Amendments" are changes that are not specifically covered by the terms and conditions of the centralized contract but inclusion is found to be in the best interest of the State. Requests for product changes and other requests that would require changes to the terms and conditions of the centralized contract would fall into the Amendments category. Contractor must provide a written justification of reasonableness of the price levels offered and a statement explaining why it is in the best interest of the State to approve the requested amendment. Amendments typically require negotiation between OGS and the Contractor. OGS will work directly with the Contractor to obtain the required documentation for each requested amendment and notify Contractor in writing if approved.

(continued)

5.4.4 Contractor's Submission of Contract Modifications

In connection with any contract modification, OGS reserves the right to do the following:

- request additional information;
- reject contract modifications;
- remove products from contract modification requests; and
- request additional discounts for new or existing products.

5.4.5 Price Level Justification – Format

Contractor is required to submit the Product and price level information for the update in an Excel spreadsheet format electronically via e-mail (and in hard copy if requested by OGS) to the OGS Contract Administrator. The list must be dated. The product and price level information should include the following and identify (e.g., by use of separate worksheets or by using italics, bold and/or color fonts):

- Price level increases;
- Price level decreases;
- Products being added.

5.4.6 Supporting Documentation

Each modification request must include the current contract pricing discount relevant to the products included in the update.

5.4.7 Submittal of Modification Requests

A contract modification request must be accompanied by a completed Contract Modification Form. Contractor should briefly describe the nature and purpose of the update (e.g., update requested in order to reflect a recently approved GSA schedule, to restructure the price level to its customers generally, and/or for new Products which fall within the scope of the contract). The Contract Modification Form must contain original signatures by an individual authorized to sign on behalf of Contractor and must be notarized.

(continued)

5.5 Product Line Catalog Updates - Addition & Deletion Of Products

Awarded product catalogs shall remain firm for 12 months from contract start date. Following the first year of the contract, the Contractor may update the catalog (and/or Commercial Price List) twice (2x) annually to reflect manufacturer's addition or discontinuation of products as established in their normal course of business. Contractor shall follow the Contract Modification Procedures above, and complete and submit a Contract Modification Form. This form will be supplied to contract awardees post award. Any new products added to pricelists or catalogs should have a discount structure consistent with existing products on the pricelist or catalog that are comparable in scope. Contractors shall submit their updated pricelist or catalog to OGS Procurement Services for review and written approval prior to publicly releasing any update to Authorized Users. OGS Procurement Services reserves the right to accept or reject any or all products included in the Contractor's pricelist or catalog update.

As previously noted, unless otherwise specified, any change or update transacted by a Contractor prior to receipt of a notice of approval by the OGS Procurement Services is prohibited and may be cause for cancellation of contract.

5.5.1 Product Deletion, Discontinuation and Substitution

In the event a specified manufacturer's Product listed in the Contract becomes unavailable or cannot be supplied by the Contractor for any reason (except as provided for in the Savings/Force Majeure Clause) a product deemed in writing by OGS Procurement Services to be equal to or better than the specified product should be substituted by the Contractor at no additional cost or expense to the Authorized User. Contractor shall follow the Contract Modification Procedures above, and complete and submit a Contract Modification Form (which will be supplied post award). The Contractor shall provide to OGS Procurement Services, complete information on the replacement product including, but not limited to a Specification List, Function and Feature list and Comparison of Performance between the new and old product.

If a Contractor believes that a product will be discontinued without replacement, notification should be given to the Contract Management Specialist of record as soon as possible following such a determination. Should, per the above, the Contractor find no suitable substitution or replacement, the notification must detail the reasons for that determination. The notification shall include the date of loss of availability and the current inventory level for the product. The request will then be reviewed by the engineering staffs of NYSDOT and/or the NYS Thruway Authority, who will determine if discontinuation without replacement is warranted. Should the determination be that a viable replacement is available, the contractor will supply the stated replacement the same price as the discontinued item.

It is the contractor's responsibility to inform the assigned OGS Procurement Services Contract Management Specialist, in a timely fashion for any product discontinuation or deletion from contract availability. Contractor must supply documentation supporting the unavailability of the product to the US market. Along with the notification of change, the Contractor must supply documentation detailing the reasons behind the need to discontinue the item(s) of note, as well as information pertinent to evaluating the appropriateness of any specified replacement item, as well as existing inventory status reports supporting any claims against product availability on the outgoing item(s) must be supplied.

Unless otherwise specified, any substitution of product prior to the Commissioner's written approval may be cause for cancellation of the contract. In the event that a Contractor is unable to provide a replacement, it is the State's right to cancel the contract. Contractor should note, however, that all deletions approved by OGS Procurement Services are subject to a post-audit by the Office of the State Comptroller.

(continued)

5.5.2 Interim Government Program Adjustment

OGS Procurement Services may permit a change in product, catalog or price outside of the time frames and conditions, or in excess of annual limitations for change as expressed herein if a federal government program, such as the United States Department of Transportation, The Federal Highway Administration, National Transportation Research Board, National Transportation Product Evaluation Program (NTPEP), The American Association of State Highway Transportation Officials (AASHTO), (or other similar entity) were to issue a Regulation, Specification, Standard, Engineering Recommendation or an amendment to The Manual for Uniform Traffic Control Devices (MUTCD) that failing to rapidly integrate could impact public safety.

Contractor shall follow the Contract Modification Procedures above and complete and submit a Contract Modification Form. Suitable documentation would be submitted to OGS Procurement Services in accordance with the requirements set forth herein. OGS Procurement Services will determine if the requested change is reasonable and attainable. Replacement or new products may be subject to NYSDOT testing and approval by the Department and The Office of General Services.

As previously noted, unless otherwise specified, any change, modification or update transacted by a Contractor prior to receipt of a notice of approval by OGS Procurement Services is prohibited and may be cause for cancellation of a contract.

5.6 Administrative Reporting Requirements

The Contractor shall provide the following reports to OGS at the e-mail address listed on the Notice of Contract Award. Failure to submit reports on a timely basis may result in contract cancellation and designation of Contractor as non-responsible. The Parties agree that OGS reserves the right to amend the data elements collected in these reports in its sole discretion. Such amendments shall not be substantive in nature and shall reflect information relevant to monitoring the expenditures under the contract.

With respect to any reporting requirements set forth in this Contract Award, Contractors are hereby advised that the State reserves the right to additionally implement and maintain specific on-line reporting modules and databases for reporting purposes and to require Contractors to use such on-line functionality beginning with the earliest reporting period after notification of implementation. Should such functionality be implemented prior to the awarding of contracts, the requirement to report using such functionality will be reflected herein. After award, notification will be made via a Purchasing Memorandum.

(continued)

5.6.1 Report of Contract Purchases

Contractor shall submit Report of Contract Usage including total sales to Authorized Users of this Contract by Contractor, and all authorized resellers, dealers and distributors, if any, by the fifteenth day of the month following each calendar quarterly period as follows (unless otherwise indicated):

<u>Report</u>	<u>From</u>	<u>To</u>	<u>Report Due Before</u>
1st	Contract Start Date	6/30/2016	7/15/2016
2nd	7/1/2016	9/30/2016	10/15/2016
3rd	10/1/2016	12/31/2016	1/15/2017
4th	1/1/2017	3/31/2017	4/15/2017
5th	4/1/2017	6/30/2017	7/15/2017
6th	7/1/2017	9/30/2017	10/15/2017
7th	10/1/2017	12/31/2017	1/15/2018
8th	1/1/2018	3/31/2018	4/15/2018
9th	4/1/2018	6/30/2018	7/15/2018
10th	7/1/2018	9/30/2018	10/15/2018
11th	10/1/2018	12/31/2018	1/15/2019
12th	1/1/2019	3/31/2019	4/15/2019
13th	4/1/2019	6/30/2019	7/15/2019
14th	7/1/2019	9/30/2019	10/15/2019
15th	10/1/2019	12/31/2019	1/15/2020
16th	1/1/2020	3/31/2020	4/15/2020

Contractors shall specify if any authorized resellers, dealers or distributors are NYS Certified Minority- and/or Women-Owned Business Enterprises (MWBs), small business enterprises (SBEs), or Service-Disabled Veteran-Owned Businesses (SDVOBs).

The report is to be submitted electronically via e-mail in Microsoft Excel to OGS Procurement Services, to the attention of the individual listed on the front page of the Contract Award Notification and shall reference the Contract Group Number, Award Number, Contract Number, Sales Period, and Contractor's name.

The report titled Report of Contract Usage provided by the Contract Management Specialist contains the minimum information required. Additional related sales information, such as detailed user purchases may be required by OGS and must be supplied upon request. Failure to submit reports on a timely basis may result in Contract cancellation and designation of Contractor as non-responsible.

In addition to Contractor direct sales, Contractor shall submit sales information for all authorized subcontractors, where contract sales are provided by the subcontractor. A separate report shall be provided for each authorized subcontractor.

Within the term of the contract, should appropriate means be integrated into the NYS Statewide Financial System (SFS) Portal that allow for direct input of the required reporting information, submission of the Report of Contract Purchases will migrate to that venue and Contractors will follow the reporting format established within the SFS Vendor Portal. Announcement of any such new capability and reporting requirement will be made via a Purchasing Memorandum which will be forwarded to all Contractors by the Contract Management Specialist of record assigned to administer this contract.

(continued)

5.6.2 M/WBE Contractor Compliance & Payment Reports

See prior section “MWBE Participation and Goals” for Contractor’s reporting obligations with respect to Monthly MWBE Contractor Compliance.

5.6.3 Authorized User Sales Reports

Upon written request by an Authorized User, the Contractor shall furnish to such Authorized User, on a quarterly basis, a report listing the following: name of Products purchased, quantity purchased, unit price and total dollar volume of purchases.

5.6.4 Updated Certification of Required Insurances

As insurance coverage is traditionally of a term nature, it is the Contractor’s responsibility to maintain their appropriate insurance coverages as well as their filed certifications with the Contract Management Specialist of record. The Contractor shall furnish to the State up-to-date certifications of coverages for all insurance requirements per Appendix D – Insurance Requirements (from IFB).

5.7 Contract Period and Renewals

It is the intention of the State to enter into contracts for the term of a period of four (4) years, commencing on the first business day following the execution of the contracts.

5.7.1 Contract Renewals

If mutually agreed between the OGS and the Contractor, contracts may be renewed under the same terms and conditions for one additional one year period, provided that in no event shall the term of the contract exceed five years.

5.7.2 Short Term Extensions

In the event the replacement contract has not been issued, any contract let and awarded hereunder by the State, may be extended unilaterally by the State for an additional period of up to one month upon notice to the Contractor with the same terms and conditions as the original contract including, but not limited to, prices and delivery requirements. With the concurrence of the Contractor, the extension may be for a period of up to three months in addition to the unilateral one month extension. However, this extension terminates should the replacement contract be issued in the interim.

5.7.3 Cancellation for Convenience by the State

By written notice, this Contract may be terminated at any time by the Commissioner for convenience upon sixty (60) calendar days written notice or other specified period without penalty or other early termination charges due. Such termination of the Contract shall not affect any project or Purchase Order that has been issued under the Contract prior to the date of such termination. If the Contract is terminated pursuant to this subdivision, the Authorized User shall remain liable for all accrued but unpaid charges incurred through the date of the termination. Contractor shall use due diligence and provide any outstanding deliverables. This provision should not be understood as waiving the State's right to terminate the contract for cause or stop work immediately for unsatisfactory work, but is supplementary to that provision. (See Appendix B, OGS General Specifications, §47 for more information)

5.8 Extension of Use

Any contracts resulting from this bid solicitation may be extended to additional States or governmental jurisdictions upon mutual written agreement between New York State (the lead contracting State) and the Contractor. Political subdivisions and other authorized entities within each participating State or governmental jurisdiction may also participate in any resultant contracts if such State normally allows participation by such entities. New York State reserves the right to negotiate additional discounts based on any increased volume generated by such extensions.

(continued)

5.9 New York State Procurement Card

The Contractor Directory of this Contract Award Notification indicates whether or not a contractor will accept the NYS Purchasing Card for orders up to and including \$15,000.00. No extraordinary paper work is to be required of the Authorized User. No additional processing fees shall be applied to any procurement card transaction.

See Section: Appendix B Amendments "Procurement Card".

Procurement Card Receipts - For all purchases executed using a New York State Procurement Card, Contractor shall provide an itemized receipt with each Delivery.

5.10 Performance and Bid Bonds

There are no bonds for these contracts. In accordance with Appendix B, §45, Performance/Bid Bond, the Commissioner of OGS has determined that no performance, payment or Bid bond, or negotiable irrevocable letter of credit or other form of security for the faithful performance of the contract shall be required at any time during the initial term, or any renewal term, for this agreement.

5.11 Environmental Attributes and NYS Executive Order No. 4

New York State is committed to environmental sustainability and endeavors to procure products with reduced environmental impact. One example of this commitment may be found in Executive Order No. 4 (Establishing a e Green Procurement and Agency Sustainability Program), which imposes certain requirements on state agencies, authorities, and public benefit corporations when procuring commodities, services, and technology. More information on Executive Order No. 4, including specifications for offerings covered by this contract, may be found at <http://www.ogs.ny.gov/EO/4/Default.asp>.

State entities subject to Executive Order No. 4 are advised to become familiar with the specifications that have been developed in accordance with the Order, and to incorporate them, as applicable, when making purchases under this Contract.

5.12 Use of Recycled or Remanufactured Materials

New York State supports and encourages vendors to use recycled, remanufactured or recovered materials in the manufacture of products and packaging to the maximum extent practicable without jeopardizing the performance or intended end use of the product or packaging unless such use is precluded due to health or safety requirements or product specifications contained herein. Refurbished or remanufactured components or products are required to be restored to original performance and regulatory standards and functions and are required to meet all other requirements of this bid solicitation. Warranties on refurbished or remanufactured components or products must be identical to the manufacturer's new equipment warranty or industry's normal warranty when remanufacturer does not offer new equipment. See "Remanufactured, Recycled, Recyclable or Recovered Materials." in Appendix B, §15.

The material, from which any plastic based/polyvinyl pipe and/or fitting to be supplied under this contract used in the manufacturing, extrusion or molding of the products\, shall not contain any reclaimed, recycled, reground or reworked material and shall be comprised of virgin material and resins only.

5.13 Mercury-Added Consumer Products

Contractor agrees that it will not sell or distribute any products containing elemental mercury for any purpose under these contracts.

5.14 EPA Energy Star Program

The Federal EPA, in cooperation with manufacturers, continues a program to foster the manufacture of energy efficient equipment. New York State fully supports this effort and requires all applicable products offered to comply with EPA Energy Star guidelines for energy efficiency. The State may discontinue use of and/or delete from contract selected products as mandated by any NYS energy legislation that is enacted during the term of this contract. The Contractor shall have no recourse with the State for such discontinuance/deletion.

(continued)

5.15 Surplus/Take-Back/Recycling

- I. A State agency is reminded of its obligation to comply with the NY State Finance Law §§ 167, Transfer and Disposal of Personal Property, and 168, The Management of Surplus Computer Equipment, regarding transfer and disposal of surplus personal property before utilizing take-back, recycling, or other options for disposition of equipment that is still in operable condition.
- II. If Contractor offers a take-back/recycling program, then Contractor shall provide a record of disposition to each Authorized User who participates in the take-back/recycling program for units transferred for disposition. Contractor shall provide documentation that the units were disposed of in an environmentally sound manner in compliance with applicable local, state and federal laws. See Section III below for specific requirements governing electronic equipment recycling.
- III. The NYS Department of Environmental Conservation (DEC) Electronic Equipment Recycling and Reuse Act (“Act”) (Environmental Conservation Law, Article 27, Title 26, Electronic Equipment Recycling and Reuse), requires manufacturers to establish a convenient system for the collection, handling, and recycling or reuse of electronic waste. If Contractor is a manufacturer of electronic equipment covered by the Act, Contractor agrees to comply with the requirements of the Act. More information regarding the Act can be found on the DEC web site at: <http://www.dec.ny.gov/chemical/65583.html>.
- IV. If a Contractor offers a take-back/recycling program or offers an electronic equipment recycling program pursuant to the Act, and an Authorized User participates in same, then the Authorized User shall ensure the destruction of all data from any hard drives surrendered with the machines/covered electronic equipment. Contractor shall not require an Authorized User to surrender the hard drive, as an Authorized User may wish to retain the hard-drive for security purposes. Contractor shall advise the Authorized User in advance if the retention of the hard drive results in additional fees or reduction in trade-in value. It is recommended that an Authorized User use a procedure for ensuring the destruction of confidential data stored on hard drives or other storage media that meets or exceeds the National Institute of Standards and Technology (NIST) Guidelines for Media Sanitation as found in NIST Special Publication 800-88.

5.16 Americans with Disabilities Act (ADA)

The Federal ADA Act, signed into law July 26, 1990, bars employment discrimination and requires all levels of Government to provide necessary and reasonable accommodations to qualified workers with disabilities. Bidders are required to identify and offer any software or hardware products they manufacture or adapt which may be used or adapted for use by visually, hearing, or any other physically impaired individuals.

Although it is not mandatory for bidders to have this equipment in order to receive an award, it is necessary to identify any such equipment they have which falls into the above category.

5.17 New York State Statewide Financial System

The New York State Statewide Financial System (SFS) went live for NYS agencies in April 2012. Future SFS procurement functionality envisions the ability to fully host contract catalogs or to integrate Contractor-hosted punch-out catalogs. OGS reserves the right to integrate either of these future catalog functions with a Contractor during the contract period, and by submittal of a bid a Bidder agrees to coordinate with SFS, OGS and/or a third-party host, for integration, if OGS exercises its right to do so. No costs or expenses associated with providing information and integration shall be charged to NYS. Technical Requirements for the data elements, such as data types, maximum field lengths, and cXML element names shall be provided by SFS, OGS and/or a third-party host during integration. Upon completion of integration and activation of an SFS-based catalog ordering system, State agencies shall process their orders through the SFS functionality and the other Authorized Users shall continue to process orders in accordance with contract terms and conditions, including through any Contractor-hosted web based ordering system; however, Contractor shall continue to be subject to provisions in Section VII.1 Internet Websites. For more information on SFS, its use, and its capabilities please visit the SFS website here: <http://www.sfs.ny.gov/>

(continued)

5.18 Encouraging Use of New York State Businesses In Contract Performance

New York State businesses have a substantial presence in State Contracts and strongly contribute to the economies of the State and the nation. In recognition of their economic activity and leadership in doing business in New York State, Contractors awarded Contracts for commodities, services or technology are strongly encouraged and expected to consider New York State businesses in the fulfillment of the requirements of the Contract. Such partnering may be as Subcontractors, suppliers, protégés or other supporting roles.

Contractors need to be aware that all authorized users of this Contract will be strongly encouraged, to the maximum extent practical and consistent with legal requirements, to use responsible and responsive New York State businesses in purchasing commodities that are of equal quality and functionality and in utilizing services and technology. Furthermore, Contractors are reminded that they must continue to utilize small, minority and women-owned businesses, consistent with current State law.

Utilizing New York State businesses in State Contracts will help create more private sector jobs, rebuild New York's infrastructure, and maximize economic activity to the mutual benefit of the Contractor and its New York State business partners. New York State businesses will promote the Contractor's optimal performance under the Contract, thereby fully benefiting the public sector programs that are supported by associated procurements.

Public procurements can drive and improve the State's economic engine through promotion of the use of New York businesses by its Contractors. The State therefore expects Contractors to provide maximum assistance to New York businesses in their use of the Contract. The potential participation by all kinds of New York businesses will deliver great value to the State and its taxpayers.

5.19 Bulk Delivery & Alternate Packaging

New York State encourages the use of innovative packaging that reduces the weight of packaging and the generation of packaging waste. A contractor is encouraged to use reusable materials and containers and to utilize packaging configurations that take advantage of storage containers designed to be part of the product for the shipment of multi-unit purchases. New York State recognizes that these packaging methods are in the development stage and may not be currently available. Authorized Users are urged to inquire about these programs at the time of purchase and determine the best solution for their needs.

(continued)

5.20 Internet Websites

The State acknowledges the importance of technology and encourages the use of informational exchange between contractors and Authorized Users via the web. To support this concept the State has requested that contractors supply the URL for any company web site which would be of use to the Authorized Users.

Additionally, The State offers the option to, and encourages Contractors to supply Authorized Users with a designated NYS contract web site for direct access. This supplemental web site would be listed under Contractor information in this Contract Award Notification or in a subsequent revision. A Contractor may exercise the option to supply such a supplemental web site at any time within the term of the contract. Once accepted by the State and implemented by the contractor such a site must remain active and up to date for the remainder of the contract term, including through any extensions or renewals.

It shall be the responsibility of the Contractor to maintain and update this web site, noting that changes in product line or pricing posted to the site must be approved by OGS Procurement Services prior to the updating of the web site, in accordance with Contract terms.

If the contractor stores, collects or maintains personal identification data electronically as a condition of accessing State Contract information, such data shall only be used internally by Contractor for the purpose of implementing the State Contract and shall not be disseminated to third parties or used for other marketing purposes.

Any web-based information and applications development, or programming delivered pursuant to the contract or procurement, will comply with New York State Enterprise IT Policy NYS-P08-005, Accessibility of Web-Based Information and Applications as such policy may be amended, modified or superseded, which requires that State agency web-based information and applications are accessible to persons with disabilities.

Web-based information and applications must conform to New York State Enterprise IT Policy NYS-P08-005 as determined by quality assurance testing. Such quality assurance testing will be conducted by Contractor, or, at OGS' sole option, by OGS, its designee, or a third party designated by OGS, and the results of such testing must be satisfactory to OGS before web-based information and applications will be considered a qualified deliverable under the contract or procurement.

5.20.1 Web-Based Ordering System

The State suggests that Contractors having opted to offer a supplemental, designated NYS contract web site, provide access to a web-based ordering system to facilitate and aid Authorized Users in the placement of orders. A Contractor may exercise the option to supply such a supplemental service at any time within the term of the contracts. However, once accepted by the State and implemented by the contractor the service must remain active and up to date for the remainder of the contracts term, including through any extensions or renewals. Should a Contractor opt to provide this type of service the State reserves the right to request a demonstration before implementation.

5.20.2 Preferred Source Statement

A Contractor shall clearly display on the home screen of any supplemental web site the following information:

(continued)

5.20.3 Authorized User Note

Some products in this contract may be available from one or more “Preferred Sources”. Authorized Users are reminded to comply with the statutory requirements under section 162 of the State Finance Law and the guidelines issued by the State Procurement Council to afford first priority to products available from Preferred Sources which meet your form, function and utility.”

5.20.4 Changes

All changes to products or pricing must be approved by the OGS Procurement Services in accordance with the terms of the Contract prior to any change to the supplemental web site by Contractor.

5.20.5 Web Order Elements

If an optional web-based ordering system is offered, the service must be capable of controlling, documenting and reporting the following minimum data elements:

- Contractor Name and Address
- Contract Award Description:
Group #37700 – Award 22719:
Culvert & Underdrain Pipe & Tubing
- Authorized User
- Authorized User’s Address
- Purchase Order/Requisition Numbers
- Contact (individual placing order)
- Delivery Location
- Delivery Instructions
- Anticipated Delivery Date
- Stock Number
- Manufacturer
- Item Description
- Unit of Measure
- List Price (unit)
- NYS Net Price (unit)
- Extended and Total Amounts
- Additional Shipping Charges (if applicable)

5.20.6 Agency Access to Web-Based Ordering System

Each Authorized User will be responsible for obtaining the appropriate communication software, phone or cable lines, and/or modems necessary to access a vendor’s web based ordering system if offered

(continued)

SECTION 6: TERMS AND CONDITIONS

6.1 Use of Resellers/Distributors

Contractors may provide items directly, or through Resellers/Distributors to insure maximum service capability throughout the State. They may also participate as alternate distribution sources for Contractor. These companies, if being utilized, are identified, along with their scope of involvement in the contract, on the individual contractor's price list found on the OGS Procurement Services Contract Web Site.

Contractor shall be fully liable for Reseller(s)' performance and compliance with all Contract terms and conditions. Product(s) purchased through Reseller(s) must be reported by Contractor in the required quarterly reports to the State as a condition of payment.

6.2 Catalogs, Products and Terms

Contractors' catalogs containing the awarded items are a part of the contract. Contractors shall supply catalogs to authorized users upon request. Only the products listed in the Contract Pricing pages are covered under the contract. It is the contractor's responsibility to make sure that all items delivered meet the contract specifications at all times. Whereas existing catalogs and price lists may in normal publication contain general business terms and conditions, Any pre-existing or pre-published terms and conditions contained therein are hereby waived by the Contractor. Only the Terms and Conditions as stated within the attached Appendix A and Appendix B and as found in this contract will apply.

6.3 Emergency Purchasing

In the event that a disaster emergency is declared by Executive Order under Section 28 of Article 2-B of the Executive Law, or that the Commissioner determines pursuant to his/her authority under Section 163(10)(b) of the State Finance Law that an emergency exists requiring the prompt and immediate delivery of products or services, the Commissioner reserves the right to obtain such products or services from any source, including but not limited to this contract, as the Commissioner in his/her sole discretion determines will meet the needs of such emergency. Contractor shall not be entitled to any claim or lost profits for products or services procured from other sources pursuant to this paragraph.

6.4 Contract Migration

State Agencies or any other authorized user holding individual contracts with contractors under this centralized contract shall be able to migrate to this contract award with the same contractor, effective on the contract begin date (retroactively, if applicable). Migration by an agency or any other authorized user to the centralized contract shall not operate to diminish, alter or extinguish any right that the agency or other authorized user otherwise had under the terms and conditions of their original contract.

6.5 Reservation

The State reserves the right to negotiate lower pricing or to advertise for bids in the event of any unanticipated excessive purchase. An "unanticipated excessive purchase" is defined as an unexpected order for Contract product(s) totaling more than \$250,000.00.

6.6 Poor Performance

Authorized Users should notify NYS Procurement's Customer Services and the Contract Management Specialist of record promptly if the Contractor fails to meet the requirements of this Contract. Performance which does not comply with requirements or is otherwise unsatisfactory to the Authorized User should also be reported to NYS Procurement Services Customer Services via e-mail at customer.services@ogs.ny.gov, or by calling (518) 474-6717.

(continued)

6.7 Insurance

The Contractor shall procure and maintain in force at all times during the term of this Contract, at its sole cost and expense, policies of insurance as herein below set forth, written by companies licensed or authorized by the New York State Department of Financial Services to issue insurance in the State of New York with an A.M. Best Company rating of "A-" Class "VII" or better. If during the term of the policy, a carrier's rating falls below "A-" Class "VII", the insurance must be replaced no later than the renewal date of the policy with an insurer acceptable to the New York State Office of General Services ("OGS") and rated at least "A-" Class "VII" in the most recently published Best's Insurance Report.

The Contractor shall deliver to OGS evidence of such policies in a form acceptable to OGS. These policies must be written in accordance with the requirements of the paragraphs below, as applicable. Acceptance and/or approval by OGS does not and shall not be construed to relieve the Contractor of any obligations, responsibilities or liabilities under any contract resulting from the original solicitation.

General Conditions

Conditions Applicable to Insurance.

All policies of insurance required by this Contract must meet the following requirements:

- 1. Coverage Types and Policy Limits.** The types of coverage and policy limits required from the Contractor are specified in Paragraph B *Insurance Requirements* below.
- 2. Policy Forms.** Except as may be otherwise specifically provided herein or agreed to in writing by OGS, policies must be written on an occurrence basis.

Certificates of Insurance/Notices. The Contractor shall provide a Certificate or Certificates of Insurance, and all applicable endorsements in a form satisfactory to OGS, within five (5) business days of request. Certificates shall reference the Solicitation Number and Contract Number (upon subsequent award). As applicable, the requested forms should reference IFB 22719, must name the following as the entity requesting proof of coverage (the entity being listed as the Certificate Holder) and be mailed to same:

The New York State Office of General Services
Procurement Services
Corning Tower- 38th Floor
Empire State Plaza
Albany, NY 12242

Unless otherwise agreed, policies shall be written so as to include a provision that the policy will not be canceled, materially changed, or not renewed without at least thirty (30) days prior written notice except in cases of cancellation for non-payment, in the event of which notice shall be provided as required by law to OGS. The Contractor shall not take any action, or omit to take any action that would suspend or invalidate any of the required coverages during the period of time such coverages are required to be in effect. Not less than thirty (30) days prior to the expiration date or renewal date, the Contractor shall supply OGS updated replacement Certificates of Insurance, and amendatory endorsements.

Certificates of Insurance shall:

- Be in the form approved by OGS;
- Disclose any deductible, self-insured retention, aggregate limit or any exclusion to the policy that materially changes the coverage required by the Solicitation/Contract;
- Specify the Additional Insured and Named Insured as required herein;
- Refer to this Contract Award Notification number and Contract number and any other attachments on the face of the certificate; and
- Be signed by an authorized representative of the insurance carrier or producer.

Only original documents (Certificates of Insurance & other attachments) or electronic forms that can be directly traced back to the insurance carrier, agent or broker via e-mail distribution or similar means, will be accepted.

- 4. Primary Coverage.** All insurance policies shall provide that the required coverage shall apply on a primary and not on an excess or contributing basis as to any other insurance that may be available to OGS or any Authorized User for any claim arising from the Contractor's work under this Contract,

(continued)

or as a result of the Contractor's activities. Any other insurance maintained by OGS or any Authorized User shall be excess of and shall not contribute with the Contractor's insurance.

5. ***Policy Renewal/Expiration.*** At least thirty (30) days prior to the expiration of any policy required by this Contract, evidence of renewal or replacement policies of insurance with terms no less favorable to OGS than the expiring policies shall be delivered to OGS in the manner required for service of notice in Paragraph A.3. *Certificates of Insurance/Notices* on the previous page. If, at any time during the term of this Contract, the coverage provisions and limits of the policies required herein do not meet the provisions and limits set forth in the Contract or proof thereof is not provided to OGS, the Contractor shall immediately cease work. The Contractor shall not resume work until authorized to do so by OGS. Any delay, time lost, or additional cost incurred as a result of the Contractor not having insurance required by the Contract or not providing proof of same in a form acceptable to OGS, shall not give rise to a delay claim or any other claim against OGS. Should the Contractor fail to provide or maintain any insurance required by this Contract, or proof thereof is not provided, OGS or Authorized Users may withhold further contract payments, treat such failure as a breach or default of the contract. Provided, further, that Contractor acknowledges that failure to obtain and/or keep in effect any or all required insurance by this Contract constitutes a material breach of the Contract and subjects it to liability for damages, indemnification and all other legal remedies available to OGS or the Authorized Users. The Contractor's failure to obtain and/or keep in effect any or all required insurance shall also provide the basis for OGS' immediate termination of this Contract, or an Authorized User's immediate termination of a procurement hereunder, subject only to a five (5) business day cure period. Any termination by OGS or Authorized User under this section shall in no event constitute or be deemed a breach of this Contract or any procurement hereunder and no liability shall be incurred by or arise against the OGS or any Authorized User, their officers, agents and employees therefore for lost profits or any other damages.
6. ***Self-Insured Retention/Deductibles.*** Certificates of Insurance must indicate the applicable deductible/self-insured retention on each policy. Deductibles or self-insured retentions above \$100,000 are subject to approval from OGS. The Contractor shall be solely responsible for all claim expenses and loss payments within the deductible or self-insured retention.
7. ***Subcontractors.*** Should the Contractor engage a Subcontractor, the Contractor shall require all Subcontractors, prior to commencement of an agreement between Contractor and the Subcontractor, to secure and keep in force during the term of this Contract the insurance requirements of this document on the Subcontractor, as applicable. Required insurance limits should be determined commensurate with the work of the Subcontractor. Proof thereof shall be supplied to OGS.
8. ***Additional Insureds.*** All insurance required by any contract resulting from the original solicitation shall name The People of the State of New York, its officers, agents, and employees as additional insureds thereunder (General Liability Additional Insured Endorsement shall be on Insurance Service Office's (ISO) form number CG 20 26 11 85 or the equivalent). The additional insured requirement does not apply to Workers' Compensation and Disability coverage.

(continued)

Insurance Requirements:

The Contractor, throughout the term of this Contract, or as otherwise required by this Contract, shall obtain and maintain in full force and effect, the following insurance with limits not less than those described below and as required by the terms of this Contract, or as required by law, whichever is greater (limits may be provided through a combination of primary and umbrella/excess policies):

- b. Commercial General Liability Insurance with a limit of not less than **\$2,000,000.00** each occurrence. Such liability shall be written on the ISO occurrence form **CG 00 01 01 96**, or a substitute form providing equivalent coverages and shall cover liability of the Contractor arising from premises operations liability, independent contractors, products-completed operations for a term of no less than three (3) years commencing upon acceptance of the products as required by any contract resulting from this solicitation, broad form property damage, personal & advertising injury, contractor means and methods, cross liability coverage, blanket contractual liability, including tort liability of another assumed in a contract (including the tort liability of another assumed in a contract), defense and/or indemnification obligations, including obligations assumed under this contract, cross liability for additional insureds, and explosion, collapse & underground coverage.

1. General Aggregate	\$2,000,000
2. Products – Completed Operations Aggregate	\$2,000,000
3. Personal and Advertising Injury	\$1,000,000
4. Damage to Rented Premises	\$50,000
5. Medical Expense	\$5,000
6. Each Occurrence	\$1,000,000

The following ISO forms must be endorsed to the policy:

- CG 00 01 01 96 or an equivalent – Commercial General Liability Coverage Form
 - CG 20 10 11 85 or an equivalent – Additional Insured-Owner, Lessees or Contractors (Form B)
 - Waiver of Subrogation Endorsement
- c. Comprehensive Business Automobile Liability Insurance covering liability arising out of the use of any motor vehicle in connection with the Contractor’s obligations under any contract resulting from the original solicitation, including owned, leased, hired and non-owned vehicles bearing or, under the circumstances under which they are being used, required by the Motor Vehicle Laws of the State of New York to bear, license plates. Such policy shall have a combined single limit for Bodily Injury and Property Damage of at least **\$2,000,000.00** and shall name The People of the State of New York, its officers, agents, and employees as additional insureds thereunder. The limits may be provided through a combination of primary and umbrella/excess liability policies.

Waiver of Subrogation. The Contractor shall cause to be included in each of the above referenced policies insuring against loss, damage or destruction by fire or other insured casualty a waiver of the insurer’s right of subrogation against OGS. A Waiver of Subrogation Endorsement shall be provided upon tentative award, and thereafter, within three (3) days of request.

(continued)

6.7.1 Workers' Compensation Insurance and Disability Benefits Requirements

The New York State Workers' Compensation Law (WCL) §57 & §220 requires the heads of all municipal and state entities to ensure that businesses applying for permits, licenses or contracts document it has appropriate workers' compensation and disability benefits insurance coverage. These requirements apply to both original contracts and renewals, whether the governmental agency is having the work done or is simply issuing the permit, license or contract. **Failure to provide proper current proof of such coverage or a legal exemption could result in termination of your company's contract.**

- **Proof of Compliance with Workers' Compensation Coverage Requirements: An ACORD form is NOT acceptable proof of workers' compensation coverage.**

In order to provide proof of compliance with the requirements of the New York State Workers' Compensation Law pertaining to workers' compensation coverage, a contractor shall:

1. Be legally exempt from obtaining Workers' Compensation insurance coverage; or
2. Obtain such coverage from an insurance carrier; or
3. Be a Workers Compensation Board approved self-insured employer or participate in an authorized self-insurance plan.

A Contractor seeking to enter into a contract with the State of New York shall provide **one of the following forms** to the OGS at the time of bid submission or within three (3) business days of the bid opening date:

Form CE-200, Certificate of Attestation for New York Entities with No Employees and Certain Out of State Entities, that New York State Workers' Compensation and/or Disability Benefits Insurance Coverage is Not Required, which is available on the New York State Workers' Compensation Board's website (www.wcb.ny.gov); (Reference applicable IFB/RFP and Group #s on the form.)

Certificate of Workers' Compensation Insurance:

- **Form C-105.2** (9/07) if coverage is provided by the Contractor's insurance carrier, the Contractor must request its carrier to send this form to OGS, or
- **Form U-26.3** if coverage is provided by the State Insurance Fund, the Contractor must request that the State Insurance Fund send this form to OGS, or
- **Form SI-12**, Certificate of Workers' Compensation Self-Insurance available from the New York State Workers' Compensation Board's Self-Insurance Office, or
- **Form GSI-105.2**, Certificate of Participation in Workers' Compensation Group Self- Insurance available from the Contractor's Group Self-Insurance Administrator.

Proof of Compliance with Disability Benefits Coverage Requirements:

In order to provide proof of compliance with the requirements of the New York State Workers' Compensation Law pertaining to disability benefits, a Contractor shall:

1. Be legally exempt from obtaining disability benefits coverage; or
2. Obtain such coverage from an insurance carrier; or
3. Be a Board-approved self-insured employer.

A Contractor seeking to enter into a contract with the State of New York shall **provide one of the following forms** to the OGS at the time of the bid submission or within three (3) business days of the bid opening date:

- **Form CE-200**, Certificate of Attestation for New York Entities with No Employees and certain out of State Entities, That New York State Workers' Compensation **and/or** Disability Benefits Insurance Coverage is Not Required, which is available on the New York State Workers' Compensation Board's website (www.wcb.ny.gov); (Reference applicable IFB/RFP and Group #s on the form.)
- **Form DB-120.1**, Certificate of Disability Benefits Insurance. The Contractor must request its business insurance carrier to send this form to OGS; or
- **Form DB-155, Certificate of Disability Benefits Self-Insurance.** The Contractor must call the New York State Worker's Compensation Board's Self-Insurance Office at 518-402-0247 to obtain this form.

(continued)

SECTION 7: USE OF CONTRACT BY STATE AGENCIES, POLITICAL SUBDIVISIONS & OTHER AUTHORIZED USERS

7.1 Overlapping Contract Products

Products available in this contract may also be available from other New York State contracts. Authorized Users will be advised to select the most cost-effective procurement alternative that meets their program requirements and to maintain a procurement record documenting the basis for this selection.

7.2 Procurement Instructions

The Authorized User should be familiar with and follow the terms and conditions governing the use of the contract which appear in the contract document. Listed below are separate guidance for “Executive Agencies” and “Non-Executive Agencies”. All Authorized Users shall issue purchase order(s) directly to the Contractor by mail, fax, or electronically either through e-mail, or through the Contractor’s dedicated OGS website if offered and as listed in Contract Award Notification.

Upon Authorized User acceptance of products itemized on the purchase order, Contractor(s) will invoice Authorized User for any portion of products accepted, and accordingly, Authorized User will arrange for payment. Contractor shall provide itemized invoicing for all products in accordance with the contractual requirements.

7.2.1 For Executive Agencies

An Executive Agency Authorized User shall first purchase all Culvert and Underdrain Pipe systems and materials from the appropriate Preferred Sources as required by State Finance Law §162. If the Preferred Sources do not provide a product that meets the form, function and utility of the Executive Agency Authorized User, it may then purchase products from the Contractor, first using the applicable “Core List” and then the applicable “Non-Core (discount off list) List”. It is highly encouraged that the Executive Agency Authorized User utilize the appropriate Core List, as Core List products should provide the lowest prices.

7.2.2 For Non-Executive Agencies

A Non-Executive Agency Authorized User that is subject to the requirements of State Finance Law §162 (4) shall first purchase all Culvert and Underdrain Pipe systems and materials from the appropriate Preferred Sources as required by State Finance Law §162. If Preferred Source products do not meet the entity’s form, function and utility (as required by State Finance Law §162) then it may purchase products from the “Core List” and “Non-Core (discount off list) List” offerings.

A non-Executive Agency Authorized User that is not subject to the requirements of State Finance Law §162 (4) is encouraged to purchase from the applicable Core List, as Core List products should provide the biggest savings.

(continued)

**State of New York
Office of General Services
NEW YORK STATE PROCUREMENT
Contract Performance Report**

Please take a moment to let us know how this contract award has measured up to your expectations. If reporting on more than one contractor or product, please make copies as needed. This office will use the information to improve our contract award, where appropriate. **Comments should include those of the product's end user.**

Award No.: 22719 **Contract No.:** PC_____ **Contractor:** _____

Describe Product* Provided (Include Item No., if available): _____

PRODUCT	Excellent	Good	Acceptable	Unacceptable
• Product meets your needs				
• Product meets contract specifications				
• Pricing				

**Note: "Product" is defined as a deliverable under any Bid or Contract, which may include commodities (including printing), services and/or technology. The term "Product" includes Software.*

CONTRACTOR	Excellent	Good	Acceptable	Unacceptable
• Timeliness of delivery				
• Completeness of order (fill rate)				
• Responsiveness to inquiries				
• Employee courtesy				
• Problem resolution				

Comments: _____

Agency: _____ Date: _____

Prepared by: _____ Title: _____

E-mail: _____ Phone: _____

Address: _____

Please save and forward as an attachment via e-mail to the Contract Management Specialist listed on the cover of this Contract Award Notification or return by mail to:

OGS - NEW YORK STATE PROCUREMENT
Customer Services, 38th Floor
Erastus Corning 2nd Tower - Empire State Plaza
Albany, New York 12242

(continued)