

# SUBMITTAL



|                  |                                  |  |            |
|------------------|----------------------------------|--|------------|
| Submittal number | 009.0                            | Date                                       | 01/06/2021 |
| Project          | TRAILS AT CROWFOOT F9            | 6454 N. Crowfoot Valley Road<br>Parker, CO |            |
| Project number   | 202103                           |  |            |
| Spec section     |                                  |  |            |
| Subsection       |                                  | Status                                     | Open       |
| Current action   | Submitted                        | Ball in court                              |            |
| Topic            | PVC Storm Pipe and Appurtenances |  |            |

|           |                      |
|-----------|----------------------|
| Submitter | MICHAEL TOMAS SNYDER |
| Reviewer  |                      |
| Cc        |                      |

|                     |            |                       |            |
|---------------------|------------|-----------------------|------------|
| Date submitted      | 01/06/2021 | Submission due date   | 01/06/2021 |
| Released for review | 01/06/2021 | Review due date       | 01/13/2021 |
| Date returned       |            | Required on site date |            |
| Date closed         |            |                       |            |

|  |
|--|
| <b>Notes</b>   |
| Please see attached JBS Transmittal A-009 for PVC Storm Pipe and Appurtenances |



# LETTER OF TRANSMITTAL

## JBS PIPELINE CONTRACTORS

8600 Verbena St.  
Commerce City, CO 80022  
Office 303-289-4355  
Fax 303-289-4353

### ISSUED TO:

Owner ATTN: Con Cockrum and Mike Snyder

DATE:

### REGARDING:

TRANSMITTAL NO.:

Project JBS Job No 0245

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|---|--------------|------------|--------|----------------------------------|
|   | 1-Electronic |            | A-009  | PVC Storm Pipe and Appurtenances |
|   |              |            |        |                                  |
|   |              |            |        |                                  |
|   |              |            |        |                                  |
|   |              |            |        |                                  |
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### COMMENTS

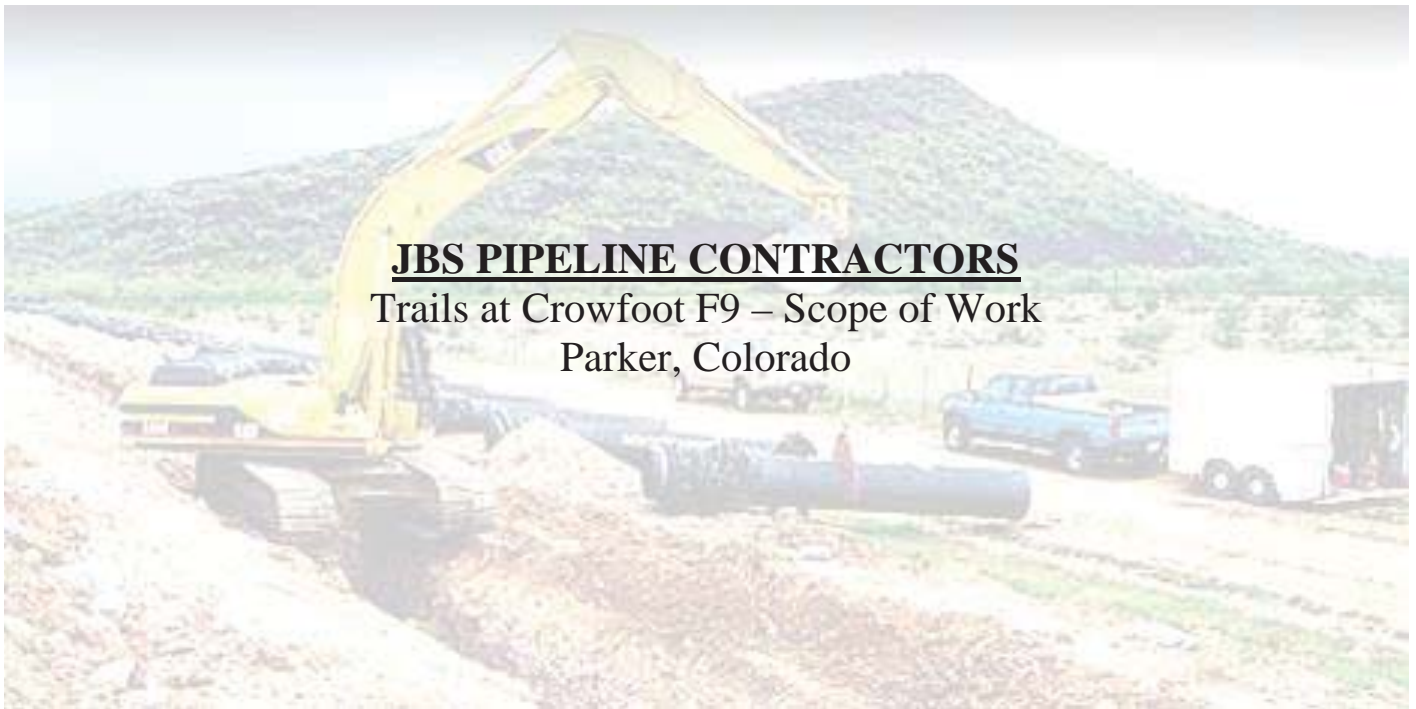
CC:

Amie Parent

**Amie Parent**  
JBS Pipeline Contractors



*We are proud to provide submittals for the following project:*



**JBS PIPELINE CONTRACTORS**  
Trails at Crowfoot F9 – Scope of Work  
Parker, Colorado

1788 Helena Street  
Aurora, CO 80011  
Phone: (720) 859-3060

# STORM DRAIN

# Storm Pipe

### D3034 & F679 SEWER SPECIFICATION DATA

Diamond gravity sewer pipe 4 inches through 60 inches shall be made of compounds conforming to material requirements of ASTM D3034 and ASTM F679 in accordance with ASTM D1784. Diamond PVC Sewer Pipe meets all the dimensional, chemical, and physical requirements as outlined in ASTM D3034 and ASTM F679. A listing to CSA B182.2 is available for most of these sizes. A complete listing by manufacturing plant is available upon request.

The pipe sizes 4 inches through 60 inches are made with an integral bell “water-tight” joint that meets the requirements of ASTM D3212 and that utilizes a Rieber gasket system for sealing that meets the requirements of ASTM F477.

Each male end shall be beveled to facilitate joining and referencing marked for proper insertion depth. Diamond furnished lubricant is to be used in the joining process.

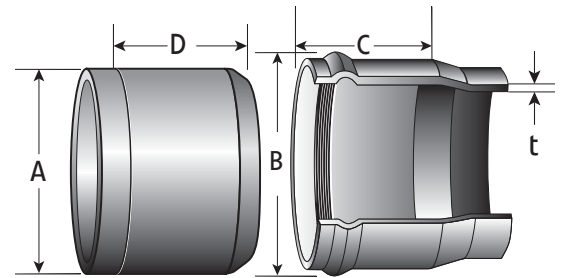
### SANI-21™

#### PHYSICAL PROPERTIES OF ASTM D3034 & F679

| Property   | ASTM TEST | Minimum 12454/12364 |
|--|-----------|---------------------|
| PIPE MATERIALS:<br>PIPE SHALL BE MADE OF PVC PLASTIC HAVING A MINIMUM CELL CLASSIFICATION OF 12454 OR 12364 AS DEFINED IN SPECIFICATION D1784. |           |                     |
| Specific Gravity   | D792      | 1.40/1.40           |
| Tensile Strength, psi  | D638      | 7,000/6,000         |
| Tensile Modulus, psi   | D638      | 400,000/500,000     |
| IZOD Impact Strength,  | D256      | .65ft., lb./in.     |

**SHORT FORM** Specification for Diamond PVC Solid-Wall Sewer Pipe SDR 26 or SDR 35 or PS 46 or PS 115  
All PVC Solid-Wall Sewer Pipe shall be made of compounds conforming to ASTM D1784 manufactured in accordance with the material requirements of ASTM D3034 or ASTM F679. All PVC Sewer Pipe must meet dimensional, chemical, and physical requirements as outlined in ASTM D3034 or ASTM F679. Joints shall meet the requirements of ASTM D3212 and shall be formed using Rieber Technology. PVC Sewer Pipe shall be installed according to the requirements of ASTM D2321, Uni-Bell's Uni-Pub 6 and the manufacturer's recommendations.

### RIEBER JOINT ILLUSTRATION



# SANI-21™

## D3034 & F679 SEWER SPECIFICATION DATA

| Nominal Pipe Size<br>in. (mm) | A<br>Outside Diameter<br>Inches | B<br>Bell Socket Diameter<br>Inches | C<br>Socket Depth<br>Inches | D<br>Insert Mark<br>Inches* | t<br>Min. Wall Thickness<br>SDR26/PS115<br>Inches | t<br>Min. Wall Thickness<br>SDR35/PS46<br>Inches |
|-------------------------------|---------------------------------|-------------------------------------|-----------------------------|-----------------------------|---|--|
| <b>D-3034 PIPE DIMENSIONS</b> |                                 |                                     |                             |                             |   |  |
| 4" (100)                      | 4.215                           | 5-1/4                               | 4-5/8"                      | 4"                          | 0.162   | 0.120  |
| 6" (150)                      | 6.275                           | 7-1/2                               | 4-3/4"                      | 4-1/8"                      | 0.241   | 0.180  |
| 8" (200)                      | 8.400                           | 9-7/8                               | 6-1/8"                      | 4-7/8"                      | 0.323   | 0.240  |
| 10" (250)                     | 10.500                          | 12-3/8                              | 6-3/4"                      | 5-1/4"                      | 0.404   | 0.300  |
| 12" (300)                     | 12.500                          | 14-5/8                              | 7-1/4"                      | 5-1/2"                      | 0.481   | 0.360  |
| 15" (375)                     | 15.300                          | 18                                  | 7-1/4"                      | 4-5/8"                      | 0.588   | 0.437  |
| <b>F-679 PIPE DIMENSIONS</b>  |                                 |                                     |                             |                             |   |  |
| 18" (450)                     | 18.701                          | 21-3/4"                             | 9-1/2"                      | 7-3/4"                      | 0.671   | 0.499  |
| 21" (525)                     | 22.047                          | 25-1/2"                             | 10"                         | 8-1/2"                      | 0.791   | 0.588  |
| 24" (600)                     | 24.803                          | 28-3/4"                             | 11"                         | 10"                         | 0.889   | 0.661  |
| 27" (675)                     | 27.953                          | 32-1/2"                             | 13-1/4"                     | 11-1/8"                     | 1.002   | 0.745  |
| 30" ciod (750)                | 32.000                          | 37-1/4"                             | 14"                         | 13-5/8"                     | 1.148   | 0.853  |
| 36" ciod (900)                | 38.300                          | 43-1/4"                             | 15"                         | 13-7/8"                     | 1.373   | 1.021  |
| 42" ciod (1050)               | 44.500                          | 53"                                 | 18"                         | 16-3/4"                     | 1.596   | 1.187  |
| 48" ciod (1200)               | 50.800                          | 60"                                 | 18"                         | 16-7/8"                     | 1.822   | 1.355  |
| 54" ciod (1350)               | 57.560                          | 67"                                 | 22"                         | 17"                         | 2.064   | 1.535  |
| 60" ciod (1500)               | 61.610                          | 72"                                 | 23"                         | 18"                         | 2.210   | 1.643  |

# SANI-21™

## LOADING ASTM D3034 & F679 LOADING CHART (SDR35 / PS46)

| Nominal Pipe Size<br>in. (mm) | Outside Diameter<br>Inches | Bundle<br>Quantity | *Feet Per Truckload |           |
|-------------------------------|----------------------------|--------------------|---------------------|-----------|
|                               |                            |                    | 14'                 | 20'       |
| <b>SDR35/PS46</b>             |                            |                    |                     |           |
| 4" (100)                      | 4.215                      | 69                 | 23,184              | 24,288    |
| 6" (150)                      | 6.275                      | 24/32              | 10,080              | 11,264    |
| 8" (200)                      | 8.400                      | 18/24              | 5544/6048           | 5808/6336 |
| 10" (250)                     | 10.500                     | 12/15              | 3402                | 3564      |
| 12" (300)                     | 12.500                     | 16                 | 2688                | 2816      |
| 15" (375)                     | 15.300                     | 6                  | 1512                | 1584      |
| 18" (450)                     | 18.701                     | 2/3/4/6            | 1050                | 1100      |
| 21" (525)                     | 22.047                     | 4                  | 672                 | 704       |
| 24" (600)                     | 24.803                     | 4                  | 504/672             | 704       |
| 27" (675)                     | 27.953                     | 3                  | 378                 |           |
| 30" (750)                     | 32.000                     | 3                  | 378/252             |           |
| 36" (900)                     | 38.300                     | 2                  | 168                 |           |
| 42" (1050)                    | 44.500                     | 2                  | 168                 |           |
| 48" (1200)                    | 50.800                     | 1                  | 84                  |           |
| 54" (1350)                    | 57.560                     | 1                  | 42                  |           |
| 60" (1500)                    | 61.610                     | 1                  | 42                  |           |

Prices are subject to a firm policy of "Price in effect at time of shipment on regular purchases"

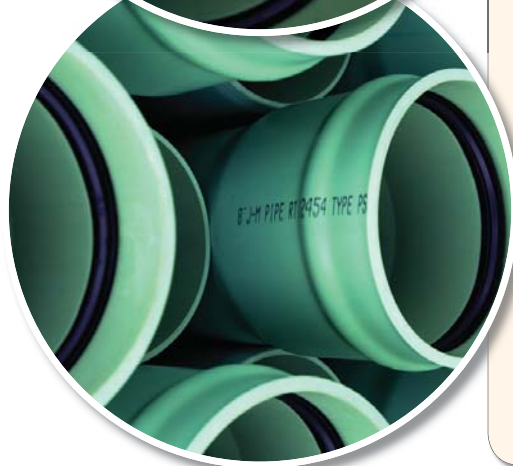
\*Possession of this page does not constitute an offer of sale"

\*Tolerance of +/- 1/4" allowed



# GRAVITY SEWER

MEETS ASTM D3034 AND F679.



## APPLICATIONS

JM Eagle's Ring-Tite PVC Gravity Sewer pipe is suitable for conveying domestic sanitary sewage, as well as certain industrial wastes.

## DESCRIPTION

JM Eagle's Gravity Sewer pipe ASTM D3034 is available in SDR 35 and SDR 26 in 4- to 15-inch diameters and ASTM F679 is available in PS 46 and PS 115 in 18- to 48-inch diameters. It comes in 14- and 20-foot lengths.

The pipe can be directed to most existing sewer equipment. It can also be connected to IPS cast- or ductile-iron fittings with the appropriate adapters and/or transition gaskets.

JM Eagle Gravity Sewer pipe comes with Ring-Tite joints with locked-in gaskets. Joints meet or exceed ASTM D3212 for joint tightness, including a 22-inch Hg vacuum and a 25-foot head pressure test.

## BENEFITS

JM Eagle's Ring-Tite Gravity Sewer pipe features an improved design for reserve strength and stiffness to increase load-bearing capacity, maximizing sewer system capacity at a reasonable cost.

- It is unaffected by the fluids found in ordinary domestic sewage; sewer gases and the sulfuring acid generated by the completion of the hydrogen sulfide cycle; and corrosive soils both alkaline and acidic.
- Maintains performance against tuberculation, corrosion and external galvanic soil conditions without lining wrapping, coating or cathodic protection.
- It resists abrasion, gouging and scouring far better than most common piping materials.
- Its interiors stay smooth over long years of service while maximizing system capacity, allowing for savings in pumping costs, as well as savings on the size of the pipe required.
- The light weight of the pipe reduces manpower required for installation.
- It can be field-cut with a power saw or ordinary handsaw and be beveled without the use of expensive or complicated machinery.
- Gasketed tee and wye saddles for tapping into previously installed PVC sewer lines eliminate the need for field solvent welding.



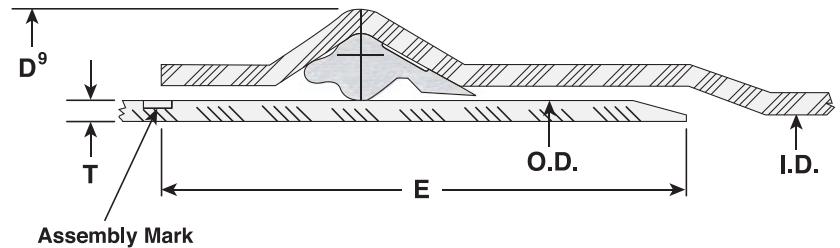
# GRAVITY SEWER

## SUBMITTAL AND DATA SHEET

### JM EAGLE'S RING-TITE JOINT OFFERS ADDITIONAL BENEFITS.

- Seated in a deep groove, the flexible elastomeric Rieber gasket provides a tight seal that protects the line from shock, vibration and earth movement, and compensates for expansion and contraction of the pipe lengths.
- Quick and easy to assemble with a simple push, there's no field mixing or application of cement.
- The joint remains tight under normal operating conditions.

| PIPE SIZE (IN)                   | AVERAGE O.D.(IN) | NOM. I.D. (IN) | MIN. T. (IN) | MIN. E (IN) | APPROX. D <sup>9</sup> (IN) | APPROX. WEIGHT (LBS/FT) |
|----------------------------------|------------------|----------------|--------------|-------------|-----------------------------|-------------------------|
| <b>SDR 35 (PS46) ASTM D3034</b>  |                  |                |              |             |                             |                         |
| 4                                | 4.215            | 3.975          | 0.120        | 3.50        | 4.695                       | 1.05                    |
| 6                                | 6.275            | 5.915          | 0.180        | 4.25        | 6.995                       | 2.36                    |
| 8                                | 8.400            | 7.920          | 0.240        | 4.75        | 9.360                       | 4.24                    |
| 10                               | 10.500           | 9.900          | 0.300        | 6.00        | 11.700                      | 6.64                    |
| 12                               | 12.500           | 11.780         | 0.360        | 6.25        | 13.940                      | 9.50                    |
| 15                               | 15.300           | 14.426         | 0.437        | 7.25        | 17.048                      | 14.19                   |
| <b>SDR 26 (PS115) ASTM D3034</b> |                  |                |              |             |                             |                         |
| 4                                | 4.215            | 3.891          | 0.162        | 3.50        | 4.863                       | 1.40                    |
| 6                                | 6.275            | 5.793          | 0.241        | 4.25        | 7.239                       | 3.11                    |
| 8                                | 8.400            | 7.754          | 0.323        | 4.75        | 9.692                       | 5.63                    |
| 10                               | 10.500           | 9.692          | 0.404        | 6.00        | 12.116                      | 8.84                    |
| 12                               | 12.500           | 11.538         | 0.481        | 6.25        | 14.424                      | 12.56                   |
| 15                               | 15.300           | 14.124         | 0.588        | 7.25        | 17.652                      | 18.90                   |
| <b>PS46, ASTM F679</b>           |                  |                |              |             |                             |                         |
| 18                               | 18.701           | 17.629         | 0.499        | 8.00        | 20.845                      | 21.43                   |
| 21                               | 22.047           | 20.783         | 0.588        | 9.50        | 24.575                      | 29.88                   |
| 24                               | 24.803           | 23.381         | 0.661        | 9.60        | 27.647                      | 38.96                   |
| 27                               | 27.953           | 26.351         | 0.745        | 10.10       | 31.157                      | 49.47                   |
| 30 CIOD                          | 32.000           | 30.194         | 0.853        | 16.75       | 35.612                      | 64.18                   |
| 36 CIOD                          | 38.300           | 36.042         | 1.021        | 19.02       | 42.816                      | 93.00                   |
| 42 CIOD                          | 44.500           | 41.948         | 1.187        | 22.43       | 49.604                      | —                       |
| 48 CIOD                          | 50.800           | 47.888         | 1.355        | 24.78       | 56.624                      | —                       |
| <b>PS115, ASTM F679</b>          |                  |                |              |             |                             |                         |
| 18                               | 18.701           | 17.261         | 0.671        | 8.00        | 21.581                      | 28.49                   |
| 21                               | 22.047           | 20.349         | 0.791        | 9.50        | 25.443                      | —                       |
| 24                               | 24.803           | 22.891         | 0.889        | 9.60        | 28.627                      | —                       |
| 27                               | 27.953           | 25.799         | 1.002        | 10.10       | 32.261                      | —                       |
| 30 CIOD                          | 32.000           | 29.070         | 1.148        | 16.75       | 36.348                      | —                       |
| 36 CIOD                          | 38.300           | 35.464         | 1.373        | 19.02       | 45.438                      | —                       |
| 42 CIOD                          | 44.500           | 41.072         | 1.596        | 22.43       | 51.356                      | —                       |
| 48 CIOD                          | 50.800           | 46.886         | 1.822        | 24.78       | 58.628                      | —                       |



I.D. : Inside Diameter  
 O.D. : Outside Diameter  
 T : Wall Thickness  
 D<sup>9</sup> : Bell Outside Diameter  
 E : Distance between Assembly Mark to the end of spigot.

Product Standard: ASTM 3034 (4"–15")  
 ASTM F679 (18"–48")  
 Pipe Compound: ASTM D1784 Cells Class 12454 or 12364  
 Gasket: ASTM F477  
 Integral Bell Joint: ASTM D3212  
 Pipe Stiffness: ASTM D2412 F/ΔY = 46 PSI or 115 PSI  
 Pipe Length: 14 or 20 feet laying length  
 Installation: ASTM D 2321  
 JM Eagle™ Installation Guide



## ASTM D3034/IB PVC Gravity Sewer Pipe | Gasketed Integral Bell

NAPCO's ASTM D3034 Gasketed Integral Bell PVC Pipe product line is manufactured to meet the needs of modern municipal waste water systems, storm water drainage systems, and other non-pressure applications. With top quality raw materials and modern processing technology, our ASTM D3034 pipe meets all industry standards in addition to our own rigorous quality control requirements.

Our D3034 pipe utilizes Rieber style gaskets throughout the entire product offering to create a leak-free joint.



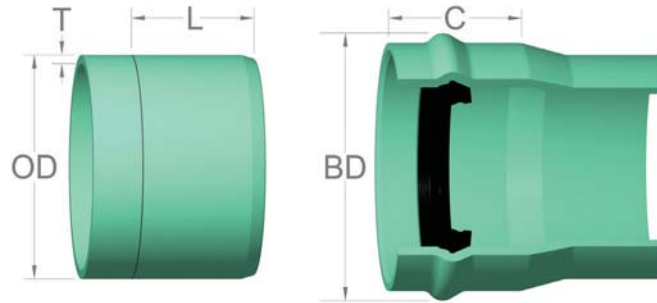
| Short Form Specification                      |   |
|---|---|
| <b>Pipe Standard:</b>                         | ASTM D3034  |
| <b>Diameter Std.:</b>                         | PSM   |
| <b>Nominal Sizes:</b>                         | 4", 6", 8", 10", 12", 15"                                 |
| <b>Dimension Ratios &amp; Pipe Stiffness:</b> | SDR 35 – 46 psi<br>SDR 26 – 115 psi<br>SDR 23.5 – 153 psi |
| <b>Pressure Ratings:</b>                      | Not rated for pressure applications                       |
| <b>Lay Length:</b>                            | 14' or 20'  |
| <b>Color:</b>                                 | Green   |
| <b>Pipe Compound:</b>                         | ASTM D1784<br>Cell Class 12454 or 12364                   |
| <b>Pipe Options:</b>                          | Solid Wall<br>2 Hole Perforated<br>3 Hole Perforated      |
| <b>Pipe Joint Std.:</b>                       | ASTM D3212  |
| <b>Max. Angular Joint Deflection:‡</b>        | 1°  |
| <b>Gasket Standard:</b>                       | ASTM F477   |
| <b>Gasket Material Offerings:</b>             | Standard – SBR<br>Optional – NBR or EPDM                  |
| <b>Certifications:</b>                        | IAPMO Uniform Plumbing Code*                              |
| <b>Installation Std.:</b>                     | ASTM D2321  |

\*IAPMO Uniform Plumbing Code listed products must be requested at time of order.  
‡See Installation Guide for more information.





## ASTM D3034/IB PVC Gravity Sewer Pipe | Gasketed Integral Bell



| D3034/IB PIPE DIMENSIONS & PERFORMANCE |                       |      |                      |                         |                        |                            |                |                    |
|--|-----------------------|------|----------------------|-------------------------|------------------------|----------------------------|----------------|--------------------|
| Nom. Size                              | Outside Diameter (OD) | SDR  | Pipe Stiffness (psi) | Min. Wall Thickness (T) | Internal Diameter (ID) | Approx. Bell Diameter (BD) | Bell Depth (C) | Insertion Mark (L) |
| 4"                                     | 4.215                 | 35   | 46                   | 0.120                   | 3.975                  | 5.000                      | 3.750          | 3.125              |
|  |                       | 26   | 115                  | 0.162                   | 3.891                  |                            |                |                    |
|  |                       | 23.5 | 153                  | 0.178                   | 3.859                  |                            |                |                    |
| 6"                                     | 6.275                 | 35   | 46                   | 0.180                   | 5.915                  | 7.375                      | 4.625          | 4.000              |
|  |                       | 26   | 115                  | 0.241                   | 5.793                  |                            |                |                    |
|  |                       | 23.5 | 153                  | 0.265                   | 5.745                  |                            |                |                    |
| 8"                                     | 8.400                 | 35   | 46                   | 0.240                   | 7.920                  | 9.625                      | 5.250          | 4.125              |
|  |                       | 26   | 115                  | 0.323                   | 7.754                  |                            |                |                    |
| 10"                                    | 10.500                | 35   | 46                   | 0.300                   | 9.900                  | 12.250                     | 5.875          | 5.125              |
|  |                       | 26   | 115                  | 0.404                   | 9.692                  |                            |                |                    |
| 12"                                    | 12.500                | 35   | 46                   | 0.360                   | 11.780                 | 14.375                     | 6.500          | 5.375              |
|  |                       | 26   | 115                  | 0.481                   | 11.538                 |                            |                |                    |
| 15"                                    | 15.300                | 35   | 46                   | 0.437                   | 14.426                 | 17.500                     | 7.750          | 7.375              |
|  |                       | 26   | 115                  | 0.588                   | 14.125                 |                            |                |                    |

Notes:

1. These dimensions are for estimating purposes only. All dimensions are in inches unless otherwise specified.
2. SDR = Standard Dimension Ratio
3. ASTM Pressure Rating @ 73°F and includes 2:1 safety factor.
4. Internal diameter calculated using nominal outside diameter and minimum wall thickness.
5. Dimension given for Approx. Bell Diameter (BD) is for highest pressure rating.

# VINYLTECH SEWER PIPE

## TECHNICAL DATA SUBMITTAL



### CONFORMANCE

These specifications designate the requirements for manufacturing and installing Vinyltech PVC sewer pipe.

**ASTM D3034** - Standard Specification for Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings

**ASTM F679** - Standard Specification for Poly (Vinyl Chloride) (PVC) Large-Diameter Plastic Gravity Sewer Pipe and Fittings

**ASTM D3212** - Standard Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals

**ASTM F477** - Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe

**ASTM D1784** - Standard Specification for Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds

**ASTM D2152** - Standard Test Method for Extruded Poly (Vinyl Chloride) (PVC) Pipe and Molded Fittings by Acetone Immersion

**ASTM D2444** - Standard Test Method for Determination of the Impact Resistance of Thermoplastic Pipe and Fittings by Means of Tup (Falling Weight)

**ASTM D2321** - Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and other Gravity-Flow Applications

**ASTM D2412** - Standard Test Method for Determination of External Loading Characteristics of Plastic Pipe by Parallel-Plate Loading

**IAPMO (File No. 2128)** - Uniform Plumbing Code (UPC) - Vinyltech sewer pipe is IAPMO listed for ASTM D3034 SDR 35 4-15 inch and SDR 26 4-12 inch.

### PIPE COMPOUND

The pipe shall be extruded from compounds meeting the requirements of Cell Classification 12454, as defined in ASTM D1784, Standard Specification for Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds.

### PIPE

Vinyltech pipe shall be manufactured in accordance with ASTM D3034 and ASTM F679.

### GASKET JOINT

The gasket shall be reinforced with a steel ring and meet the requirements of ASTM F477. Vinyltech pipe shall have an integral bell end with a locked-in factory installed gasket and shall meet the requirements of ASTM D3212.

### MARKING

The pipe shall be marked in accordance with ASTM D3034 and F679.

### QUALITY CONTROL

Requirements for manufacturing and testing are conducted in strict accordance with ASTM specifications and are outlined in ASTM D3034 and F679.

### INSTALLATION

Recommended installation procedure of Vinyltech Corporation and the Uni-Bell PVC Pipe Association are outlined in ASTM D2321, Underground Installation of Flexible Thermoplastic Sewer Pipe. Vinyltech recommends the Uni-Bell Handbook of PVC Pipe as an invaluable resource guide.

### ASSEMBLING THE PIPE

Assembling of PVC Sewer Pipe is easily accomplished by hand or by using a bar and block. A depth of entry mark serves as a visual check for rapid, accurate joint inspection. **Do not over insert.**

- 1) Remove any mud, sand, or other foreign matter from the belled and spigot ends of the pipe. Carefully clean the gasket area.
- 2) With a clean applicator (a brush or hand) lubricate the entire surface of the pipe from the spigot end to the depth of entry mark and the contact surface of the gasket with **Vinyltech Brand Lubricant**.
- 3) Brace the bell to avoid disturbing the already installed joints. Align the pipe, insert the spigot into the bell and push.
- 4) **Do not insert past the entry mark line.**



201 S. 61st Avenue • Phoenix, AZ 85043  
602 233-0071 • 602 272-4847 Fax • www.vtpipe.com

AN OTTERTAIL COMPANY

SEWER PIPE

# GRAVITY SEWER MAIN

## TECHNICAL DATA SUBMITTAL

SEWER PIPE

### ASTM D3034 SDR 35/PS 46 PVC SEWER PIPE

| NOMINAL SIZE<br>(IN) (mm) | OUTER<br>DIAMETER (IN) | MINIMUM<br>WALL | 14' LENGTH<br>WEIGHT (LB/100') | 20' LENGTH<br>WEIGHT (LB/100') |
|---------------------------|------------------------|-----------------|--------------------------------|--------------------------------|
| 4 (100)                   | 4.215                  | 0.120           | 105.7                          | 104.2                          |
| 6 (150)                   | 6.275                  | 0.180           | 232.6                          | 229.0                          |
| 8 (200)                   | 8.400                  | 0.240           | 417.8                          | 410.3                          |
| 10 (250)                  | 10.500                 | 0.300           | 657.4                          | 643.9                          |
| <b>12 (300)</b>           | <b>12.500</b>          | <b>0.360</b>    | <b>944.1</b>                   | 922.7                          |
| 15 (375)                  | 15.300                 | 0.437           | 1390.0                         | 1361.0                         |

### ASTM D3034 SDR 26/PS 115 PVC SEWER PIPE

| NOMINAL SIZE<br>(IN) (mm) | OUTER<br>DIAMETER (IN) | MINIMUM<br>WALL | 14' LENGTH<br>WEIGHT (LB/100') |
|---------------------------|------------------------|-----------------|--------------------------------|
| 4 (100)                   | 4.215                  | 0.162           | 150.0                          |
| 6 (150)                   | 6.275                  | 0.241           | 320.0                          |
| 8 (200)                   | 8.400                  | 0.323           | 580.0                          |
| 10 (250)                  | 10.500                 | 0.404           | 900.0                          |
| 12 (300)                  | 12.500                 | 0.481           | 1300.0                         |
| 15 (375)                  | 15.300                 | 0.588           | 2000.0                         |

### ASTM F679 PS 46 PVC SEWER PIPE

| NOMINAL SIZE<br>(IN) (mm) | OUTER<br>DIAMETER (IN) | MINIMUM<br>WALL | 14' LENGTH<br>LB/100' |
|---------------------------|------------------------|-----------------|-----------------------|
| 18 (475)                  | 18.701                 | 0.499           | 2115.0                |
| * 21 (560)                | 22.047                 | 0.588           | 2962.0                |
| * 24 (630)                | 24.803                 | 0.661           | 3740.0                |

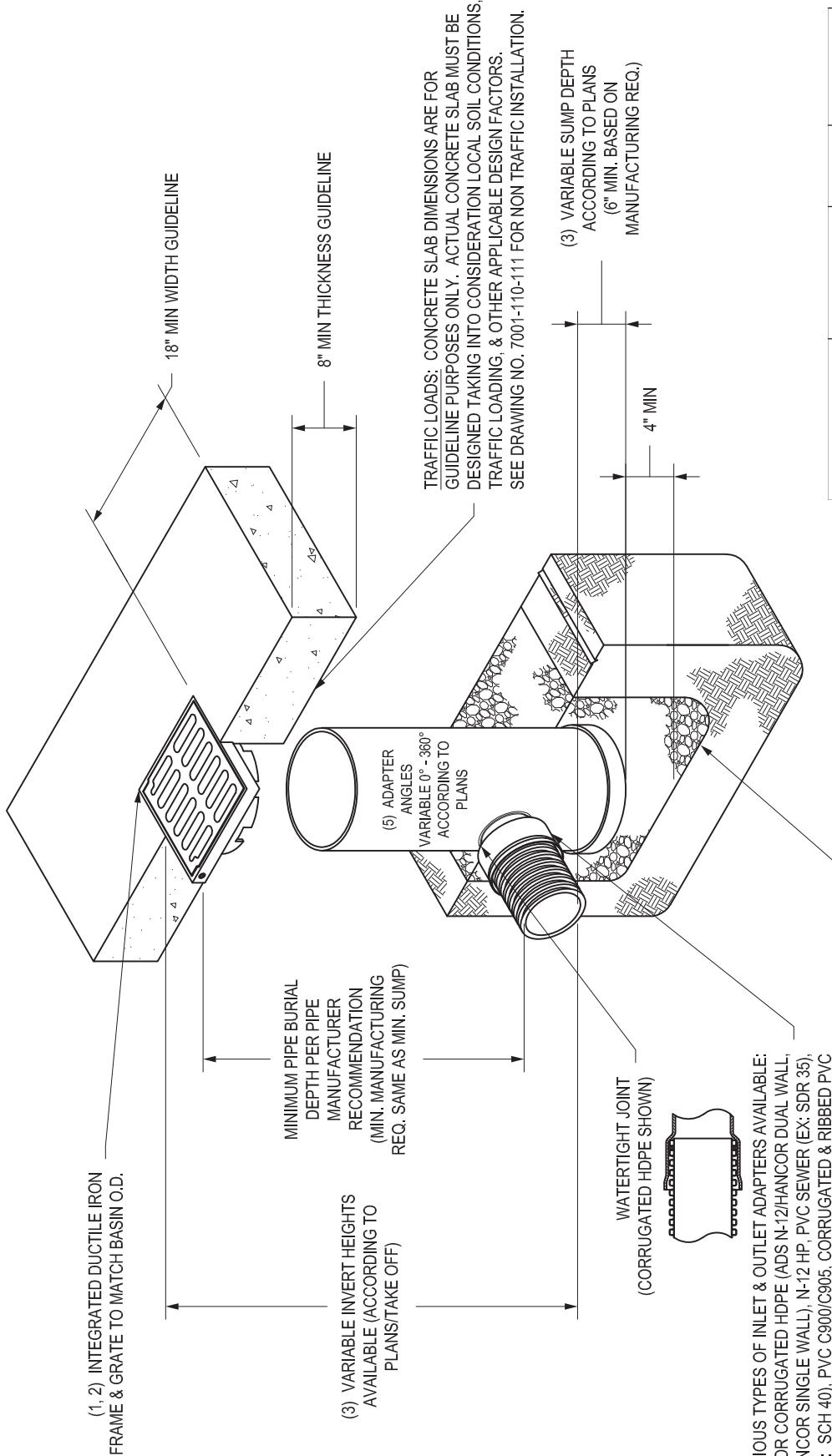
### ASTM F679 PS 115 PVC SEWER PIPE

| NOMINAL SIZE<br>(IN) (mm) | OUTER<br>DIAMETER (IN) | MINIMUM<br>WALL | 14' LENGTH<br>LB/100' |
|---------------------------|------------------------|-----------------|-----------------------|
| 18 (475)                  | 18.701                 | 0.671           | 2790.0                |
| * 21 (560)                | 22.047                 | 0.791           | 3940.0                |
| * 24 (630)                | 24.803                 | 0.889           | 4980.0                |

\* Northern Pipe Products

# Storm Fittings

# NYLOPLAST 12" DRAIN BASIN: 2812AG \_\_ X



| GRATE OPTIONS     | LOAD RATING | PART #   | DRAWING #    |
|-------------------|-------------|----------|--------------|
| PEDESTRIAN        | MEETS H-10  | 1299CGP  | 7001-110-202 |
| STANDARD          | MEETS H-20  | 1299CGS  | 7001-110-203 |
| SOLID COVER       | MEETS H-20  | 1299CGC  | 7001-110-204 |
| PEDESTRIAN BRONZE | N/A         | 1299CGPB | 7001-110-205 |
| DOMES             | N/A         | 1299CGD  | 7001-110-206 |
| DROP IN GRATE     | LIGHT DUTY  | 1207DI   | 7001-110-021 |

TRAFFIC LOADS: CONCRETE SLAB DIMENSIONS ARE FOR GUIDELINE PURPOSES ONLY. ACTUAL CONCRETE SLAB MUST BE DESIGNED TAKING INTO CONSIDERATION LOCAL SOIL CONDITIONS, TRAFFIC LOADING, & OTHER APPLICABLE DESIGN FACTORS. SEE DRAWING NO. 7001-110-111 FOR NON TRAFFIC INSTALLATION.

(3) VARIABLE SUMP DEPTH ACCORDING TO PLANS (6" MIN. BASED ON MANUFACTURING REQ.)

4" MIN

18" MIN WIDTH GUIDELINE

8" MIN THICKNESS GUIDELINE

(5) ADAPTER ANGLES VARIABLE 0° - 360° ACCORDING TO PLANS

MINIMUM PIPE BURIAL DEPTH PER PIPE MANUFACTURER RECOMMENDATION (MIN. MANUFACTURING REQ. SAME AS MIN. SUMP)

WATERTIGHT JOINT (CORRUGATED HDPE SHOWN)

(1, 2) INTEGRATED DUCTILE IRON FRAME & GRATE TO MATCH BASIN O.D.

(3) VARIABLE INVERT HEIGHTS AVAILABLE (ACCORDING TO PLANS/TAKE OFF)

THE BACKFILL MATERIAL SHALL BE CRUSHED STONE OR OTHER GRANULAR MATERIAL MEETING THE REQUIREMENTS OF CLASS I OR CLASS II MATERIAL AS DEFINED IN ASTM D2321. BEDDING & BACKFILL FOR SURFACE DRAINAGE INLETS SHALL BE PLACED & COMPACTED UNIFORMLY IN ACCORDANCE WITH ASTM D2321.

- GRATES/SOLID COVER SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05, WITH THE EXCEPTION OF THE BRONZE GRATE.
- FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05
- DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NEEDED FOR BASINS OVER 84" DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. 7001-110-065
- DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL), N-12 HP, & PVC SEWER.
- ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012.

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|            |          |                  |
|------------|----------|------------------|
| DRAWN BY   | EBC      | MATERIAL         |
| DATE       | 03-29-06 |                  |
| REVISOR BY | CCA      | PROJECT NO./NAME |
| DATE       | 08-27-13 |                  |
| DWG SIZE   | A        | SCALE            |
|            |          | 1:20             |
|            |          | SHEET            |
|            |          | 1 OF 1           |

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TITLE  
 12 IN DRAIN BASIN QUICK SPEC INSTALLATION DETAIL

DWG NO. 7001-110-189 REV D