

Section 2721
Engineered Surface Drainage Products

GENERAL
PVC surface drainage inlets shall include the drain basin type as indicated on the contract drawing and referenced within the contract specifications. The ductile iron grates for each of these fittings are to be considered an integral part of the surface drainage inlet and shall be furnished by the same manufacturer. The surface drainage inlets shall be as manufactured by Nyloplast a division of Advanced Drainage Systems, Inc., or prior approved equal.

MATERIALS
The drain basins required for this contract shall be manufactured from PVC pipe stock, utilizing a thermoforming process to reform the pipe stock to the specified configuration. The drainage pipe connection stubs shall be manufactured from PVC pipe stock and formed to provide a watertight connection with the specified pipe system. This joint tightness shall conform to ASTM D3212 for joints for drain and sewer plastic pipe using flexible elastomeric seals. The flexible elastomeric seals shall conform to ASTM F477. The pipe bell spigot shall be joined to the main body of the drain basin or catch basin. The raw material used to manufacture the pipe stock that is used to manufacture the main body and pipe stubs of the surface drainage inlets shall conform to ASTM D1784 cell class 12454.

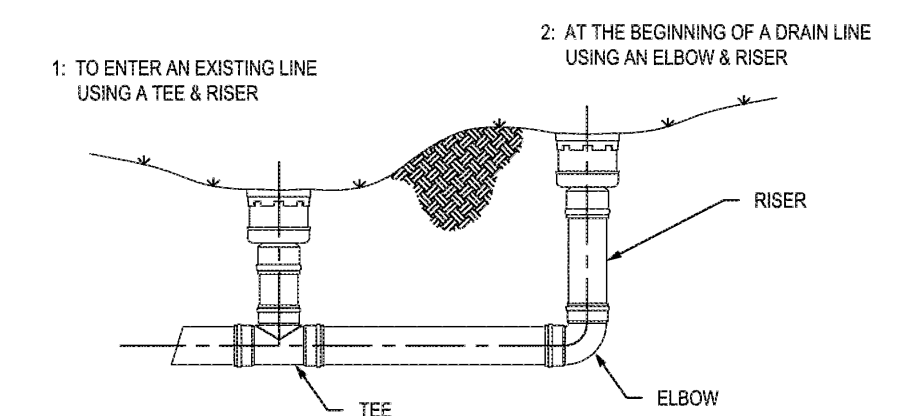
The grates and frames furnished for all surface drainage inlets shall be ductile iron for sizes 8", 10", 12", 15", 18", 24" and 30" and shall be made specifically for each basin so as to provide a round bottom flange that closely matches the diameter of the surface drainage inlet. Grates for drain basins shall be capable of supporting various wheel loads as specified by Nyloplast. 12" and 15" square grates will be hinged to the frame using pins. Ductile iron used in the manufacture of the castings shall conform to ASTM A536 grade 70-50-05. Grates and covers shall be provided painted black.

INSTALLATION
The specified PVC surface drainage inlet shall be installed using conventional flexible pipe backfill materials and procedures. The backfill material shall be crushed stone or other granular material meeting the requirements of class 1, class 2, or class 3 material as defined in ASTM D2321. Bedding and backfill for surface drainage inlets shall be well placed and compacted uniformly in accordance with ASTM D2321. The drain basin body will be cut at the time of the final grade. No brick, stone or concrete block will be required to set the grate to the final grade height. For load rated installations, a concrete slab shall be poured under and around the grate and frame. The concrete slab must be designed taking into consideration local soil conditions, traffic loading, and other applicable design factors. For other installation considerations such as migration of fines, ground water, and soft foundations refer to ASTM D2321 guidelines.

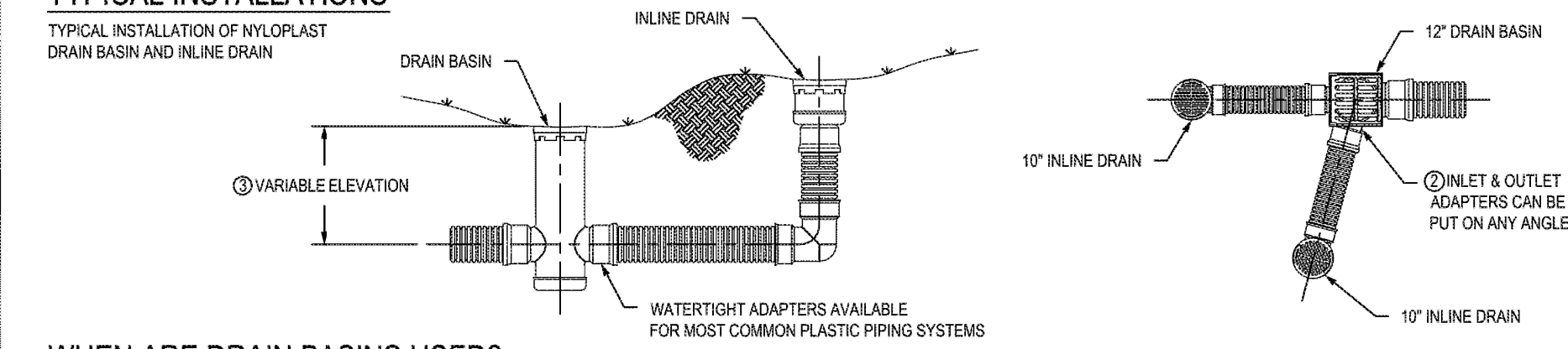
THIS PRINT DISCLOSES SUBJECT MATTER IN WHICH NYLOPLAST HAS PROPRIETARY RIGHTS. THE RECEIPT OR POSSESSION OF THIS PRINT DOES NOT CONFER, TRANSFER, OR LICENSE THE USE OF THE DESIGN OR TECHNICAL INFORMATION SHOWN HEREIN. REPRODUCTION OF THIS PRINT OR ANY INFORMATION CONTAINED HEREIN, OR MANUFACTURE OF ANY ARTICLE HEREFROM, FOR THE DISCLOSURE TO OTHERS IS FORBIDDEN, EXCEPT BY SPECIFIC WRITTEN PERMISSION FROM NYLOPLAST.		DRAWN BY: CJA DATE: 3-10-10 REVISED BY: NMM DATE: 03-11-16	MATERIAL: DUCTILE IRON PROJECT NO. NAME: DATE: 03-11-16	3130 VERONA AVE BUFORD, GA 30518 PHN (770) 932-2443 FAX (770) 932-2469 www.nyloplast-us.com	TITLE: 8 IN - 30 IN DRAIN BASIN SPECIFICATIONS DWG NO. 7001-110-011 REV H
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WHEN ARE INLINE DRAINS USED?

- 2708AG _ _ X
- 2710AG _ _ X
- 2712AG _ _ X
- 2715AG _ _ X
- 2718AG _ _ X
- 2724AG _ _ X
- 2730AG _ _ X

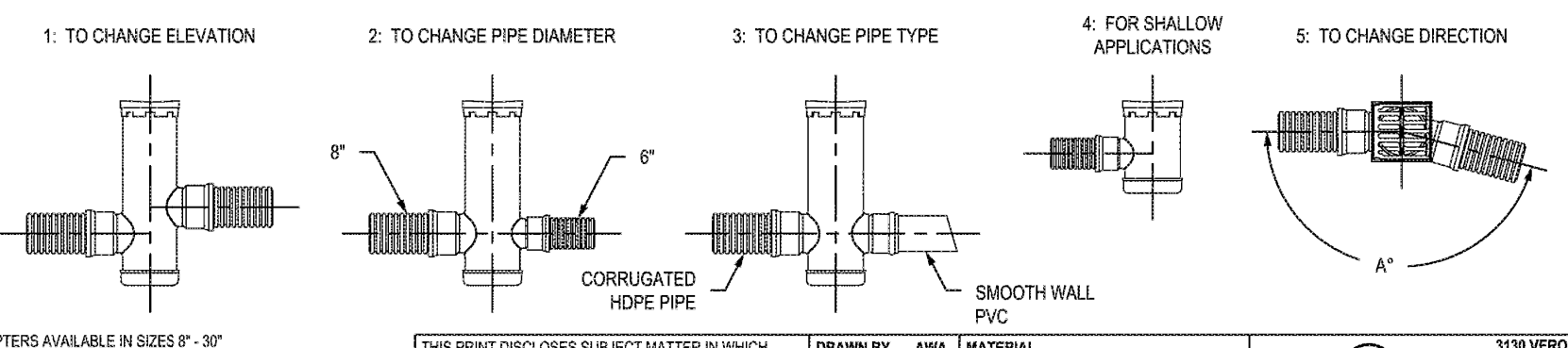


TYPICAL INSTALLATIONS



WHEN ARE DRAIN BASINS USED?

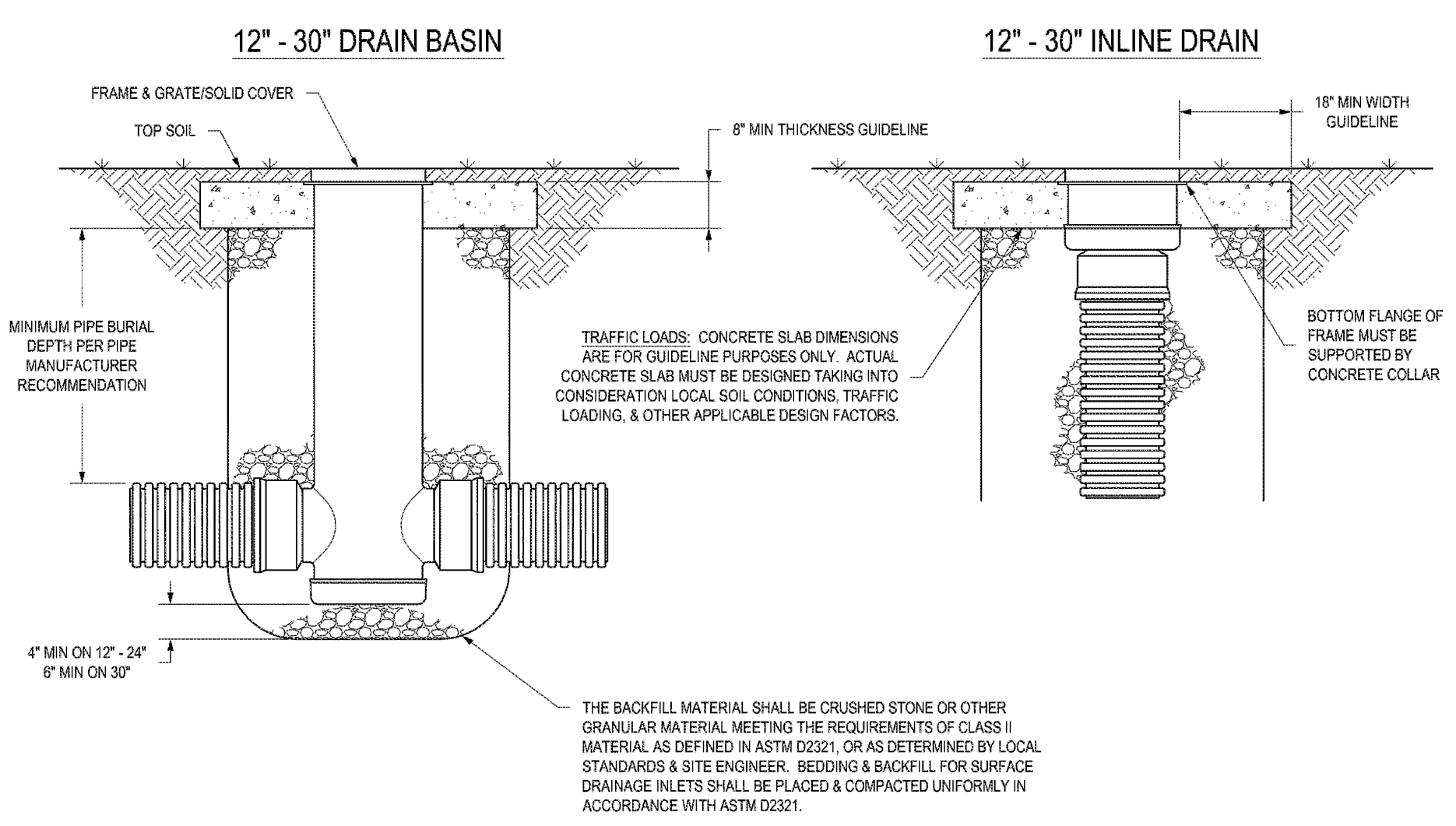
- 2808AG _ _ X
- 2810AG _ _ X
- 2812AG _ _ X
- 2815AG _ _ X
- 2818AG _ _ X
- 2824AG _ _ X
- 2830AG _ _ X



- 1. STRUCTURES & ADAPTERS AVAILABLE IN SIZES 8" - 30"
- 2. ADAPTERS CAN BE MOUNTED ON ANY ANGLE UP TO 90°, TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012, 7001-110-013 & 7001-110-014
- 3. DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NEEDED FOR BASINS OVER 84" DUE TO SHIPPING RESTRICTIONS SEE DRAWING NO. 7001-110-040

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NYLOPLAST TURF TRAFFIC INSTALLATION



- 1. GRATES/SOLID COVERS SHALL MEET H-20 LOAD RATING FOR 30" PEDESTRIAN & 12" - 30" STANDARD & SOLID
- TRAFFIC LOADS: CONCRETE SLAB DIMENSIONS ARE FOR GUIDELINE PURPOSES ONLY. ACTUAL CONCRETE SLAB MUST BE DESIGNED TAKING INTO CONSIDERATION LOCAL SOIL CONDITIONS, TRAFFIC LOADINGS, & OTHER APPLICABLE DESIGN FACTORS.
- THE BACKFILL MATERIAL SHALL BE CRUSHED STONE OR OTHER GRANULAR MATERIAL MEETING THE REQUIREMENTS OF CLASS II MATERIAL AS DEFINED IN ASTM D2321, OR AS DETERMINED BY LOCAL STANDARDS & SITE ENGINEER. BEDDING & BACKFILL FOR SURFACE DRAINAGE INLETS SHALL BE PLACED & COMPACTED UNIFORMLY IN ACCORDANCE WITH ASTM D2321.

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HORNER SHIFERIN

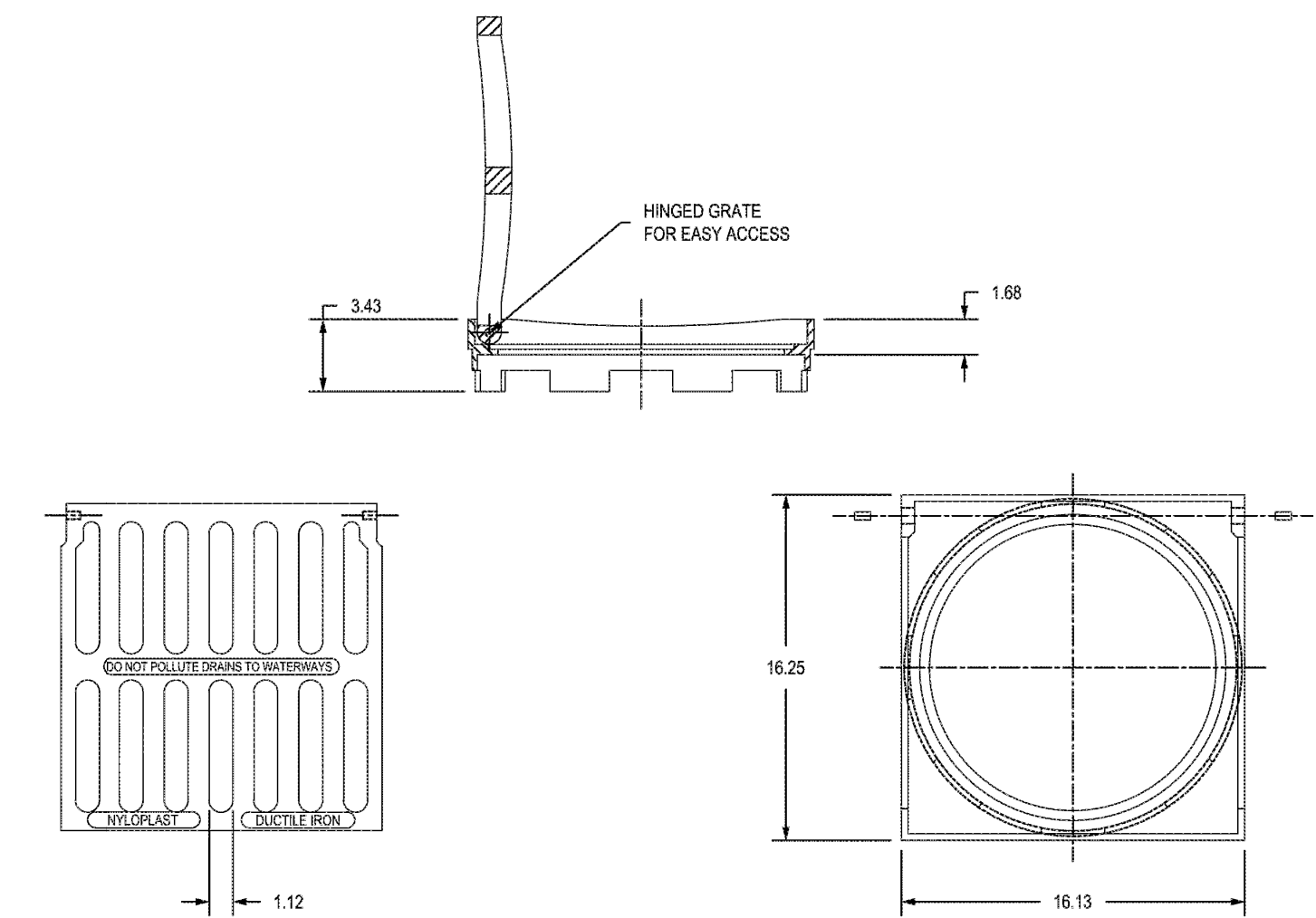
101 LAURA V. DR., STE. 101, O'FALLON, MO 63366-2081
 636-329-2296 • FAX 636-329-2810 • WWW.HORNERSHIFERIN.COM
 DISCIPLINE: PROFESSIONAL ENGINEERING
 CERTIFICATE OF AUTHORITY: 000159
 EXPIRATION DATE: DECEMBER 31, 2018

STATE OF MISSOURI
 APRIL GEISMANN
 PROFESSIONAL ENGINEER
 NUMBER E-2001004592
 7/18/18

Name: April Geismann
 Discipline: Civil Engineer
 License No. E2001004592
 Expiration Date: 12/31/2019

1599CGS

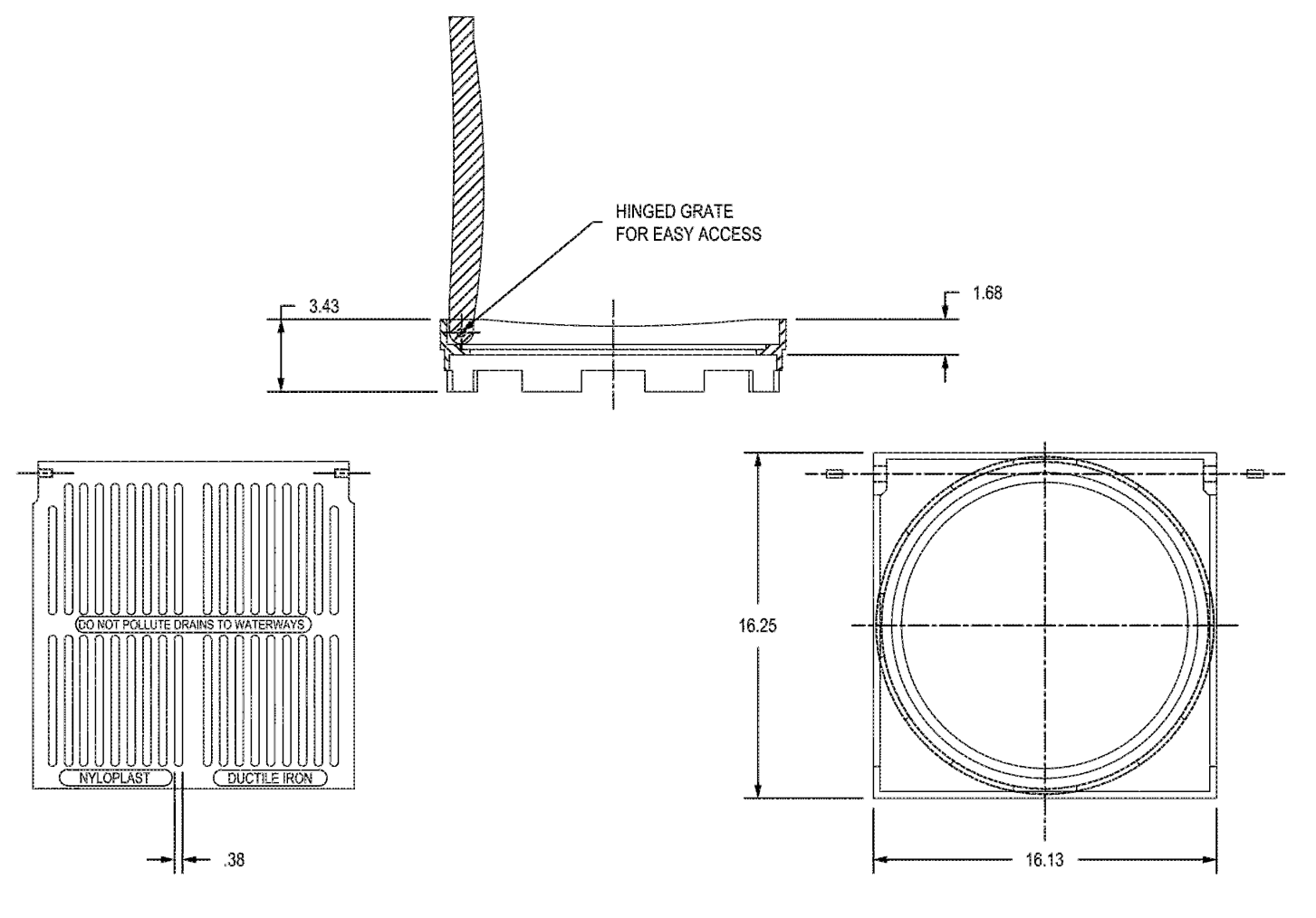
APPROX. DRAIN AREA = 92.70 SQ IN
 APPROX. WEIGHT WITH FRAME = 59.62 LBS



ALL DIMENSIONS IN INCHES UNLESS NOTED OTHERWISE. GRATE MEETS H-20 LOAD RATING. QUALITY: MATERIALS SHALL CONFORM TO ASTM A536 GRADE 70-50-05. PAINT: CASTINGS ARE FURNISHED WITH A BLACK PAINT. LOCKING DEVICE AVAILABLE UPON REQUEST SEE DRAWING NO. 7001-110-032		DRAWN BY: EBC DATE: 3-7-06 APP'D BY: CJA DATE: 3-7-06	MATERIAL: DUCTILE IRON PROJECT NO. NAME: DATE: 3-7-06	3130 VERONA AVE BUFORD, GA 30518 PHN (770) 932-2443 FAX (770) 932-2469 www.nyloplast-us.com	TITLE: 15 IN STANDARD GRATE ASSEMBLY DWG NO. 7001-110-208 REV B
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1599CGP

APPROX. DRAIN AREA = 81.25 SQ IN
 APPROX. WEIGHT WITH FRAME = 53.70 LBS



ALL DIMENSIONS IN INCHES UNLESS NOTED OTHERWISE. GRATE MEETS H-10 LOAD RATING. QUALITY: MATERIALS SHALL CONFORM TO ASTM A536 GRADE 70-50-05. PAINT: CASTINGS ARE FURNISHED WITH A BLACK PAINT. LOCKING DEVICE AVAILABLE UPON REQUEST SEE DRAWING NO. 7001-110-031. SIZE OF OPENING MEETS REQUIREMENTS OF AMERICAN DISABILITY ACT AS STATED IN FEDERAL REGISTER PART II, DEPARTMENT OF JUSTICE, 28 CFR PART 36. NONDISCRIMINATION ON THE BASIS OF DISABILITY BY PUBLIC ACCOMMODATIONS AND IN COMMERCIAL FACILITIES, FINAL BY RULE.		DRAWN BY: EBC DATE: 3-7-06 APP'D BY: CJA DATE: 3-7-06	MATERIAL: DUCTILE IRON PROJECT NO. NAME: DATE: 3-7-06	3130 VERONA AVE BUFORD, GA 30518 PHN (770) 932-2443 FAX (770) 932-2469 www.nyloplast-us.com	TITLE: 15 IN PEDESTRIAN GRATE ASSEMBLY DWG NO. 7001-110-207 REV B
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RENEW O'FALLON
T.R. HUGHES BLVD
O'FALLON, MO 63366

SHEET TITLE: STORM AND SANITARY SEWER DETAILS

PROJECT NUMBER: 17050

SHEET NUMBER:

C10.6

DRAWN BY: AMH CHECKED BY: AMG