PDX-TFX® UTILITY

The Versitile Utility Trench Solution

Pipe and Wire Chases

Support Structure Friendly

Containment and Storage

www.abtdrains.com

Today's Trench Solutions

ABT, INC.

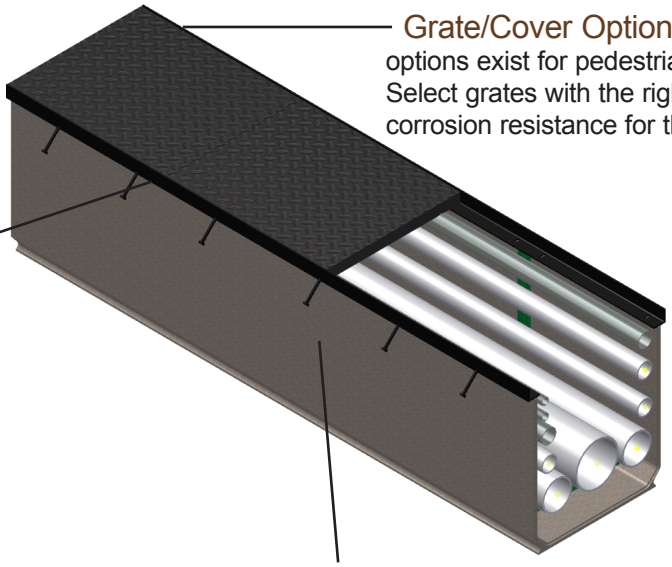
Advanced Building Technologies, Inc.

PDX® Product Features

PDX® Utility

PDX® Utility is the preeminent pre-engineered modular trench system available in varying width and slopes assures the precision, accuracy and design flexibility for virtually any utility trench application. Whether employed as a cable/pipe chase for air, gas, or fluid transmission lines or as secondary containment for spill containment; ABT's utility trench systems provide an economical solution. The modular PDX® Utility channels are manufactured from non-absorbent polymer concrete known for its high strength and chemical resistance. The channels are produced from either polyester or vinyl ester resin to provide a wide range of chemical resistance. For applications requiring chemical resistance the appropriate PolySeal Adhesive/Sealant can be utilized in the channel's true tongue and groove joints. A large selection of trench widths and depths are available to optimize the cross sectional area for pipe chases, raceway applications or storage capacity for containment applications. The PDX® Utility system is available in a wide variety of frames, grates, cover materials and load capabilities, including commercially available rapid access covers, fast layout change systems, pipe strut systems and electronic leak detectors.

Product Features:



Grate/Cover Options - A wide range of grate options exist for pedestrian to airport applications. Select grates with the right strength, style, and corrosion resistance for the application.

Frame Options - Painted steel, stainless steel, galvanized steel, aluminum, or FRP styles are available. Select the best rail material for your application. All rails are independently anchored into the surrounding concrete so that the encapsulation concrete receives the horizontal loads, not the channel walls.

Channels - Manufactured from UL / ULC certified polymeric materials, the channels feature a high precision tongue and groove joint for positive alignment and a superior configuration for sealant application when required.

Grate Retention Systems - For applications with substantial horizontal loads, pin locks are available and recommended. Toggle locks can be used when longitudinal loads are low. Locks may be omitted where horizontal loads and grate retention are not a consideration. ABT can assist you in making a suitable selection.

Ease of Installation - The system can be installed using the no-float leg installation device.

Eliminates Sub-Slab Barrier Penetration - Prevents Geo-membrane penetrations during trench drain installation and monolithic pours are eliminated using no-float legs and anchor slab.

PDX® Product Specs

PDX® Formulations

ABT® offers two compositional formulations for PDX® Utility channels, depending on the effluent and chemical environment. Both offer superior strength and durability as well as marked cost advantages over alternative materials.

Standard PDX® Utility channels are manufactured from PolyDyn®, an advanced formulation of selected aggregates and inert mineral fillers bonded together in a high-grade polyester resin. This formulation is suitable for use in both exterior and interior applications and are UL Classified and ULC Listed.

When a higher level of chemical resistance is required, ABT® offers PDX® Utility in a special formulation called PolyChampion®, which has the same aggregates and mineral fillers as the PolyDyn® formulation, but with a premium grade vinylester resin binder. This formulation will withstand a broader range of corrosive salts, fuels, acids and alkalis.

Please see chemical resistance guide.

Fluid	PolyDyn	PolyChampion	Portland Cement
Water	•	•	Permeable
Gasoline	•	•	Permeable
Diesel Fuel	•	•	Permeable
Aviation Fuel	•	•	Permeable
Hydraulic Oil	•	•	Permeable
Fuel Oil	•	•	Permeable
Hydraulic Fluid	•	•	Permeable
Motor Oil	•	•	Permeable
Sea Water	•	•	Permeable
Acids		•	Corrodes
Road Salts	•	•	Corrodes
Caustic		•	Corrodes

Physical Properties of PolyDyn® Thermoset Polyester Polymer Concrete		
Property	**Test Method**	**Value**
Compressive Strength	ASTM C579	17,000 psi Minimum
Bending Strength	ASTM C580	4,000 psi Minimum
Tensile Strength	ASTM C307	2,000 psi Minimum
Moisture Absorption	ASTM C140	0.1% Maximum
Freeze/Thaw (1,600 cycles)	ASTM C666	No Weight Loss
Fungi Growth Resistance	ASTM G21	Zero Mold Growth
Flame Spread - UL/ULC	UL 723	Class A

PDX Trench Storage Capacity and Cross Section Area

Clear Depth		4 Inch [102 mm]				5 Inch [127 mm]				6 Inch [152 mm]				8 Inch [203 mm]				10 Inch [254 mm]			
Inch	mm	Gal/Ft	Sq In	L/M	Sq. M	Gal/Ft	Sq In	L/M	Sq. M	Gal/Ft	Sq In	L/M	Sq. M	Gal/Ft	Sq In	L/M	Sq. M	Gal/Ft	Sq In	L/M	Sq. M
3.94	100	0.7	12.9	8.321	0.008	0.87	16.8	10.8	0.011	1.1	20.7	13.4	0.01	1.5	28.6	18.5	0.02	1.9	36.5	23.6	0.02
5.91	150	1.1	20.7	13.661	0.013	1.4	26.7	17.4	0.017	1.7	32.6	21.1	0.02	2.3	44.4	28.6	0.03	2.9	56.2	36.0	0.04
7.87	200	1.5	28.7	18.629	0.019	1.9	36.6	23.6	0.024	2.3	44.4	28.6	0.03	3.1	60.2	38.5	0.04	3.9	75.9	48.4	0.05
9.84	250	1.9	36.7	23.597	0.024	2.4	46.5	29.8	0.030	2.9	56.4	36.0	0.04	4.0	76.1	49.7	0.05	5.0	95.7	62.1	0.06
11.81	300	2.3	44.7	28.564	0.029	2.9	56.6	36.0	0.037	3.6	68.4	44.7	0.04	4.8	92.0	59.6	0.06	6.0	116	74.5	0.07
13.78	350	2.7	52.9	33.532	0.034	3.5	66.6	43.5	0.043	4.2	80.4	52.2	0.05	5.6	108	69.5	0.07	7.0	136	86.9	0.09
15.75	400	3.2	61.1	39.742	0.039	4.0	76.8	49.7	0.050	4.8	92.5	59.6	0.06	6.4	124	79.5	0.08	8.1	156	101	0.10
17.72	450	3.6	69.3	44.710	0.045	4.5	87.0	55.9	0.056	5.4	105	67.1	0.07	7.3	140	90.7	0.09	9.1	176	113	0.11
19.69	500	4.0	77.6	49.677	0.050	5.1	97.3	63.3	0.063	6.1	117	75.8	0.08	8.1	156	100.6	0.10	10	196	127	0.13

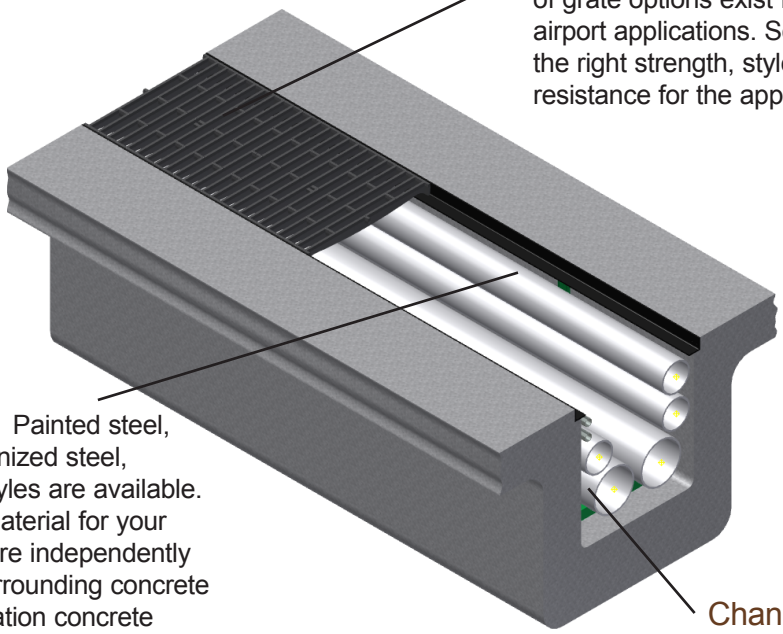
Clear Depth		12 Inch [305 mm]				15 Inch [381 mm]				18 Inch [457 mm]				21 Inch [533 mm]				24 Inch [610 mm]			
Inch	mm	Gal/Ft	Sq In	L/M	Sq. M	Gal/Ft	Sq In	L/M	Sq. M	Gal/Ft	Sq In	L/M	Sq. M	Gal/Ft	Sq In	L/M	Sq. M	Gal/Ft	Sq In	L/M	Sq. M
3.94	100	2.3	44.4	28.564	0.029	2.9	56.2	36.264	0.036	3.5	68.0	43.8	0.04	4.2	79.8	51.5	0.05	4.8	91.6	59.1	0.06
5.91	150	3.5	68.0	43.468	0.044	4.5	85.7	55.887	0.055	5.4	103	67.1	0.07	6.3	121	78.2	0.08	7.2	139	89.4	0.09
7.87	200	4.8	91.7	59.613	0.059	6.0	115.3	74.516	0.074	7.2	139	89.4	0.09	8.4	163	104	0.10	9.7	186	120	0.12
9.84	250	6.0	115.4	74.516	0.074	7.5	145	93.145	0.094	9.1	175	113	0.11	11	204	132	0.13	12	234	150	0.15
11.81	300	7.2	139.2	89.419	0.090	9.1	174.7	113.016	0.113	11	210	135	0.14	13	246	159	0.16	15	281	181	0.18
13.78	350	8.5	163.1	105.564	0.105	11	204.4	131.645	0.132	13	246	159	0.16	15	287	185	0.19	17	329	212	0.21
15.75	400	9.7	187	120.468	0.121	12	234.3	151.516	0.151	15	282	181	0.18	17	329	212	0.21	20	376	242	0.24
17.72	450	11	211	136.613	0.136	14	264.2	170.145	0.170	17	317	205	0.20	19	371	238	0.24	22	424	273	0.27
19.69	500	12	235.1	151.516	0.152	15	294.1	190.016	0.190	18	353	227	0.23	21	412	266	0.27	25	471	304	0.30

TFX® Product Features

TFX® Utility

For non-corrosive applications the TFX Utility modular pre-engineered EPS concrete forming system is a lower cost cast in place trench option. TFX Utility trench has the same chemical resistance as the concrete floor, for instances where floor coatings are applied, the TFX Utility trench can easily be coated at the same time. While the TFX Utility system comes standard as a flat-bottom trench in either sloping or non-sloping variations, a radius bottom or other custom shapes are available. TFX Utility is more versatile than the PDX Utility trenches as it is available with variable slopes and greater depth options. Additionally, the same wide array and selection of frame, grate, and cover options available with the PDX Utility are available with the TFX Utility system.

Product Features:



Grate/Cover Options - A wide range of grate options exist for pedestrian to airport applications. Select grates with the right strength, style, and corrosion resistance for the application.

Frame Options - Painted steel, stainless steel, galvanized steel, aluminum, or FRP styles are available. Select the best rail material for your application. All rails are independently anchored into the surrounding concrete so that the encapsulation concrete receives the horizontal loads, not the channel walls.

Channels - Cast in place concrete formed utilizing pre-engineered EPS foam forms. Forms are removed after concrete placement.

Grate Retention Systems - For applications with substantial horizontal loads, pin locks are available and recommended. Toggle locks can be used when longitudinal loads are low. No grate lock is an option where horizontal loads and grate retention are not a consideration. ABT can assist you in making a suitable selection.

Ease of Installation - The system is installed utilizing ABT's patented no-float U-leg system.

Eliminates Sub-Slab Barrier Penetration - Prevents Geo-membrane penetrations during trench drain installation and monolithic pours are eliminated using no-float legs and anchor slab

TFX® Product Specs

TFX® Storage Capacity and Cross Section Area:

Clear Depth		4 Inch		[102 mm]		5 Inch		[127 mm]		6 Inch		[152 mm]		8 Inch		[203 mm]		10 Inch		[254 mm]	
Inch	mm	Gal/Ft	Sq In	L/M	Sq. M	Gal/Ft	Sq In	L/M	Sq. M	Gal/Ft	Sq In	L/M	Sq. M	Gal/Ft	Sq In	L/M	Sq. M	Gal/Ft	Sq In	L/M	Sq. M
4	102	0.8	15.6	10.0	0.010	1.0	19.6	12.6	0.01	1.2	23.57	15.2	0.02	-	-	-	-	-	-	-	-
8	203	1.6	31.6	20.4	0.020	2.1	39.6	25.5	0.03	2.5	47.57	30.7	0.03	3.3	63.6	41.0	0.04	4.1	80	51.3	0.05
12	305	2.5	47.6	30.7	0.03	3.1	59.6	38.4	0.04	3.7	71.57	46.2	0.05	5.0	95.6	61.7	0.06	6.2	120	77.1	0.08
16	406	3.3	63.6	41.0	0.04	4.1	79.6	51.3	0.05	5.0	95.57	61.7	0.06	6.6	128	82.3	0.08	8.3	160	102.9	0.1
20	508	-	-	-	-	5.2	99.6	64.2	0.06	6.2	120	77.1	0.08	8.3	160	102.9	0.1	10.4	200	128.8	0.13
24	610	-	-	-	-	-	-	-	-	7.5	144	92.6	0.09	10.0	192	123.6	0.12	12.4	240	154.6	0.15
28	711	-	-	-	-	-	-	-	-	-	-	-	-	11.6	224	144.2	0.14	14.5	280	180.4	0.18
32	813	-	-	-	-	-	-	-	-	-	-	-	-	13.3	256	164.9	0.16	16.6	320	206.2	0.21
36	914	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.7	360	232.0	0.23
40	1016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20.8	400	257.8	0.26

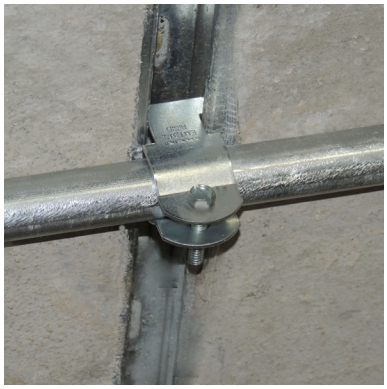
Clear Depth		12 Inch		[305 mm]		15 Inch		[381 mm]		18 Inch		[457 mm]		21 Inch		[533 mm]		24 Inch		[610 mm]	
Inch	mm	Gal/Ft	Sq In	L/M	Sq. M	Gal/Ft	Sq In	L/M	Sq. M	Gal/Ft	Sq In	L/M	Sq. M	Gal/Ft	Sq In	L/M	Sq. M	Gal/Ft	Sq In	L/M	Sq. M
12	305	7.5	144	93	0.093	9.3	180	116	0.12	11.2	215.6	139	0.14	13.1	251.6	162	0.16	14.9	287.6	186	0.19
16	406	10.0	192	124	0.124	12.4	240	155	0.15	14.9	287.6	186	0.19	17.4	335.6	216	0.22	19.9	384	247	0.25
20	508	12.4	240	155	0.15	15.6	300	193	0.19	18.7	359.6	232	0.23	21.8	419.6	271	0.27	24.9	480	309	0.31
24	610	14.9	288	186	0.19	18.7	360	232	0.23	22.4	431.6	278	0.28	26.2	504	325	0.32	29.9	576	371	0.37
28	711	17.4	336	216	0.22	21.8	420	271	0.27	26.2	504	325	0.32	30.5	588	379	0.38	34.9	672	433	0.43
32	813	19.9	384	247	0.25	24.9	480	309	0.31	29.9	576	371	0.37	34.9	672	433	0.43	39.9	768	495	0.5
36	914	22.4	432	278	0.28	28.0	540	348	0.35	33.6	648	418	0.42	39.3	756	487	0.49	44.9	864	557	0.56
40	1016	24.9	480	309	0.31	31.1	600	387	0.39	37.4	720	464	0.46	43.6	840	542	0.54	49.8	960	619	0.62
44	1118	27.4	528	340	0.34	34.3	660	426	0.43	41.1	792	511	0.51	48.0	924	596	0.6	54.8	1056	681	0.68
48	1219	29.9	576	371	0.37	37.4	720	464	0.46	44.9	864	557	0.56	52.3	1008	650	0.65	59.8	1152	743	0.74

PDX®- Surface Mount

Standard available Pipe supports can be surface mounted onto PDX® channels by anchoring through the channel into the encapsulation concrete. For those applications where any penetration of the channels is to be avoided, self-standing structures can be placed inside the channels. Standard methods can then be used to secure the pipes and/or conduits to the support members.

TFX®- Flush Mount

Pipe supports can be flush mounted in the TFX® formed trench by securing the support structures to the outside of the EPS forms at desired locations prior to concrete placement pour. These can be attached in a number of ways; by mechanically inserting rod thought the structure into the EPS foam at desired locations; or utilizing contact cement apply to the surface of the structure at desired locations. After the EPS form is removed the support structure will be flush with the trench wall and the pipe supports can be installed. Flush mounting keeps the structure from taking up space within the trench providing a clear open area for piping. Installation time for installing support structures is reduced utilizing this method. The support can also be surfaced mounted to the trench walls after the concrete sets.



Frames/Grates/Covers

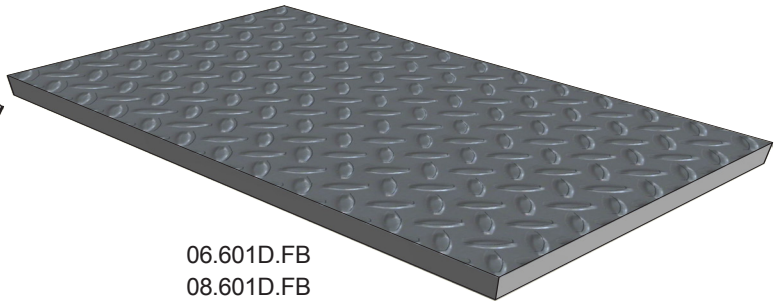
An extensive selection of standard grates and covers are available for the PDX/TFX Utility product line. However, when unique challenges and requirements exclude the standard options, custom fabrication can be tailored to meet a project's special needs and conditions. While powder painted steel frames are standard; galvanized steel, FRP, aluminum, and stainless frames are available.

For more technical design information, product specifications and details see our web site at: www.abtdrains.com

Lite Duty Covers

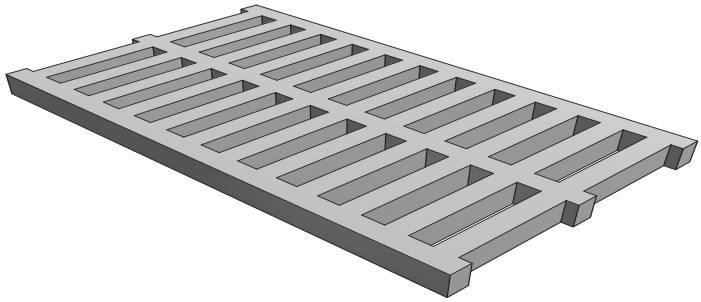
06.201C.FE	06.401C.FB	06.801C.FB
08.201C.FE	08.401C.FB	08.801C.FB
10.201C.FE	10.401C.FB	10.801C.FB
12.201C.FE	12.401C.FB	12.801C.FB
15.201C.FE	15.401C.FB	15.801C.FB
18.201C.FE	18.401C.FB	18.801C.FB
24.201C.FE	24.401C.FB	24.801C.FB

Heavy Duty Covers



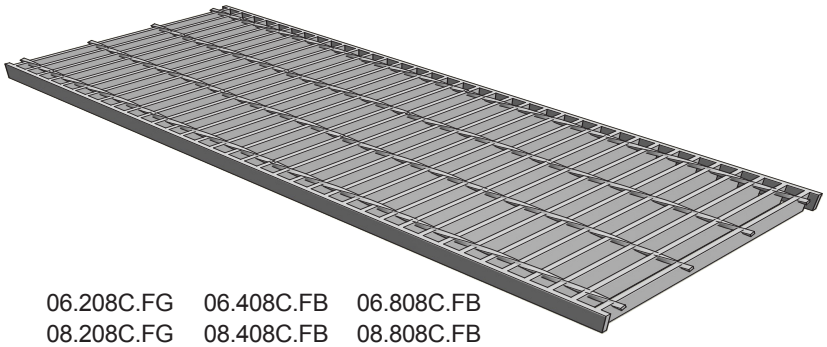
06.601D.FB
08.601D.FB
10.601D.FB
12.501G.FB
15.601D.FB
18.601D.FB
24.601D.FB

Cast Gray Iron Grating



06.603D.FB	**Heel Proof**
10.603D.FB	06.606D.FB
15.603D.FB	10.606D.FB
18.603D.FB	15.606D.FB
21.603D.FB	18.606D.FB
24.603D.FB	

Bar Grating



06.208C.FG	06.408C.FB	06.808C.FB
08.208C.FG	08.408C.FB	08.808C.FB
10.208C.FG	10.408C.FB	10.808C.FB
12.208C.FG	12.408C.FB	12.808C.FB
15.208C.FG	15.408C.FB	15.808C.FB
18.208C.FG	18.408C.FB	18.808C.FB
21.208C.FG	21.408C.FB	21.808C.FB
24.208C.FG	24.408C.FB	24.808C.FB

GRATE / COVER LEGEND

06.208C.FG

Trench Width (In) / Grate Material
2 = Fabricated Steel
3 = Thermoplastic
4 = Stainless Steel
5 = Ductile Iron
6 = Cast Iron
7 = FRP
8 = Aluminum
9 = Brass

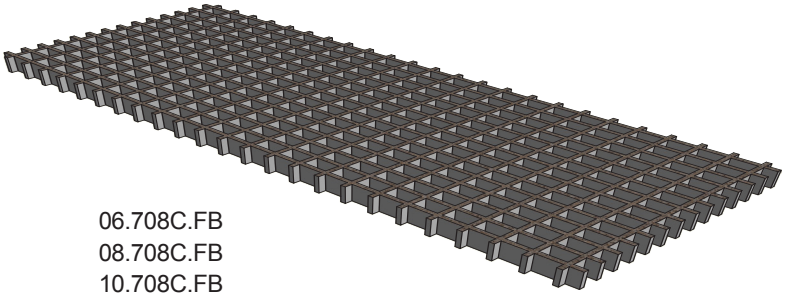
Grate Style
01 = Solid Cover
02 = High Intake Slotted
03 = Standard Slotted
04 = Long. Slotted / ADA
05 = Embossed Solid
06 = Heel Proof / ADA
08 = Bar Grate
1X = Ornamental

Load Class
A = 75 psi - Foot Traffic
B = 150 psi - Light Tire
C = 310 psi - Fed. A-A60005
D = 494 psi - AASHTO H-20
E = 620 psi - AASHTO HS25
F = 1235 psi - FAA Airport
G = 2469 psi - Port/Airport

Rail Size
D = 1.25x1.75x0.25
E = 1.75x1.75x0.25
F = 1.75x1.75x0.188
G = 2.0x2.0x0.188
H = 2.5x2.5x0.25
J = 3.0x3.0x0.313
K = 1.75x2.25x0.25

Grate Finish
B = Bare Smooth
C =Bare Non-Slip
E = Coated - Black
G = Galvanized
Z = Zinc Plated

FRP Grating



06.708C.FB
08.708C.FB
10.708C.FB
12.708C.FB
15.708C.FB
18.708C.FB
21.708C.FB
24.708C.FB

Cast Ductile Iron Grating

08.502E.GB
12.502G.JB
18.502G.JB
18.502E.GB

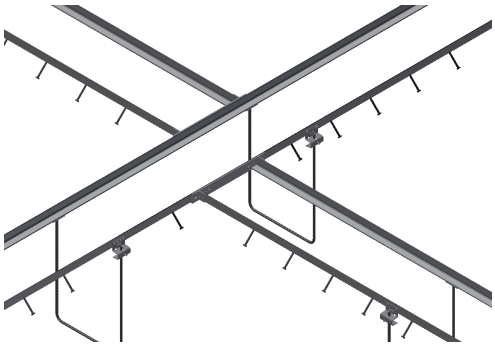
Heel Proof
08.506.GB

ADA
08.504F.FB
12.504F.FB

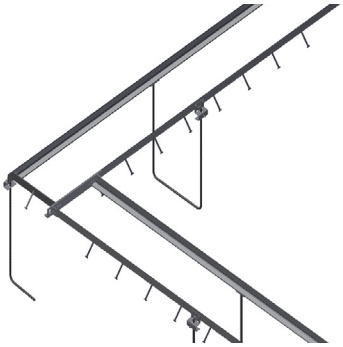
Utility Trench

Surface Drainage Solutions

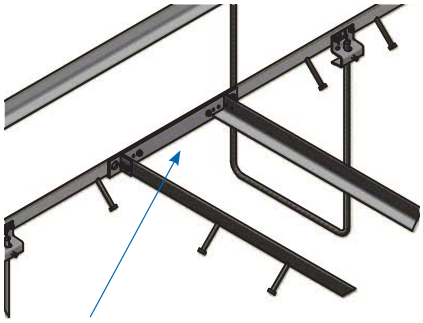
Tee and Ell Options



T-Rail Assembly- Trench intersections are easily formed using rails with pre-mounted load bars.



L-Rail Assembly- L-Rail Assembly with pre-mounted load bars are right and left turns anywhere in the trench layout



Load Bar- exclusive to ABT® Inc. Reinforcement for unsupported rail.

POLY DRAIN | POLY DRAIN PDX | TRENCH FORMER | PDX/TFX UTILITY | FIRST FLUSH | PERMAVOID

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