

## Typical Self Supporting Circumferential Section

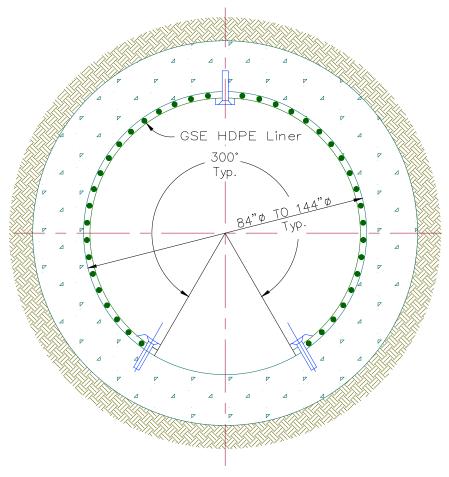
(One piece two point anchor)
Not to scale



NO PART OF THIS DOCUMENT MAY BE REPRODUCED OR DISTRIBUTED IN ANY FORM OR BY ANY MEANS, OR STORED IN A DATA BASE OR RETRIEVAL SYSTEM, WITHOUT THE PRIOR WRITTEN PERMISSION OF GSE Lining Technology, Inc.

This is a conceptual draining solely for use by engineers as a ceneral cudeline in formulating site specific engineering drainings, no description of materials or this design creates or amounts to an express warranty, or impulse warranty of werchantability or times for a particular purpose.

 DRAWN
 Don
 DATE
 12/15/98
 REVISION
 1
 DWG. NO.
 D-TN001



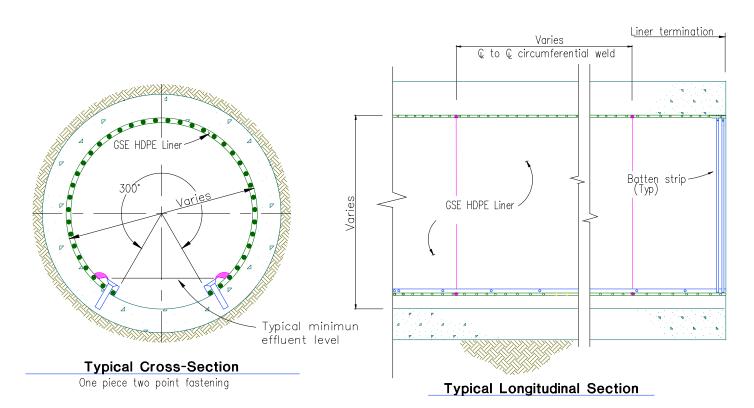
## Typical Self Supporting Circumferential Section

(Two piece three point anchor) Not to scale



NO PART OF THIS DOCUMENT MAY BE REPRODUCED OR DISTRIBUTED IN ANY FORM OR BY ANY MEANS, OR STORED IN A DATA BASE OR RETRIEVAL SYSTEM, WITHOUT THE PRIOR WRITTEN PERMISSION OF GSE Lining Technology, Inc.

THIS IS A CONCEPTUAL DRAWING SOLELY FOR USE BY ENGINEERS AS A CENERAL CUDELINE IN FORMULATING SITE SPECIFIC ENGINEERING DRAWINGS. NO DESCRIPTION OF MATERIALS OR THIS DESIGN CREATES OR AMOUNTS TO AN EXPRESS WARRANTY, OR IMPUED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.



## Typical Sections of Sanitary Sewer

Two point anchor arrangement Not to scale

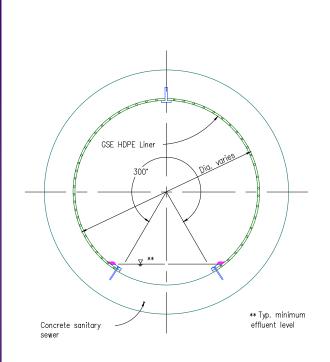
### CONSTRUCTION NOTES

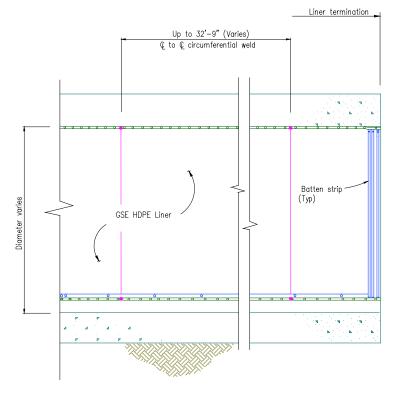
1) 2 RINGS (MINIMUN) OF BATTEN STRIP AT UPSTREAM AND DOWNSTREAM ENDS OF TUNNEL AND AT DIVERSION BOX ENTRANCES OR EXITS.



NO PART OF THIS DOCUMENT MAY BE REPRODUCED OR DISTRIBUTED IN ANY FORM OR BY ANY MEANS, OR STORED IN A DATA BASE OR RETRIEVAL SYSTEM, WITHOUT THE PRIOR WRITTEN PERMISSION OF GSE Lining Technology, Inc.

THIS IS A CONCEPTUAL DRAWING SOLLLY FOR USE BY ENGINEERS AS A GENERAL GUIDELINE IN FORMULATING SITE SPECIFIC ENGINEERING DRAWINGS. NO DESCRIPTION OF MATERIALS OR THIS DESIGN CREATER OR AMOUNTS TO AN EXPRESS WARRAINTY, OR IMPULED WARRAINTY OF WERDHALTMENLITY OR FITNESS FOR A PARTICULAR PURPOSE.





**Typical Cross Section** 

Typical Longitudinal Section

### **Typical Sections of Sanitary Sewer**

Three point anchor arrangement Not to scale

### **CONSTRUCTION NOTES**

1) 2 RINGS (MINIMUN) OF BATTEN STRIP AT UPSTREAM AND DOWNSTREAM ENDS OF TUNNEL AND AT DIVERSION BOX ENTRANCES OR EXITS.

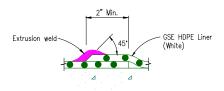


(800)435-2008 / (281)443-8564

NO PART OF THIS DOCUMENT MAY BE REPRODUCED OR DISTRIBUTED IN ANY FORM OR BY ANY MEANS, OR STORED IN A DATA BASE OR RETRIEVAL SYSTEM, WITHOUT THE PRIOR WRITTEN PERMISSION OF GSE Lining Technology, Inc.

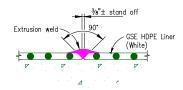
THIS IS A CONCEPTUAL DRAWING SOLELY FOR USE BY ENGINEERS AS A GENERAL GUIDELINE IN FORMULATING SITE SPECIFIC ENGINEERING DRAWINGS. NO DESCRIPTION OF MATERIALS OR THIS DESIGN CREATES OR AMOUNTS TO AN EXPRESS WARRANTY, OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

DRAWN REVISION DATE DWG. NO. D-TN004



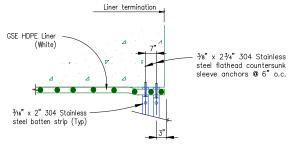
### Alternate Circumferential Weld Detail

Not to scale

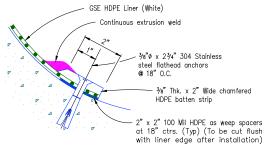


### Typical Circumferential Weld Detail

Not to scale

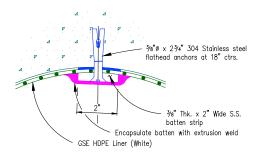


## Terminating Edge Sealing Detail Not to scale



### Typical Bottom HDPE Batten Detail

Not to scale



### Typical Top S.S. Batten Detail

Not to scale

### **CONSTRUCTION NOTES**

1) 2 RINGS (MINIMUN) OF BATTEN STRIP AT UPSTREAM AND DOWNSTREAM ENDS OF TUNNEL AND AT DIVERSION BOX ENTRANCES OR EXITS.

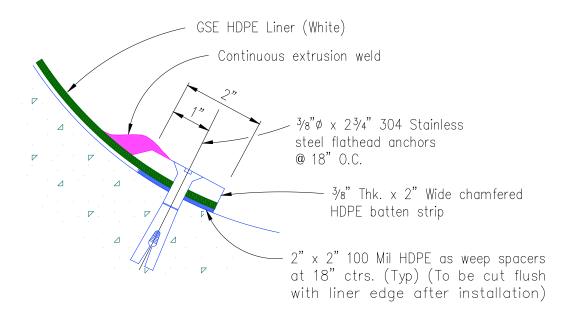
### TYPICAL TUNNEL DETAILS

Not to scale



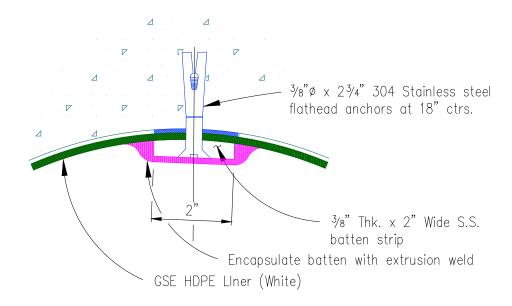
NO PART OF THIS DOCUMENT MAY BE REPRODUCED OR DISTRIBUTED IN ANY FORM OR BY ANY MEANS, OR STORED IN A DATA BASE OR RETRIEVAL SYSTEM, WITHOUT THE PRIOR WRITTEN PERMISSION OF GSE Lining Technology, Inc.

THIS IS A CONCEPTUAL DRAWING SOLELY FOR USE BY ENGINEERS AS A GENERAL GUDELINE IN FORMULATING SITE SPECIFIC ENGINEERING DRAWINGS. NO DESCRIPTION OF MATERIALS OR THIS DESIGN CREATES OR AMOUNTS TO AN EXPRESS WARRANTY, OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.



## Typical Bottom HDPE Batten Detail

Not to scale

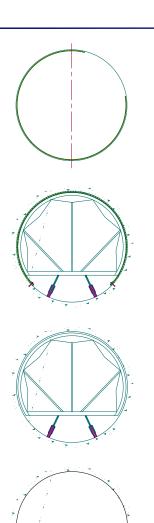


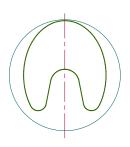
## Typical Top S.S. Batten Detail

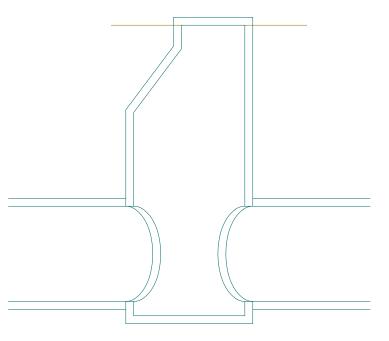
Not to scale

NO PART OF THIS DOCUMENT MAY BE REPRODUCED OR DISTRIBUTED IN ANY FORM OR BY ANY MEANS, OR STORED IN A DATA BASE OR RETRIEVAL SYSTEM, WITHOUT THE PRIOR WRITTEN PERMISSION OF GSE Lining Technology, Inc.

This is a conceptual drawing solely for use by engineers as a ceneral cudeline in forbulating site specific engineering drawings, no description of "Materials or This Desorn creates or alkounts to an express warranty, or induced warranty of werchantability or fitness for a particular purpose.





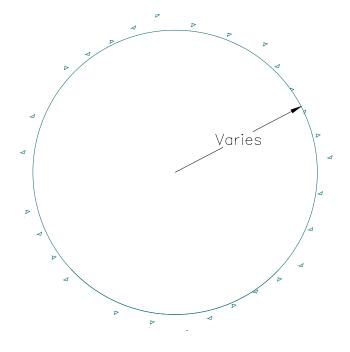




NO PART OF THIS DOCUMENT MAY BE REPRODUCED OR DISTRIBUTED IN ANY FORM OR BY ANY MEANS, OR STORED IN A DATA BASE OR RETRIEVAL SYSTEM, WITHOUT THE PRIOR WRITTEN PERMISSION OF GSE Lining Technology, Inc.

THIS IS A CONCEPTUAL DRAWING SOLELY FOR USE BY ENGINEERS AS A GENERAL CUDELINE IN FORMULATING SITE SPECIFIC ENGINEERING DRAWINGS. NO DESCRIPTION OF MATERIALS OR THIS DESIGN CREATES OR AMOUNTS TO AN EXPRESS WARRANTY, OR MPUED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

 DRAWN
 Don
 DATE
 12/15/98
 REVISION
 1
 DWG. NO.
 D-TN008

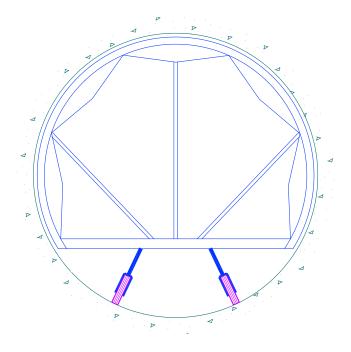


Typical Section #1
(Existing Tunnel With Old Material Removed) Not to scale

NO PART OF THIS DOCUMENT MAY BE REPRODUCED OR DISTRIBUTED IN ANY FORM OR BY ANY MEANS, OR STORED IN A DATA BASE OR RETRIEVAL SYSTEM, WITHOUT THE PRIOR WRITTEN PERMISSION OF GSE Lining Technology, Inc.

THIS IS A CONCEPTUAL DRAWING SOLELY FOR USE BY ENGINEERS AS A GENERAL GUIDELINE IN FORMULATING SITE SPECIFIC ENGINEERING DRAWINGS. NO DESCRIPTION OF MATERIALS OR THIS DESIGN CREATES OR AMOUNTS TO AN EXPRESS WARRANTY, OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

DRAWN REVISION DWG. NO. D-TN008A

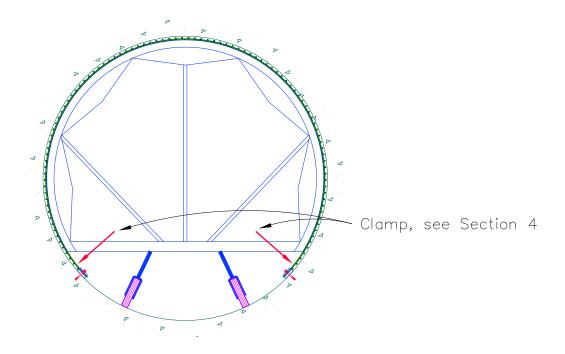


(Existing Tunnel With Stud Liner Installation Machine)
Not to scale



NO PART OF THIS DOCUMENT MAY BE REPRODUCED OR DISTRIBUTED IN ANY FORM OR BY ANY MEANS, OR STORED IN A DATA BASE OR RETRIEVAL SYSTEM, WITHOUT THE PRIOR WRITTEN PERMISSION OF GSE Lining Technology, Inc.

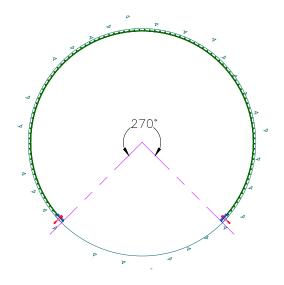
THIS IS A CONCEPTUAL DRAWING SOLELY FOR USE BY ENGINEERS AS A CENERAL CUDELINE IN FORMULATING SITE SPECIFIC ENGINEERING DRAWINGS. NO DESCRIPTION OF MATERIALS OR THIS DESIGN CREATES OR AMOUNTS TO AN EXPRESS WARRANTY, OR IMPUED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.



(Existing Tunnel Prior to Grout Installation)
(Schematic Only)
Not to scale

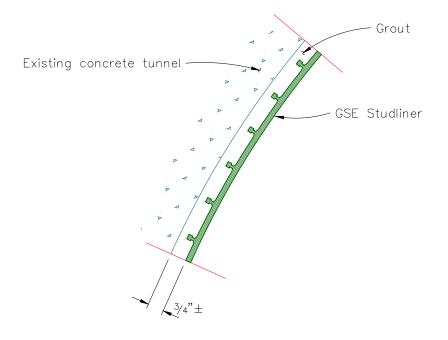
NO PART OF THIS DOCUMENT MAY BE REPRODUCED OR DISTRIBUTED IN ANY FORM OR BY ANY MEANS, OR STORED IN A DATA BASE OR RETRIEVAL SYSTEM, WITHOUT THE PRIOR WRITTEN PERMISSION OF GSE Lining Technology, Inc.

This is a conceptual drawno solely for use by enomeres as a general cudeline in Forbulanno site specific engineering drawnos. No description of Materials or this design creates or amounts to an express warranty, or wipli



Typical Section #6
(Existing Tunnel With New HDPE Liner) Not to scale

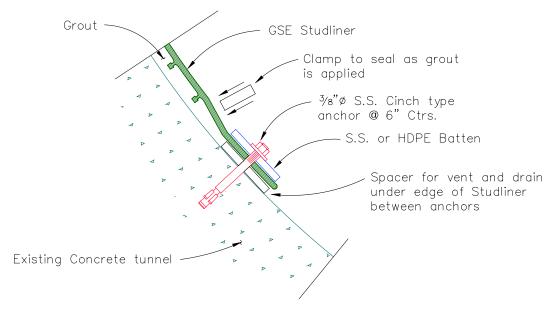
D-TN008D



Typical Section #5
(Existing Tunnel With GSE Studliner) Not to scale

THIS IS A CONCEPTUAL DRAWING SOLELY FOR USE BY ENGINEERS AS A GENERAL GUIDELINE IN FORMULATING SITE SPECIFIC ENGINEERING DRAWINGS. NO DESCRIPTION OF MATERIALS OR THIS DESIGN CREATES OR AMOUNTS TO AN EXPRESS WARRANTY, OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

DRAWN REVISION DATE DWG. NO. D-TN008E



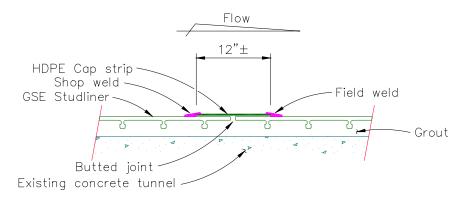
(Studliner Bottom Seal) Not to scale

(800)435-2008 / (281)443-8564

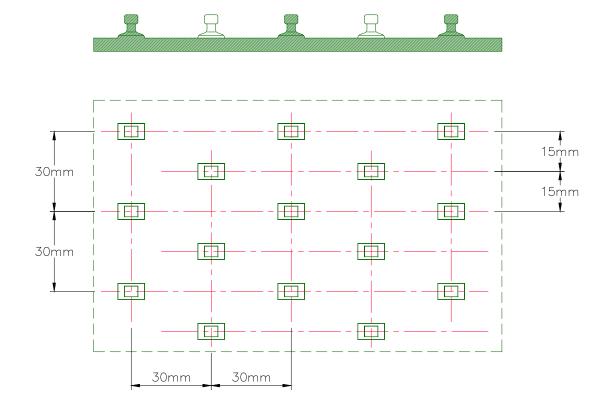
NO PART OF THIS DOCUMENT MAY BE REPRODUCED OR DISTRIBUTED IN ANY FORM OR BY ANY MEANS, OR STORED IN A DATA BASE OR RETRIEVAL SYSTEM, WITHOUT THE PRIOR WRITTEN PERMISSION OF GSE Lining Technology, Inc.

THIS IS A CONCEPTUAL DRAWING SOLELY FOR USE BY ENGINEERS AS A GENERAL GUIDELINE IN FORMULATING SITE SPECIFIC ENGINEERING DRAWINGS. NO DESCRIPTION OF MATERIALS OR THIS DESIGN CREATES OR AMOUNTS TO AN EXPRESS WARRANTY, OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

DRAWN REVISION DATE DWG. NO. D-TN008F



(Typical Lap joint) Not to scale



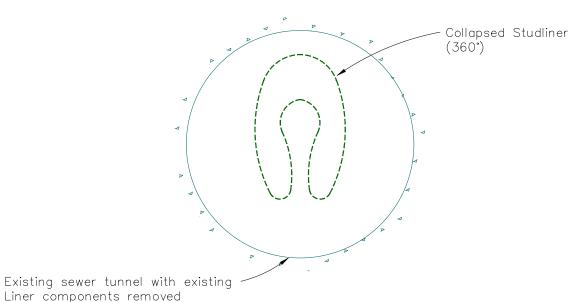
# Typical Section Of GSE StudLiner

Not to scale



NO PART OF THIS DOCUMENT MAY BE REPRODUCED OR DISTRIBUTED IN ANY FORM OR BY ANY MEANS, OR STORED IN A DATA BASE OR RETRIEVAL SYSTEM, WITHOUT THE PRIOR WRITTEN PERMISSION OF GSE Lining Technology, Inc.

THIS IS A CONCEPTUAL DRAWING SOLELY FOR USE BY ENONEERS AS A GENERAL CUDELINE IN FORMULATING SITE SPECIFIC ENGINEERING DRAWINGS. NO DESCRIPTION OF MATERIALS OR THIS DESIGN CREATES OR AMOUNTS TO AN EXPRESS WARRANTY, OR IMPUED WARRANTY OF WERCHANTABULTY OR FITNESS FOR A PARTICULAR PURPOSE.



Typical Section #8

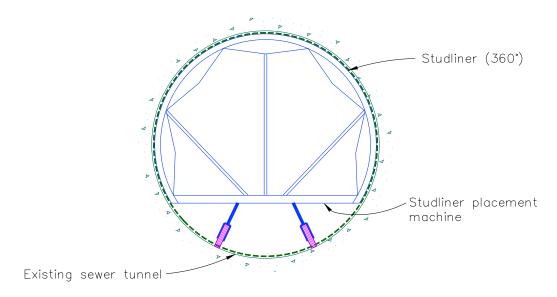
(Existing Tunnel With 360° Collapsed Studliner) Not to scale

GSE	GSE Lining Technology, Inc	
OSE	19103 Gundle Road Houston, Texas 77073—3598 (800)435—2008 / (281)443—8564	

NO PART OF THIS DOCUMENT MAY BE REPRODUCED OR DISTRIBUTED IN ANY FORM OR BY ANY MEANS, OR STORED IN A DATA BASE OR RETRIEVAL SYSTEM, WITHOUT THE PRIOR WRITTEN PERMISSION OF GSE Lining Technology, Inc.

THIS IS A CONCEPTUAL DRAWING SOLELY FOR USE BY ENGINEERS AS A GENERAL GUIDELINE IN FORMULATING SITE SPECIFIC ENGINEERING DRAWINGS. NO DESCRIPTION OF MATERIALS OR THIS DESIGN CREATES OR AMOUNTS TO AN EXPRESS WARRANTY, OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

DRAWN REVISION DWG. NO. D-TN008I

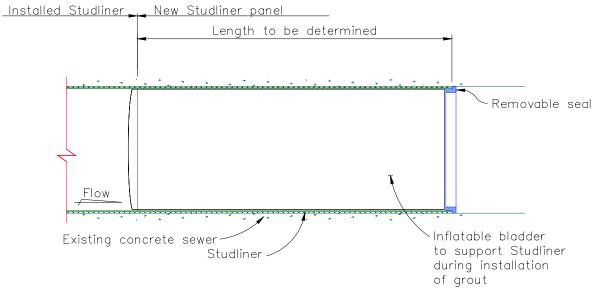


(Existing Tunnel With 360° Expanded Studliner & Installation Machine)
(Schematic Only)
Not to scale



NO PART OF THIS DOCUMENT MAY BE REPRODUCED OR DISTRIBUTED IN ANY FORM OR BY ANY MEANS, OR STORED IN A DATA BASE OR RETRIEVAL SYSTEM, WITHOUT THE PRIOR WRITTEN PERMISSION OF GSE Lining Technology, Inc.

THIS IS A CONCEPTUAL DRAWING SOLELY FOR USE BY ENGINEERS AS A GENERAL CUIDELINE IN FORMULATING SITE SPECIFIC ENGINEERING DRAWINGS. NO DESCRIPTION OF MATERIALS OR THIS DESIGN CREATES OR AMOUNTS TO AN EXPRESS WARRANTY, OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

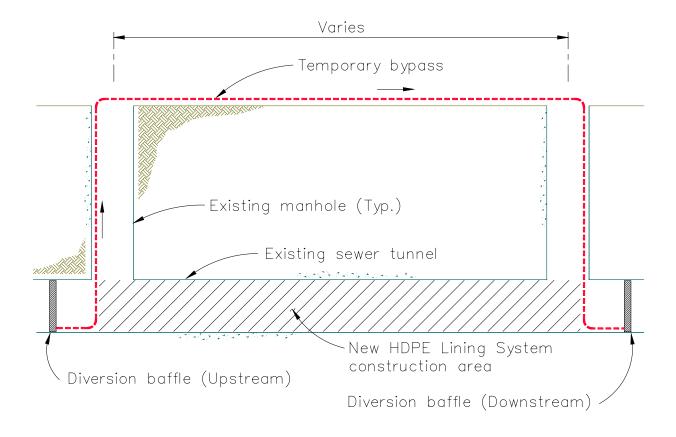


(Studliner Installation With Inflatable Bladder)
(Schematic Only)
Not to scale

COL	GSE Lining Technology, Inc.  19103 Gundle Road  19104 Technology
CSE	19103 Gundle Road Houston, Texas 77073-3598 (800)435-2008 / (281)443-8564

NO PART OF THIS DOCUMENT MAY BE REPRODUCED OR DISTRIBUTED IN ANY FORM OR BY ANY MEANS, OR STORED IN A DATA BASE OR RETRIEVAL SYSTEM, WITHOUT THE PRIOR WRITTEN PERMISSION OF GSE Lining Technology, Inc.

This is a conceptual drawing solely for use by engineers as a ceneral cudeline in forbulating size specific engineering drawings, no description of "Materials or This Design Creates or Augusts To an express warranty, or induced warranty of werchantability or fitness for a particular purpose.



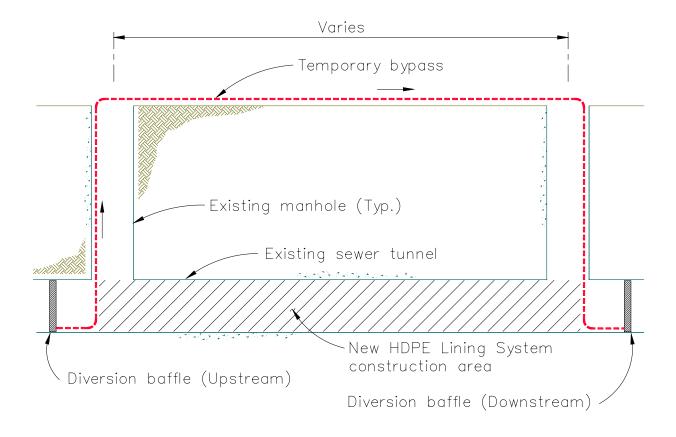
# **Sewage Diversion Schematic**

Not to scale



NO PART OF THIS DOCUMENT MAY BE REPRODUCED OR DISTRIBUTED IN ANY FORM OR BY ANY MEANS, OR STORED IN A DATA BASE OR RETRIEVAL SYSTEM, WITHOUT THE PRIOR WRITTEN PERMISSION OF GSE Lining Technology, Inc.

THIS IS A CONCEPTUAL DRAWING SOLELY FOR USE BY ENGINEERS AS A GENERAL GUIDELINE IN FORMULATING SITE SPECIFIC ENGINEERING DRAWINGS. NO DESCRIPTION OF MATERIALS OR THIS DESIGN CREATES OR AMOUNTS TO AN EXPRESS WARRANTY, OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.



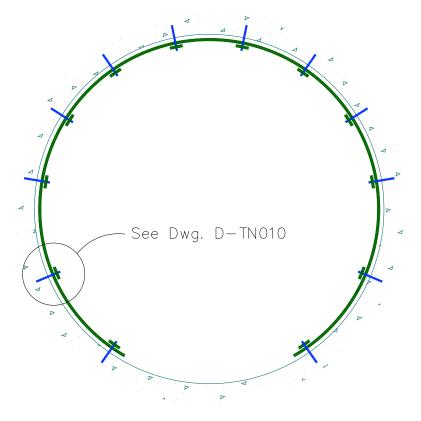
# **Sewage Diversion Schematic**

Not to scale



NO PART OF THIS DOCUMENT MAY BE REPRODUCED OR DISTRIBUTED IN ANY FORM OR BY ANY MEANS, OR STORED IN A DATA BASE OR RETRIEVAL SYSTEM, WITHOUT THE PRIOR WRITTEN PERMISSION OF GSE Lining Technology, Inc.

THIS IS A CONCEPTUAL DRAWING SOLELY FOR USE BY ENGINEERS AS A GENERAL GUIDELINE IN FORMULATING SITE SPECIFIC ENGINEERING DRAWINGS. NO DESCRIPTION OF MATERIALS OR THIS DESIGN CREATES OR AMOUNTS TO AN EXPRESS WARRANTY, OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.



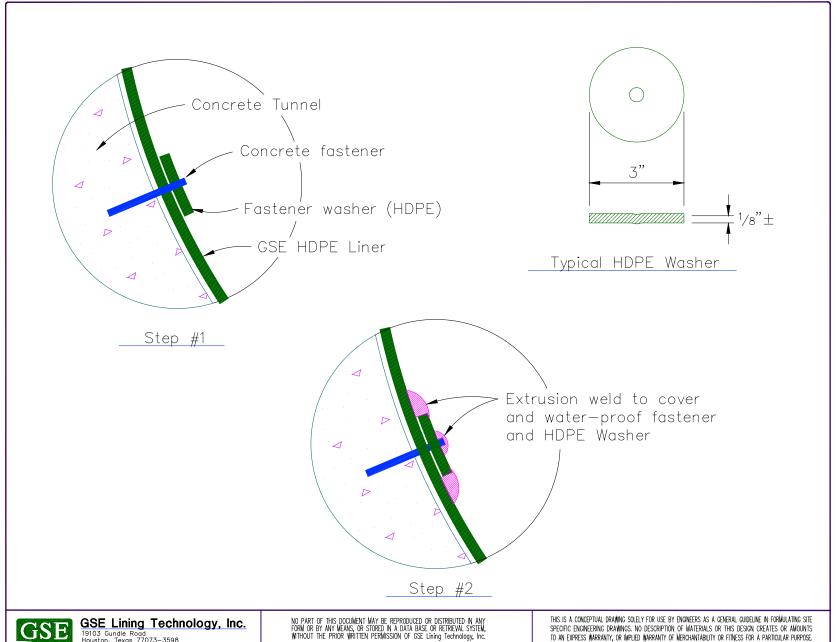
# Typical Tunnel Lining System

Not to scale

NO PART OF THIS DOCUMENT MAY BE REPRODUCED OR DISTRIBUTED IN ANY FORM OR BY ANY MEANS, OR STORED IN A DATA BASE OR RETRIEVAL SYSTEM, WITHOUT THE PRIOR WRITTEN PERMISSION OF GSE Lining Technology, Inc.

THIS IS A CONCEPTUAL DRAWING SOLELY FOR USE BY ENGINEERS AS A GENERAL GUIDELINE IN FORMULATING SITE SPECIFIC ENGINEERING DRAWINGS. NO DESCRIPTION OF MATERIALS OR THIS DESIGN CREATES OR AMOUNTS TO AN EXPRESS WARRANTY, OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

DRAWN REVISION DWG. NO. D-TN009



**GSE Lining Technology, Inc.** 19103 Gundle Rood Houston, Texas 77073-3598 (800)435-2008 / (281)443-8564

TO AN EXPRESS WARRANTY, OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

DRAWN REVISION DATE DWG. NO. D-TN010