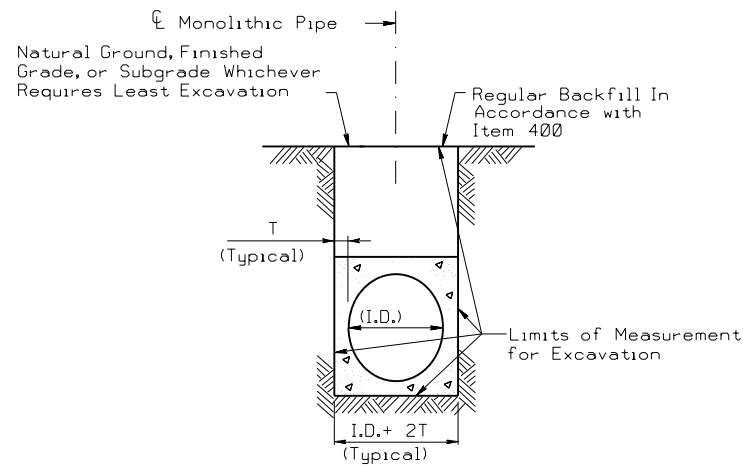
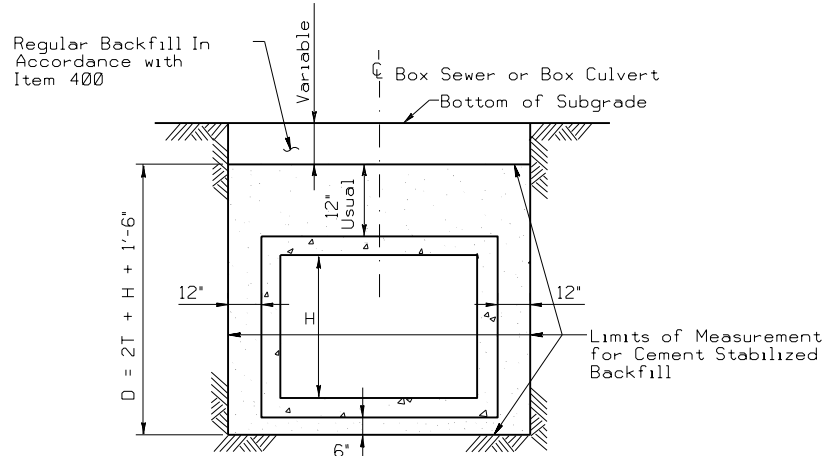


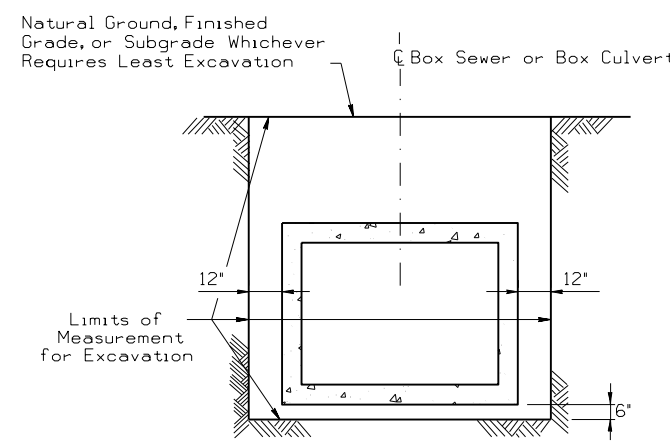
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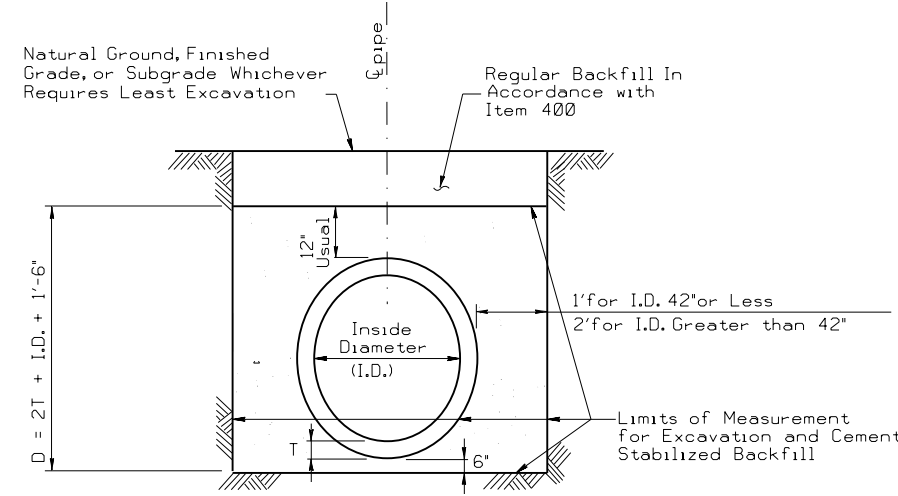
EXCAVATION DETAIL
MONOLITHIC PIPE
IN A PAVED OR GRADED AREA



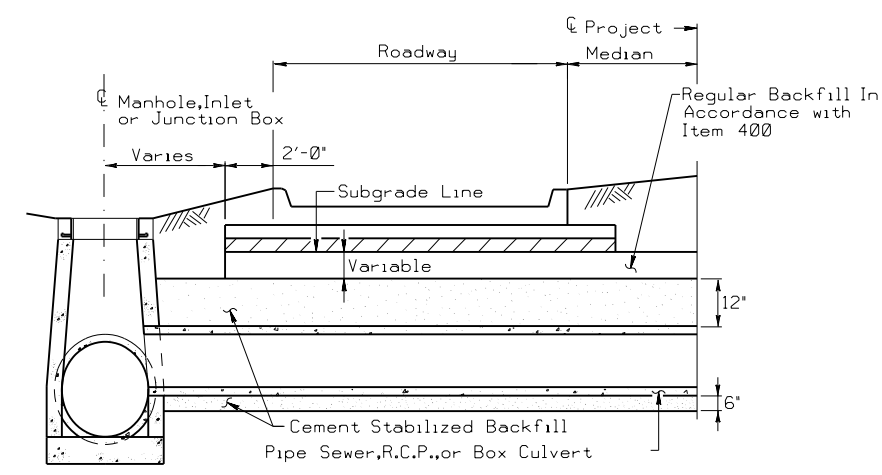
BACKFILL DETAIL
BOX CULVERTS
IN A GRADED OR PAVED AREA
INCLUDING DETOURS *



EXCAVATION DETAIL
BOX CULVERTS
IN A GRADED AREA



EXCAVATION & BACKFILL DETAIL
REINFORCED CONCRETE PIPE
& THERMOPLASTIC PIPE
IN A GRADED OR PAVED AREA
INCLUDING DETOURS



BACKFILL DETAIL
AT MANHOLE, INLET OR JUNCTION BOX

REINFORCED CONCRETE PIPE

EXCAVATION AND BACKFILL QUANTITIES

PIPE DIA. IN.	T FT.	CULVERT OR SEWER EXCAVATION IN A PAVED OR GRADED AREA	CEMENT STABILIZED BACKFILL IN A PAVED OR GRADED AREA
		C. Y. PER L. F. PER FT. OF DEPTH	C. Y. PER L. F. OF PIPE
18	0.19	0.144	0.383
24	0.23	0.165	0.478
30	0.29	0.188	0.586
36	0.33	0.210	0.692
42	0.38	0.231	0.808
48	0.42	0.327	1.394
54	0.46	0.349	1.560
60	0.50	0.370	1.731
66	0.54	0.392	1.907
72	0.58	0.414	2.088
78	0.62	0.435	2.275
84	0.67	0.457	2.474

THERMOPLASTIC PIPE

EXCAVATION AND BACKFILL QUANTITIES

PIPE DIA. IN.	T FT.	CULVERT OR SEWER EXCAVATION IN A PAVED OR GRADED AREA	CEMENT STABILIZED BACKFILL IN A PAVED OR GRADED AREA
		C. Y. PER L. F. PER FT. OF DEPTH	C. Y. PER L. F. OF PIPE
12	0.104	0.119	0.279
15	0.113	0.129	0.320
18	0.142	0.140	0.368
24	0.167	0.160	0.457
30	0.229	0.184	0.564
36	0.229	0.202	0.654
42	0.225	0.220	0.747
48	0.254	0.315	1.302
60	0.296	0.355	1.610

MONOLITHIC PIPE

EXCAVATION QUANTITIES

PIPE DIA. IN.	T FT.	EXCAVATION
		C. Y. PER L. F. PER FT. OF DEPTH
36	0.417	0.142
42	0.458	0.164
48	0.458	0.182
54	0.500	0.204
60	0.583	0.228
66	0.583	0.247
72	0.625	0.269
78	0.625	0.287
84	0.625	0.306

D = Depth
H = Height
T = Thickness
R = Radius
Dia = Diameter



EXCAVATION AND BACKFILL DIAGRAMS

E&BD-24 (HOU)

FILE: E&BD-24 (HOU). DGN	DN: TXDOT	CK: TXDOT	OW: TXDOT	CK: TXDOT
© TXDOT December 2024	CONT	SECT	JOB	HIGHWAY
REVISIONS	\$C\$	\$S\$	\$J\$	\$HWY\$
DIST	COUNTY	SHEET NO.		
\$DST\$	\$CTY\$			

NOTE:

Cement stabilized backfill may be omitted in private driveways as indicated elsewhere in the plans.

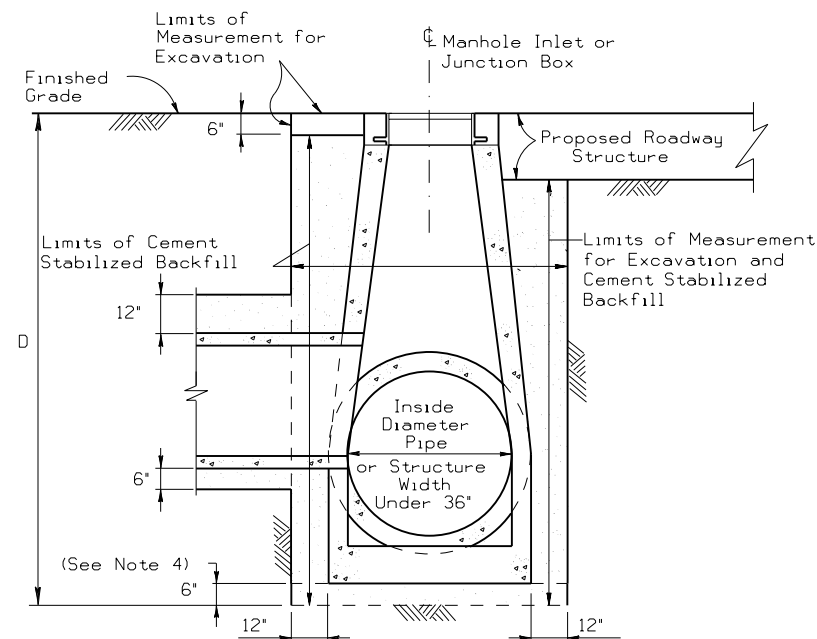
Rubber gaskets shall be required for all joints on proposed cross drainage, pipe culverts and proposed storm sewer systems, unless otherwise shown in the plans.

* Backfill with cement stabilized material will be required for all structures under detours unless noted otherwise in the General Notes.

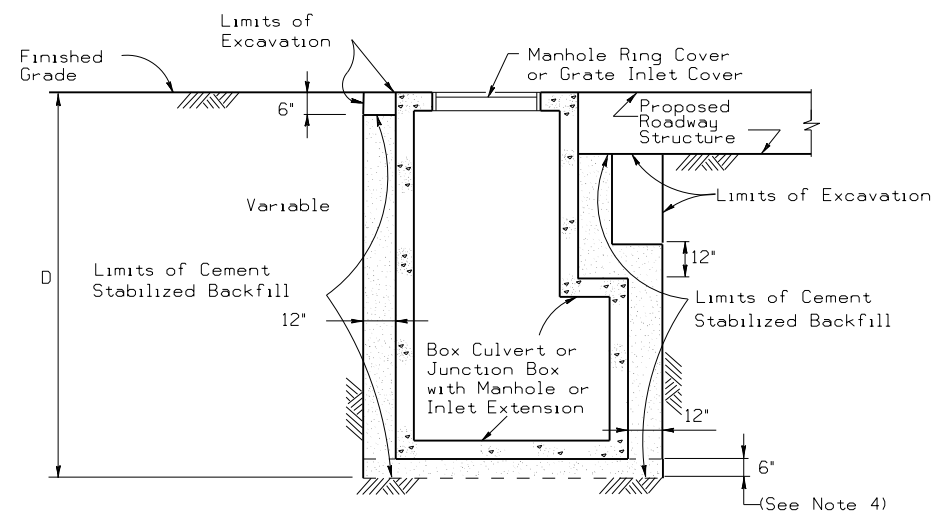
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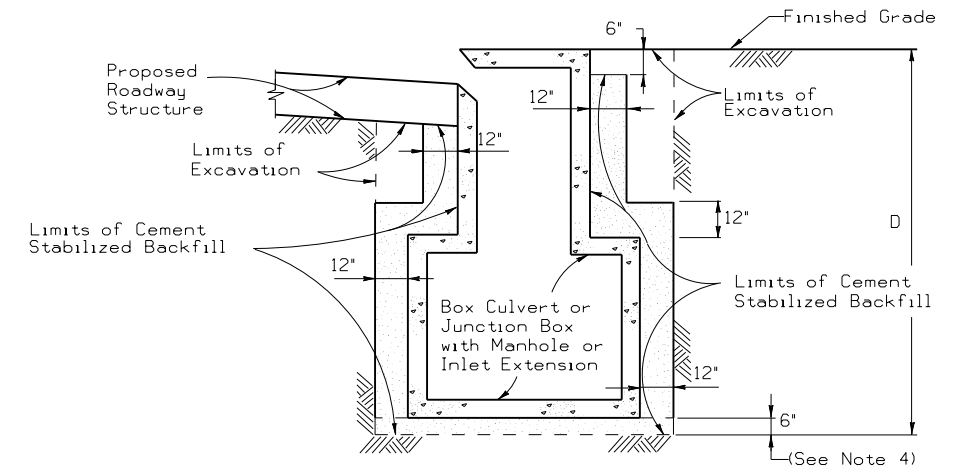
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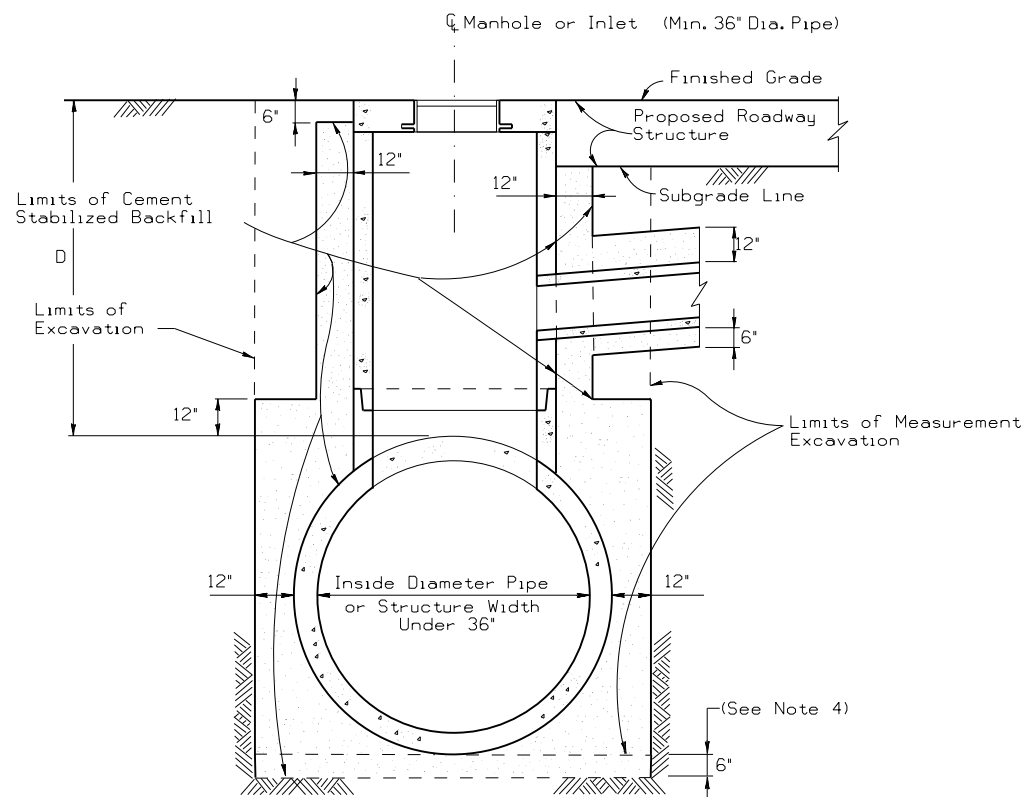
EXCAVATION AND BACKFILL DETAIL
 MANHOLES SMALLER THAN 36 IN.
 IN A PAVED OR GRADED AREAS
 N.T.S.



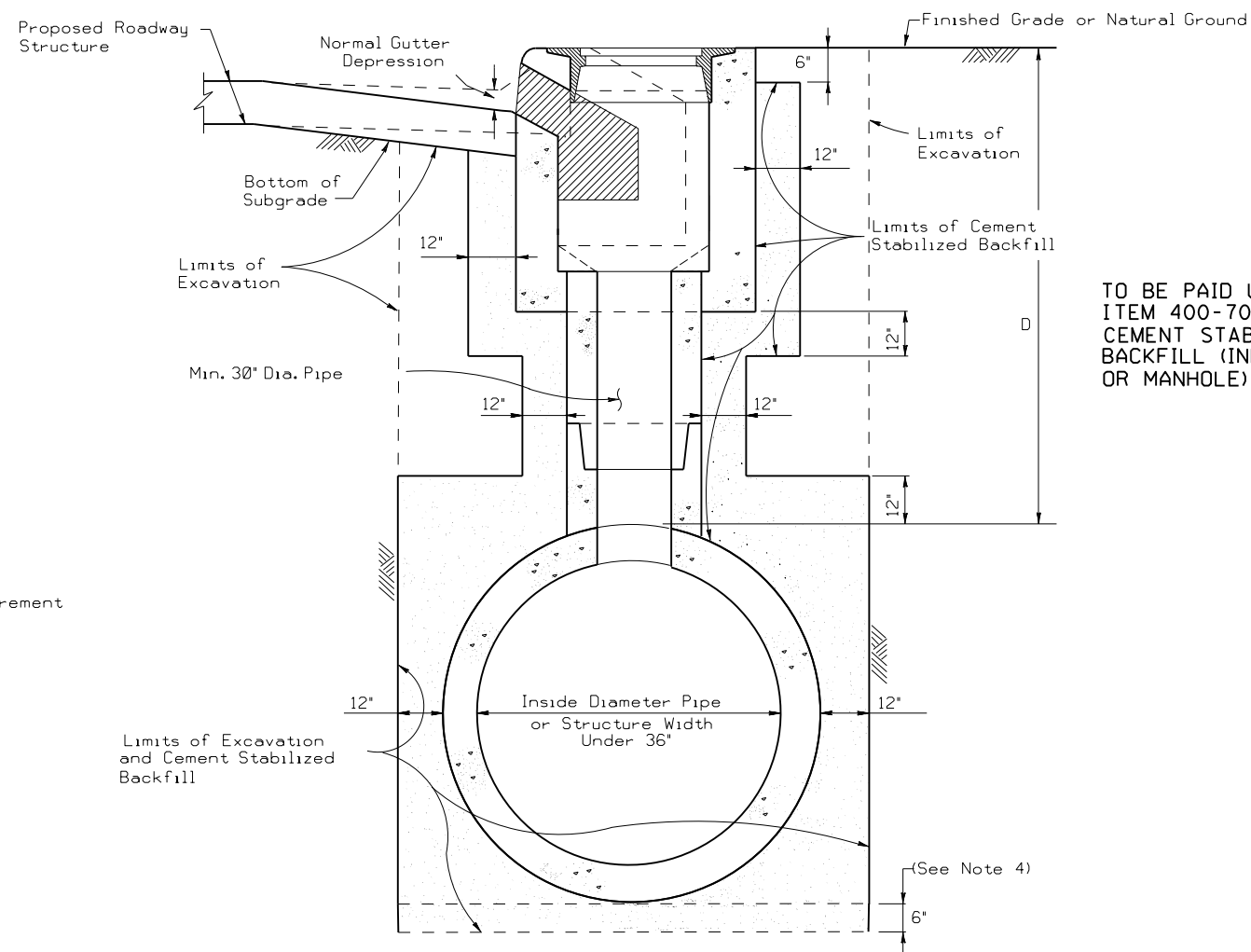
EXCAVATION AND BACKFILL DETAIL
 JUNCTION BOXES IN A
 PAVED OR GRADED AREA
 N.T.S.



EXCAVATION AND BACKFILL DETAIL
 INLET EXTENSIONS ON A BOX
 CULVERT IN A PAVED OR
 GRADED AREA
 N.T.S.



EXCAVATION AND BACKFILL DETAIL
 MANHOLES 36 IN. AND GREATER
 IN A PAVED OR GRADED AREA
 N.T.S.



EXCAVATION AND BACKFILL DETAIL
 CURB INLETS IN A PAVED OR
 GRADED AREA
 N.T.S.

TO BE PAID UNDER
 ITEM 400-7011
 CEMENT STABILIZED
 BACKFILL (INLET
 OR MANHOLE)

TABLE I	
SCHEDULE FOR PAY QUANTITIES OF CEMENT STABILIZED BACKFILL (SEE NOTE 1)	
MANHOLE OR INLET DEPTH (D) IN FEET	CEMENT STABILIZED BACKFILL IN CUBIC YARDS
0 through 5	5.75
> 5 through 10	8.25
greater than 10	12.75

- NOTES:
- The Contractor is paid a fixed estimated amount for cement stabilized backfill based on depth (D) and Table I.
 - Proposed roadway structure includes pavement, base and any subgrade.
 - For backfill of intersecting pipes and box culverts, see 'Excavation and Backfill Diagram for Pipes and Box Culverts.'
 - 6" cement stabilized backfill will be required only for precast units.

Texas Department of Transportation Houston District Standard

EXCAVATION AND BACKFILL DIAGRAMS

E&BD-24 (HOU)

FILE: E&BD-24 (HOU).DGN	DN: TXDOT	CK: TXDOT	DW: TXDOT	CR: TXDOT
© TXDOT December 2024	CONT	SECT	JOB	HIGHWAY
REVISIONS	\$C\$	\$S\$	\$J\$	\$HWY\$
DIST	COUNTY	SHEET NO.		
\$DST\$	\$CTY\$			

D = Depth
 H = Height
 T = Thickness
 R = Radius
 Dia = Diameter