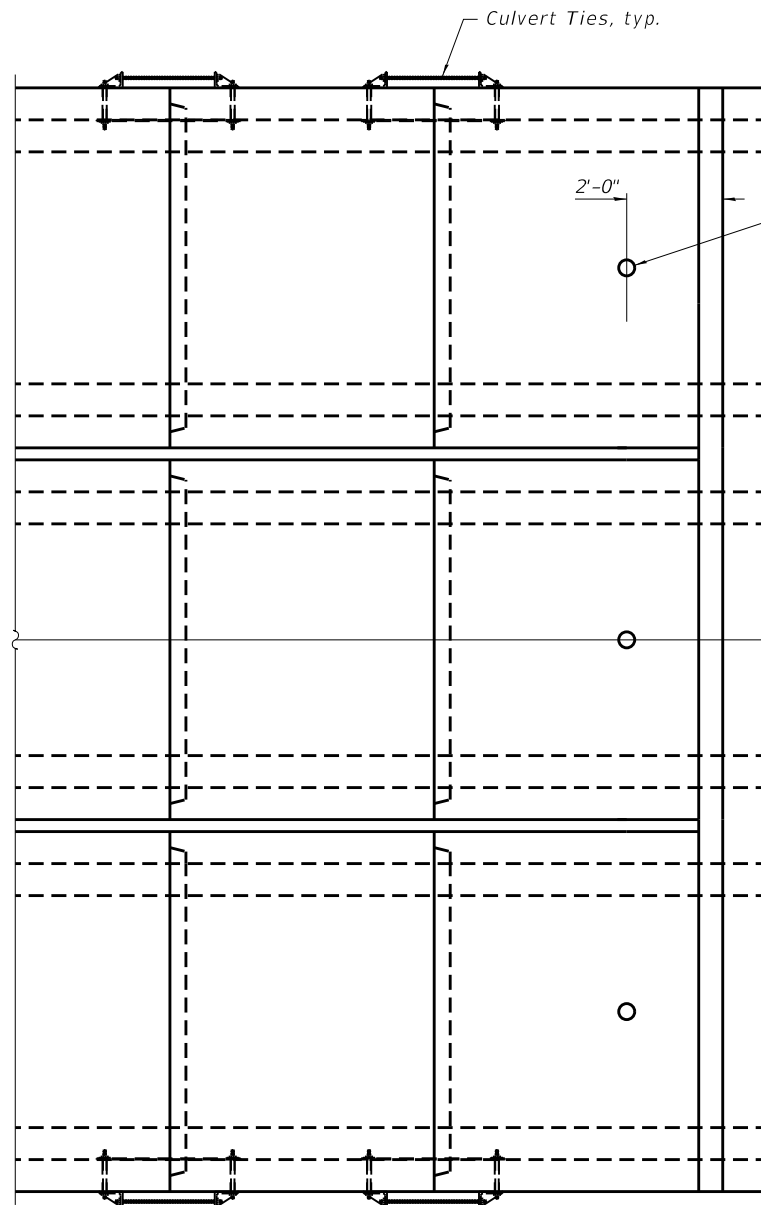


* Precast box culvert end section joints with a total vertical height less than 8'-0" shall only require one culvert tie placed at midheight.



3" Ø Drain hole
See Sheet CUL-8 for drain details

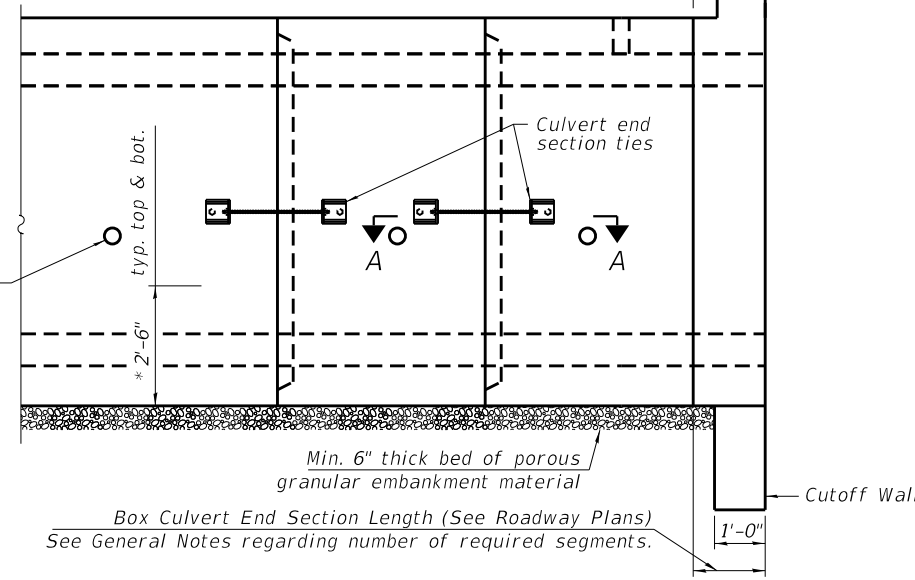
3" Ø Drain holes
(See General Notes on CUL-02)

Fill with
Class SI concrete

Ø Culvert

Pay Limits for Precast Concrete Box Culverts

Cast in place end section



Min. 6" thick bed of porous granular embankment material

Box Culvert End Section Length (See Roadway Plans)
See General Notes regarding number of required segments.

Cutoff Wall

ELEVATION

GENERAL NOTES

Box Culvert End Sections will be cast in place and using "Concrete Box Culvert" pay item.

Typical box section dimensions and materials shall be according to the requirements of ASTM C 1577 as required for the design of the portion of the culvert within the limits of Precast Concrete Box Culverts except as modified herein.

Number of segments shown in Elevation is for example only. Length and number of precast box sections required to construct Box Culvert End Sections shall be determined by the Contractor. See roadway plans for embankment slope (V:H).

1" Ø anchor rods for the culvert ties shall conform to the requirements of ASTM F1554, Grade 105. Structural steel for tie plate and restraint angle shall conform to the requirements of Article 1006.04 of the Standard Specifications.

All components of the culvert tie detail shall be galvanized according to the requirements of AASHTO M 111 or M 232 as applicable. 2 1/4" x 2 1/4" x 5/16" plate washers shall be provided under each nut required for the anchor rods. Anchor rods connecting precast sections shall be brought to a snug tight condition followed by an additional 1/2 turn on one of the nuts for anchor rods installed in the walls. Match marks shall be provided on the bolt and nut to verify relative rotation between the bolt and the nut. Holes in the walls for the culvert tie assembly may be drilled using core bits in lieu of using formed holes.

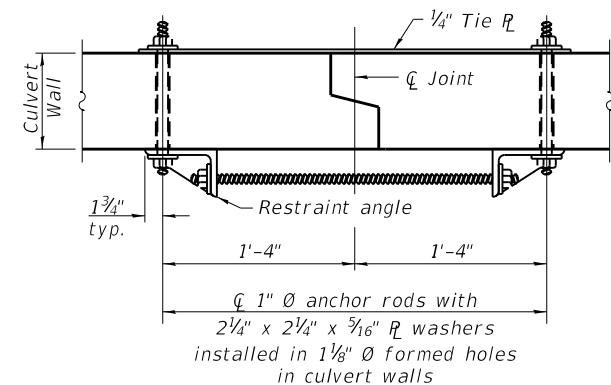
The number of culvert ties shall be sufficient to engage the minimum length of culvert barrel shown within the pay limits for Precast Concrete Box Culverts and will be dependent upon the length of box culvert segments furnished by the Contractor. Culvert ties are not required for box culverts having a rise (R) less than or equal to 3 ft and a span (S) greater than or equal to 10 ft.

Drain holes shall conform to the requirements of Article 503.11 of the Standard Specifications unless noted otherwise.

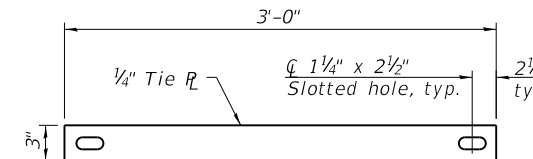
Nonwoven geotextile fabric shall conform to the requirements of Article 1080.01. The minimum weight of the fabric shall be 6 oz. / sq. yd.

The 3" nominal space between adjacent end sections shall be filled with Class SI concrete in accordance with Article 540.06 of the Standard Specifications. Cost included with Concrete Box Culverts used for Box Culvert End Sections.

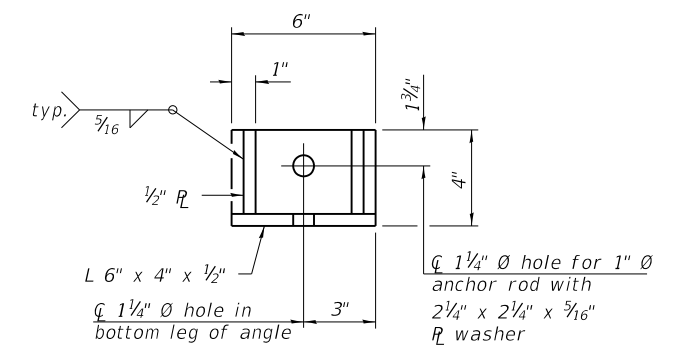
Details for triple cell box culvert shown. Details for other multi-cell box culverts similar.



SECTION A-A
(Showing end section tie details)



TIE PLATE DETAIL



RESTRAINT ANGLE DETAIL

MODEL: 0228306_62M69.dwg
 FILE NAME: P:\000000 - D01\000000\002 (ENG) - PTB 195-016 Phase II Var Van Engineering\WO 01 - IL83-IL30500 Drawings\01 CADD Drawings\0228306_62M69.dwg
 311 S. Wacker Drive, Suite 1950
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Bowman CONSULTING

| | | |
|------------------------------------|------------------|-----------|
| USER NAME = atiemann | DESIGNED - KJH | REVISED - |
| DRAWN - AHT | REVISED - | |
| PLOT SCALE = 2:0.0000 " = 1" / in. | CHECKED - AJN | REVISED - |
| PLOT DATE = 3/10/2021 | DATE - 3/11/2021 | REVISED - |

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**CULVERT ASSEMBLY SHEET
CULVERT - STRUCTURE NO. 022-8300**

SCALE: SHEET CUL-06 OF CUL-10 SHEETS STA. TO STA.

| | | | | |
|--------------------|------------|------------------|--------------|-----------|
| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 344 | 2020-196-T | DUPAGE | 122 | 61 |
| CONTRACT NO. 62M69 | | | | |
| ILLINOIS | | FED. AID PROJECT | | |

CUL-06