

Drawing name: V:\2009\27 Highway N Assest\27\Drawings\Engineering\Improvements\927 IMP DETAILS.dwg Plotted on: Feb 04, 2025 - 2:26am Plotted by: jlukenhaus

| ISSUE REMARKS/DATE |                                         |
|--------------------|-----------------------------------------|
| 1                  | 2024-08-13, INITIAL SUBMITTAL CITY PH.2 |
| 2                  | 2024-11-08, REVISED PER CITY COMMENTS   |
| 3                  | 2024-01-03, REVISED PER CITY COMMENTS   |
| 4                  | 2024-02-04, REVISED PER CITY COMMENTS   |

PROJECT TITLE  
**HARVEST  
AT HOPEWELL**  
O'Fallon, Missouri  
**O'FALLON PHASE 2**

THE **STERLING** CO.  
ENGINEERS & SURVEYORS  
5055 New Baumgartner Road  
St. Louis, Missouri 63129  
Ph 314-487-0440 Fax 314-487-8944  
www.sterling-eng-survey.com  
Corporate Certificate of Authority #001348



Date: 02-04-2025  
Michael G. Boerding  
License No. MO E-28643  
Professional Engineer

HARVEST HOPEWELL, LLC  
5091 New Baumgartner Road  
St. Louis, Missouri 63129

DCSD SANITARY DETAILS

P+Z No. 21-004994  
City No. 21-011444  
Date: 02-04-2025  
Job No. 20-09-327

Page No.

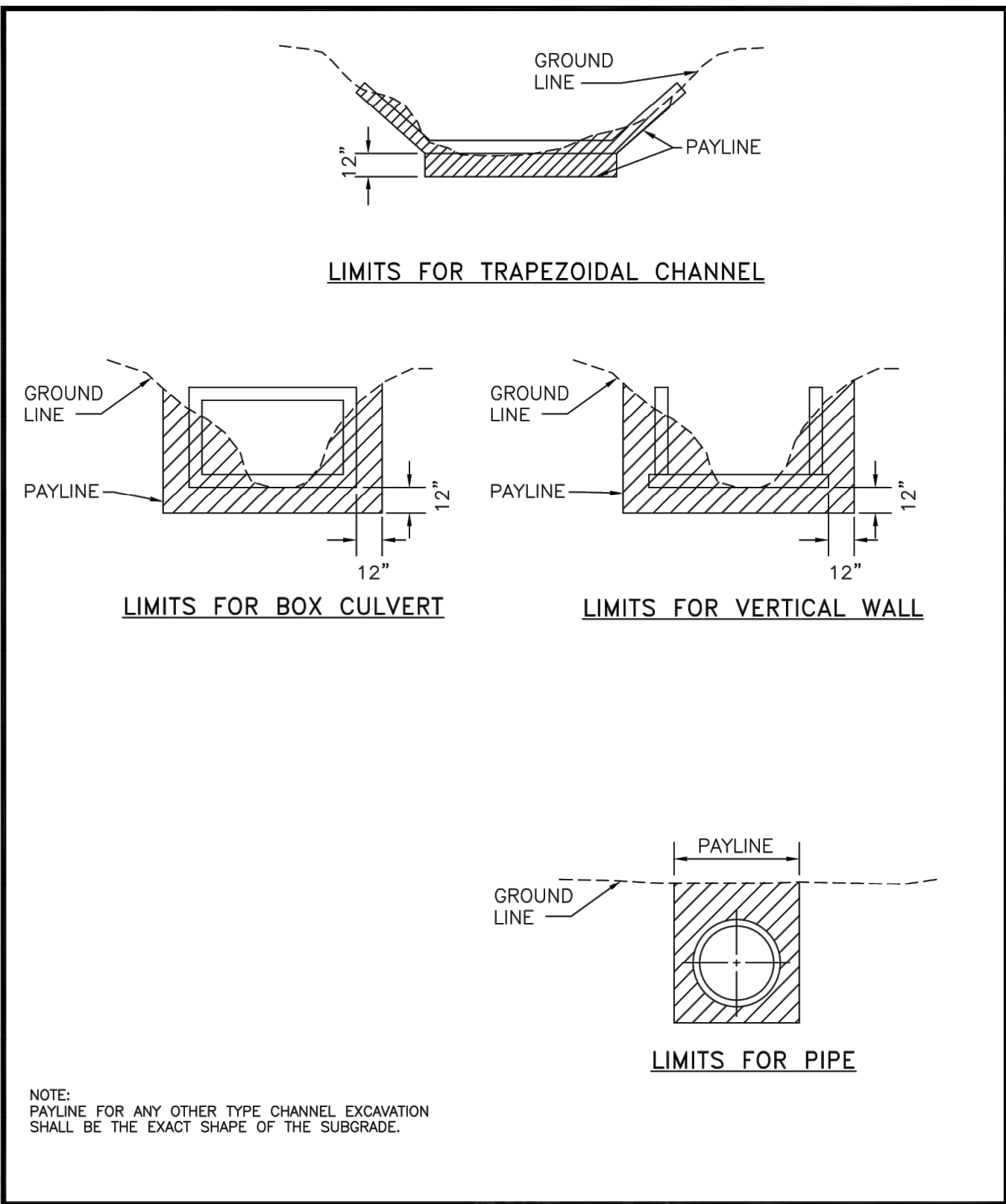
DTL-3

IMP

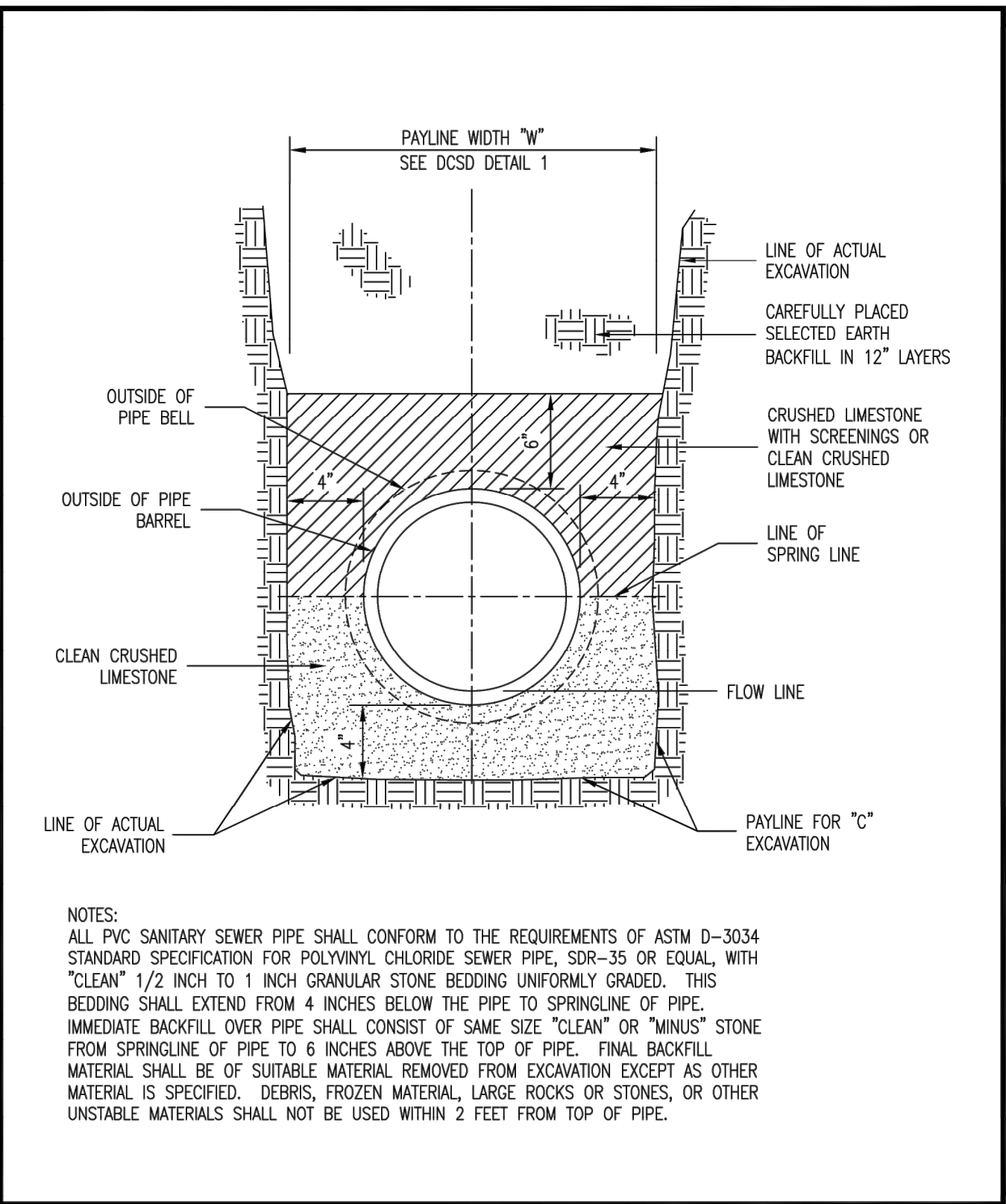
"FINAL PLAN" Approval Date: Dec. 16, 2021

| ROUND PIPE                       |                                      |                                    |                                                   | HORIZONTAL ELLIPTICAL PIPE       |                                      |                                    |                                                   |
|----------------------------------|--------------------------------------|------------------------------------|---------------------------------------------------|----------------------------------|--------------------------------------|------------------------------------|---------------------------------------------------|
| INSIDE DIAMETER OF PIPE (INCHES) | "W" PAYLINE WIDTH OF TRENCH (INCHES) | "W" PAYLINE WIDTH OF TRENCH (FEET) | PAY-VOLUMES CU. FT. PER FT. CONCRETE ENCASUREMENT | INSIDE DIAMETER OF PIPE (INCHES) | "W" PAYLINE WIDTH OF TRENCH (INCHES) | "W" PAYLINE WIDTH OF TRENCH (FEET) | PAY-VOLUMES CU. FT. PER FT. CONCRETE ENCASUREMENT |
| 4                                | 30                                   | 2.50                               | 3.28                                              |                                  |                                      |                                    |                                                   |
| 6                                | 30                                   | 2.50                               | 3.59                                              |                                  |                                      |                                    |                                                   |
| 8                                | 30                                   | 2.50                               | 3.87                                              |                                  |                                      |                                    |                                                   |
| 10                               | 30                                   | 2.50                               | 4.09                                              |                                  |                                      |                                    |                                                   |
| 12                               | 30                                   | 2.50                               | 4.25                                              |                                  |                                      |                                    |                                                   |
| 15                               | 36                                   | 3.00                               | 5.55                                              |                                  |                                      |                                    |                                                   |
| 18                               | 36                                   | 3.00                               | 5.77                                              | 14 x 23                          | 41                                   | 3.42                               | 5.94                                              |
| 21                               | 39                                   | 3.25                               | 6.61                                              |                                  |                                      |                                    |                                                   |
| 24                               | 42                                   | 3.50                               | 7.39                                              | 19 x 30                          | 49                                   | 4.08                               | 7.68                                              |
| 27                               | 45                                   | 3.75                               | 8.18                                              | 22 x 34                          | 53                                   | 4.42                               | 8.61                                              |
| 30                               | 49                                   | 4.08                               | 9.30                                              | 24 x 38                          | 58                                   | 4.83                               | 9.70                                              |
| 33                               | 53                                   | 4.42                               | 10.53                                             | 27 x 42                          | 62                                   | 5.17                               | 10.71                                             |
| 36                               | 56                                   | 4.67                               | 11.43                                             | 29 x 45                          | 66                                   | 5.50                               | 11.72                                             |
| 39                               | DISCONTINUED                         |                                    |                                                   | 32 x 49                          | 71                                   | 5.92                               | 13.14                                             |
| 42                               | 63                                   | 5.25                               | 13.38                                             | 34 x 53                          | 75                                   | 6.25                               | 14.05                                             |
| 48                               | 70                                   | 5.83                               | 15.67                                             | 38 x 60                          | 83                                   | 6.92                               | 16.18                                             |
| 54                               | 77                                   | 6.42                               | 18.15                                             | 43 x 68                          | 92                                   | 7.67                               | 18.81                                             |
| 60                               | 84                                   | 7.00                               | 20.73                                             | 48 x 76                          | 101                                  | 8.42                               | 21.59                                             |
| 66                               | 91                                   | 7.58                               | 23.45                                             | 53 x 83                          | 109                                  | 9.08                               | 24.35                                             |
| 72                               | 98                                   | 8.17                               | 26.37                                             | 58 x 91                          | 118                                  | 9.83                               | 27.45                                             |
| 78                               | 105                                  | 8.75                               | 29.39                                             | 63 x 98                          | 126                                  | 10.50                              | 30.50                                             |
| 84                               | 112                                  | 9.33                               | 32.57                                             | 68 x 106                         | 135                                  | 11.25                              | 33.91                                             |
| 90                               | 119                                  | 9.92                               | 35.90                                             | 72 x 113                         | 143                                  | 11.92                              | 36.99                                             |
| 96                               | 126                                  | 10.50                              | 39.37                                             | 77 x 121                         | 152                                  | 12.67                              | 40.69                                             |
| 102                              | 133                                  | 11.08                              | 42.99                                             | 82 x 128                         | 160                                  | 13.33                              | 44.45                                             |
| 108                              | 140                                  | 11.67                              | 46.75                                             | 87 x 136                         | 168                                  | 14.00                              | 47.79                                             |
| 114                              | 147                                  | 12.25                              | 50.66                                             | 92 x 143                         | 176                                  | 14.67                              | 51.70                                             |
| 120                              | 154                                  | 12.83                              | 54.72                                             | 97 x 151                         | 185                                  | 15.42                              | 56.01                                             |
| 126                              | 161                                  | 13.42                              | 58.92                                             |                                  |                                      |                                    |                                                   |
| 132                              | 168                                  | 14.00                              | 63.27                                             | 106 x 166                        | 202                                  | 16.83                              | 64.48                                             |
| 144                              | 182                                  | 15.17                              | 72.40                                             | 116 x 180                        | 218                                  | 18.17                              | 73.59                                             |

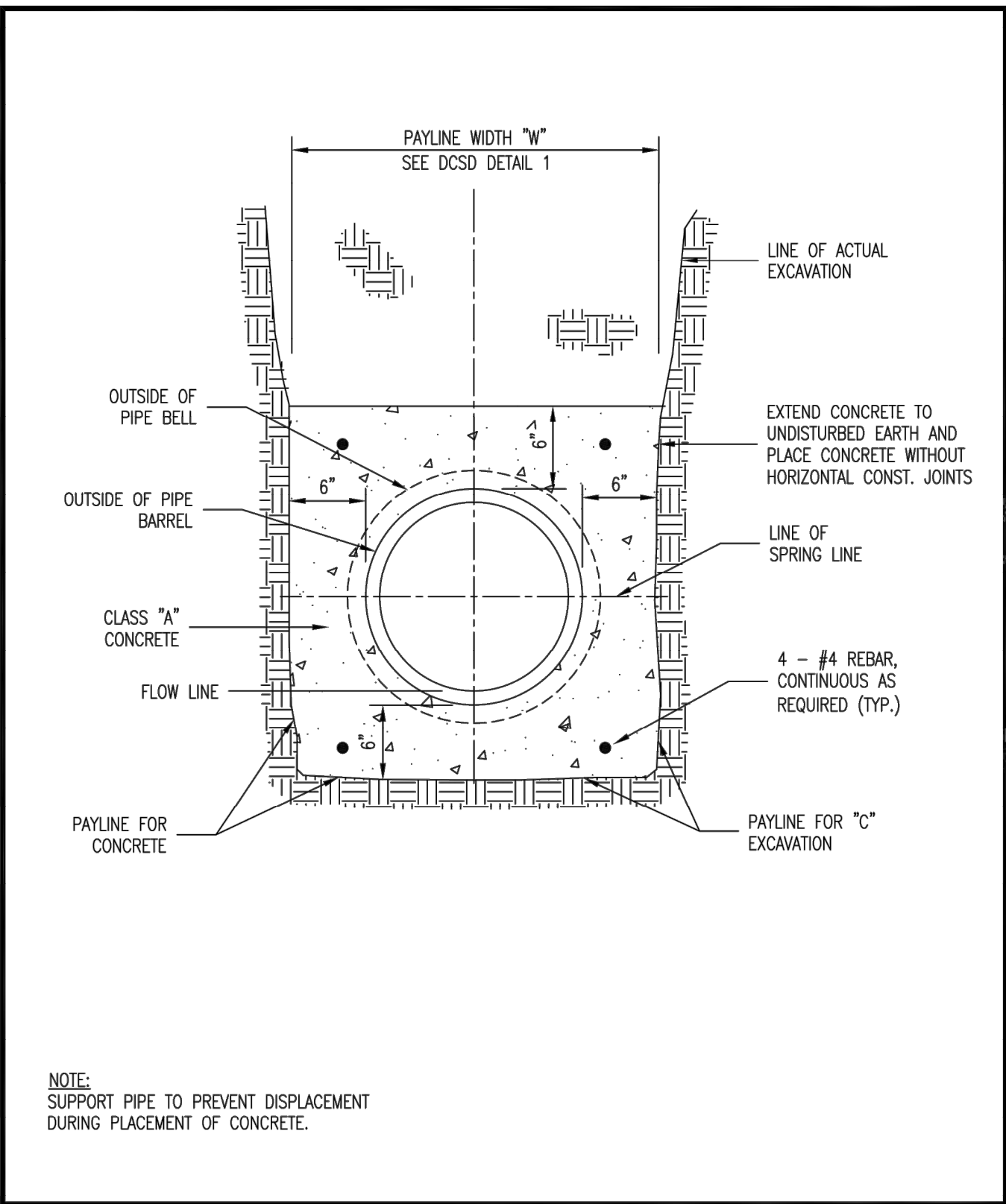
|  |                                        |                                                         |                                                               |              |
|--|----------------------------------------|---------------------------------------------------------|---------------------------------------------------------------|--------------|
|  | <b>Duckett Creek Sanitary District</b> | PAYLINE WIDTHS OF TRENCH AND PAY-QUANTITIES OF CONCRETE | Own By: BSM<br>App By: KLA<br>Ckd By: MDOB<br>Date: DEC. 2015 | Detail No. 1 |
|--|----------------------------------------|---------------------------------------------------------|---------------------------------------------------------------|--------------|



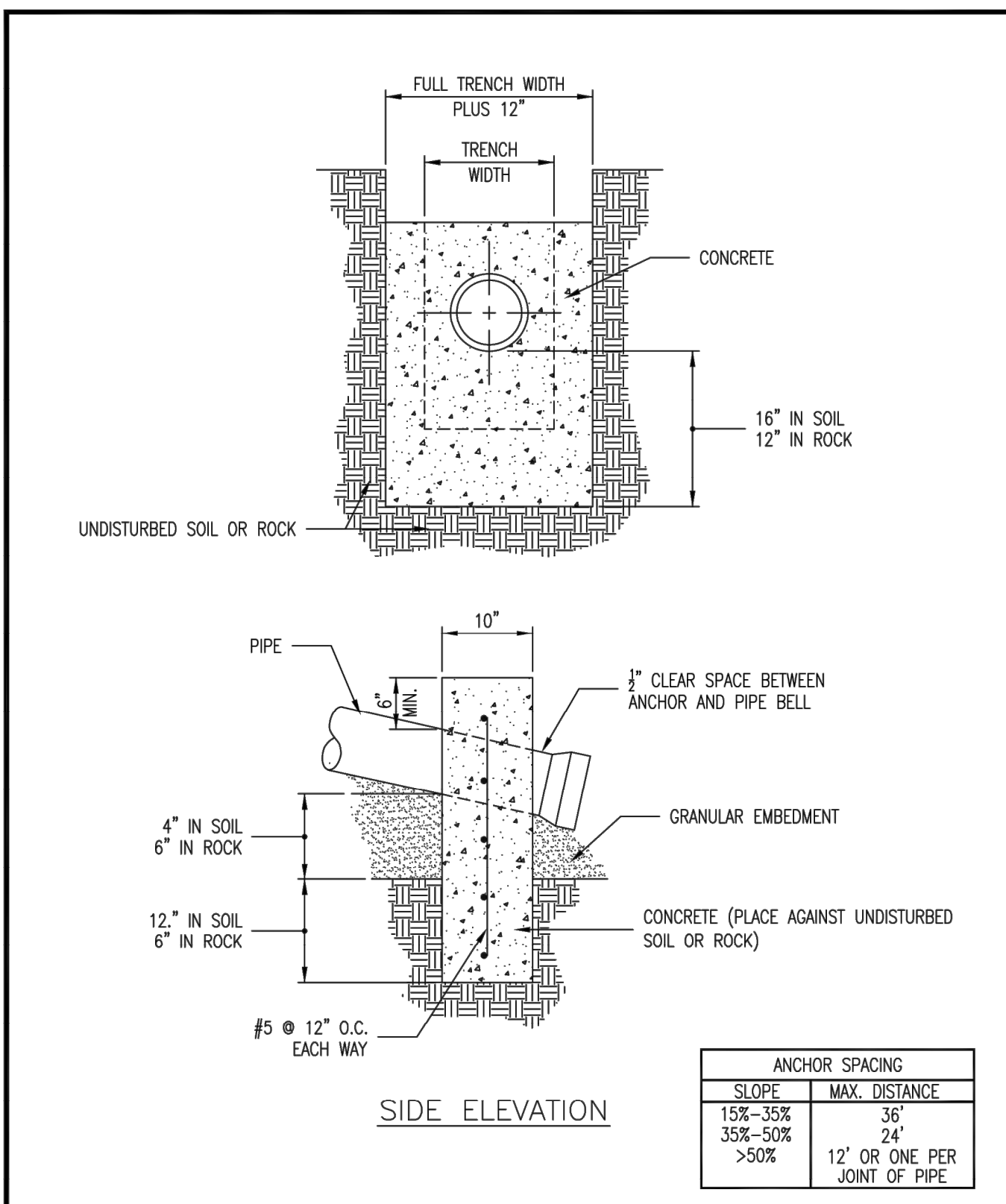
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|  | <b>Duckett Creek Sanitary District</b> | PAYLINE LIMITS FOR EXCAVATION | Own By: BSM<br>App By: KLA<br>Ckd By: MDOB<br>Date: DEC. 2015 | Detail No. 2 |
|--|----------------------------------------|-------------------------------|---------------------------------------------------------------|--------------|



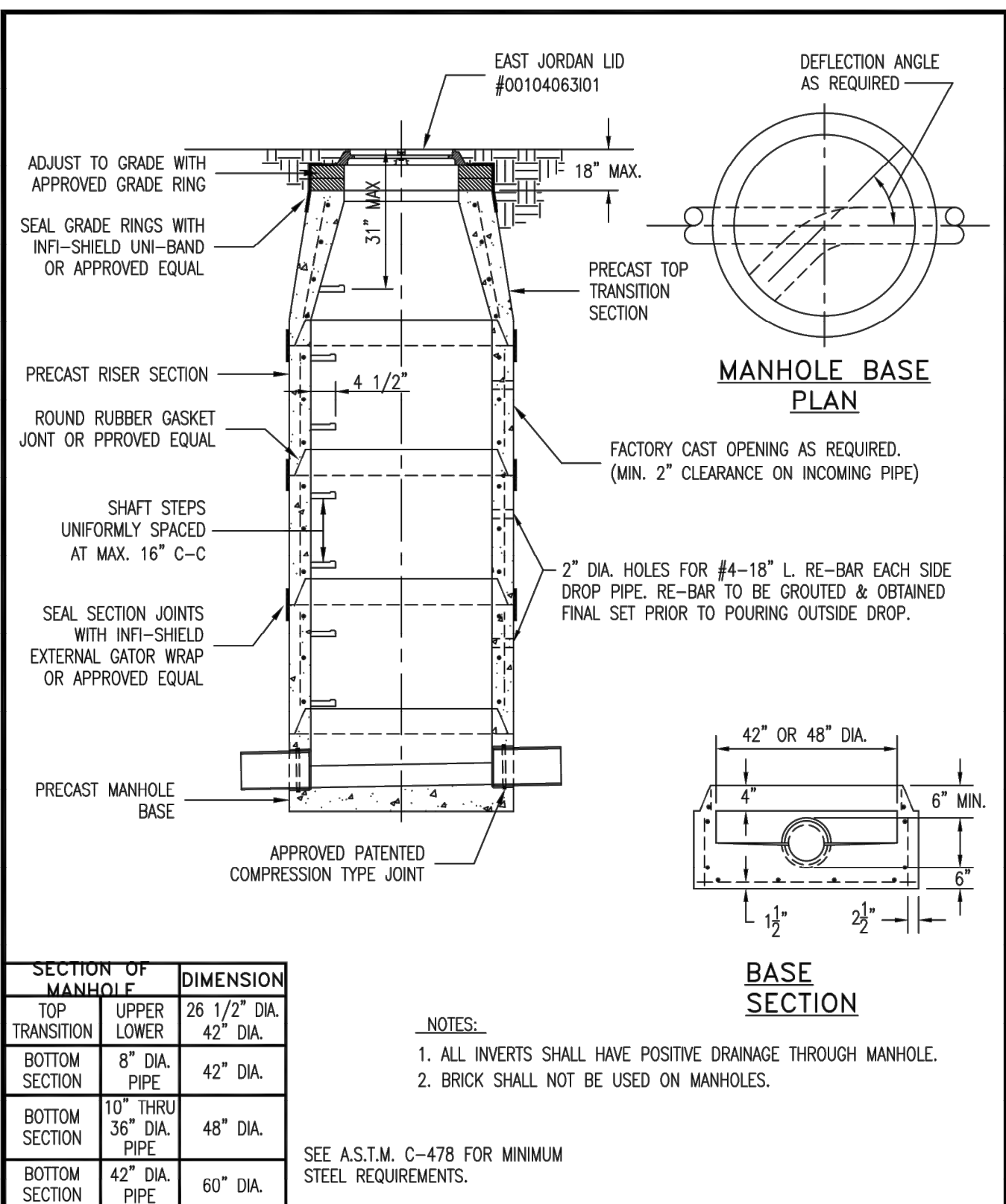
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|--|----------------------------------------|------------------------------------------------------------------|--------------------------------------------------------------|--------------|
|  | <b>Duckett Creek Sanitary District</b> | PIPE BEDDING CLASS "C" (FOR ALL EXCEPT REINFORCED CONCRETE PIPE) | Own By: BSM<br>App By: KA<br>Ckd By: MDOB<br>Date: JULY 2016 | Detail No. 3 |
|--|----------------------------------------|------------------------------------------------------------------|--------------------------------------------------------------|--------------|



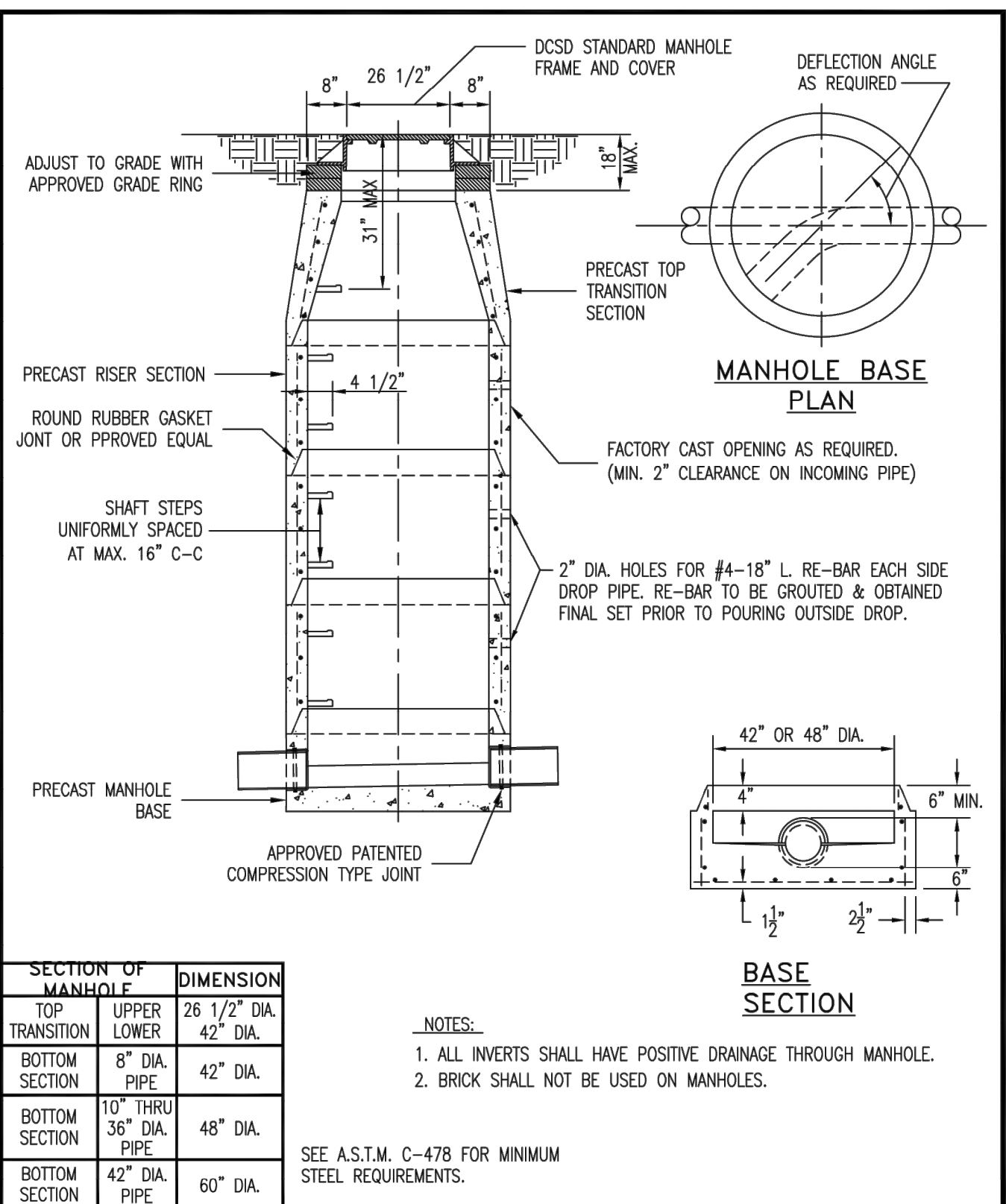
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|--|----------------------------------------|-------------------------------|--------------------------------------------------------------|--------------|
|  | <b>Duckett Creek Sanitary District</b> | TYPICAL CONCRETE ENCASUREMENT | Own By: BSM<br>App By: KA<br>Ckd By: MDOB<br>Date: DEC. 2015 | Detail No. 4 |
|--|----------------------------------------|-------------------------------|--------------------------------------------------------------|--------------|



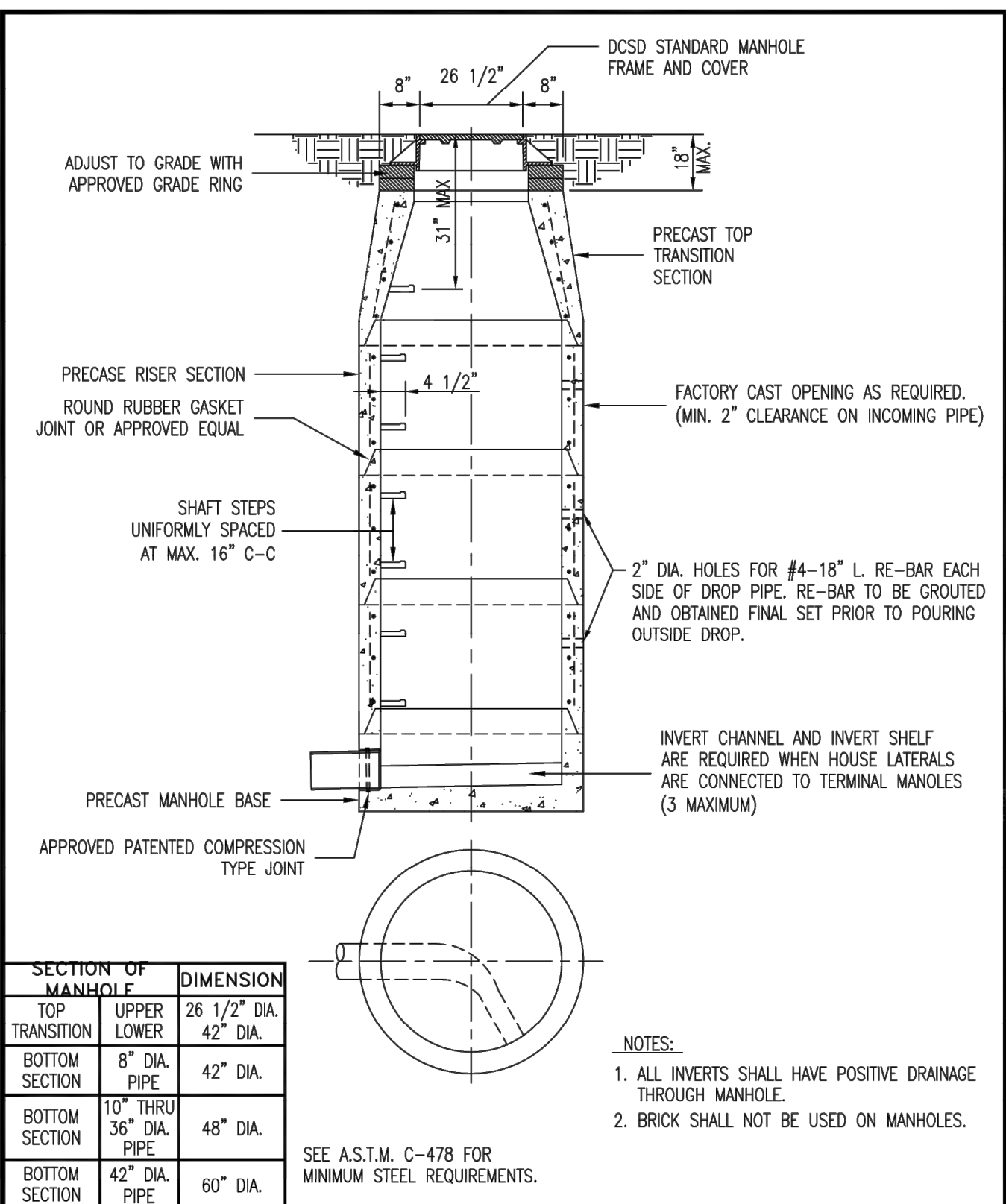
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|--|----------------------------------------|-----------------------------------------------------------------------|--------------------------------------------------------------|--------------|
|  | <b>Duckett Creek Sanitary District</b> | CONCRETE ANTI-SLIP COLLAR FOR PVC PIPE ON PIPE SLOPES FROM 15% TO 50% | Own By: MSM<br>App By: KA<br>Ckd By: MDOB<br>Date: DEC. 2015 | Detail No. 5 |
|--|----------------------------------------|-----------------------------------------------------------------------|--------------------------------------------------------------|--------------|



|  |                                        |                                                                      |                                                               |              |
|--|----------------------------------------|----------------------------------------------------------------------|---------------------------------------------------------------|--------------|
|  | <b>Duckett Creek Sanitary District</b> | PRECAST CONCRETE MANHOLE FOR SEWERS 8" THROUGH 18" IN FLOODWAY AREAS | Own By: MSM<br>App By: KLA<br>Ckd By: MDOB<br>Date: DEC. 2015 | Detail No. 6 |
|--|----------------------------------------|----------------------------------------------------------------------|---------------------------------------------------------------|--------------|



|  |                                        |                                                        |                                                               |              |
|--|----------------------------------------|--------------------------------------------------------|---------------------------------------------------------------|--------------|
|  | <b>Duckett Creek Sanitary District</b> | PRECAST CONCRETE MANHOLE FOR SEWERS 8" THROUGH 18" BSM | Own By: BSM<br>App By: KLA<br>Ckd By: MDOB<br>Date: DEC. 2015 | Detail No. 7 |
|--|----------------------------------------|--------------------------------------------------------|---------------------------------------------------------------|--------------|



|  |                                        |                                            |                                                               |              |
|--|----------------------------------------|--------------------------------------------|---------------------------------------------------------------|--------------|
|  | <b>Duckett Creek Sanitary District</b> | TERMINAL MANHOLE FOR SEWERS 8" THROUGH 18" | Own By: BSM<br>App By: KLA<br>Ckd By: MDOB<br>Date: DEC. 2015 | Detail No. 8 |
|--|----------------------------------------|--------------------------------------------|---------------------------------------------------------------|--------------|