

V:\Projects\BVA\31237\GIS\100% Construction Drawings-Updated.mxd

### Legend

- Sanitary Manhole
- Sanitary Sewer

### Contract 1A - Sanitary Sewer Line Rehabilitation

#### Sanitary Sewer Rehabilitation

- Line
- Burst
- Lateral Rehabilitation**
- Capped- Do Not Reinstall
- Replace
- Replace - Pavement
- Trim and Replace
- Trim and Replace - Pavement
- Trim - Do Not Reinstall
- Assist Owner to Verify Active - Replace if Active
- Verify Active - Pavement
- Existing PVC - Reconnect at Sewer Main
- Existing PVC - Pavement - Reconnect at Sewer Main

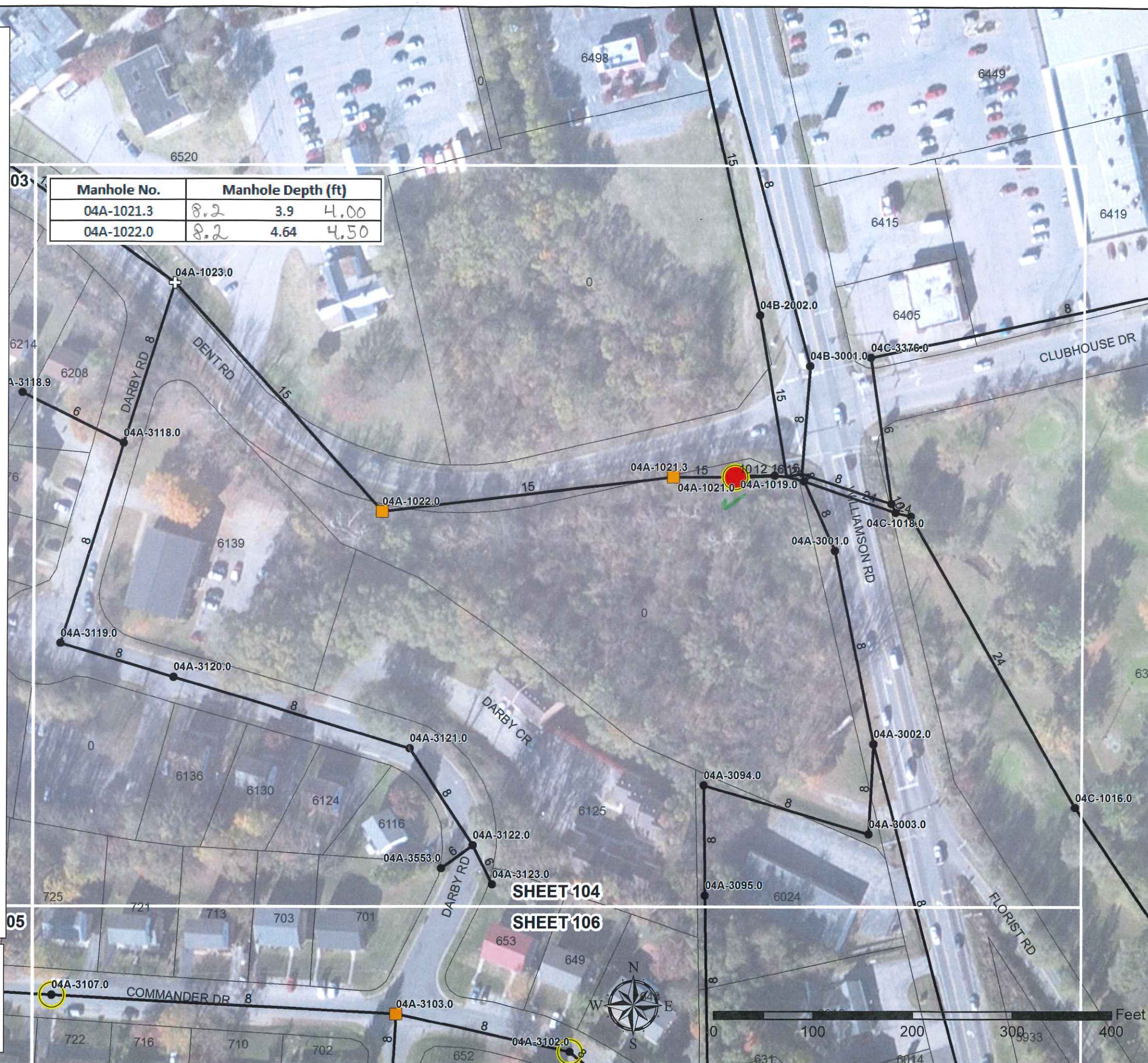
### Contract 1B - Manhole Rehabilitation

- Install Water-Resistant F&C
- Reseal Existing Frame
- Install Standard F&C
- Seal Chimney
- Cementitious Line Manhole
- ✱ Repair Crack/Holes in Wall
- ✱ Seal Pipe Connections
- ✱ Seal Wall/Bench Connection
- ✱ Repair Crack/Holes in Bench
- ★ Install 8-inch Cleanout

### Pipe Material Legend

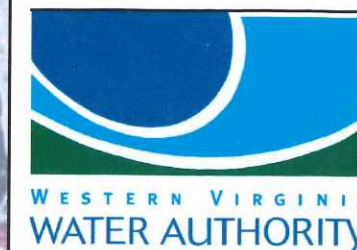
- CP = Concrete Pipe
- VCP = Vitrified Clay Pipe

| Manhole No. | Manhole Depth (ft) |      |      |
|-------------|--------------------|------|------|
| 04A-1021.3  | 8.2                | 3.9  | 4.00 |
| 04A-1022.0  | 8.2                | 4.64 | 4.50 |



DRAWING COPYRIGHT 2016

CHIA



WESTERN VIRGINIA  
WATER AUTHORITY

ROANOKE, VIRGINIA

Taped 3.30.17 on  
Disc 2 side A

1022 & 1021.3 have a  
hole in  
Trench B of Aerial Tid.



THIS IS A PRELIMINARY DRAWING. IT IS NOT TO BE USED FOR CONSTRUCTION. THE USER SHALL BE RESPONSIBLE FOR VERIFYING THE ACCURACY OF THE INFORMATION PROVIDED HEREON. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY MATERIALS AND LABOR. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY INSURANCE AND BONDING. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY NOTICES AND RECORDS. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY ASSESSMENTS AND REPORTS. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY CONSULTATIONS AND ADVICE. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY INFORMATION AND DATA. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY ANALYSIS AND RESULTS. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY DESIGN AND CALCULATIONS. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY CONSTRUCTION AND MAINTENANCE. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY OPERATION AND MANAGEMENT. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY MONITORING AND EVALUATION. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY IMPROVEMENT AND REPAIR. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY DESTRUCTION AND REMOVAL. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY RESTORATION AND REHABILITATION. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PROTECTION AND PRESERVATION. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY SAFETY AND SECURITY. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY COMPLIANCE AND REGULATION. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY STANDARDS AND SPECIFICATIONS. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY METHODS AND PROCEDURES. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY TOOLS AND EQUIPMENT. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERSONNEL AND TRAINING. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY SUPPLIES AND MATERIALS. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY SERVICES AND CONTRACTS. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY INFORMATION AND DATA. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY ANALYSIS AND RESULTS. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY DESIGN AND CALCULATIONS. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY CONSTRUCTION AND MAINTENANCE. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY OPERATION AND MANAGEMENT. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY MONITORING AND EVALUATION. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY IMPROVEMENT AND REPAIR. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY DESTRUCTION AND REMOVAL. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY RESTORATION AND REHABILITATION. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PROTECTION AND PRESERVATION. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY SAFETY AND SECURITY. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY COMPLIANCE AND REGULATION. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY STANDARDS AND SPECIFICATIONS. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY METHODS AND PROCEDURES. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY TOOLS AND EQUIPMENT. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERSONNEL AND TRAINING. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY SUPPLIES AND MATERIALS. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY SERVICES AND CONTRACTS.

| No. | Submittal/Revision | App'd. | By  | Date     |
|-----|--------------------|--------|-----|----------|
|     |                    |        |     |          |
|     |                    |        |     |          |
|     |                    |        |     |          |
|     |                    |        |     |          |
| -   | Bid Issue          | DBH    | KJV | 10/07/16 |
| A   | 50% Submission     | DBH    | KJV | 05/12/16 |

CONTRACT 1 -  
2016 SANITARY SEWER REHABILITATION

Manhole Rehabilitation

|                     |                             |                              |
|---------------------|-----------------------------|------------------------------|
| Designed By:<br>KJV | Project No:<br>31237        | Drawing No.:<br><b>C-104</b> |
| Drawn By:<br>KJV    | Scale:<br>AS SHOWN          |                              |
| Checked By:<br>DBH  | Issue Date:<br>October 2016 |                              |