

# SVMD SANITARY SEWER AND WATER CONSTRUCTION PLANS FOR COMPARK VILLAGE SOUTH FILING NO. 2 - AMENDMENT NO. 1 PARKER, COLORADO

## AGENCY CONTACT LIST

**470 COMPARK, LLC**  
MICHAEL VICKERS  
1001 BANNOCK STREET, SUITE #240  
DENVER, CO 80204  
303-881-6292

**MANHARD CONSULTING**  
RICK J. MOORE, P.E.  
8008 E ARAPAHOE COURT, SUITE 110  
CENTENNIAL, CO 80112  
303-708-0500

**PARKER PUBLIC WORKS**  
20120 E. MAIN STREET  
PARKER, CO, 80138  
303-840-9546  
STREETS - ALEX MESTDAGH  
STORM WATER - JACOB JAMES  
EROSION CONTROL - KURT PATRICK  
LIFE SAFETY - RANDY CARPRA

**TOWN OF PARKER POLICE DEPARTMENT**  
13600 E. PARKER SQUARE DR.  
PARKER, CO, 80134  
303-841-9800

**PARKER BUILDING DEPT**  
20120 E. MAIN STREET  
PARKER, CO, 80138  
303-805-3169  
LIFE SAFETY - RANDY CAPRA

**STONEGATE VILLAGE METROPOLITAN DISTRICT**  
DISTRICT ENGINEER  
SCOTT BARNETT 303-649-9857  
MULHERN MRE, INC.  
188 INVERNESS DRIVE WEST, SUITE 140  
ENGLEWOOD, CO 80112  
303-649-9857

**DISTRICT MANAGER:**  
SARAH SJOBAKKEN  
10252 STONEGATE PARKWAY  
PARKER, CO 80134  
303-858-9909

**SOUTH METRO FIRE RESCUE AUTHORITY**  
MICHELLE HERIAN  
9195 E. MINERAL AVE.  
CENTENNIAL, CO 80112  
720-488-7200

**UTILITY NOTIFICATION COMPANY OF COLORADO**  
2801 SOUTH YOUNGFIELD ST, SUITE 301  
GOLDEN, CO 80401  
1-800-922-1987  
LOCAL CALLS (811)

**XCEL ENERGY**  
MICHELLE O'NAN  
5909 E. 38TH AVE.  
DENVER, CO 80207  
303-329-1618

**QWEST**  
WILLIAM BENSON  
9750 E. COSTILLA AVE.  
ENGLEWOOD, CO 80112  
720-490-3867

**COMCAST**  
KEVIN YOUNG  
6850 S. TUCSON WAY  
ENGLEWOOD, CO 80112  
303-792-6069

**COLORADO DEPARTMENT OF HEALTH**  
4210 E. 11TH AVE.  
DENVER, CO 80220  
303-320-8333

**INTERMOUNTAIN RURAL ELECTRIC ASSOCIATION**  
BROOKS KAUFMAN  
5495 NORTH US HWY 85  
P.O. BOX DRAWER A  
SEDALIA, CO 80135  
303-688-3100

## BENCHMARKS: (COMPARK SOUTH)

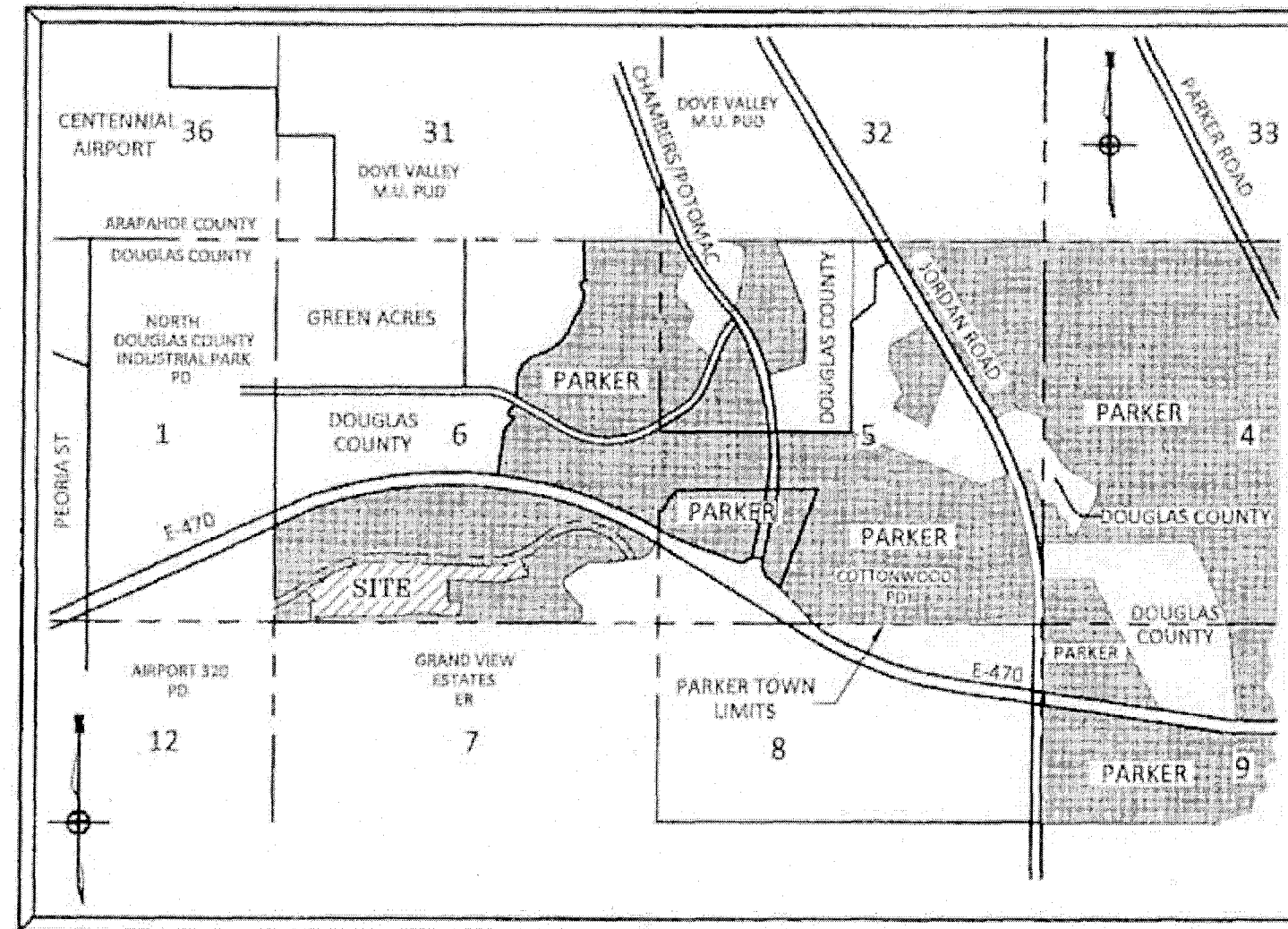
**SOURCE BENCHMARKS:**  
DOUGLAS COUNTY BM 1.115010  
A DOUGLAS COUNTY GIS MONUMENT SET IN CONCRETE LOCATED APPROXIMATELY 130 FEET SOUTHWESTERLY OF THE CENTERLINE OF CHAMBERS ROAD AND 95 FEET NORTHWESTERLY OF THE CENTERLINE OF COMPARK BOULEVARD.  
ELEVATION = 5752.84 (NAVD 88)

**SITE BENCHMARKS:**  
1. A NO. 5 REBAR WITH 2" ALUMINUM CAP STAMPED "1S 28286, 2001" FOUND AT THE SOUTHEAST CORNER OF SECTION 6, T6S, R66W LOCATED ON THE WEST LINE OF FIRST STREET APPROXIMATELY 1000 FEET NORTH OF ELM AVENUE.  
ELEVATION = 5845.51

2. A 1.5" IRON PIPE WITH 3.25" ALUMINUM CAP STAMPED "PLS 12405, 1997" FOUND AT THE SOUTHEAST CORNER OF SECTION 6, T6S, R66W LOCATED APPROXIMATELY 960 FEET NORTH OF THE CENTERLINE OF AVENTERRA PARKWAY AND APPROXIMATELY 1050 FEET WEST OF THE CENTERLINE OF CHAMBERS ROAD.  
ELEVATION = 5808.06

THE WEST LINE OF THE SOUTHWEST QUARTER OF SECTION 6, TOWNSHIP 6 SOUTH, RANGE 66 WEST OF THE SIXTH PRINCIPAL MERIDIAN BEING MONUMENTED AS SHOWN HEREON HAVING A BEARING OF NORTH 00°29'49" WEST, AS DETERMINED BY GPS OBSERVATION FROM NGS CONTROL POINTS IN THE COLORADO CENTRAL ZONE, STATE PLANE COORDINATE SYSTEM TOWN OF PARKER, COUNTY OF DOUGLAS, STATE OF COLORADO

## STONEGATE VILLAGE METRO DISTRICT WATER AND SANITARY SEWER PLAN



VICINITY MAP  
N.T.S.

### WATER MAIN QUANTITIES

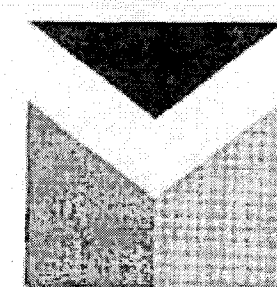
1	8" PVC Water Main	3,152	L.F.
2	8" Gate Valve and Box	16	Each
3	8" Plug w/ BO and KB	3	Each
4	8" x 6" Tee w/ Kick Block	11	Each
5	8" x 8" Tee w/ KB	2	Each
6	8" x 8" Cross w/ KB	1	Each
7	8" 45 Degree Bend w/ KB	1	Each
8	8" 22.5 Degree Bend w/ 8"x6" Reducer and Kick Block	1	Each
9	6" PVC Water Main	1,184	L.F.
10	6" Gate Valve and Box	5	Each
11	6" Plug w/ BO & KB	5	Each
12	Fire Hydrant Assembly	9	Each
13	5" Manhole	2	Each
14	6" Check Valve	2	Each
15	6" Turbine Meter	2	Each
16	Remove Existing 8" Plug and Make Dry Connection	3	Each
17	Air Release	1	Each
18	Water Quality Sampling Station	1	Each

### SANITARY SEWER MAIN QUANTITIES

1	8" Sanitary Sewer Main (0-16' Depth)	2,630	L.F.
2	8" Sanitary Sewer Main (>16' Depth)	540	L.F.
3	4' Diameter Manholes (0-20' Depth)	20	Each
4	8" Plug	1	Each
5	Connection to Existing Sanitary Sewer	2	Each

I HEREBY AFFIRM THAT THESE CONSTRUCTION PLANS WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION.

FOR AND ON BEHALF OF MANHARD CONSULTING



**Manhard CONSULTING**  
7000 East Orchard Road, Suite 1504, Greenwood Village, CO 80111 | 303.708.0500 | manhard.com  
Civil Engineering | Surveying & Geospatial Services | GIS  
Water Resource Management | Construction Management



### SHEET INDEX - SVMD DISTRICT PLAN SET

SHEET NUMBER	SHEET TITLE
1	COVER SHEET
2	GENERAL NOTES
3	OVERALL UTILITY PLAN
4	WATER PLAN - WEST
5	WATER PLAN - EAST
6	SANITARY SEWER PLAN AND PROFILE - DEERTRACK LANE
7	SANITARY SEWER PLAN AND PROFILE - BUNNY HOP LANE
8	SANITARY SEWER PLAN AND PROFILE - BUNNY HOP LANE
9	SANITARY SEWER PLAN AND PROFILE - RACCOON TAIL WAY
10	SANITARY SEWER PLAN AND PROFILE - ALLEY 10-12
11	SANITARY SEWER PLAN AND PROFILE - ALLEY 13-15
12	SANITARY SEWER CONSTRUCTION DETAILS
13	WATER SYSTEM CONSTRUCTION DETAILS
14	WATER SYSTEM CONSTRUCTION DETAILS

### TOWN OF PARKER BUILDING DEPT FIRE LIFE SAFETY APPROVAL

ALL FIRE HYDRANTS SHALL BE INSTALLED ACCORDING TO WATER UTILITY STANDARDS. THE NUMBER AND LOCATIONS OF THE FIRE HYDRANTS AS SHOWN ON THE OVERALL UTILITY PLAN ARE CORRECT AS SPECIFIED BY THE TOWN OF PARKER, COMMUNITY DEVELOPMENT DEPARTMENT.

BY:

(SIGNATURE OF FIRE CODE OFFICIAL OR DESIGNATED REPRESENTATIVE) DATE

NOTE: UNDERGROUND FIRE LINE (UFL) SUBMITTAL DOCUMENTS MUST MEET THE REQUIREMENTS OF NFPA 24 WHEN SUBMITTING FOR REVIEW

### DISTRICT APPROVALS

THESE DESIGNS, PLANS, AND CONTRACT DOCUMENTS ARE REVIEWED FOR CONCEPT AND GENERAL CONFORMANCE TO THE DISTRICT'S MINIMUM STANDARDS ONLY, AND THE PRIMARY RESPONSIBILITY FOR DESIGN ADEQUACY IS TO REMAIN WITH THE ENGINEER OF RECORD. THIS REVIEW DOES NOT IMPLY RESPONSIBILITY BY EITHER THE STONEGATE VILLAGE METROPOLITAN DISTRICT OR THE DISTRICT ENGINEER FOR COMPLETENESS, ACCURACY OR CORRECTNESS OF CALCULATIONS. THE REVIEW DOES NOT IMPLY THAT QUANTITIES OF ITEMS INDICATED ON THE PLANS ARE THE FINAL QUANTITIES REQUIRED. THE REVIEW SHALL NOT BE CONSTRUED FOR ANY REASON AS ACCEPTANCE OF FINANCIAL RESPONSIBILITY BY THE STONEGATE VILLAGE METROPOLITAN DISTRICT FOR ADDITIONAL ITEMS AND ADDITIONAL QUANTITIES OF ITEMS SHOWN THAT MAY BE REQUIRED DURING THE CONSTRUCTION PHASE.

APPROVED FOR CONSTRUCTION WITHIN ONE YEAR OF THE EARLIEST OF THESE DATES:

BY Scott Barnett  
STONEGATE VILLAGE METROPOLITAN DISTRICT ENGINEER

11/23/2020  
DATE

BY [Signature]  
STONEGATE VILLAGE METROPOLITAN DISTRICT MANAGER

11/23/2020  
DATE

COMPARK VILLAGE SOUTH FILING NO. 2 - AMENDMENT NO. 1  
TOWN OF PARKER, COLORADO  
COVER SHEET

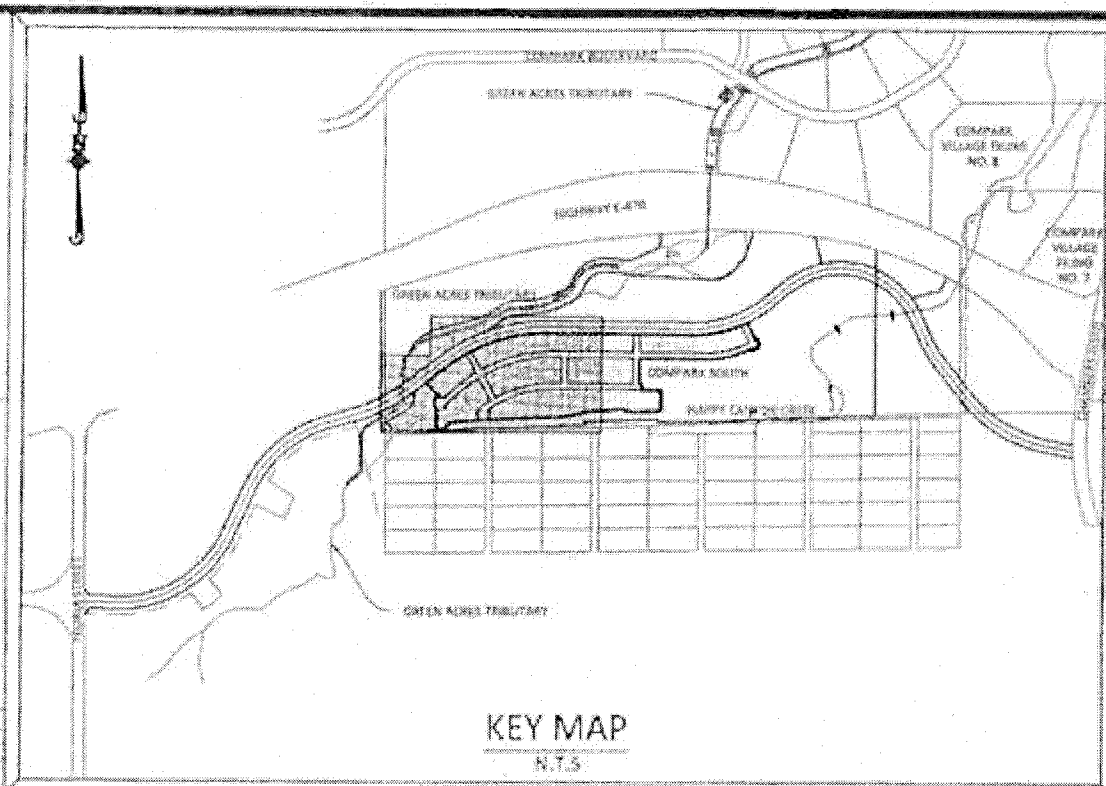
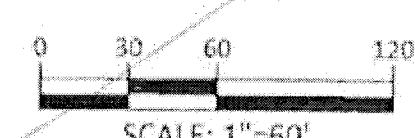
**Manhard CONSULTING**  
7000 East Orchard Road, Suite 1504, Greenwood Village, CO 80111 | 303.708.0500 | manhard.com  
Civil Engineering | Surveying & Geospatial Services | GIS  
Water Resource Management | Construction Management

DATE: 11/23/2020  
DRAWN BY: ASD  
DATE: 10/2016  
SHEET 1 OF 14  
CLCPK3

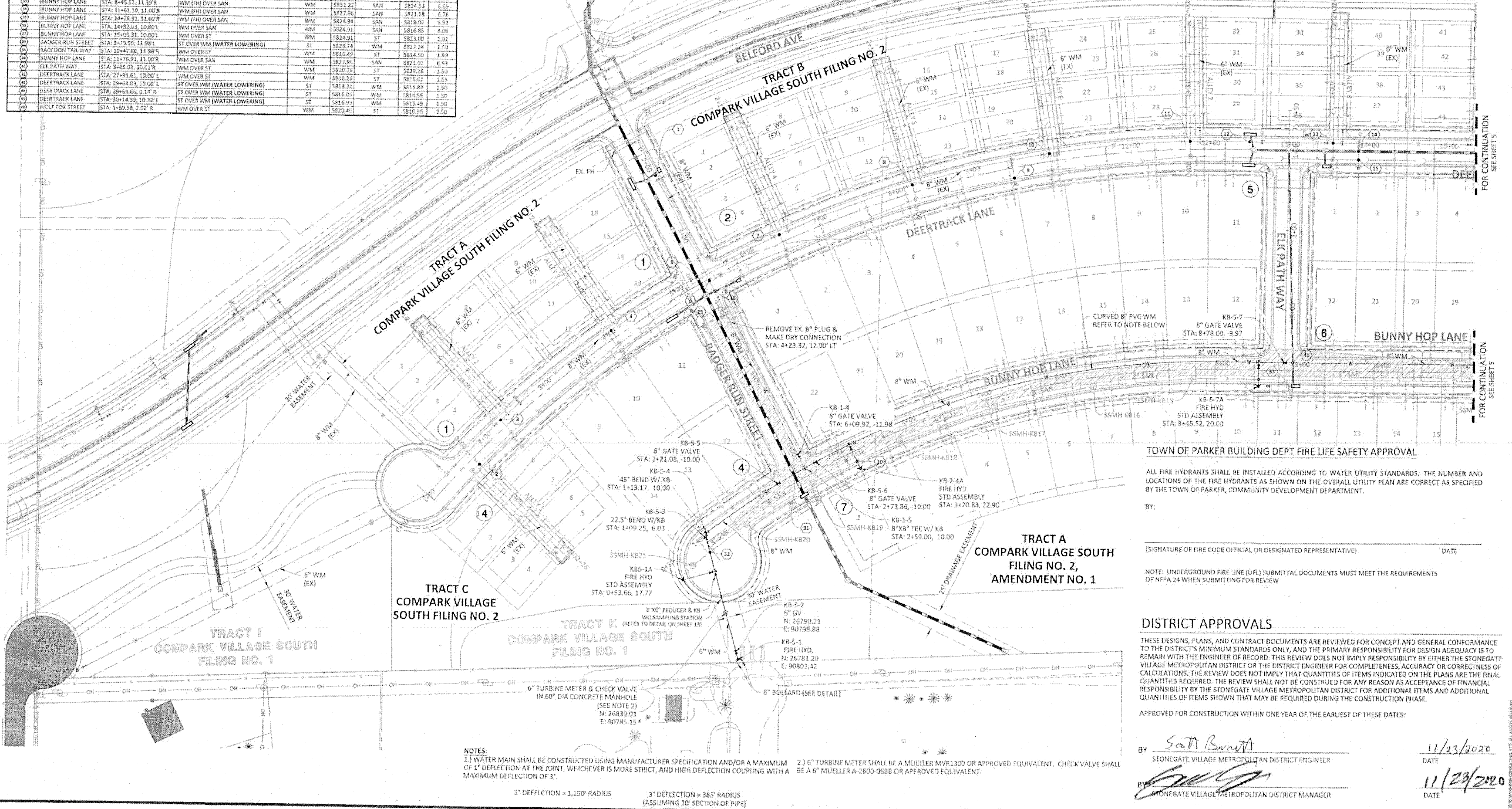




CROSSING	STREET	STATION/OFFSET	TYPE OF CROSSING	UPPER UTILITY	B.O.P.	LOWER UTILITY	T.O.P.	CLEAR
(1)	BADGER RUN STREET	STA: 2+16.17, 11.98'L	ST OVER WM (WATER LOWERING)	ST	5825.14	WM	5823.14	2.00
(2)	DEERTRACK LANE	STA: 1+72.35, 11.24'R	WM OVER SAN	WM	5814.33	SAN	5827.95	6.78
(3)	DEERTRACK LANE	STA: 2+29.06, 10.00'L	WM OVER SAN	WM	5813.46	SAN	5827.48	6.00
(4)	DEERTRACK LANE	STA: 4+05.15, 10.00'L	WM OVER SAN	WM	5810.74	SAN	5824.96	5.78
(5)	DEERTRACK LANE	STA: 5+30.36, 10.00'L	ST OVER WM (WATER LOWERING)	ST	5826.36	WM	5824.36	2.00
(6)	DEERTRACK LANE	STA: 6+41.93, 11.81'R	WM OVER SAN	WM	5823.42	SAN	5823.33	6.09
(7)	DEERTRACK LANE	STA: 6+45.71, 10.00'L	WM OVER SAN	WM	5826.26	SAN	5822.52	5.55
(8)	DEERTRACK LANE	STA: 8+21.94, 10.00'L	WM OVER SAN	WM	5826.26	SAN	5820.55	5.71
(9)	DEERTRACK LANE	STA: 9+45.78, 12.78'R	WM (FH) OVER SAN	WM	5824.95	SAN	5818.80	6.15
(10)	DEERTRACK LANE	STA: 9+58.17, 10.00'L	WM OVER SAN	WM	5824.46	SAN	5818.63	5.83
(11)	DEERTRACK LANE	STA: 11+76.40, 10.00'L	WM OVER SAN	WM	5822.65	SAN	5816.66	5.99
(12)	DEERTRACK LANE	STA: 12+49.16, 9.95'L	ST OVER WM (WATER LOWERING)	ST	5820.82	WM	5818.82	2.00
(13)	DEERTRACK LANE	STA: 13+45.59, 9.96'L	WM OVER SAN	WM	5815.99	SAN	5812.84	2.15
(14)	DEERTRACK LANE	STA: 13+45.84, 10.81'R	ST OVER WM (FH) (WATER LOWERING)	ST	5820.81	SAN	5814.69	6.12
(15)	DEERTRACK LANE	STA: 13+45.81, 10.81'R	WM (FH) OVER SAN	WM	5815.06	WM	5816.66	2.00
(16)	DEERTRACK LANE	STA: 15+43.55, 9.97'L	WM OVER SAN	WM	5815.99	SAN	5812.69	6.28
(17)	DEERTRACK LANE	STA: 17+89.84, 9.99'L	WM OVER SAN	WM	5816.34	SAN	5809.90	6.44
(18)	DEERTRACK LANE	STA: 18+38.84, 0.00'L	ST OVER WM (FH) (WATER LOWERING)	ST	5812.43	WM	5810.93	1.50
(19)	DEERTRACK LANE	STA: 18+33.86, 11.00'R	WM (FH) OVER SAN	WM	5810.26	SAN	5808.33	1.93
(20)	DEERTRACK LANE	STA: 19+22.47, 10.00'L	WM OVER SAN	WM	5815.56	SAN	5806.28	9.28
(21)	DEERTRACK LANE	STA: 19+23.34, 10.00'L	ST OVER WM (WATER LOWERING)	ST	5810.79	WM	5808.79	2.00
(22)	DEERTRACK LANE	STA: 19+35.32, 4.57'R	ST OVER WM (WATER LOWERING)	ST	5811.94	WM	5810.94	2.00
(23)	DEERTRACK LANE	STA: 19+35.32, 11.00'R	WM OVER SAN	WM	5810.27	SAN	5806.75	3.52
(24)	DEERTRACK LANE	STA: 20+39.84, 10.00'L	WM OVER SAN	WM	5816.85	SAN	5808.11	8.74
(25)	DEERTRACK LANE	STA: 22+19.84, 10.00'L	WM OVER SAN	WM	5820.02	SAN	5809.46	10.56
(26)	DEERTRACK LANE	STA: 23+09.84, 10.00'L	WM OVER SAN	WM	5822.66	SAN	5810.74	11.92
(27)	DEERTRACK LANE	STA: 25+91.77, 10.00'L	WM OVER SAN	WM	5820.85	SAN	5811.57	9.27
(28)	DEERTRACK LANE	STA: 28+22.75, 10.00'L	WM OVER SAN	WM	5818.42	SAN	5812.41	6.02
(29)	BADGER RUN STREET	STA: 4+12.17, 0.64'R	ST OVER WM (FH) (WATER LOWERING)	ST	5827.92	WM	5825.92	2.00
(30)	BUNNY HOP LANE	STA: 30+20.88, 12.81'R	WM OVER SAN	WM	5827.37	SAN	5828.96	8.41
(31)	BUNNY HOP LANE	STA: 2+43.56, 10.00'L	WM OVER ST	WM	5838.34	ST	5835.18	3.16
(32)	BUNNY HOP LANE	STA: 1+01.67, 11.83'R	WM (FH) OVER SAN	WM	5840.25	SAN	5831.63	8.62
(33)	BUNNY HOP LANE	STA: 6+45.52, 11.39'R	WM (FH) OVER SAN	WM	5831.27	SAN	5824.53	6.74
(34)	BUNNY HOP LANE	STA: 11+61.10, 11.00'R	WM (FH) OVER SAN	WM	5827.96	SAN	5821.18	6.78
(35)	BUNNY HOP LANE	STA: 14+76.91, 11.00'R	WM (FH) OVER SAN	WM	5824.94	SAN	5818.02	6.92
(36)	BUNNY HOP LANE	STA: 14+97.03, 10.00'L	WM OVER SAN	WM	5824.91	SAN	5816.85	8.06
(37)	BUNNY HOP LANE	STA: 15+03.91, 10.00'L	WM OVER ST	WM	5824.91	ST	5824.00	0.91
(38)	BADGER RUN STREET	STA: 3+79.05, 11.98'L	ST OVER WM (WATER LOWERING)	ST	5828.74	WM	5827.24	1.50
(39)	RACCOON TAIL WAY	STA: 10+47.66, 11.98'R	WM OVER ST	WM	5816.49	ST	5814.00	2.49
(40)	BUNNY HOP LANE	STA: 11+76.91, 11.00'R	WM OVER SAN	WM	5827.95	SAN	5821.02	6.93
(41)	ELK PATH WAY	STA: 3+65.03, 10.01'R	WM OVER ST	WM	5830.76	ST	5829.26	1.50
(42)	DEERTRACK LANE	STA: 27+91.61, 10.00'L	WM OVER ST	WM	5818.26	ST	5816.61	1.65
(43)	DEERTRACK LANE	STA: 28+44.03, 10.00'L	ST OVER WM (WATER LOWERING)	ST	5813.32	WM	5811.82	1.50
(44)	DEERTRACK LANE	STA: 28+63.66, 10.14'R	ST OVER WM (WATER LOWERING)	ST	5816.05	WM	5814.55	1.50
(45)	DEERTRACK LANE	STA: 30+14.39, 10.32'L	ST OVER WM (WATER LOWERING)	ST	5816.05	WM	5815.49	0.56
(46)	WOLF FOX STREET	STA: 1+69.58, 2.02'R	WM OVER ST	WM	5820.41	ST	5816.97	3.44



**SOURCE BENCHMARKS:**  
 DOUGLAS COUNTY BM 1.135010  
 A DOUGLAS COUNTY GIS MONUMENT SET IN CONCRETE LOCATED APPROXIMATELY 130 FEET  
 SOUTHWESTERLY OF THE CENTERLINE OF CHAMBERS ROAD AND 95 FEET NORTHWESTERLY OF  
 THE CENTERLINE OF COMPARK BOULEVARD. ELEVATION = 5752.84 (NAVD 88)



**TOWN OF PARKER BUILDING DEPT FIRE LIFE SAFETY APPROVAL**

ALL FIRE HYDRANTS SHALL BE INSTALLED ACCORDING TO WATER UTILITY STANDARDS. THE NUMBER AND LOCATIONS OF THE FIRE HYDRANTS AS SHOWN ON THE OVERALL UTILITY PLAN ARE CORRECT AS SPECIFIED BY THE TOWN OF PARKER, COMMUNITY DEVELOPMENT DEPARTMENT.

BY: \_\_\_\_\_ DATE \_\_\_\_\_  
 (SIGNATURE OF FIRE CODE OFFICIAL OR DESIGNATED REPRESENTATIVE)

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APPROVED FOR CONSTRUCTION WITHIN ONE YEAR OF THE EARLIEST OF THESE DATES:

BY: *Sarah Bennett* DATE: 11/23/2020  
 STONEGATE VILLAGE METROPOLITAN DISTRICT ENGINEER  
 BY: *[Signature]* DATE: 11/23/2020  
 STONEGATE VILLAGE METROPOLITAN DISTRICT MANAGER

**NOTES:**  
 1) WATER MAIN SHALL BE CONSTRUCTED USING MANUFACTURER SPECIFICATION AND/OR A MAXIMUM OF 1" DEFLECTION AT THE JOINT, WHICHEVER IS MORE STRICT, AND HIGH DEFLECTION COUPLING WITH A MAXIMUM DEFLECTION OF 3".  
 2) 6" TURBINE METER SHALL BE A MUELLER MVR1300 OR APPROVED EQUIVALENT. CHECK VALVE SHALL BE A 6" MUELLER A-2600-056B OR APPROVED EQUIVALENT.  
 3" DEFLECTION = 1,150' RADIUS  
 6" DEFLECTION = 385' RADIUS  
 (ASSUMING 20' SECTION OF PIPE)

**Manhard CONSULTING**  
 7600 East Orchard Road, Suite 300N, Greenwood Village, CO 80111  
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 Water Resource Management | Construction Management

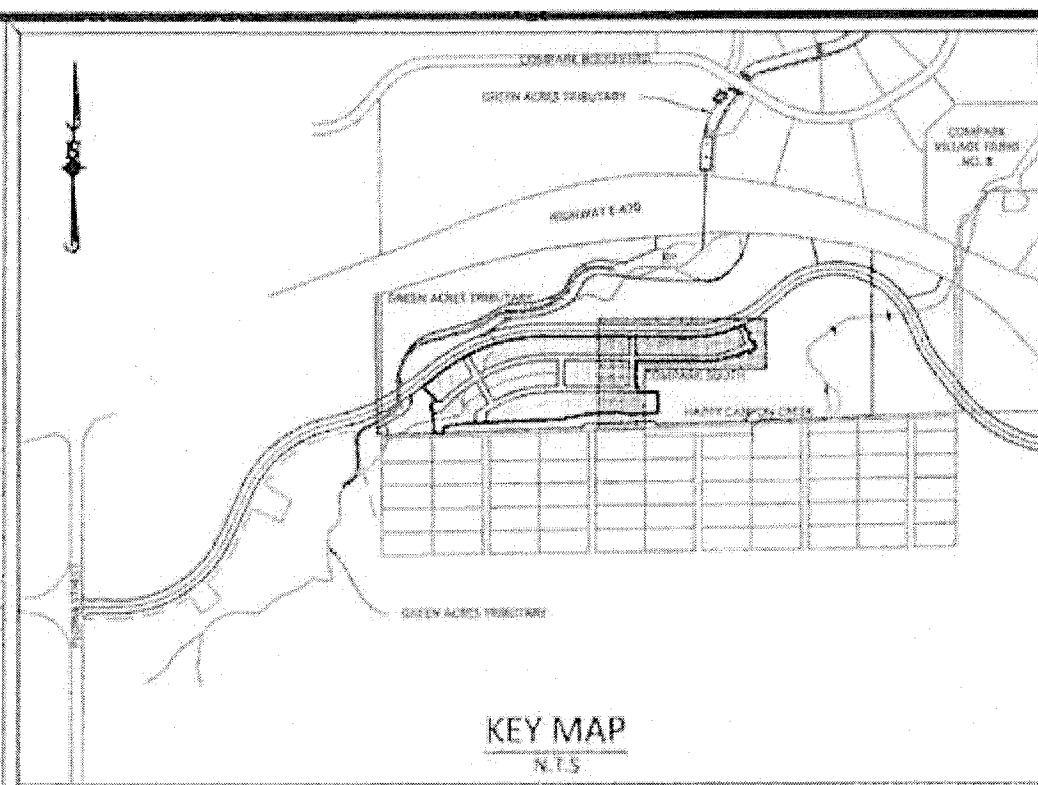
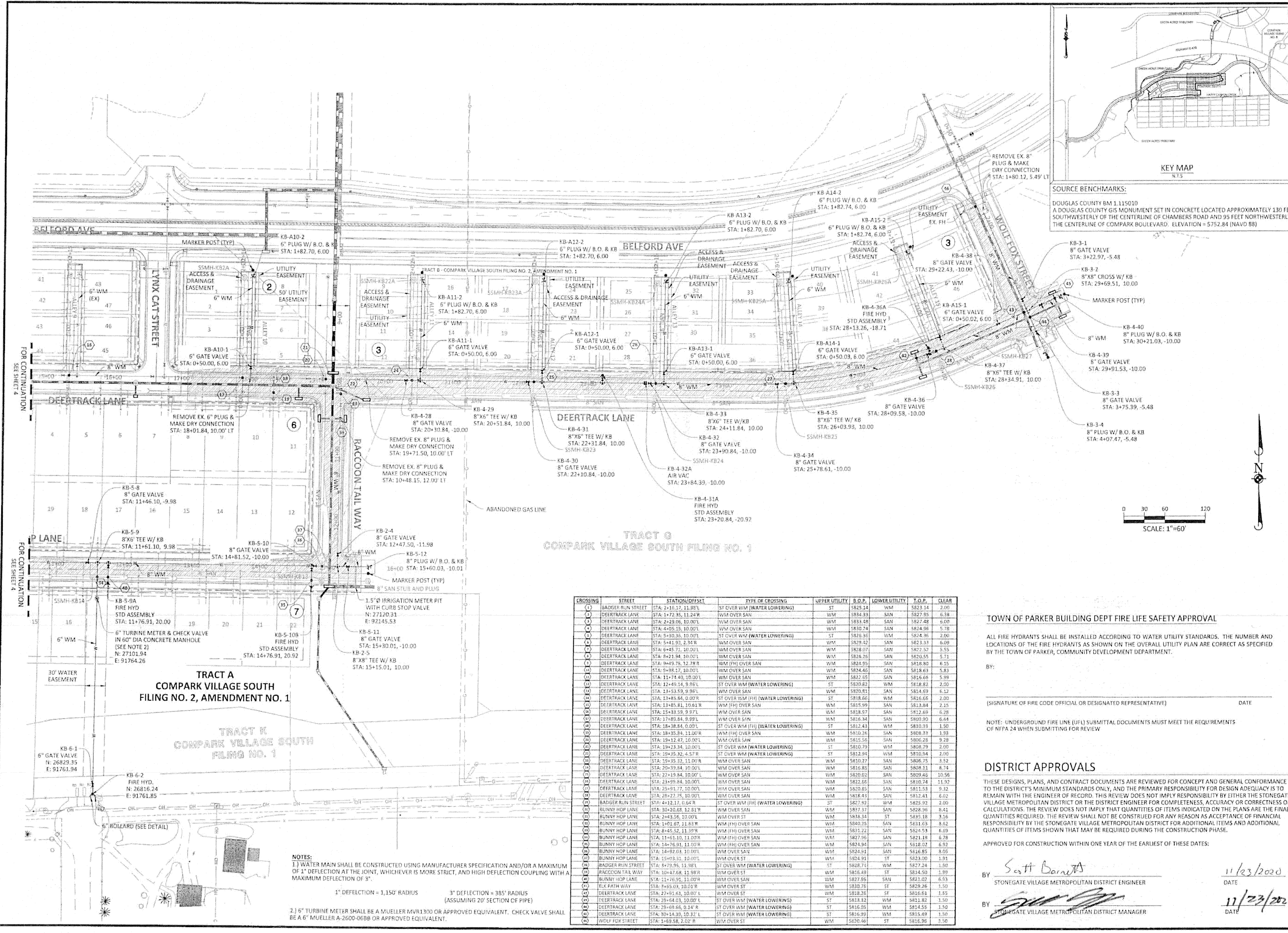
**COMPARK VILLAGE SOUTH FILING NO. 2 - AMENDMENT NO. 1**  
**TOWN OF PARKER, COLORADO**  
**WATER PLAN - WEST**

DATE: 11/23/2020  
 REVISIONS:  
 NO. DATE BY DESCRIPTION  
 1 11/23/2020 HANS SUBRANTAL ISSUED FOR PERMITS  
 2 02/20/2021 HANS SUBRANTAL REVISED ALLEY EASEMENTS  
 3 02/20/2021 HANS SUBRANTAL REVISED ALLEY EASEMENTS  
 4 02/20/2021 HANS SUBRANTAL REVISED ALLEY EASEMENTS

PROJ. MGR: RIM  
 PROJ. ASSOC: BAK  
 DRAWN BY: ASD  
 DATE: 10/20/16

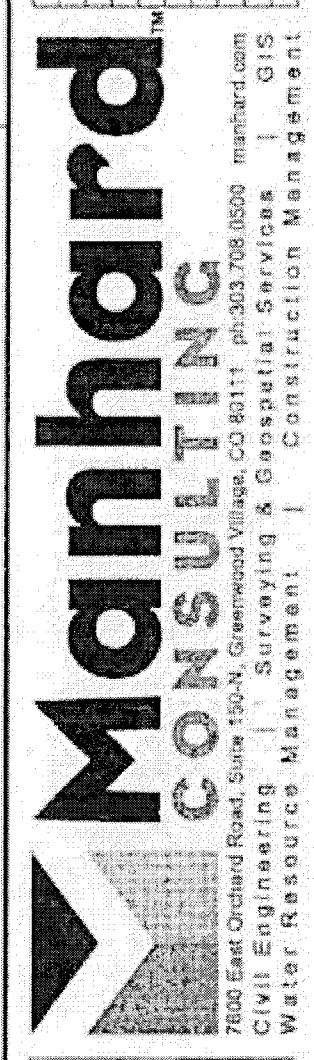
**37642**  
 11-20-2020  
 PROFESSIONAL ENGINEER

**4 OF 14**  
 CLEPK3



**SOURCE BENCHMARKS:**  
 DOUGLAS COUNTY BM 111503D  
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DATE	REVISION
11/20/20	ISSUED FOR PERMITS
07/2021	FINAL SUBMITTAL
06/2021	REVISED ALLEYS
04/2021	REVISED FIRE HYDRANT
02/2021	REVISED FIRE HYDRANT



**COMPARK VILLAGE SOUTH FILING NO. 2 - AMENDMENT NO. 1**  
 TOWN OF PARKER, COLORADO  
 WATER PLAN - EAST

CROSSING	STREET	STATION/OFFSET	TYP OF CROSSING	UPPER UTILITY	B.O.D.	LOWER UTILITY	T.O.P.	CLEAR
(1)	BADGER RUN STREET	STA: 1+81.37, 11.82'R	ST OVER WM (WATER LOWERING)	WM	5834.33	SAN	5827.95	6.38
(2)	DEERTRACK LANE	STA: 1+72.35, 11.24'R	WM OVER SAN	WM	5834.33	SAN	5827.95	6.38
(3)	DEERTRACK LANE	STA: 2+29.06, 10.00'L	WM OVER SAN	WM	5834.33	SAN	5827.95	6.38
(4)	DEERTRACK LANE	STA: 4+05.15, 10.00'L	WM OVER SAN	WM	5834.33	SAN	5827.95	6.38
(5)	DEERTRACK LANE	STA: 5+30.36, 10.00'L	ST OVER WM (WATER LOWERING)	ST	5828.36	WM	5824.36	2.00
(6)	DEERTRACK LANE	STA: 5+41.93, 2.34'R	WM OVER SAN	WM	5829.42	SAN	5823.33	6.09
(7)	DEERTRACK LANE	STA: 6+45.71, 10.00'L	WM OVER SAN	WM	5828.97	SAN	5823.57	5.55
(8)	DEERTRACK LANE	STA: 8+21.84, 10.00'L	WM OVER SAN	WM	5828.37	SAN	5820.55	5.71
(9)	DEERTRACK LANE	STA: 9+49.75, 12.78'R	WM (FH) OVER SAN	WM	5824.95	SAN	5818.80	6.15
(10)	DEERTRACK LANE	STA: 9+88.17, 10.00'L	WM OVER SAN	WM	5824.46	SAN	5818.69	5.83
(11)	DEERTRACK LANE	STA: 11+74.00, 10.00'L	WM OVER SAN	WM	5822.65	SAN	5816.65	5.99
(12)	DEERTRACK LANE	STA: 12+49.14, 9.95'L	ST OVER WM (WATER LOWERING)	ST	5820.62	WM	5816.62	2.00
(13)	DEERTRACK LANE	STA: 13+52.59, 9.95'L	WM OVER SAN	WM	5820.61	SAN	5814.69	6.12
(14)	DEERTRACK LANE	STA: 13+85.81, 10.00'L	ST OVER WM (FH) (WATER LOWERING)	ST	5818.66	WM	5816.66	2.00
(15)	DEERTRACK LANE	STA: 13+85.81, 10.00'R	WM (FH) OVER SAN	WM	5815.99	SAN	5813.94	2.15
(16)	DEERTRACK LANE	STA: 15+83.59, 9.97'L	WM OVER SAN	WM	5818.07	SAN	5812.69	6.28
(17)	DEERTRACK LANE	STA: 17+85.84, 9.99'L	WM OVER SAN	WM	5816.34	SAN	5809.30	6.44
(18)	DEERTRACK LANE	STA: 18+38.84, 0.00'L	ST OVER WM (FH) (WATER LOWERING)	ST	5812.43	WM	5810.33	1.50
(19)	DEERTRACK LANE	STA: 18+35.84, 11.00'R	WM (FH) OVER SAN	WM	5810.26	SAN	5808.39	1.95
(20)	DEERTRACK LANE	STA: 18+41.27, 10.00'L	WM OVER SAN	WM	5815.56	SAN	5806.28	9.28
(21)	DEERTRACK LANE	STA: 19+23.34, 10.00'L	ST OVER WM (WATER LOWERING)	ST	5810.79	WM	5808.79	2.00
(22)	DEERTRACK LANE	STA: 20+35.32, 4.57'R	ST OVER WM (WATER LOWERING)	ST	5812.94	WM	5810.94	2.00
(23)	DEERTRACK LANE	STA: 20+39.84, 10.00'L	WM OVER SAN	WM	5810.27	SAN	5806.75	3.52
(24)	DEERTRACK LANE	STA: 20+39.84, 10.00'L	WM OVER SAN	WM	5816.83	SAN	5808.11	6.74
(25)	DEERTRACK LANE	STA: 22+19.84, 10.00'L	WM OVER SAN	WM	5820.02	SAN	5809.46	10.96
(26)	DEERTRACK LANE	STA: 23+49.84, 10.00'L	WM OVER SAN	WM	5822.66	SAN	5810.24	14.92
(27)	DEERTRACK LANE	STA: 25+41.77, 10.00'L	WM OVER SAN	WM	5820.85	SAN	5811.53	9.32
(28)	DEERTRACK LANE	STA: 26+27.75, 10.00'L	WM OVER SAN	WM	5818.43	SAN	5812.41	6.02
(29)	BADGER RUN STREET	STA: 4+12.17, 0.64'R	ST OVER WM (FH) (WATER LOWERING)	ST	5827.93	WM	5825.93	2.00
(30)	BUNNY HOP LANE	STA: 30+20.68, 12.81'R	WM OVER SAN	WM	5827.37	SAN	5826.36	8.41
(31)	BUNNY HOP LANE	STA: 2+43.56, 10.00'L	WM OVER ST	WM	5834.34	ST	5835.18	3.16
(32)	BUNNY HOP LANE	STA: 1+01.07, 11.83'R	WM (FH) OVER SAN	WM	5803.75	SAN	5803.03	8.82
(33)	BUNNY HOP LANE	STA: 8+45.52, 11.97'R	WM (FH) OVER SAN	WM	5813.22	SAN	5824.93	6.09
(34)	BUNNY HOP LANE	STA: 11+61.10, 11.00'R	WM (FH) OVER SAN	WM	5827.96	SAN	5821.18	6.78
(35)	BUNNY HOP LANE	STA: 14+76.91, 11.00'R	WM (FH) OVER SAN	WM	5824.94	SAN	5818.02	6.92
(36)	BUNNY HOP LANE	STA: 14+82.04, 10.00'L	WM OVER SAN	WM	5824.91	SAN	5816.85	8.05
(37)	BUNNY HOP LANE	STA: 15+03.31, 10.00'L	WM OVER ST	WM	5824.91	ST	5823.00	1.91
(38)	BUNNY HOP LANE	STA: 15+03.31, 10.00'L	ST OVER WM (WATER LOWERING)	ST	5826.75	WM	5827.24	1.50
(39)	BADGER RUN STREET	STA: 8+79.95, 11.96'L	ST OVER WM (WATER LOWERING)	ST	5816.91	WM	5814.50	1.89
(40)	RACCOON TAIL WAY	STA: 10+47.68, 11.98'R	WM OVER ST	WM	5827.95	ST	5823.02	4.93
(41)	BUNNY HOP LANE	STA: 21+78.91, 11.00'R	WM OVER SAN	WM	5827.95	SAN	5823.02	4.93
(42)	ELK PATH WAY	STA: 3+45.04, 10.01'R	WM OVER ST	WM	5830.76	ST	5829.26	1.50
(43)	DEERTRACK LANE	STA: 27+51.63, 10.00'L	WM OVER ST	WM	5818.26	ST	5816.63	1.63
(44)	DEERTRACK LANE	STA: 29+64.03, 10.00'L	ST OVER WM (WATER LOWERING)	ST	5814.92	WM	5813.82	1.50
(45)	DEERTRACK LANE	STA: 29+69.86, 0.14'R	ST OVER WM (WATER LOWERING)	ST	5816.05	WM	5814.55	1.50
(46)	DEERTRACK LANE	STA: 30+14.39, 10.31'L	ST OVER WM (WATER LOWERING)	ST	5816.99	WM	5813.49	1.50
(47)	WOLF FOX STREET	STA: 1+68.58, 2.02'R	WM OVER ST	WM	5820.46	ST	5816.96	1.50

**TOWN OF PARKER BUILDING DEPT FIRE LIFE SAFETY APPROVAL**

ALL FIRE HYDRANTS SHALL BE INSTALLED ACCORDING TO WATER UTILITY STANDARDS. THE NUMBER AND LOCATIONS OF THE FIRE HYDRANTS AS SHOWN ON THE OVERALL UTILITY PLAN ARE CORRECT AS SPECIFIED BY THE TOWN OF PARKER, COMMUNITY DEVELOPMENT DEPARTMENT.

BY: \_\_\_\_\_ DATE \_\_\_\_\_  
 (SIGNATURE OF FIRE CODE OFFICIAL OR DESIGNATED REPRESENTATIVE)

NOTE: UNDERGROUND FIRE LINE (UFL) SUBMITTAL DOCUMENTS MUST MEET THE REQUIREMENTS OF NFPA 24 WHEN SUBMITTING FOR REVIEW

**DISTRICT APPROVALS**

THESE DESIGNS, PLANS, AND CONTRACT DOCUMENTS ARE REVIEWED FOR CONCEPT AND GENERAL CONFORMANCE TO THE DISTRICT'S MINIMUM STANDARDS ONLY, AND THE PRIMARY RESPONSIBILITY FOR DESIGN ADEQUACY IS TO REMAIN WITH THE ENGINEER OF RECORD. THIS REVIEW DOES NOT IMPLY RESPONSIBILITY BY EITHER THE STONEGATE VILLAGE METROPOLITAN DISTRICT OR THE DISTRICT ENGINEER FOR COMPLETENESS, ACCURACY OR CORRECTNESS OF CALCULATIONS. THE REVIEW DOES NOT IMPLY THAT QUANTITIES OF ITEMS INDICATED ON THE PLANS ARE THE FINAL QUANTITIES REQUIRED. THE REVIEW SHALL NOT BE CONSTRUED FOR ANY REASON AS ACCEPTANCE OF FINANCIAL RESPONSIBILITY BY THE STONEGATE VILLAGE METROPOLITAN DISTRICT FOR ADDITIONAL ITEMS AND ADDITIONAL QUANTITIES OF ITEMS SHOWN THAT MAY BE REQUIRED DURING THE CONSTRUCTION PHASE.

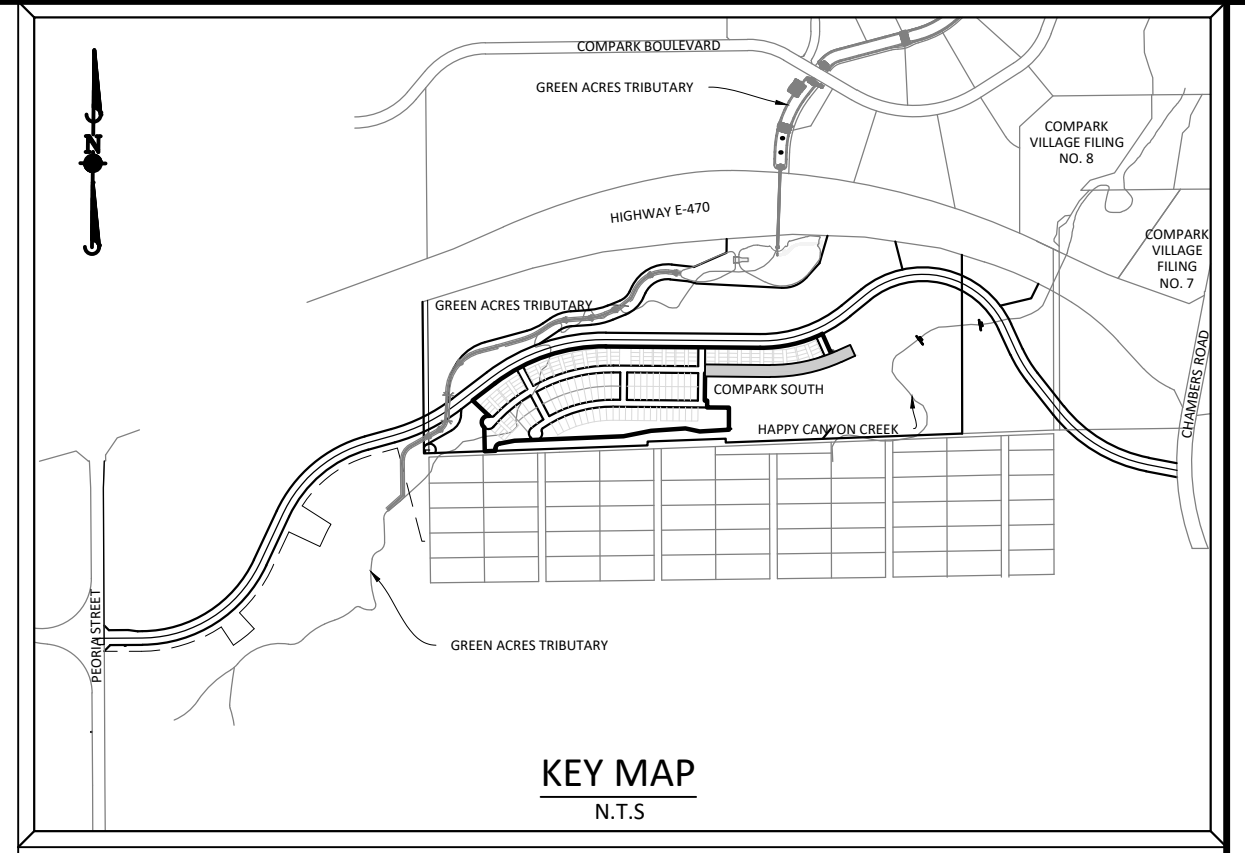
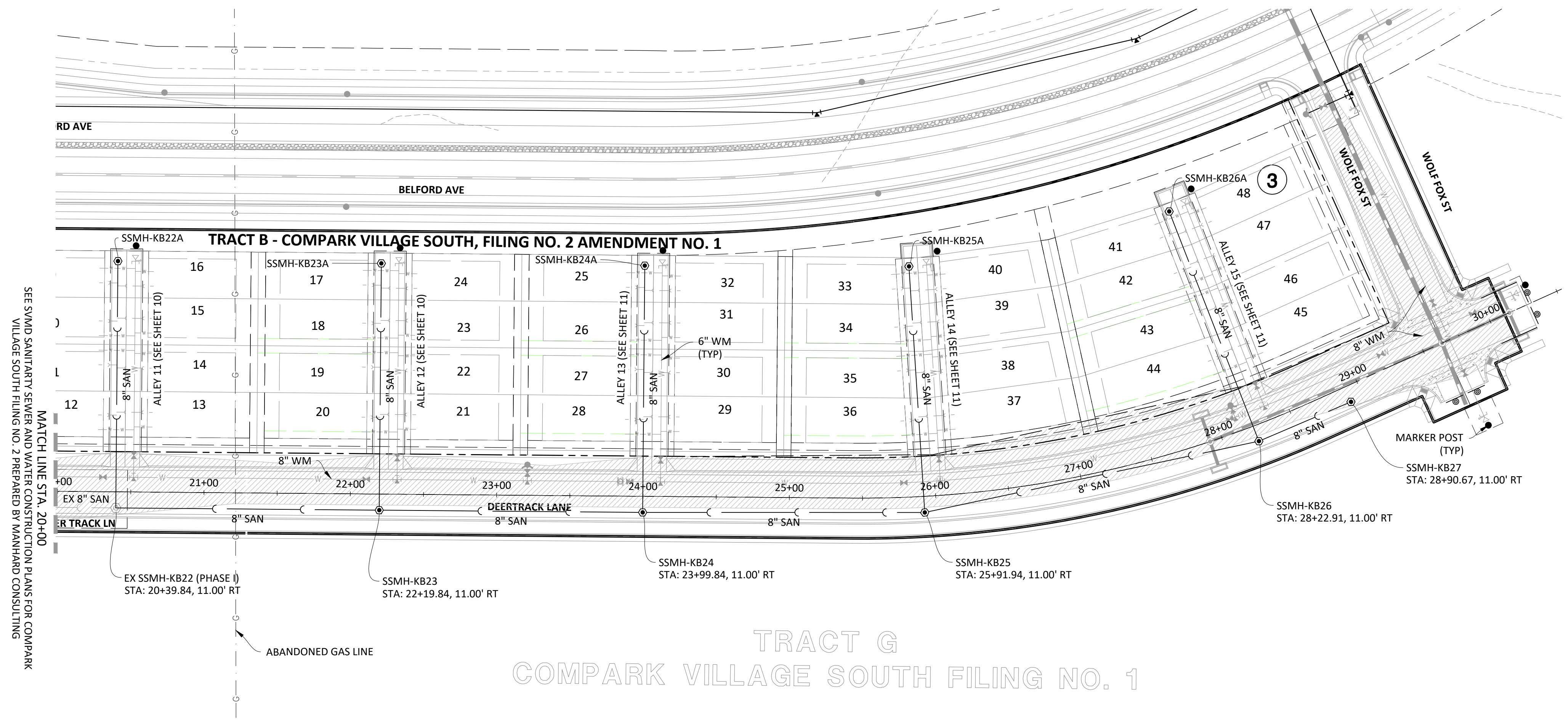
APPROVED FOR CONSTRUCTION WITHIN ONE YEAR OF THE EARLIEST OF THESE DATES:

BY: *Scott Barnett* DATE: 11/23/2020  
 STONEGATE VILLAGE METROPOLITAN DISTRICT ENGINEER  
 BY: *[Signature]* DATE: 11/23/2020  
 STONEGATE VILLAGE METROPOLITAN DISTRICT MANAGER

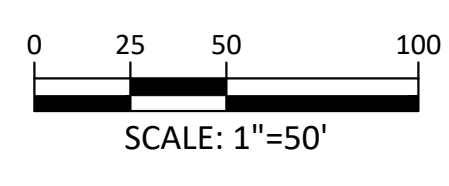
**NOTES:**  
 1) WATER MAIN SHALL BE CONSTRUCTED USING MANUFACTURER SPECIFICATION AND/OR A MAXIMUM OF 1" DEFLECTION AT THE JOINT, WHICHEVER IS MORE STRICT, AND HIGH DEFLECTION COUPLING WITH A MAXIMUM DEFLECTION OF 3".  
 1" DEFLECTION = 1,150' RADIUS  
 3" DEFLECTION = 385' RADIUS (ASSUMING 20' SECTION OF PIPE)  
 2) 6" TURBINE METER SHALL BE A MUELLER MVR1300 OR APPROVED EQUIVALENT. CHECK VALVE SHALL BE A 6" MUELLER A-2600-06BB OR APPROVED EQUIVALENT.



PROJ. NO.: EAM  
 DRAWN BY: ASD  
 DATE: 10/2016  
 SHEET 5 OF 14  
 CLCPK3

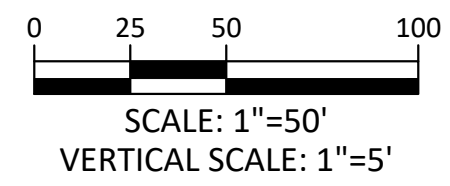
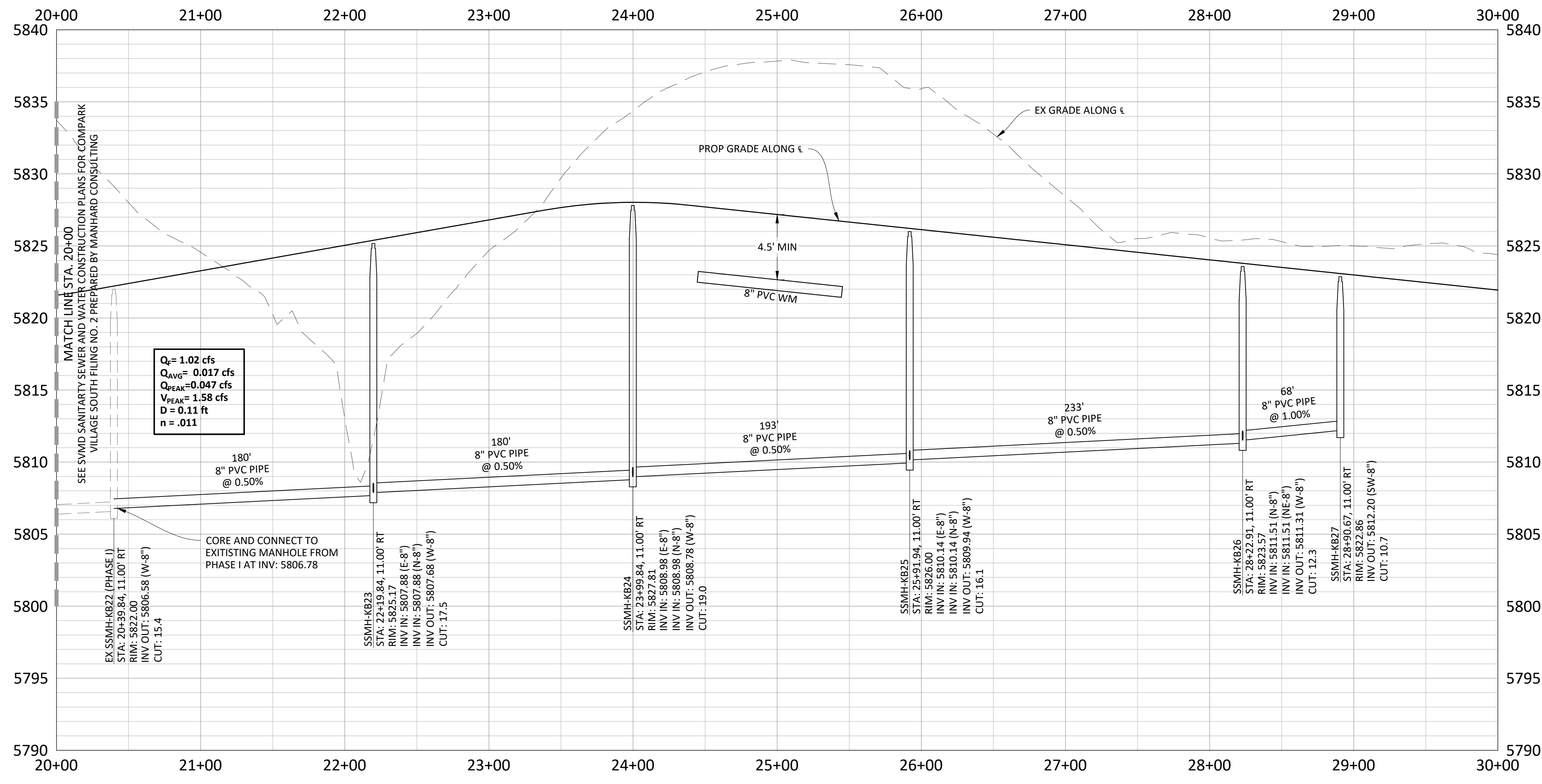


**SOURCE BENCHMARKS:**  
 DOUGLAS COUNTY BM 1.115010  
 A DOUGLAS COUNTY GIS MONUMENT SET IN CONCRETE LOCATED APPROXIMATELY 130 FEET  
 SOUTHWESTERLY OF THE CENTERLINE OF CHAMBERS ROAD AND 95 FEET NORTHWESTERLY OF  
 THE CENTERLINE OF COMPARK BOULEVARD. ELEVATION = 5752.84 (NAVD 88)



TRACT G  
 COMPARK VILLAGE SOUTH FILING NO. 1

**DEERTRACK LANE**



- NOTES:**
1. SET ALL MANHOLE RIMS NOT IN PAVED AREAS 6" ABOVE FINISHED GRADE AND PROVIDE CARSONITE MARKER POST AT 5' OFFSET W/ CONCRETE COLLAR.
  2. ALL WATER LINES WITHIN THE COMPARK SOUTH DEVELOPMENT WILL BE REQUIRED TO BE C9000 DR14 PIPE MATERIAL WITH A MINIMUM 4.5' OF COVER.
  3. WATER MAIN SHALL BE CONSTRUCTED USING MANUFACTURER SPECIFICATION, EBAA IRON SERIES 3800 MEGACOUPLING HIGH DEFLECTION COUPLINGS SHALL BE UTILIZED FOR ALL DEFLECTIONS AT JOINTS.
  4. ALL PLUGS AT END OF WATER LINES SHALL HAVE A 2" BLOWOFF IN MANHOLE. REFER TO SHEET 13 FOR DETAIL.

SEE SVID SANITARY SEWER AND WATER CONSTRUCTION PLANS FOR COMPARK VILLAGE SOUTH FILING NO. 2 PREPARED BY MANHARD CONSULTING

MATCH LINE STA. 20+00

MATCH LINE STA. 20+00  
 SEE SVID SANITARY SEWER AND WATER CONSTRUCTION PLANS FOR COMPARK VILLAGE SOUTH FILING NO. 2 PREPARED BY MANHARD CONSULTING

Plotted: 11/20/2020 9:42 AM. Dwg Name: c:\c\p\k3\yomso\h05-residential.ctb\c\p\k3\yomso\h05-residential.ctb\District\PHASE 2\USB-P&P-1-Street-G.dwg. Updated By: Jhawthorne

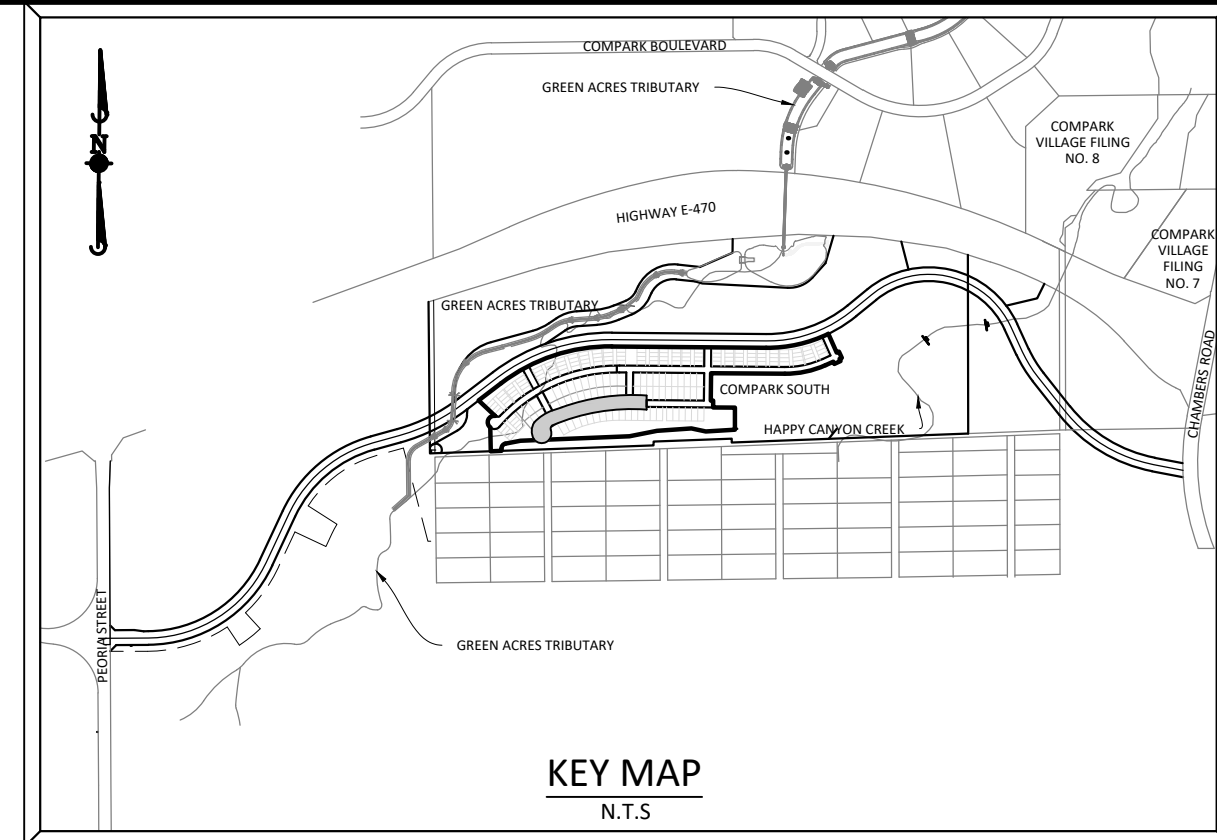
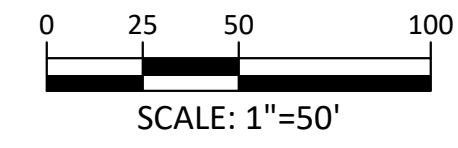
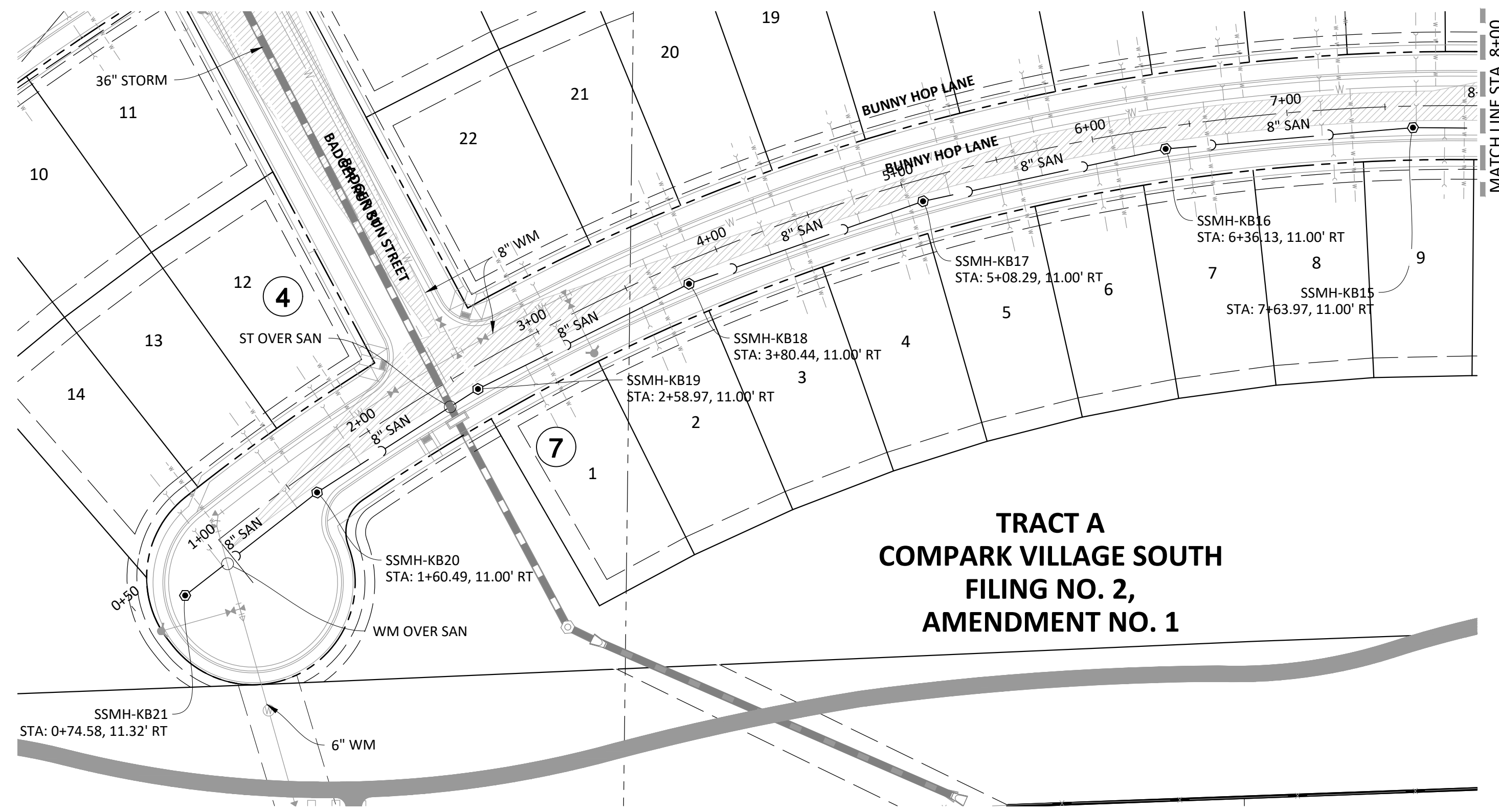
**Manhard CONSULTING**  
 7600 East Orchard Road, Suite 100-1003, Greenwood Village, CO 80111, phone: 303.778.0500 manhard.com  
 Civil Engineering | Surveying & Geospatial Services | GIS | Construction Management | Water Resource Management

DATE	REVISIONS
11/20/20	REVISED PER SVID COMMENTS
07/20/17	FINAL SUBMITTAL
06/20/17	REVISED ALLEY EASEMENTS
08/20/16	REVISED PER SVID COMMENTS

COMPARK VILLAGE SOUTH FILING NO. 2 - AMENDMENT NO. 1  
 TOWN OF PARKER, COLORADO  
 SANITARY SEWER PLAN AND PROFILE - DEERTRACK LANE

PROJ. MGR.: RJM  
 PROJ. ASSOC.: RAK  
 DRAWN BY: ASD  
 DATE: 10/20/16

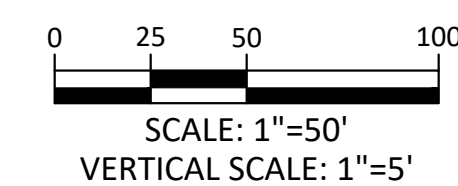
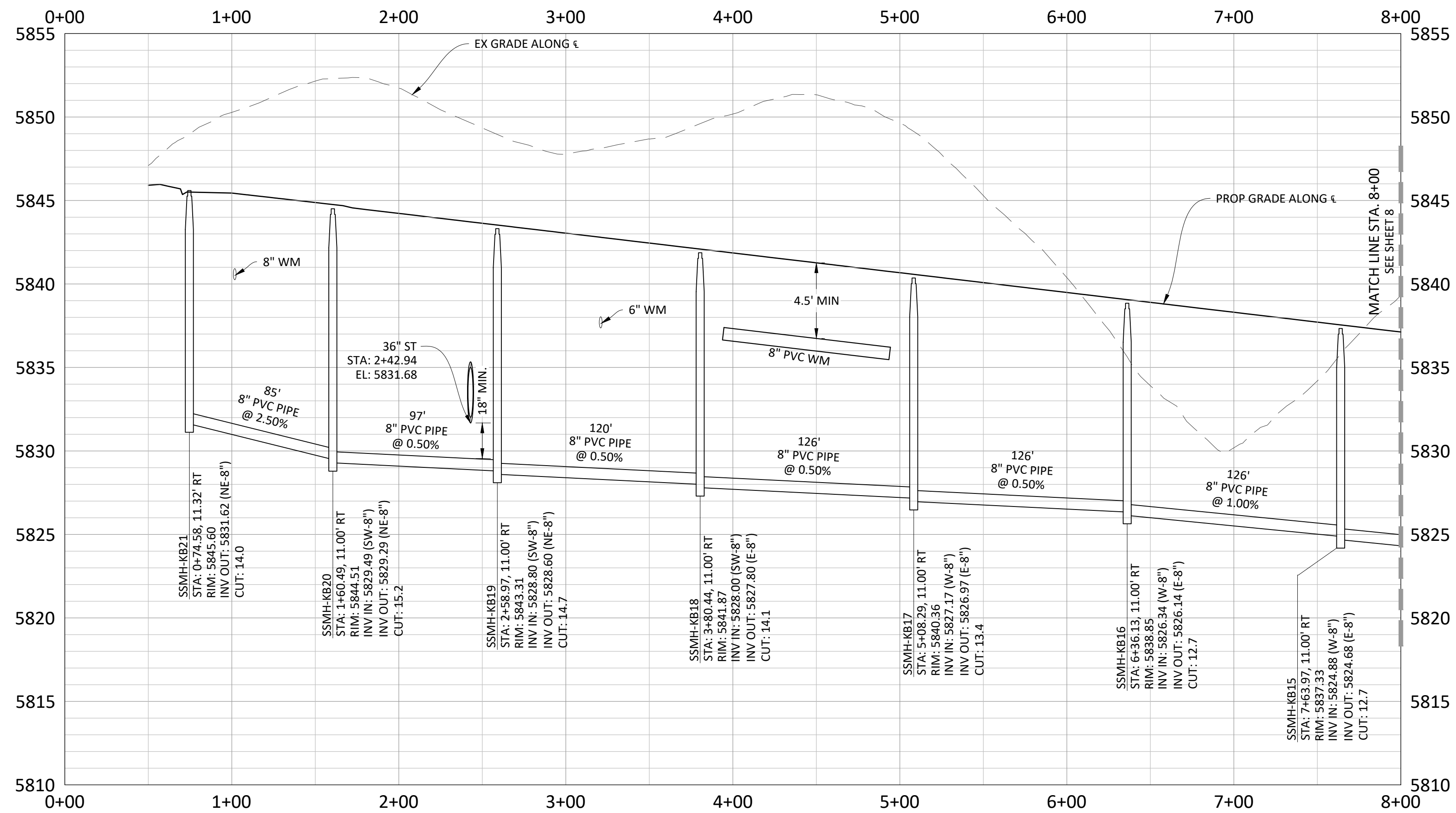
SHEET  
**6 OF 14**  
 CLCPK3



**SOURCE BENCHMARKS:**  
 DOUGLAS COUNTY BM 1.115010  
 A DOUGLAS COUNTY GIS MONUMENT SET IN CONCRETE LOCATED APPROXIMATELY 130 FEET  
 SOUTHWESTERLY OF THE CENTERLINE OF CHAMBERS ROAD AND 95 FEET NORTHWESTERLY OF  
 THE CENTERLINE OF COMPARK BOULEVARD. ELEVATION = 5752.84 (NAVD 88)

**TRACT A  
 COMPARK VILLAGE SOUTH  
 FILING NO. 2,  
 AMENDMENT NO. 1**

**BUNNY HOP LANE**



- NOTES:**
1. SET ALL MANHOLE RIMS NOT IN PAVED AREAS 6" ABOVE FINISHED GRADE AND PROVIDE CARSONITE MARKER POST AT 5' OFFSET W/ CONCRETE COLLAR.
  2. ALL WATER LINES WITHIN THE COMPARK SOUTH DEVELOPMENT WILL BE REQUIRED TO BE C9000 DR14 PIPE MATERIAL WITH A MINIMUM 4.5' OF COVER.
  3. WATER MAIN SHALL BE CONSTRUCTED USING MANUFACTURER SPECIFICATION, EBAA IRON SERIES 3800 MEGACOUPLING HIGH DEFLECTION COUPLINGS SHALL BE UTILIZED FOR ALL DEFLECTIONS AT JOINTS.
  4. ALL PLUGS AT END OF WATER LINES SHALL HAVE A 2" BLOWOFF IN MANHOLE. REFER TO SHEET 13 FOR DETAIL.

Plotted: 11/20/2020 9:44 AM. Dwg Name: C:\cplkpc3\compsouth05\_residential.cad\cplkpc3\District\PHASE 2\05B-P&P-2-Street-11.dwg. Updated By: JHawthorne

DATE	REVISIONS

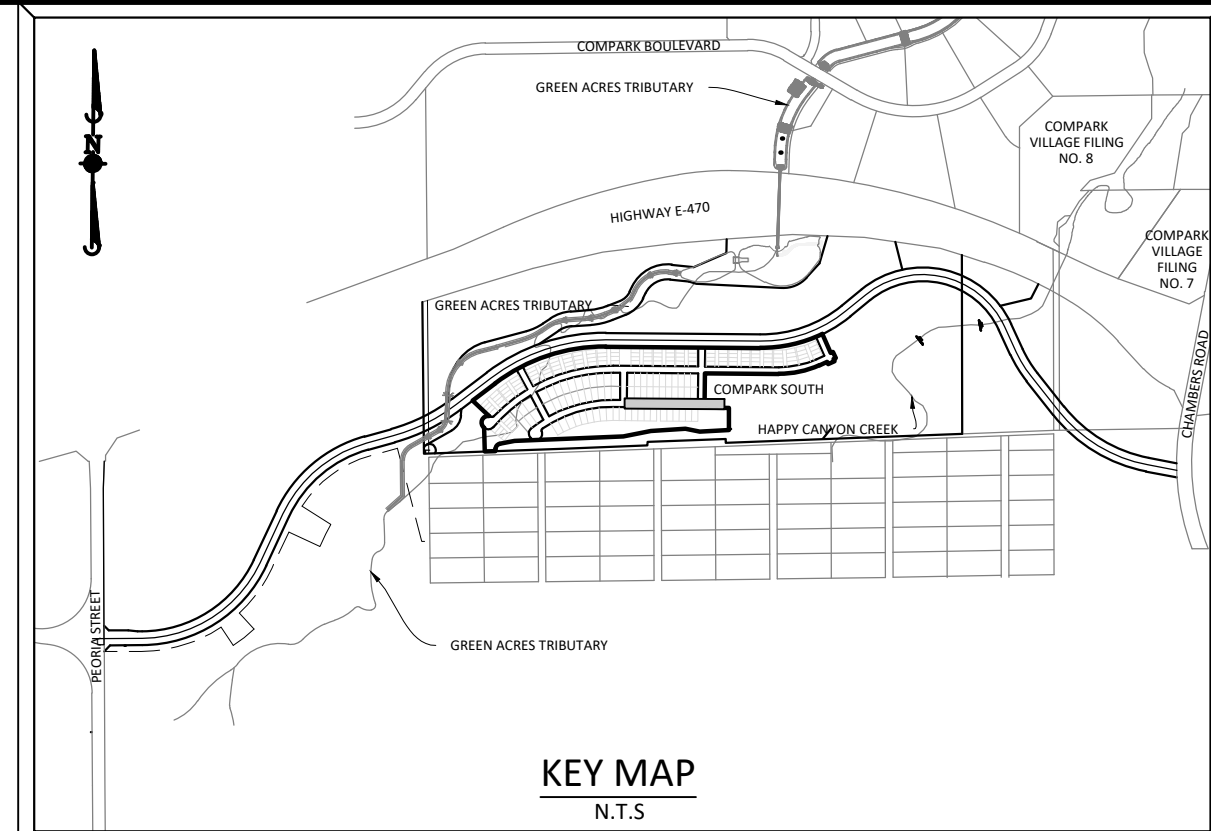
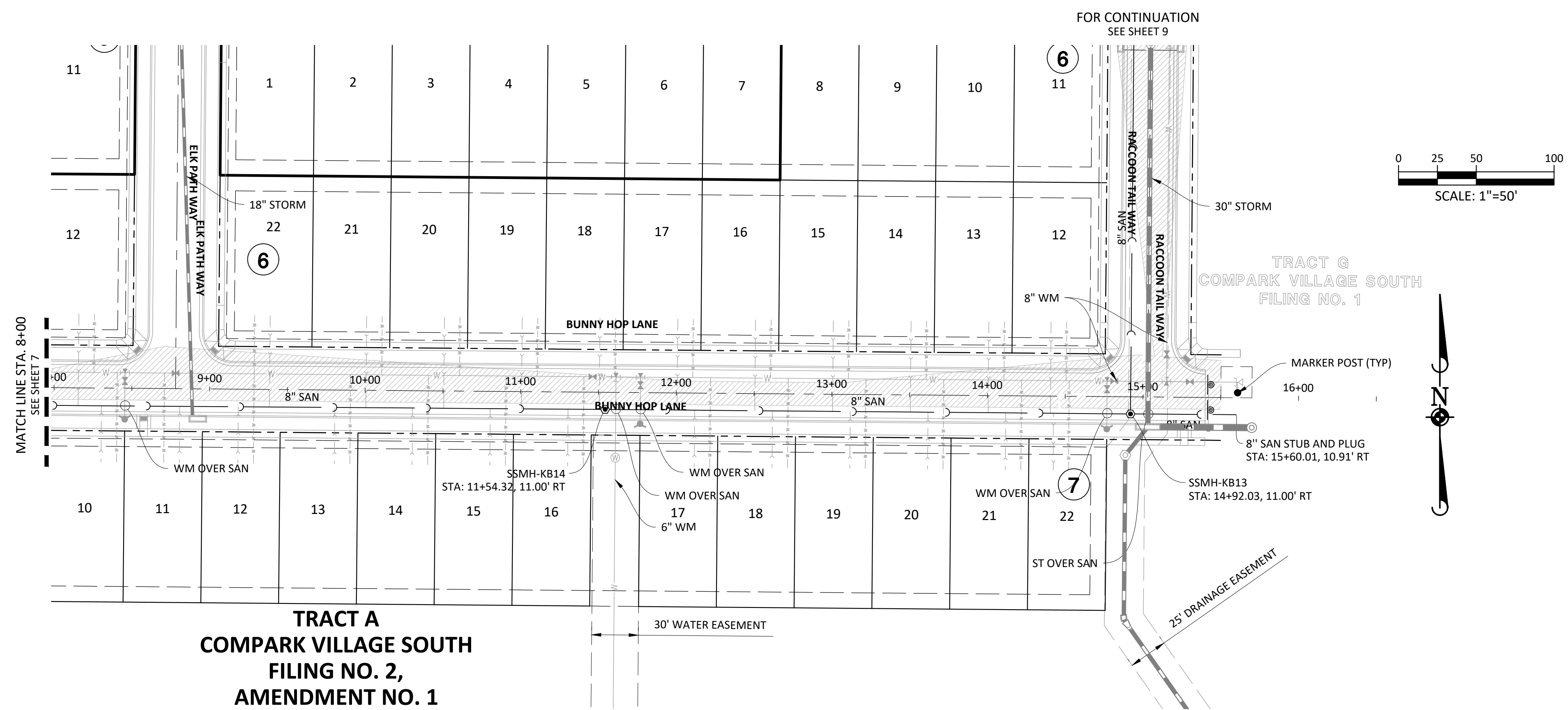
NO.	DATE	REVISIONS
1	11/20/20	REVISED PER SAND COMMENTS
2	07/20/17	FINAL SUBMITTAL
3	06/20/17	REVISED ALLEY EASEMENTS
4	08/20/16	REVISED PER SAND COMMENTS

**Manhard CONSULTING**  
 7600 East Orchard Road, Suite 100, Greenwood Village, CO 80111, phone: 303.750.0500  
 Civil Engineering | Surveying & Geospatial Services | GIS | Construction Management | Water Resource Management

**COMPARK VILLAGE SOUTH FILING NO. 2 - AMENDMENT NO. 1**  
 TOWN OF PARKER, COLORADO  
**SANITARY SEWER PLAN AND PROFILE - BUNNY HOP LANE**

SHEET  
**7 OF 14**  
 CLCPK3

Plotted: 11/20/2020 11:41 AM Dwg Name: P:\C06k3\comsouth05-residential\cds\dwg\Eng\Final Drawings\Plan Set\District\PHASE 2\05B-P&P-2-Street II.dwg Updated By: jhawthorne

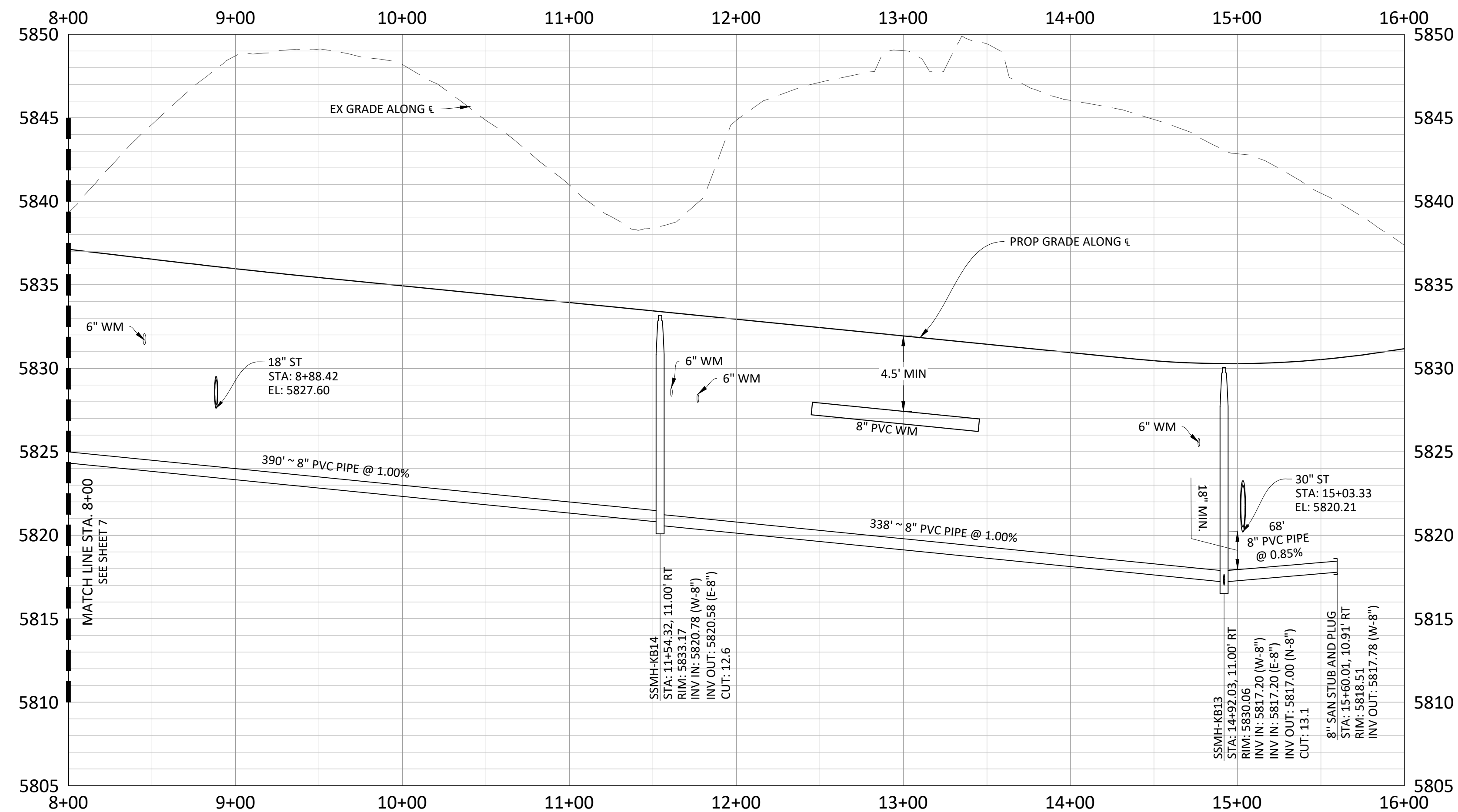


**SOURCE BENCHMARKS:**  
 DOUGLAS COUNTY BM 1.115010  
 A DOUGLAS COUNTY GIS MONUMENT SET IN CONCRETE LOCATED APPROXIMATELY 130 FEET  
 SOUTHWESTERLY OF THE CENTERLINE OF CHAMBERS ROAD AND 95 FEET NORTHWESTERLY OF  
 THE CENTERLINE OF COMPARK BOULEVARD. ELEVATION = 5752.84 (NAVD 88)

DATE	REVISIONS
11/20/2020	REVISED PER SVD COMMENTS
07/2017	FINAL SUBMITTAL
06/2017	REVISED ALLEY EASEMENTS
09/2016	REVISED PER SVD COMMENTS

**Manhard CONSULTING**  
 7600 East Orchard Road, Suite 100-2, Greenwood Village, CO 80111, phone: 303.780.0500 manhard.com  
 Civil Engineering | Surveying & Geospatial Services | GIS | Construction Management | Water Resource Management

### BUNNY HOP LANE



- NOTES:**
- SET ALL MANHOLE RIMS NOT IN PAVED AREAS 6" ABOVE FINISHED GRADE AND PROVIDE CARSONITE MARKER POST AT 5' OFFSET W/ CONCRETE COLLAR.
  - ALL WATER LINES WITHIN THE COMPARK SOUTH DEVELOPMENT WILL BE REQUIRED TO BE C9000 DR14 PIPE MATERIAL WITH A MINIMUM 4.5' OF COVER.
  - WATER MAIN SHALL BE CONSTRUCTED USING MANUFACTURER SPECIFICATION. EBAA IRON SERIES 3800 MEGACOUPLING HIGH DEFLECTION COUPLINGS SHALL BE UTILIZED FOR ALL DEFLECTIONS AT JOINTS.
  - ALL PLUGS AT END OF WATER LINES SHALL HAVE A 2" BLOWOFF IN MANHOLE. REFER TO SHEET 13 FOR DETAIL.

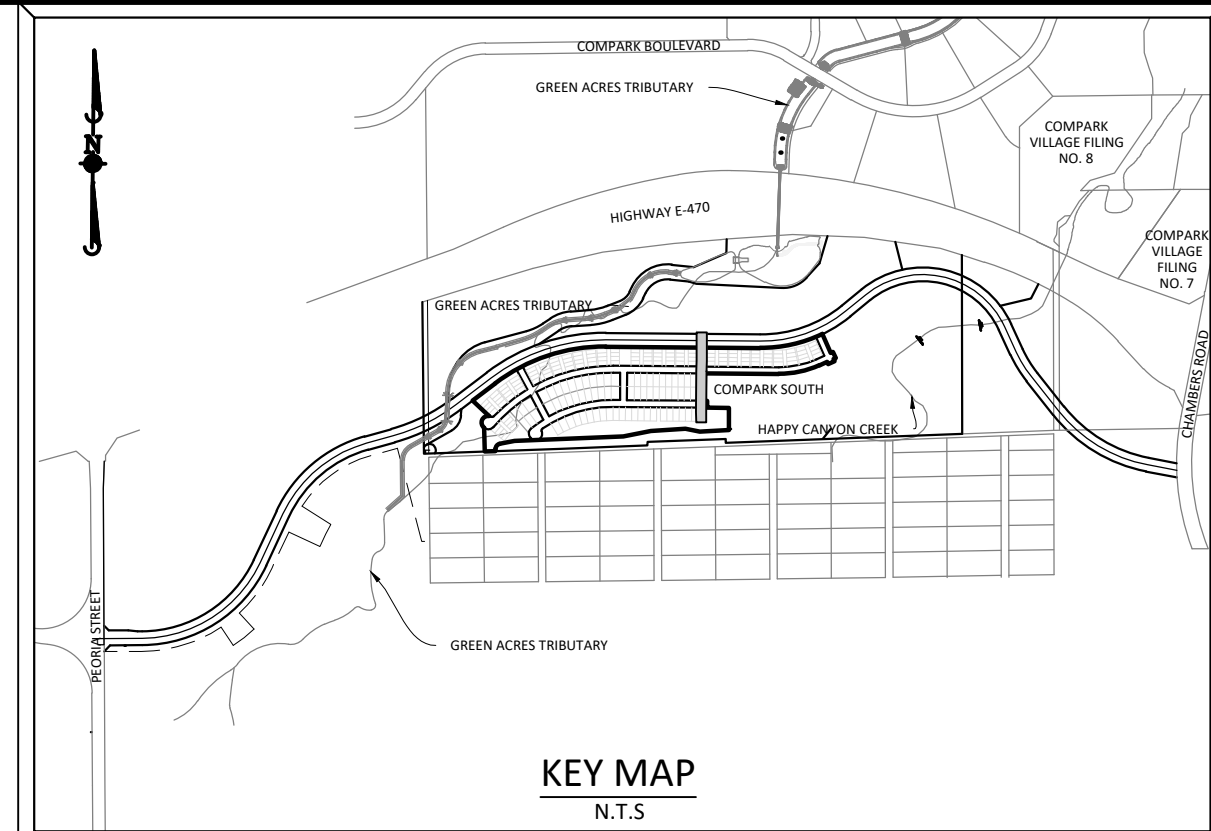
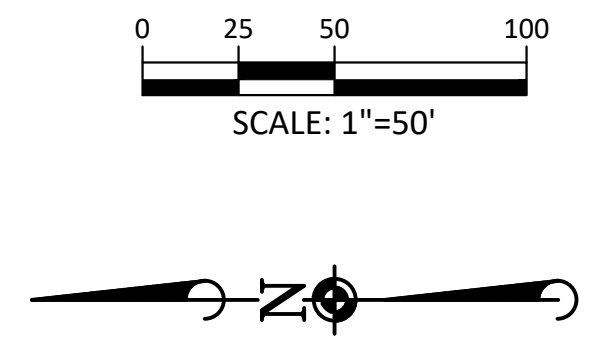
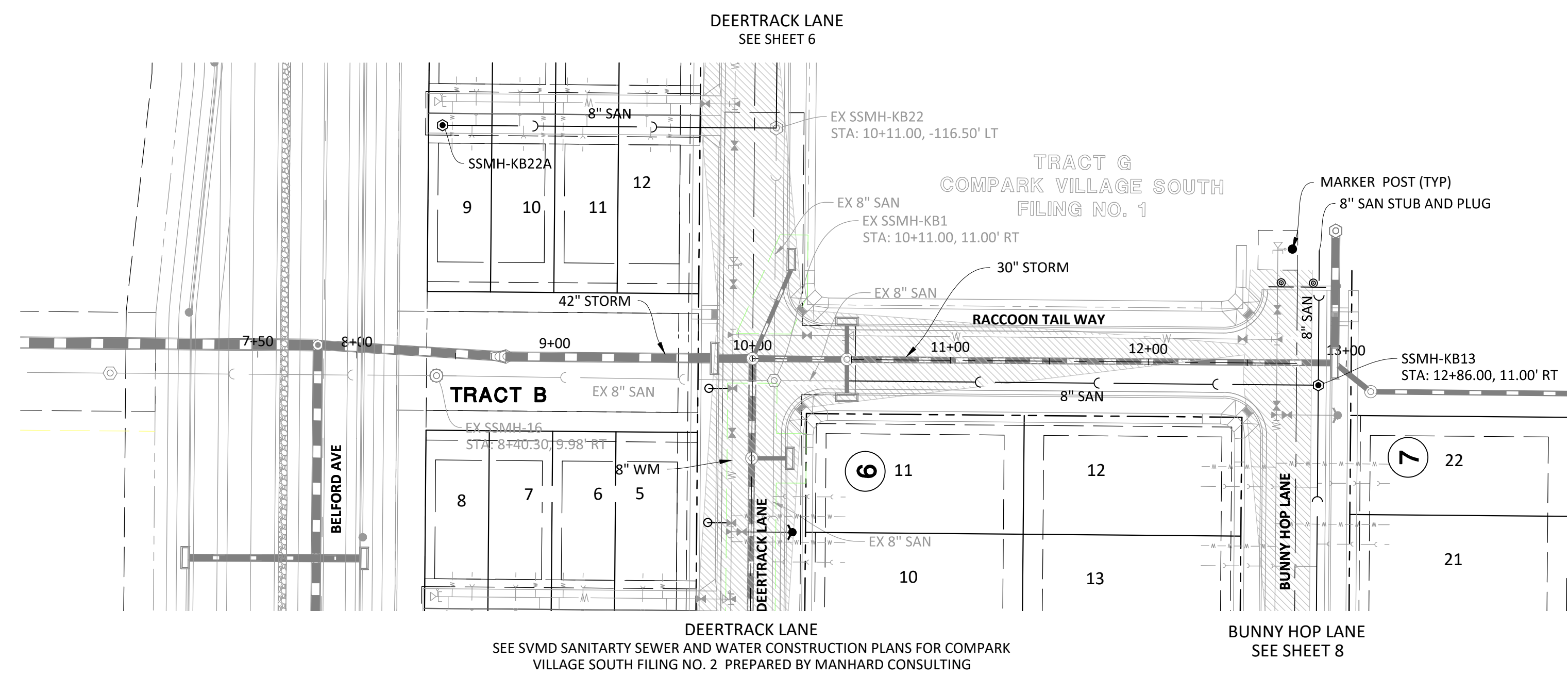
**COMPARK VILLAGE SOUTH FILING NO. 2 - AMENDMENT NO. 1**  
**TOWN OF PARKER, COLORADO**  
**SANITARY SEWER PLAN AND PROFILE - BUNNY HOP LANE**

PROJECT NO: 37642  
 DATE: 11-20-2020  
 PROFESSIONAL ENGINEER

PROJ. MGR.: RJM  
 PROJ. ASSOC.: RAK  
 DRAWN BY: ASD  
 DATE: 10/20/16

**SHEET**  
**8 OF 14**  
 CLCPK3

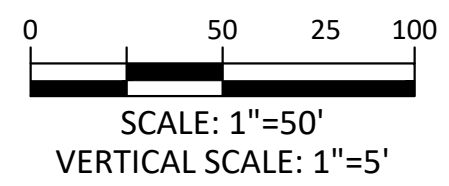
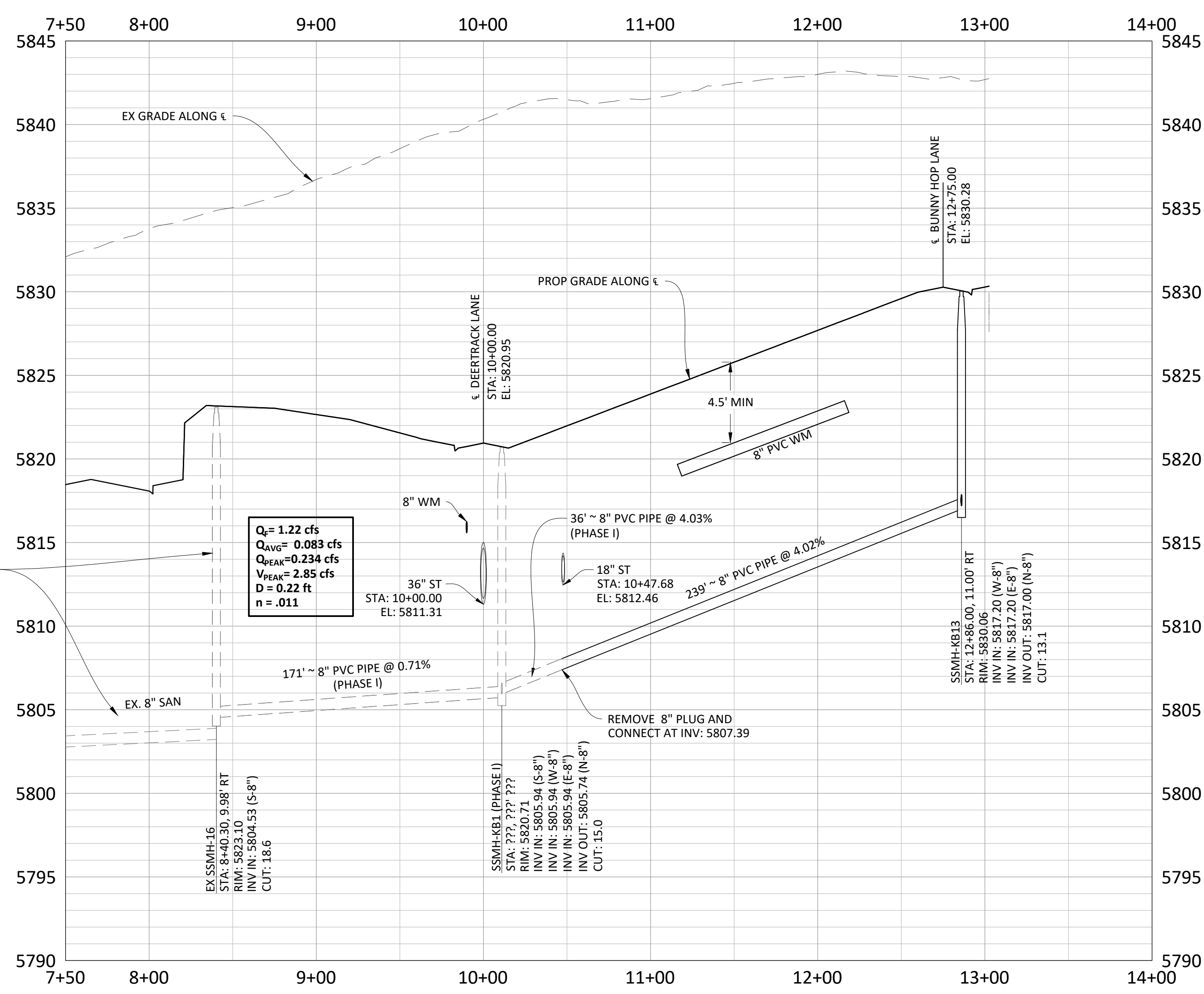
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**SOURCE BENCHMARKS:**  
 DOUGLAS COUNTY BM 1.115010  
 A DOUGLAS COUNTY GIS MONUMENT SET IN CONCRETE LOCATED APPROXIMATELY 130 FEET SOUTHWESTERLY OF THE CENTERLINE OF CHAMBERS ROAD AND 95 FEET NORTHWESTERLY OF THE CENTERLINE OF COMPARK BOULEVARD. ELEVATION = 5752.84 (NAVD 88)

DATE	REVISIONS
11/20/20	REVISED PER SVMD COMMENTS
07/2017	FINAL SUBMITTAL
06/2017	REVISED ALLEY EASEMENTS
09/2016	REVISED PER SVMD COMMENTS

### RACCOON TAIL WAY



- NOTES:**
- SET ALL MANHOLE RIMS NOT IN PAVED AREAS 6" ABOVE FINISHED GRADE AND PROVIDE CARSONITE MARKER POST AT 5' OFFSET W/ CONCRETE COLLAR.
  - ALL WATER LINES WITHIN THE COMPARK SOUTH DEVELOPMENT WILL BE REQUIRED TO BE C9000 DR14 PIPE MATERIAL WITH A MINIMUM 4.5' OF COVER.
  - WATER MAIN SHALL BE CONSTRUCTED USING MANUFACTURER SPECIFICATION. EBAA IRON SERIES 3800 MEGACOUPLING HIGH DEFLECTION COUPLINGS SHALL BE UTILIZED FOR ALL DEFLECTIONS AT JOINTS.
  - ALL PLUGS AT END OF WATER LINES SHALL HAVE A 2" BLOWOFF IN MANHOLE. REFER TO SHEET 13 FOR DETAIL.

REFER TO COMPARK VILLAGE SOUTH FILING NO. 1 SVMD SANITARY SEWER AND WATER CONSTRUCTION PLANS PREPARED BY MANHARD CONSULTING

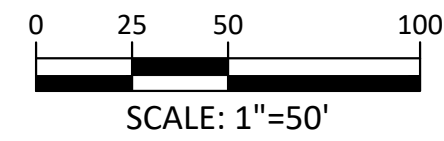
**Manhard CONSULTING**  
 7600 East Orchard Road, Suite 100-1, Greenwood Village, CO 80111, phone: 303.750.0500 manhard.com  
 Civil Engineering | Surveying & Geospatial Services | GIS | Construction Management | Water Resource Management

**COMPARK VILLAGE SOUTH FILING NO. 2 - AMENDMENT NO. 1**  
**TOWN OF PARKER, COLORADO**  
**SANITARY SEWER PLAN AND PROFILE - RACCOON TAIL WAY**

PROJ. MGR.: RJM  
 PROJ. ASSOC.: RAK  
 DRAWN BY: ASD  
 DATE: 10/2016

**37642**  
 11-20-2020  
 PROFESSIONAL ENGINEER

SHEET  
**9 OF 14**  
 CLCPK3



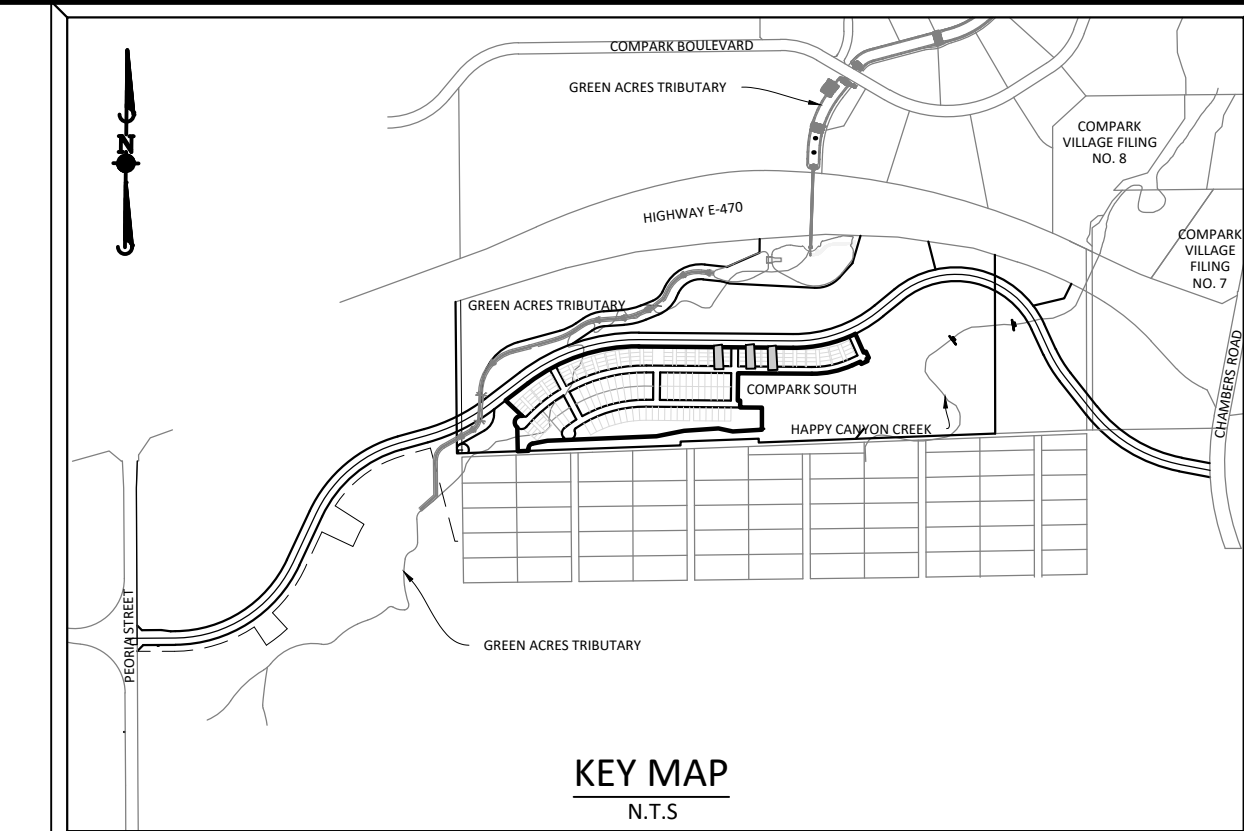
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SCALE: 1"=50'

NOTES:

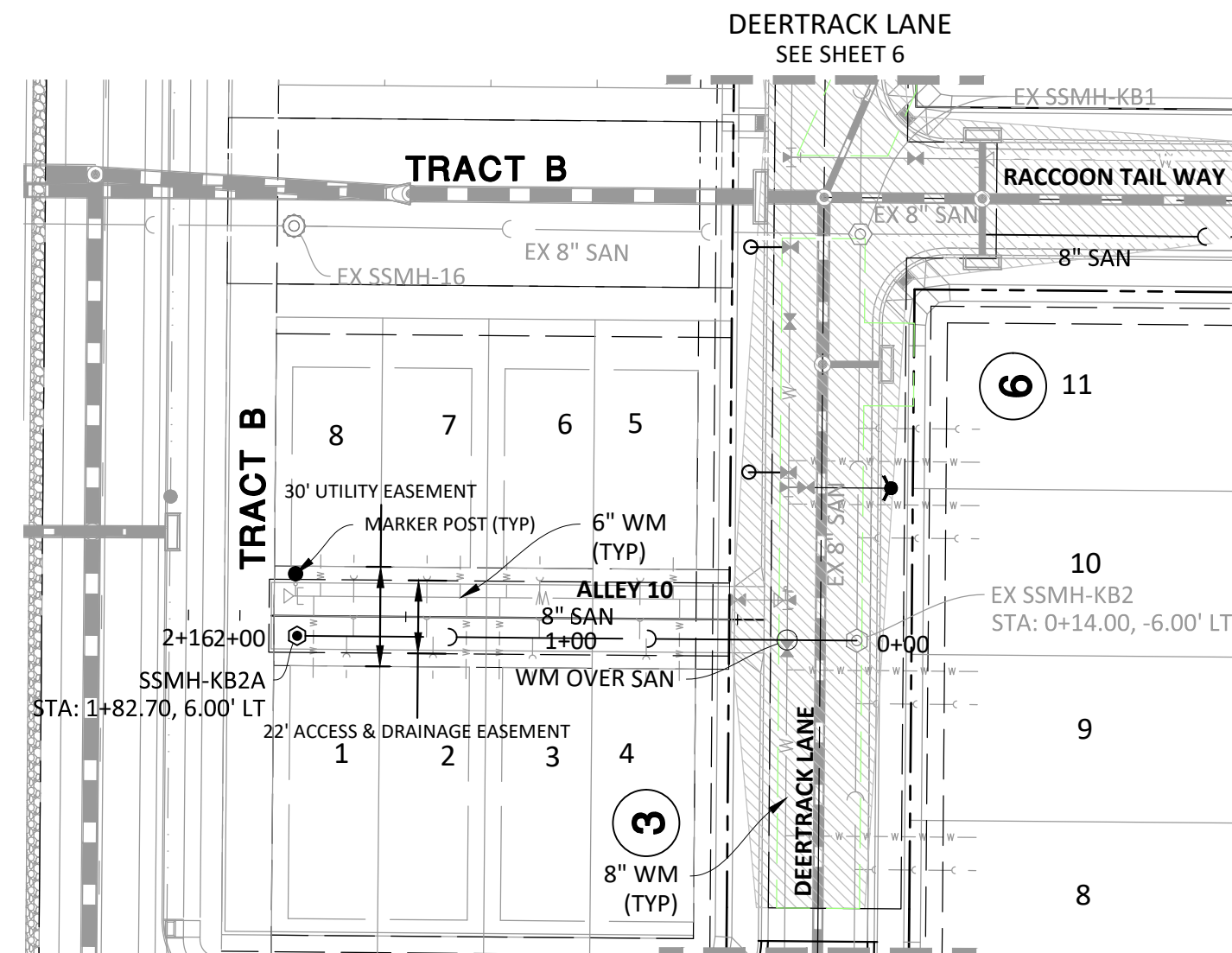
1. SET ALL MANHOLE RIMS NOT IN PAVED AREAS 6" ABOVE FINISHED GRADE AND PROVIDE CARSONITE MARKER POST AT 5' OFFSET W/ CONCRETE COLLAR.
2. ALL WATER LINES WITHIN THE COMPARK SOUTH DEVELOPMENT WILL BE REQUIRED TO BE C9000 DR14 PIPE MATERIAL WITH A MINIMUM 4.5' OF COVER.
3. WATER MAIN SHALL BE CONSTRUCTED USING MANUFACTURER SPECIFICATION: EBAA IRON SERIES 3800 MEGACOUPLING HIGH DEFLECTION COUPLINGS SHALL BE UTILIZED FOR ALL DEFLECTIONS AT JOINTS.
4. ALL PLUGS AT END OF WATER LINES SHALL HAVE A 2" BLOWOFF IN MANHOLE. REFER TO SHEET 13 FOR DETAIL.



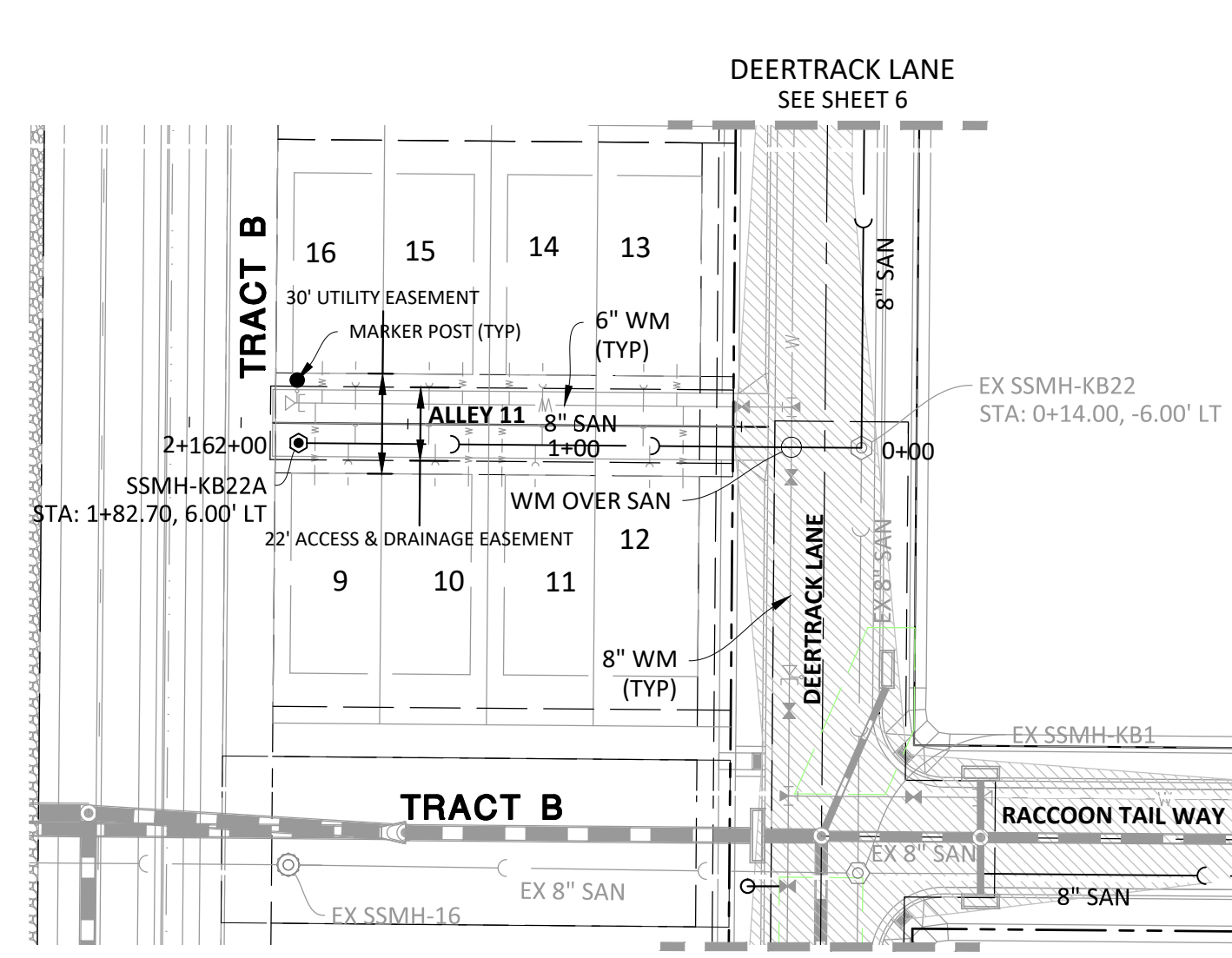
SOURCE BENCHMARKS:

DOUGLAS COUNTY BM 1.115010  
A DOUGLAS COUNTY GIS MONUMENT SET IN CONCRETE LOCATED APPROXIMATELY 130 FEET SOUTHWESTERLY OF THE CENTERLINE OF CHAMBERS ROAD AND 95 FEET NORTHWESTERLY OF THE CENTERLINE OF COMPARK BOULEVARD. ELEVATION = 5752.84 (NAVD 88)

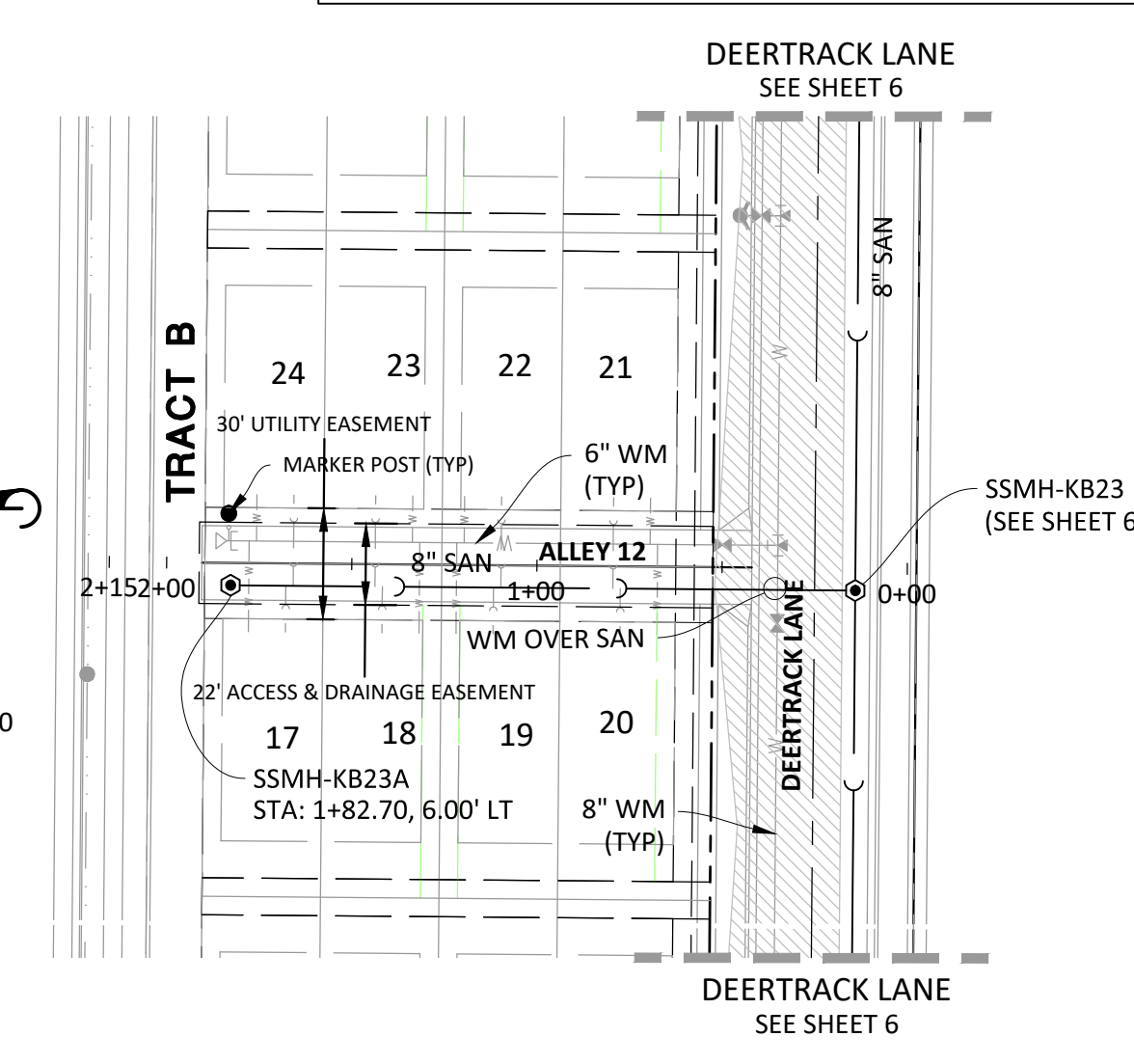
DATE	REVISIONS
11/20/20	REVISED PER SWM COMMENTS
07/20/17	FINAL SUBMITTAL
06/20/17	REVISED ALLEY EASEMENTS
08/20/16	REVISED PER SWM COMMENTS



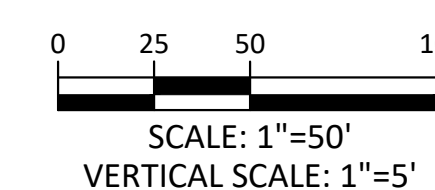
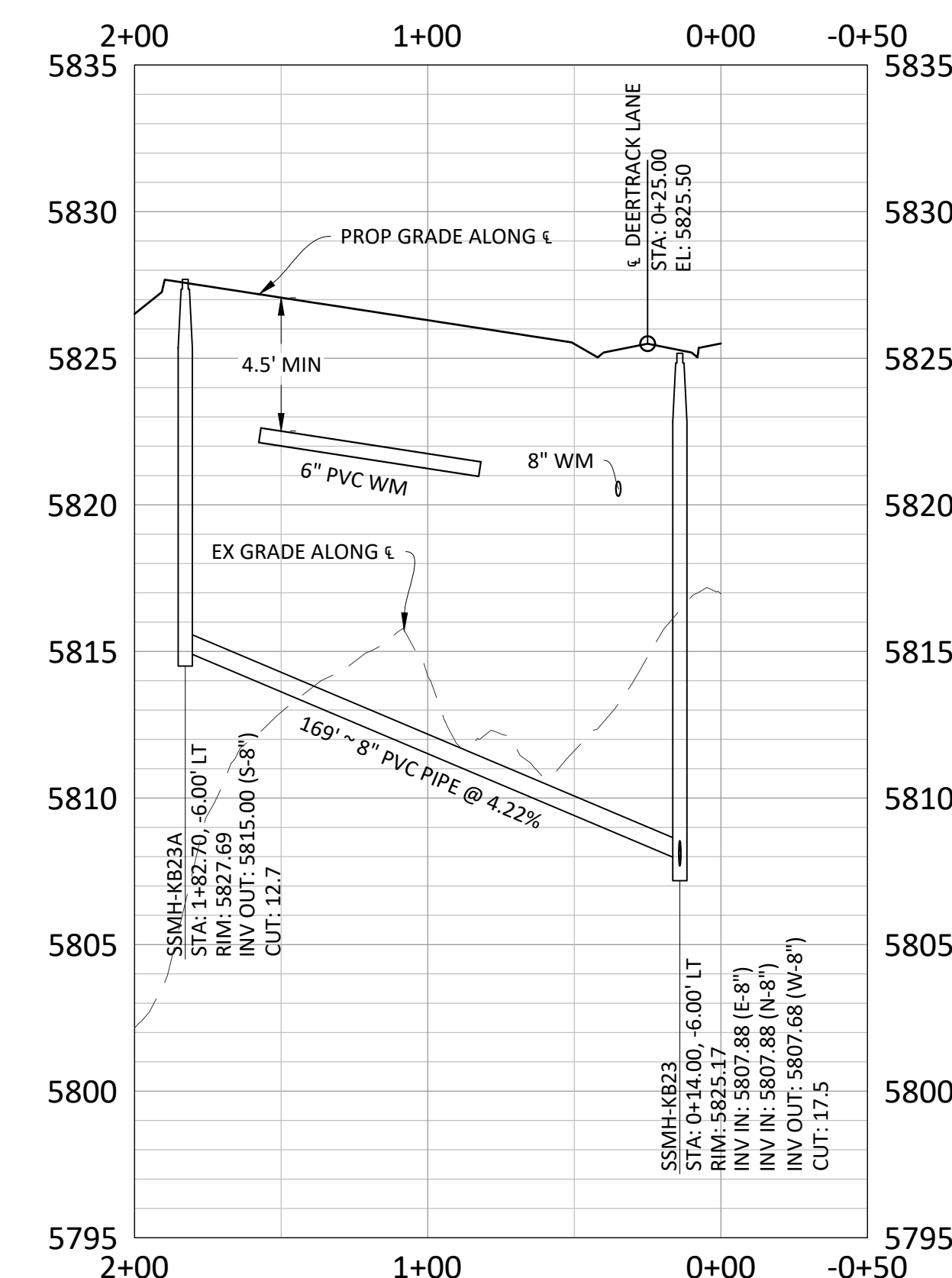
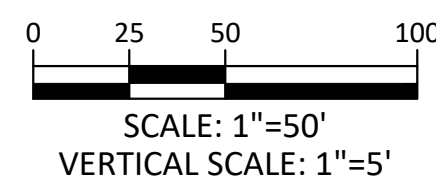
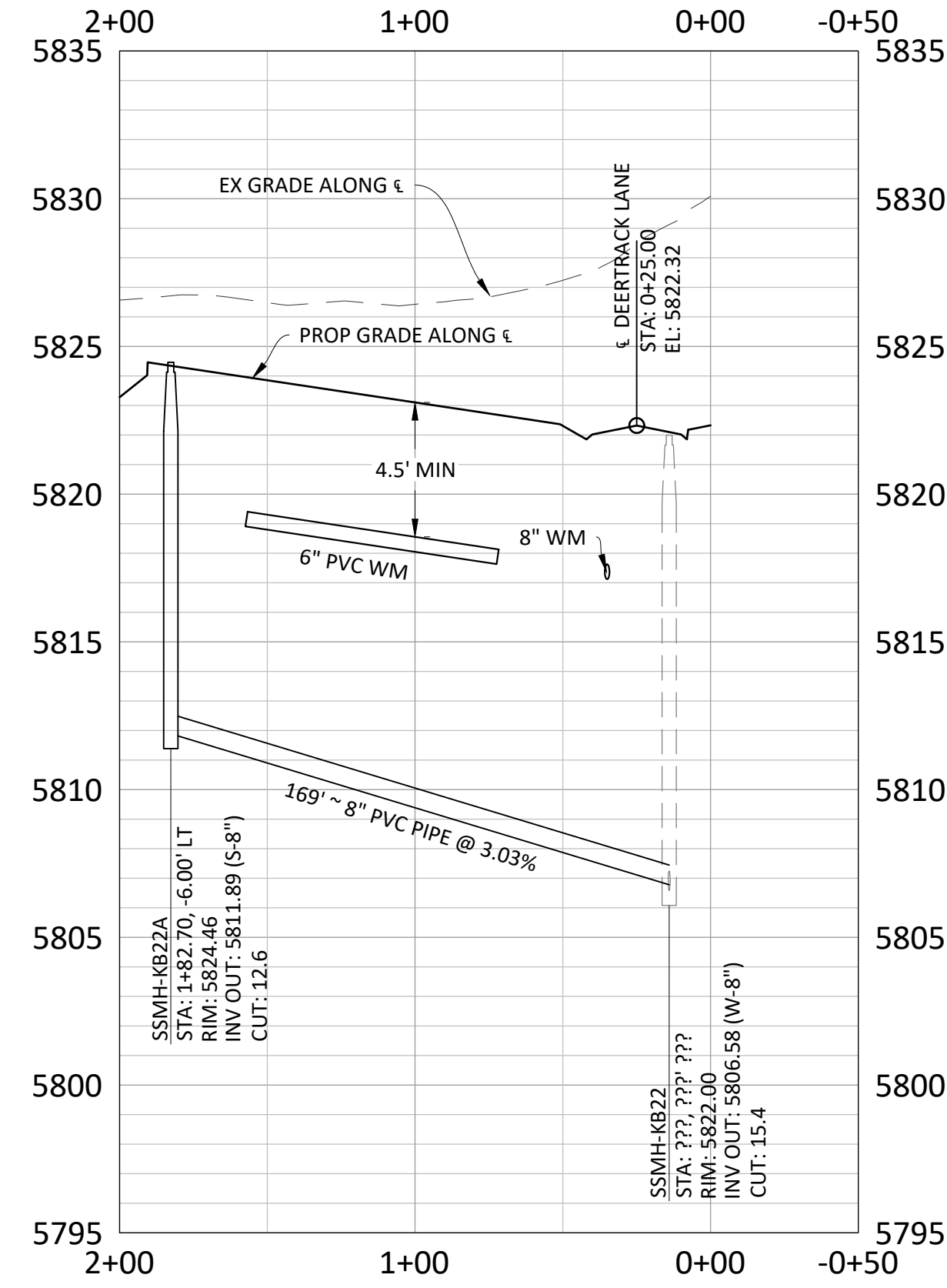
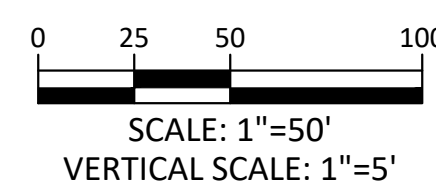
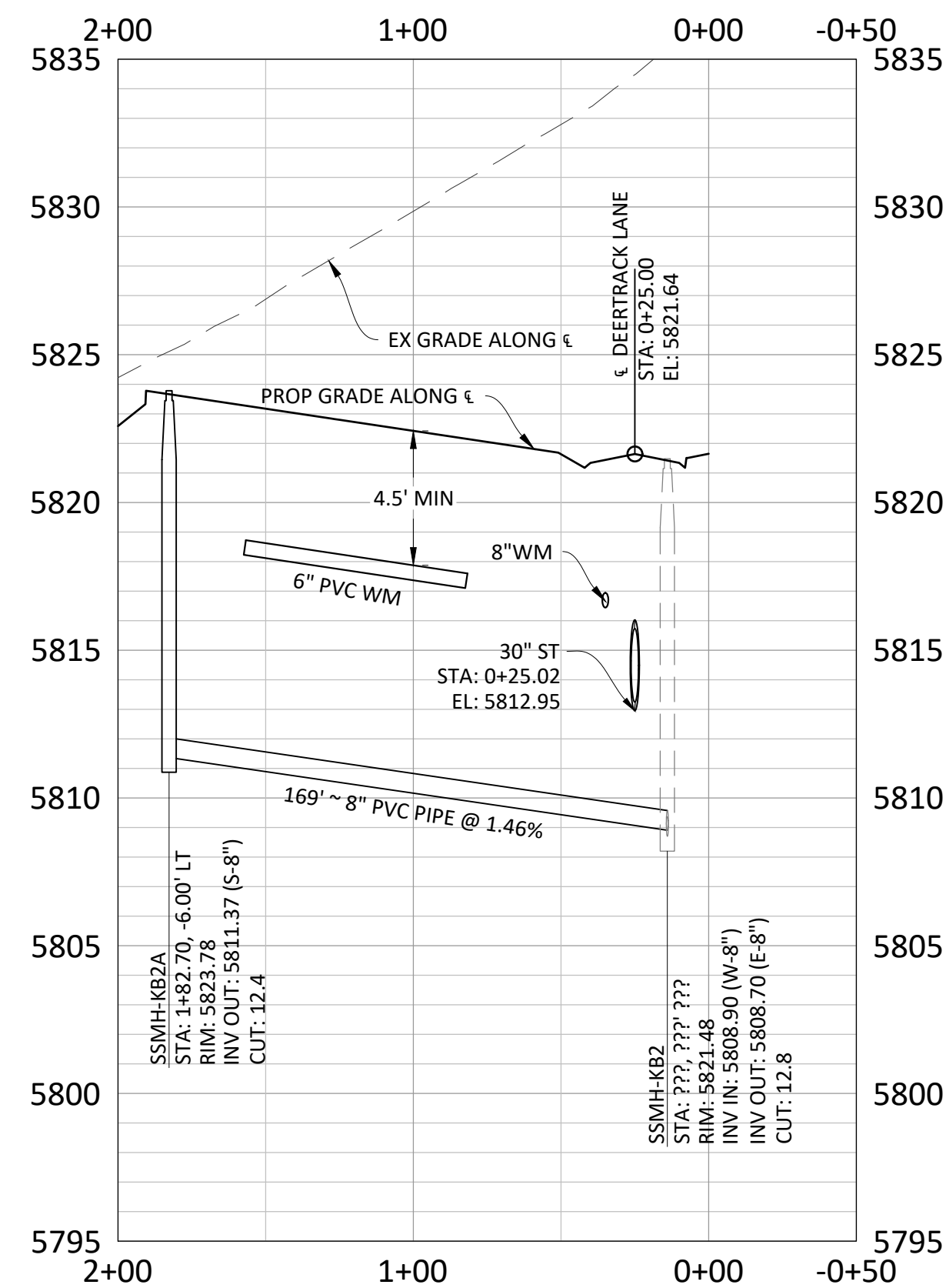
ALLEY 10



ALLEY 11



ALLEY 12



Plotted: 11/20/2020 9:50 AM. Dwg Name: C:\pdk3\homsouth05-residential.ctb\Drawings\Plan Set\District\PHASE 2\05B-P&P-7-Alley 10-12.dwg. Updated By: JHawthorne



COMPARK VILLAGE SOUTH FILING NO. 2 - AMENDMENT NO. 1

TOWN OF PARKER, COLORADO

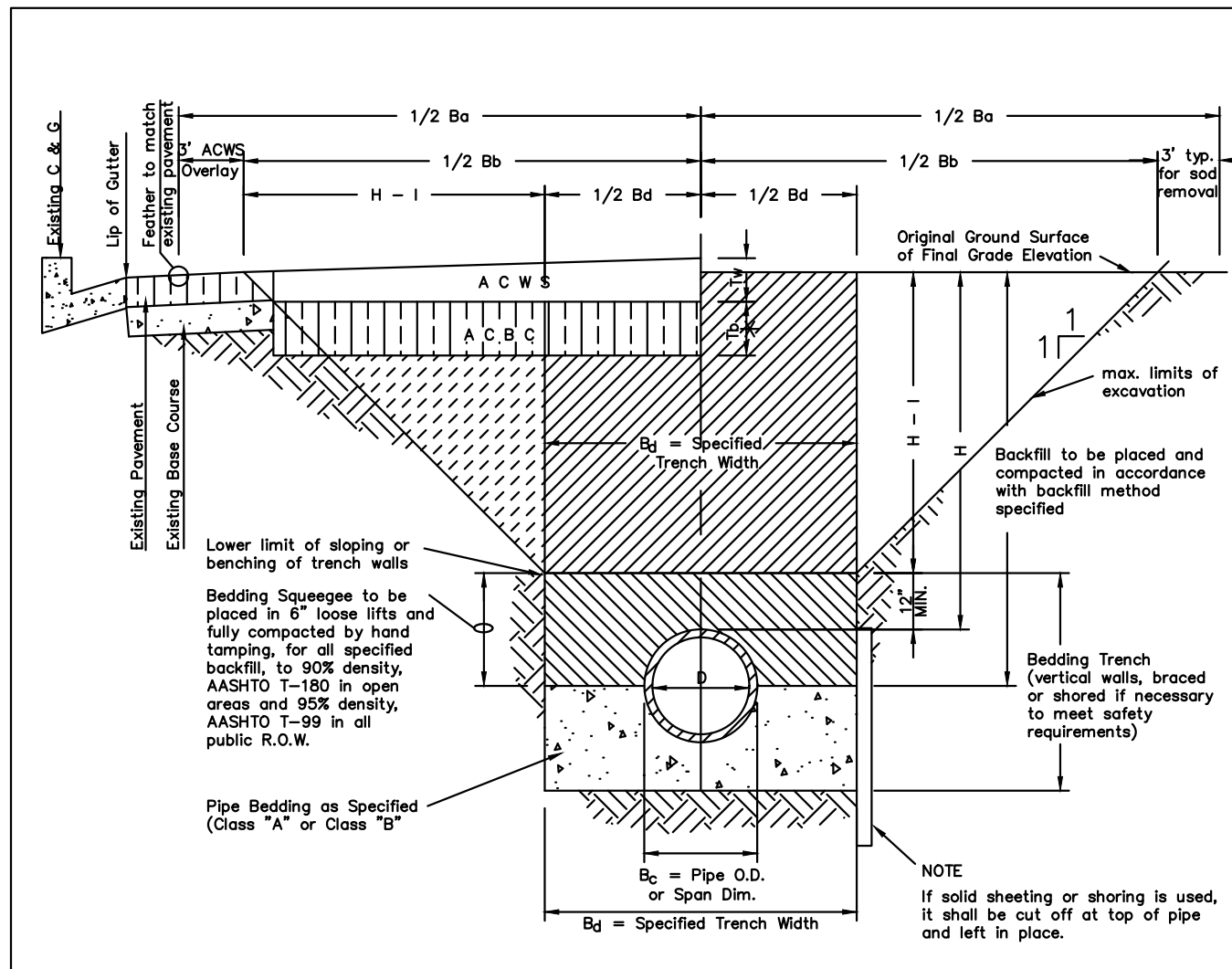
SANITARY SEWER PLAN AND PROFILE - ALLEY 10-12

37642  
11-20-2020  
PROFESSIONAL ENGINEER

PROJ. MGR.: RJM  
PROJ. ASSOC.: RAK  
DRAWN BY: ASD  
DATE: 10/20/16

SHEET  
**10** OF 14  
CLCPK3



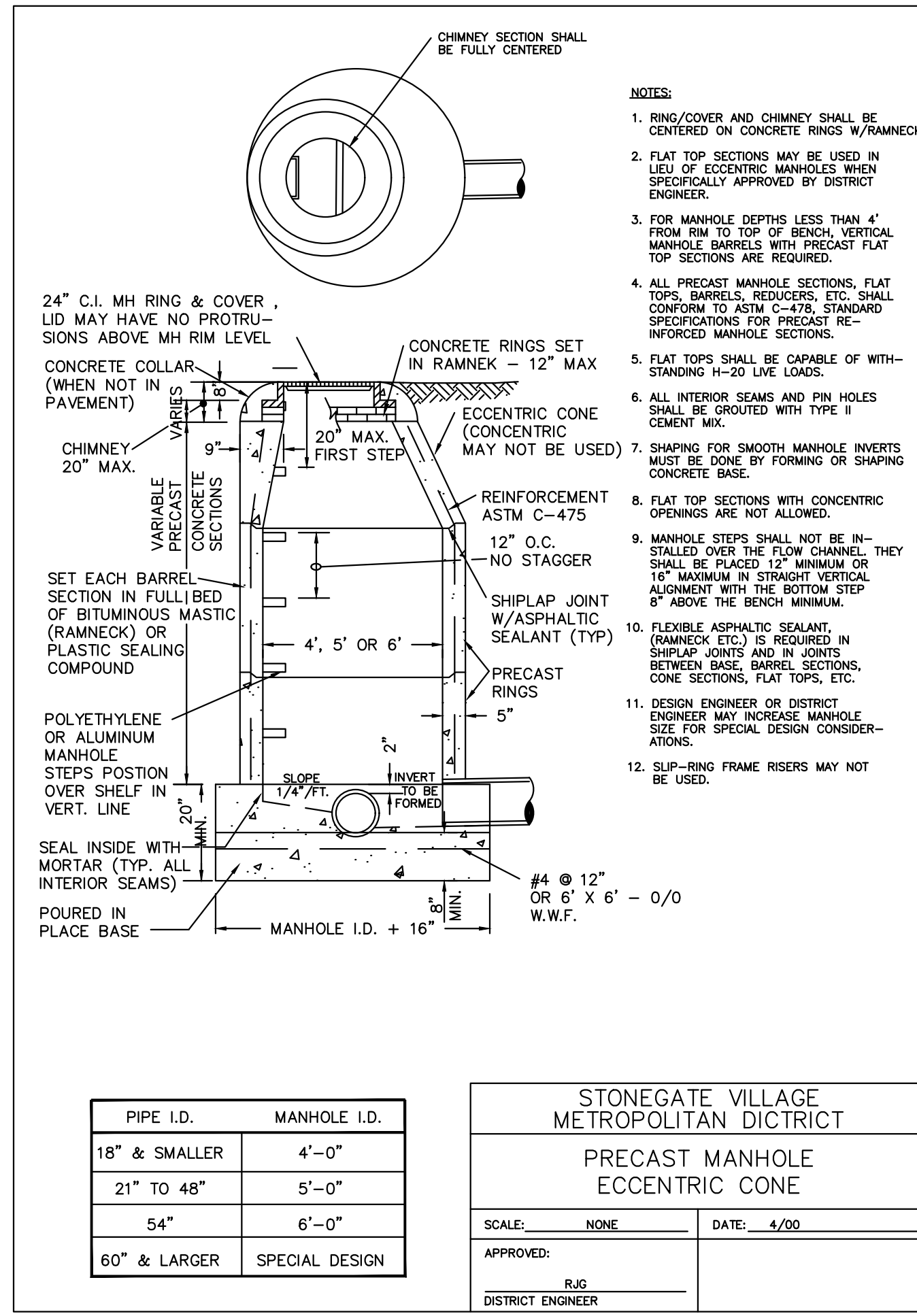


**TYPICAL TRENCH DETAIL**

Notes:  
 1. Slipping or benching of trench side walls, where permitted shall be in accordance with applicable Federal, State and Local safety regulations.  
 2. Trench shall be braced and shored as necessary to afford safe working conditions or to protect adjacent utilities, structures, etc. Unless otherwise specified on the plans, no pavement will be made for removal, replacement or relocation of curb and gutter, utilities, sidewalk, structures, etc. outside the maximum limits of excavation as shown and the contractor shall be responsible for protection of same.  
 3. If dimension  $T_b$  is  $\leq 5'$ , then existing asphalt pavement shall be removed and replaced up to the gutter. Maximum asphalt pay width,  $B_a$  &  $B_b$  shall then be based upon this actual width.

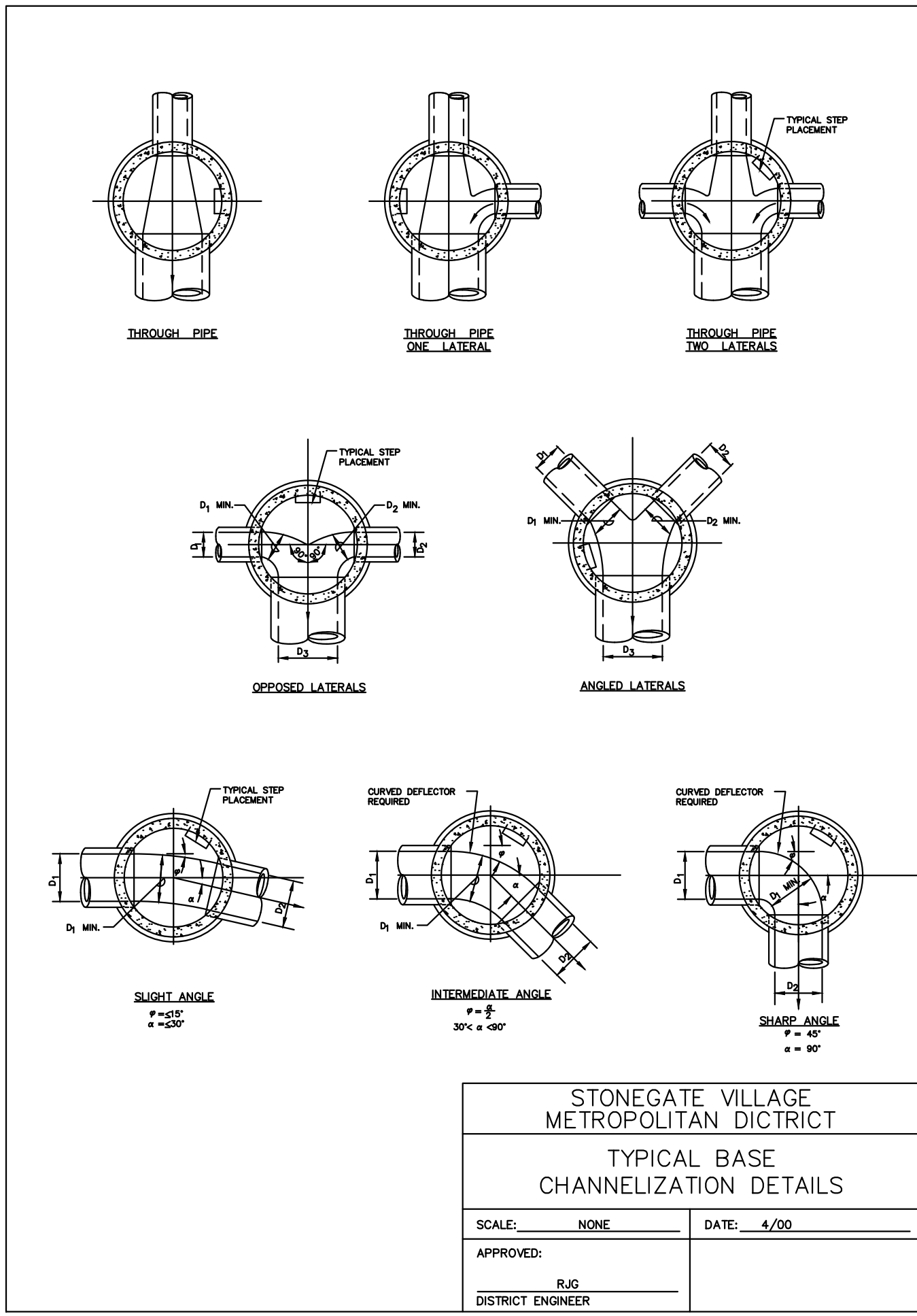
STREET WIDTH	ASPHALTIC BASE COURSE (T <sub>b</sub> )	ASPHALTIC WEARING SURFACE (T <sub>w</sub> )	TOTAL THICKNESS (T <sub>o</sub> )
UP TO 36'	4"	2"	6"
36' TO 44'	4"	3"	7"
44' TO 48'	5"	3"	8"
WIDER THAN 48'	6"	3"	9"

STONEGATE VILLAGE METROPOLITAN DISTRICT  
SEWER TRENCHING AND BEDDING DETAIL  
SCALE: NONE DATE: 4/20  
APPROVED: RJC DISTRICT ENGINEER

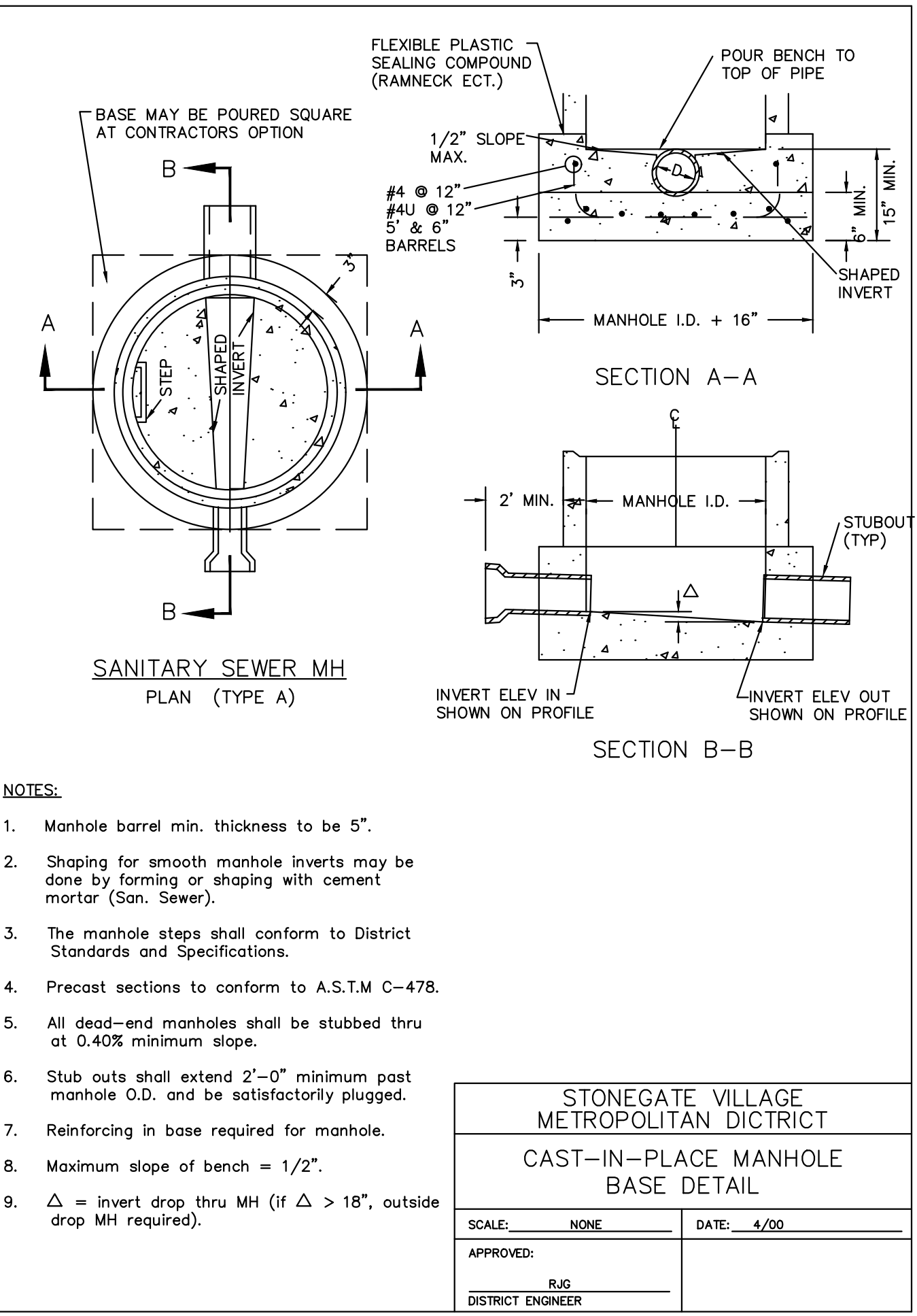


PIPE I.D.	MANHOLE I.D.
18" & SMALLER	4'-0"
21" TO 48"	5'-0"
54"	6'-0"
60" & LARGER	SPECIAL DESIGN

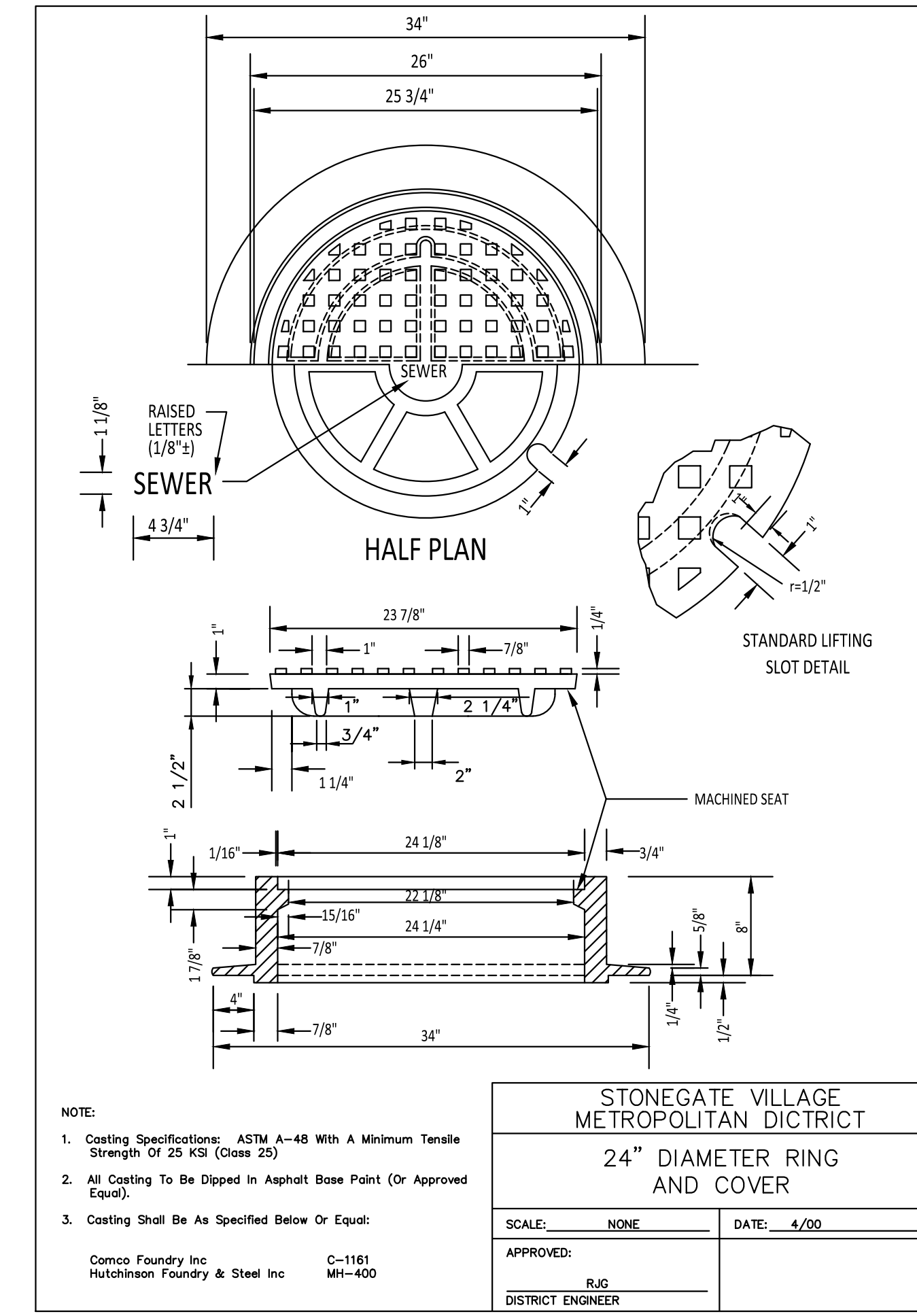
STONEGATE VILLAGE METROPOLITAN DISTRICT  
PRECAST MANHOLE ECCENTRIC CONE  
SCALE: NONE DATE: 4/20  
APPROVED: RJC DISTRICT ENGINEER



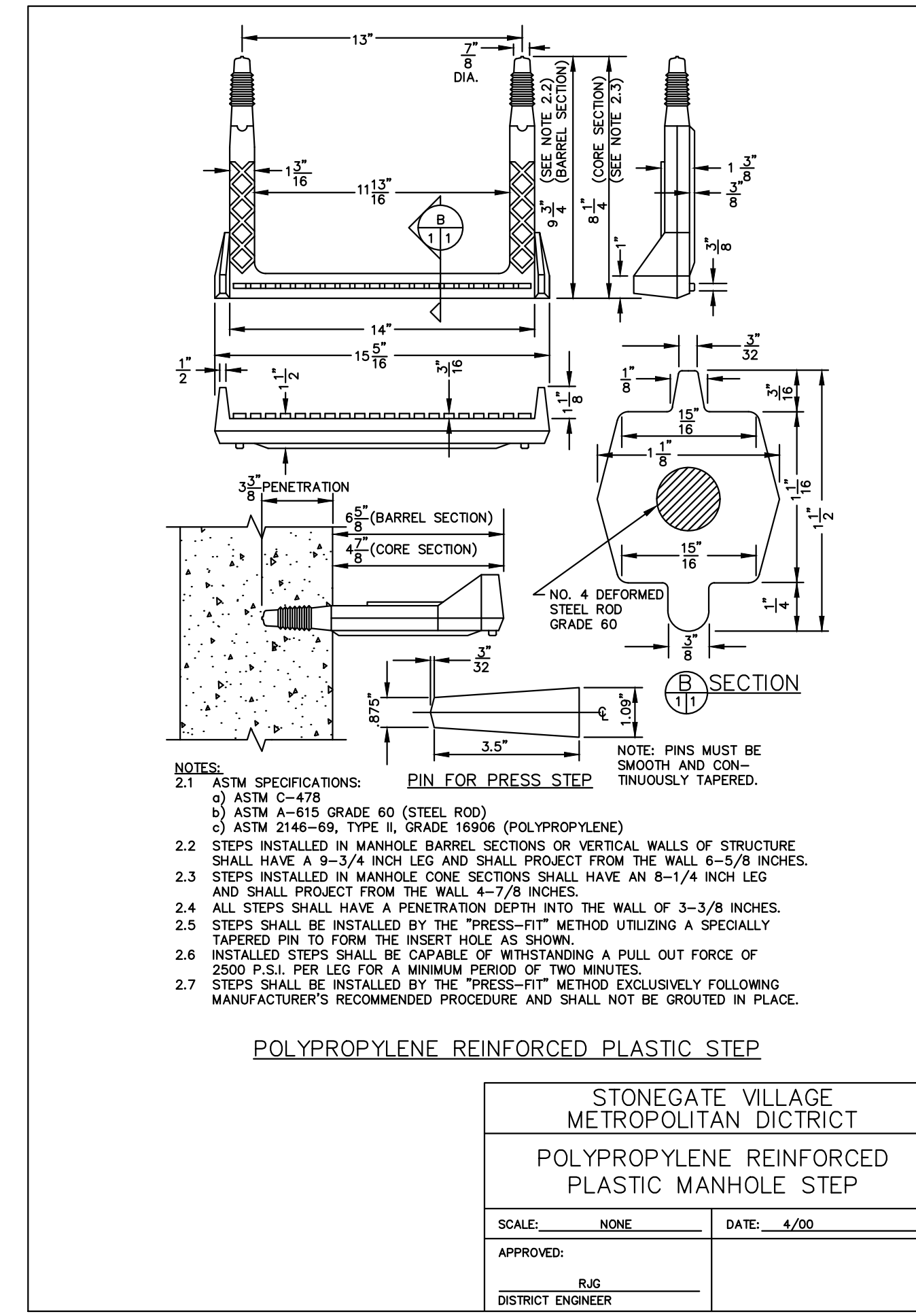
STONEGATE VILLAGE METROPOLITAN DISTRICT  
TYPICAL BASE CHANNELIZATION DETAILS  
SCALE: NONE DATE: 4/20  
APPROVED: RJC DISTRICT ENGINEER



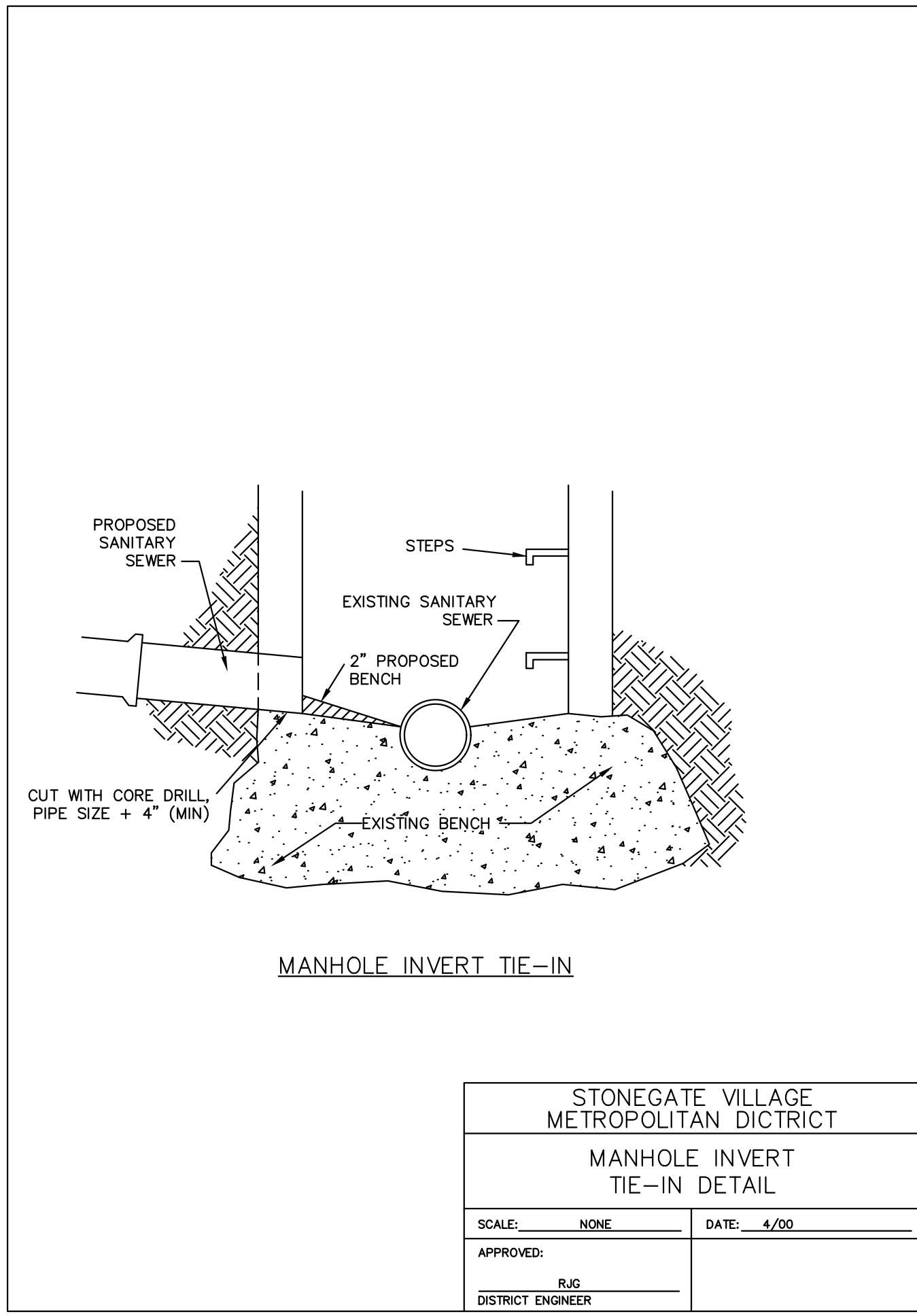
STONEGATE VILLAGE METROPOLITAN DISTRICT  
CAST-IN-PLACE MANHOLE BASE DETAIL  
SCALE: NONE DATE: 4/20  
APPROVED: RJC DISTRICT ENGINEER



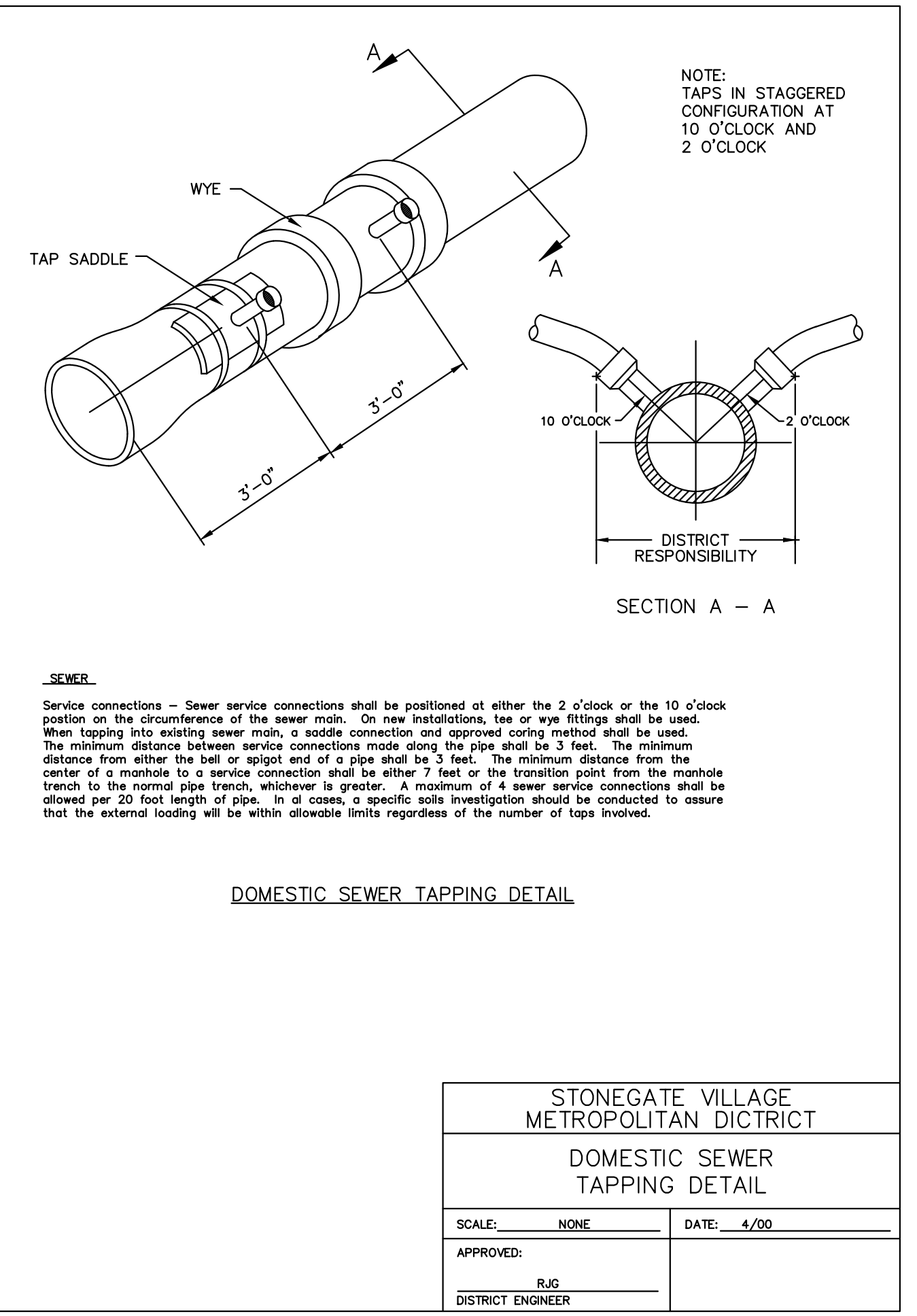
STONEGATE VILLAGE METROPOLITAN DISTRICT  
24" DIAMETER RING AND COVER  
SCALE: NONE DATE: 4/20  
APPROVED: RJC DISTRICT ENGINEER



STONEGATE VILLAGE METROPOLITAN DISTRICT  
POLYPROPYLENE REINFORCED PLASTIC MANHOLE STEP  
SCALE: NONE DATE: 4/20  
APPROVED: RJC DISTRICT ENGINEER



STONEGATE VILLAGE METROPOLITAN DISTRICT  
MANHOLE INVERT TIE-IN DETAIL  
SCALE: NONE DATE: 4/20  
APPROVED: RJC DISTRICT ENGINEER



STONEGATE VILLAGE METROPOLITAN DISTRICT  
DOMESTIC SEWER TAPPING DETAIL  
SCALE: NONE DATE: 4/20  
APPROVED: RJC DISTRICT ENGINEER

Plotted: 11/20/2020 9:53 AM. Dwg Name: D:\C:\p3\3\homsou005-residential\cd\1\dwg\Enr\Final Drawings\Plan Set\District\PHASE 2\05B-SANITARY DETAILS.dwg. Updated By: RJK

REVISIONS

NO.	DATE	DESCRIPTION
1	11/20/20	REVISED PER SVD COMMENTS
2	07/20/21	FINAL SUBMITTAL
3	06/20/21	REVISED ALLEY EASEMENTS
4	08/20/21	REVISED PER SVD COMMENTS

DATE: \_\_\_\_\_

**Manhard CONSULTING**

7600 East Orchard Road, Suite 100-100, Greenwood Village, CO 80111, phone: 303.750.0500 manhard.com  
 Civil Engineering | Surveying & Geospatial Services | GIS | Water Resource Management

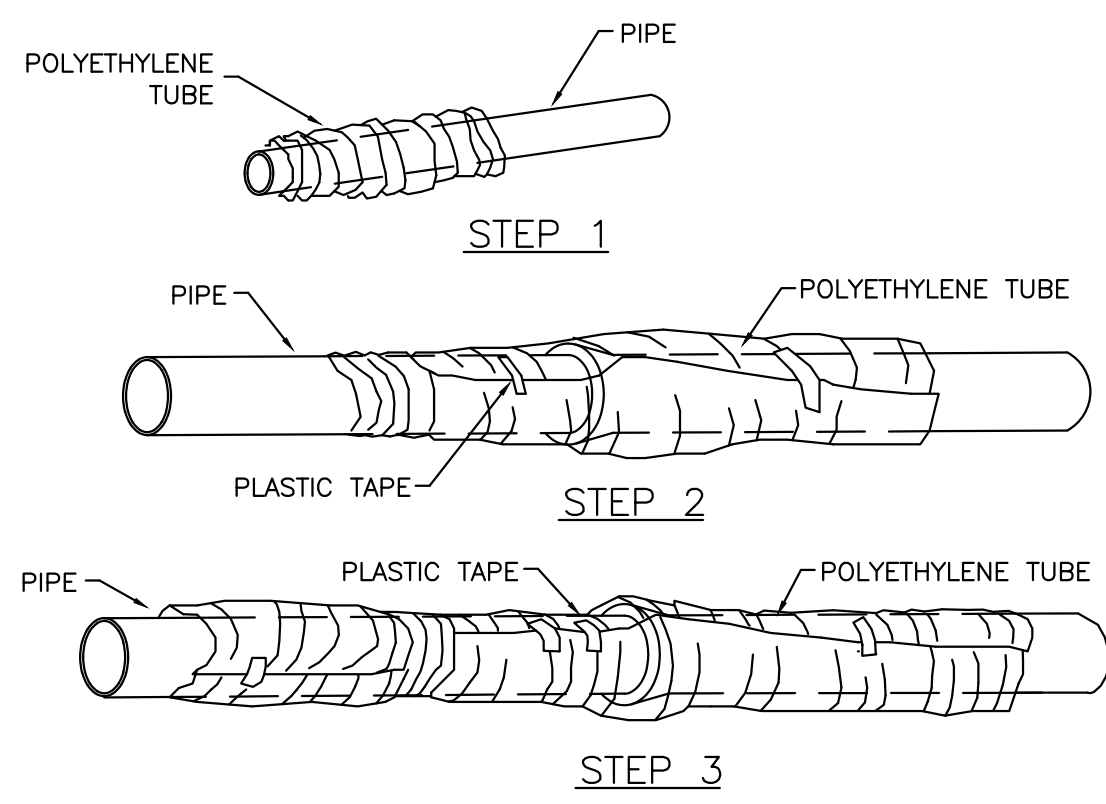
COMPARK VILLAGE SOUTH FILING NO. 2 - AMENDMENT NO. 1  
TOWN OF PARKER, COLORADO  
SANITARY SEWER CONSTRUCTION DETAILS

PROJ. MGR.: RJM  
 PROJ. ASSOC.: RAK  
 DRAWN BY: ASD  
 DATE: 10/20/16

37642  
11-20-2020  
PROFESSIONAL ENGINEER

SHEET 14 OF 14  
CLCPK3





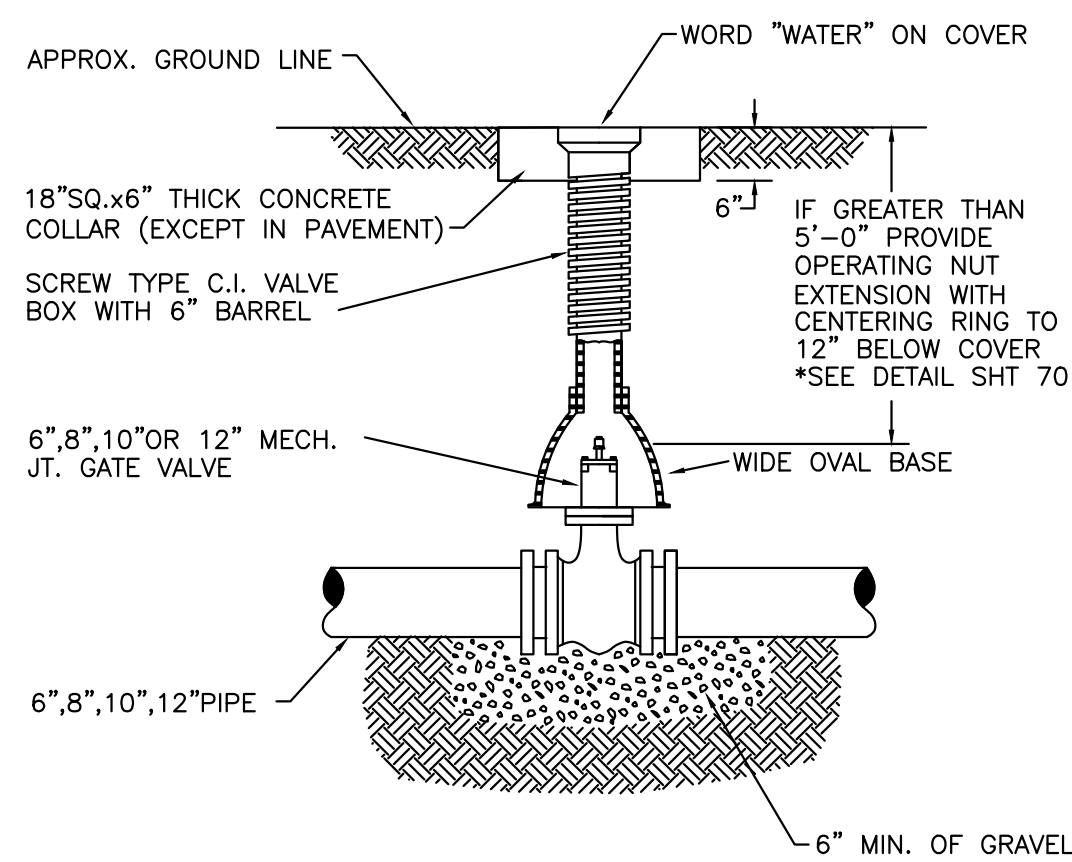
**FIELD INSTALLATION -- POLYETHYLENE WRAP**

- STEP 1 - PLACE TUBE OF POLYETHYLENE MATERIAL ON PIPE PRIOR TO LOWERING IT INTO TRENCH.
- STEP 2 - PULL THE TUBE OVER THE LENGTH OF THE PIPE. TAPE TUBE TO PIPE AT JOINT. FOLD MATERIAL AROUND THE ADJACENT SPIGOT END AND WRAP WITH TAPE TO HOLD THE PLASTIC TUBE IN PLACE.
- STEP 3 - OVERLAP FIRST TUBE WITH ADJACENT TUBE AND SECURE WITH PLASTIC ADHESIVE TAPE. THE POLYETHYLENE TUBE MATERIAL COVERING THE PIPE SHALL BE LOOSE. EXCESS MATERIAL SHALL BE NEATLY DRAWN UP AROUND THE PIPE BARREL, FOLDED ON TOP OF PIPE AND TAPED IN PLACE.

STONEGATE VILLAGE METROPOLITAN DISTRICT  
**POLYETHYLENE WRAP**

SCALE: NONE DATE: 4/00

APPROVED: R/JG DISTRICT ENGINEER



**6-INCH VALVE BOXES**

**Materials:**  
Valve box parts shall be made from gray cast iron, ASTM A48 Class 20A. Use of an aluminum alloy as a casting material is not acceptable.

**Approved Patterns:**  
Valve boxes shall be the three-piece adjustable screw type and the following two patterns are acceptable.

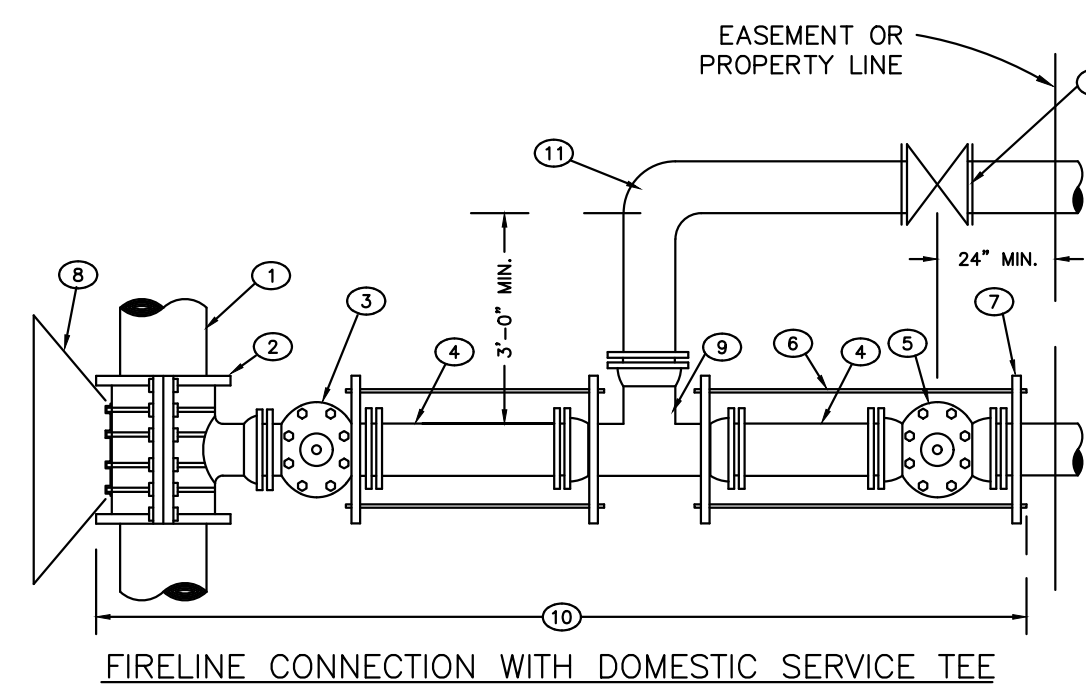
1. Tyler screw-type 6-inch cast iron valve box assembly series 6860 with No. 160 oval base.
2. Clay and Bailey screw-type 6-inch cast iron valve box assembly No. P-108 with No. 160 large oval base.

- NOTES:**
1. VALVE BOXES SHALL BE:
    - A. TYLER SCREW-TYPE 6" C.I. ASSY. SERIES 6860 W/NO.160 LARGE OVAL BASE OR
    - B. CLAY & BAILEY SCREW-TYPE 6" C.I. ASSY. NO. P-108 W/NO.160 LARGE OVAL BASE.
  2. ALL C.I. SHALL BE WRAPPED WITH 8 MIL. MIN. THICKNESS POLYETHYLENE.
  3. VALVE NUT SHALL BE CENTERED.
  4. VALVE BOX SHALL BE PLUMB.

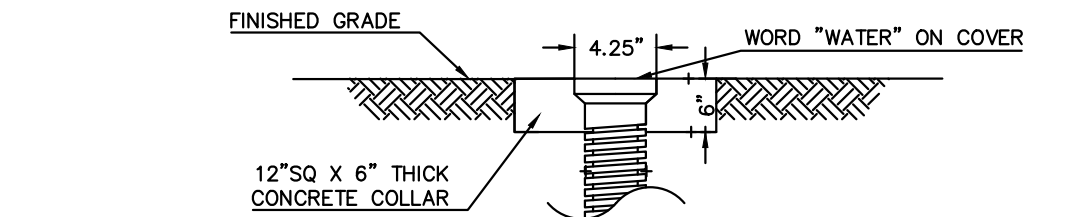
STONEGATE VILLAGE METROPOLITAN DISTRICT  
**VALVE BOX DETAIL**

SCALE: NONE DATE: 4/00

APPROVED: R/JG DISTRICT ENGINEER



**FIRELINE CONNECTION WITH DOMESTIC SERVICE TEE**



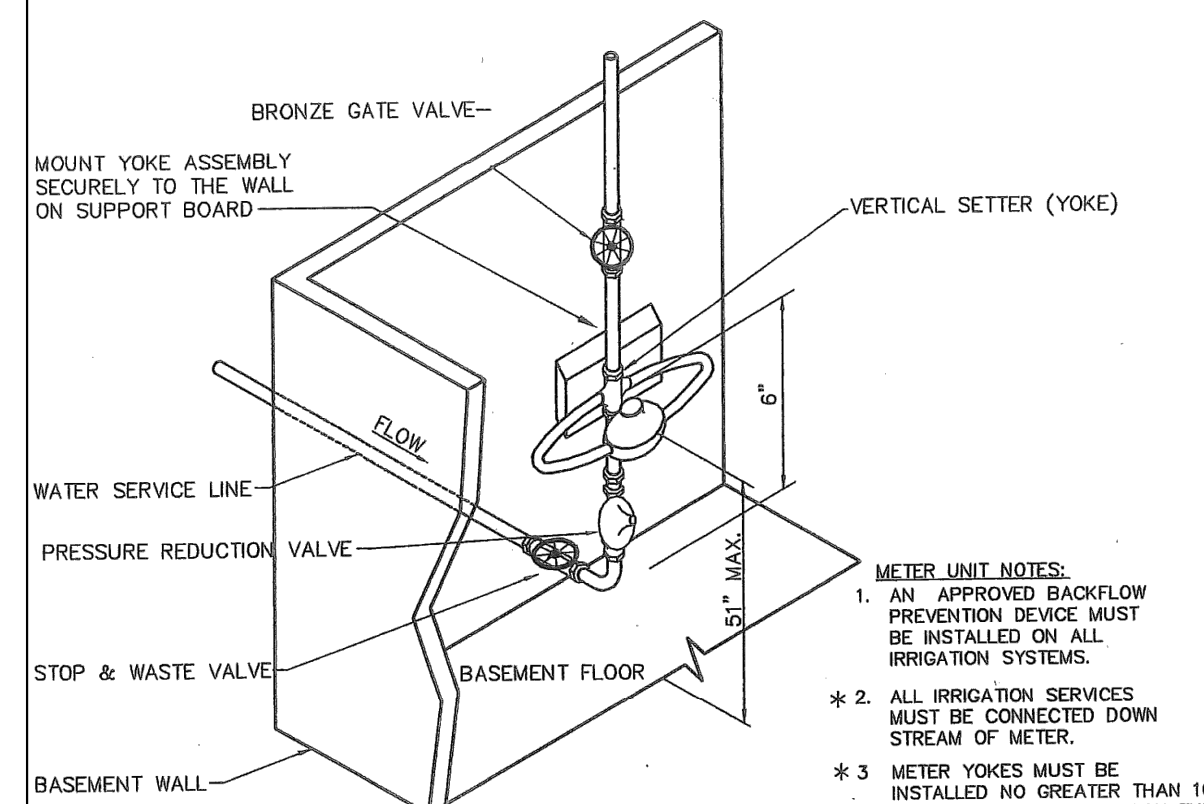
**CURB STOP BOX IN PAVEMENT/LANDSCAPING DETAIL**

1. EXISTING MAIN
2. TAPPING SLEEVE OR M.J. ANCHORING TEE (SWIM TEE WHERE APPLICABLE)
3. TAPPING VALVE OR DOMESTIC SERVICE TEE OR SERVICE TAP
4. DOUBLE SPIGOT PIPE
5. PROPERTY LINE VALVE
6. TIE RODS (MEGALUS MAY BE USED IN PLACE OF RODDING)
7. PIPE CLAMP
8. CONCRETE KICKBLOCK
9. DOMESTIC SERVICE TEE OR SERVICE TAP
10. POLYETHYLENE WRAPPED
11. 90° FITTING (BEND FOR 2" & SMALLER)
12. VALVE OR CURBSTOP AS REQUIRED

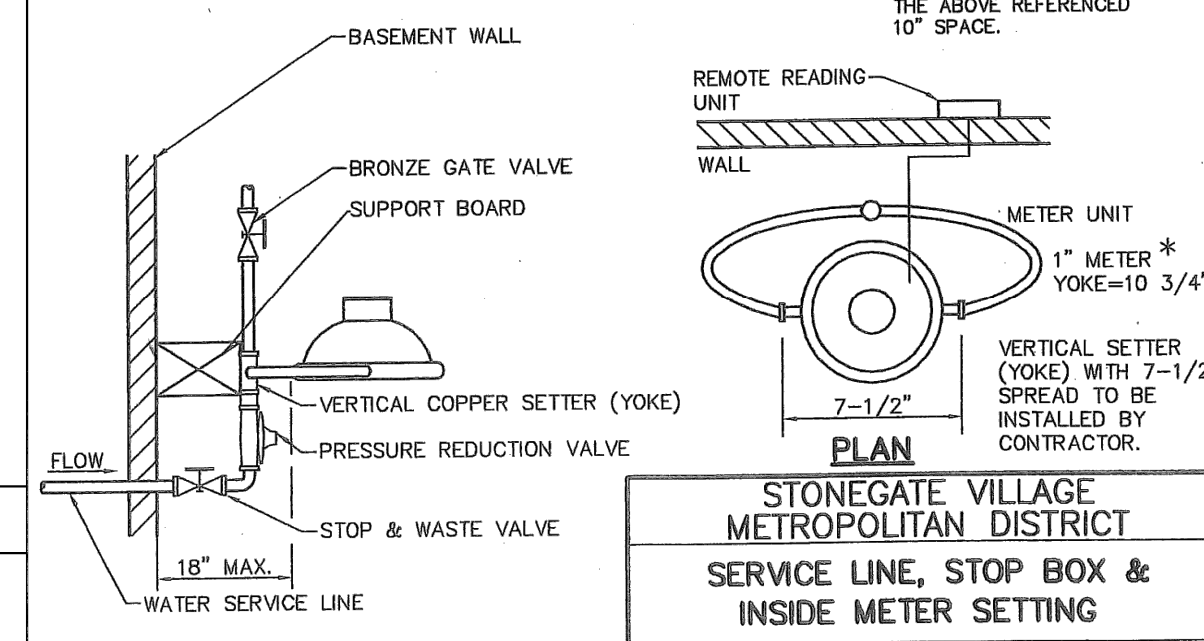
COMMERCIAL AND MULTI-FAMILY USE ONLY  
STONEGATE VILLAGE METROPOLITAN DISTRICT  
**COMBINATION FIRE/SERVICE TAP**

SCALE: NONE DATE: 4/00

APPROVED: R/JG DISTRICT ENGINEER



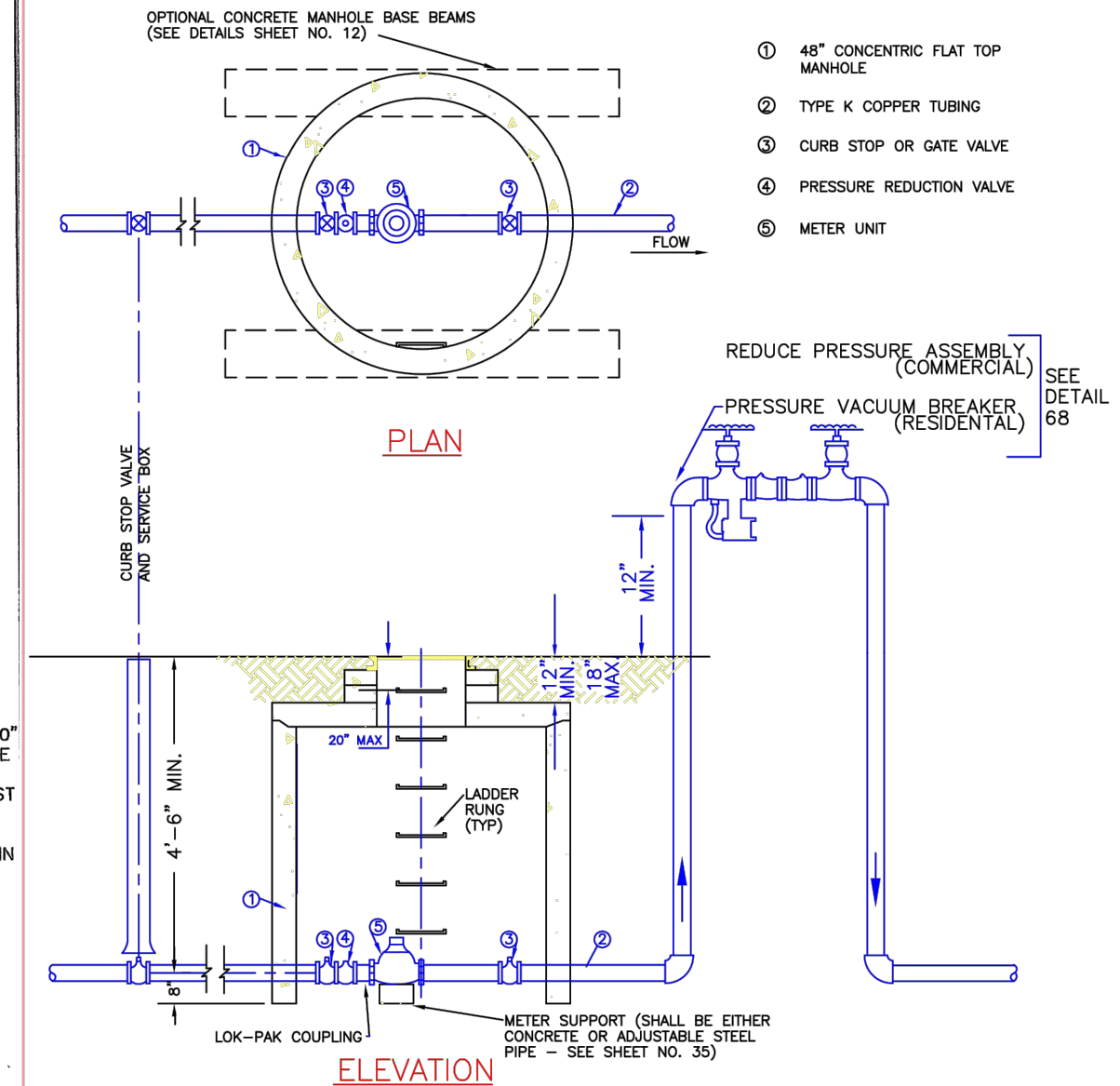
**ISOMETRIC VIEW**



STONEGATE VILLAGE METROPOLITAN DISTRICT  
**SERVICE LINE, STOP BOX & INSIDE METER SETTING**

SCALE: NONE DATE: 4/00

APPROVED: R/JG DISTRICT ENGINEER



STONEGATE VILLAGE METROPOLITAN DISTRICT  
**OUTSIDE SETTING FOR 1 1/2" & 2" METER FOR IRRIGATION**

SCALE: NONE DATE: 4/00

APPROVED: R/JG DISTRICT ENGINEER

**LENGTH OF TIED PIPE**

PIPE SIZE	4"		6"		8"		10"		12"		16"		20"		24"	
	D	L	D	L	D	L	D	L	D	L	D	L	D	L	D	L
TEE OR VALVE	3/4"	16.0"	3/4"	13.0"	3/4"	10.0"	3/4"	8.0"	3/4"	6.0"	3/4"	4.0"	3/4"	3.0"	3/4"	2.0"
90° BEND	3/4"	16.0"	3/4"	13.0"	3/4"	10.0"	3/4"	8.0"	3/4"	6.0"	3/4"	4.0"	3/4"	3.0"	3/4"	2.0"
45° BEND	3/4"	16.0"	3/4"	13.0"	3/4"	10.0"	3/4"	8.0"	3/4"	6.0"	3/4"	4.0"	3/4"	3.0"	3/4"	2.0"
22-1/2° BEND	3/4"	16.0"	3/4"	13.0"	3/4"	10.0"	3/4"	8.0"	3/4"	6.0"	3/4"	4.0"	3/4"	3.0"	3/4"	2.0"
11-1/4° BEND	3/4"	16.0"	3/4"	13.0"	3/4"	10.0"	3/4"	8.0"	3/4"	6.0"	3/4"	4.0"	3/4"	3.0"	3/4"	2.0"

- NOTES:**
1. LENGTH OF TIED PIPE MEASURED EACH WAY FROM VALVES AND BENDS.
  2. CLAMPS AND RODS NOT ALLOWED FOR 24" AND LARGER PIPES.
  3. P.C. DIMENSIONS TO CENTERLINE.
  4. MINIMUM 4.5" GROUND COVER REQUIRED.
  5. BASED ON 150 PSI INTERNAL PRESSURE.
  6. M.S. MEANS MILD STEEL ROD A.S.T.M. STANDARD DESIGNATION A-36.
  7. A-183 GRADE B7-2.
  8. NUTS SHALL BE A.S.T.M. STANDARD DESIGNATION A-307 GRADE A OR B HEAVY SERIES.
  9. SEE IF BOLT WAS DRAWN, ALSO SEE ROD COUPLING DETAILS.
  10. LENGTH REFERS TO THE AMOUNT OF PIPE WHICH MUST BE TIED TOGETHER AND IS NOT NECESSARILY THE LENGTH OF THE RODS.
  11. STAR BOLTS NOT ALLOWED ON PIPE LARGER THAN 16".
  12. MINIMUM OF 4 RODS REQUIRED ON 16" PIPE IF STAR BOLTS ARE USED.
  13. TEES ARE TO BE RODDED ON BRANCH ONLY.
  14. ALL VALVES TO BE RODDED IN BOTH DIRECTIONS.

STONEGATE VILLAGE METROPOLITAN DISTRICT  
**LENGTH OF TIED PIPE**

SCALE: NONE DATE: 4/00

APPROVED: R/JG DISTRICT ENGINEER

**PIPE BEDDING:**

(c) **Installation of Bedding and Pipe:** After completion of the trench excavation and proper preparation of the foundation, six inches (6") of bedding material shall be placed on the trench bottom for support under the pipe. Bed holes shall be dug deep enough to provide a minimum of two inches (2") of clearance between the soil and bedding material. All pipe shall be installed in such a manner as to insure full support of the pipe barrel over its entire length. After the pipe is adjusted for line and grade, and the joint is made, the bedding material shall be carefully placed and tamped under the haunches of the pipe and in the previously dug bed holes.

Tamping is herein defined as the act of placing approved bedding material under the haunches of the pipe, paying particular attention to voids, bell holes, and sling holes. The purpose of tamping is to ensure uniform support for the pipe.

The limits of bedding shall be from six inches (6") below the bottom of the pipe to twelve inches (12") above the top of the pipe. Approved backfill may then be installed to the groundline. See Section 6 of these Standards for backfill and composition of backfill.

Compaction of bedding is not required. The only requirement is sufficient tamping to achieve uniform support under the pipe. See Sheet 8 of the Standard Drawings for a typical trench cross section.

(d) **Bedding Material:** The bedding material shall be a clean well-graded sand or squeegee sand and shall conform to the following limits when tested by means of laboratory sieves:

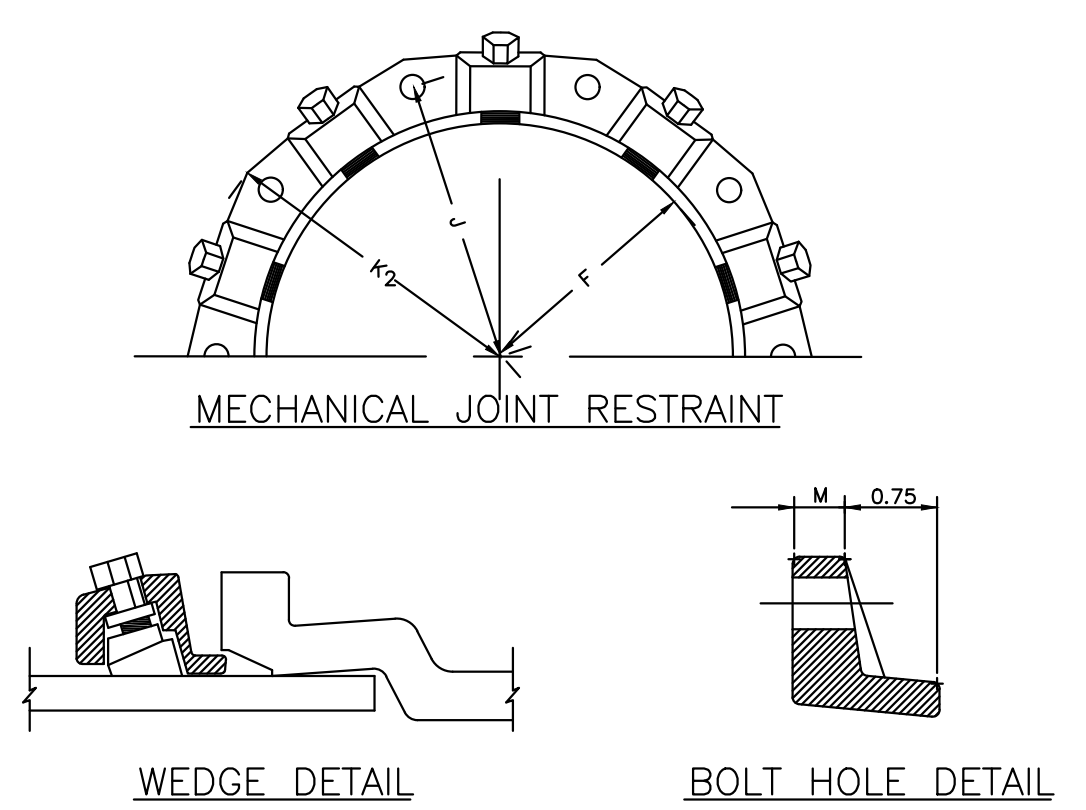
**Well-Graded Sand**

Sieve Size	Total Percent Passing by Weight
3/8 inch	100
No. 4	85-100
No. 8	80-100
No. 16	50-85
No. 30	20-60
No. 50	10-30
No. 100	2-10
No. 200	0

**Squeegee Sand**

Sieve Size	Total Percent Passing by Weight
3/8 inch	100
No. 100	0-5

If approved by the District, fines from the trench walls and spoils pile may be used to provide uniform support for the pipe. No rock or stone larger than that allowed by the sieve analysis, or any other detrimental substance, shall be placed closer to the pipe than six inches (6"). Approved bedding materials shall be stockpiled on the jobsite to be used in the event natural materials become unsatisfactory. The District reserves the right to require the use of the specified bedding material at any time.



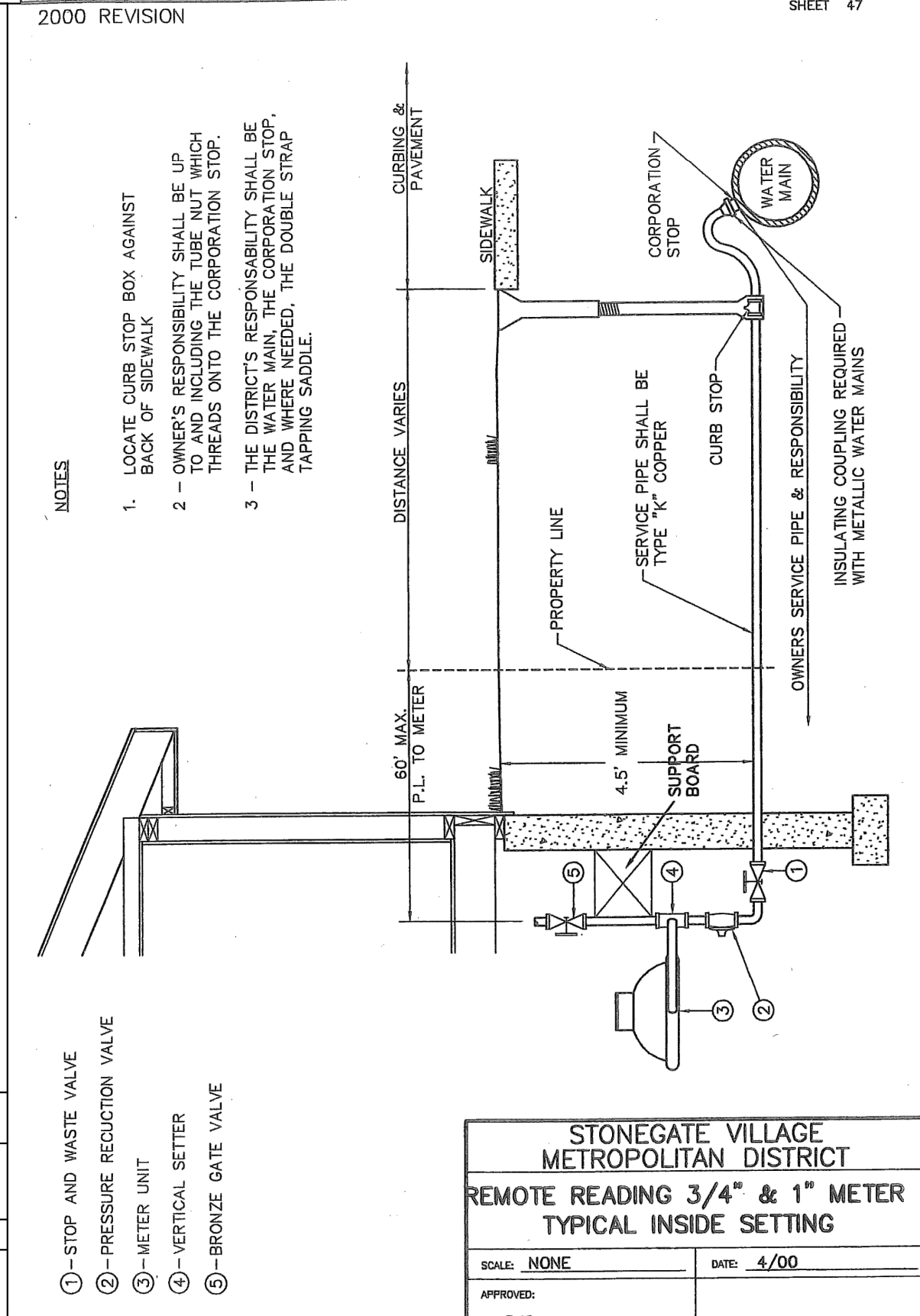
NOMINAL PIPE SIZE	NO. OF BOLTS	NO. OF WEDGES	K2 INCHES	J INCHES	F INCHES	M INCHES
P 4"	2	2				
V 6"	6	3	11.12	9.5	7.00	0.88
V 8"	6	4	13.37	11.75	9.15	1.00
C 10"	8	6	15.62	14.00	11.20	1.00
C 12"	8	8	17.88	16.25	13.30	1.25
D 4"	4	2				
D 6"	6	3	11.12	9.5	7.00	0.88
D 8"	6	4	13.37	11.75	9.15	1.00
D 10"	8	6	15.62	14.00	11.20	1.00
D 12"	8	8	17.88	16.25	13.30	1.25

- NOTES:**
1. REFER TO SHEET W-19 SECTION 6.10.
  2. DIMENSIONS FOR 16" AND 20" D.I. PIPE NOT SHOWN.

STONEGATE VILLAGE METROPOLITAN DISTRICT  
**MECHANICAL JOINT RESTRAINT JOINT**

SCALE: NONE DATE: 4/00

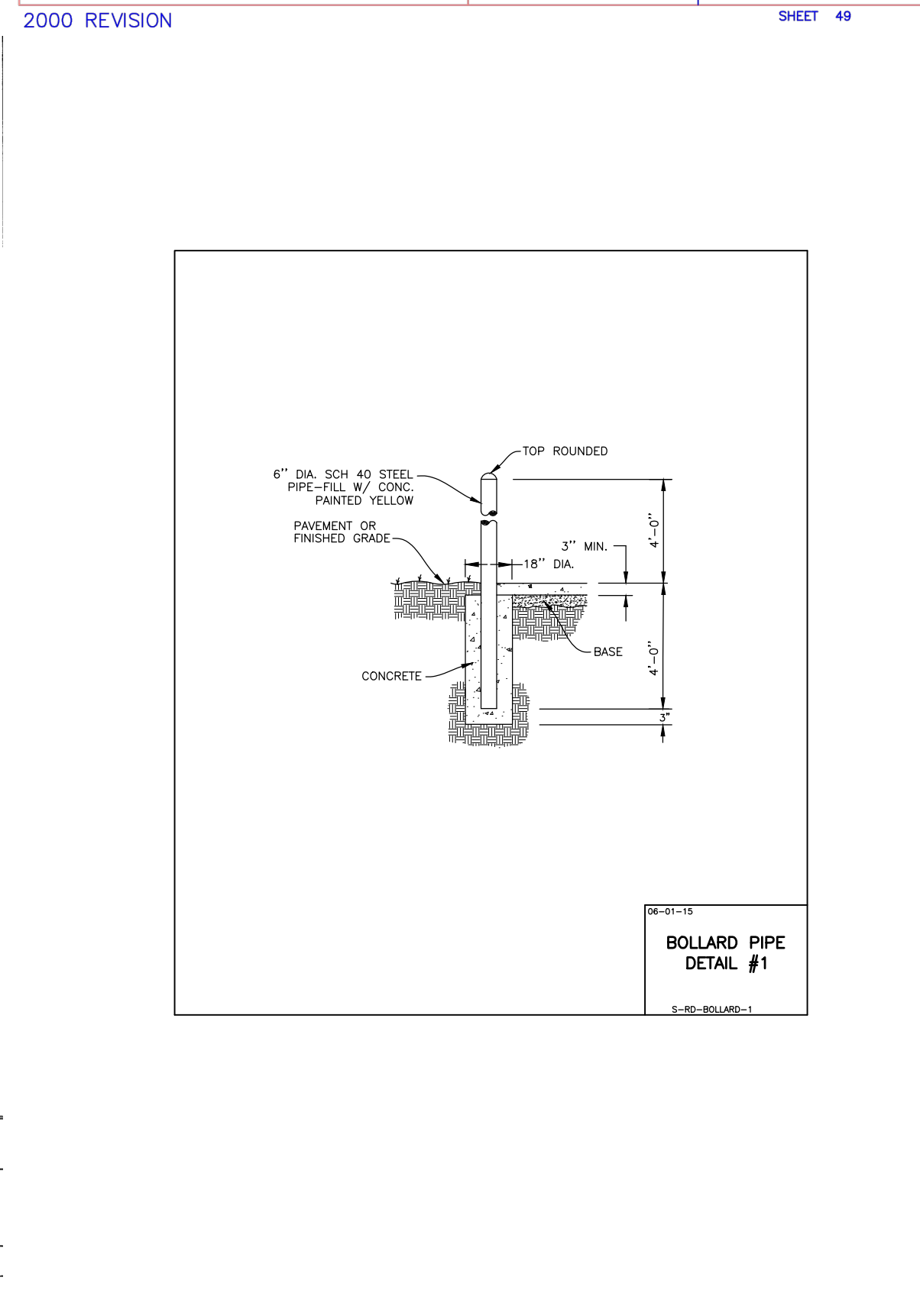
APPROVED: R/JG DISTRICT ENGINEER



STONEGATE VILLAGE METROPOLITAN DISTRICT  
**REMOTE READING 3/4" & 1" METER TYPICAL INSIDE SETTING**

SCALE: NONE DATE: 4/00

APPROVED: R/JG DISTRICT ENGINEER



STONEGATE VILLAGE METROPOLITAN DISTRICT  
**BOLLARD PIPE DETAIL #1**

SCALE: NONE DATE: 4/00

APPROVED: R/JG DISTRICT ENGINEER

REVISIONS

NO.	DATE	DESCRIPTION
1	11/20/20	ISSUED PER SAID COMMENTS
2	07/2017	FINAL SUBMITTAL
3	06/2017	REVISED ALLEY EASEMENTS
4	08/2016	REVISED PER SAID COMMENTS

DATE: 11/20/2020

PROJECT: COMPARK VILLAGE SOUTH FILING NO. 2 - AMENDMENT NO. 1

TOWN OF PARKER, COLORADO

WATER SYSTEM CONSTRUCTION DETAILS

PROJ. MGR.: R/JM

PROJ. ASSOC.: RAK

DRAWN BY: ASD

DATE: 10/2016

SHEET 14 OF 14

CLCPK3

Manhard CONSULTING

7600 East Orchard Road, Suite 100-100, Greenwood Village, CO 80120, phone: 303.778.0500 manhard.com

Civil Engineering | Surveying & Geospatial Services | GIS | Construction Management | Water Resource Management

REGISTERED PROFESSIONAL ENGINEER

37642

11-20-2020