CHALLENGER COMMUNITIES, LLC
BENT GRASS RESIDENTIAL FILING NO. 2
BENT GRASS MEADOWS DRIVE & MERIDIAN ROAD - FALCON, CO
UTILITY CONSTRUCTION PLANS

SF-19-014

PROJECT CONTACTS

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FALCON FIRE PROTECTION DISTRICT
7030 OLD MERIDIAN ROAD
PEYTON, COLORADO 80831
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EMAIL: FALCONFIRE@FALCONFIREPD.ORG

SITE MAP
SCALE: 1"=300'

VICINITY MAP
1"=2,000'

LEGAL DESCRIPTION

BENT GRASS RESIDENTIAL FILING NO. 2. LOCATED IN THE NORTHWEST QUARTER AND SOUTHWEST QUARTER OF SECTION 1 T13S R65W OF THE 6TH PRINCIPAL MERIDIAN, COUNTY OF EL PASO, STATE OF COLORADO

BASIS OF BEARINGS

ALL BEARINGS ARE GRID BEARINGS OF THE COLORADO STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, NORTH AMERICAN DATUM 1983. THE BEARING OF THE LINE BETWEEN THE SOUTHWEST CORNER OF SECTION 1, T13S, R65W AND THE WEST QUARTER CORNER SECTION 1, T13S, R65W IS N00°13'46"W AND MONUMENTED AS SHOWN:

BENCHMARK

THE SOUTHWESTERLY CORNER OF LOT 1 WOODMEN HILLS FILING NO. 4. MONUMENTED BY A YELLOW PLASTIC SURVEYORS CAP ON A NO. 4 REBAR LS# 24954 ELEVATION = 6947.67

CAUTION – NOTICE TO CONTRACTOR

1. ALL UTILITY LOCATIONS SHOWN ARE BASED ON MAPS PROVIDED BY THE APPROPRIATE UTILITY COMPANY AND FIELD SURFACE EVIDENCE AT THE TIME OF SURVEY AND IS TO BE CONSIDERED AN APPROXIMATE LOCATION ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE FIELD LOCATION OF ALL UTILITIES, PUBLIC OR PRIVATE, WHETHER SHOWN ON THE PLANS OR NOT, PRIOR TO CONSTRUCTION. REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO CONSTRUCTION.
2. WHERE A PROPOSED UTILITY CROSSES AN EXISTING UTILITY, IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF SUCH EXISTING UTILITY, EITHER THROUGH POTHOLING OR ALTERNATIVE METHOD. REPORT INFORMATION TO THE ENGINEER PRIOR TO CONSTRUCTION.

811 Know what's **below.** **Call** before you dig.

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SEE BENT GRASS RESIDENTIAL FILING NO. 2 CONSTRUCTION PLANS FOR PUBLIC AND PRIVATE IMPROVEMENTS
SEE BENT GRASS RESIDENTIAL FILING NO. 2 GEC PLANS FOR GRADING AND EROSION CONTROL CONSTRUCTION DOCUMENTS

WATER AND SEWER MAIN EXTENSIONS :

ANY CHANGES OR ALTERATIONS AFFECTING THE GRADE, ALIGNMENT, ELEVATION AND/OR DEPTH OF COVER OF ANY WATER OR SEWER MAINS OR OTHER APPURTENANCE SHOWN ON THIS DRAWING SHALL BE THE RESPONSIBILITY OF THE OWNER/DEVELOPER. THE OWNER/DEVELOPER SHALL BE RESPONSIBLE FOR ALL OPERATIONAL DAMAGES AND DEFECTS IN INSTALLATION AND MATERIAL FOR MAINS AND SERVICES FROM THE DATE OF APPROVAL UNTIL FINAL ACCEPTANCE IS ISSUED.

SIGNED _____ OWNER/DEVELOPER DATE 2-24-20
PRINT NAME James Byers
DBA Challenger Communities, LLC
ADDRESS 8605 Explorer Dr. 80920

FIRE AUTHORITY APPROVAL:

THE NUMBER OF FIRE HYDRANTS AND HYDRANT LOCATIONS SHOWN ON THIS WATER INSTALLATION PLAN ARE CORRECT AND ADEQUATE TO SATISFY THE FIRE PROTECTION REQUIREMENTS AS SPECIFIED BY THE FIRE DISTRICT SERVING THE PROPERTY NOTED ON THE PLANS.

FIRE PROTECTION DISTRICT Falcon Fire Protection District
SIGNED _____ FIRE PROTECTION DISTRICT DATE 2/24/2020

DISTRICT APPROVALS:

THE WOODMEN HILLS METROPOLITAN DISTRICT RECOGNIZES THE DESIGN ENGINEER AS HAVING RESPONSIBILITY FOR THE DESIGN AND HAS LIMITED ITS SCOPE OF REVIEW ACCORDINGLY.

WOODMEN HILLS METROPOLITAN DISTRICT
WATER DESIGN APPROVAL
DATE: 2-24-2020 BY: _____

PROJECT NO. _____

IN CASE OF ERRORS OR OMISSIONS WITH THE WATER DESIGN AS SHOWN ON THIS DOCUMENT THE STANDARDS AS DEFINED IN THE 'RULES AND REGULATIONS FOR INSTALLATION OF WATER MAINS AND SERVICES' SHALL RULE.

APPROVAL EXPIRES 180 DAYS FROM DESIGN APPROVAL.

THE WOODMEN HILLS METROPOLITAN DISTRICT RECOGNIZES THE DESIGN ENGINEER AS HAVING RESPONSIBILITY FOR THE DESIGN AND HAS LIMITED ITS SCOPE OF REVIEW ACCORDINGLY.

WOODMEN HILLS METROPOLITAN DISTRICT
WASTEWATER DESIGN APPROVAL
DATE: 2-24-2020 BY: _____

PROJECT NO. _____

IN CASE OF ERRORS OR OMISSIONS WITH THE WATER DESIGN AS SHOWN ON THIS DOCUMENT THE STANDARDS AS DEFINED IN THE 'RULES AND REGULATIONS FOR INSTALLATION OF WASTEWATER MAINS AND SERVICES' SHALL RULE.

APPROVAL EXPIRES 180 DAYS FROM DESIGN APPROVAL.

ENGINEERS STATEMENT:

THESE DETAILED PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECTION AND SUPERVISION. SAID DETAILS AND SPECIFICATIONS HAVE BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE STATE OF COLORADO.

_____ DATE 2/24/2020
RONALD G. DENNIS, COLORADO P.E. NO. 0051622

Galloway
1155 Kelly Johnson Blvd., Suite 305
Colorado Springs, CO 80920
719.900.7220
GallowayUS.com

COLORADO LICENSED RONALD GRANT DENNIS PE 0051622 PROFESSIONAL ENGINEER
02/24/2020

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CHALLENGER HOMES

CONSTRUCTION DOCUMENTS
BENT GRASS RESIDENTIAL FILING NO. 2
FOR
CHALLENGER COMMUNITIES, LLC

BENT GRASS MEADOWS DRIVE & MERIDIAN ROAD
FALCON, CO 80831 - EL PASO COUNTY

#	Date	Issue / Description	Init.

Project No:	CLH000014.20
Drawn By:	JDP
Checked By:	RGD
Date:	2/24/2020

COVER SHEET

U0.01
Sheet 1 of 36

GENERAL NOTES:

1. ALL UTILITY CONSTRUCTION TO BE CONDUCTED IN CONFORMANCE WITH THE CURRENT WOODMEN HILLS METROPOLITAN DISTRICT (WHMD, THE DISTRICT) SPECIFICATIONS.

2. ALL PLANS ON THE JOB SITE SHALL BE SIGNED BY THE DISTRICT AND THE DISTRICTS ENGINEER. ANY REVISION TO THE PLANS SHALL BE SO NOTED WITH THE OLD DRAWING MARKED NOT VALID.

3. ALL STATIONING IS CENTER LINE UNLESS OTHERWISE NOTED. ALL ELEVATIONS ARE CENTER LINE UNLESS OTHERWISE NOTED.

4. ALL MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION BY THE DISTRICT. THE DISTRICT RESERVES THE RIGHT TO ACCEPT OR REJECT ANY SUCH MATERIALS AND WORKMANSHIP THAT DOES NOT CONFORM TO ITS STANDARDS AND SPECIFICATIONS.

5. ALL WATER AND SEWER SERVICE LOCATIONS SHALL BE CLEARLY MARKED ON EITHER THE CURB HEAD OR THE FACE OF THE CURB, WITH AN 'S'FOR SEWER AND A 'W'FOR WATER.

6. DUCTILE IRON PIPES, INCLUDING FITTINGS, VALVES AND FIRE HYDRANTS, SHALL BE WRAPPED WITH POLYETHYLENE TUBING, DOUBLE BONDED AT EACH JOINT AND ELECTRICALLY ISOLATED. BONDING AND ANODE CONNECTIONS SHALL BE THOROUGHLY COATED WITH BITUMINOUS COATINGS.

7. ALL DUCTILE IRON PIPE LESS THAN 12 INCHES AND FITTINGS SHALL HAVE CATHODIC PROTECTION USING TWO NO. 6 WIRES WITH 17 LB. MAGNESIUM ANODES EVERY 400 FEET AND 9 LB. MAGNESIUM ANODES AT EACH FITTING. ALL DUCTILE IRON PIPE 12 INCHES AND GREATER AND FITTINGS SHALL HAVE CATHODIC PROTECTION USING TWO NO. 6 WIRES WITH 17 LB. MAGNESIUM ANODES EVERY 300 FEET AND 9 LB. MAGNESIUM ANODES AT EACH FITTING.

8. ALL PIPE MATERIAL, BACKFILL AND INSTALLATION SHALL CONFORM TO THE APPLICABLE SPECIFICATIONS OF THE CITY OF COLORADO SPRINGS, COLORADO DEPARTMENT OF TRANSPORTATION, EL PASO COUNTY DEPARTMENT OF TRANSPORTATION, COLORADO SPRINGS UTILITIES AND THE GEOTECHNICAL ENGINEER.

9. COMPACTION TESTS SHALL BE 95% STANDARD PROCTOR AS DETERMINED BY ASTM D698, UNLESS OTHERWISE APPROVED BY THE DISTRICT OR HIGHER STANDARD AS IMPOSED BY ANOTHER AGENCIES HAVING RIGHT-OF-WAY JURISDICTION.
THIS SHALL INCLUDE ALL VALVES, FIRE HYDRANT RUNS, WATER & SEWER SERVICE LINES AND MANHOLES. ALL REPORTS SHALL BE SUBMITTED TO THE DISTRICT FOR REVIEW AND APPROVAL.

10. THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THE DRAWINGS ARE APPROXIMATE ONLY. THE LOCATION OF ALL UTILITIES SHALL BE FIELD VERIFIED PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES. THE DISTRICT SHALL BE NOTIFIED OF ANY DEVIATIONS TO THE LINE AND/OR GRADE AS DEPICTED ON THE PLANS. CONTRACTOR SHALL SUBMIT TO THE DISTRICT AND THE ENGINEER OF RECORD A REPORT OF THE FIELD VERIFIED INFORMATION PRIOR TO THE START OF
CONSTRUCTION.

11. ALL BENDS SHALL BE FIELD STAKED PRIOR TO THE START OF CONSTRUCTION.

12. BENDS, DEFLECTION & CUT PIPE LENGTHS SHALL BE USED TO HOLD HORIZONTAL ALIGNMENT OF SEWER AND WATER LINES TO NO MORE THAN 0.5' FROM THE DESIGNED ALIGNMENT. CONSTRUCTION STAKES TO BE AT 25' INTERVALS ALONG
CURVES TO ASSURE LOCATION OF PIPE LINE CONSTRUCTION.

13. AT ALL LOCATIONS WHERE CAP AND STUB IS NOTED ON DRAWINGS, PROVIDE A PLUG AT THE END OF THE PIPE JOINT NEAREST THE SPECIFIED STATION. PROVIDE A REVERSE ANCHOR AT ALL WATER LINE PLUGS.

14. ALL UNUSED SALVAGED WATER UTILITY MATERIAL SHALL BE RETURNED TO THE METROPOLITAN DISTRICT AS REQUESTED.

15. AT THE CONTRACTOR'S EXPENSE, ALL UTILITY MAINS SHALL BE SUPPORTED AND PROTECTED SUCH THAT THEY SHALL FUNCTION CONTINUOUSLY DURING CONSTRUCTION OPERATIONS. SHOULD A UTILITY MAIN FAIL AS A RESULT OF THE CONTRACTOR'S OPERATION, IT SHALL BE REPLACED IMMEDIATELY BY THE CONTRACTOR OR BY THE DISTRICT AT FULL COST OF LABOR AND MATERIALS TO THE CONTRACTOR/DEVELOPER.

16. PUMPING OR BYPASS OPERATIONS SHALL BE REVIEWED AND APPROVED BY BOTH THE DISTRICT AND THE DISTRICT ENGINEER PRIOR TO EXECUTION.

17. THE CONTRACTOR SHALL REPLACE OR REPAIR DAMAGE TO ALL SURFACE IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO FENCES, LANDSCAPING, CURB AND GUTTER AND/OR ASPHALT THAT MAY BE CAUSED DURING CONSTRUCTION.

18. ALL CONTRACTORS WORKING ON OR NEAR A WATER OR SEWER FACILITY (TO INCLUDE SERVICE LINES) SHALL HAVE LIABILITY INSURANCE NAMING THE DISTRICT AS AN ADDITIONAL INSURED AND SHALL PROVIDE A CURRENT COPY OF WORKERS COMPENSATION INSURANCE ON FILE WITH THE DISTRICT. NO WORK CAN PROCEED WITHOUT CURRENT CERTIFICATES ON FILE AT THE DISTRICTS OFFICE.

19. THE CONTRACTOR SHALL NOTIFY THE DISTRICT AND ALL AFFECTED UTILITY COMPANIES ADJACENT TO THE PROPOSED UTILITY CONSTRUCTION A MINIMUM OF 48 HOURS AND A MAXIMUM OF 96 HOURS PRIOR TO THE START OF CONSTRUCTION.
A WEEKLY CONSTRUCTION MEETING SHALL BE REQUIRED WITH THE CONTRACTOR, DISTRICT ENGINEER AND ALL OTHER PARTIES AS DEEMED NECESSARY BY THE DISTRICT.

20. COMMENCEMENT OF CONSTRUCTION OF WATER/SEWER SYSTEMS WITHIN METROPOLITAN DISTRICT:

A) PRIOR TO THE START OF CONSTRUCTION, A PRE-CONSTRUCTION MEETING IS REQUIRED A MINIMUM OF 48 HOURS IN ADVANCE OF COMMENCEMENT OF WORK. A REPRESENTATIVE OF THE OWNER OR DEVELOPER, A REPRESENTATIVE OF THE
CONTRACTOR AND DESIGN ENGINEER ARE REQUIRED TO ATTEND. CONTACT THE DISTRICT TO SCHEDULE THE PRE-CONSTRUCTION MEETING. NO PRE-CONSTRUCTION MEETING CAN BE SCHEDULED PRIOR TO FOUR (4) SIGNED/APPROVED PLAN
SETS ARE RECEIVED BY THE DISTRICT.

B) THE CONTRACTOR IS REQUIRED TO NOTIFY THE DISTRICT A MINIMUM OF 48 HOURS AND A MAXIMUM OF 2 WEEKS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL ALSO NOTIFY AFFECTED UTILITY COMPANIES AT LEAST
48 HOURS PRIOR TO THE START OF CONSTRUCTION ADJACENT TO THE KNOWN UTILITY LINES.

21. TESTING OF FACILITIES:

A) THE CONTRACTOR SHALL NOTIFY THE DISTRICT A MINIMUM OF 48 HOURS AND A MAXIMUM OF 96 HOURS PRIOR TO THE START OF ANY TESTING.

B) ALL SECTIONS OF WATER LINE ARE TO MEET THE FOLLOWING PRESSURE TESTING REQUIREMENTS
- TEST 100 % OF ALL LINES
- MUST PASS PRESSURE TEST TO 200 PSI FOR TWO HOURS (UNLESS OTHERWISE APPROVED ON THE PLANS).

C) ALL SANITARY SEWER FACILITIES ARE TO MEET THE FOLLOWING TESTING REQUIREMENTS
- ALL LINES SHALL BE JET CLEANED PRIOR TO VACUUM OR PRESSURE TESTING
- ALL MANHOLES SHALL BE VACUUM TESTED WITH DISTRICT STAFF PRESENT PRIOR TO CCTV INSPECTION.
- SEWER MAINS TO BE PRESSURE TEST PRIOR TO CCTV INSPECTION
- ALL LINES SHALL BE CCTV INSPECTED AND VIDEO SHALL TO BE SUBMITTED TO THE DISTRICT FOR REVIEW AND APPROVAL.

22. PRELIMINARY ACCEPTANCE SHALL BE DEFINED AS THE POINT IN TIME THAT THE DISTRICT ACCEPTS THE FACILITY FOR USE. ALL SURFACE IMPROVEMENTS AND RESTORATION SHALL BE COMPLETED WITHIN 30 DAYS OF COMMENCEMENT. SHOULD THE CONTRACTOR FAIL TO COMPLETE ALL SURFACE IMPROVEMENTS AND RESTORATION WITHIN 30 DAYS OF COMMENCEMENT OF SERVICE, THE DISTRICT, AT THEIR DISCRETION, MAY ELECT TO COMPLETE THE IMPROVEMENTS AT THE CONTRACTORS COST.

23. FINAL ACCEPTANCE BY THE DISTRICT OF ANY LINE OR SYSTEM SHALL NOT OCCUR UNTIL COMPLETION OF FINAL ASPHALT LAYERS AND/OR FINAL COMPLETION AND/OR RESTORATION OF ALL SURFACE IMPROVEMENTS. THE WARRANTY PERIOD
FOR ALL FACILITIES PRIOR TO FINAL ACCEPTANCE SHALL BE 24 MONTHS COMMENCING AFTER PRELIMINARY ACCEPTANCE.

24. ACCEPTANCE:

A) THE DISTRICT MAY GIVE PRELIMINARY ACCEPTANCE ONCE ALL OF THE TESTS ON ALL THE LINES HAVE BEEN COMPLETED AND A WALK-THRU HAS OCCURRED.

B) A SECOND ACCEPTANCE MAY OCCUR ONCE FIRST LIFT OF ASPHALT GOES DOWN AND A SECOND WALK-THRU OF THE SYSTEM OCCURS. IF ALL FACILITIES ARE CLEAN AND ACCESSIBLE, A FINAL ACCEPTANCE MAY OCCUR (THE DISTRICT MAY
REQUIRE CLEANING AND RE-VIDEO OF THE SYSTEM, DEPENDING ON THE SEVERITY OF THE CONTAMINATION).

25. ALL WATER AND SEWER MAINS, INCLUDING SERVICE LINES, SHALL HAVE "AS-BUILT" DRAWINGS PREPARED AND APPROVED PRIOR TO PRELIMINARY ACCEPTANCE BY THE DISTRICT.

26. ALL COMMERCIAL/BUSINESS DEVELOPMENTS SHALL HAVE AN EIGHT INCH (MIN.) WATER MAIN LOOPED THROUGH THE PROPOSED PROPERTY WITH GATE VALVES LOCATED WHERE THE MAIN ENTERS THE PROPERTY LINE. AN EIGHT INCH SEWER MAIN SHALL BE INSTALLED FOR SERVICE TO COMMERCIAL/BUSINESS DEVELOPMENTS, AND A MANHOLE SHALL BE LOCATED WHERE THE MAIN ENTERS THE PROPERTY. THE END OF THE MAINS SHALL BE MARKED WITH THE APPROPRIATE
COLORED CARSONITE MARKER ALONG WITH TRACER WIRE.

27. AFTER REVIEW AND APPROVAL OF PLANS FOR THE EXTENSION OF LINES, FACILITIES AND/OR SERVICES, CONSTRUCTION MUST BE COMMENCED WITHIN 18 MONTHS FOR RESIDENTIAL SUBDIVISIONS AND 12 MONTHS FOR ANY COMMERCIAL INSTALLATIONS.

28. INSPECTION FEES: CALL THE DISTRICT (719-495-2500) FOR FEE SCHEDULE.

WATER SYSTEM INSTALLATION NOTES

29. ALL WATER AND FORCE MAIN PIPE SHALL BE AWWA C900 PVC, OR EQUAL, PRESSURE CLASS 200. ALL WATER AND FORCE MAIN FITTINGS SHALL HAVE MECHANICAL RESTRAINTS AND THRUST BLOCKS. ALL WATER AND FORCE MAIN PIPE SHALL
HAVE A MINIMUM COVER DEPTH OF FIVE AND ONE-HALF (5.5) FEET.

30. ALL WATER VALVES ASSOCIATED WITH THE POTABLE WATER SYSTEM SHALL BE OPEN CLOCKWISE. ALL VALVES INSTALLED IN LANDSCAPED AREAS AND/OR NOT WITHIN PAVED STREETS SHALL BE MARKED WITH CARSONITE MARKERS. ALL
VALVES ASSOCIATED WITH THE RAW WATER SYSTEM SHALL BE OPEN COUNTERCLOCKWISE AND MARKED WITH CARSONITE MARKERS AS APPLICABLE.

31. THE DEVELOPER OR HIS ENGINEER SHALL LOCATE ALL FIRE HYDRANTS AND SERVICE STUB OUTS FOR FUTURE DEVELOPMENT. ANY REQUIRED REALIGNMENT, (HORIZONTAL OR VERTICAL), SHALL BE AT THE EXPENSE OF THE DEVELOPER. FIRE HYDRANT LOCATION SHALL BE REVIEWED AND APPROVED BY THE APPLICABLE FIRE AUTHORITY.

32. FIRE HYDRANTS SHALL BE OPEN RIGHT WITH 7/8 X 7/8 SQUARE TAPERED ALONG WITH SERVICE CAPS. LUBRICATION TYPE: (GREASE). ACCEPTABLE BRANDS ARE AMERICAN AVK SERIES 2700 (MODERN) AND MUELLER SUPER CENTURION 250.

33. ALL MAIN LINES (PVC & DUCTILE IRON) SHALL BE INSTALLED WITH COATED #12 TRACER WIRE WITH TEST STATIONS AT INTERVALS NO GREATER THAN 500 FT (VALVE BOXES CAN BE USED AT INTERSECTIONS AND SERVICE STUBS).

34. CONTRACTOR SHALL MAKE CONNECTIONS TO EXISTING WATER LINE WITHOUT SHUTDOWN, OR ELSE NOTIFY THE DISTRICT OF ANY SERVICE SHUTDOWNS NECESSARY TO CONNECT TO EXISTING LINES.

35. IRRIGATION SERVICES SHALL HAVE A STOP AND WASTE CURB STOP VALVE INSTALLED ALONG WITH TRACER WIRE EXTENDING BACK TO THE MAIN LINE.

36. COMMENCEMENT OF USE OF WATER LINES AND/OR SYSTEMS:

A) NO WATER FACILITY SHALL BE PLACED IN SERVICE UNTIL AFTER THE COMPLETION OF ALL PRESSURE TESTING, FLUSHING, BAC-T TESTING, COMPACTION TESTING, AND AS-BUILT DRAWINGS ARE SUBMITTED AND APPROVED BY THE DISTRICT.

B) NO WATER FACILITY SHALL BE PLACED IN SERVICE UNTIL ALL SERVICE LINES ARE COMPLETED AND THE FIRST LIFT OF ASPHALT IS COMPLETED OVER THE LINE. IN THE CASE WHERE NO ASPHALT IS TO BE PLACED OVER THE LINE, SURFACE
IMPROVEMENTS SHALL BE COMPLETED PRIOR TO USE OF THE FACILITY.

C) ALL EASEMENTS (PLATTED OR DEEDED) ARE DEDICATED, EXECUTED BY THE DISTRICT, AND RECORDED.

WASTEWATER SYSTEM INSTALLATION NOTES

37. SANITARY SEWER LENGTHS ARE MH CENTER-MH CENTER. ALL SANITARY SEWER PIPES SHALL BE SDR 35 PVC OR EQUAL. SEWER LINES MAY NOT EXCEED 7% GRADE FOR ANY SIZE WITHOUT PRIOR APPROVAL OF THE DISTRICT. ALL NEWLY
CONSTRUCTED RESIDENTIAL SANITARY SEWER TAPS SHALL USE PRE-MANUFACTURED IN-LINE PVC PUSH-ON WYES. TAPPING SADDLES MAY ONLY BE USED FOR TAPPING PRE-EXISTING MAINS.

38. ALL SANITARY SEWER MANHOLES SHALL BE WRAPPED WITH RU116 – RUBR-NEK JOINT WRAP OR EQUIVALENT AND COATED.

39. COMMENCEMENT OF USE OF SEWER LINES AND/OR SYSTEMS:

A) NO SANITARY SEWER FACILITY SHALL BE PLACED IN SERVICE UNTIL THE COMPLETION OF ALL JET CLEANING, PRESSURE TESTING, VACUUM TESTING, CCTV INSPECTION, COMPACTION TESTING, AND AS-BUILT DRAWINGS ARE SUBMITTED AND
APPROVED BY THE DISTRICT.

B) NO SANITARY SEWER FACILITY SHALL BE PLACED IN SERVICE UNTIL ALL SERVICE LINES ARE COMPLETED AND THE FIRST LIFT OF ASPHALT IS COMPLETED OVER THE LINE. IN THE CASE WHERE NO ASPHALT IS TO BE PLACED OVER THE LINE,
ANY REQUIRED SURFACE IMPROVEMENTS SHALL BE COMPLETED PRIOR TO USE OF THE FACILITY.

C) ALL NECESSARY EASEMENTS (PLATTED OR DEEDED) ARE DEDICATED, EXECUTED BY THE DISTRICT, AND RECORDED.

D) DOWNSTREAM PLUG CAN BE REMOVED ONCE FIRST LIFT OF ASPHALT IS DOWN AND THE ABOVE REQUIREMENTS ARE MET.

THE ABOVE GUIDELINES ARE SUBJECT TO CHANGE AT ANY TIME.

TYPICAL STREET SECTION – BENT GRASS MEADOWS DRIVE
URBAN NON-RESIDENTIAL COLLECTOR ROADWAY
N.T.S.

TYPICAL STREET SECTION
URBAN LOCAL ROADWAY
N.T.S.

DETAIL: UTILITY SERVICE LOCATIONS
N.T.S.

UTILITY NOTES

1. CONTRACTOR TO OBTAIN WORK IN THE ROW PERMIT FROM EL PASO COUNTY PRIOR TO CONSTRUCTION.
2. CONTRACTOR TO POTHOLE AND VERIFY EXISTENCE OF OTHER UTILITIES WITHIN ANY PUBLIC RIGHT OF WAYS.
3. 30' UTILITY EASEMENT CONNECTING THE BENT GRASS RESIDENTIAL FILING NO. 2 TO THE E WOODMEN RD R.O.W. TO BE GRANTED PRIOR TO CONSTRUCTION.
4. CONTRACTOR TO MAINTAIN 5.0' MINIMUM COVER OVER ALL WATER MAINS CONSTRUCTED.
5. ALL VALVES SHOWN FOR SCHEMATIC PURPOSES ONLY. NO VALVES SHALL BE INSTALLED IN CURB AND GUTTER OR CROSSPANS.
6. STANDARD WATER SERVICE LOCATIONS TO BE 10' FROM PROPERTY LINE AND EXTENDED THROUGH THE 10' PUBLIC UTILITY EASEMENT.
7. STANDARD SANITARY SEWER SERVICE LOCATIONS TO BE 10' FROM PROPERTY LINE AND EXTENDED THROUGH THE 10' PUBLIC UTILITY EASEMENT.
8. SERVICES SHALL BE MARKED WITH 2"X4" POST AT TERMINATION POINT FOR LOCATION DURING CONNECTION TO RESIDENCE. POSTS SHALL BE SPRAY-PAINTED BLUE FOR WATER AND GREEN FOR SEWER.
9. CURB STOPS ARE NOT TO BE INSTALLED IN CONCRETE CURB, CROSSPANS , SIDEWALKS, OR DRIVEWAYS.
10. SEE PLAN FOR CORNER LOT LOCATIONS.

Galloway
1155 Kelly Johnson Blvd., Suite 305
Colorado Springs, CO 80920
719.900.7220
GallowayUS.com

COLORADO LICENSED PROFESSIONAL ENGINEER
RYAN G. DONAHUE
PE-0057242
02/24/2020

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CHALLENGER HOMES

CONSTRUCTION DOCUMENTS
BENT GRASS RESIDENTIAL FILING NO. 2
FOR
CHALLENGER COMMUNITIES, LLC

BENT GRASS MEADOWS DRIVE & MERIDIAN ROAD
FALCON, CO 80831 - EL PASO COUNTY

#	Date	Issue / Description	Init.

Project No:	CLH000014.20
Drawn By:	JDP
Checked By:	RGD
Date:	2/24/2020

GENERAL NOTES AND TYPICAL ROADWAY SECTIONS

U0.02

LEGEND

- EXISTING PROPERTY BOUNDARY
- PROPOSED PROPERTY BOUNDARY
- PROPOSED R.O.W.
- LOT LINE
- EASEMENT LINE
- 100YR — FEMA 100-YEAR FLOODPLAIN BOUNDARY
- PHASING LINE
- EXISTING STORM SEWER
- PROPOSED STORM SEWER
- W — EXISTING WATER LINE
- W — PROPOSED WATER LINE
- SS — EXISTING SANITARY SEWER
- SS — PROPOSED SANITARY SEWER
- G — EXISTING GAS LINE
- UE — EXISTING UNDERGROUND ELECTRIC LINE
- OHE — EXISTING OVERHEAD ELECTRIC LINE
- X — EXISTING FENCE
- EXISTING SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER MANHOLE
- PROPOSED FIRE HYDRANT AND FITTINGS

N

0 20 50 100
SCALE: 1"=100'

LEGAL DESCRIPTION

BENT GRASS RESIDENTIAL FILING NO. 2. LOCATED IN THE NORTHWEST QUARTER AND SOUTHWEST QUARTER OF SECTION 1 T13S R65W OF THE 6TH PRINCIPAL MERIDIAN, COUNTY OF EL PASO, STATE OF COLORADO

BASIS OF BEARINGS

ALL BEARINGS ARE GRID BEARINGS OF THE COLORADO STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, NORTH AMERICAN DATUM 1983. THE BEARING OF THE LINE BETWEEN THE SOUTHWEST CORNER OF SECTION 1, T13S, R65W AND THE WEST QUARTER CORNER SECTION 1, T13S, R65W IS N00°13'46"W AND MONUMENTED AS SHOWN:

BENCHMARK

THE SOUTHWESTERLY CORNER OF LOT 1 WOODMEN HILLS FILING NO. 4. MONUMENTED BY A YELLOW PLASTIC SURVEYORS CAP ON A NO. 4 REBAR LS# 24954 ELEVATION = 6947.67

CAUTION – NOTICE TO CONTRACTOR

1. ALL UTILITY LOCATIONS SHOWN ARE BASED ON MAPS PROVIDED BY THE APPROPRIATE UTILITY COMPANY AND FIELD SURFACE EVIDENCE AT THE TIME OF SURVEY AND IS TO BE CONSIDERED AN APPROXIMATE LOCATION ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE FIELD LOCATION OF ALL UTILITIES, PUBLIC OR PRIVATE, WHETHER SHOWN ON THE PLANS OR NOT, PRIOR TO CONSTRUCTION. REPORT ANY DISCREPANCIES TO THE ENGINEEER PRIOR TO CONSTRUCTION.
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CHALLENGER HOMES

CONSTRUCTION DOCUMENTS
BENT GRASS RESIDENTIAL FILING NO. 2
FOR
CHALLENGER COMMUNITIES, LLC

BENT GRASS MEADOWS DRIVE & MERIDIAN ROAD
FALCON, CO 80831 - EL PASO COUNTY

#	Date	Issue / Description	Init.

Project No:	CLH000014.20
Drawn By:	JDP
Checked By:	RGD
Date:	2/24/2020

OVERALL UTILITY & PHASING PLAN

U0.03
Sheet 3 of 36

LEGEND

- EXISTING PROPERTY BOUNDARY
- PROPOSED PROPERTY BOUNDARY
- PROPOSED R.O.W.
- LOT LINE
- EASEMENT LINE
- 100YR — FEMA 100-YEAR FLOODPLAIN BOUNDARY
- PHASING LINE
- EXISTING STORM SEWER
- PROPOSED STORM SEWER
- W — EXISTING WATER LINE
- W — W — PROPOSED WATER LINE
- SS — EXISTING SANITARY SEWER
- SS — PROPOSED SANITARY SEWER
- G — EXISTING GAS LINE
- UE — EXISTING UNDERGROUND ELECTRIC LINE
- OHE — EXISTING OVERHEAD ELECTRIC LINE
- X — EXISTING FENCE
- EXISTING SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER MANHOLE
- PROPOSED FIRE HYDRANT AND FITTINGS

N

0 20 50 100
SCALE: 1"=100'

LEGAL DESCRIPTION

BENT GRASS RESIDENTIAL FILING NO. 2. LOCATED IN THE NORTHWEST QUARTER AND SOUTHWEST QUARTER OF SECTION 1 T13S R65W OF THE 6TH PRINCIPAL MERIDIAN, COUNTY OF EL PASO, STATE OF COLORADO

BASIS OF BEARINGS

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BENCHMARK

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CHALLENGER HOMES

CONSTRUCTION DOCUMENTS
BENT GRASS RESIDENTIAL FILING NO. 2
FOR
CHALLENGER COMMUNITIES, LLC

BENT GRASS MEADOWS DRIVE & MERIDIAN ROAD
FALCON, CO 80831 - EL PASO COUNTY

#	Date	Issue / Description	Init.

Project No:	CLH000014.20
Drawn By:	JDP
Checked By:	RGD
Date:	2/24/2020

OVERALL UTILITY & PHASING PLAN

U0.04

LEGEND

- EXISTING PROPERTY BOUNDARY
- PROPOSED PROPERTY BOUNDARY
- PROPOSED R.O.W.
- LOT LINE
- EASEMENT LINE
- 100YR — FEMA 100-YEAR FLOODPLAIN BOUNDARY
- PHASING LINE
- EXISTING STORM SEWER
- PROPOSED STORM SEWER
- W — EXISTING WATER LINE
- W — PROPOSED WATER LINE
- SS — EXISTING SANITARY SEWER
- SS — PROPOSED SANITARY SEWER
- G — EXISTING GAS LINE
- UE — EXISTING UNDERGROUND ELECTRIC LINE
- OHE — EXISTING OVERHEAD ELECTRIC LINE
- X — EXISTING FENCE
- EXISTING SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER MANHOLE
- PROPOSED FIRE HYDRANT AND FITTINGS

LEGAL DESCRIPTION

BENT GRASS RESIDENTIAL FILING NO. 2. LOCATED IN THE NORTHWEST QUARTER AND SOUTHWEST QUARTER OF SECTION 1 T13S R65W OF THE 6TH PRINCIPAL MERIDIAN, COUNTY OF EL PASO, STATE OF COLORADO

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BENCHMARK

THE SOUTHWESTERLY CORNER OF LOT 1 WOODMEN HILLS FILING NO. 4. MONUMENTED BY A YELLOW PLASTIC SURVEYORS CAP ON A NO. 4 REBAR LS# 24954 ELEVATION = 6947.67

CAUTION – NOTICE TO CONTRACTOR

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02/24/2020

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CHALLENGER HOMES

CONSTRUCTION DOCUMENTS
BENT GRASS RESIDENTIAL FILING NO. 2
FOR
CHALLENGER COMMUNITIES, LLC

BENT GRASS MEADOWS DRIVE & MERIDIAN ROAD
FALCON, CO 80831 - EL PASO COUNTY

#	Date	Issue / Description	Init.

Project No:	CLH000014.20
Drawn By:	JDP
Checked By:	RGD
Date:	2/24/2020

OVERALL UTILITY & PHASING PLAN

U0.05

LEGEND

- EXISTING PROPERTY BOUNDARY
- PROPOSED PROPERTY BOUNDARY
- PROPOSED R.O.W.
- LOT LINE
- EASEMENT LINE
- 100YR — FEMA 100-YEAR FLOODPLAIN BOUNDARY
- PHASING LINE
- EXISTING STORM SEWER
- PROPOSED STORM SEWER
- W — EXISTING WATER LINE
- W — PROPOSED WATER LINE
- SS — EXISTING SANITARY SEWER
- SS — PROPOSED SANITARY SEWER
- G — EXISTING GAS LINE
- UE — EXISTING UNDERGROUND ELECTRIC LINE
- OHE — EXISTING OVERHEAD ELECTRIC LINE
- X — EXISTING FENCE
- EXISTING SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER MANHOLE
- PROPOSED FIRE HYDRANT AND FITTINGS

N

0 20 50 100
SCALE: 1"=100'

LEGAL DESCRIPTION

BENT GRASS RESIDENTIAL FILING NO. 2. LOCATED IN THE NORTHWEST QUARTER AND SOUTHWEST QUARTER OF SECTION 1 T13S R65W OF THE 6TH PRINCIPAL MERIDIAN, COUNTY OF EL PASO, STATE OF COLORADO

BASIS OF BEARINGS

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BENCHMARK

THE SOUTHWESTERLY CORNER OF LOT 1 WOODMEN HILLS FILING NO. 4. MONUMENTED BY A YELLOW PLASTIC SURVEYORS CAP ON A NO. 4 REBAR LS# 24954 ELEVATION = 6947.67

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CHALLENGER HOMES

CONSTRUCTION DOCUMENTS
BENT GRASS RESIDENTIAL FILING NO. 2
FOR
CHALLENGER COMMUNITIES, LLC

BENT GRASS MEADOWS DRIVE & MERIDIAN ROAD
FALCON, CO 80831 - EL PASO COUNTY

#	Date	Issue / Description	Init.

Project No:	CLH000014.20
Drawn By:	JDP
Checked By:	RGD
Date:	2/24/2020

OVERALL UTILITY & PHASING PLAN

U0.06
Sheet 6 of 36

LEGEND

- EXISTING PROPERTY BOUNDARY
- PROPOSED PROPERTY BOUNDARY
- PROPOSED R.O.W.
- LOT LINE
- EASEMENT LINE
- FEMA 100-YEAR FLOODPLAIN BOUNDARY
- PHASING LINE
- EXISTING STORM SEWER
- PROPOSED STORM SEWER
- EXISTING WATER LINE
- PROPOSED WATER LINE
- EXISTING SANITARY SEWER
- PROPOSED SANITARY SEWER
- EXISTING GAS LINE
- EXISTING UNDERGROUND ELECTRIC LINE
- EXISTING OVERHEAD ELECTRIC LINE
- EXISTING FENCE
- EXISTING SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER MANHOLE
- PROPOSED FIRE HYDRANT AND FITTINGS

LEGAL DESCRIPTION

BENT GRASS RESIDENTIAL FILING NO. 2. LOCATED IN THE NORTHWEST QUARTER AND SOUTHWEST QUARTER OF SECTION 1 T13S R65W OF THE 6TH PRINCIPAL MERIDIAN, COUNTY OF EL PASO, STATE OF COLORADO

BASIS OF BEARINGS

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BENCHMARK

THE SOUTHWESTERLY CORNER OF LOT 1 WOODMEN HILLS FILING NO. 4. MONUMENTED BY A YELLOW PLASTIC SURVEYORS CAP ON A NO. 4 REBAR LS# 24954 ELEVATION = 6947.67

CAUTION – NOTICE TO CONTRACTOR

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02/24/2020

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CHALLENGER HOMES

CONSTRUCTION DOCUMENTS
BENT GRASS RESIDENTIAL FILING NO. 2
FOR
CHALLENGER COMMUNITIES, LLC

BENT GRASS MEADOWS DRIVE & MERIDIAN ROAD
FALCON, CO 80831 - EL PASO COUNTY

#	Date	Issue / Description	Init.

Project No:	CLH000014.20
Drawn By:	JDP
Checked By:	RGD
Date:	2/24/2020

OVERALL UTILITY & PHASING PLAN

U0.07

Sheet 7 of 36

LEGEND

- EXISTING PROPERTY BOUNDARY
- PROPOSED PROPERTY BOUNDARY
- PROPOSED R.O.W.
- LOT LINE
- EXISTING EASEMENT LINE
- PROPOSED EASEMENT LINE
- FEMA 100-YEAR FLOODPLAIN BOUNDARY
- MATCHLINE
- EXISTING STORM SEWER
- PROPOSED STORM SEWER
- EXISTING WATER LINE
- PROPOSED WATER LINE
- EXISTING SANITARY SEWER
- PROPOSED SANITARY SEWER
- EXISTING GAS LINE
- EXISTING UNDERGROUND ELECTRIC LINE
- EXISTING OVERHEAD ELECTRIC LINE
- EXISTING FENCE
- EXISTING SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER MANHOLE
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT AND FITTINGS
- WATER SERVICE LINE
- SANITARY SEWER SERVICE LINE

N

0 10 20 50

SCALE: 1"=50'

NOTES

1. SEE SHEETS U3.01 – U3.14 FOR ALL SANITARY CROSSING AND PLAN & PROFILE STATIONING.

LEGAL DESCRIPTION

BENT GRASS RESIDENTIAL FILING NO. 2. LOCATED IN THE NORTHWEST QUARTER AND SOUTHWEST QUARTER OF SECTION 1 T13S R65W OF THE 6TH PRINCIPAL MERIDIAN, COUNTY OF EL PASO, STATE OF COLORADO

BASIS OF BEARINGS

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BENCHMARK

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CHALLENGER HOMES

CONSTRUCTION DOCUMENTS
BENT GRASS RESIDENTIAL FILING NO. 2
FOR
CHALLENGER COMMUNITIES, LLC

BENT GRASS MEADOWS DRIVE & MERIDIAN ROAD
FALCON, CO 80831 - EL PASO COUNTY

#	Date	Issue / Description	Init.

Project No:	CLH000014.20
Drawn By:	JDP
Checked By:	RGD
Date:	2/24/2020

SANITARY LAYOUT PLAN

U1.01

KEY MAP
SCALE: 1"=600'

LEGEND

- EXISTING PROPERTY BOUNDARY
- PROPOSED PROPERTY BOUNDARY
- PROPOSED R.O.W.
- LOT LINE
- EXISTING EASEMENT LINE
- PROPOSED EASEMENT LINE
- 100YR — FEMA 100-YEAR FLOODPLAIN BOUNDARY
- MATCHLINE
- EXISTING STORM SEWER
- PROPOSED STORM SEWER
- W — EXISTING WATER LINE
- W — PROPOSED WATER LINE
- SS — EXISTING SANITARY SEWER
- SS — PROPOSED SANITARY SEWER
- G — EXISTING GAS LINE
- UE — EXISTING UNDERGROUND ELECTRIC LINE
- OHE — EXISTING OVERHEAD ELECTRIC LINE
- X — EXISTING FENCE
- EXISTING SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER MANHOLE
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT AND FITTINGS
- W — WATER SERVICE LINE
- S — SANITARY SEWER SERVICE LINE

N

0 10 20 50
SCALE: 1"=50'

NOTES

1. SEE SHEETS U3.01 – U3.14 FOR ALL SANITARY CROSSING AND PLAN & PROFILE STATIONING.

LEGAL DESCRIPTION

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BENCHMARK

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CHALLENGER HOMES

CONSTRUCTION DOCUMENTS
BENT GRASS RESIDENTIAL FILING NO. 2
FOR
CHALLENGER COMMUNITIES, LLC

BENT GRASS MEADOWS DRIVE & MERIDIAN ROAD
FALCON, CO 80831 - EL PASO COUNTY

#	Date	Issue / Description	Init.

Project No:	CLH000014.20
Drawn By:	JDP
Checked By:	RGD
Date:	2/24/2020

SANITARY LAYOUT PLAN

U1.02
Sheet 9 of 36

N

KEY MAP
SCALE: 1"=600'

LEGEND

- EXISTING PROPERTY BOUNDARY
- PROPOSED PROPERTY BOUNDARY
- PROPOSED R.O.W.
- LOT LINE
- EXISTING EASEMENT LINE
- PROPOSED EASEMENT LINE
- FEMA 100-YEAR FLOODPLAIN BOUNDARY
- MATCHLINE
- EXISTING STORM SEWER
- PROPOSED STORM SEWER
- EXISTING WATER LINE
- PROPOSED WATER LINE
- EXISTING SANITARY SEWER
- PROPOSED SANITARY SEWER
- EXISTING GAS LINE
- EXISTING UNDERGROUND ELECTRIC LINE
- EXISTING OVERHEAD ELECTRIC LINE
- EXISTING FENCE
- EXISTING SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER MANHOLE
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT AND FITTINGS
- WATER SERVICE LINE
- SANITARY SEWER SERVICE LINE

N

0 10 20 50
SCALE: 1"=50'

NOTES

1. SEE SHEETS U3.01 – U3.14 FOR ALL SANITARY CROSSING AND PLAN & PROFILE STATIONING.

LEGAL DESCRIPTION

BENT GRASS RESIDENTIAL FILING NO. 2. LOCATED IN THE NORTHWEST QUARTER AND SOUTHWEST QUARTER OF SECTION 1 T13S R65W OF THE 6TH PRINCIPAL MERIDIAN, COUNTY OF EL PASO, STATE OF COLORADO

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BENCHMARK

THE SOUTHWESTERLY CORNER OF LOT 1 WOODMEN HILLS FILING NO. 4. MONUMENTED BY A YELLOW PLASTIC SURVEYORS CAP ON A NO. 4 REBAR LS# 24954 ELEVATION = 6947.67

CAUTION – NOTICE TO CONTRACTOR

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719.900.7220
GallowayUS.com

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ROGER GRANT PAYNE
PE-0024954
PROFESSIONAL ENGINEER
02/24/2020

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CHALLENGER HOMES

CONSTRUCTION DOCUMENTS
BENT GRASS RESIDENTIAL FILING NO. 2
FOR
CHALLENGER COMMUNITIES, LLC

BENT GRASS MEADOWS DRIVE & MERIDIAN ROAD
FALCON, CO 80831 - EL PASO COUNTY

#	Date	Issue / Description	Init.

Project No:	CLH000014.20
Drawn By:	JDP
Checked By:	RGD
Date:	2/24/2020

SANITARY LAYOUT PLAN

U1.03

MATCHLINE – SEE SHEET U1.03

LEGEND

- EXISTING PROPERTY BOUNDARY
- PROPOSED PROPERTY BOUNDARY
- PROPOSED R.O.W.
- LOT LINE
- EXISTING EASEMENT LINE
- PROPOSED EASEMENT LINE
- FEMA 100-YEAR FLOODPLAIN BOUNDARY
- MATCHLINE
- EXISTING STORM SEWER
- PROPOSED STORM SEWER
- EXISTING WATER LINE
- PROPOSED WATER LINE
- EXISTING SANITARY SEWER
- PROPOSED SANITARY SEWER
- EXISTING GAS LINE
- EXISTING UNDERGROUND ELECTRIC LINE
- EXISTING OVERHEAD ELECTRIC LINE
- EXISTING FENCE
- EXISTING SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER MANHOLE
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT AND FITTINGS
- WATER SERVICE LINE
- SANITARY SEWER SERVICE LINE

N

0 10 20 50
SCALE: 1"=50'

NOTES

1. SEE SHEETS U3.01 – U3.14 FOR ALL SANITARY CROSSING AND PLAN & PROFILE STATIONING.

LEGAL DESCRIPTION

BENT GRASS RESIDENTIAL FILING NO. 2. LOCATED IN THE NORTHWEST QUARTER AND SOUTHWEST QUARTER OF SECTION 1 T13S R65W OF THE 6TH PRINCIPAL MERIDIAN, COUNTY OF EL PASO, STATE OF COLORADO

BASIS OF BEARINGS

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02/24/2020

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CHALLENGER HOMES

CONSTRUCTION DOCUMENTS
BENT GRASS RESIDENTIAL FILING NO. 2
FOR
CHALLENGER COMMUNITIES, LLC

BENT GRASS MEADOWS DRIVE & MERIDIAN ROAD
FALCON, CO 80831 - EL PASO COUNTY

#	Date	Issue / Description	Init.

Project No:	CLH000014.20
Drawn By:	JDP
Checked By:	RGD
Date:	2/24/2020

SANITARY LAYOUT PLAN

U1.04

LEGEND

- EXISTING PROPERTY BOUNDARY
- PROPOSED PROPERTY BOUNDARY
- PROPOSED R.O.W.
- LOT LINE
- EXISTING EASEMENT LINE
- PROPOSED EASEMENT LINE
- FEMA 100-YEAR FLOODPLAIN BOUNDARY
- MATCHLINE
- EXISTING STORM SEWER
- PROPOSED STORM SEWER
- EXISTING WATER LINE
- PROPOSED WATER LINE
- EXISTING SANITARY SEWER
- PROPOSED SANITARY SEWER
- EXISTING GAS LINE
- EXISTING UNDERGROUND ELECTRIC LINE
- EXISTING OVERHEAD ELECTRIC LINE
- EXISTING FENCE
- EXISTING SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER MANHOLE
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT AND FITTINGS
- WATER SERVICE LINE
- SANITARY SEWER SERVICE LINE

N

0 10 20 50

SCALE: 1"=50'

NOTES

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GRANT W. PEDERSEN
PE.0036122
02/24/2020

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CHALLENGER HOMES

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BENT GRASS MEADOWS DRIVE & MERIDIAN ROAD
FALCON, CO 80831 - EL PASO COUNTY

#	Date	Issue / Description	Init.

Project No:	CLH000014.20
Drawn By:	JDP
Checked By:	RGD
Date:	2/24/2020

SANITARY LAYOUT PLAN

U1.05

Sheet 12 of 36

H:\Challenger Homes Inc\CO, El Paso County\CLH000014 Bent Grass\CAD\C3\C3-01 Site.dwg , Caleb Johnson , 2/24/2020

LEGEND

- EXISTING PROPERTY BOUNDARY
- PROPOSED PROPERTY BOUNDARY
- PROPOSED R.O.W.
- LOT LINE
- EXISTING EASEMENT LINE
- PROPOSED EASEMENT LINE
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- MATCHLINE
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- PROPOSED STORM SEWER
- EXISTING WATER LINE
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- EXISTING GAS LINE
- EXISTING UNDERGROUND ELECTRIC LINE
- EXISTING OVERHEAD ELECTRIC LINE
- EXISTING FENCE
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- PROPOSED SANITARY SEWER MANHOLE
- EXISTING WATER VALVE
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT AND FITTINGS
- WATER SERVICE LINE
- SANITARY SEWER SERVICE LINE

N

0 10 20 50
SCALE: 1"=50'

LEGAL DESCRIPTION

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BENT GRASS MEADOWS DRIVE & MERIDIAN ROAD
FALCON, CO 80831 - EL PASO COUNTY

#	Date	Issue / Description	Init.

Project No:	CLH000014.20
Drawn By:	JDP
Checked By:	RGD
Date:	2/24/2020

WATER LAYOUT PLAN

U2.01
Sheet 13 of 36

LEGEND

- EXISTING PROPERTY BOUNDARY
- PROPOSED PROPERTY BOUNDARY
- PROPOSED R.O.W.
- LOT LINE
- EXISTING EASEMENT LINE
- PROPOSED EASEMENT LINE
- FEMA 100-YEAR FLOODPLAIN BOUNDARY
- MATCHLINE
- EXISTING STORM SEWER
- PROPOSED STORM SEWER
- EXISTING WATER LINE
- PROPOSED WATER LINE
- EXISTING SANITARY SEWER
- PROPOSED SANITARY SEWER
- EXISTING GAS LINE
- EXISTING UNDERGROUND ELECTRIC LINE
- EXISTING OVERHEAD ELECTRIC LINE
- EXISTING FENCE
- EXISTING SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER MANHOLE
- EXISTING WATER VALVE
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT AND FITTINGS
- WATER SERVICE LINE
- SANITARY SEWER SERVICE LINE

N

0 10 20 50
SCALE: 1"=50'

LEGAL DESCRIPTION

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PE-0057822
PROFESSIONAL ENGINEER
02/24/2020

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CONSTRUCTION DOCUMENTS
BENT GRASS RESIDENTIAL FILING NO. 2
FOR
CHALLENGER COMMUNITIES, LLC

BENT GRASS MEADOWS DRIVE & MERIDIAN ROAD
FALCON, CO 80831 - EL PASO COUNTY

#	Date	Issue / Description	Init.

Project No:	CLH000014.20
Drawn By:	JDP
Checked By:	RGD
Date:	2/24/2020

WATER LAYOUT PLAN

U2.02

N

SCALE: 1"=50'

LEGEND

- EXISTING PROPERTY BOUNDARY
- PROPOSED PROPERTY BOUNDARY
- PROPOSED R.O.W.
- LOT LINE
- EXISTING EASEMENT LINE
- PROPOSED EASEMENT LINE
- FEMA 100-YEAR FLOODPLAIN BOUNDARY
- MATCHLINE
- EXISTING STORM SEWER
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- PROPOSED SANITARY SEWER
- EXISTING GAS LINE
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- EXISTING FENCE
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- EXISTING WATER VALVE
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT AND FITTINGS
- WATER SERVICE LINE
- SANITARY SEWER SERVICE LINE

UTILITY ENLARGEMENT

SCALE: 1"=10'

LEGAL DESCRIPTION

BENT GRASS RESIDENTIAL FILING NO. 2, LOCATED IN THE NORTHWEST QUARTER AND SOUTHWEST QUARTER OF SECTION 1 T13S R65W OF THE 6TH PRINCIPAL MERIDIAN, COUNTY OF EL PASO, STATE OF COLORADO

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02/24/2020

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BENT GRASS MEADOWS DRIVE & MERIDIAN ROAD
FALCON, CO 80831 - EL PASO COUNTY

#	Date	Issue / Description	Init.

Project No:	CLH000014.20
Drawn By:	JDP
Checked By:	RGD
Date:	2/24/2020

WATER LAYOUT PLAN

U2.03

Sheet 15 of 36

MATCHLINE – SEE SHEET U2.03

LEGEND

- EXISTING PROPERTY BOUNDARY
- PROPOSED PROPERTY BOUNDARY
- PROPOSED R.O.W.
- LOT LINE
- EXISTING EASEMENT LINE
- PROPOSED EASEMENT LINE
- FEMA 100-YEAR FLOODPLAIN BOUNDARY
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N

0 10 20 50
SCALE: 1"=50'

LEGAL DESCRIPTION

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BENT GRASS MEADOWS DRIVE & MERIDIAN ROAD
FALCON, CO 80831 - EL PASO COUNTY

#	Date	Issue / Description	Init.

Project No:	CLH000014.20
Drawn By:	JDP
Checked By:	RGD
Date:	2/24/2020

WATER LAYOUT PLAN

U2.04

REVERSE ANCHOR DETAIL

Drawn: GSM	Revised:	WOODMEN HILLS	WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS
Date: JAN. 2011	Revised:		W-15
Scale: N.T.S.	Revised:		

BENT GRASS WM
STA: 16+00 - 21+00
SCALE: H: 1"=40' V: 1"=10'

LEGEND

- EXISTING PROPERTY BOUNDARY
- PROPOSED PROPERTY BOUNDARY
- PROPOSED R.O.W.
- LOT LINE
- EXISTING EASEMENT LINE
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ALL BEARINGS ARE GRID BEARINGS OF THE COLORADO STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, NORTH AMERICAN DATUM 1983. THE BEARING OF THE LINE BETWEEN THE SOUTHWEST CORNER OF SECTION 1, T13S, R65W AND THE WEST QUARTER CORNER SECTION 1, T13S, R65W IS N00°13'46"W AND MONUMENTED AS SHOWN:

BENCHMARK

THE SOUTHWESTERLY CORNER OF LOT 1 WOODMEN HILLS FILING NO. 4. MONUMENTED BY A YELLOW PLASTIC SURVEYORS CAP ON A NO. 4 REBAR LS# 24954 ELEVATION = 6947.67

CAUTION – NOTICE TO CONTRACTOR

1. ALL UTILITY LOCATIONS SHOWN ARE BASED ON MAPS PROVIDED BY THE APPROPRIATE UTILITY COMPANY AND FIELD SURFACE EVIDENCE AT THE TIME OF SURVEY AND IS TO BE CONSIDERED AN APPROXIMATE LOCATION ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE FIELD LOCATION OF ALL UTILITIES, PUBLIC OR PRIVATE, WHETHER SHOWN ON THE PLANS OR NOT, PRIOR TO CONSTRUCTION. REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO CONSTRUCTION.
2. WHERE A PROPOSED UTILITY CROSSES AN EXISTING UTILITY, IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF SUCH EXISTING UTILITY, EITHER THROUGH POTHOLING OR ALTERNATIVE METHOD. REPORT INFORMATION TO THE ENGINEER PRIOR TO CONSTRUCTION.

811 Know what's below. Call before you dig.

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RICHARD GRANT DUNN
PE-0036722
02/24/2020

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CHALLENGER HOMES

CONSTRUCTION DOCUMENTS
BENT GRASS RESIDENTIAL FILING NO. 2
FOR
CHALLENGER COMMUNITIES, LLC

BENT GRASS MEADOWS DRIVE & MERIDIAN ROAD
FALCON, CO 80831 - EL PASO COUNTY

#	Date	Issue / Description	Init.

Project No:	CLH000014.20
Drawn By:	JDP
Checked By:	RGD
Date:	2/24/2020

WATER LOWERING

U2.05
Sheet 17 of 36

LOCATION MAP

SCALE: 1"=600'

AVENA RD – CL – 50' ROW
STA: 0+50 – 11+33.64
SCALE: H: 1"=40' V: 1"=10'

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FALCON, CO 80831 - EL PASO COUNTY

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Project No:	CLH000014.20
Drawn By:	JDP
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Date:	2/24/2020

AVENA ROAD SANITARY
PLAN & PROFILE

U3.01

Sheet 18 of 36

BOSSETT DR – CL – 50' ROW
STA: 0+50 – 8+51.66
SCALE: H: 1"=40' V: 1"=10'

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FALCON, CO 80831 - EL PASO COUNTY

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BOSSETT DRIVE SANITARY PLAN & PROFILE

U3.02

Sheet 19 of 36

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BENT GRASS MEADOWS DRIVE & MERIDIAN ROAD
FALCON, CO 80831 - EL PASO COUNTY

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BENT GRASS MEADOWS DRIVE SANITARY PLAN & PROFILE

U3.03

Sheet 20 of 36

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BENT GRASS MEADOWS DRIVE & MERIDIAN ROAD
FALCON, CO 80831 - EL PASO COUNTY

#	Date	Issue / Description	Init.

Project No:	CLH000014.20
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BENT GRASS MEADOWS DRIVE SANITARY PLAN & PROFILE

U3.04

LOCATION MAP

SCALE: 1"=600'

BARLEY COURT – CL – 50' ROW
STA: 1+00 – 7+25
SCALE: H: 1"=40' V: 1"=10'

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BENT GRASS MEADOWS DRIVE & MERIDIAN ROAD
FALCON, CO 80831 - EL PASO COUNTY

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Project No:	CLH000014.20
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BARLEY COURT SANITARY PLAN & PROFILE

U3.05

Sheet 22 of 36

LOCATION MAP

SCALE: 1"=600'

NIEBRARA - CL - 50' ROW
STA: 0+50 - 5+16.78
SCALE: H: 1"=40' V: 1"=10'

ANSLEY CT - CL - 50' ROW
STA: 1+00 - 4+00
SCALE: H: 1"=40' V: 1"=10'

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FALCON, CO 80831 - EL PASO COUNTY

#	Date	Issue / Description	Init.

Project No:	CLH000014.20
Drawn By:	JDP
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NIEBRARA DRIVE &
ANSLEY COURT SANITARY
PLAN & PROFILE

U3.06

Sheet 23 of 36

LOCATION MAP

SCALE: 1"=600'

BERWYN DR SOUTH - CL - 50' ROW
STA: 1+00 - 11+50
SCALE: H: 1"=40' V: 1"=10'

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FALCON, CO 80831 - EL PASO COUNTY

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BERWYN DRIVE SANITARY
PLAN & PROFILE

U3.07

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H:\Challenger Homes Inc\CO, El Paso County\CLH000014.20\Bent Grass\CAD\CD\C3D\El Paso County\CLH14.20p_Berwyn Drive-Cross\Bent Grass - Cards Johnson - 2/24/2020

LOCATION MAP

SCALE: 1"=600'

BERWYN DR SOUTH - CL - 50' ROW
STA: 10+00 - 18+65.88
SCALE: H: 1"=40' V: 1"=10'

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FALCON, CO 80831 - EL PASO COUNTY

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Drawn By:	JDP
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Date:	2/24/2020

BERWYN DRIVE SANITARY PLAN & PROFILE

U3.08

Sheet 25 of 36

LOCATION MAP

SCALE: 1"=600'

SILVER GRASS DR – CL – 50' ROW
STA: 1+00 – 9+00
SCALE: H: 1"=40' V: 1"=10'

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CHALLENGER HOMES

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BENT GRASS MEADOWS DRIVE & MERIDIAN ROAD
FALCON, CO 80831 - EL PASO COUNTY

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Project No:	CLH000014.20
Drawn By:	JDP
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SILVER GRASS DRIVE
SANITARY PLAN & PROFILE

U3.09

LEMON GRASS RD - CL - 60' ROW
STA: 1+00 - 3+45.28
SCALE: H: 1"=40' V: 1"=10'

SILVER GRASS DR - CL - 50' ROW, STA: 9+00 - 15+14.90, SCALE: H: 1"=40' V: 1"=10'

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BENT GRASS MEADOWS DRIVE & MERIDIAN ROAD
FALCON, CO 80831 - EL PASO COUNTY

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Project No:	CLH000014.20
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SILVER GRASS DRIVE & LEMON GRASS ROAD SANITARY PLAN & PROFILE

U3.10

LOCATION MAP

SCALE: 1"=600'

WILLMORE DR EAST - CL - 60' ROW
STA: 0+50 - 6+85.83
SCALE: H: 1"=40' V: 1"=10'

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BENT GRASS MEADOWS DRIVE & MERIDIAN ROAD
FALCON, CO 80831 - EL PASO COUNTY

#	Date	Issue / Description	Init.

Project No:	CLH000014.20
Drawn By:	JDP
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Date:	2/25/2020

WILMORE DRIVE SANITARY PLAN & PROFILE

U3.11

Sheet 28 of 36

LOCATION MAP
SCALE: 1"=600'

THEDFORD CT - CL - 50' ROW
STA: 0+50 - 5+60.99
SCALE: H: 1"=40' V: 1"=10'

SIKY THRED RD EAST - CL - 50' ROW
STA: 0+50 - 3+57.76
SCALE: H: 1"=40' V: 1"=10'

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BENT GRASS MEADOWS DRIVE & MERIDIAN ROAD
FALCON, CO 80831 - EL PASO COUNTY

#	Date	Issue / Description	Init.

Project No:	CLH000014.20
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Date:	2/25/2020

THEDFORD COURT & SILKY THREAD ROAD SANITARY PLAN & PROFILE

U3.12
Sheet 29 of 36

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PE.0.0.0

LOCATION MAP

SCALE: 1"=600'

SCALE: 1"=40'

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BENT GRASS MEADOWS DRIVE & MERIDIAN ROAD
FALCON, CO 80831 - EL PASO COUNTY

#	Date	Issue / Description	Init.

Project No:	CLH000014.20
Drawn By:	JDP
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Date:	2/24/2020

RIGHT OF WAY
CONNECTION SANITARY
PLAN & PROFILE

U3.14

Sheet 31 of 36

GENERAL NOTES:

1. HYDRANT NOZZLE SHALL BE POSITIONED AT RIGHT ANGLES TO THE CURB. IF NO CURB OR SIDEWALK EXISTS, NOZZLE SHALL BE PLACED AT RIGHT ANGLES TO STREET OR ALLEY.
2. HYDRANTS INSTALLED AT FLAG LOT LINES SHALL BE OFFSET 3' FROM THE LOT LINE (AWAY FROM STEM).
3. HYDRANTS WILL BE PLACED A MINIMUM OF 5.0 FT. FROM ANY UTILITY OR DRAINAGE STRUCTURE.
4. EASEMENTS MUST BE PROVIDED FOR ANY PUBLIC HYDRANT WHICH IS CLOSER THAN 5.0 FT. TO THE RIGHT-OF-WAY LINE.
5. ANY HYDRANTS BEING INSTALLED WITH CONDITIONS OTHER THAN THOSE MENTIONED AND/OR DETAILED BELOW WILL BE REQUIRE SIGNED APPROVAL FROM THE DISTRICT AND THE FIRE DEPARTMENT.

LOT LINE LOCATIONS

CORNER LOCATIONS

FIRE HYDRANT LOCATIONS

Drawn: CDM	Revised:	WOODMEN HILLS METROPOLITAN DISTRICT — WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS	W-1
Date: JAN 2011	Revised:		
Scale: N.T.S.	Revised:		

FIRE HYDRANT INSTALLATION

Drawn: CDM	Revised:	WOODMEN HILLS METROPOLITAN DISTRICT — WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS	W-2
Date: JAN 2011	Revised:		
Scale: N.T.S.	Revised:		

TAPERED SQUARE NUT. USE ONLY DEFINITE PURPOSE HYDRANT WRENCH THAT EXACTLY FITS THE NUT. DO NOT USE A GENERIC HYDRANT WRENCH WITH ADJUSTABLE CORNER BOLT. DO NOT USE A CRESCENT WRENCH OR PIPE WRENCH.

FIRE HYDRANT SPECIFICATIONS

Drawn: CDM	Revised:	WOODMEN HILLS METROPOLITAN DISTRICT — WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS	W-3
Date: JAN 2011	Revised:		
Scale: N.T.S.	Revised:		

GENERAL NOTES:

1. ON ANY VALVE INSTALLATION NEAR A FITTING THE VALVE SHALL BE ANCHORED BY RODS, REVERSE ANCHOR, AND MECHANICAL JOINT RESTRAINTS. 3/4" ALL-THREAD RODS SHALL BE USED WITH FIG. 7 BOLTS OR APPROVED DUCTLE TIE-LUGS FOR DEAD-END VALVES AND/OR PLUGS. ALL METALLIC COMPONENTS SHALL BE WRAPPED IN POLYETHYLENE TUBING.
2. ANCHOR PIPE OR FOSTER COUPLINGS MAY BE SUBSTITUTED FOR SPACER PIPE AND RODS.
3. THE CONCRETE REVERSE ANCHORS USED SHALL BE SIZED AS INDICATED ON DRAWING "W-15".
4. SEE DRAWINGS "W-24" AND "W-25" FOR APPLICATION OF MECHANICAL JOINT RESTRAINTS.
5. SEE DRAWING "W-5" FOR VALVE BOX INSTALLATION.

VALVE INSTALLATION & LOCATION

Drawn: CDM	Revised:	WOODMEN HILLS METROPOLITAN DISTRICT — WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS	W-4
Date: JAN 2011	Revised:		
Scale: N.T.S.	Revised:		

NOTES:

1. SUP-PIPE, 5-1/4" I.D. "SHAFT" TYLER PIPE SERIES 564-A OR EQUIVALENT APPROVED BY THE DISTRICT.
2. MAIN LINE FIRE HYDRANT VALVES AND VALVE BOXES SHALL BE LOCATED IN AND UNDER THE DRIVING SURFACE OF THE STREET, NOT IN THE CURB PAN, CURB, OR BEHIND THE CURB.
3. SEE DRAWING "W-6" FOR TRACER WIRE INSTALLATION AT VALVE BOXES.

VALVE BOX INSTALLATION

Drawn: CDM	Revised:	WOODMEN HILLS METROPOLITAN DISTRICT — WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS	W-5
Date: JAN 2011	Revised:		
Scale: N.T.S.	Revised:		

FIELD INSTALLATION OF POLYETHYLENE WRAP

POLYETHYLENE WRAP

Drawn: CDM	Revised:	WOODMEN HILLS METROPOLITAN DISTRICT — WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS	W-6
Date: JAN 2011	Revised:		
Scale: N.T.S.	Revised:		

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CHALLENGER HOMES

CONSTRUCTION DOCUMENTS
BENT GRASS RESIDENTIAL FILING NO. 2
FOR
CHALLENGER COMMUNITIES, LLC

BENT GRASS MEADOWS DRIVE & MERIDIAN ROAD
FALCON, CO 80831 - EL PASO COUNTY

#	Date	Issue / Description	Init.

Project No:	CLH000014.20
Drawn By:	JDP
Checked By:	RGD
Date:	2/24/2020

UTILITY DETAILS

U4.01

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ELEVATION

SECTION A–A

NOTES:

1. CADWELD CONNECTION TO BE PRIMED AND COATED CAREFULLY. PACKAGED ANODE SHOULD BE COVERED WITH FINE SOIL CONTAINING NO ROCKS OR DIRT CLUMPS, TAMPED.
2. WHEN ANODES ARE REQUIRED WITH METAL FITTINGS AND APPURTENANCES TOGETHER WITH PVC PIPE INSTALLATION, THE ANODES SHALL BE PLACED AND ATTACHED TO THE METAL FITTINGS AND APPURTENANCES. ONLY ANODES 10 LBS. ANODES CAN BE USED FOR METAL FITTINGS 12" AND LESS IN DIAMETER AND 17LBS. ANODES FOR METAL FITTINGS GREATER THAN 12" DIAMETER WHEN USING PVC PIPE.
3. PACKAGED ANODE TO BE WETTED AND COVERED WITH SOIL PRIOR TO BACKFILLING.

BONDING JOINT & ANODE INSTALLATION

Drawn: GDM	Revised:	WOODMEN HILLS METROPOLITAN DISTRICT — WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS	W–7
Date: JAN 2011	Revised:		
Scale: N.T.S.	Revised:		

TRACER WIRE INSTALLATION DETAILS

Drawn: GDM	Revised:	WOODMEN HILLS METROPOLITAN DISTRICT — WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS	W–9
Date: JAN 2011	Revised:		
Scale: N.T.S.	Revised:		

VOL. (yds)	A	B (0'-6" ≤ C ≤ 2'-0")	B (2'-0" < C ≤ 3'-0")	B (3'-0" < C ≤ 4'-0")
¼	12"–9"	10"–10"	¾	¾
⅓	12"–9"	1'-0"*	¾	¾
½	12"–9"	1'-4"	1'-0"	¾
¾	1'-4"	1'-8"	1'-4"	1'-0"
1	1'-4"	2'-0"	1'-7"	1'-4"(3)
1¼	1'-10"	2'-11"	2'-0"	1'-10"
1½	2'-3"	3'-3"	2'-11"	2'-4"
1¾	2'-9"	3'-8"	3'-1"	2'-8"
2	3'-10"	3'-7"	3'-3"	2'-8"
2¼	3'-3"	3'-8"	3'-4"	2'-10"
2½	3'-4"	3'-11"	3'-7"	3'-0"
2¾	3'-9"	3'-11"	3'-7"	3'-0"
3	3'-10"	4'-1"	3'-9"	3'-2"
3¼	3'-3"	4'-1"	3'-9"	3'-2"
3½	3'-4"	4'-3"	3'-11"	3'-4"
3¾	3'-7"	4'-6"	4'-0"	3'-5"
4	3'-11"		4'-0"	3'-5"
4½	4'-1"		4'-0"	3'-6"
4¾	4'-4"		4'-0"	3'-6"
5	4'-6"		4'-1"	3'-7"

VOL. (yds)	A	B (0'-6" ≤ C ≤ 2'-0")	B (2'-0" < C ≤ 3'-0")	B (3'-0" < C ≤ 4'-0")
5	8'-8"		4'-2"	3'-8"
5¼	8'-11"		4'-2"	3'-8"
5½	9'-1"		4'-3"	3'-9"
5¾	9'-3"		4'-4"	3'-10"
6	9'-4"		4'-5"	3'-11"*
6¼	9'-6"		4'-6"	4'-0"
6½	9'-8"		4'-6"	4'-0"
6¾	9'-11"		4'-6"	4'-0"
7	10'-1"		4'-6"	4'-0"
7¼	10'-3"		4'-7"	4'-1"
7½	10'-4"		4'-8"	4'-2"
7¾	10'-6"		4'-8"	4'-3"
8	10'-8"		4'-10"	4'-4"
8¼	10'-8"		4'-10"	4'-4"
8½	10'-8"		4'-11"	4'-5"
8¾	10'-11"		4'-11"	4'-5"
9	11'-1"		4'-11"	4'-5"
9¼	11'-2"		5'-0"	4'-6"
9½	11'-4"		5'-0"	4'-6"
9¾	11'-4"		5'-0"	4'-6"
10	11'-6"		5'-0"	4'-6"

ALL WATER MAINS GREATER THAN 12" INCHES IN DIAMETER SHALL HAVE THRUST BLOCK DESIGNED & SHOWN ON THE CONSTRUCTION DOCUMENTS

REF VOLUMES ABOVE FOR 1/4, 1/2 & 1 CUY.

FITTING	4"	6"	8"	12"
TEE	⅙ yd.	½ yd.	⅔ yd.	1 yd.
90° BEND	⅙ yd.	½ yd.	1 ¼ yd.	3 yd.
45° BEND	⅙ yd.	½ yd.	¾ yd.	1 ½ yd.
22-1/2° BEND	⅙ yd.	⅙ yd.	⅙ yd.	⅓ yd.
11-1/4° BEND	⅙ yd.	⅙ yd.	⅙ yd.	⅙ yd.

THRUST BLOCK DATA

Drawn: GDM	Revised:	WOODMEN HILLS METROPOLITAN DISTRICT — WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS	W–10
Date: JAN 2011	Revised:		
Scale: N.T.S.	Revised:		

CONCRETE THRUST BLOCKS

WATER MAIN AND TAP SIZE COMBINATIONS WHICH REQUIRE A CONCRETE THRUST REACTION BLOCK BEHIND THE MAIN AT THE TAPPING SLEEVE OR SADDLE.

ALL WATER MAINS

INDICATES CONCRETE THRUST BLOCK REQUIRED

ANY THRUST REACTION BLOCK REQUIREMENTS FOR WATER MAIN AND TAP SIZE COMBINATIONS OTHER THAN THOSE SHOWN ABOVE WILL REQUIRE SPECIAL DESIGN APPROVAL BY THE DISTRICT.

THRUST BLOCKS REQUIRED FOR TAPS

Drawn: GDM	Revised:	WOODMEN HILLS METROPOLITAN DISTRICT — WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS	W–11
Date: JAN 2011	Revised:		
Scale: N.T.S.	Revised:		

TYPICAL TRENCH SECTION
SCALE: N.T.S.

PIPE DIAMETER	MINIMUM WIDTH	MAXIMUM WIDTH
4"	2'-0"	3'-0"
6"	2'-0"	3'-0"
8"	2'-0"	3'-0"
12"	2'-6"	3'-0"
12"	2'-6"	3'-0"
18"	3'-0"	3'-6"
24"	3'-0"	4'-3"

UNSTABLE TRENCH BEDDING DETAIL
SCALE: N.T.S.

TYPICAL TRENCH CROSS-SECTION

Drawn: GDM	Revised:	WOODMEN HILLS METROPOLITAN DISTRICT — WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS	W–12
Date: JAN 2011	Revised:		
Scale: N.T.S.	Revised:		

DETAIL "A"
N.T.S.

NOTES:

1. IF APPROPRIATE LOCATION FOR DISCHARGED WATER CANNOT BE REACHED BY ROLLING THE BEND, ADDITIONAL BENDS MAY BE REQUIRED BY THE INSPECTOR.
2. COAT TIE RODS, BEAM AND BLACK IRON PIPE WITH EPOXY POLYAMIDE COATING, 10 MILS MIN.
3. ENTIRE BLOW-OFF ASSEMBLY MUST BE FULLY SUPPORTED. CONCRETE STEPPING STONES MAY BE REQUIRED.
4. PIPE DOPE APPROVED FOR USE IN POTABLE WATER SYSTEMS MUST BE USED ON ALL THREADED JOINTS.

TEMP & PERMANENT BLOW-OFF ASSEMBLIES FOR 6" & 8" MAINS

Drawn: GDM	Revised:	WOODMEN HILLS METROPOLITAN DISTRICT — WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS	W–18
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02/24/2020

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CHALLENGER HOMES

CONSTRUCTION DOCUMENTS
BENT GRASS RESIDENTIAL FILING NO. 2
FOR
CHALLENGER COMMUNITIES, LLC

BENT GRASS MEADOWS DRIVE & MERIDIAN ROAD
FALCON, CO 80831 - EL PASO COUNTY

#	Date	Issue / Description	Init.

Project No:	CLH000014.20
Drawn By:	JDP
Checked By:	RGD
Date:	2/24/2020

UTILITY DETAILS

U4.02

PLAN VIEW
N.T.S.

PROFILE VIEW
N.T.S.

PIPE TAPPING DETAIL

Drawn: GDM	Revised:	WOODMEN HILLS METROPOLITAN DISTRICT — WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS	W-21
Date: JAN 2011	Revised:		
Scale: N.T.S.	Revised:		

PLAN VIEW
N.T.S.

PROFILE VIEW
N.T.S.

CUL-DE-SAC BLOW-OFF DETAIL

Drawn: GDM	Revised:	WOODMEN HILLS METROPOLITAN DISTRICT — WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS	W-22
Date: JAN 2011	Revised:		
Scale: N.T.S.	Revised:		

PIPE DIA. (IN.)	PRESS. CLASS (PSI)	"A" (IN.)	"D" (IN.)	H.S. ROD "B" (IN.)	H.S. ROD "C" (IN.)	H.S. ROD ROD DIA. (IN.)	M.S. ROD "E" (IN.)	M.S. ROD "F" (IN.)	M.S. ROD ROD DIA. (IN.)	"R" (IN.)	"S" (IN.)	"U" (IN.)	"W" (IN.)	NO REQ'D (EA)
6	150	1-15/16	2-1/4	1	7/8	3/4	1	7/8	3/4	7/8	7/8	3-3/4	3/4	2
	300	1-3/8	2-3/4	1	1	7/8	1	1	7/8	7/8	7/8	4-7/16	1	
8	150	2-1/4	2-3/4	1	7/8	3/4	1	7/8	3/4	1	7/8	4-7/8	3/4	2
	300	1-11/16	2-7/8	1	1	7/8	1	1	7/8	1	1	5-1/2	1	
12	150	2-3/16	2-3/4	1-1/4	1-1/8	1	1-1/4	1-1/8	1	1-1/8	1	7-1/4	7/8	2
	300	1-3/4	3-3/4	1-3/8	1-1/4	1-1/2	1-3/8	1-1/4	1-1/2	1-1/4	1-1/8	7-5/8	1-1/4	
16	150	2-1/16	2-3/4	1-1/2	1-3/8	1-1/4	1-1/2	1-3/8	1-1/4	1-1/4	1-1/8	9-3/8	1-1/8	3
	300	1-3/4	4-1/4	1-1/2	1-1/2	1-3/8	1-1/2	1-1/2	1-3/8	1-1/2	1-3/8	9-7/8	1-1/2	
18	150	2-1/4	2-1/2		1-1/8	1		1-1/8	1		1-1/8	10	1-1/8	4
	300	1-7/8	3-3/4	1-1/2	1-1/2	1-1/2	1-1/2	1-1/2	1-1/2	1-1/2	1-3/8	10-3/16	2	4
20	150	2-5/8	1-15/16		1-1/8	1		1-1/8	1		1-1/4	11-1/8	1-1/4	4
	300	2	3-1/16	1-3/8	1-9/16	1-1/2	1-3/8	1-9/16	1-1/2	1-3/8	1-3/8	10-1/2	2-1/2	4
24	150	2-5/16	2-5/8		1-1/8	1		1-1/8	1		1-3/8	13-1/4	1-1/4	6
	300	2-5/16	3-1/8	1-1/2	1-9/16	1-1/2	1-1/2	1-9/16	1-1/2	1-1/2	1-5/8	12-1/2	2-1/4	6

NOTES:
1. M.S. MEANS MILD STEEL ROD, ASTM STANDARD DESIGNATION A-36; NUTS SHALL BE ASTM STANDARD DESIGNATION A-307
2. H.S. MEANS HIGH STRENGTH STEEL ROD, ASTM STANDARD DESIGNATION A-193 GRADE B-7; NUTS SHALL BE ASTM STANDARD DESIGNATION A-193 GRADE 2-HM

FLANGE – LUG DETAIL

Drawn: GDM	Revised:	WOODMEN HILLS METROPOLITAN DISTRICT — WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS	W-23
Date: JAN 2011	Revised:		
Scale: N.T.S.	Revised:		

INSTALLATION FOR BENDS

NOTE: ALL JOINTS BETWEEN HYDRANT AND TEE MUST BE RESTRAINED.

INSTALLATION FOR BENDS

NOTE: FOR LINE VALVE INSTALLATIONS WITHOUT LOWERING, JOINT RESTRAINTS SHALL BE USED WHERE REQUIRED BY THE DISTRICT.

INSTALLATION FOR LINE VALVE & LOWERING

CROSS INSTALLATION

TEE INSTALLATION

NOTES:
1. MECHANICAL JOINTS SHALL BE APPROVED ACCORDING TO MATERIAL SPECIFICATION FOR DIP AND PVC PIPE.
2. LENGTH OF PIPE REQUIRING JOINT RESTRAINT SHALL BE DETERMINED FROM CHART ON DRAWING W-25.
3. RESTRAINED JOINT PVC PIPE SHALL NOT BE USED FOR LOWERINGS.

APPLICATIONS FOR MECHANICAL JOINT RESTRAINTS

Drawn: GDM	Revised:	WOODMEN HILLS METROPOLITAN DISTRICT — WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS	W-24
Date: JAN 2011	Revised:		
Scale: N.T.S.	Revised:		

RESTRAINED M.J. PIPE LENGTH (FT)

6-INCH DUCTILE IRON AND PVC

TYPE OF FITTING	STATIC PRESSURE (PSI) <100	100-150	150-200
90° BEND, TEE, VALVE OR PLUG	12	18	24
45° BEND	5	8	10
22-1/2° BEND	2	4	5
11-1/4° BEND	1	2	2

16-INCH DUCTILE IRON AND PVC

TYPE OF FITTING	STATIC PRESSURE (PSI) <100	100-150	150-200
90° BEND, TEE, VALVE OR PLUG	29	43	58
45° BEND	12	18	24
22-1/2° BEND	6	9	12
11-1/4° BEND	3	4	6

8-INCH DUCTILE IRON AND PVC

TYPE OF FITTING	STATIC PRESSURE (PSI) <100	100-150	150-200
90° BEND, TEE, VALVE OR PLUG	16	24	32
45° BEND	7	10	13
22-1/2° BEND	3	5	6
11-1/4° BEND	2	2	3

18-INCH DUCTILE IRON AND PVC

TYPE OF FITTING	STATIC PRESSURE (PSI) <100	100-150	150-200
90° BEND, TEE, VALVE OR PLUG	32	48	64
45° BEND	14	20	27
22-1/2° BEND	7	10	13
11-1/4° BEND	3	5	7

12-INCH DUCTILE IRON AND PVC

TYPE OF FITTING	STATIC PRESSURE (PSI) <100	100-150	150-200
90° BEND, TEE, VALVE OR PLUG	23	34	45
45° BEND	9	14	19
22-1/2° BEND	5	7	9
11-1/4° BEND	2	3	4

20-INCH DUCTILE IRON AND PVC

TYPE OF FITTING	STATIC PRESSURE (PSI) <100	100-150	150-200
90° BEND, TEE, VALVE OR PLUG	35	52	70
45° BEND	15	22	29
22-1/2° BEND	7	10	14
11-1/4° BEND	3	5	7

24-INCH DUCTILE IRON AND PVC

TYPE OF FITTING	STATIC PRESSURE (PSI) <100	100-150	150-200
90° BEND, TEE, VALVE OR PLUG	41	61	81
45° BEND	17	25	34
22-1/2° BEND	8	12	16
11-1/4° BEND	4	6	8

NOTES:
1. PRESSURES GREATER THAN 200 PSI REQUIRE SPECIAL DESIGN APPROVED BY THE DISTRICT.
2. LENGTH IS BASED ON MINIMUM 5'-0" OF GROUND COVER AND SOIL COMPACTED ACCORDING TO SECTION 5.15 OF THESE SPECIFICATIONS.
3. APPROVED METHODS OF RESTRAINED PIPE BEYOND INITIAL FITTING SHALL BE:
   A. FOR DUCTILE IRON PIPE, 1100 SERIES MEGALUG BY EBAA IRON OR EQUAL ON MECHANICAL JOINT PIPE OR DOUBLE 1100 SERIES MEGALUG BY EBAA IRON OR EQUAL ON PUSH ON JOINT PIPE.
   B. FOR PVC PIPE, SERIES 1500 OR SERIES 2800 RESTRAINTS BY EBAA IRON OR EQUAL.

RESTRAINED MJ PIPE LENGTH DATA

Drawn: GDM	Revised:	WOODMEN HILLS METROPOLITAN DISTRICT — WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS	W-25
Date: JAN 2011	Revised:		
Scale: N.T.S.	Revised:		

NOTES:
1. WATER SERVICE TO BE 10' FROM "DOWNSTREAM" PROPERTY LINE AND EXTENDED TO WHMD UTILITY EASEMENT LINE.
2. SEWER SERVICE TO BE PLACED APPROXIMATELY IN THE MIDDLE OF THE LOT AND EXTENDED TO WHMD UTILITY EASEMENT LINE.
3. SERVICES SHALL BE MARKED WITH 2"x4" POST AT TERMINATION POINT FOR LOCATION DURING CONNECTION TO RESIDENCE. POSTS SHALL BE SPRAY-PAINTED BLUE FOR WATER AND GREEN FOR SEWER.

UTILITY SERVICE LOCATIONS

Drawn: GDM	Revised:	WOODMEN HILLS METROPOLITAN DISTRICT — WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS	W-39
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CHALLENGER HOMES

CONSTRUCTION DOCUMENTS
BENT GRASS RESIDENTIAL FILING NO. 2
FOR
CHALLENGER COMMUNITIES, LLC

BENT GRASS MEADOWS DRIVE & MERIDIAN ROAD
FALCON, CO 80831 - EL PASO COUNTY

#	Date	Issue / Description	Init.

Project No:	CLH000014.20
Drawn By:	JDP
Checked By:	RGD
Date:	2/24/2020

UTILITY DETAILS

U4.03

NOTES:

1. FOR ROCK OR OTHER INCOMPRESSIBLE MATERIALS, THE TRENCH SHALL BE OVEREXCAVATED A MINIMUM OF 6" AND REFILLED WITH GRANNULAR BEDDING MATERIAL AS DEFINED BY CLASS "B" BEDDING.
2. L.F. = LOAD FACTOR
3. CLASS "D" BEDDING WILL NOT BE ACCEPTABLE UNDER ANY CONDITION.
4. MINIMUM DENSITY FOR CAREFULLY COMPACTED SELECT BACKFILL SHALL BE 85% OF STD. PROCTOR DENSITY OR AS SPECIFIED FOR THE TRENCH BACKFILL, WHICHEVER IS GREATER.

PIPE BEDDING

Drawn: GDM | Revised: | Date: JAN 2011 | Revised: | Scale: N.T.S. | Revised:

WOODMEN HILLS METROPOLITAN DISTRICT — WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS — WW-1

BOTTOM OF TRENCH WIDTH		
PIPE DIAMETER	MINIMUM WIDTH	MAXIMUM WIDTH
4"	1'-5"	3'-9"
6"	1'-7"	3'-11"
8"	1'-9"	4'-1"
12"	2'-1"	4'-5"
15"	2'-6"	4'-9"
18"	2'-10"	5'-2"
24"	3'-2"	5'-8"

ALL PIPE EMBEDMENT SHALL BE IMPORTED CLASS B BEDDING UNLESS OTHERWISE DIRECTED.

AN OVER EXCAVATED TRENCH SHALL BE REFILLED AND THOROUGHLY COMPACTED UNDER THE DIRECTION OF THE DISTRICT.

UNDER NO CIRCUMSTANCES WILL PIPE BE LAID IN A PROPOSED FILL AREA PRIOR TO IT BEING COMPLETELY FILLED. THE FILL WILL BE PLACED FIRST TO PROPOSED GRADE AND COMPACTED AS REQUIRED. A TRENCH THEN WILL BE EXCAVATED AND THE PIPE INSTALLED IN THE USUAL MANNER.

TYPICAL TRENCH CROSS SECTION

Drawn: GDM | Revised: | Date: JAN 2011 | Revised: | Scale: N.T.S. | Revised:

WOODMEN HILLS METROPOLITAN DISTRICT — WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS — WW-2

1. MANHOLE BARREL MINIMUM DIAMETER SHALL CONFORM TO TABLE.
2. SHAPING FOR SMOOTH MANHOLE INVERTS MUST BE DONE BY FORMING/SHAPING CONCRETE BASE.
3. PRECAST SECTIONS TO CONFORM TO ASTM C-478.
4. STUB-OUTS SHALL EXTEND A MINIMUM OF 6" PAST MANHOLE O.D. AND BE SATISFACTORILY PLUGGED.
5. CONCRETE MANHOLES MAY BE POURED IN PLACE ONLY WITH PRIOR DESIGN AND INSPECTION APPROVAL.
6. ALL MORTOR GROUT SHALL BE MIXED WITH THE PURE V CEMENT.
7. APPLY COAL TAR EPOXY DAMP-PROOFING TO ALL EXTERIOR CONCRETE SURFACES.
8. CENTER REINF. IN BASE POUR BELOW PIPE O.D. AT FL.
9. ALL EXTERIOR JOINTS SHALL RECEIVE BUTYL RUBBER JOINT WRAP. REFER TO SPECIFICATIONS.

PIPE I.D.	MANHOLE I.D.	WALL
8" TO 15"	4'-0"	5"
18" TO 30"	5'-0"	6"
36" TO 54"	6'-0"	7"
60" & LARGER	SPECIAL DESIGN	

PRECAST MANHOLE

Drawn: GDM | Revised: | Date: JAN 2011 | Revised: | Scale: N.T.S. | Revised:

WOODMEN HILLS METROPOLITAN DISTRICT — WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS — WW-3

M.H. DEPTH	DIMENSION A	DIMENSION B
0' TO 30'	8"	8"
OVER 30'	12"	12"

WATERPROOFING REQUIREMENTS

1. APPLY CEMENT GROUT LAYER (3/8" TO 1/2" THICK) TO ALL INTERIOR JOINTS ABOVE FLOW CHANNEL.
2. APPLY COAL TAR EPOXY DAMPROOFING TO ALL EXTERIOR CONCRETE SURFACES.
3. APPLY CEMENT GROUT LAYER (3/8" TO 1/2" THICK) TO ALL EXTERIOR CONCRETE SURFACES, AS DIRECTED BY DISTRICT. APPLY PRIOR TO DAMPROOFING.

SANITARY SEWER MANHOLE

Drawn: GDM | Revised: | Date: JAN 2011 | Revised: | Scale: N.T.S. | Revised:

WOODMEN HILLS METROPOLITAN DISTRICT — WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS — WW-4

MANHOLE RING AND COVER ADJUSTMENT

Drawn: GDM | Revised: | Date: JAN 2011 | Revised: | Scale: N.T.S. | Revised:

WOODMEN HILLS METROPOLITAN DISTRICT — WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS — WW-5

SANITARY SEWER MAIN CLEAN-OUT

Drawn: GDM | Revised: | Date: JAN 2011 | Revised: | Scale: N.T.S. | Revised:

WOODMEN HILLS METROPOLITAN DISTRICT — WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS — WW-6

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#	Date	Issue / Description	Init.

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UTILITY DETAILS

U4.04

SANITARY SEWER SERVICE CONNECTION

Drawn: GDM | Date: JAN 2011 | Scale: N.T.S. | Revised: | Revised: | Revised:
WOODMEN HILLS METROPOLITAN DISTRICT — WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS — WW-7

TYPICAL CROSS SECTION
UTILITIES LOCATION

GENERAL NOTES

1. STORM SEWERS SHALL MAINTAIN A 10' CLEAR SEPARATION FROM WATER;
2. ELECTRIC CONDUITS SHALL BE ON THE OPPOSITE SIDE OF THE STREET FROM WATER;
3. FOR 40' WIDE STREET SECTIONS, MAINTAIN WATER: 10 FEET FROM SANITARY SEWER AT STREET CENTERLINE;
4. FOR 50' WIDE RIGHT-OF-WAY (ROW), A 5-FOOT WIDE SIDEWALK AND UTILITY EASEMENTS ARE REQUIRED ADJACENT TO THE STREET ROW. FIVE (5) FOOT WIDE ATTACHED SIDEWALK IS USED WITH ELECTRIC UTILITIES BEHIND WALK IN EASEMENT.

TYPICAL UTILITY LOCATIONS

Drawn: GDM | Date: JAN 2011 | Scale: N.T.S. | Revised: | Revised: | Revised:
WOODMEN HILLS METROPOLITAN DISTRICT — WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS — WW-8

POLYETHYLENE PIPE WRAP

Drawn: GDM | Date: JAN 2011 | Scale: N.T.S. | Revised: | Revised: | Revised:
WOODMEN HILLS METROPOLITAN DISTRICT — WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS — WW-12

METER PIT SETUP
N.T.S.

NEW SERVICE LINE/METER PIT INSTALLATION

Drawn: GDM | Date: JAN 2011 | Scale: N.T.S. | Revised: | Revised: | Revised:
WOODMEN HILLS METROPOLITAN DISTRICT — WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS — W-36

PLAN VIEW
N.T.S.

PLAN LEGEND

1. 8" STYLE 39 DRESSER COUPLING, OR EQUAL, 300-LB. FLANGED
2. 8" 250-LB. GATE VALVE
3. 8" 250-LB. CLA-VAL REGULATOR
4. 8" STEEL FITTING, 300-LB. FLANGE ONE END, PLAIN ONE END, 9"-11" LONG.
5. 8" 150-LB. DRESSER STYLE 128 FLANGED ADAPTER OR EQUAL. TIE BACK TO REGULATOR W/ TWO 3/4" RODS. (SEE DETAIL 'A' THIS SHEET)
6. 8" 150-LB. GATE VALVE
7. CLASS 'E' FLANGES

PROFILE VIEW
N.T.S.

GENERAL NOTES:

1. CONCRETE VAULTS SHALL MEET ALL CRITERIA AS OUTLINED ON STANDARD DRAWINGS W-29 & W-30.
2. ALL REGULATOR INSTALLATIONS LARGER THAN 8-INCH SHALL BE SPECIALLY DESIGNED AND APPROVED BY THE DISTRICT.

DETAIL 'A' – FLANGED ADAPTOR
N.T.S.

DETAIL 'B' – PIPE ARCH
N.T.S.

8" SIZE PRESSURE REGULATOR STATION

Drawn: GDM | Date: JAN 2011 | Scale: N.T.S. | Revised: | Revised: | Revised:
WOODMEN HILLS METROPOLITAN DISTRICT — WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS — W-27

NOTES:

1. ALL CONCRETE WORK SHALL COMPLY WITH DISTRICT STANDARD SPECIFICATIONS AND LATEST ACI-318 CODE.
2. MINIMUM REINFORCED CONCRETE COVER FOR REBAR:
   - 3" WHERE POURED AGAINST EARTH
   - 2" WHERE FORMED AND THEN EXPOSED TO GROUND OR WEATHER FOR #6 OR LARGER, 1.5" FOR #5 AND SMALLER
   - 1.5" WHERE EXPOSED TO INTERIOR SURFACES
3. ALL VAULTS SHALL BE CONSTRUCTED TO MEET HS20-44 TRAFFIC LOADING CONDITIONS AND 300 PSF SURCHARGE LOAD.

STAND. CONC. VAULT FOR VALVE INSTALLATION (PRECAST)

Drawn: GDM | Date: JAN 2011 | Scale: N.T.S. | Revised: | Revised: | Revised:
WOODMEN HILLS METROPOLITAN DISTRICT — WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS — W-29

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02/24/2020

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CHALLENGER HOMES

CONSTRUCTION DOCUMENTS
BENT GRASS RESIDENTIAL FILING NO. 2
FOR
CHALLENGER COMMUNITIES, LLC

BENT GRASS MEADOWS DRIVE & MERIDIAN ROAD
FALCON, CO 80831 - EL PASO COUNTY

#	Date	Issue / Description	Init.

Project No:	CLH000014.20
Drawn By:	JDP
Checked By:	RGD
Date:	2/24/2020

UTILITY DETAILS

U4.05
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