

MEMORANDUM

DATE: June 9, 2021

TO: Kari Parsons, PCD-Project Manager

FROM: Jeff Rice, PCD-Engineering
719-520-7877

SUBJECT: PUDSP-20-005 – Falcon Meadows at Bent Grass (with EGP)
Fourth Submittal

Engineering Division

Planning and Community Development (PCD)-Engineering reviews plans and reports to ensure general conformance with El Paso County standards and criteria. The project engineer is responsible for compliance with all applicable criteria, including other governmental regulations. Notwithstanding anything depicted in the plans in words or graphic representation, all design and construction related to roads, storm drainage and erosion control shall conform to the standards and requirements of the most recent version of the relevant adopted El Paso County standards, including the Land Development Code (LDC), the Engineering Criteria Manual (ECM), the Drainage Criteria Manual (DCM), and the Drainage Criteria Manual Volume 2 (DCM2). Any deviations from regulations and standards must be requested, and approved by the ECM Administrator, in writing. Any modifications necessary to meet overlooked criteria after-the-fact will be entirely the developer's responsibility to rectify.

The comments include unresolved previous comments and new comments resulting from the re-submittal in **bold blue**. All previous comments that have been resolved have been noted or deleted. A written response to all comments and redlines is required for review of the re-submittal. Please arrange a meeting between the developer's team and County staff to review and discuss these comments and prepared revisions/responses prior to the next submittal.

Additional comments may be generated on items added or revised after the original comments.

General/Letter of Intent – Resolved.

PUD/Preliminary Plan – **Resolved.**

Transportation / Traffic Impact Study – Resolved.

MDDP – **See separate comments on MDP-21-001.**

See responses to MDDP comments separately.

Preliminary Drainage Report / Drainage Plans **(not submitted for this review)**

*Note: this review is **remains** cursory due to the need for additional information in the PDR.*

1. ~~Provide the MDDP for completion with this project.~~ Discuss the MDDP analysis and recommendations in the PDR, specifically in regard to impacts to the onsite and downstream channel, its capacity, DBPS-recommended improvements and necessary improvements. Unresolved. *Unresolved (See MDDP comments #6 and 7 above).*
Update the PDR to include revised MDDP information when the MDDP is complete.
Information has been updated to reflect changes in MDDP.
2. See PDR/FDR redlines. **Partially resolved; see remaining/updated redlines.**

3. through 7 – Resolved.
7. Provide complete FSD design worksheets. Since the proposed south FSD pond will be treating already-developed areas (Bent Grass Meadows Drive), the pond outlet structure should also be designed and installed with pre-development site grading; provide complete design.
8. Address spillway design and FSD pond freeboard. Show the 100-year water surface elevations in the ponds and the channel. **Partially resolved;**
 - a. *Resolved.*
 - b. The channel WSEs need to be shown. Provide a preliminary channel profile with the MDDP hydraulic modeling. *Unresolved.* **See MDDP redlines; update the PDR accordingly.**
Preliminary design of channel (Plan & Profile sheets, as shown in MDDP) which includes WSE have been included in report.
9. Resolved.
10. Resolved.
11. Provide channel and swale cross-sections and drop/check structure design on the plan. Provide a channel plan and profile. **Unresolved.**
At this time, no changes are being proposed from what is shown in the DBPS. Copies of the details from the DBPS have been included in the appendix, as also shown in the MDDP. Statement regarding design of channel, as included in MDDP, has also been added to this report

Grading and Erosion Control Plan / Predevelopment Site Grading / SWMP

1. *through 3 - Resolved.*
4. Since the proposed south FSD pond will be treating already-developed areas (Bent Grass Meadows Drive), the pond outlet structure should also be installed and complete pond construction will be required prior to County acceptance of Bent Grass Meadows Drive; provide design details.
5. **Note: if there are no changes from the standalone GEC Plan (CDR-21-004) no further submittals are needed for the PUDSP project.**
Noted. GEC set not resubmitted with this submittal.

Utility CDs

1. **See redlines.**
See responses on redline comments.

Forms / Permits / Other

1. See attached Final Engineering Checklist for required EGP approval documents.
2. **through 6 – Resolved.**

Attachments/Electronic Redlines

1. Utility CD redlines
2. Engineering Final Submittal Checklist

Engineering Final Submittal Checklist for Electronic Submittals	
Check Box	Item: Report/Form
<input type="checkbox"/>	MDDP and Drainage Report (signed)
<input checked="" type="checkbox"/>	PBMP Applicability Form
<input checked="" type="checkbox"/>	Traffic Impact Study (signed)
<input checked="" type="checkbox"/>	Grading & Erosion Control Plan and checklist (signed)
<input type="checkbox"/>	Channel Construction Plans (signed) (If channel construction will be done with EGP) Utility CDs if utilities are proposed with EGP
<input type="checkbox"/>	Deviation/PUD Modification Request (signed)
<input checked="" type="checkbox"/>	MS4 Post Construction Form and SDI worksheet
<input type="checkbox"/>	Proof of embankment/pond submittal to State Engineer
<input checked="" type="checkbox"/>	ESQCP (signed)
<input checked="" type="checkbox"/>	* Financial Assurance Estimate, SIA (signed)
<input checked="" type="checkbox"/>	* Pond/BMP Maint. Agreement and Easement (signed)
<input checked="" type="checkbox"/>	* Operation & Maintenance Manual
<input type="checkbox"/>	AutoCAD base drawing (submitted to DPW)
<input checked="" type="checkbox"/>	Pre-Development Site Grading Acknowledgement and Right of Access Form (signed)
<input type="checkbox"/>	Other: <u>Offsite Easements, Other Permits (FEMA LOMR, USACE, Floodplain...), Conditions of Approval, Street light license agreement, etc.</u>
Pre-Construction Checklist:	
<input type="checkbox"/>	Driveway/Access Permit (Temporary access permits to be obtained from EPC DPW)
<input type="checkbox"/>	Work Within the ROW Permit (DPW or CDOT)
<input checked="" type="checkbox"/>	* Stormwater Management Plan (SWMP) and checklist Submit to PCD-Inspections 2 weeks prior to precon.
<input type="checkbox"/>	* Colorado Discharge Permit (COR: _____)
<input type="checkbox"/>	* County Construction Activity Permit
<input type="checkbox"/>	* CDPHE APEN – (if over 25 ac. or 6 mos.)
<input type="checkbox"/>	* Financial Surety (Letter of Credit/Bond/Collateral/Check)
<input type="checkbox"/>	Construction Permit Fee: <i>Early Grading or Standalone Grading</i> \$ (Verify fees with Inspections Supervisor at time of scheduling)
<input type="checkbox"/>	Other: _____

* - required items to obtain an ESQCP

Permit Fee and Collateral must be separate checks

Post Construction Submittal Checklist: (ECM 5.10.6)	
<input type="checkbox"/>	As-Built Drawings
<input type="checkbox"/>	Pond Certification Letter
<input type="checkbox"/>	Acceptance Letter for wet utilities

- ☐ = Need final / signed version

- ☒ = complete, in file

- ☐ = PCD Staff to provide

- ☐ = Undetermined at this time

- ☐ = Need later

**PRIVATE DETENTION BASIN /
STORMWATER QUALITY BEST MANAGEMENT PRACTICE
MAINTENANCE AGREEMENT AND EASEMENT**

This PRIVATE DETENTION BASIN / STORMWATER QUALITY BEST MANAGEMENT PRACTICE MAINTENANCE AGREEMENT AND EASEMENT (Agreement) is made by and between EL PASO COUNTY by and through THE BOARD OF COUNTY COMMISSIONERS OF EL PASO COUNTY, COLORADO (Board or County) and Challenger Communities LLC, a Colorado limited liability company (Developer). The above may occasionally be referred to herein singularly as “Party” and collectively as “Parties.”

Recitals

A. WHEREAS, Developer is the owner of certain real estate (the Property) in El Paso County, Colorado, which Property is legally described in Exhibit A attached hereto and incorporated herein by this reference; and

B. WHEREAS, Developer desires to plat on the Property a subdivision to be known as Bent Grass Residential Filing No. 2; and

C. WHEREAS, Developer has received approval of an Early Grading and Erosion Control Plan (“Plan”) for the Property; and

~~DC.~~ WHEREAS, the development of this Property will substantially increase the volume of water runoff and will decrease the quality of the stormwater runoff from the Property, and, therefore, it is in the best interest of public health, safety and welfare for the County to condition approval of this subdivision on Developer’s promise to construct adequate drainage, water runoff control facilities, and stormwater quality structural Best Management Practices (“BMPs”) for the subdivision; and

~~ED.~~ WHEREAS, Chapter 8, Section 8.4.5 of the El Paso County Land Development Code, as periodically amended, promulgated pursuant to Section 30-28-133(1), Colorado Revised Statutes (C.R.S.), requires the County to condition approval of all subdivisions on a developer’s promise to so construct adequate drainage, water runoff control facilities, and BMPs in subdivisions; and

~~FE.~~ WHEREAS, the Drainage Criteria Manual, Volume 2, as amended by Appendix I of the El Paso County Engineering Criteria Manual (ECM), as each may be periodically amended, promulgated pursuant to the County’s Colorado Discharge Permit System General Permit (MS4 Permit) as required by Phase II of the National Pollutant Discharge Elimination System (NPDES), which MS4 Permit requires that the County take measures to protect the quality of stormwater from sediment and other contaminants, requires subdividers, developers, landowners, and owners of facilities located in the County’s rights-of-way or easements to provide adequate permanent stormwater quality BMPs with new development or significant redevelopment; and

~~GF.~~ WHEREAS, Section 2.9 of the El Paso County Drainage Criteria Manual provides for a developer’s promise to maintain a subdivision’s drainage facilities in the event the County does not assume such responsibility; and

Galloway responses

Commented [LS1]: Better Land LLC is also showing as an owner within the PUDSP. It must therefore be added as a party.

Added Better Land LLC

Revised Plat Name

Commented [LS2]: Correct the plat name

Added "C" to list

Revised Bullet list

~~H.G.~~ WHEREAS, developers in El Paso County have historically chosen water runoff detention basins as a means to provide adequate drainage and water runoff control in subdivisions, which basins, while effective, are less expensive for developers to construct than other methods of providing drainage and water runoff control; and

~~I.H.~~ WHEREAS, Developer desires to construct for the subdivision one (1) sedimentation pond as the means for providing adequate drainage and stormwater runoff control and to meet requirements of the County's MS4 Permit, and to provide for operating, cleaning, maintaining and repairing such detention basin/BMP(s); and

~~I.~~ ~~J.~~ WHEREAS, Developer desires to construct the detention basin/BMP(S) on the property that is or will be platted as Tract A, as indicated on the final plat of the subdivision, and that currently lies within the Easement legally described and depicted Early Grading & Erosion Control Plan of the subdivision and as set forth on Exhibit B, attached hereto; and

~~K.J.~~ WHEREAS, Developer shall be charged with the duties of constructing, operating, maintaining and repairing the detention basin/BMP(s) on the ~~P~~property described in Exhibit B; and

~~L.K.~~ WHEREAS, it is the County's experience that subdivision developers and property owners historically have not properly cleaned and otherwise not properly maintained and repaired these detention basins/BMPs, and that these detention basins/BMPs, when not so properly cleaned, maintained, and repaired, threaten the public health, safety and welfare; and

~~M.L.~~ WHEREAS, the County, in order to protect the public health, safety and welfare, has historically expended valuable and limited public resources to so properly clean, maintain, and repair these detention basins/BMPs when developers and property owners have failed in their responsibilities, and therefore, the County desires the means to recover its costs incurred in the event the burden falls on the County to so clean, maintain and repair the detention basin/BMP(s) serving this subdivision due to the Owner's failure to meet its obligations to do the same; and

~~N.M.~~ WHEREAS, the County conditions approval of the Plan~~this subdivision~~ on the Developer's promise to so construct the detention basin/BMP(s), and further conditions approval on the ~~Owner's~~ Developer's promise to reimburse the County in the event the burden falls upon the County to so clean, maintain and/or repair the detention basin/BMP(s) serving this subdivision; and

~~O.N.~~ WHEREAS, the County could condition subdivision approval on the Developer's promise to construct a different and more expensive drainage, water runoff control system and BMPs than those proposed herein, which more expensive system would not create the possibility of the burden of cleaning, maintenance and repair expenses falling on the County; however, the County is willing to forego such right upon the performance of Developer's promises contained herein; and

~~P.O.~~ WHEREAS, the County, in order to secure performance of the promises contained herein, conditions approval of this subdivision upon the Developer's grant herein of a perpetual Easement over a portion of the Property for the purpose of allowing the County to periodically access, inspect, and, when so necessary, to clean, maintain and/or repair the detention basin/BMP(s), ~~and~~

Updated text

Formatted: No bullets or numbering

Commented [LS3]: Developer can either grant to County an easement over the entire Property that is the subject of the PUDSP for purposes of this Agreement, in which case you don't need and Exhibit B, or it can create an Easement area that encompasses the pond and an access to the pond from a public road

Updated Text

Agreement

NOW, THEREFORE, in consideration of the mutual Promises contained herein, the sufficiency of which are hereby acknowledged, the Parties agree as follows:

1. Incorporation of Recitals: The Parties incorporate the Recitals above into this Agreement.
2. Covenants Running with the Land: Developer agrees that this entire Agreement and the performance thereof shall become a covenant running with the land, which land is legally described in Exhibit A attached hereto, and that this entire Agreement and the performance thereof shall be binding upon itself, its successors and assigns.
3. Construction: Developer shall construct on that portion of the Property described in Exhibit B attached hereto and incorporated herein by this reference, three (3) detention basin/BMP(s). Developer shall not commence construction of the detention basin/BMP(s) until the El Paso County Planning and Community Development Services Department (PCDSD) has approved in writing the plans and specifications for the detention basin/BMP(s) and this Agreement has been signed by all Parties and returned to the PCDSD. Developer shall complete construction of the detention basin/BMP(s) in substantial compliance with the County-approved plans and specifications for the detention basin/BMP(s). Failure to meet these requirements shall be a material breach of this Agreement, and shall entitle the County to pursue any remedies available to it at law or in equity to enforce the same. Construction of the detention basin/BMP(s) shall be substantially completed within one (1) year (defined as 365 days), which one year period will commence to run on the date the Erosion and Stormwater Quality Control Permit is issued, approved plat of this subdivision is recorded in the records of the El Paso County Clerk and Recorder. Rough grading of the detention basin/BMP(s) must be completed and inspected by El Paso County Development Services Department prior to commencing road construction.

In the event construction is not substantially completed within the one (1) year period, then the County may exercise its discretion to complete the project, and shall have the right to seek reimbursement from the Developer and its successors and assigns, for its actual costs and expenses incurred in the process of completing construction. The term actual costs and expenses shall be liberally construed in favor of the County, and shall include, but shall not be limited to, labor costs, tool and equipment costs, supply costs, and engineering and design costs, regardless of whether the County uses its own personnel, tools, equipment and supplies, etc. to correct the matter. In the event the County initiates any litigation or engages the services of legal counsel in order to enforce the Provisions arising herein, the County shall be entitled to its damages and costs, including reasonable attorney fees, regardless of whether the County contracts with outside legal counsel or utilizes in-house legal counsel for the same.

4. Maintenance: The Developer agrees for itself and its successors and assigns, that it will regularly and routinely inspect, clean and maintain the detention basin/BMP(s), and otherwise keep the same in good repair, all at its own cost and expense. No trees or shrubs that will impair the structural integrity of the detention basin/BMP(s) shall be planted or allowed to grow on the detention basin/BMP(s).
5. Creation of Easement: Developer hereby grants the County a non-exclusive perpetual easement upon and across the portion of the Property described in Exhibit B. The purpose of the easement is to allow the County to access, inspect, clean, repair and maintain the detention basin/BMP(s); however, the creation of the easement does not expressly or implicitly impose on the County a duty to so inspect, clean, repair or maintain the detention basin/BMP(s).

Revised to (1) pond
to match Paragraph I

Commented [LS4]: This conflicts with paragraph I above.

Updated text

Updated text

6. County's Rights and Obligations: Any time the County determines, in the sole exercise of its discretion, that the detention basin/BMP(s) is not properly cleaned, maintained and/or otherwise kept in good repair, the County shall give reasonable notice to the Owner and its successors and assigns, that the detention basin/BMP(s) needs to be cleaned, maintained and/or otherwise repaired. The notice shall provide a reasonable time to correct the problem(s). Should the responsible parties fail to correct the specified problem(s), the County may enter upon the Property to so correct the specified problem(s). Notice shall be effective to the above by the County's deposit of the same into the regular United States mail, postage pre-paid. Notwithstanding the foregoing, this Agreement does not expressly or implicitly impose on the County a duty to so inspect, clean, repair or maintain the detention basin/BMP(s).

7. Reimbursement of County's Costs / Covenant Running With the Land: The Developer agrees and covenants, for itself, and its successors and assigns, that it will reimburse the County for its costs and expenses incurred in the process of completing construction of, cleaning, maintaining, and/or repairing the detention basin/BMP(s) pursuant to the provisions of this Agreement.

The term "actual costs and expenses" shall be liberally construed in favor of the County, and shall include, but shall not be limited to, labor costs, tools and equipment costs, supply costs, and engineering and design costs, regardless of whether the County uses its own personnel, tools, equipment and supplies, etc. to correct the matter. In the event the County initiates any litigation or engages the services of legal counsel in order to enforce the provisions arising herein, the County shall be entitled to its damages and costs, including reasonable attorney's fees, regardless of whether the County contracts with outside legal counsel or utilizes in-house legal counsel for the same.

8. Agreement Monitored by El Paso County Planning and Community Development and/or El Paso County Department of Public Works: Any and all actions and decisions to be made hereunder by the County shall be made by the Director of the El Paso County Planning and Community Development and/or the Director of the El Paso County Department of Public Works. Accordingly, any and all documents, submissions, plan approvals, inspections, etc. shall be submitted to and shall be made by the Director of the Planning and Community Development and/or the Director of the El Paso County Department of Public Works.

9. Indemnification and Hold Harmless: To the extent authorized by law, Developer agrees, for itself and its successors and assigns, that it will indemnify, defend, and hold the County harmless from any and all loss, costs, damage, injury, liability, claim, lien, demand, action and causes of action whatsoever, whether at law or in equity, arising from or related to their respective intentional or negligent acts, errors or omissions or that of their agents, officers, servants, employees, invitees and licensees in the construction, operation, inspection, cleaning (including analyzing and disposing of any solid or hazardous wastes as defined by State and/or Federal environmental laws and regulations), maintenance, and repair of the detention basin/BMP(s), and such obligation arising under this Paragraph shall be joint and several. Nothing in this Paragraph shall be deemed to waive or otherwise limit the defense available to the County pursuant to the Colorado Governmental Immunity Act, Sections 24-10-101, *et seq.* C.R.S., or as otherwise provided by law.

10. Severability: In the event any Court of competent jurisdiction declares any part of this Agreement to be unenforceable, such declaration shall not affect the enforceability of the remaining parts of this Agreement.

Executed this _____ day of _____, 20____, by:

BOARD OF COUNTY COMMISSIONERS
OF EL PASO COUNTY, COLORADO

By: _____

Craig Dossey, Executive Director
Planning and Community Development
Authorized signatory pursuant to LDC

The foregoing instrument was acknowledged before me this _____ day of _____,

20____, by _____, Executive Director of Planning and Community

Development of El Paso County, Colorado.

Witness my hand and official seal.

My commission expires: _____

Notary Public

Approved as to Content and Form:

Assistant County Attorney

Exhibit A

LEGAL DESCRIPTION

PARCELS OF LAND AS DESCRIBED IN WARRANTY DEEDS RECORDED AT RECEPTION NO. 219074560 AND 219074561 OF THE EL PASO COUNTY CLERK AND RECORDER OFFICE, BEING A PORTION OF THE WEST HALF OF SECTION 1, TOWNSHIP 13 SOUTH, RANGE 65 WEST, OF THE 6TH/ PRINCIPAL MERIDIAN, LOCATED IN EL PASO COUNTY, STATE OF COLORADO, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

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 OF SECTION 1, T13S, R65W IS N00°13'46"W AND MONUMENTED AS SHOWN:

COMMENCING AT THE SOUTHWEST QUARTER CORNER OF SAID SECTION 1; THENCE N00°13'46"W WITH THE WEST LINE OF SAID SECTION 1, A DISTANCE OF 1928.67 FEET TO THE SOUTHWEST CORNER OF A PARCEL DESCRIBED IN WARRANTY DEED RECORDED AT RECEPTION NO. 21303554 OF THE EL PASO COUNTY CLERK AND RECORDER OFFICE; THENCE WITH THE SOUTH LINE OF SAID PARCEL, N89°47'22"E A DISTANCE OF 419.98 FEET TO THE SOUTHEAST CORNER OF SAID PARCEL AND BEING THE SOUTHWEST CORNER OF A STRIP OF LAND DESCRIBED IN QUIT CLAIM DEED AT RECEPTION NO. 209061972 AND ALSO BEING THE POINT OF BEGINNING:

THENCE N00°13'46"W, A DISTANCE OF 206.47 FEET TO A POINT OF CURVATURE;

THENCE ALONG SAID CURVE TO THE RIGHT, HAVING A RADIUS OF 605.00 FEET, A CENTRAL ANGLE OF 23°58'12", A DISTANCE OF 253.10 FEET, A CHORD BEARING OF N11°45'20"E WITH A CHORD DISTANCE OF 251.26 FEET;

THENCE N23°44'26"E, A DISTANCE OF 301.49 FEET TO A POINT OF CURVATURE;

THENCE ALONG SAID CURVE TO THE RIGHT, HAVING A RADIUS OF 605.00 FEET, A CENTRAL ANGLE OF 65°45'45", A DISTANCE OF 694.40 FEET, A CHORD BEARING OF N56°37'18"E WITH A CHORD DISTANCE OF 656.91 FEET;

THENCE N89°30'12"E, A DISTANCE OF 62.90 FEET;

THENCE N00°14'14"W, A DISTANCE OF 938.90 FEET TO A POINT ON THE SOUTH LINE OF THE MEADOWS FILING NO. 3, RECORDED AT RECEPTION NO. 200135677 AND ALSO BEING A POINT ON THE SOUTH LINE OF THE NORTH 1/16TH OF SAID SECTION 1;

THENCE WITH SAID SOUTH LINE, N89°36'34"E, A DISTANCE OF 1431.39 FEET TO THE NORTH 1/16TH CORNER OF SAID SECTION 1;

THENCE N89°36'02"E, A DISTANCE OF 28.34 FEET;

THENCE S00°22'19"E, DISTANCE OF 619.54 FEET TO A POINT ON THE NORTH RIGHT OF WAY LINE OF BENT GRASS MEADOWS DRIVE (AN 80' PUBLIC RIGHT OF WAY) AND BEING A POINT ON THE NORTH LINE OF BENT GRASS RESIDENTIAL FILING NO. 1, RECORDED AT RECEPTION NO. 215713636;

THENCE WITH SAID NORTH RIGHT OF WAY LINE AND THE NORTH LINE OF SAID BENT GRASS RESIDENTIAL FILING NO.1, S89°38'09"W, A DISTANCE OF 28.48 FEET TO THE NORTHWEST CORNER OF SAID BENT GRASS MEADOWS DRIVE RIGHT OF WAY AND BEING A POINT ON THE EAST 1/16 LINE OF SAID SECTION 1;

THENCE WITH SAID EAST 1/16 LINE, S00°21'34"E, A DISTANCE OF 699.51 FEET;

THENCE CONTINUING WITH SAID EAST 1/16 LINE, S00°21'50"E, A DISTANCE OF 693.63 FEET TO THE NORTHEAST CORNER OF A PARCEL DESCRIBED IN DEED AT BOOK 3233, PAGE 824 OF THE EL PASO COUNTY CLERK & RECORDER;

THENCE WITH THE NORTH OF LINE OF SAID PARCEL, S89°47'22"W, A DISTANCE OF 952.75 FEET TO THE NORTHWEST CORNER OF SAID PARCEL DESCRIBED IN BOOK 3233 AT PAGE 824;

THENCE ALONG THE WEST LINE OF SAID PARCEL, S00°22'01"E, A DISTANCE OF 18.25 FEET TO THE NORTHEAST CORNER OF A PARCEL DESCRIBED IN DEED AT RECEPTION NO. 208053974;

THENCE WITH THE NORTH LINE OF SAID PARCEL DESCRIBED AT RECEPTION NO. 208053974, S89°47'22"W, A DISTANCE OF 179.94 FEET;

THENCE N00°12'38"W, A DISTANCE OF 119.39 FEET TO A POINT OF CURVE;

THENCE ALONG SAID CURVE TO THE RIGHT, HAVING A RADIUS OF 450.00 FEET, A CENTRAL ANGLE OF 55°58'18", A DISTANCE OF 439.60 FEET, A CHORD BEARING OF N28°11'47"W WITH A CHORD DISTANCE OF 422.33 FEET;

THENCE N56°10'56"W, A DISTANCE OF 198.31 FEET TO A POINT OF CURVE;

THENCE ALONG SAID CURVE TO THE RIGHT, HAVING A RADIUS OF 540.00 FEET, A CENTRAL ANGLE OF 16°06'20", A DISTANCE OF 151.79 FEET, A CHORD BEARING OF N48°07'46"W WITH A CHORD DISTANCE OF 151.29 FEET;

THENCE N40°04'36"W, A DISTANCE OF 279.73 FEET TO A POINT OF NON-TANGENT CURVE;

THENCE ALONG SAID NON-TANGENT CURVE TO THE LEFT, HAVING A RADIUS OF 525.00 FEET, A CENTRAL ANGLE OF 32°26'00", A DISTANCE OF 297.18 FEET, A CHORD BEARING OF S39°57'26"W WITH A CHORD DISTANCE OF 293.23 FEET;

THENCE S23°44'26"W, A DISTANCE OF 301.49 FEET TO A POINT OF CURVATURE;

THENCE ALONG SAID CURVE TO THE LEFT, HAVING A RADIUS OF 525.00 FEET, A CENTRAL ANGLE OF 23°58'12", A DISTANCE OF 219.64 FEET, A CHORD BEARING OF S11°45'20"W WITH A CHORD DISTANCE OF 218.04 FEET;

THENCE S00°13'46"E, A DISTANCE OF 206.50 FEET TO THE SOUTHEAST CORNER OF SAID STRIP OF LAND DESCRIBED IN QUITCLAIM DEED AT RECEPTION NO. 209061972;

THENCE WITH SOUTH LINE OF SAID STRIP OF LAND, S89°47'22"W, A DISTANCE OF 80.00 FEET TO THE POINT OF BEGINNING.

THE ABOVE DESCRIBED PARCEL CONTAINS 2,985,862 SQUARE FEET OR 68.55 ACRES, MORE OR LESS.

Exhibit B

Early Grading & Erosion Control Plan

Challenger Horser Inc'CO, 3100018-Bent Grass Filing 30CADDIS-COJUL120118 UO.D. CourtNotes-30caddis.dcm - Calif Johnson - 3/7/2021

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

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

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.

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.

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.

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

CONSTRUCTION STAKES TO BE AT 25 INTERVALS ALONG CURVES TO ASSURE LOCATION OF PIPE LINE CONSTRUCTION.

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

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

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.

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

- TEST 100 % OF ALL LINES
- MUST PASS PRESSURE TEST TO 200 PSI FOR TWO HOURS (UNLESS OTHERWISE APPROVED ON THE PLANS).

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.

24. ACCEPTANCE: _____

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

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

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.

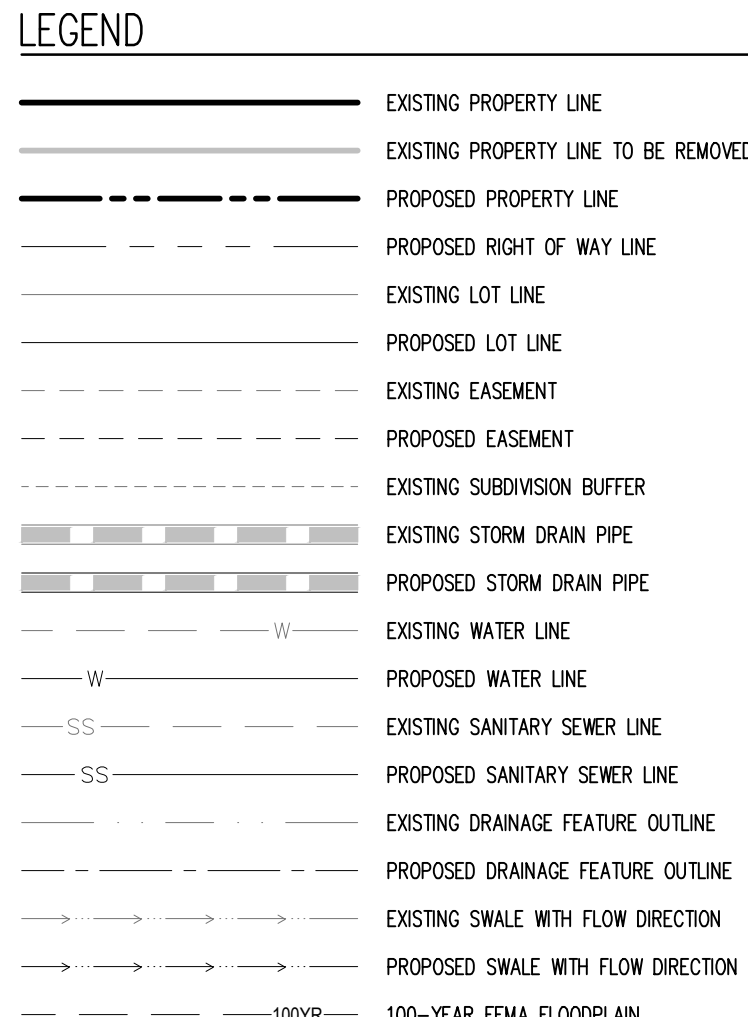
B) NO SANITARY SEWER FACILITY SHALL BE PLACED IN SERVICE UNTIL ALL SERVICE LINES ARE COMPLETED AND THE FIRST LIFT OF ASPHALT IS COMPLETED OVER THE LINE. IN THE CASE WHERE NO ASPHALT IS TO BE PLACED OVER THE LINE, ANY REQUIRED SURFACE IMPROVEMENTS SHALL BE COMPLETED PRIOR TO USE OF THE FACILITY.

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.



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 WITH ANY PUBLIC RIGHT-OF-WAY.
3. CONTRACTOR TO MAINTAIN 5% MINIMUM COVER OVER ALL WATER MAINS CONSTRUCTED.
4. ALL VALVES SHOWN FOR SCHEMATIC PURPOSES ONLY. NO VALVES SHALL BE INSTALLED IN CURB OR GUTTER OR CROSSPANS.
5. STANDARD WATER SERVICE LOCATIONS TO BE 10' FROM PROPERTY LINE AND EXTENDED TO 5' PUBLIC UTILITY EASEMENT.
6. STANDARD SANITARY SEWER SERVICE LOCATIONS TO BE 10' FROM PROPERTY LINE AND EXTENDED TO THE 5' PUBLIC UTILITY EASEMENT.
7. SERVICES SHALL BE MARKED WITH 2"x4" POST AT TERMINATION POINT FOR LOCATION DURING CONSTRUCTION TO PREVENT DAMAGE. POSTS SHALL BE SPRAY-PAINTED BLUE FOR WATER AND GREEN FOR SEWER.
8. CURB STOPS ARE NOT TO BE INSTALLED IN CONCRETE CURBS, CROSSPANS , OR DRIVEWAYS.
9. SEE PLAN FOR CORNER LOT LOCATIONS.



KEY MAP

SCALE: 1"=300'

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



04/07/2021

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CHALLENGER HOMES

WATER & WASTEWATER CONSTRUCTION PLANS
FALCON MEADOWS AT BENT GRASS FILING NO. 1

FOR
CHALLENGER COMMUNITIES, LLC

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

[illegible]

Project No:	CLH000018
Drawn By:	CMWJ
Checked By:	RGD
Date:	03/26/2021

OVERALL UTILITY LAYOUT

U0.2

Sheet 3 of 21

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

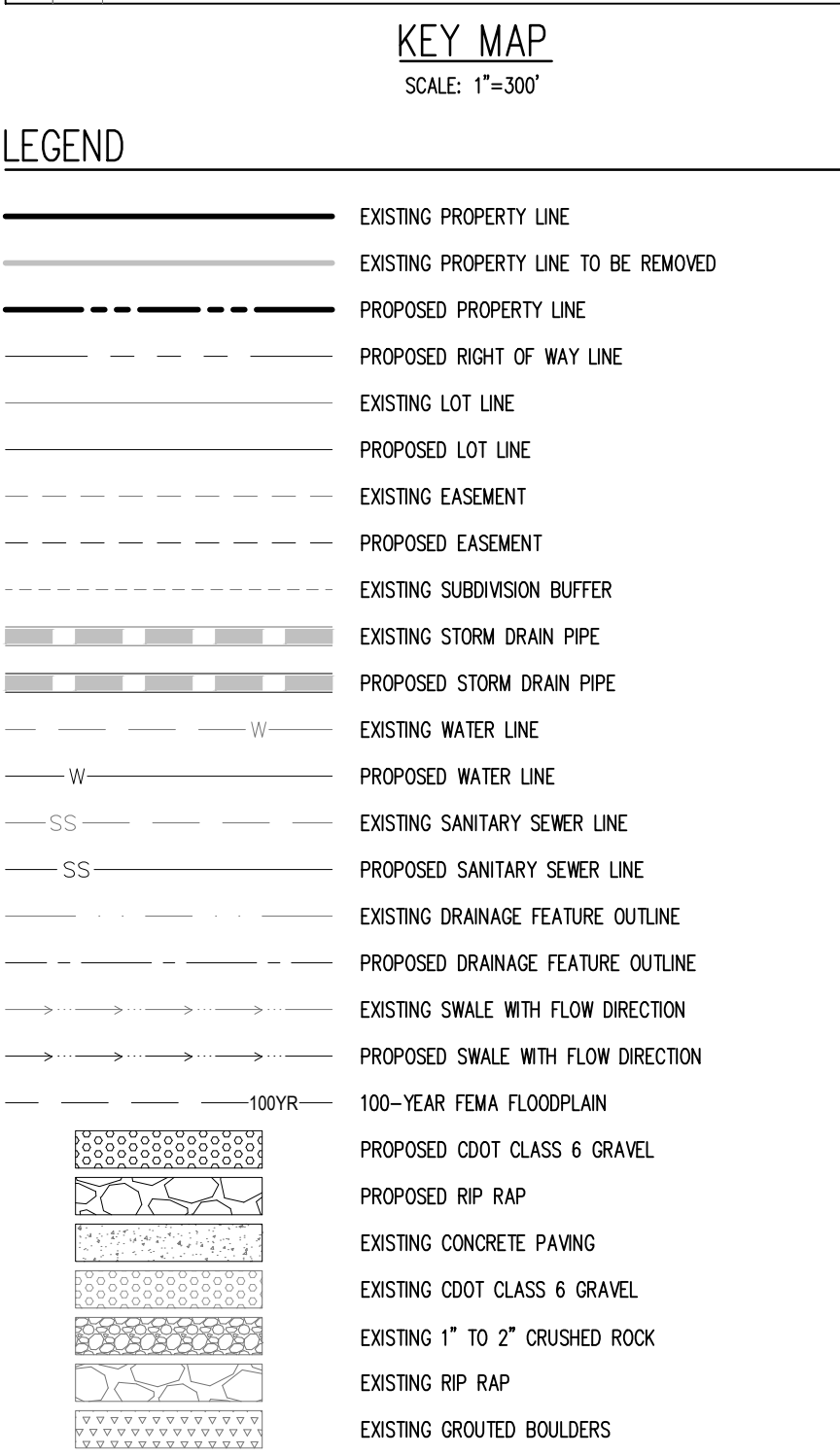
1. ALL UTILITY LOCATIONS SHOWN ARE BASED ON MAPS PROVIDED BY THE APPROPRIATE UTILITY COMPANY AND FIELD SURFACE EVIDENCE AT THE TIME OF SURVEY AND IS TO BE CONSIDERED AN APPROXIMATE LOCATION ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE FIELD LOCATION OF ALL UTILITIES, PUBLIC OR PRIVATE, 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.



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

4 | Challenger: Horner Inc/CO. © Paso County-CLW00018-Bart Grass. Filing 30CARDS-CDUTIL-CLH18. U0.2-Coveral Sheet dng - Coleb Johnson - 3/28/2021



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WATER & WASTEWATER CONSTRUCTION PLANS
FALCON MEADOWS AT BENT GRASS FILING NO. 1
FOR
CHALLENGER COMMUNITIES, LLC

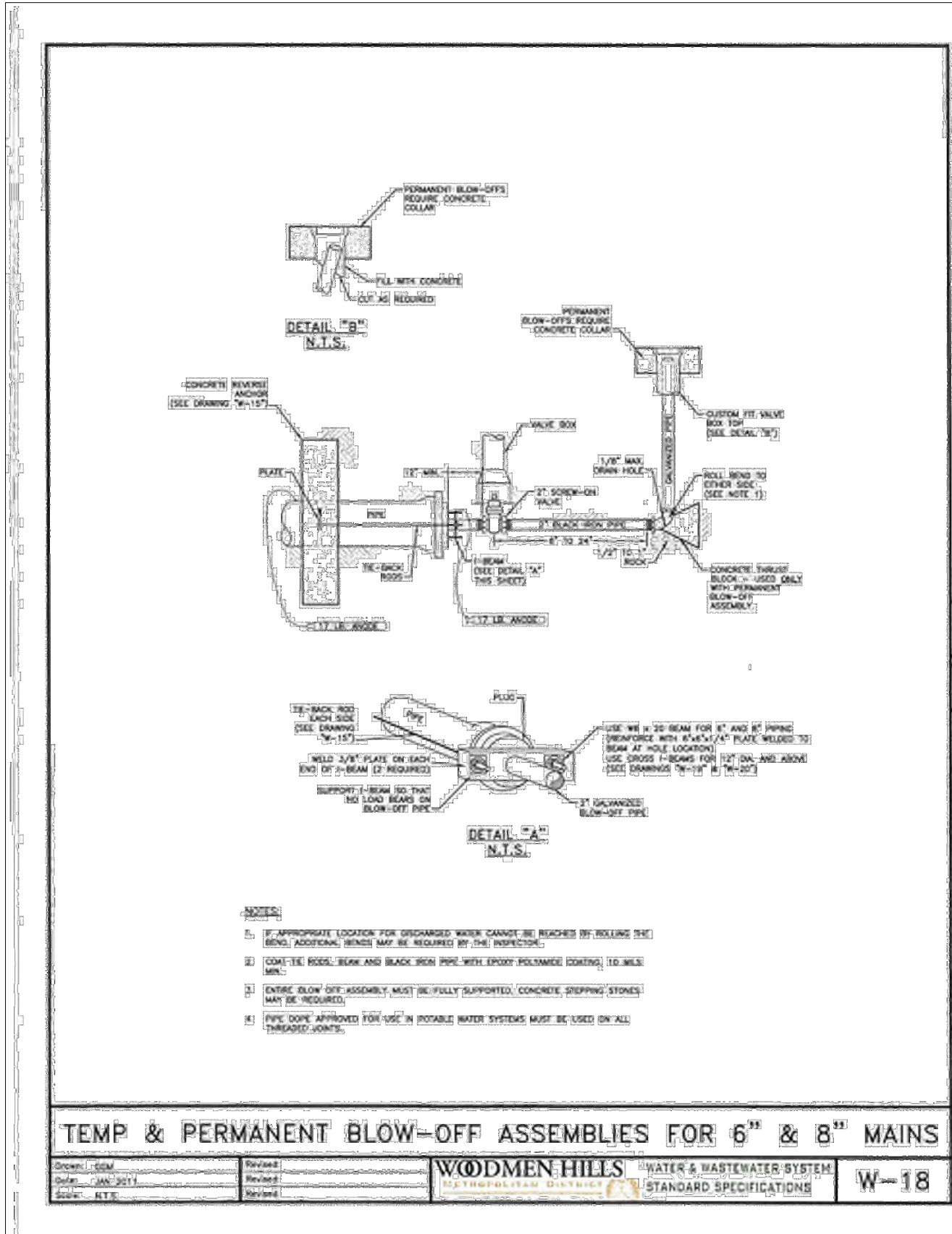
BENT GRASS MEADOWS DRIVE & MERIDIAN ROAD
FALCON, CO 80831 - EL PASO COUNTY

[illegible]

Project No:	CLH000018
Drawn By:	CMWJ
Checked By:	RGD
Date:	03/26/2021

PHASING PLAN (PHASE 1)

U0.3
Sheet 4 of 21



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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CHALLENGER HOMES

WATER & WASTEWATER CONSTRUCTION PLANS
FALCON MEADOWS AT BENT GRASS FILING NO. 1

CHALLENGER COMMUNITIES, LLC

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

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Project No:	CLH000018
Drawn By:	CMWJ
Checked By:	RGD
Date:	03/26/2021

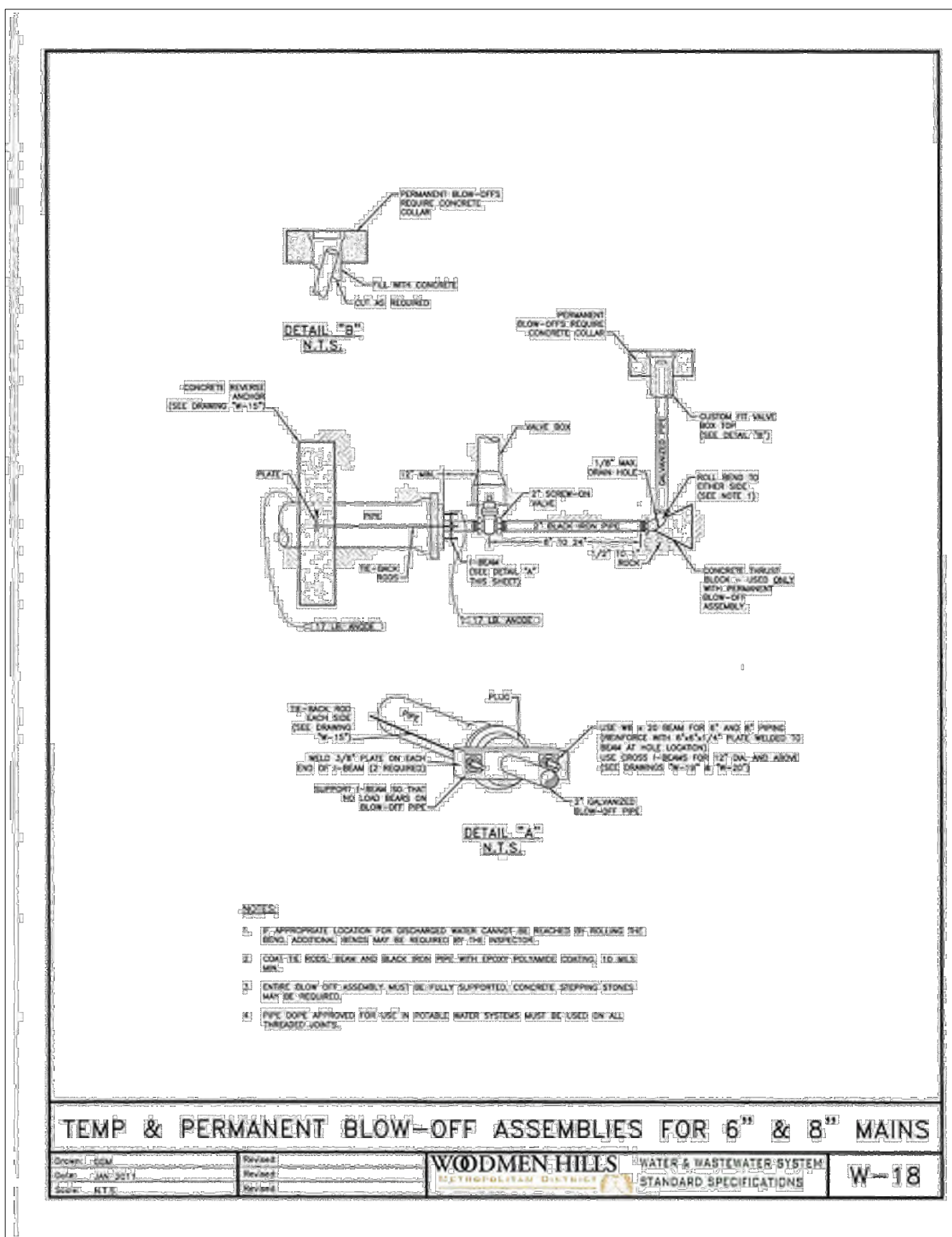
PHASING PLAN (PHASE 2)



Know what's **below**.
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U0.4

Sheet 5 of 21



BASIS OF BEARINGS

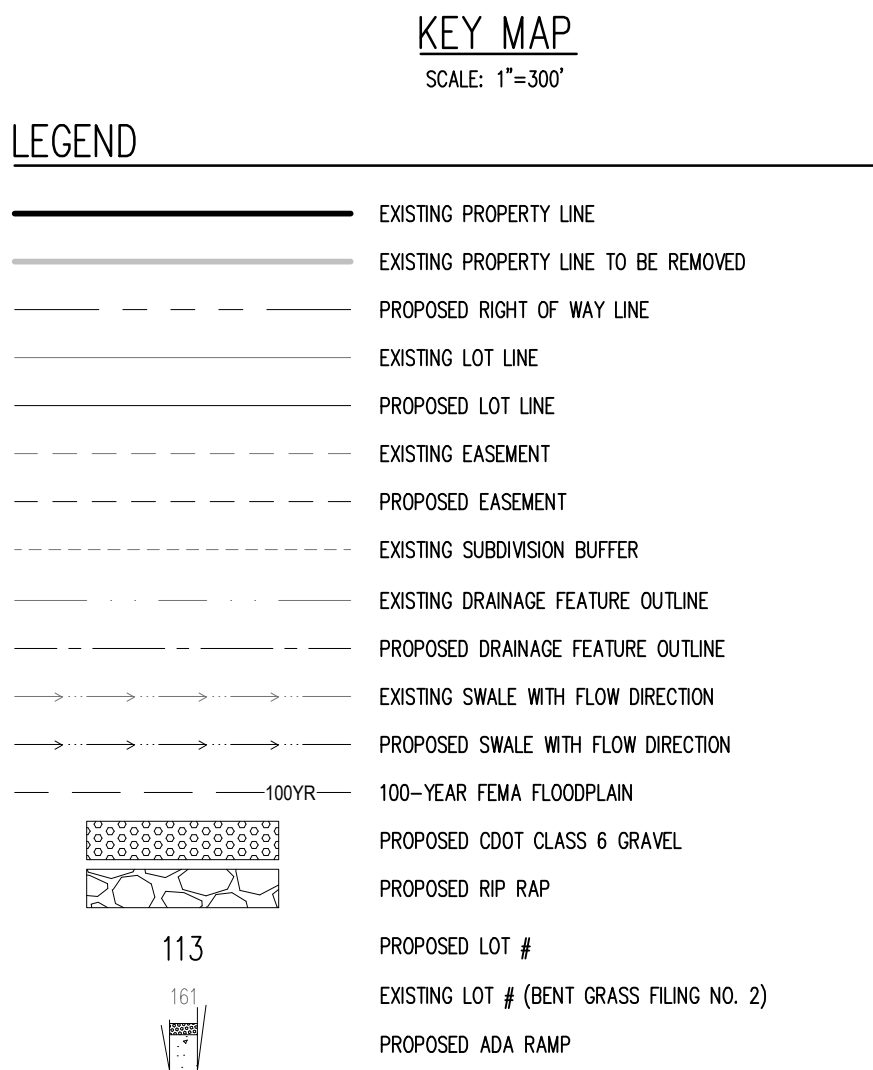
ALL BEARINGS ARE GRID BEARINGS OF THE COLORADO STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, NORTH AMERICAN DATUM 1983. THE BEARING OF THE LINE BETWEEN THE SOUTHWEST CORNER OF SECTION 1, T13S, R65W AND THE WEST QUARTER CORNER SECTION 1, T13S, R65W IS N001°3'46"W AND MINUS AS SHOWN:

BENCHMARK

CAUTION – NOTICE TO CONTRACTOR

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KEY MAP

SCALE: 1"=300'

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CHALLENGER HOMES

WATER & WASTEWATER CONSTRUCTION PLANS
FALCON MEADOWS AT BENT GRASS FILING NO. 1

CHALLENGER COMMUNITIES, LLC

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

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Project No:	CLH000018
Drawn By:	CMWJ
Checked By:	RGD
Date:	03/26/2021

HORIZONTAL CONTROL
PLAN

U0.5

Sheet 6 of 21

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

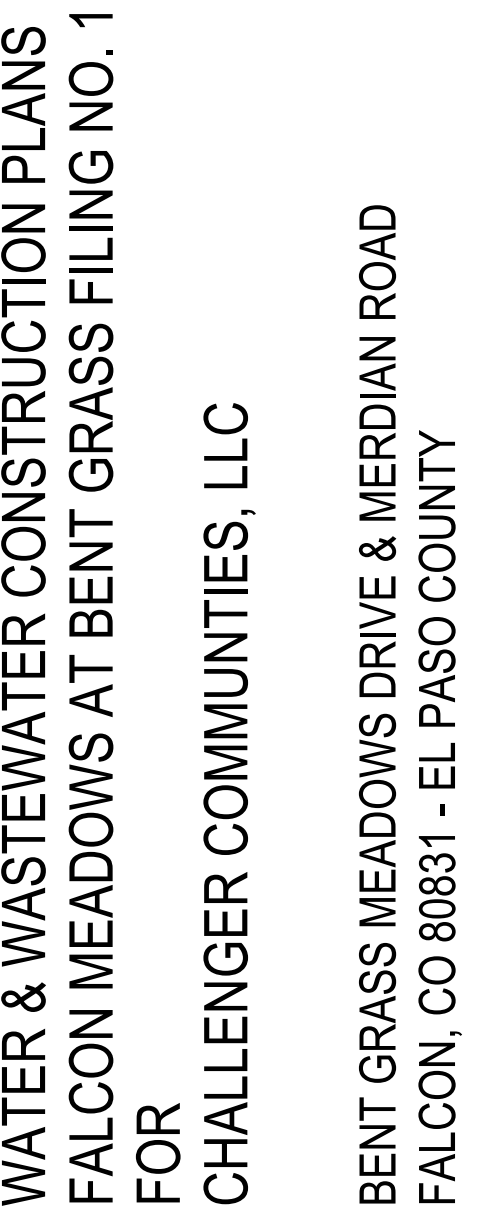
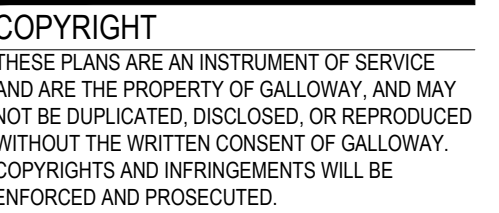
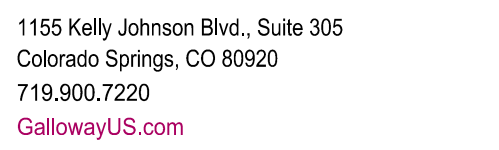
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Know what's **below**.
Call before you dig.

41/Challenger Horres, Inc/CO, ☐ Paso County-CLH900118-Sant Grass Filing 3/CADD/3-CD/UTIL/CLH18, U0.3-Overall Horizontal Control dwn - 3/26/2021

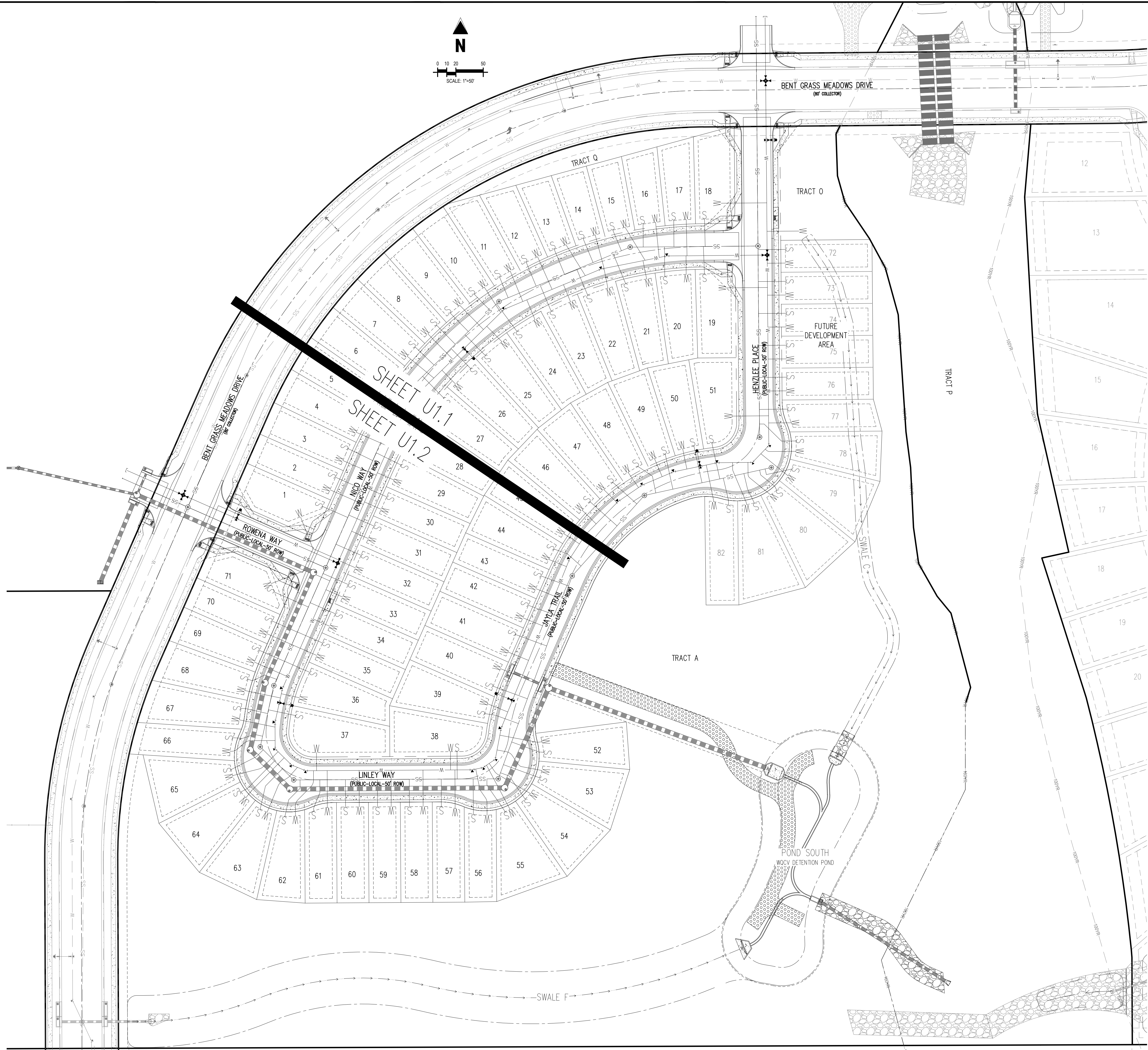


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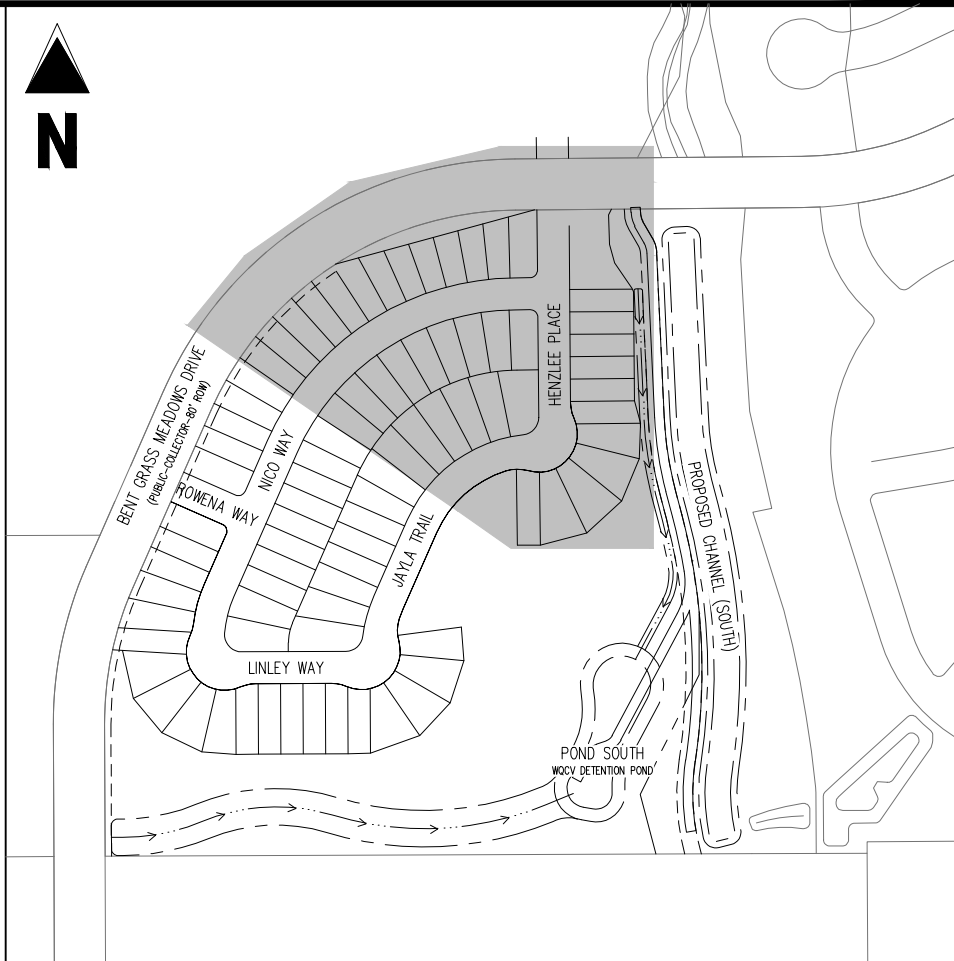
Project No:	CLH000018
Drawn By:	CMWJ
Checked By:	RGD
Date:	03/26/2021

WATER PLAN KEY MAP

Sheet 7 of 21

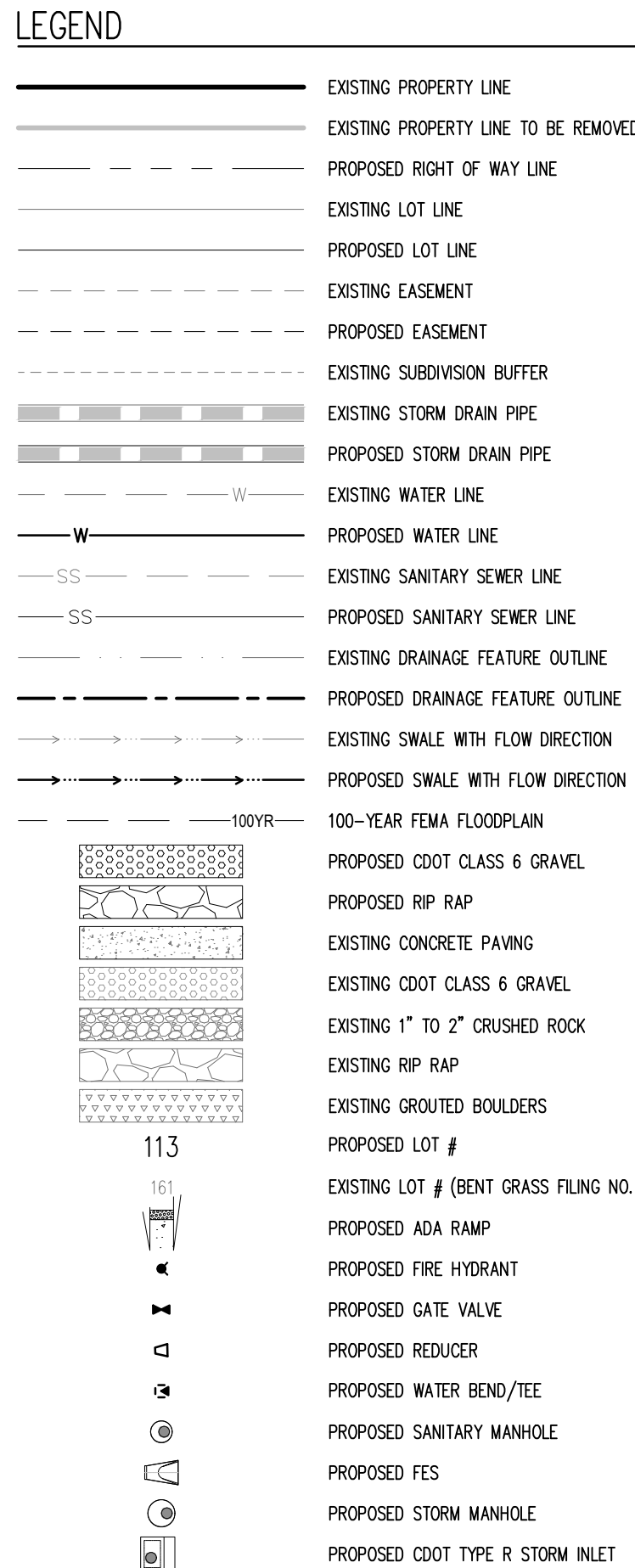


4/Challenger Homes Inc/CO, E Paso County-CLH00016-Sant Grass Flng 3/CADDIS-CDUTIL/CLH18_U1 D-Water Key Map.dwg - 3/26/2021



CHALLENGER HOMES

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



1. ALL WATER MAINS SHALL BE NO CLOSER THAN FIVE FEET (5') TO EDGE OF CONCRETE CURB AND/OR GUTTER.
2. WATER MAINS SHALL BE DESIGNED FOR A MINIMUM OF FIVE FEET SIX INCHES (5'-6") AND A MAXIMUM OF SIX FEET SIX INCHES (6'-6") OF COVER, EXCEPT WHERE ANOTHER UTILITY CAUSES A CONFLICT, IN WHICH CASE THE WATER MAIN SHALL BE LOWERED AS NECESSARY.
3. A VALVE SHALL ALWAYS BE PROVIDED WHERE A MAIN WILL BE EXTENDED IN THE FUTURE TO FACILITATE CONNECTING TO THE EXISTING MAIN WITHOUT DISRUPTING SERVICE. THERE SHALL BE A TWENTY FOOT (20') STUB PAST THE VALVE TO FACILITATE EASE OF CONNECTION.
4. CONTRACTOR TO READ AND BECOME FAMILIAR WITH THE WOODMEN HILLS METROPOLITAN DISTRICT WATER AND WASTEWATER SYSTEM STANDARD SPECIFICATIONS, CRITERIA MANUAL AND DETAILS PRIOR TO BEGINNING CONSTRUCTION.

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:

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

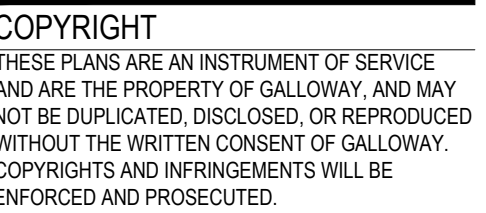
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Sheet 8 of 21

Project No:	CLH000018
Drawn By:	CMWJ
Checked By:	RGD
Date:	03/26/2021

WATER PLAN



WATER & WASTEWATER CONSTRUCTION PLANS
FALCON MEADOWS AT BENT GRASS FILING NO. 1
FOR
CHALLENGER COMMUNITIES, LLC
BENT GRASS MEADOWS DRIVE & MERDIAN ROAD
FALCON, CO 80831 - EL PASO COUNTY

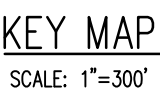
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Project No:	CLH000018
Drawn By:	CMWJ
Checked By:	RGD
Date:	03/26/2021

WATER PLAN

Know what's **below**.
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Sheet 9 of 21



	EXISTING PROPERTY LINE
	EXISTING RIGHT OF WAY TO BE REMOVED
	PROPOSED RIGHT OF WAY LINE
	EXISTING LOT LINE
	PROPOSED LOT LINE
	EXISTING EASEMENT
	PROPOSED EASEMENT
	EXISTING SUBDIVISION BUFFER
	EXISTING STORM DRAIN PIPE
	PROPOSED STORM DRAIN PIPE
	EXISTING WATER LINE
	PROPOSED WATER LINE
	EXISTING SANITARY SEWER LINE
	PROPOSED SANITARY SEWER LINE
	EXISTING DRAINAGE FEATURE OUTLINE
	PROPOSED DRAINAGE FEATURE OUTLINE
	EXISTING SWALE WITH FLOW DIRECTION
	PROPOSED SWALE WITH FLOW DIRECTION
	100-YR
	100-YEAR FEMA FLOODPLAIN
	PROPOSED CDOT CLASS 6 GRAVEL
	PROPOSED RIP RAP
	EXISTING CONCRETE PAVING
	EXISTING CDOT CLASS 6 GRAVEL
	EXISTING 1" TO 2" CRUSHED ROCK
	EXISTING RIP RAP
	EXISTING GROUTED BOULDERS
	PROPOSED LOT #
	EXISTING LOT # (BENT GRASS FILING NO.)
	PROPOSED ADA RAMP
	PROPOSED FIRE HYDRANT
	PROPOSED GATE VALVE
	PROPOSED REDUCER
	PROPOSED WATER BEND/TEE
	PROPOSED SANITARY MANHOLE
	PROPOSED FES
	PROPOSED STORM MANHOLE
	PROPOSED CDOT TYPE R STORM INLET

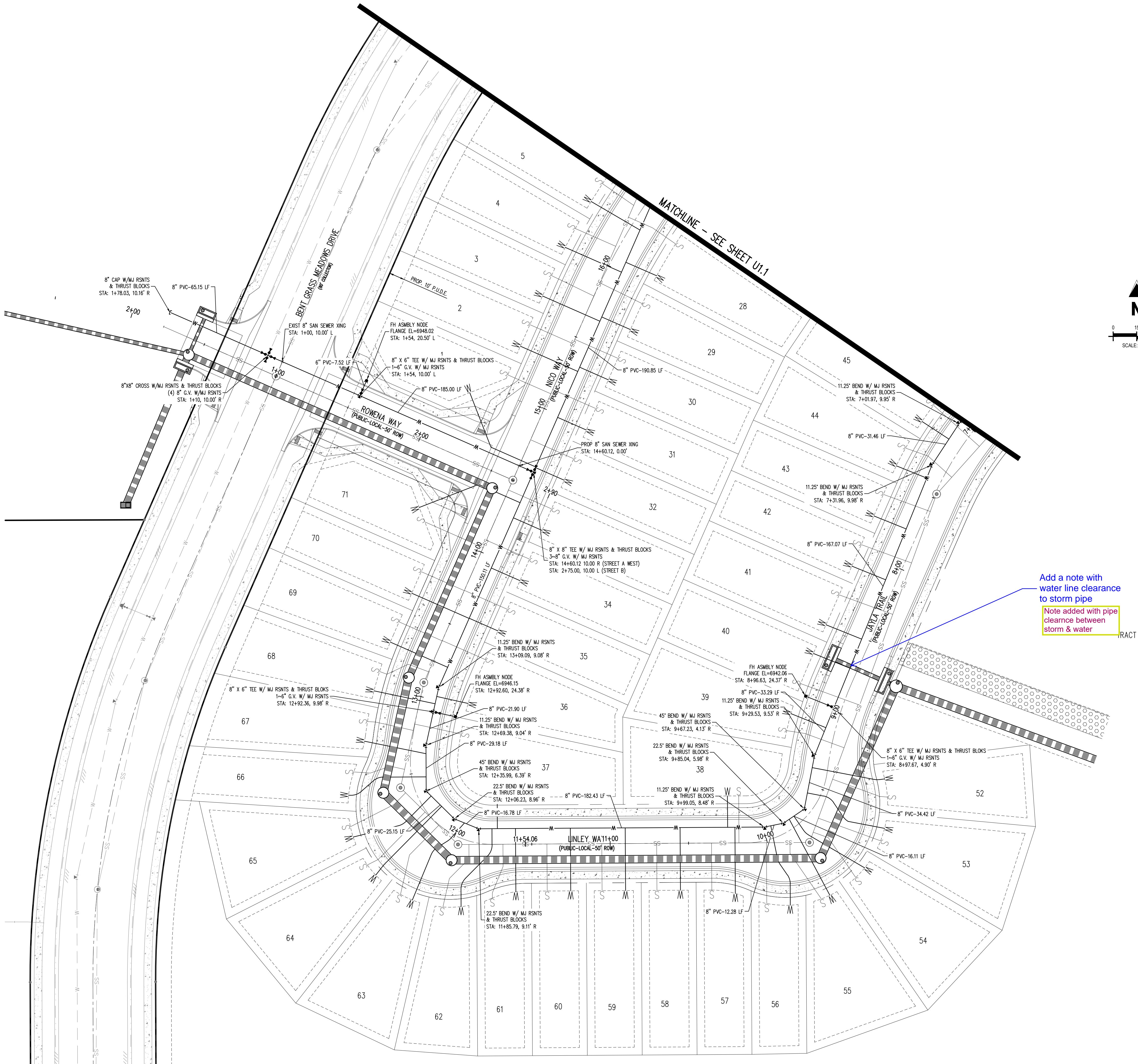
1. ALL WATER MAINS SHALL BE NO CLOSER THAN FIVE FEET (5') TO EDGE OF CONCRETE CURB AND/OR GUTTER.
2. WATER MAINS SHALL BE DESIGNED FOR A MINIMUM OF FIVE FEET SIX INCHES (5'-6") AND A MAXIMUM OF SIX FEET SIX INCHES (6'-6") OF COVER, EXCEPT WHERE ANOTHER UTILITY CAUSES A CONFLICT, IN WHICH CASE THE WATER MAIN SHALL BE LOWERED AS NECESSARY.
3. A VALVE SHALL ALWAYS BE PROVIDED WHERE A MAIN WILL BE EXTENDED IN THE FUTURE TO FACILITATE CONNECTING TO THE EXISTING MAIN WITHOUT DISRUPTING SERVICE. THERE SHALL BE A TWENTY FOOT (20') STUB PAST THE VALVE TO FACILITATE EASE OF CONNECTION.
4. CONTRACTOR TO READ AND BECOME FAMILIAR WITH THE WOODMEN HILLS METROPOLITAN DISTRICT WATER AND WASTEWATER SYSTEM STANDARD SPECIFICATIONS CRITERIA MANUAL AND DETAILS PRIOR TO BEGINNING CONSTRUCTION.

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:

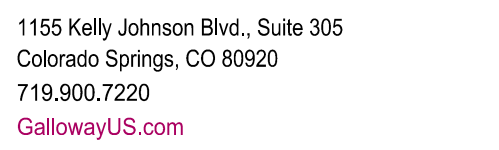
THE SOUTHWESTERLY CORNER OF LOT 1 WOODMEN HILLS FILING NO. 4. MONUMENTED BY A YELLOW PLASTIC SURVEYORS CAP ON A NO. 4 REBAR LS# 24954 ELEVATION = 6947.67

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41Challenger Hornea Inc/CO, E Paso County-CLH00016-Sent Grass Filing 3/CADDIS-CDUTIL/CLH18_W12 Water Plan/Day - Caleb Johnson - 3/29/2021



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WATER & WASTEWATER CONSTRUCTION PLANS
FALCON MEADOWS AT BENT GRASS FILING NO. 1
FOR
CHALLENGER COMMUNITIES, LLC
BENT GRASS MEADOWS DRIVE & MERIDIAN ROAD
FALCON, CO 80831 - EL PASO COUNTY

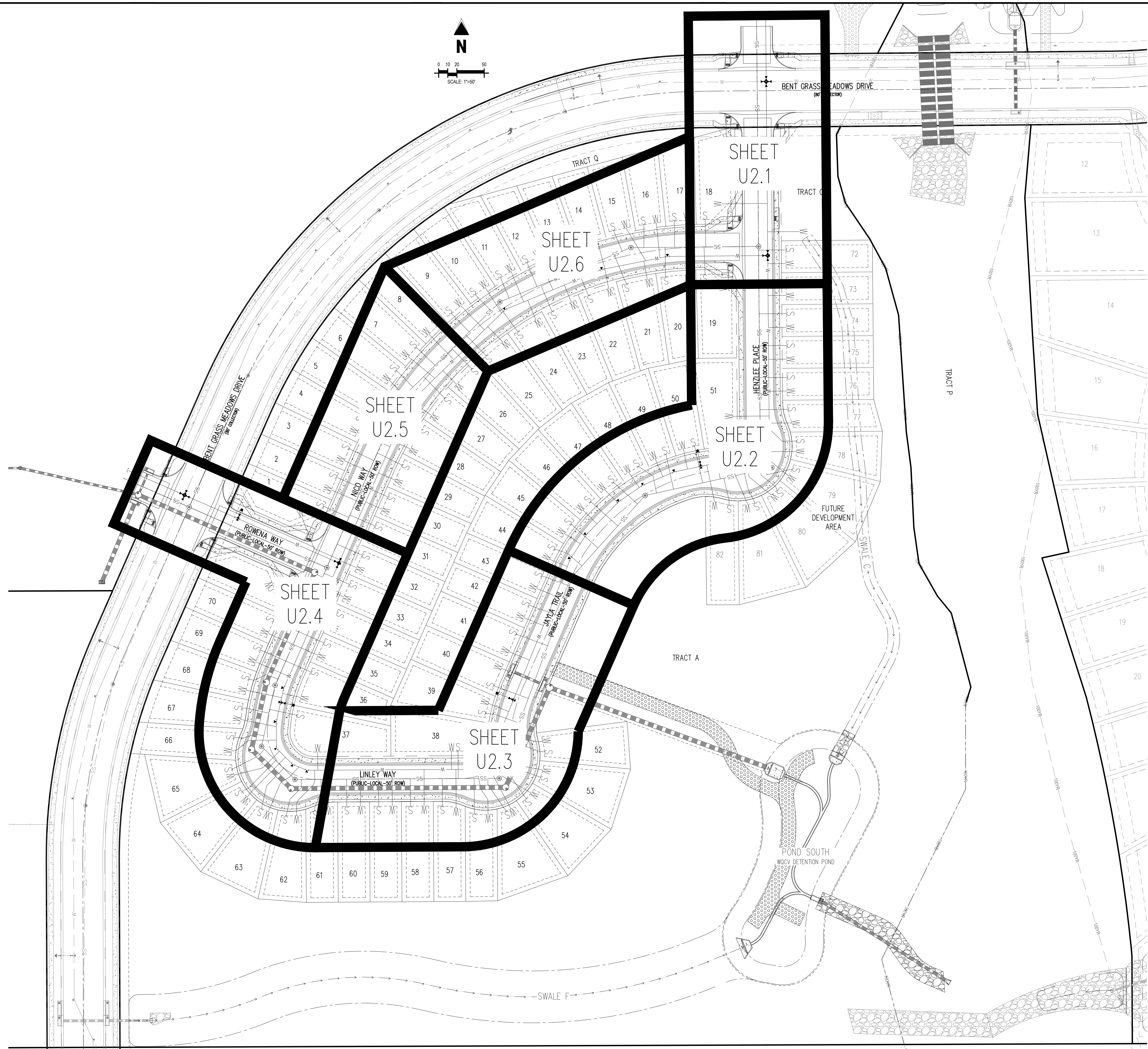
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Project No:	CLH000018
Drawn By:	CMWJ
Checked By:	RGD
Date:	03/26/2021

WASTEWATER PLAN KEY MAP

U2.0

Sheet 10 of 21



41/Challenger Horres, Inc/CO, 1 Paso County-CLH00018-Sant Grass Filing 3/CADDIS-CDUTIL/CLH18, U2 0-Wastewater Key Map/dwg - 3/28/2021



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CHALLENGER HOMES

WATER & WASTEWATER CONSTRUCTION PLANS
FALCON MEADOWS AT BENT GRASS FILING NO. 1
FOR
CHALLENGER COMMUNITIES, LLC

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

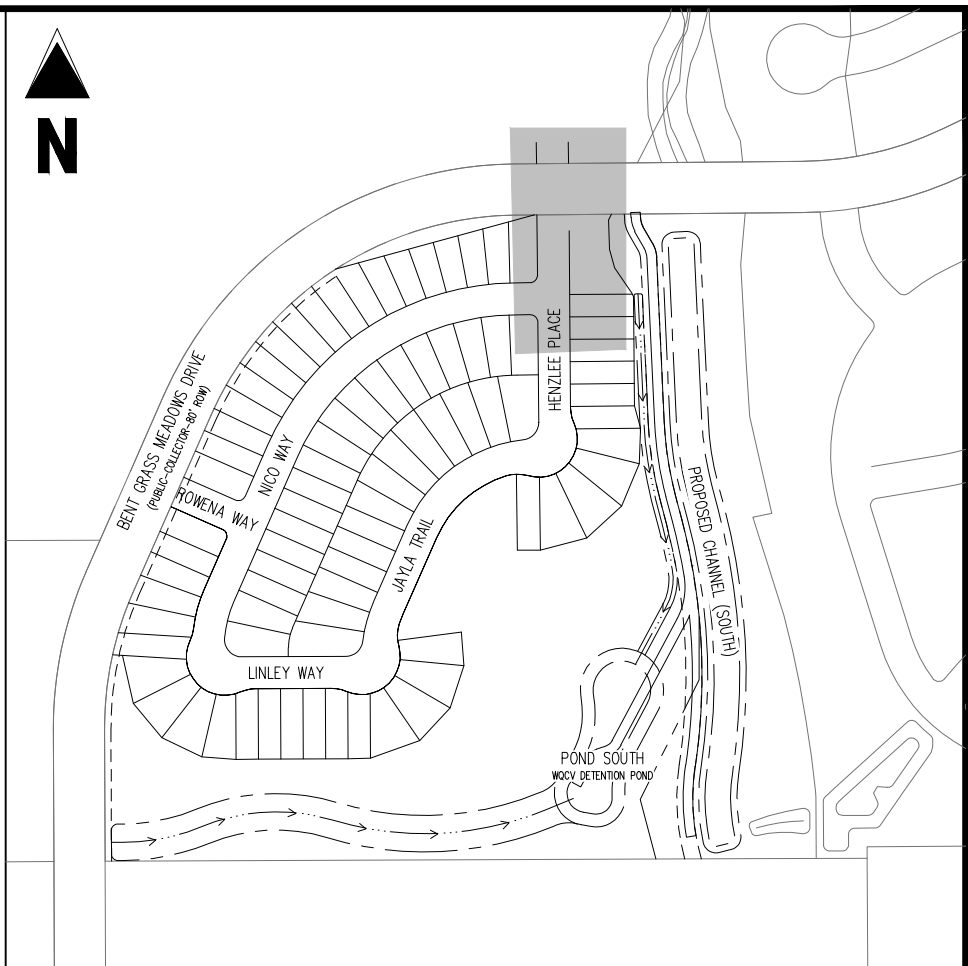
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Project No:	CLH000018
Drawn By:	CMWJ
Checked By:	RGD
Date:	03/26/2021

WASTEWATER PLAN & PROFILE



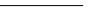







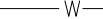

























U2.1

Sheet 11 of 21



KEY MAP
SCALE: 1"=300'

LEGEND

- | | |
|---|---|
|  | EXISTING PROPERTY LINE |
|  | EXISTING PROPERTY LINE TO BE REMOVED |
|  | PROPOSED RIGHT OF WAY LINE |
|  | EXISTING LOT LINE |
|  | PROPOSED LOT LINE |
|  | EXISTING EASEMENT |
|  | PROPOSED EASEMENT |
|  | EXISTING SUBDIVISION BUFFER |
|  | EXISTING STORM DRAIN PIPE |
|  | PROPOSED STORM DRAIN PIPE |
|  | EXISTING WATER LINE |
|  | PROPOSED WATER LINE |
|  | EXISTING SANITARY SEWER LINE |
|  | PROPOSED SANITARY SEWER LINE |
|  | EXISTING DRAINAGE FEATURE OUTLINE |
|  | PROPOSED DRAINAGE FEATURE OUTLINE |
|  | EXISTING SWALE WITH FLOW DIRECTION |
|  | PROPOSED SWALE WITH FLOW DIRECTION |
|  | 100-YEAR FEMA FLOODPLAIN |
|  | PROPOSED CDOT CLASS 6 GRAVEL |
|  | PROPOSED RIP RAP |
|  | EXISTING CONCRETE PAVING |
|  | EXISTING CDOT CLASS 6 GRAVEL |
|  | EXISTING 1" TO 2" CRUSHED ROCK |
|  | EXISTING RIP RAP |
|  | EXISTING GROUTED BOULDERS |
| 113 | PROPOSED LOT # |
|  | EXISTING LOT # (BENT GRASS FILLING NO. 2) |
|  | PROPOSED ADA RAMP |
|  | PROPOSED FIRE HYDRANT |
|  | PROPOSED GATE VALVE |
|  | PROPOSED REDUCER |
|  | PROPOSED WATER BEND/TEE |
|  | PROPOSED SANITARY MANHOLE |
|  | PROPOSED FES |
|  | PROPOSED STORM MANHOLE |
|  | PROPOSED CDOT TYPE R STORM INLET |

NOTES

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BENCHMARK

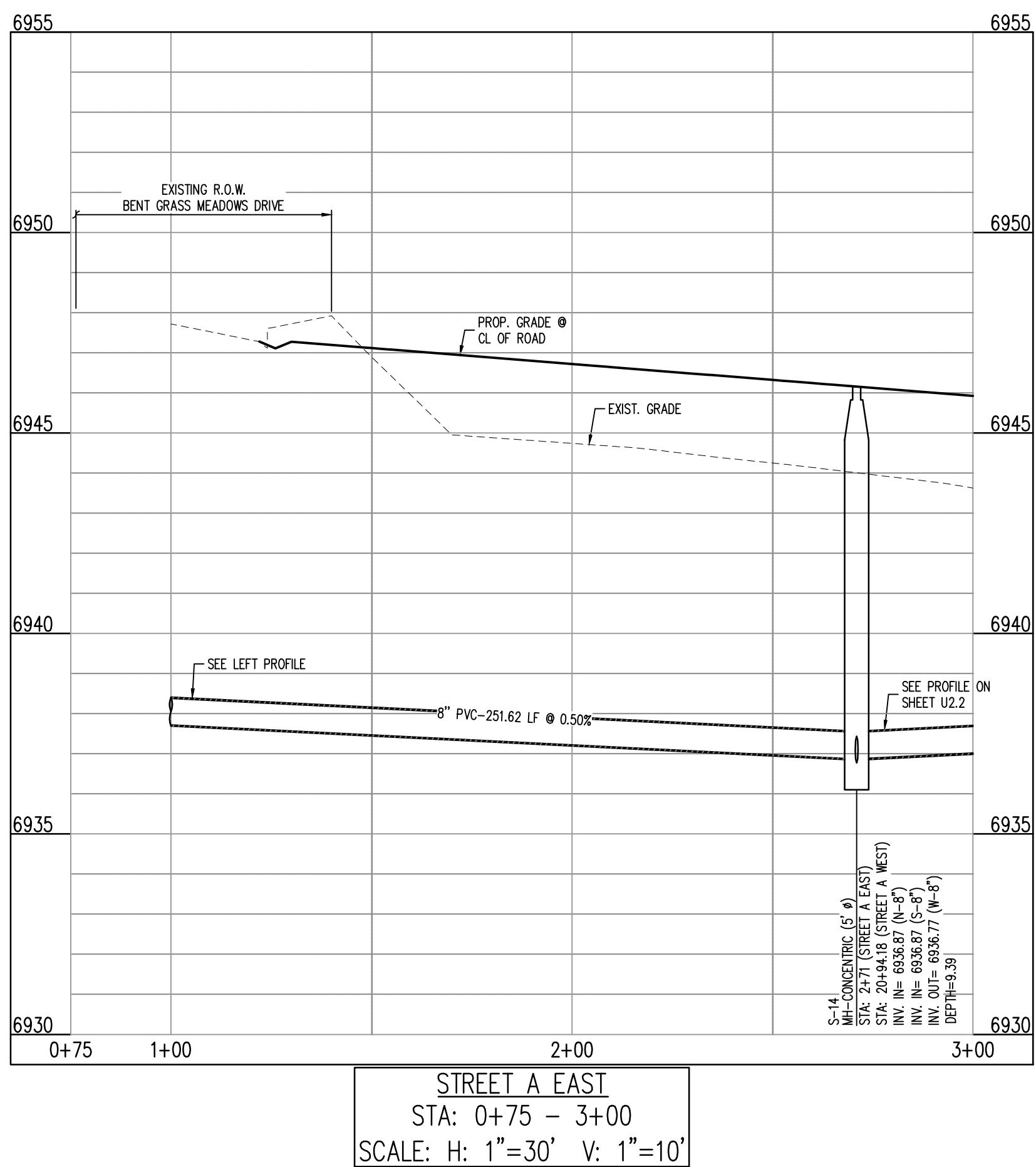
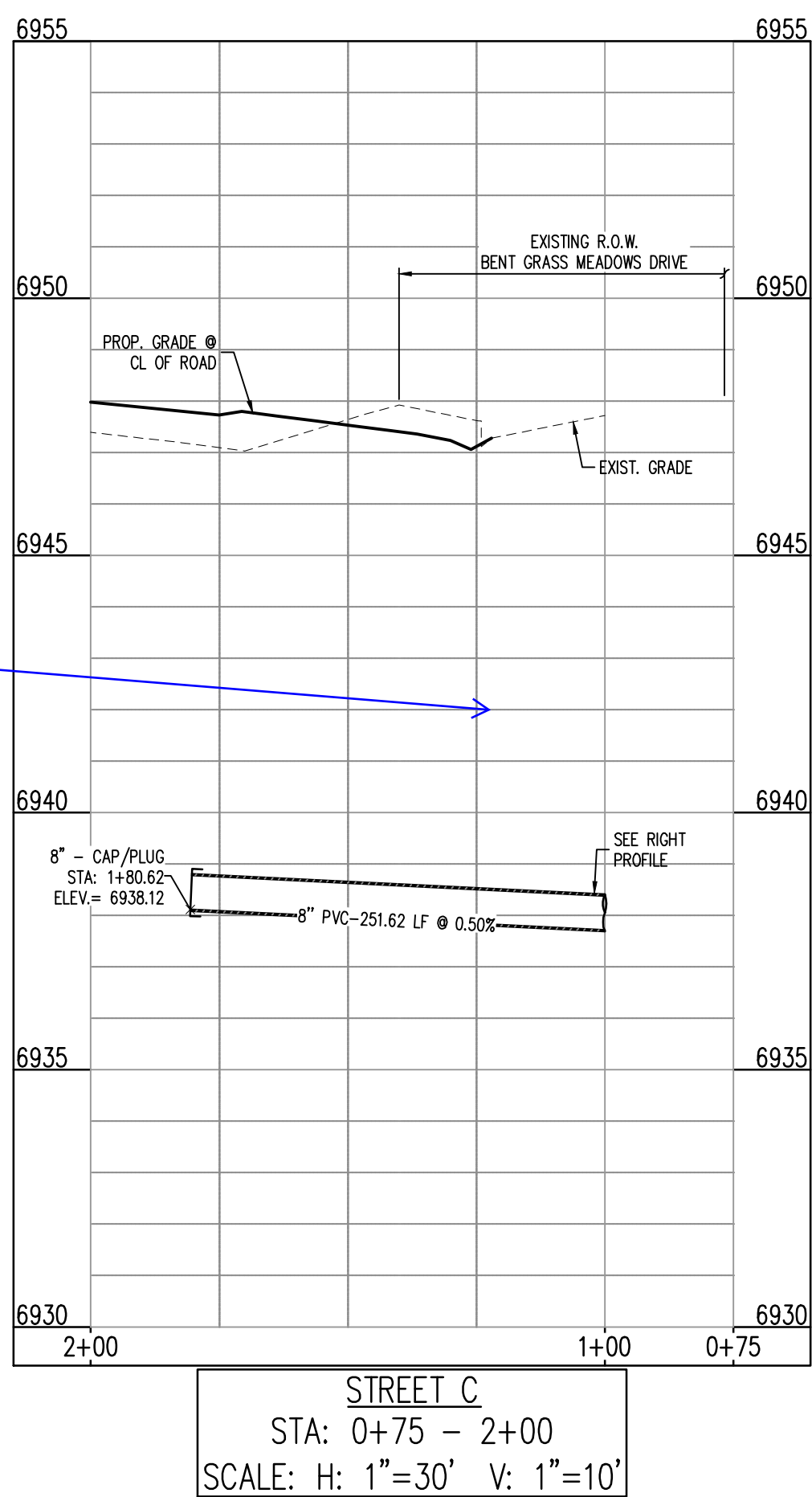
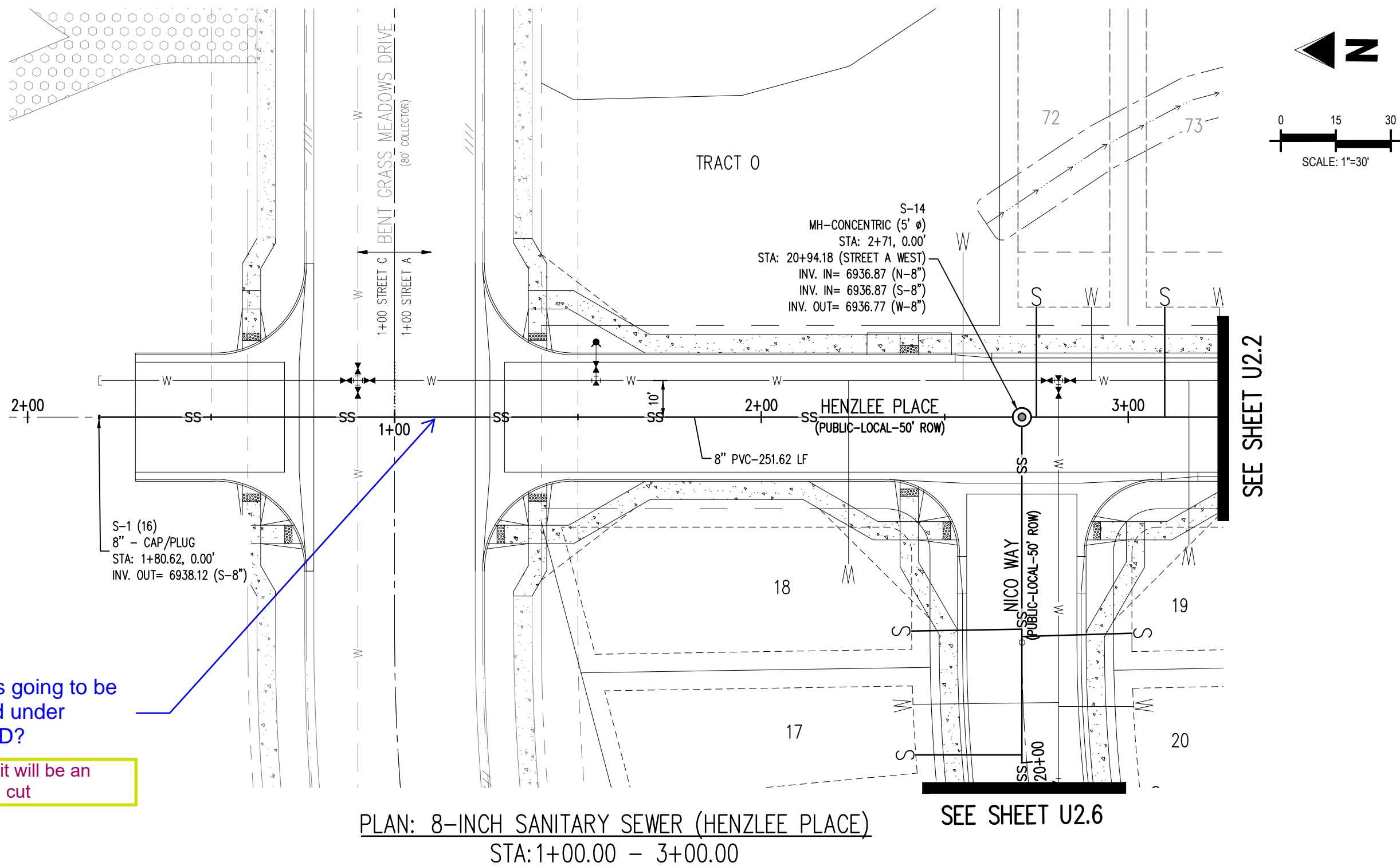
THE SOUTHWESTERLY CORNER OF LOT 1 WOODMEN HILLS FILING NO. 4, MONUMENTED BY A YELLOW PLASTIC SURVEYORS CAP ON A NO. 4 REBAR LS# 24954 ELEVATION = 6947.67

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



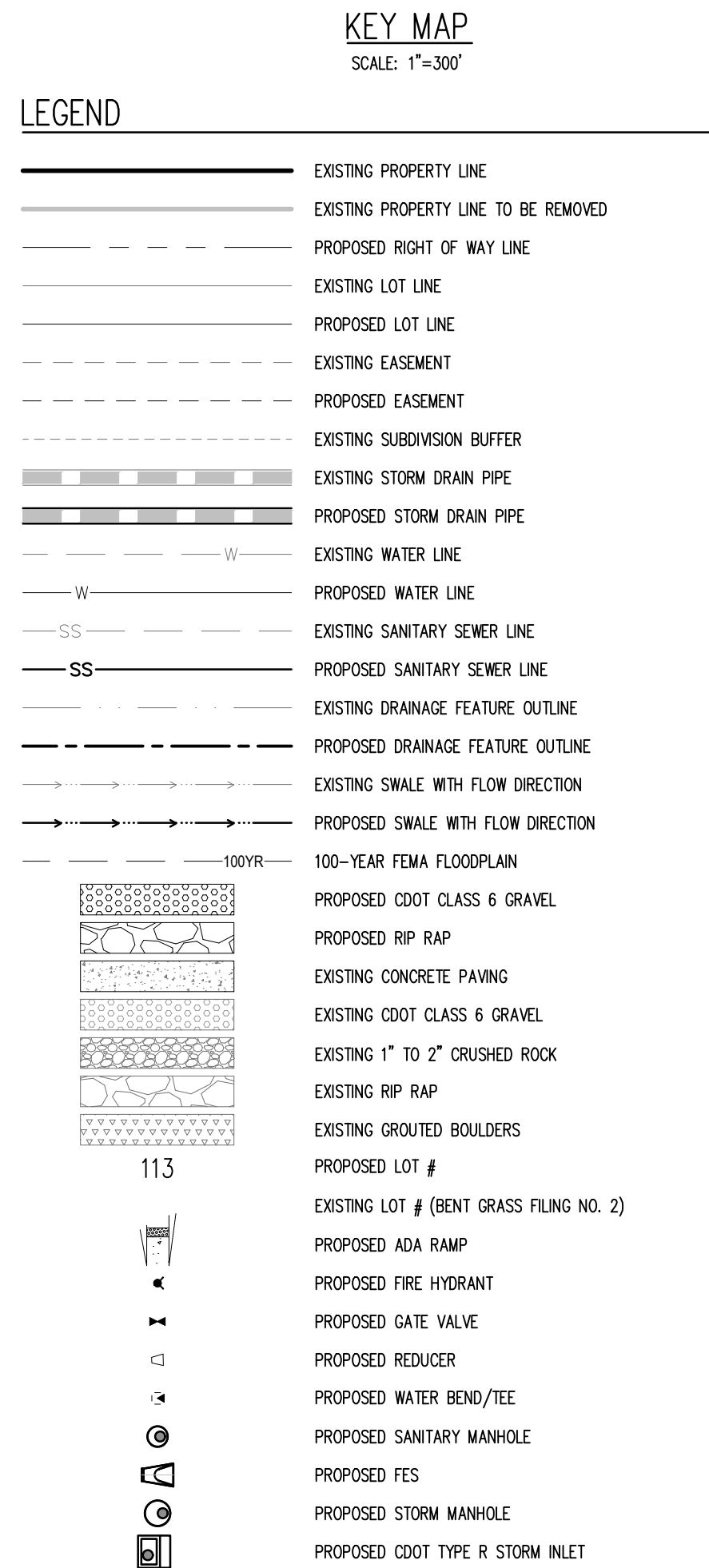
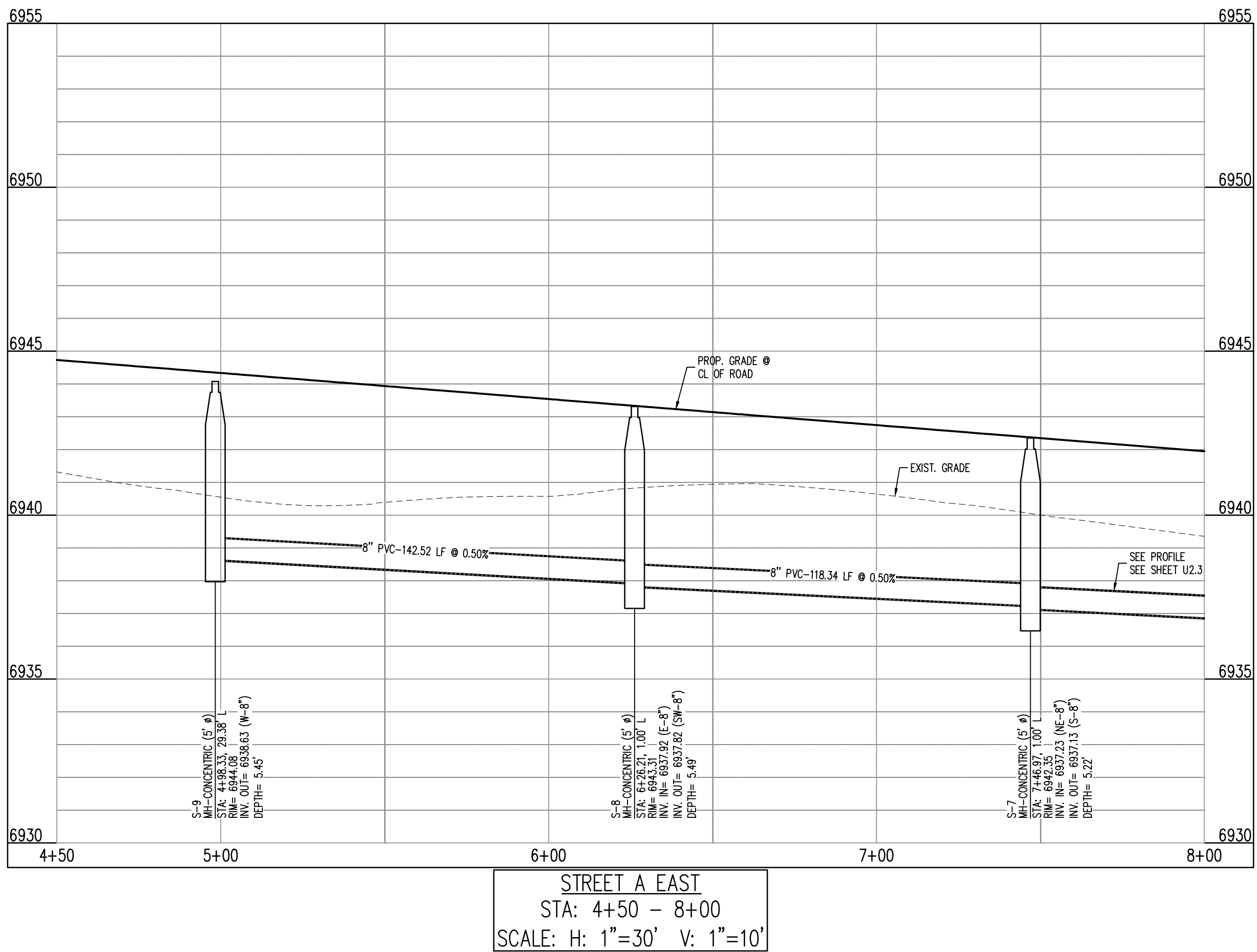
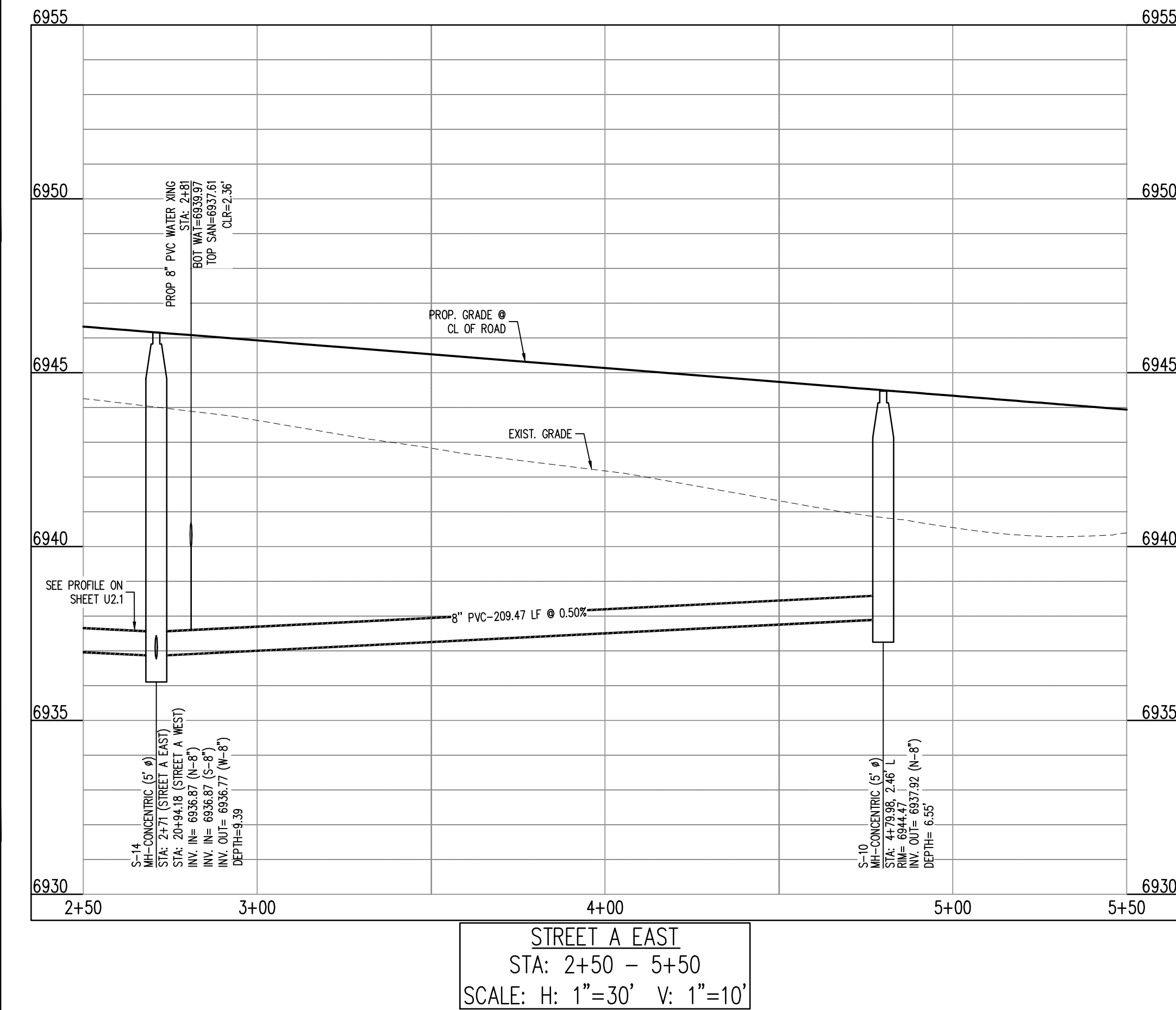
Show the water crossing

Water crossing added

Is this going to be
bored under
BGMD?

No - it will be an open cut

Water crossing added



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Galloway

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CHALLENGER HOMES

WATER & WASTEWATER CONSTRUCTION PLANS
FALCON MEADOWS AT BENT GRASS FILING NO. 1
FOR
CHALLENGER COMMUNITIES, LLC

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

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Project No: CLH000018

Drawn By: CMWJ

Checked By: RGD

Date: 03/26/2021

WASTEWATER PLAN & PROFILE

U2.2

Sheet 12 of 21

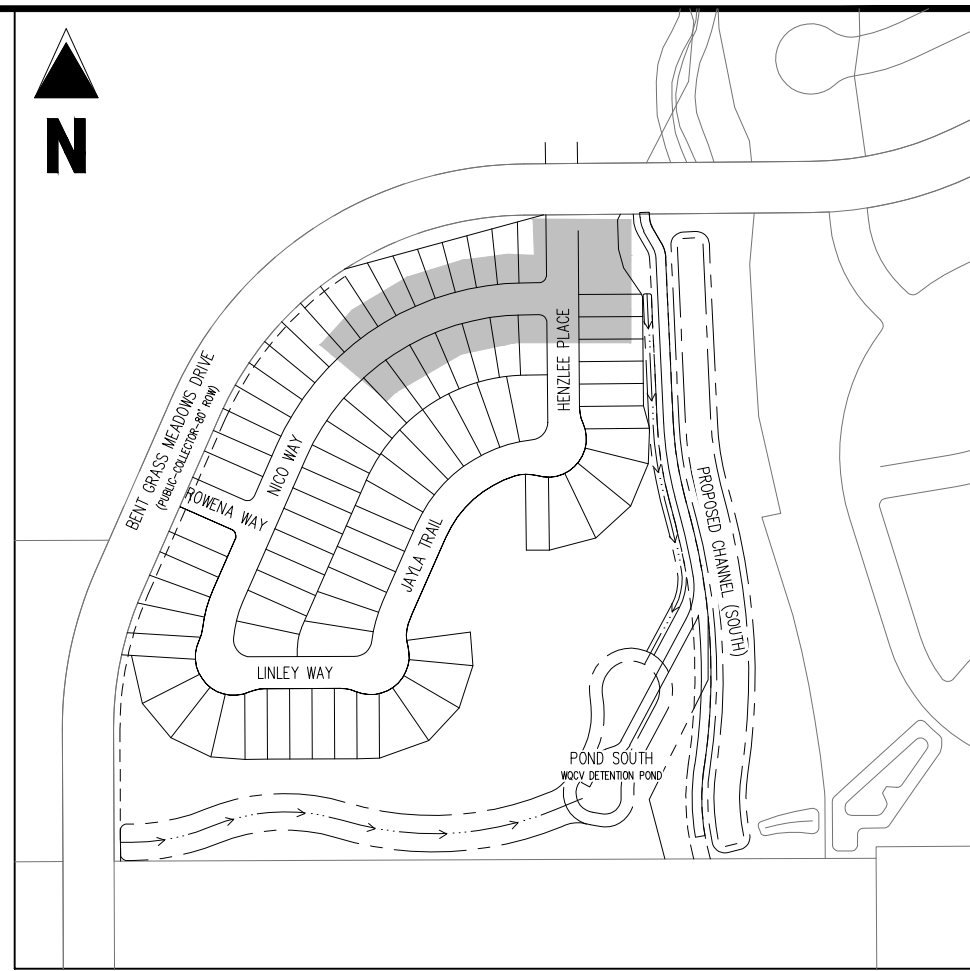


CHALLENGER HOMES

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

Sheet 15 of 21

11. *Phaeobryozoa* Montagu, 1820: 100. (Type: *Phaeobrya* Montagu, 1820: 100. (By monotypy).)



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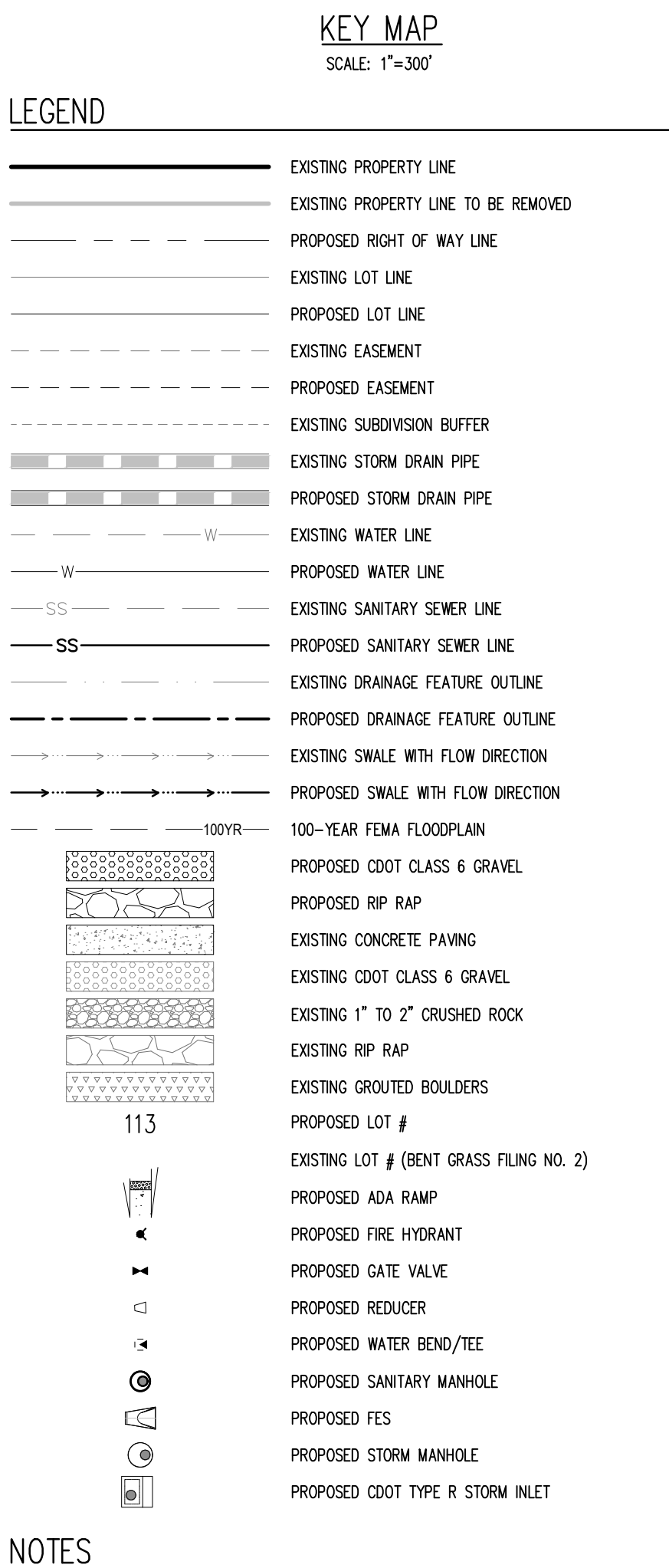


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CHALLENGER HOMES

CHALLENGER COMMUNITIES, LLC

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



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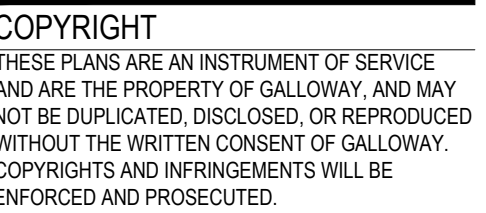
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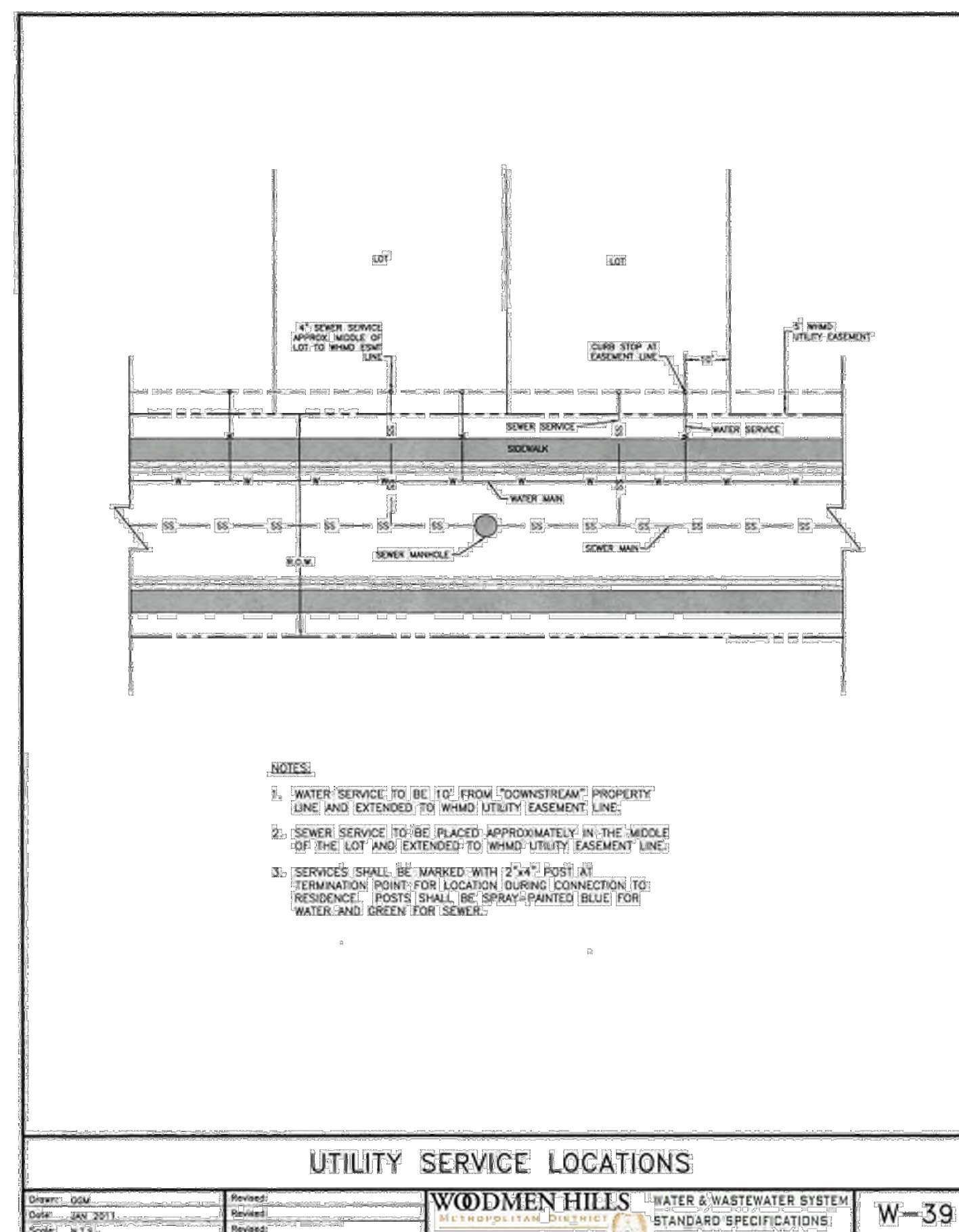


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Checked By:	RGD
Date:	03/26/2021





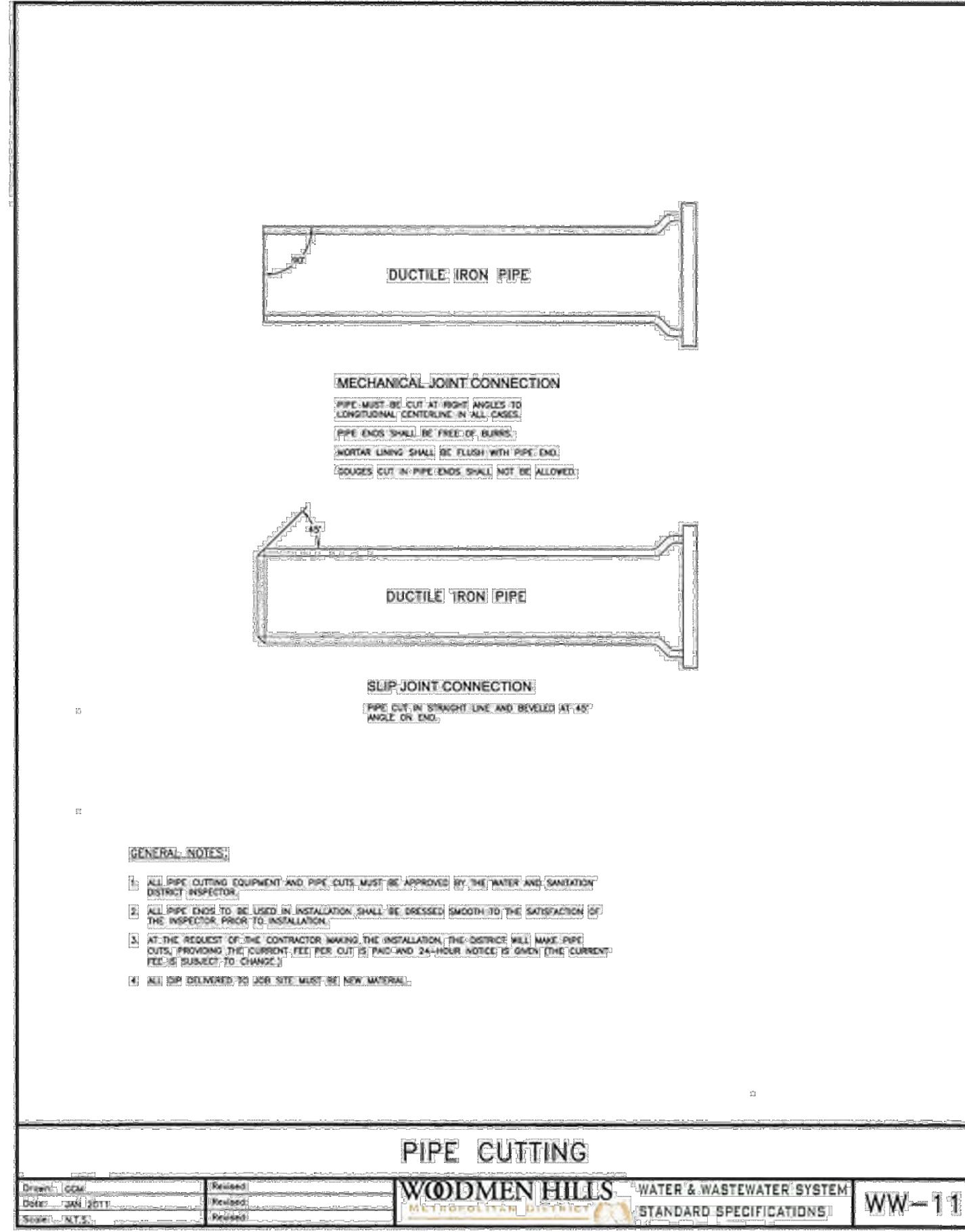
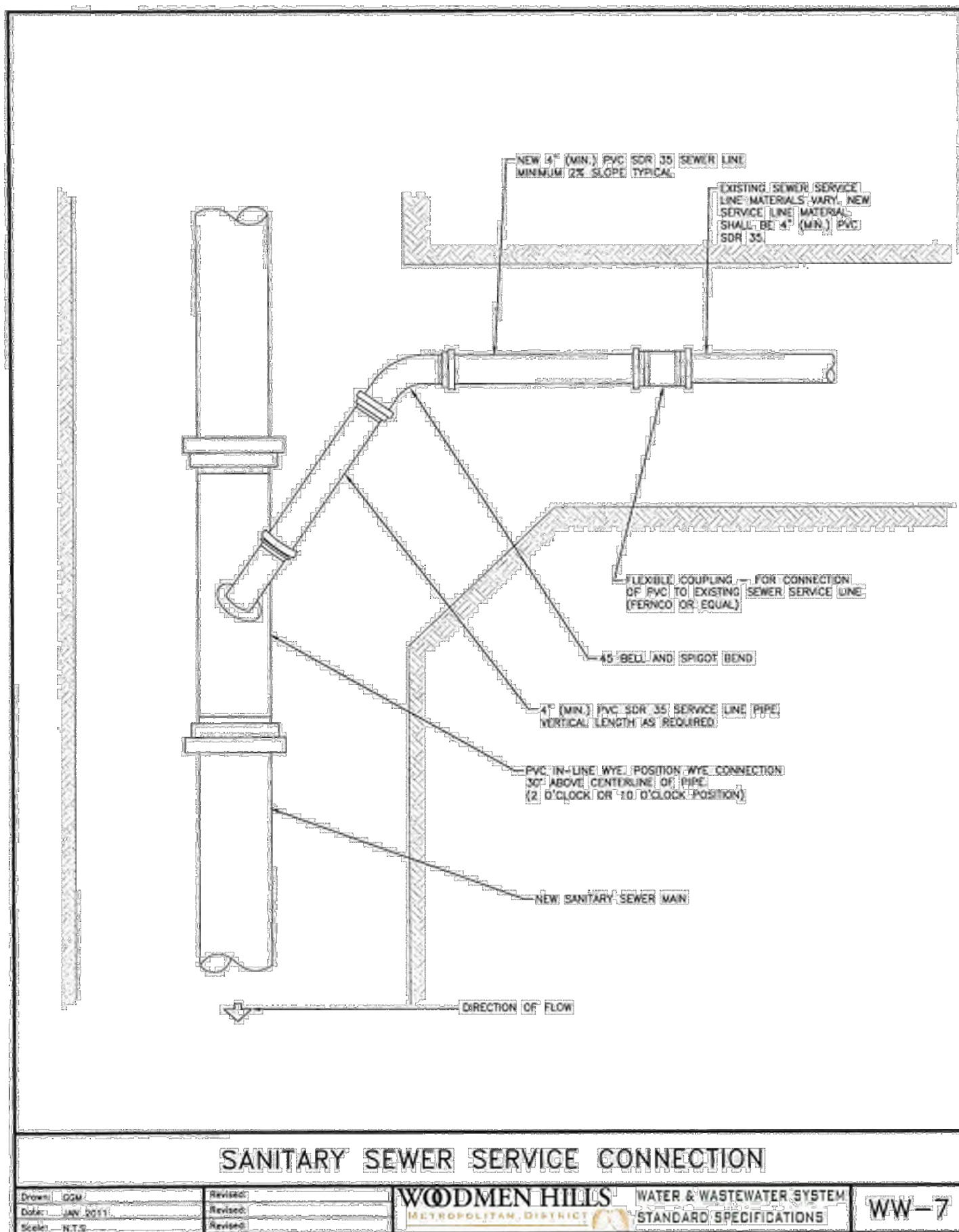
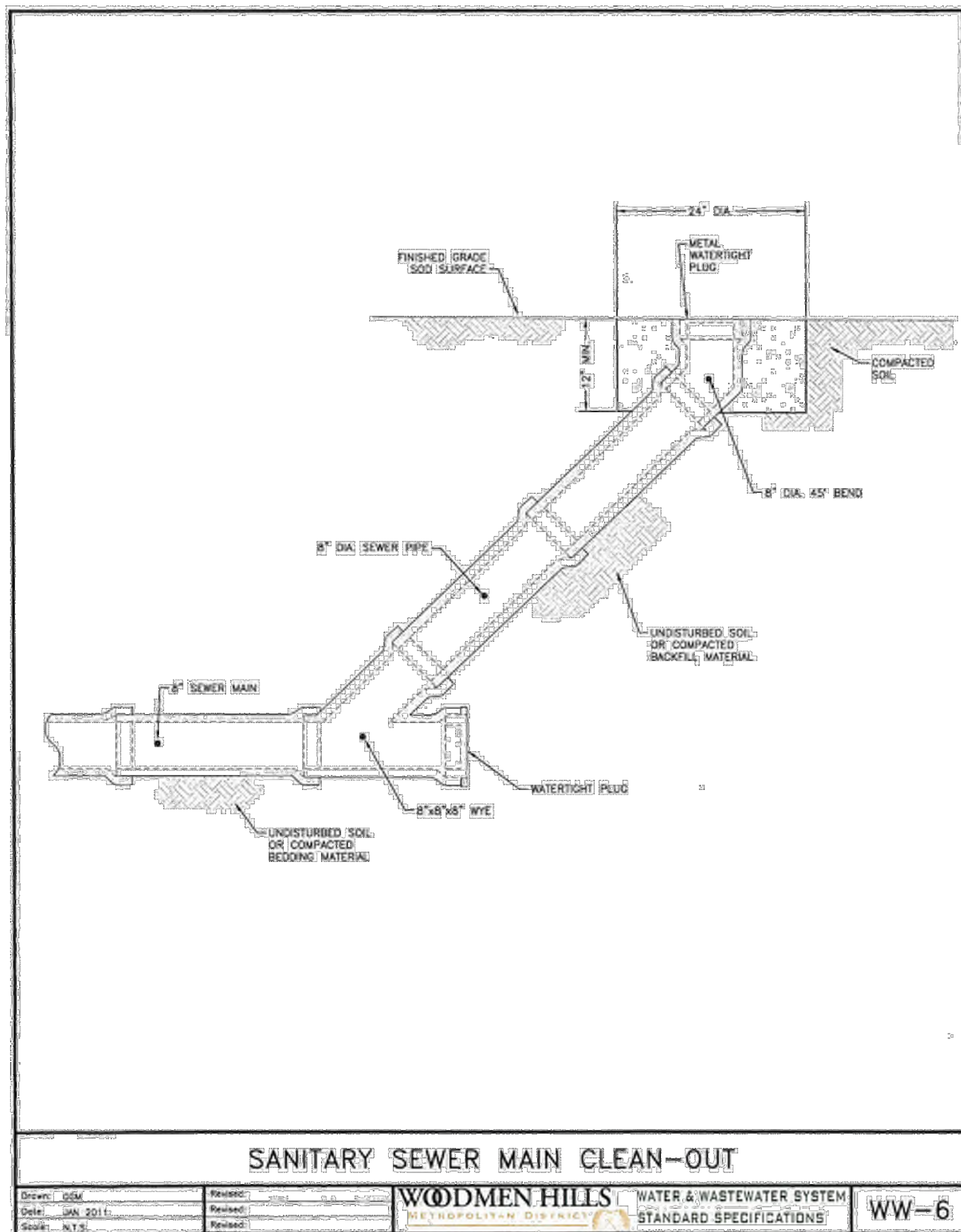
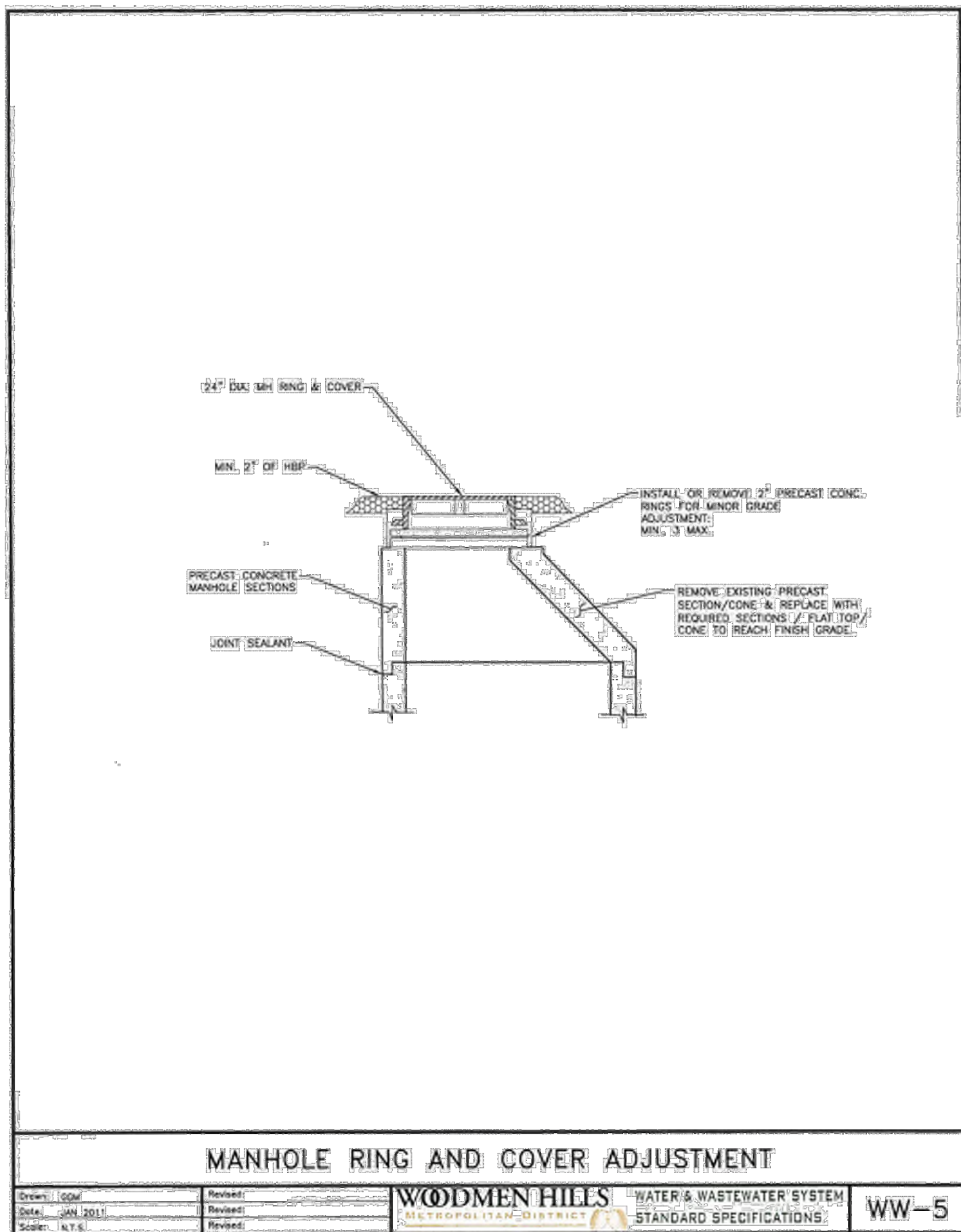


CHALLENGER HOMES

[illegible]

WASTEWATER DETAIL
SHEET 1

Sheet 20 of 21



WATER & WASTEWATER CONSTRUCTION PLANS
FALCON MEADOWS AT BENT GRASS FILING NO. 1
FOR
CHALLENGER COMMUNITIES, LLC
BENT GRASS MEADOWS DRIVE & MERIDIAN ROAD
FALCON, CO 80831 - EL PASO COUNTY

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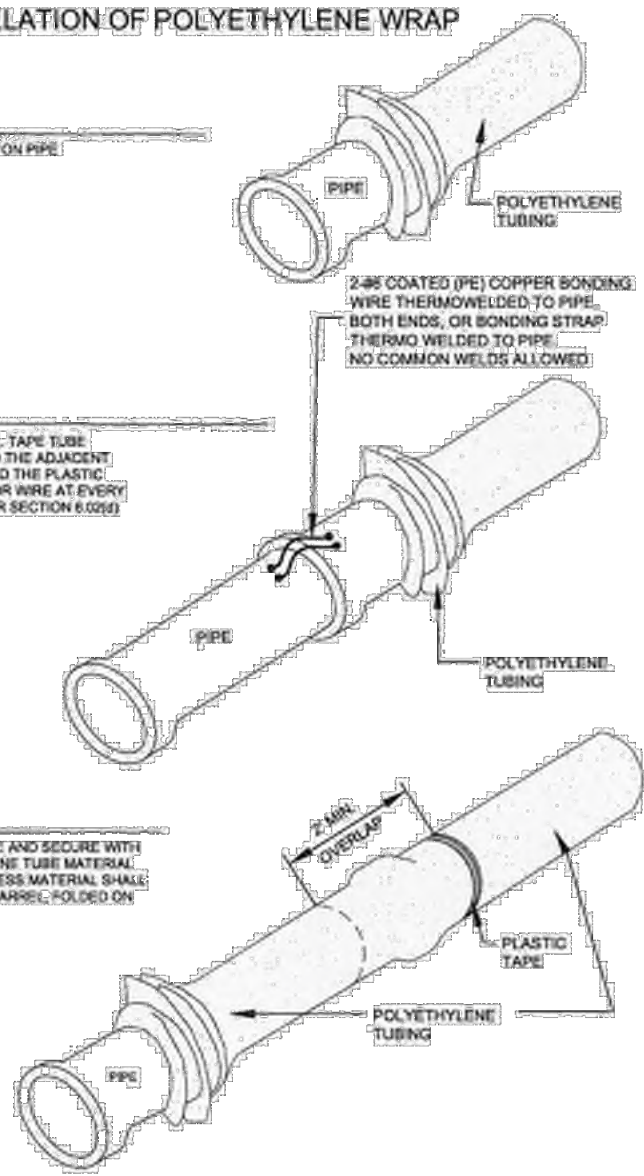
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Drawn By:	CMWJ
Checked By:	RGD
Date:	03/26/2021

WASTEWATER DETAIL
SHEET 2

U3.5

Sheet 21 of 21

STEP 1:
PLACE TUBE OF POLYETHYLENE MATERIAL ON PIPE
PRIOR TO LOWERING IT INTO TRENCH.



POLYETHYLENE PIPE WRAP

Drawn: GJM Date: MAY 2017 Scale: N.T.S.	Revised: Revised: Revised:		WATER & WASTE WATER SYSTEM STANDARD SPECIFICATIONS	WW-12
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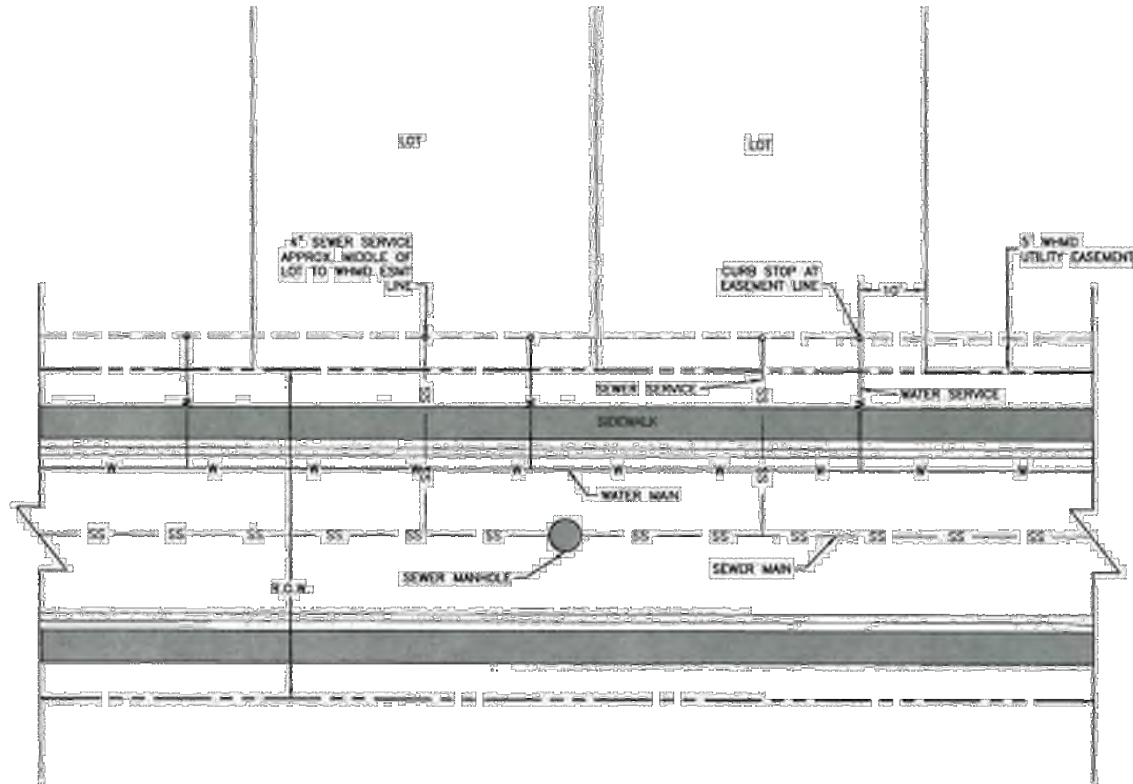
MAXIMUM DEFLECTION
PER SLIP JOINT OF D.P.

PIPE DIAMETER			DESIGN DEFLECTION (80% MAX)		APPROX. RADIUS FOR DEFLECTING CURVE WITHOUT BENDS	
ID (IN)	O.D. (IN)	O.D. (FT)	MFRS. DEFL.	MAX. DEFL. DIST. (IN)	(FT)	(IN)
4"	4.967	4.090	9.00000"	4.00000"	14"	201' 181"
6"	6.907	5.752	9.00000"	6.00000"	14"	285' 258"
8"	8.905	7.754	9.00000"	8.00000"	14"	285' 258"
10"	11.107	9.500	9.00000"	9.00000"	14"	285' 258"
12"	13.327	11.002	9.00000"	10.00000"	14"	285' 258"
14"	15.362	12.578	9.00000"	11.00000"	9"	473' 430"
16"	17.420	14.500	9.00000"	12.00000"	9"	473' 430"
18"	19.500	16.525	9.00000"	12.00000"	9"	473' 430"
20"	21.610	18.000	9.00000"	12.00000"	9"	473' 430"
24"	25.897	2.150	3.00000"	2.00000"	9"	473' 430"
30"	32.500	2.650	2.00000"	2.00000"	8"	574' 514"
36"	36.350	3.192	2.00000"	1.90000"	8"	719' 645"
42"	44.550	3.708	2.00000"	1.90000"	6"	716' 645"

(1) 20'L = NORMAL 20-FOOT JOINT LAYING LENGTH
(2) = NORMAL 18-FOOT JOINT LAYING LENGTH

MAXIMUM PIPELINE DEFLECTION DATA

Drawn: GCM	Revised:	 WOODMEN HILLS METROPOLITAN DISTRICT WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS	WW-14
Date: JAN 2011	Revised:		
Scale: N.T.S.	Revised:		



UTILITY SERVICE LOCATIONS

Drawn: CGM Date: JAN 2011 Scale: N.T.S.	Revised: Revised: Revised:	WOODMEN HILLS METROPOLITAN DISTRICT	WATER & WASTEWATER SYSTEM STANDARD SPECIFICATIONS <small>11th Edition</small>	WW-20
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14/Challenger Horner, Inc/CO, © Paso County-CU400018-Sant Grass Filing 20CADD3-CDUTILCUH18_U3.1-Details.dwg - Caleb Johnson - 3/26/2021