

MARKSHEFFEL ROAD - SEGMENT M3

EL PASO COUNTY, CO

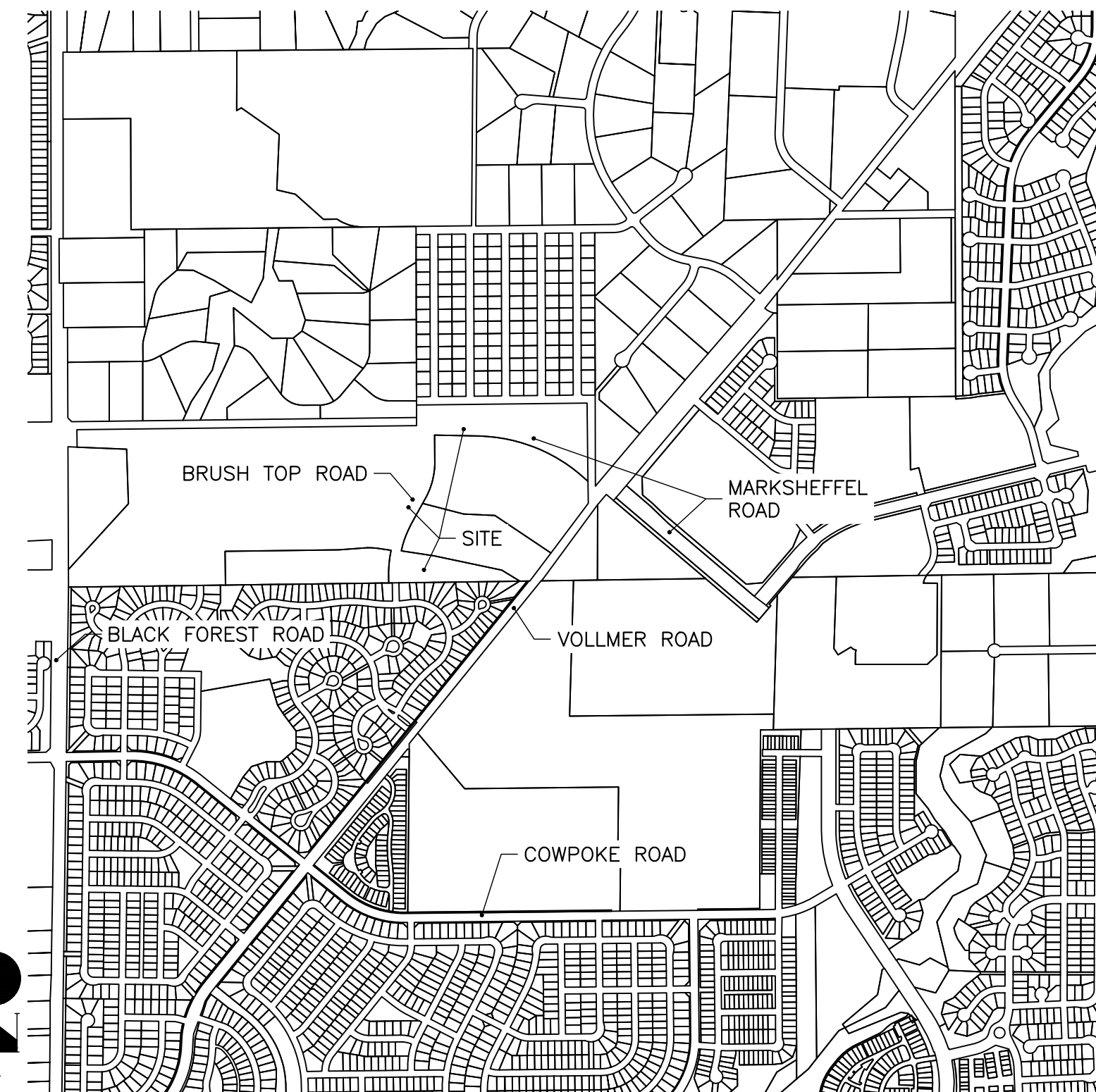
SANITARY SEWER MAIN EXTENSION

FAWWA GENERAL NOTES

- ALL UTILITY CONSTRUCTION TO BE CONDUCTED IN CONFORMANCE WITH THE CURRENT FALCON AREA WATER AND WASTEWATER AUTHORITY (FAWWA, THE DISTRICT) SPECIFICATIONS.
- ALL PLANS ON THE JOB SITE SHALL BE SIGNED BY THE DISTRICT AND THE DISTRICT'S ENGINEER. ANY REVISION TO THE PLANS SHALL BE SO NOTED WITH THE OLD DRAWING MARKED "NOT VALID".
- ALL STATIONING IS CENTERLINE UNLESS OTHERWISE NOTED. ALL ELEVATIONS ARE CENTERLINE UNLESS OTHERWISE NOTED.
- 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.
- ALL OVER-LOT GRADING MUST BE COMPLETED TO WITHIN ONE (1) FOOT OF FINAL GRADE PRIOR TO INSTALLATION OF WATER AND WASTEWATER INFRASTRUCTURE.
- 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.
- 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.
- ALL DUCTILE IRON PIPE LESS THAN TWELVE INCHES (12") AND FITTINGS SHALL HAVE CATHODIC PROTECTION USING TWO (2) NO. 6 WIRES WITH 17 LB. MAGNESIUM ANODES EVERY 400 FEET AND 9 LB. MAGNESIUM ANODES AT EACH FITTING. ALL DUCTILE IRON PIPE TWELVE INCHES (12") AND GREATER AND FITTINGS SHALL HAVE CATHODIC PROTECTION USING TWO (2) NO. 6 WIRES WITH 17 LB. MAGNESIUM ANODES EVERY 300 FEET AND 9 LB. MAGNESIUM ANODES AT EACH FITTING.
- ALL PIPE MATERIAL, BACKFILL, AND INSTALLATION SHALL CONFORM TO THE APPLICABLE SPECIFICATIONS OF THE DISTRICT, COLORADO DEPARTMENT OF TRANSPORTATION, EL PASO COUNTY DEPARTMENT OF TRANSPORTATION, COLORADO SPRINGS UTILITIES, AND THE GEOTECHNICAL ENGINEER.
- 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.
- 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.
- ALL BENDS SHALL BE FIELD STAKED PRIOR TO THE START OF CONSTRUCTION.
- BENDS, DEFLECTION, AND 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 TWENTY-FIVE FEET (25') INTERVALS ALONG CURVES TO ENSURE LOCATION OF PIPELINE CONSTRUCTION.
- 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.
- ALL UNUSED, SALVAGED WATER UTILITY MATERIAL SHALL BE RETURNED TO THE METROPOLITAN DISTRICT AS REQUESTED.
- 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.
- PUMPING OR BYPASS OPERATIONS SHALL BE REVIEWED AND APPROVED BY BOTH THE DISTRICT AND THE DISTRICT ENGINEER PRIOR TO EXECUTION.
- 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.
- 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.
- 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.
- COMMENCEMENT OF CONSTRUCTION OF WATER/SEWER SYSTEMS WITHIN METROPOLITAN DISTRICT:
 - PRIOR TO THE START OF CONSTRUCTION, A PRECONSTRUCTION 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 PRECONSTRUCTION MEETING. NO PRECONSTRUCTION MEETING CAN BE SCHEDULED BEFORE FOUR (4) SIGNED/APPROVED PLAN SETS ARE RECEIVED BY THE DISTRICT.
 - 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.
- TESTING OF FACILITIES:
 - THE CONTRACTOR SHALL NOTIFY THE DISTRICT A MINIMUM OF 48 HOURS AND A MAXIMUM OF 96 HOURS PRIOR TO THE START OF ANY TESTING.
 - 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).
 - 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 TESTED PRIOR TO CCTV INSPECTION.
 - ALL LINES SHALL BE CCTV INSPECTED AND VIDEO SHALL TO BE SUBMITTED TO THE DISTRICT FOR REVIEW AND APPROVAL.
- 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 CONTRACTOR'S COST.
- 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.
- ACCEPTANCE:
 - THE DISTRICT MAY GIVE PRELIMINARY ACCEPTANCE ONCE ALL OF THE TESTS ON ALL THE LINES HAVE BEEN COMPLETED AND A WALK-THROUGH HAS OCCURRED.
 - A SECOND ACCEPTANCE MAY OCCUR ONCE THE FIRST LIFT OF ASPHALT GOES DOWN AND A SECOND WALK-THROUGH 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).
- ALL WATER AND SEWER MAINS, INCLUDING SERVICE LINES, SHALL HAVE "AS-BUILT" DRAWINGS PREPARED AND APPROVED PRIOR TO PRELIMINARY ACCEPTANCE BY THE DISTRICT.
- 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 CARBONITE MARKER ALONG WITH TRACER WIRE.
- AFTER REVIEW AND APPROVAL OF PLANS FOR THE EXTENSION OF LINES, FACILITIES, AND/OR SERVICES, CONSTRUCTION MUST HAVE COMMENCED WITHIN 18 MONTHS FOR RESIDENTIAL SUBDIVISIONS AND 12 MONTHS FOR ANY COMMERCIAL INSTALLATIONS.
- INSPECTION FEES: CALL THE DISTRICT (719-495-2500) FOR FEE SCHEDULE.

WATER SYSTEM INSTALLATION NOTES

- ALL WATER AND FORCE MAIN PIPE SHALL BE AWWA C900 PVC, OR APPROVED 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.
- 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 CARBONITE MARKERS. ALL VALVES ASSOCIATED WITH THE RAW WATER SYSTEM SHALL BE OPEN COUNTERCLOCKWISE AND MARKED WITH CARBONITE MARKERS AS APPLICABLE.
- 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.
- FIRE HYDRANTS SHALL BE OPEN RIGHT WITH 7/8" X 7/8" SQUARE TAPERED ALONG WITH SERVICE CAPS. LUBRICATION TYPE: GREASE. ACCEPTABLE BRAND IS KENNEDY GUARDIAN (K81D, K81A, AND K81AM). EACH FIRE HYDRANT LOCATION SHALL ALSO BE USED AS TEST STATION.
- FIRE HYDRANTS SHALL BE OPEN RIGHT WITH 7/8" X 7/8" SQUARE TAPERED ALONG WITH SERVICE CAPS. LUBRICATION TYPE: GREASE. ACCEPTABLE BRAND IS KENNEDY GUARDIAN (K81D, K81A, AND K81AM). EACH FIRE HYDRANT LOCATION SHALL ALSO BE USED AS TEST STATION.
- 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.
- IRRIGATION SERVICES SHALL HAVE A STOP-AND-WASTE CURB STOP VALVE INSTALLED ALONG WITH TRACER WIRE EXTENDING BACK TO THE MAIN LINE.
- COMMENCEMENT OF USE OF WATER LINES AND/OR SYSTEMS:
 - NO WATER FACILITY SHALL BE PLACED IN SERVICE UNTIL AFTER THE COMPLETION OF ALL PRESSURE TESTING, FLUSHING, BAC-TESTING, AND COMPACTION TESTING, AND AS-BUILT DRAWINGS ARE SUBMITTED AND APPROVED BY THE DISTRICT.
 - 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.
 - ALL EASEMENTS (PLATTED OR DEEDED) ARE DEDICATED, EXECUTED BY THE DISTRICT, AND RECORDED.



VICINITY MAP
SCALE: 1"=1,000'

WASTEWATER SYSTEM INSTALLATION NOTES

- SANITARY SEWER LENGTHS ARE MH CENTER - MH CENTER. ALL SANITARY SEWER PIPES SHALL BE SDR 35 PVC OR APPROVED 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, INLINE PVC PUSH-ON WYES. SINGLE SADDLE TAP ALLOWED ON EXISTING MAINS. MULTIPLE SADDLE TAPS ON EXISTING MAINS MUST BE APPROVED BY THE DISTRICT ON A CASE BY CASE BASIS.
- ALL SANITARY SEWER MANHOLES SHALL BE WRAPPED WITH RUI116 - RUBR-NEK JOINT WRAP, OR APPROVED EQUAL, AND COATED.
- ALL SEWER LINES MUST BE BEDDED WITH SQUEEGEE OR 3/4" CRUSHED ROCK.
- COMMENCEMENT OF USE OF SEWER LINES AND/OR SYSTEMS:
 - NO SANITARY SEWER FACILITY SHALL BE PLACED IN SERVICE UNTIL THE COMPLETION OF ALL JET CLEANING, PRESSURE TESTING, VACUUM TESTING, CCTV INSPECTION, AND COMPACTION TESTING, AND AS-BUILT DRAWINGS ARE SUBMITTED AND APPROVED BY THE DISTRICT.
 - 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.
 - ALL NECESSARY EASEMENTS (PLATTED OR DEEDED) ARE DEDICATED, EXECUTED BY THE DISTRICT, AND RECORDED.
 - DOWNSTREAM PLUG CAN BE REMOVED ONCE THE FIRST LIFT OF ASPHALT IS DOWN AND THE ABOVE REQUIREMENTS ARE MET.

BASIS OF BEARINGS

THE NORTH LINE OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 5, TOWNSHIP 13 SOUTH, RANGE 65 WEST OF THE 6TH PRINCIPAL MERIDIAN, BEING MONUMENTED AT THE NORTHEAST CORNER OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 5 BY A 3-1/4" ALUMINUM CAP STAMPED "LS 10376" AND AT THE NORTH QUARTER CORNER BY A 3-1/4" ALUMINUM CAP STAMPED "LS 4842 1996", BEARING S89°14'13"W.

BENCHMARKS

- THE TOP OF AN ALUMINUM SURVEYORS CAP, STAMPED "9853", AT THE SOUTHEAST BOUNDARY CORNER OF BARBARICK SUBDIVISION
NORTHING = 411416.273
EASTING = 235167.071
ELEVATION = 7023.42
- THE TOP OF A RED PLASTIC SURVEYORS CAP, ILLEGIBLE, AT THE NORTHWEST BOUNDARY CORNER OF PAWNEE RANCHEROS SUBDIVISION
NORTHING = 410095.404
EASTING = 235052.131
ELEVATION = 7000.40
- THE TOP OF A RED PLASTIC SURVEYORS CAP, STAMPED "38141", AT THE SOUTHWEST BOUNDARY CORNER OF BARBARICK SUBDIVISION
NORTHING = 411399.962
EASTING = 233649.817
ELEVATION = 7030.82

THE LOCATIONS OF EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL ABOVE GROUND AND UNDERGROUND UTILITIES.



Know what's below.
Call before you dig.

AGENCIES

| | | | |
|----------------------|---|----------------------|---|
| OWNER/DEVELOPER: | TURKEY CANON QUARRY, LLC 20 BOULDER CRESCENT, SUITE 201 COLORADO SPRINGS, CO 80903 JAMES F. MORLEY (719) 471-1742 | WATER & WASTEWATER: | FALCON AREA WATER & WASTEWATER AUTHORITY ENGINEERS - RESPEC 5540 E. TECH CENTER DR. COLORADO SPRINGS, CO 80919 719.227.0072 |
| CIVIL ENGINEER: | ALL TERRAIN ENGINEERING LLC 1004 WEST VAN BUREN STREET COLORADO SPRINGS, CO 80907 RYAN BURNS P.E. 203.577.8656 | FIRE DISTRICT: | BLACK FOREST FIRE PROTECTION DISTRICT 11445 TEACHOUT ROAD COLORADO SPRINGS, CO 80908 CHIEF BRYAN JACK (719) 495-4300 |
| COUNTY ENGINEERING: | EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT 2580 INTERNATIONAL CIRCLE, SUITE 110 COLORADO SPRINGS, CO 80910 (719) 520-6300 | GAS DEPARTMENT: | COLORADO SPRINGS UTILITIES 7710 DURANT DR. COLORADO SPRINGS, CO 80947 TIM WENDT (719) 668-3556 |
| TRAFFIC ENGINEERING: | EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS 3275 AKERS DRIVE COLORADO SPRINGS, CO 80922 (719) 520-6300 | ELECTRIC DEPARTMENT: | MOUNTAIN VIEW ELECTRIC 11140 E. WOODMEN ROAD FALCON, CO 80831 (719) 495-2283 |

SHEET INDEX

| | |
|---|---------------------------|
| 1 | - COVER |
| 2 | - LEGEND |
| 3 | - SANITARY PLAN & PROFILE |
| 5 | - DETAILS |
| | |
| 5 | - TOTAL SHEETS |

EL PASO COUNTY STATEMENT

COUNTY PLAN REVIEW IS PROVIDED ONLY FOR GENERAL CONFORMANCE WITH COUNTY DESIGN CRITERIA. THE COUNTY IS NOT RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF THE DESIGN, DIMENSIONS, AND/OR ELEVATIONS WHICH SHALL BE CONFIRMED AT THE JOB SITE. THE COUNTY THROUGH THE APPROVAL OF THIS DOCUMENT ASSUMES NO RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THIS DOCUMENT.

FILED IN ACCORDANCE WITH THE REQUIREMENTS OF THE EL PASO COUNTY LAND DEVELOPMENT CODE, DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2, AND ENGINEERING CRITERIA MANUAL AS AMENDED.

IN ACCORDANCE WITH ECM SECTION 1.12, THESE CONSTRUCTION DOCUMENTS WILL BE VALID FOR CONSTRUCTION FOR A PERIOD OF 2 YEARS FROM THE DATE SIGNED BY THE EL PASO COUNTY ENGINEER. IF CONSTRUCTION HAS NOT STARTED WITHIN THOSE 2 YEARS, THE PLANS WILL NEED TO BE RESUBMITTED FOR APPROVAL, INCLUDING PAYMENT OF REVIEW FEES AT THE PLANNING AND COMMUNITY DEVELOPMENT DIRECTORS DISCRETION.

JOSHUA PALMER, P.E. DATE _____
COUNTY ENGINEER/ECM ADMINISTRATOR

WATER & 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 _____ DATE _____
JAMES F. MORLEY

SR LAND, LLC
20 BOULDER CRESCENT, SUITE 201
COLORADO SPRINGS, CO 80903
(719) 471-1742

FALCON AREA WATER & WASTEWATER AUTHORITY - WASTEWATER DESIGN APPROVAL

THE FALCON AREA WATER & WASTEWATER AUTHORITY RECOGNIZED THE DESIGN ENGINEER AS HAVING RESPONSIBILITY FOR THE DESIGN AND HAS LIMITED ITS SCOPE OF REVIEW ACCORDINGLY.

PROJECT NO. _____

SIGNED _____ DATE _____
FAWWA ENGINEER

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

ENGINEER'S STATEMENT

THIS WASTEWATER SYSTEM PLAN WAS PREPARED UNDER MY DIRECTION AND SUPERVISION AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. SAID PLAN HAS BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR WASTEWATER SYSTEM PLANS. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARING THIS PLANS.

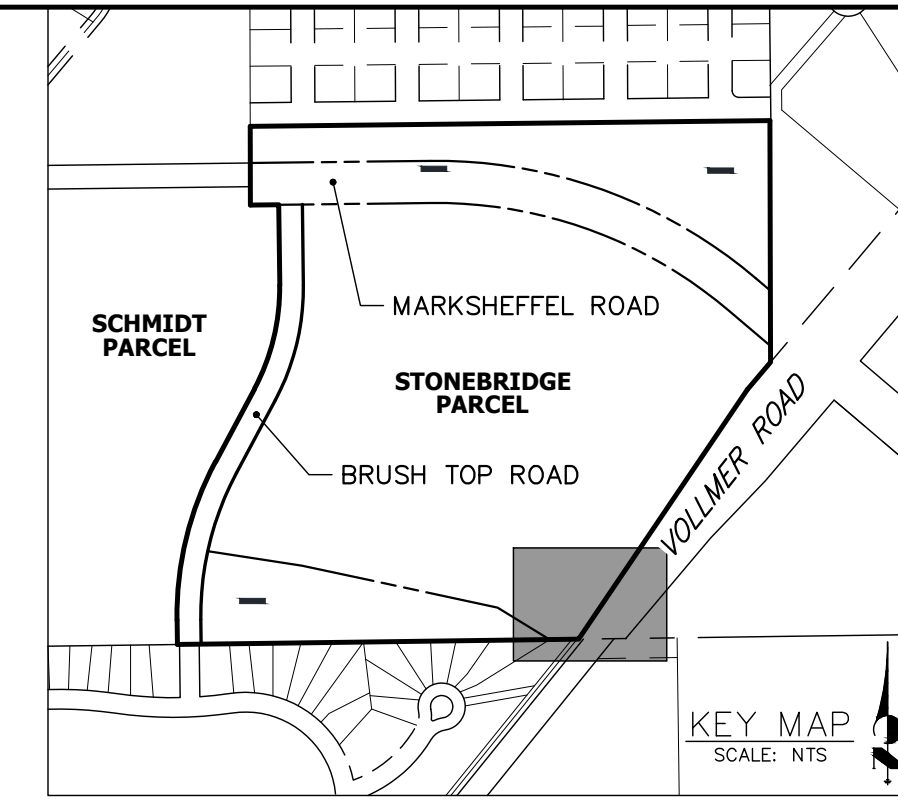
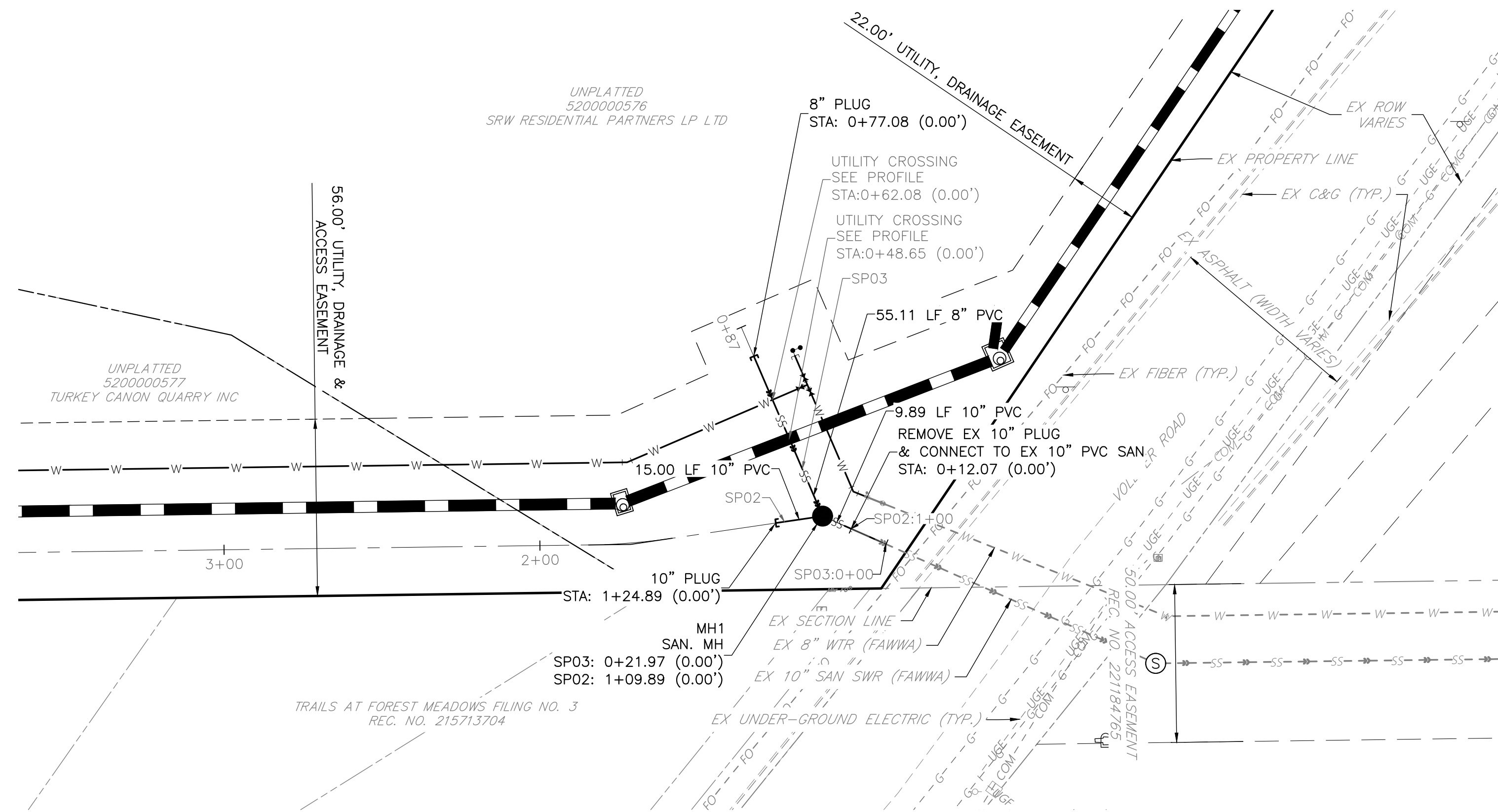
RYAN E. BURNS P.E. DATE _____
COLORADO P.E. 54412
FOR AND ON BEHALF OF ALL TERRAIN ENGINEERING LLC

PCD FILING NO.: CDR-2413

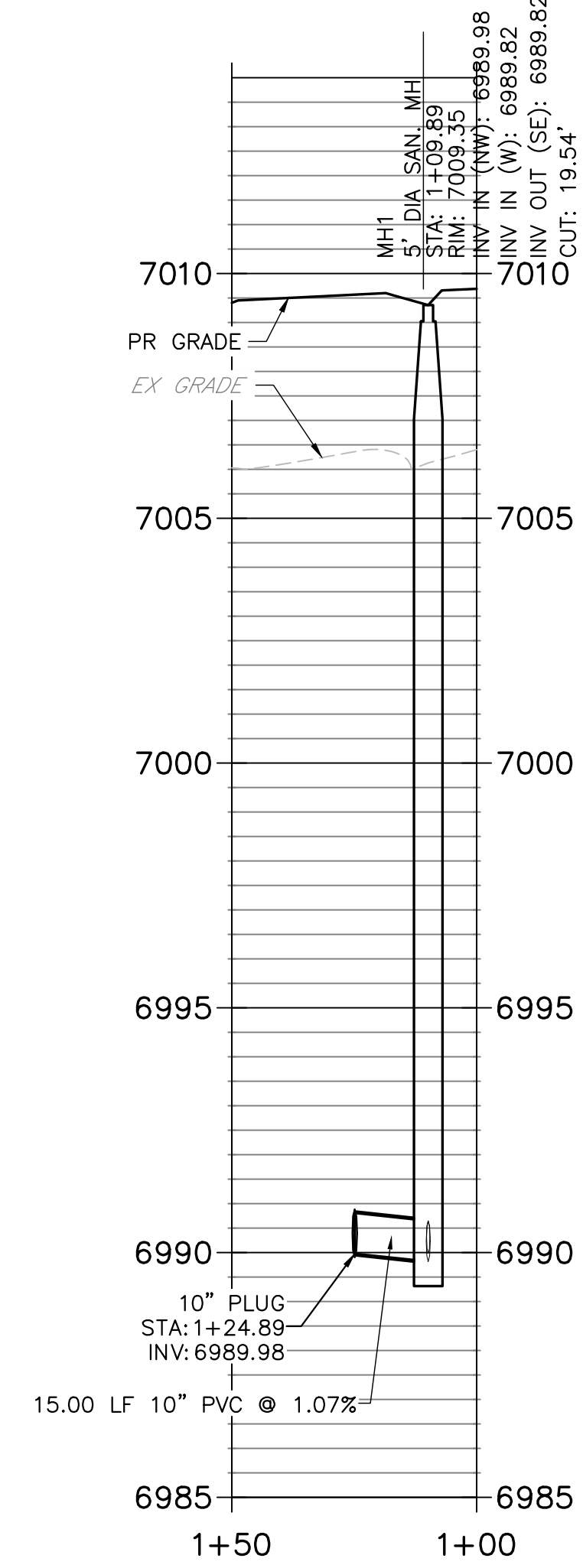
UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, ALL TERRAIN ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

| DATE | LOCATION: # | REV | DESCRIPTION |
|------|-------------|-----|-------------|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

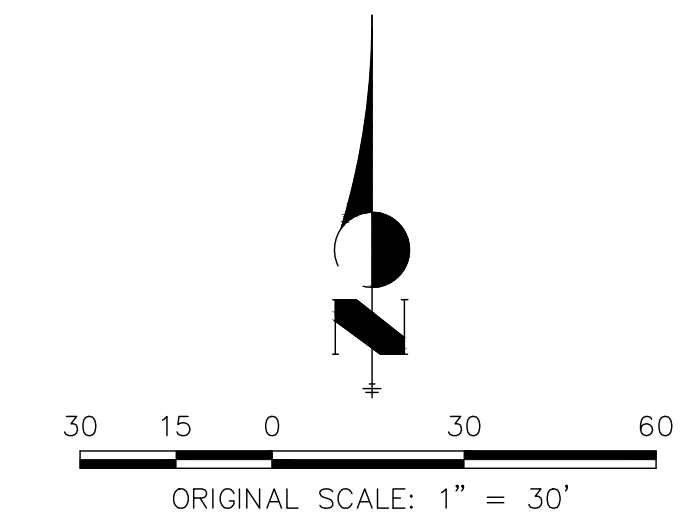
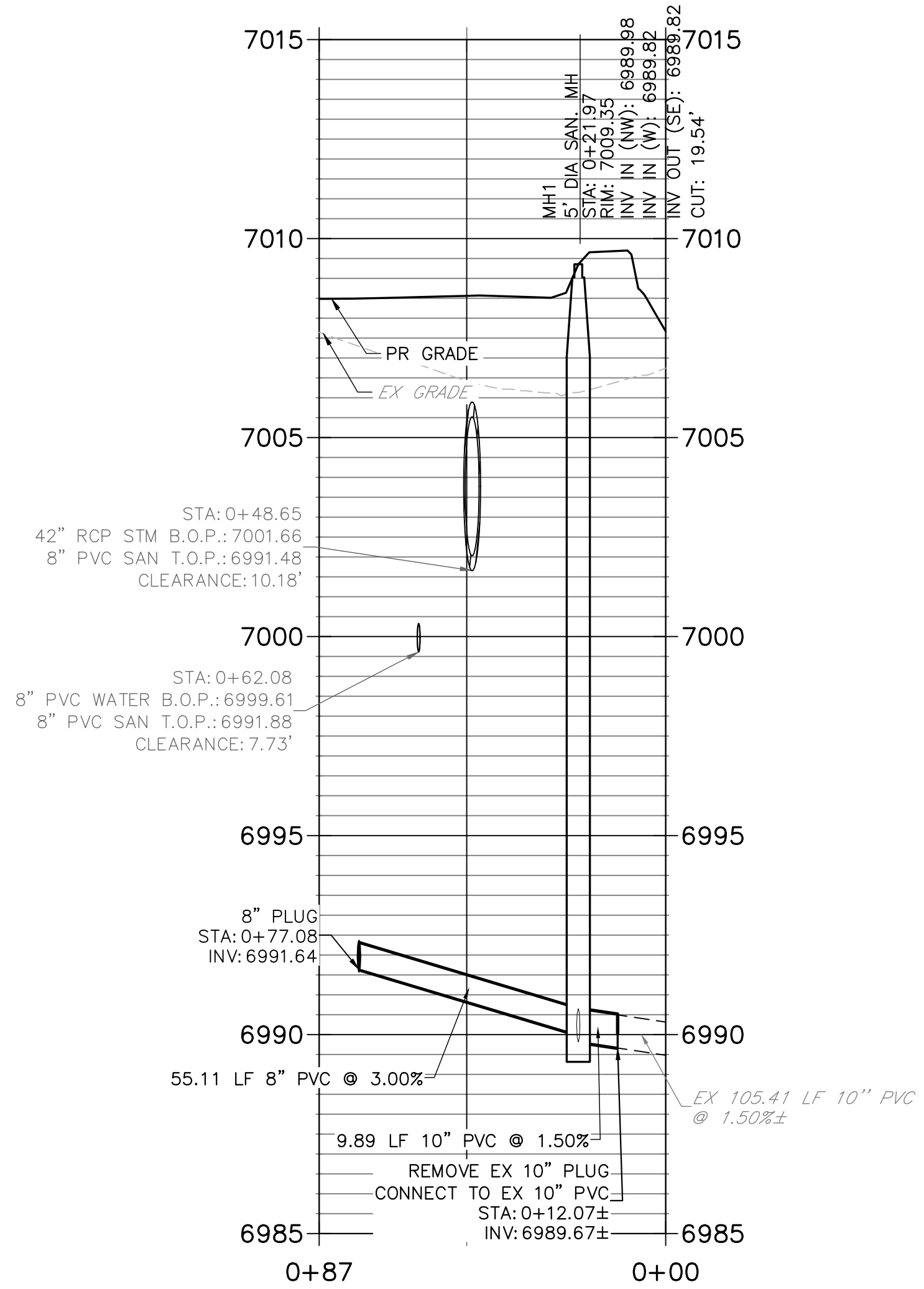
DESIGN: NJJ
REVIEW: REB
DATE: 11/24/2025
H-SCALE: 1" = 1000'
V-SCALE: N/A
SHEET



SP02
STA 1+00.00 TO 1+50.00



SP03
STA 0+00.00 TO 0+87.08




ENGINEER'S STATEMENT
THIS WASTEWATER SYSTEM PLAN WAS PREPARED UNDER MY DIRECTION AND SUPERVISION AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. SAID PLAN HAS BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR WASTEWATER SYSTEM PLANS. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARING THIS PLANS.

RYAN E. BURNS P.E.
COLORADO P.E. 54412
FOR AND ON BEHALF OF ALL TERRAIN ENGINEERING LLC

DATE _____



THE LOCATIONS OF EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL ABOVE GROUND AND UNDERGROUND UTILITIES.



PREPARED FOR:
TURKEY CANON QUARRY INC
20 BOULDER CRESCENT STREET, SUITE 100
COLORADO SPRINGS, CO 80903
ATTN: JIM MORLEY
(719) 491-3024
####

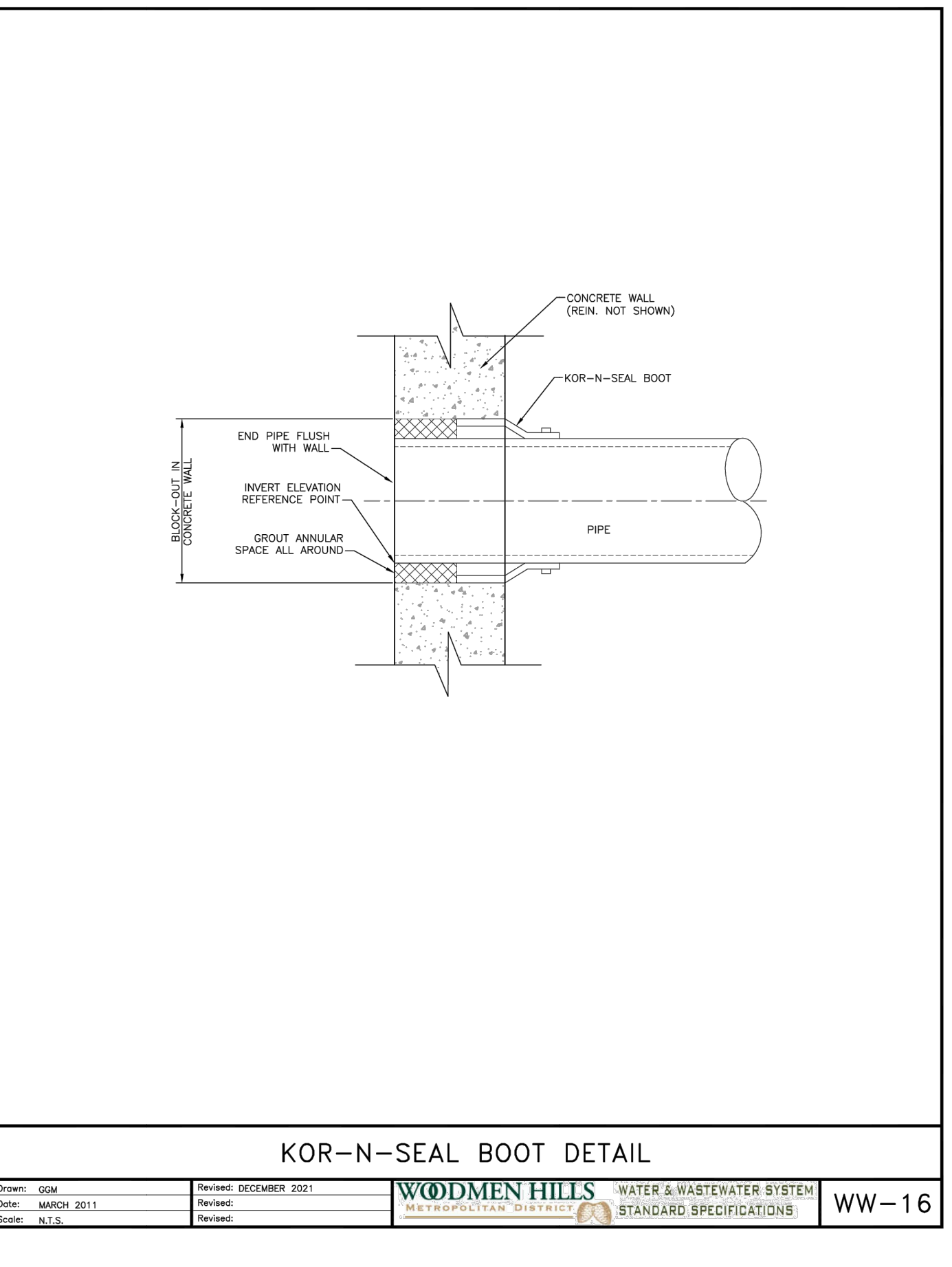
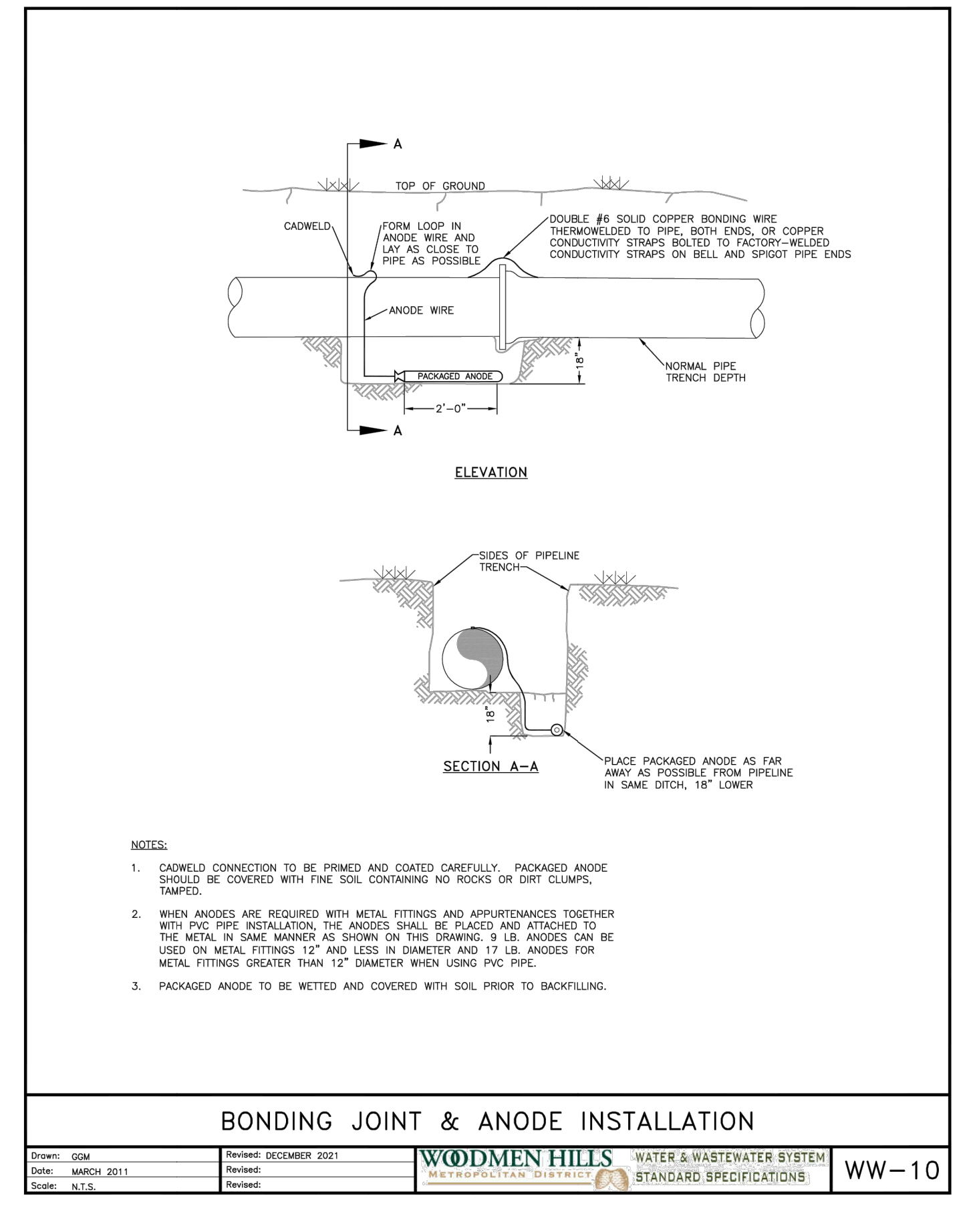
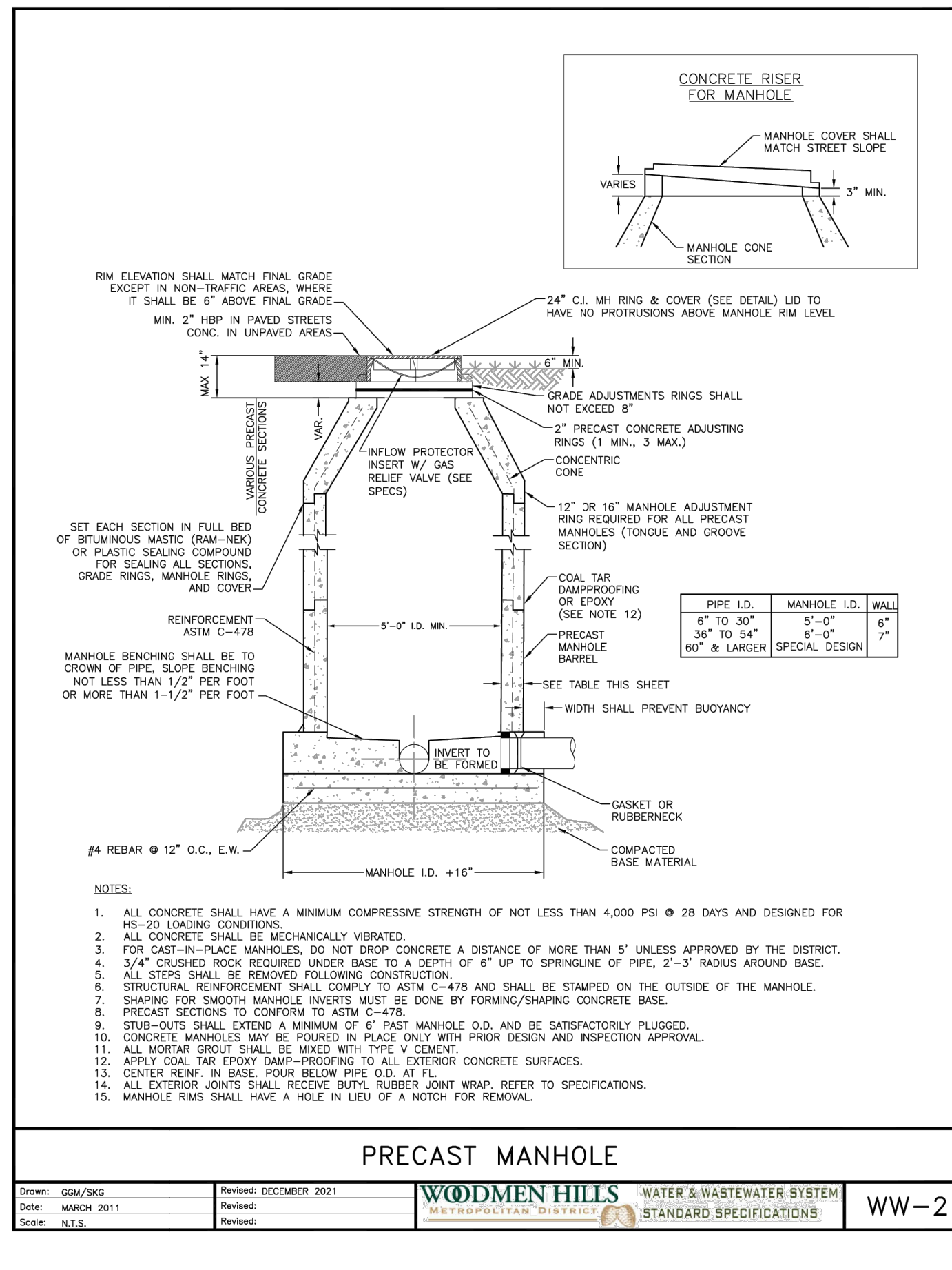
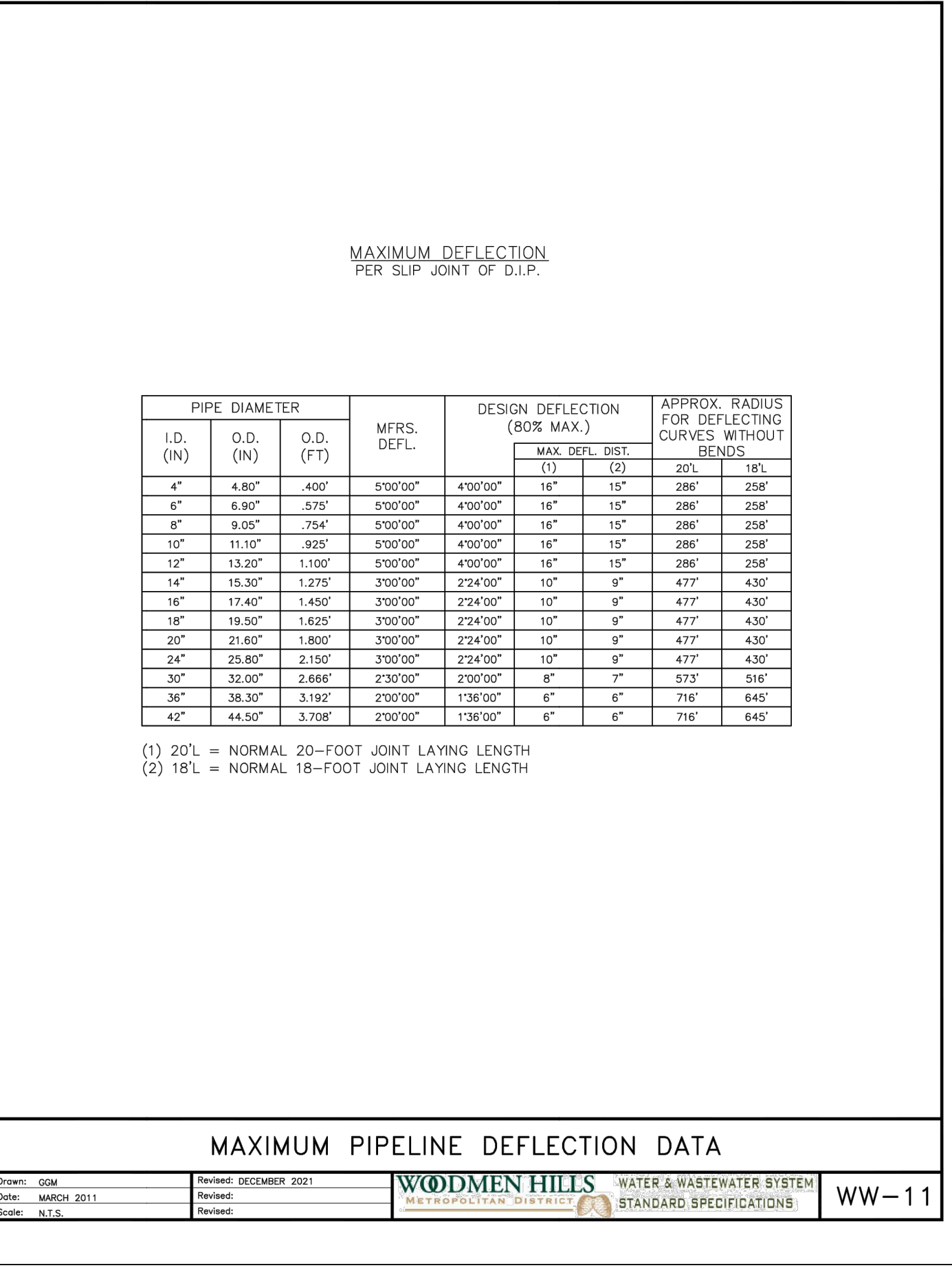
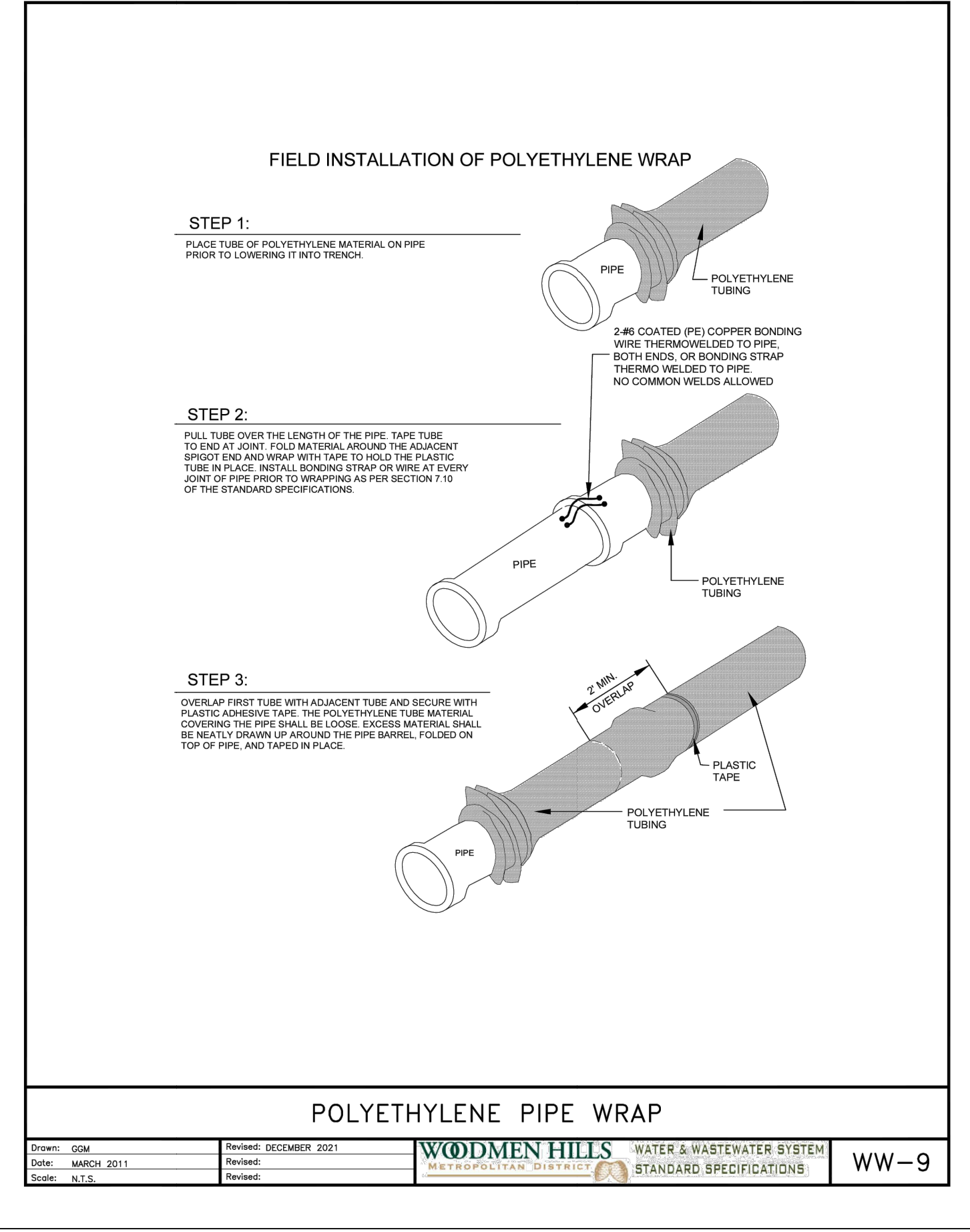
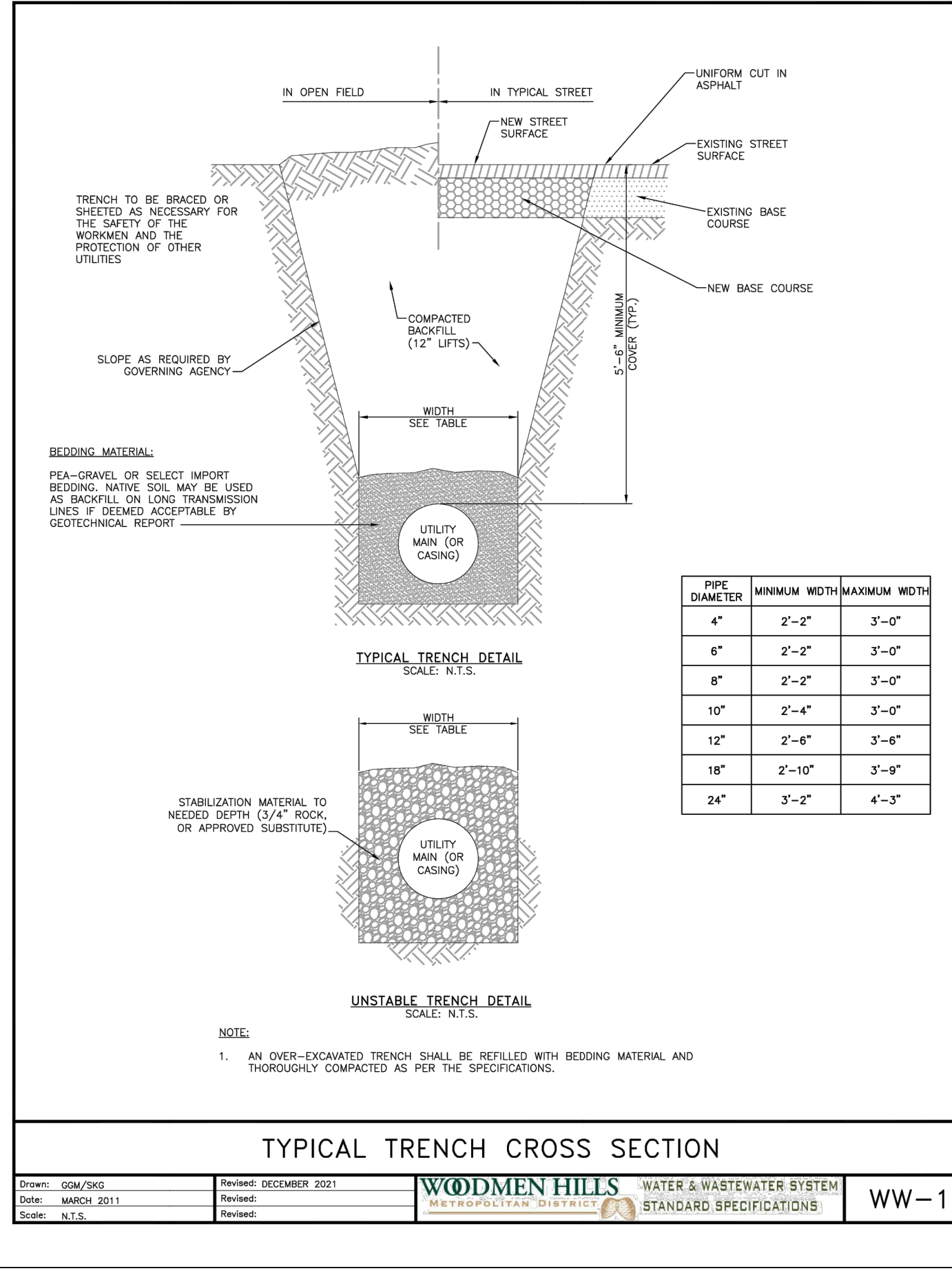
UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, ALL TERRAIN ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

| JOB NO. 24013 | LOCATION: EPC |
|-----------------|---------------|
| REV DESCRIPTION | DATE |
| | |
| | |
| | |

MARKSHEFFEL ROAD - SEGMENT M3

SANITARY PLAN & PROFILE

DESIGN: NQJ
REVIEW: REB
DATE: 11/24/2025
H-SCALE: 1" = 30'
V-SCALE: 1" = 3'
SHEET
4 OF 5



WOODMEN HILLS ENGINEERING
WOODMEN HILLS ENGINEERING, P.C.
550 S. 19TH AVE., SUITE 100
DENVER, CO 80202
PH: 303.733.8888 | FAX: 303.733.8888 | WWW.WOODMENHILLSENGINEERING.COM

PREPARED FOR:
TURKEY CANON QUARRY INC
20 BOULDER CRESCENT STREET, SUITE 100
COLORADO SPRINGS, CO 80903
ATTN: JIM MORLEY
(719) 491-3024
#####

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, ALL TERRAIN ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

| JOB NO. | LOCATION | DATE |
|---------|----------|------|
| 24013 | EPC | |

MARKSHEFFEL ROAD - SEGMENT M3

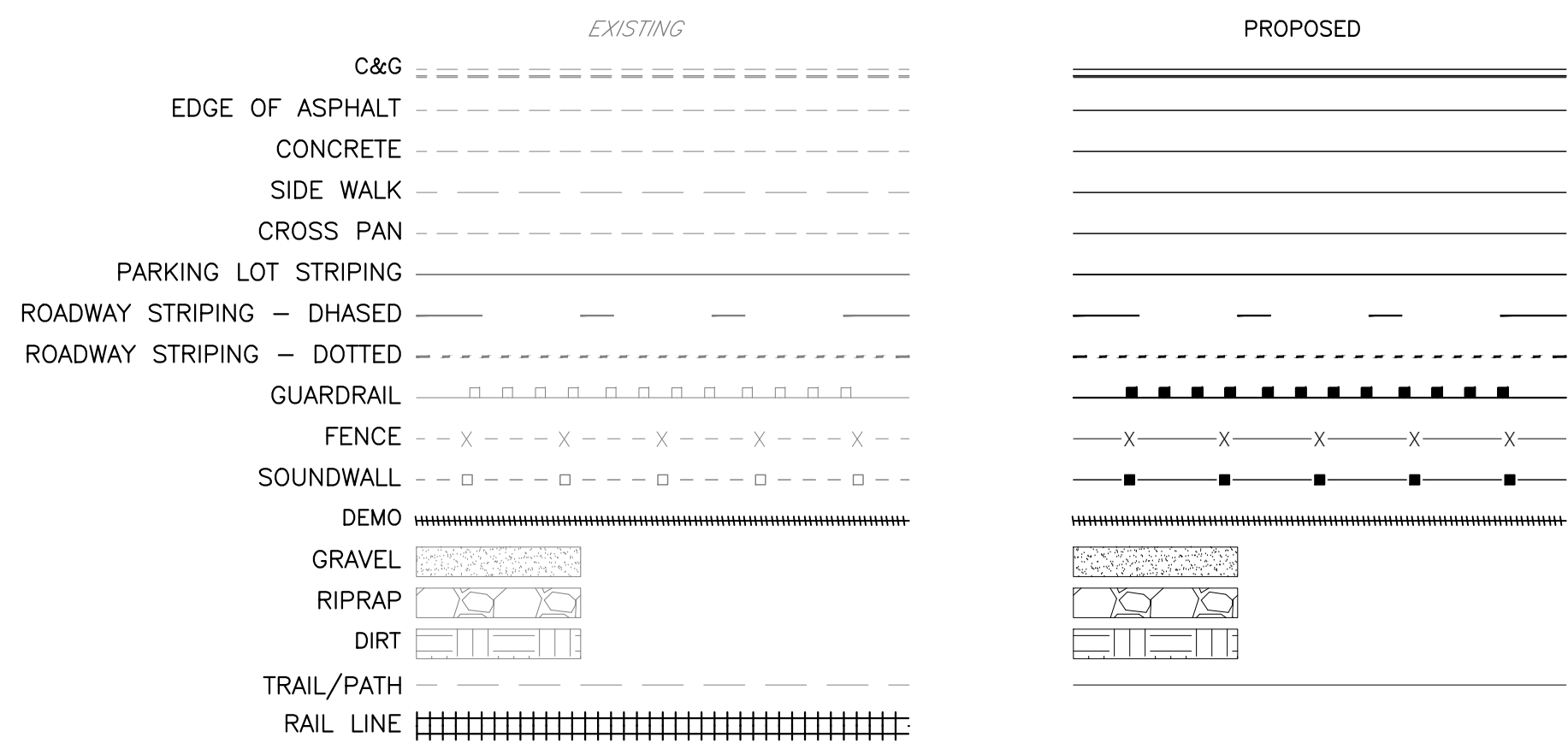
DETAILS

DESIGN: NJQ
REVIEW: REB
DATE: 11/24/2025
H-SCALE: 1" = 30'
V-SCALE: 1" = 3'
SHEET 5 OF 5

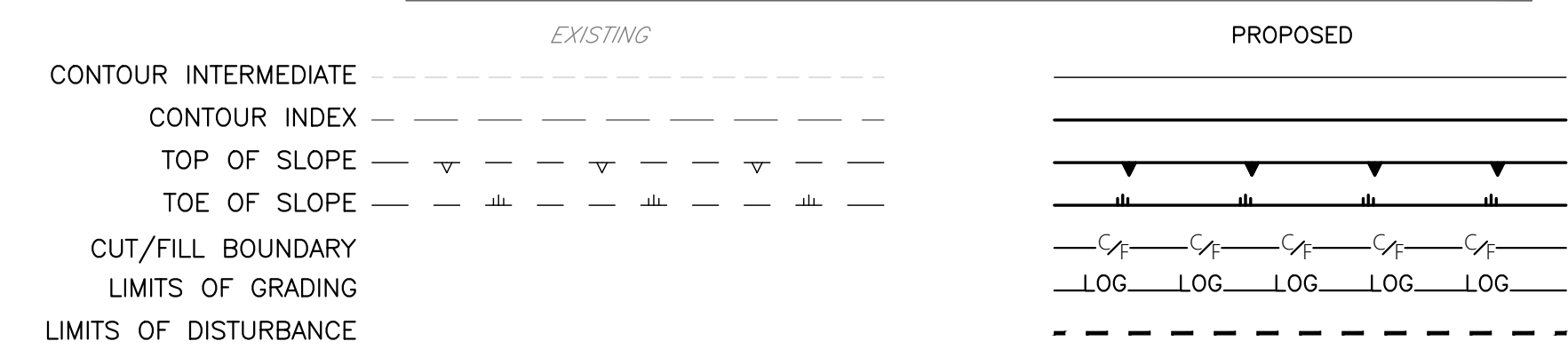
PLANOMETRICS



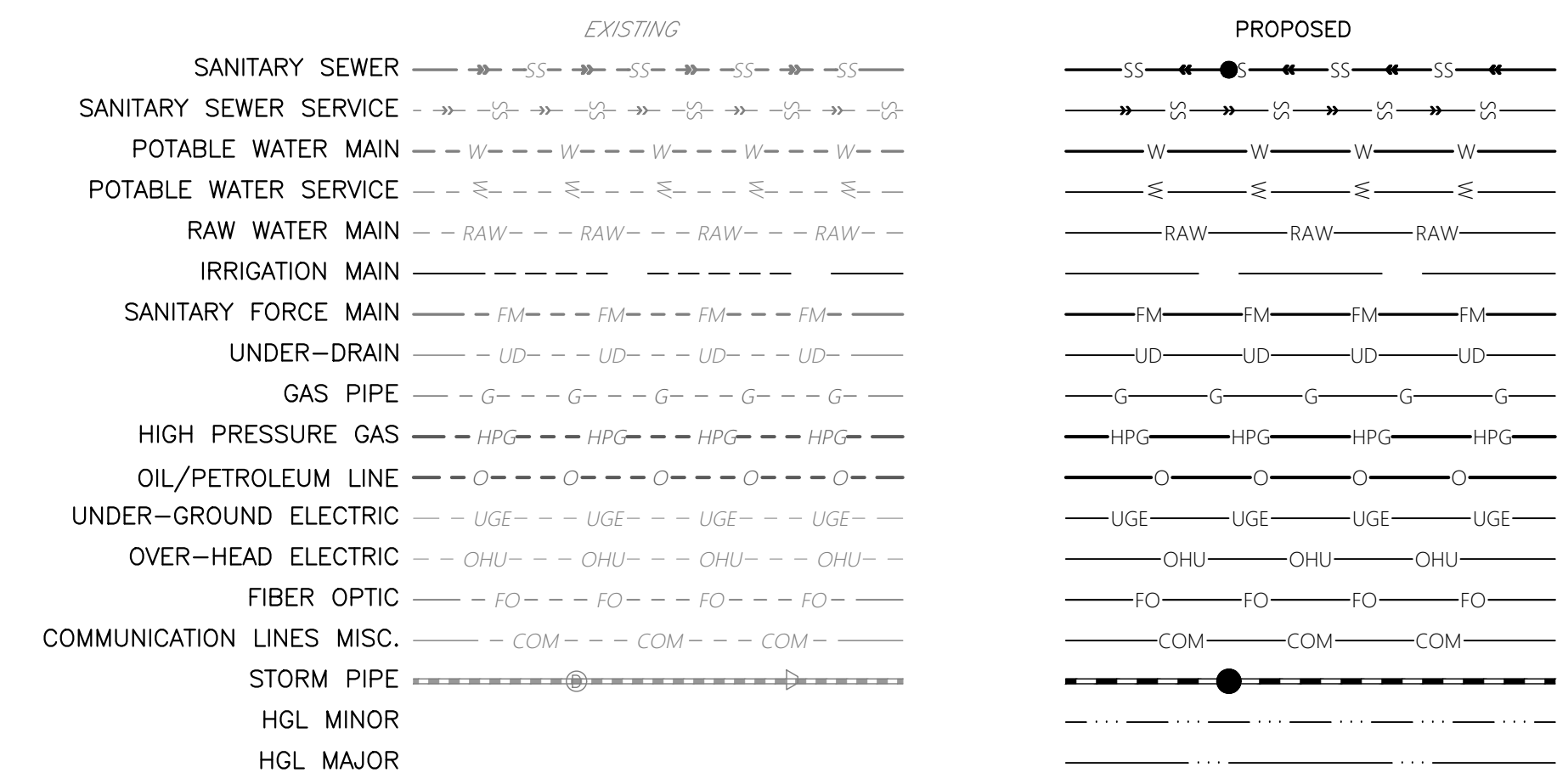
CONSTRUCTION



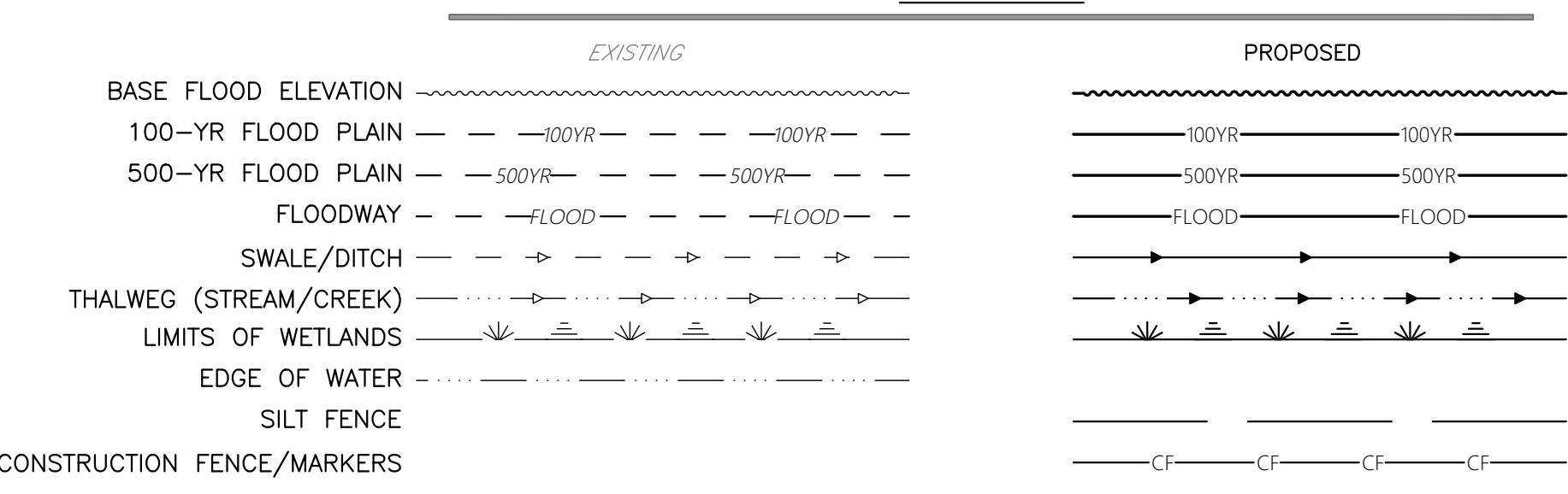
GRADING



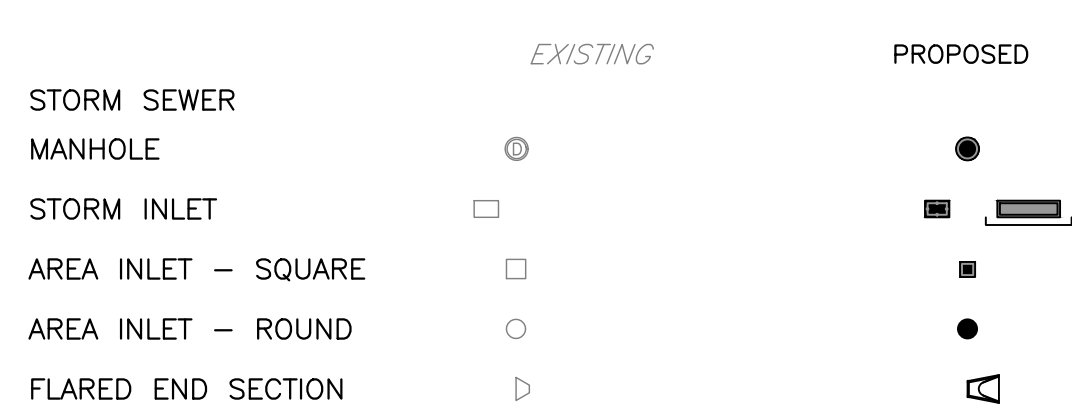
UTILITIES



DRAINAGE



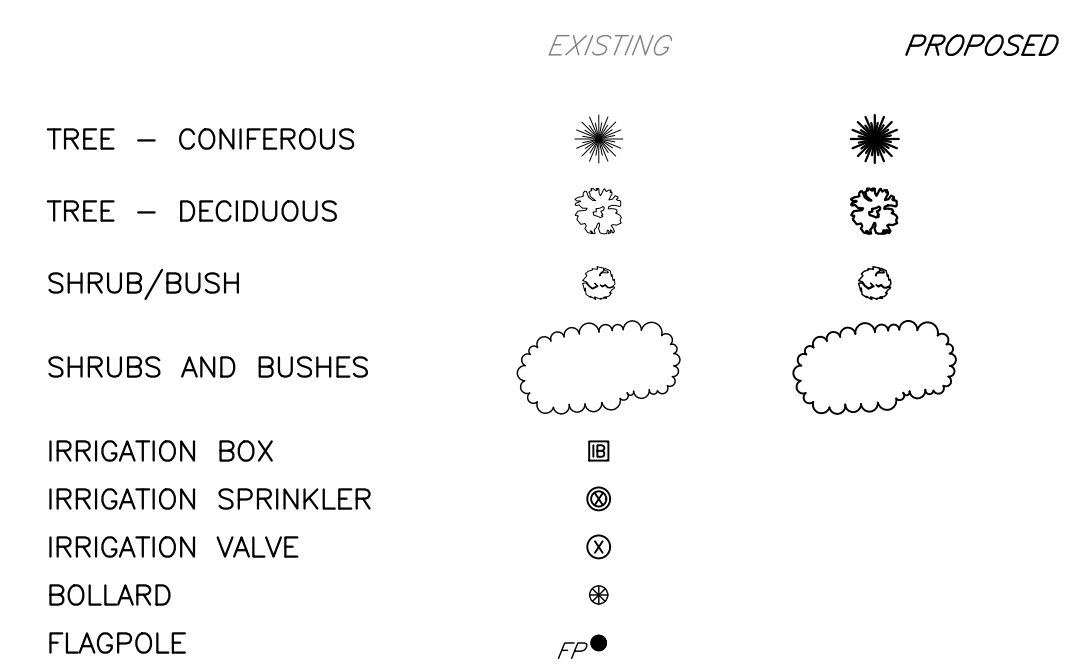
UTILITY SYMBOLS



TRAFFIC



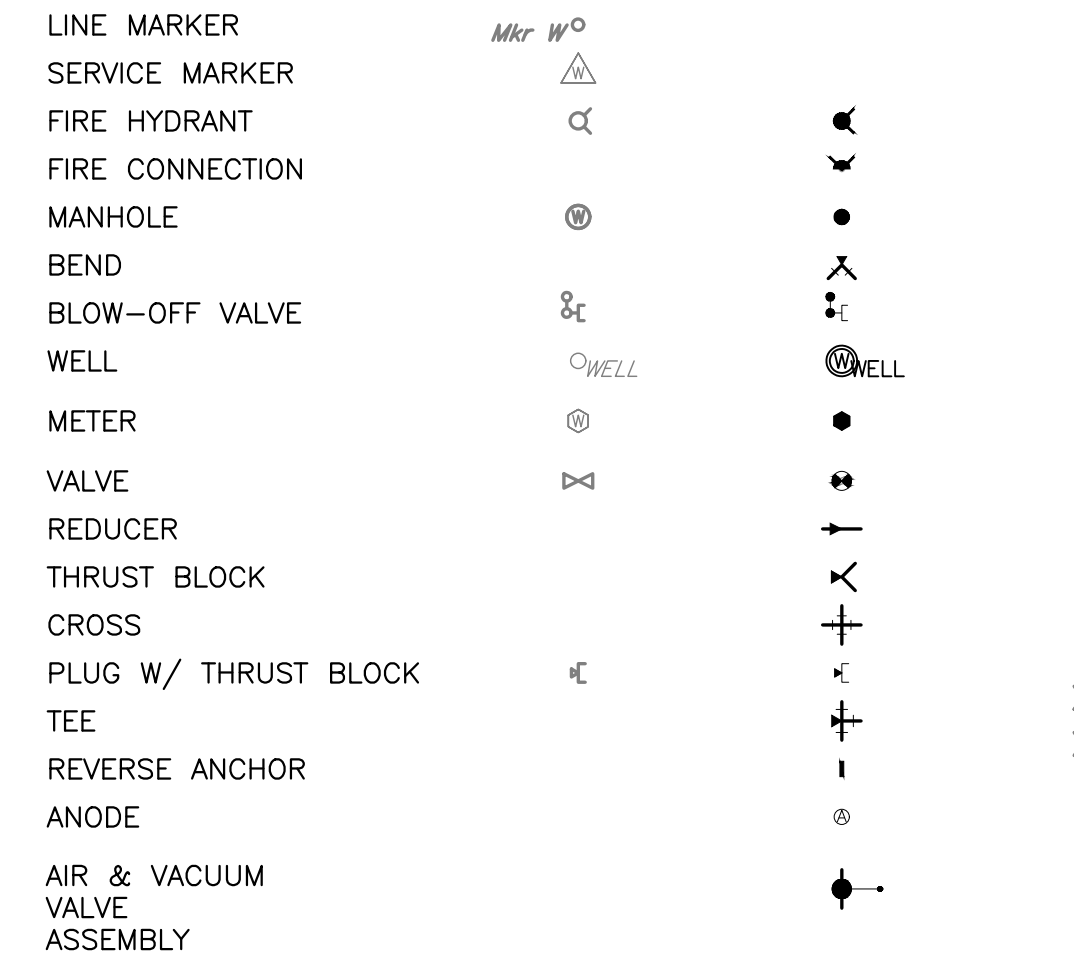
LANDSCAPE



UTILITY SYMBOLS



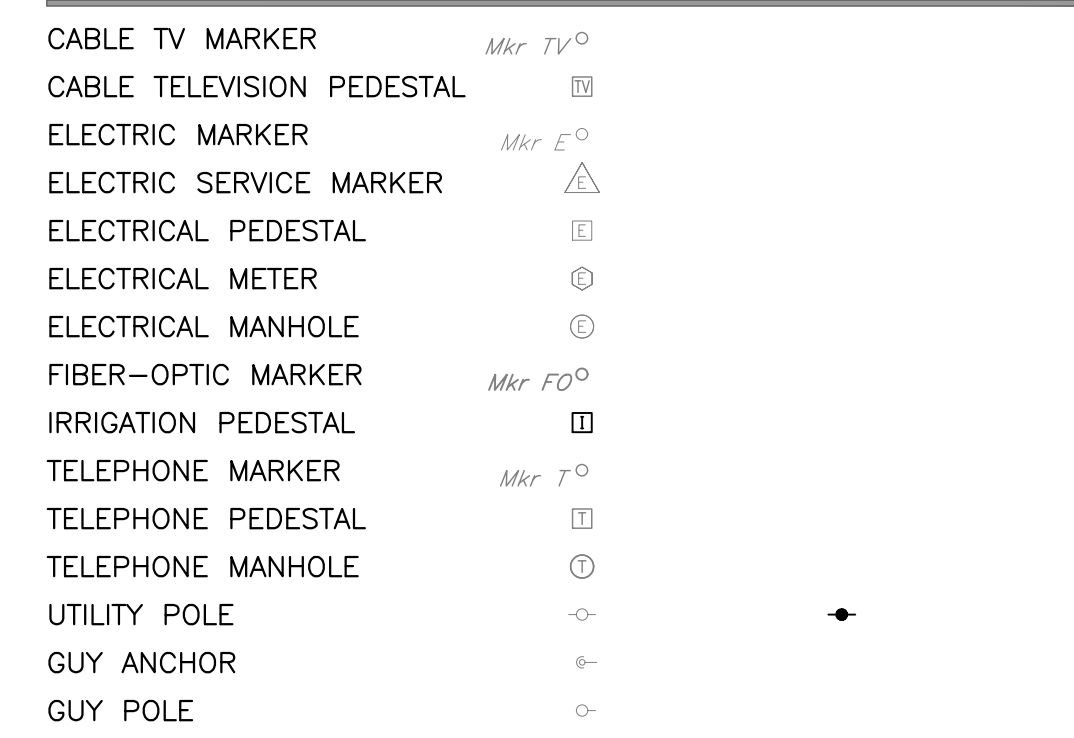
WATER



GAS



DRY UTILITIES



MISC. UTILITIES



ABBREVIATIONS:

- | | |
|--|--|
| ASCE - AMERICAN SOCIETY OF CIVIL ENGINEERS | OH - OVERHEAD |
| BLDG - BUILDING | PB - PUBLIC |
| BW - BOTTOM OF WALL | PC - POINT OF CURVATURE |
| CG - CURB AND GUTTER | PCC - POINT OF COMPOUND CURVATURE |
| CIP - CAST IRON PIPE | PCR - POINT OF CURB RETURN |
| CL - CENTERLINE | PR - PROPOSED |
| CMP - CORRUGATED METAL PIPE | PRC - POINT OF REVERSE CURVATURE |
| CONC - CONCRETE | PVC - POLYVINYL CHLORIDE PIPE |
| DIP - DUCTILE IRON PIPE | PVT - PRIVATE |
| DS - DOWNSPOUT | PT - POINT OF TANGENCY |
| EL - ELEVATION | P.U.E - PUBLIC UTILITY EASEMENT |
| ESMT - EASEMENT | P.U.A.E - PUBLIC UTILITY & ACCESS EASEMENT |
| EX - EXISTING | P.U.D.E - PUBLIC UTILITY & DRAINAGE EASEMENT |
| FES - FLARED END SECTION | P.I.E - PUBLIC IMPROVEMENT EASEMENT |
| FL - FLOWLINE | R - RADIUS |
| GB - GRADE BREAK | RIM - RIM ELEVATION |
| HP - HIGH POINT | STM - STORM |
| HYD - HYDRANT | TBC - TOP BACK OF CURB |
| INV - INVERT ELEVATION | TW - TOP OF WALL |
| LF - LINEAR FEET | TYP - TYPICAL |
| LP - LOW POINT | UD - UNDERDRAIN |
| MH - MANHOLE | UT - UTILITY |
| MIN - MINIMUM | WTR - WATER |
| | XPAN - CROSSSPAN |



Know what's below.
Call before you dig.

ALL TERRAIN ENGINEERING

PREPARED FOR:
TURKEY CANON QUARRY INC
20 BOULDER CREST STREET, SUITE 100
COLORADO SPRINGS, CO 80903
ATTN: JIM MORLEY
(719) 491-3024
JMORLEY3870@AOL.COM

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, ALL TERRAIN ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

| REV | DESCRIPTION | DATE |
|-----|-------------|------|
| | | |
| | | |
| | | |
| | | |

MARKSHEFFEL ROAD - SEGMENT M3

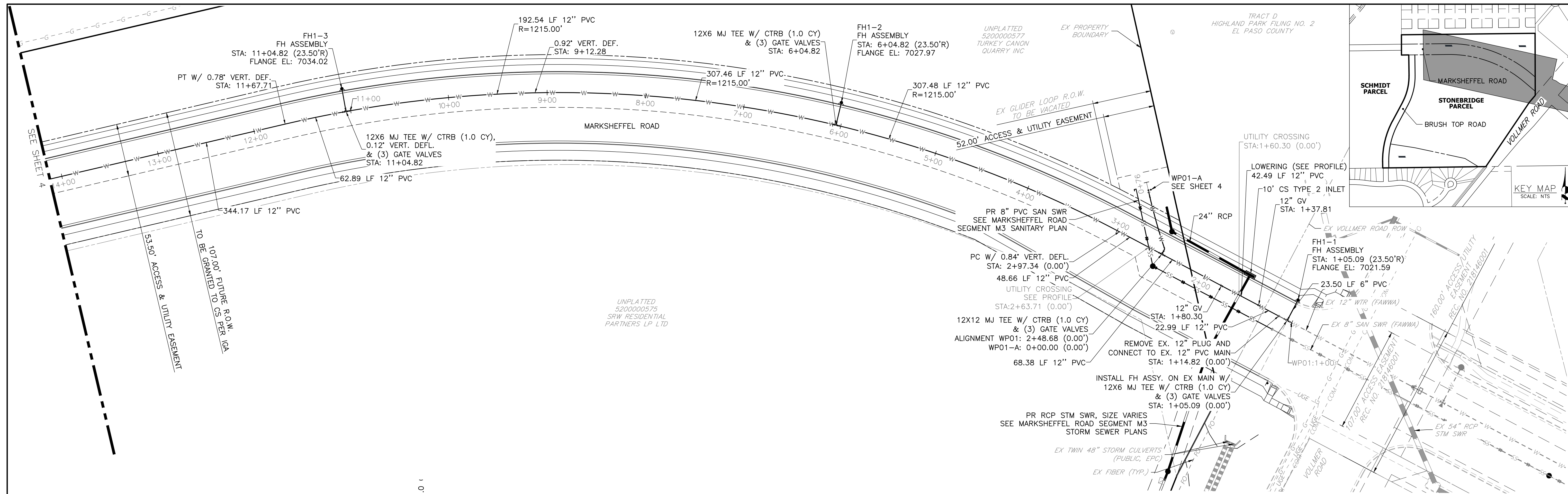
LEGEND

DESIGN: REB
REVIEW: NJJ
DATE: 04/27/26

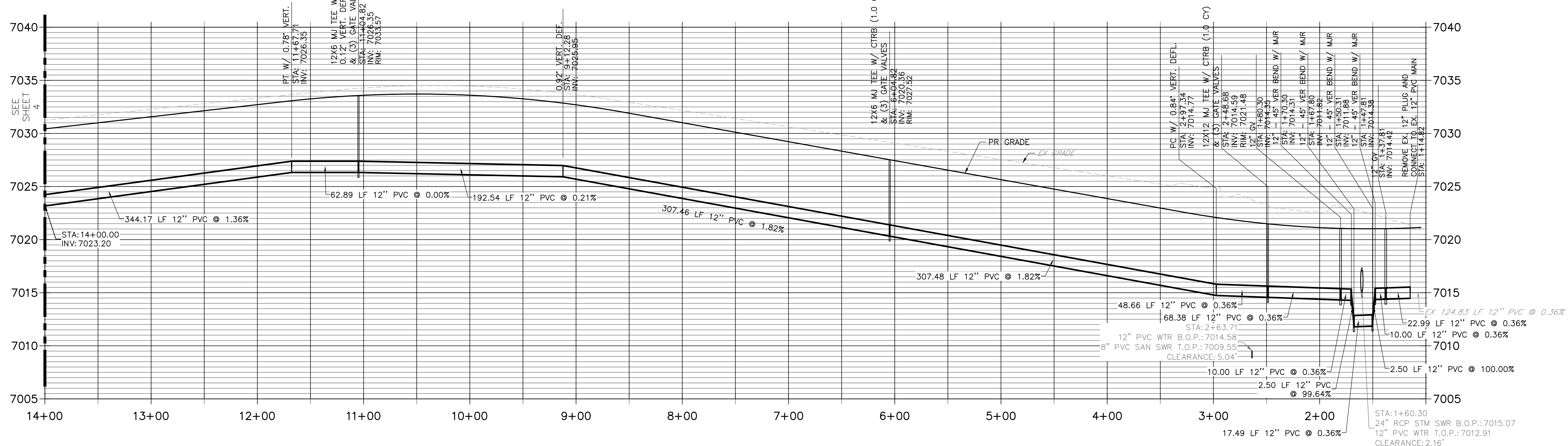
H-SCALE: N/A
V-SCALE: N/A

SHEET
2 OF 5

THE LOCATIONS OF EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL ABOVE GROUND AND UNDERGROUND UTILITIES.

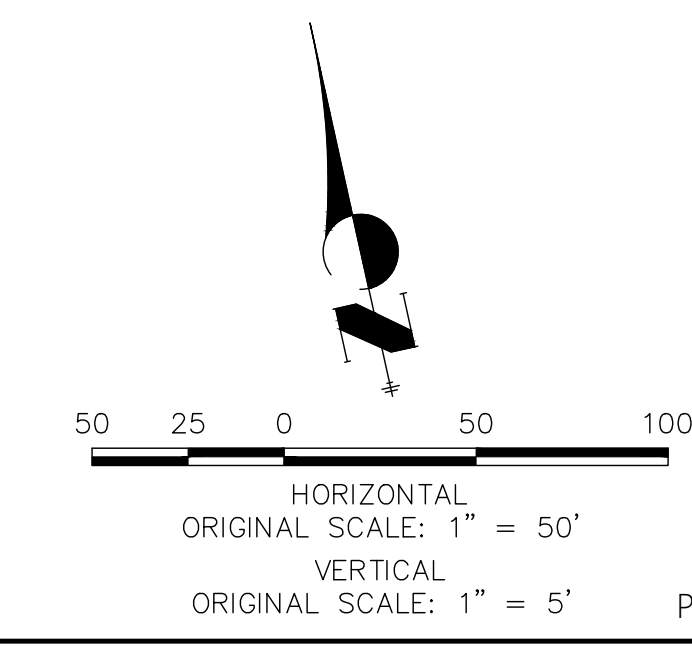


**ALIGNMENT WP01
STA 1+00.00 TO 14+00.00**



Know what's below.
Call before you dig.

THE LOCATIONS OF EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL ABOVE GROUND AND UNDERGROUND UTILITIES.



ENGINEER'S STATEMENT

THIS WASTEWATER SYSTEM PLAN WAS PREPARED UNDER MY DIRECTION AND SUPERVISION AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. SAID PLAN HAS BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR WASTEWATER SYSTEM PLANS. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARING THIS PLANS.

RYAN E. BURNS P.E.
COLORADO P.E. 54412
FOR AND ON BEHALF OF ALL TERRAIN ENGINEERING LLC

DATE _____

ALL TERRAIN ENGINEERING

PREPARED FOR:
TURKEY CANYON QUARRY INC
20 BOULDER CRESCENT STREET, SUITE 100
COLORADO SPRINGS, CO 80903
ATTN: JIM MORLEY
(719) 491-3024
JMORLEY3870@AOL.COM

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, ALL TERRAIN ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

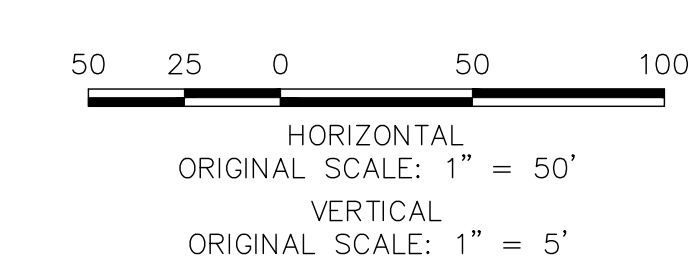
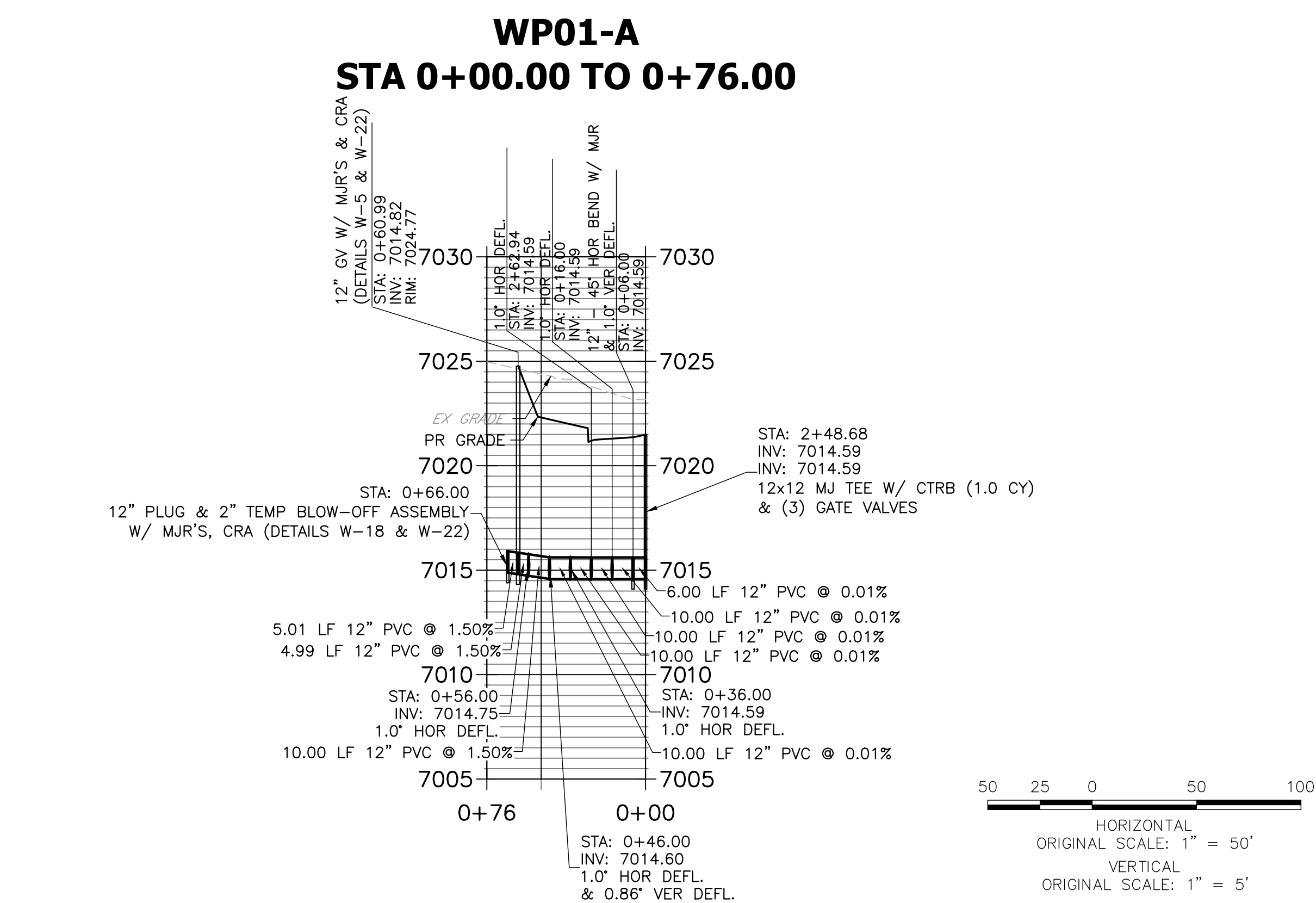
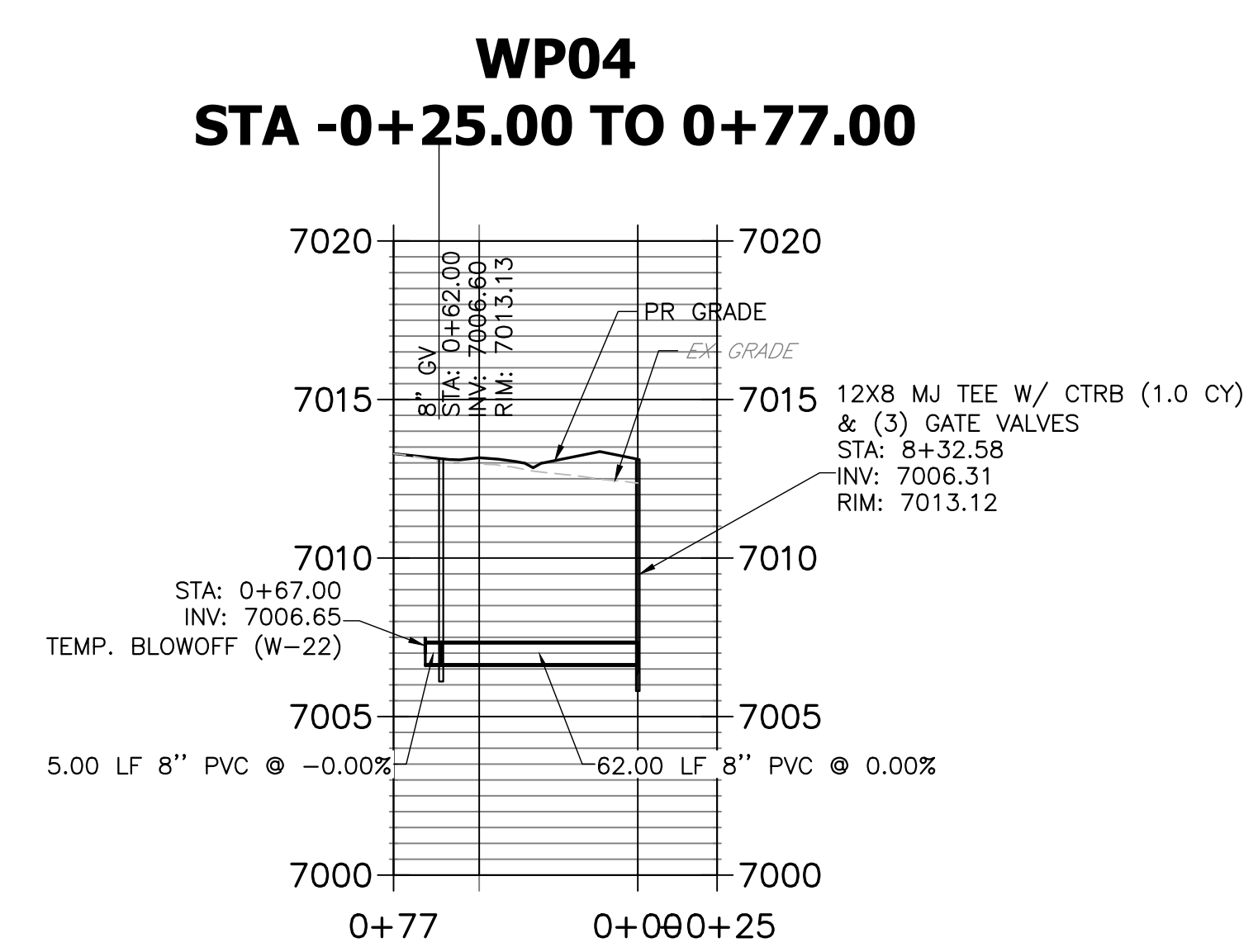
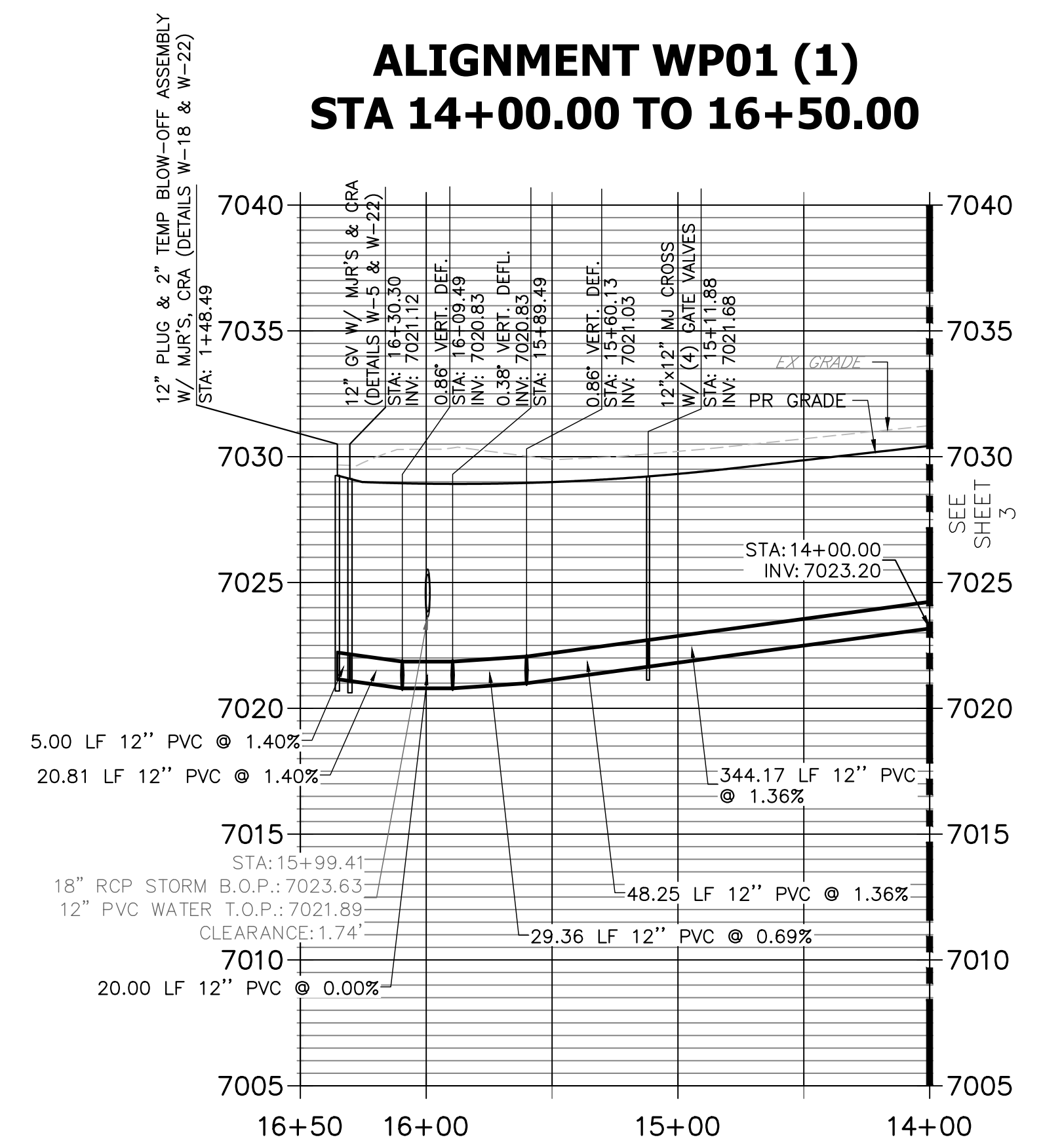
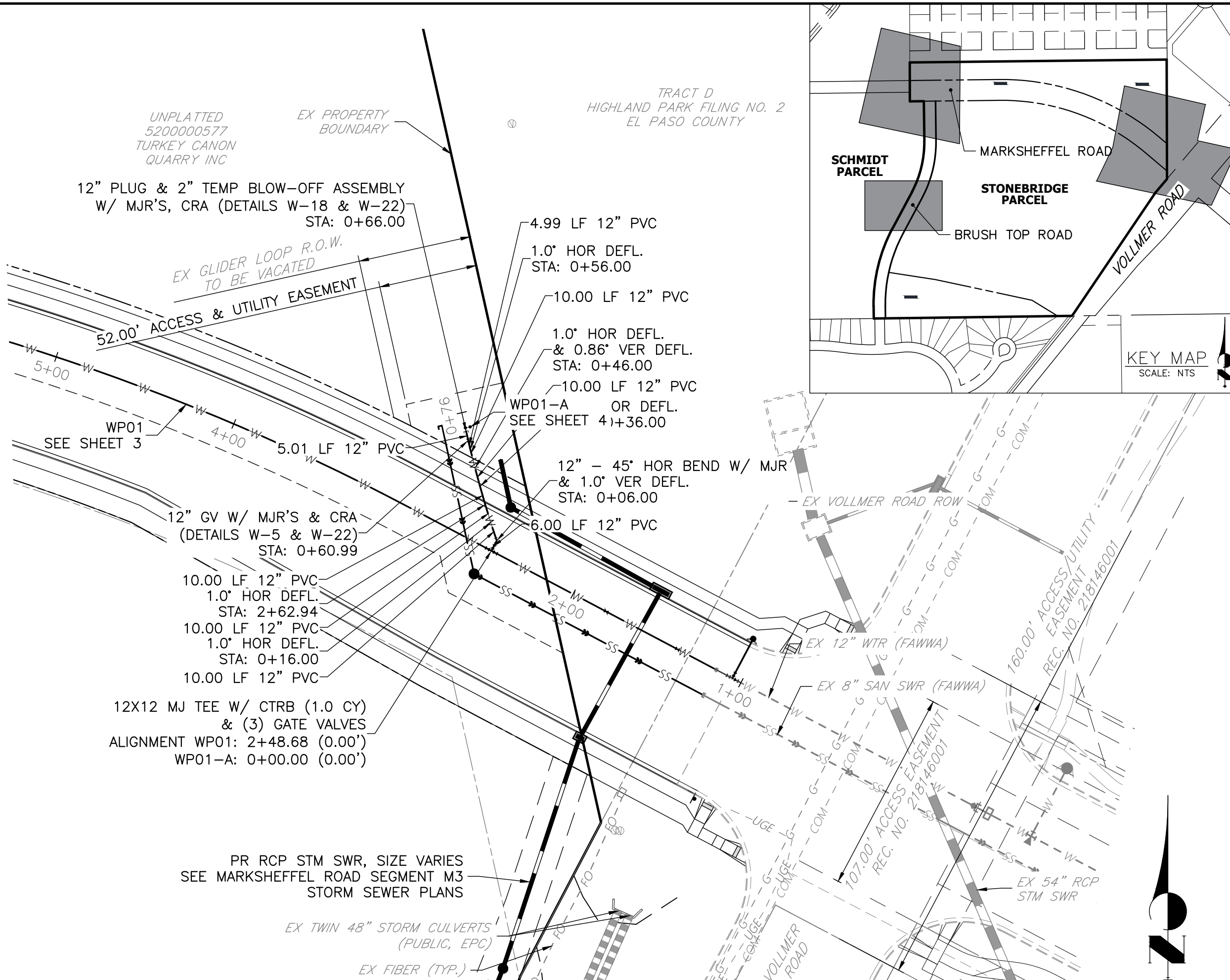
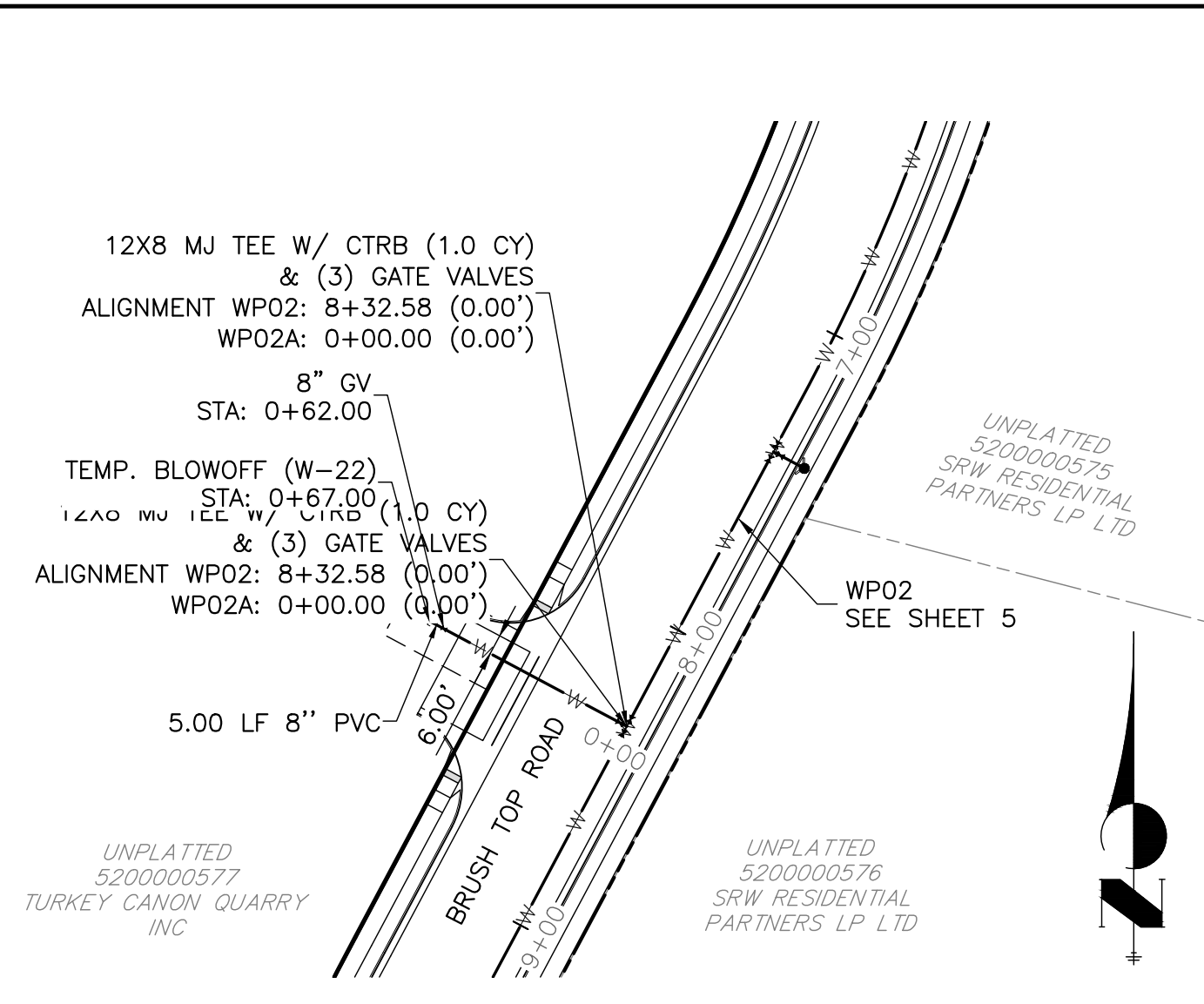
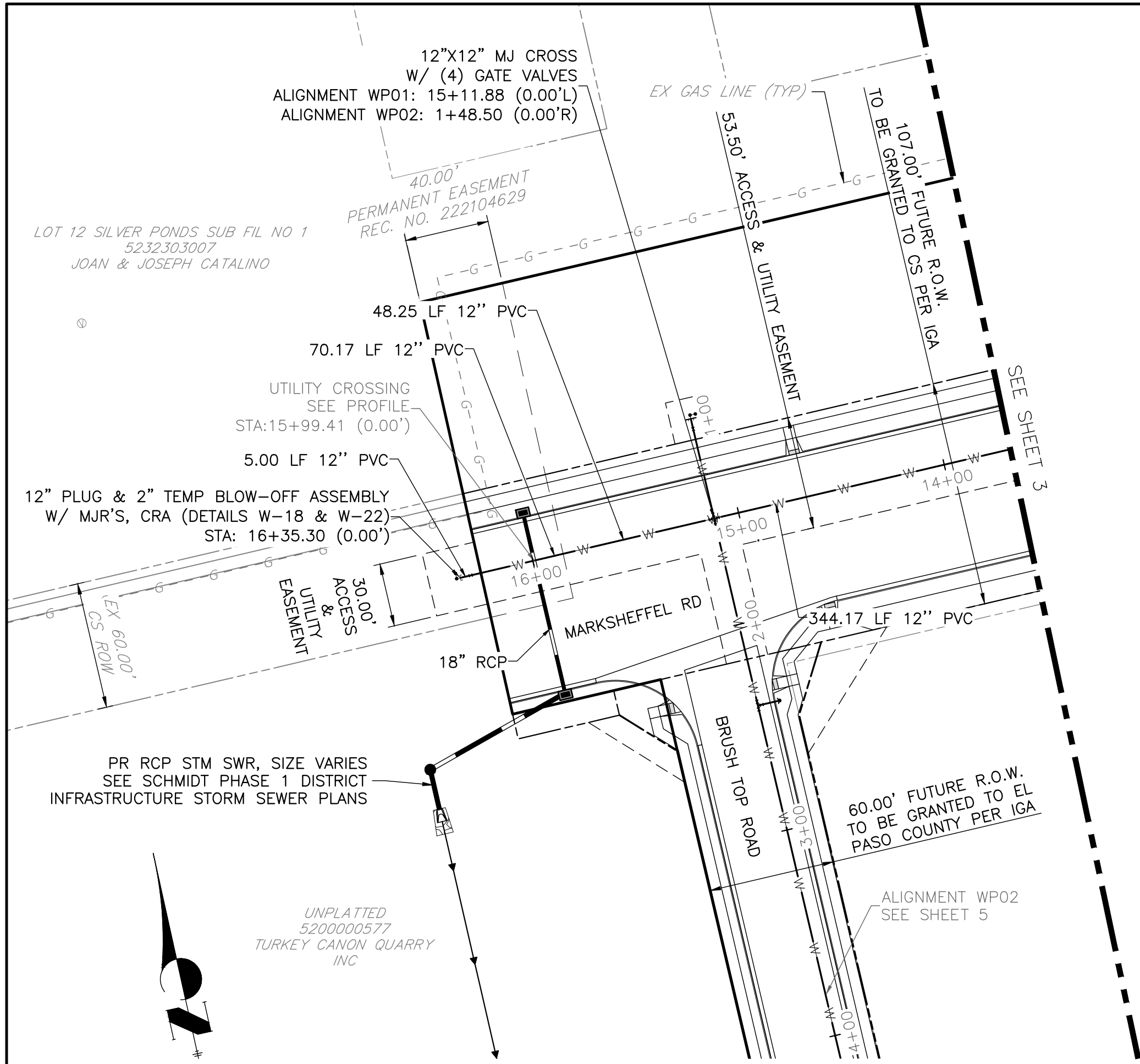
JOB NO: 24013 LOCATION: EPC

| REV | DESCRIPTION | DATE |
|-----|-------------|------|
| | | |
| | | |
| | | |
| | | |

MARKSHEFFEL ROAD - SEGMENT M3

WATER MAIN EXTENSION

DESIGN: REB
REVIEW: NOJ
DATE: 04/27/26
H-SCALE: 1" = 50'
V-SCALE: 1" = 5'
SHEET
3 OF 5



ENGINEER'S STATEMENT

THIS WASTEWATER SYSTEM PLAN WAS PREPARED UNDER MY DIRECTION AND SUPERVISION AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. SAID PLAN HAS BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR WASTEWATER SYSTEM PLANS. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARING THIS PLANS.

RYAN E. BURNS P.E.
COLORADO P.E. 54412
FOR AND ON BEHALF OF ALL TERRAIN ENGINEERING LLC



THE LOCATIONS OF EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL ABOVE GROUND AND UNDERGROUND UTILITIES.



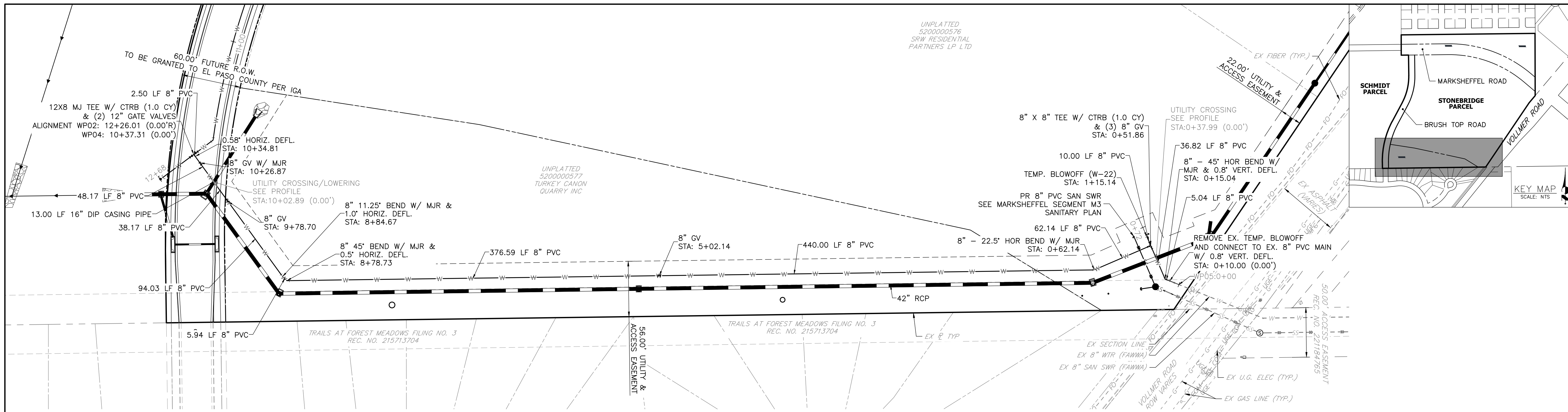
PREPARED FOR:
TURKEY CANON QUARRY INC
20 BOULDER CRESCENT STREET, SUITE 100
COLORADO SPRINGS, CO 80903
ATTN: JIM MORLEY
(719) 491-3024
JMORLEY3870@AOL.COM

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, ALL TERRAIN ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

| DATE | DESCRIPTION |
|------|-------------|
| | |
| | |
| | |
| | |

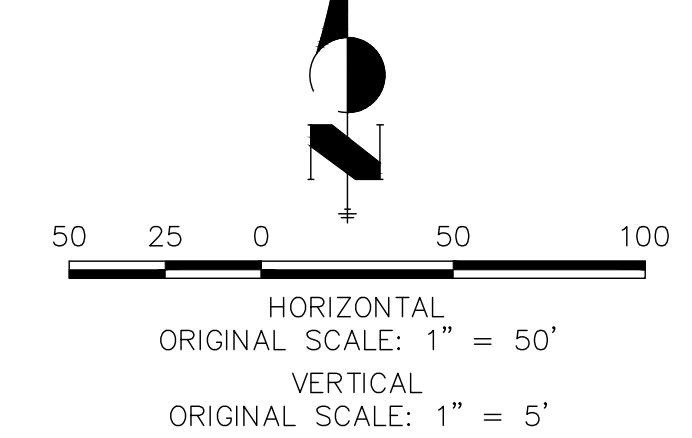
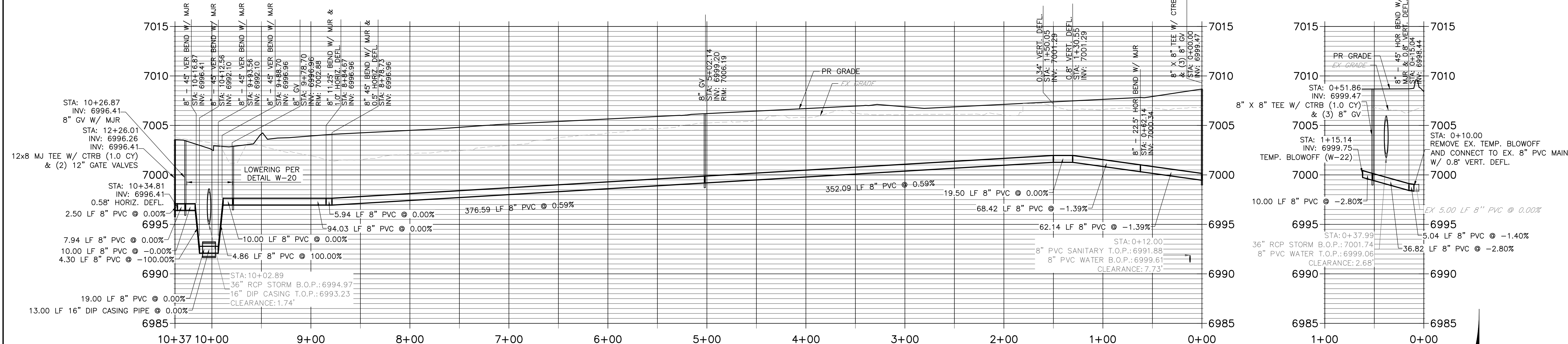
MARKSHEFFEL ROAD - SEGMENT M3
WATER MAIN EXTENSION

DESIGN: REB
REVIEW: NJQ
DATE: 04/27/26
H-SCALE: 1" = 50'
V-SCALE: 1" = 5'
SHEET
4 OF 5



**WP04 (1)
STA 0+00.00 TO 10+37.31**

**WP05
STA 0+00.00 TO 1+00.00**



Know what's below.
Call before you dig.

THE LOCATIONS OF EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL ABOVE GROUND AND UNDERGROUND UTILITIES.

ENGINEER'S STATEMENT

THIS WASTEWATER SYSTEM PLAN WAS PREPARED UNDER MY DIRECTION AND SUPERVISION AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. SAID PLAN HAS BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR WASTEWATER SYSTEM PLANS. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARING THIS PLANS.

RYAN E. BURNS P.E.
COLORADO P.E. 54412
FOR AND ON BEHALF OF ALL TERRAIN ENGINEERING LLC

DATE _____

PCD FILE NO. CDR-2413

ALL TERRAIN
ENGINEERING

PREPARED FOR:
TURKEY CANON QUARRY INC
20 BOULDER CRESCENT STREET, SUITE 100
COLORADO SPRINGS, CO 80903
ATTN: JIM MORLEY
(719) 491-3024
JMORLEY3870@AOL.COM

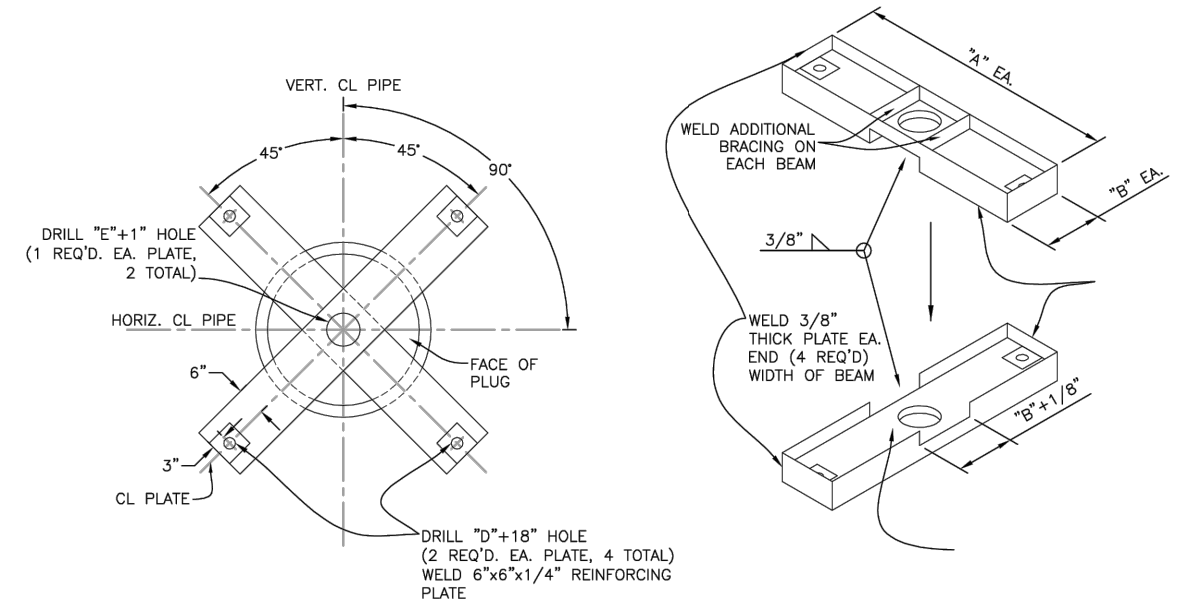
UNTIL SUCH TIME AS THESE
DRAWINGS ARE APPROVED BY THE
APPROPRIATE REVIEWING
AGENCIES, ALL TERRAIN
ENGINEERING APPROVES THEIR
USE ONLY FOR THE PURPOSES
DESIGNATED BY WRITTEN
AUTHORIZATION.

| DATE | DESCRIPTION |
|------|-------------|
| | |
| | |
| | |
| | |
| | |

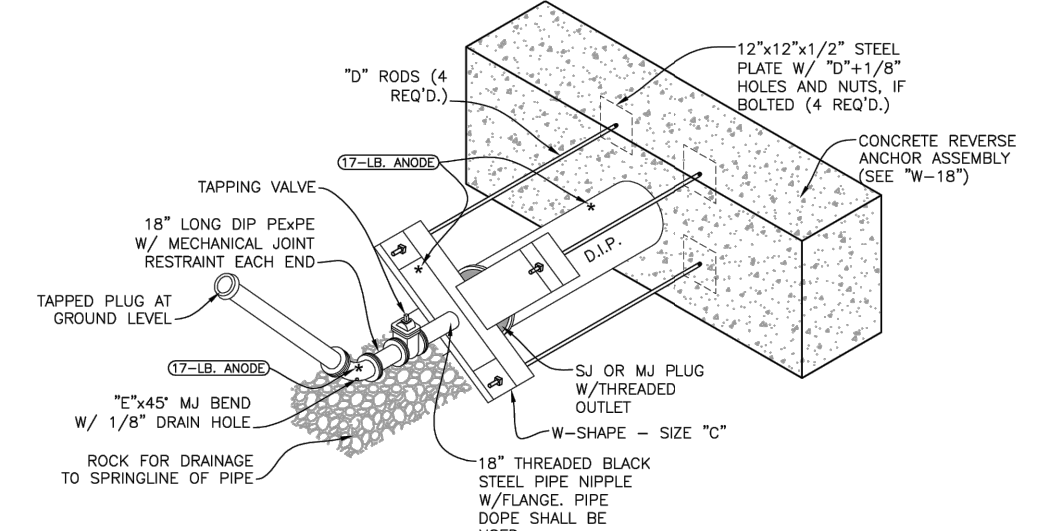
MARKSHEFFEL ROAD - SEGMENT M3

WATER MAIN EXTENSION

DESIGN: REB
REVIEW: NJQ
DATE: 04/27/26
H-SCALE: 1" = 50'
V-SCALE: 1" = 5'
SHEET
6 OF 5



REFER TO W-24 FOR ALL DIMENSIONS & SIZES
 "E" = SIZE OF BLOW-OFF ASSEMBLY
 (WHERE "E"=2", USE STANDARD BLOW-OFF ASSEMBLY, W-22)



- NOTES:
- PIPE DOPE APPROVED FOR USE IN POTABLE WATER SYSTEMS MUST BE USED ON ALL THREADED JOINTS.
 - ENTIRE BLOW-OFF ASSEMBLY MUST BE FULLY SUPPORTED SO NO LOAD BEARS ON BLOW-OFF PIPING.
 - IF APPROPRIATE LOCATION FOR DISCHARGED WATER CANNOT BE REACHED BY ROLLING THE BEND, ADDITIONAL BENDS MAY BE REQUIRED.
 - COAT TE-RODS, BEAMS, AND BLACK IRON PIPE WITH EPOXY POLYAMIDE COATING, 10 MILS THICK, MIN.

TEMP & PERMANENT BLOW-OFF ASSEMBLIES FOR MAINS 12"+

| | | | |
|------------------|------------------------|--|-------------|
| Drawn: GGM/2015 | Revised: DECEMBER 2021 | WOODMEN HILLS WATER & WASTEWATER SYSTEM | W-23 |
| Date: MARCH 2011 | Revised: | METROPOLITAN DISTRICT STANDARD SPECIFICATIONS | |
| Scale: N.P.S. | Revised: | | |

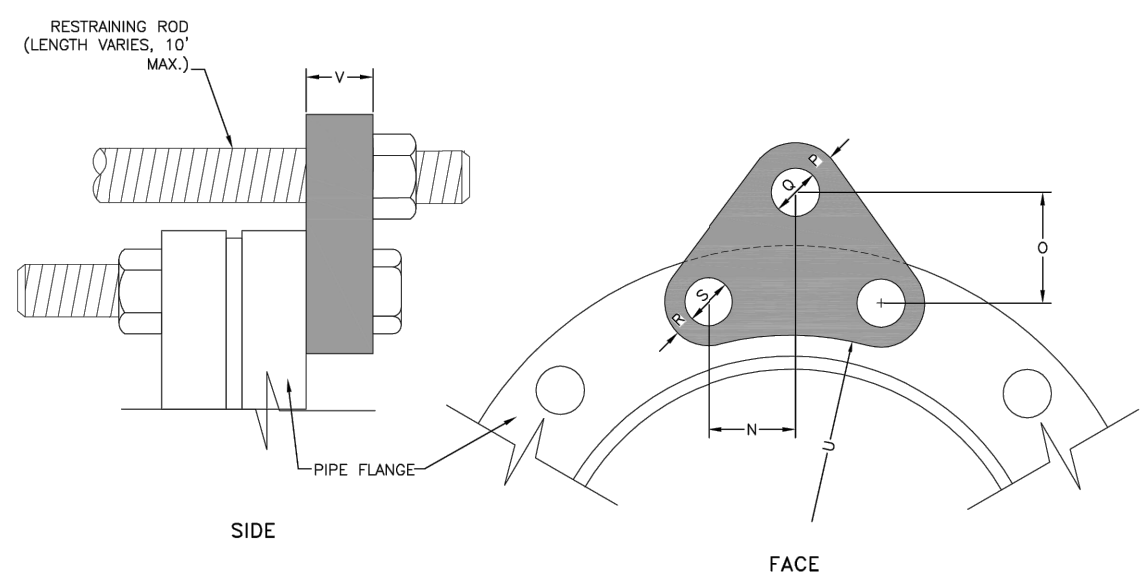
BLOW-OFF ASSEMBLY SIZING

| MAIN PIPE DIA. (IN.) | STAT. PRESSURE (P.S.I.) | DIMENSIONS FROM DRAWING "W-23" | | | | BLOW-OFF PIPE SIZE (IN.) |
|----------------------|-------------------------|--------------------------------|-----------|---------------------|---------------------|--------------------------|
| | | "A" (IN.) | "B" (IN.) | "C" (W-SHAPE) (IN.) | "D" (W-SHAPE) (IN.) | |
| 12 | 100 150 200 | 6.625 | 6.625 | 3.000 | 3.000 | N/A |
| 16 | 100 150 200 | 8.625 | 8.625 | 3.000 | 3.000 | N/A |
| 18 | 100 150 200 | 8.625 | 8.625 | 3.000 | 3.000 | N/A |
| 20 | 100 150 200 | 8.625 | 8.625 | 3.000 | 3.000 | N/A |
| 24 | 100 150 200 | 8.625 | 8.625 | 3.000 | 3.000 | N/A |
| 30 | 100 150 200 | 8.625 | 8.625 | 3.000 | 3.000 | N/A |
| 36 | 100 150 200 | 8.625 | 8.625 | 3.000 | 3.000 | N/A |

- NOTES:
- ALL W-SHAPE FABRICATED FROM A36 STEEL.
 - ALL RODS SHALL BE MIN. GRADE A307 EXCEPT WHERE NOTED AS *. THESE SHALL BE MINIMUM STRENGTH EQUAL TO ASTM A36 RODS.
 - A SOLE SURGE FACTOR HAS BEEN INCLUDED IN DESIGN.
 - FOR SIZES AND PRESSURES GREATER THAN THOSE SHOWN, SPECIAL DESIGN IS REQUIRED, APPROVED BY THE DISTRICT.

BLOW-OFF ASSEMBLY DIMENSION DATA FOR MAINS 12" +

| | | | |
|------------------|------------------------|--|-------------|
| Drawn: GGM | Revised: DECEMBER 2021 | WOODMEN HILLS WATER & WASTEWATER SYSTEM | W-24 |
| Date: MARCH 2011 | Revised: | METROPOLITAN DISTRICT STANDARD SPECIFICATIONS | |
| Scale: N.P.S. | Revised: | | |

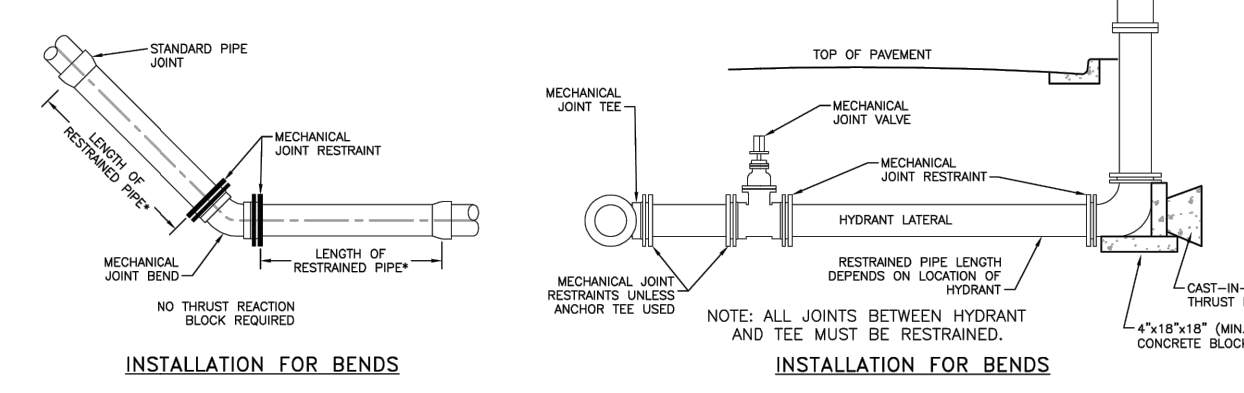


| PIPE DIA. (IN.) | PRESS. CLASS (PSI) | H.S. ROD | | | | M.S. ROD | | | | NO. REQ'D (EA) | | | | |
|-----------------|--------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------------|--------|-------|-------|---|
| | | "N" (IN.) | "O" (IN.) | "P" (IN.) | "Q" (IN.) | "R" (IN.) | "S" (IN.) | "U" (IN.) | "V" (IN.) | | | | | |
| 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 |
| 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 |
| 12 | 150 | 2-3/8 | 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 |
| 16 | 150 | 2-7/8 | 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 | 8-5/8 | 1-1/8 | 3 |
| 18 | 150 | 2-1/4 | 2-1/2 | 1-1/8 | 1 | 1-1/8 | 1 | 1-1/8 | 1 | 1-1/8 | 10 | 1-1/8 | 4 | |
| 20 | 150 | 2-5/8 | 2-3/4 | 1-1/2 | 1-1/2 | 1-1/2 | 1-1/2 | 1-1/2 | 1-1/2 | 1-3/8 | 10-3/8 | 2 | 4 | |
| 24 | 150 | 2-5/8 | 2-5/8 | 1-1/8 | 1-1/8 | 1-1/8 | 1-1/8 | 1-1/8 | 1-1/8 | 1-1/8 | 11-1/8 | 1-1/8 | 4 | |
| 30 | 150 | 2-5/8 | 2-5/8 | 1-1/8 | 1-1/8 | 1-1/8 | 1-1/8 | 1-1/8 | 1-1/8 | 1-1/8 | 11-1/8 | 1-1/8 | 4 | |
| 36 | 150 | 2-5/8 | 2-5/8 | 1-1/8 | 1-1/8 | 1-1/8 | 1-1/8 | 1-1/8 | 1-1/8 | 1-1/8 | 11-1/8 | 1-1/8 | 4 | |

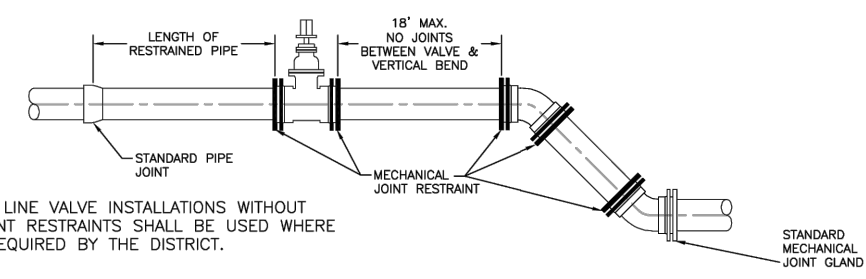
- NOTES:
- M.S. MEANS MILD STEEL ROD, ASTM STANDARD DESIGNATION A-36. NUTS SHALL BE ASTM STANDARD DESIGNATION A-307.
 - H.S. MEANS HIGH STRENGTH STEEL ROD, ASTM STANDARD DESIGNATION A-193 GRADE B-7. NUTS SHALL BE ASTM STANDARD DESIGNATION A-193 GRADE 2-H.

FLANGE - LUG DETAIL

| | | | |
|------------------|------------------------|--|-------------|
| Drawn: GGM | Revised: DECEMBER 2021 | WOODMEN HILLS WATER & WASTEWATER SYSTEM | W-27 |
| Date: MARCH 2011 | Revised: | METROPOLITAN DISTRICT STANDARD SPECIFICATIONS | |
| Scale: N.P.S. | Revised: | | |



INSTALLATION FOR BENDS



INSTALLATION FOR LINE VALVE & LOWERING

- NOTES:
- MECHANICAL JOINTS SHALL BE APPROVED ACCORDING TO MATERIAL SPECIFICATION FOR DIP AND PVC PIPE.
 - LENGTH OF PIPE REQUIRING JOINT RESTRAINT SHALL BE DETERMINED FROM CHART ON DRAWING W-13.
 - RESTRAINED JOINT PVC PIPE SHALL NOT BE USED FOR LOWERINGS.
 - IF A JOINT IS LOCATED BETWEEN ANY FITTINGS INCORPORATED INTO THE ASSEMBLY, BELL/Joint RESTRAINTS MUST BE USED.

APPLICATIONS FOR MECHANICAL JOINT RESTRAINTS

| | | | |
|------------------|------------------------|--|-------------|
| Drawn: GGM | Revised: DECEMBER 2021 | WOODMEN HILLS WATER & WASTEWATER SYSTEM | W-28 |
| Date: MARCH 2011 | Revised: | METROPOLITAN DISTRICT STANDARD SPECIFICATIONS | |
| Scale: N.P.S. | Revised: | | |



PREPARED FOR:
 TURKEY CANON QUARRY INC
 20 BOULDER CRESCENT STREET, SUITE 100
 COLORADO SPRINGS, CO 80903
 ATTN: JIM MORLEY
 (719) 491-3024
 JMORLEY3870@AOL.COM

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, ALL TERRAIN ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

| REV | DESCRIPTION | DATE |
|-----|-------------|------|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

MARKSHEFFEL ROAD - SEGMENT M3
 DETAILS

DESIGN: REB
 REVIEW: NQJ
 DATE: 04/27/26

H-SCALE: N/A
 V-SCALE: N/A

SHEET
 9 OF 5

ENGINEER'S STATEMENT
 STANDARD DETAILS SHOWN WERE REVIEWED ONLY AS TO THEIR APPLICATION ON THIS PROJECT
 RYAN E. BURNS, P.E.
 COLORADO P.E. 0054412
 FOR AND ON BEHALF OF ALL TERRAIN ENGINEERING, LLC

