HORIZONTAL CONTROL

MODIFIED COORDINATE SYSTEM - SEE SHEETS IN DRAWINGS

#### VERTICAL DATUM NAVD88

## **GRANDVIEW RESERVE METROPOLITAN DISTRICT ON SITE SANITARY SEWER** COUNTY PLAN **CONSTRUCTION DOCUMENTS**

### **SHEET INDEX**

CD: GENERAL G000 COVER SHEET G101 GENERAL NOTES G102 LEGEND G103 SURVEY COORDINATES CD: SANITARY SEWER C100 **OVERALL SITE PLAN & HORIZONTAL ALIGNMENT** C101 PLAN AND PROFILES STA. 1+00 TO STA 12+50 C102 PLAN AND PROFILES STA. 12+50 TO STA 24+50 C103 PLAN AND PROFILES STA. 24+50 TO STA 36+50 C105 PLAN AND PROFILES STA. 48+50 TO STA 53+00 C104 PLAN AND PROFILES STA. 36+50 TO STA 48+50 CD: EROSION CONTROL C300 GRADING AND EROSION CONTROL NOTES C301 **EROSION CONTROL INITIAL-INTERIM PLAN** C302 **EROSION CONTROL INITIAL-INTERIM PLAN** C303 **EROSION CONTROL INITIAL-INTERIM PLAN** C304 EORSION CONTROL FINAL PLANS C305 EORSION CONTROL FINAL PLANS C306 EORSION CONTROL FINAL PLANS C307 EORSION CONTROL DETAILS C308 EORSION CONTROL DETAILS C309 EORSION CONTROL DETAILS CD: DETAILS C701 DETAILS

#### **PROJECT CONTACTS:**

#### OWNER/DEVELOPER

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ATTN: JEFF JONES EMAIL: COLORADOSPRINGS@CTLTHOMPSON.COM

TRAFFIC ENGINEER LSC TRANSPORTATION CONSULTANTS INC. 2504 EAST PIKES PEAK AVENUE, SUITE 304 COLORADO SPRINGS, CO 80909 TELE: &719) 633-2868 ATTN: JEFFREY C. HODSON, P.E. EMAIL: LSC@LSCTRANS.COM

SURVEYOR EDWARD-JAMES SURVEYING, INC. 926 ELKTON DRIVE COLORADO SPRINGS, CO 80907 TELE: (719) 576-1216 ATTN: JONATHAN W. TESSIN EMAIL: JTESSIN@EJSURVEYING.COM

#### UTILITY CONTACTS

WATER **GRANDVIEW RESERVE METROPOLITAN DISTRICT** 1272 KELLY JOHNSON BLVD. SUITE 100 COLORADO SPRINGS, CO 80921 TELE: (719 499-8416 ATTN: PAUL HOWARD EMAIL: PAULINFINITY1@MSN.COM

WASTEWATER / WATER WOODMEN HILLS METRO DISTRICT 8046 EASTONVILLE ROAD FALCON, CO 80831 TELE: (719) 495-2500 CONTACT: CODY RITTER EMAIL: CODY@WHMD.ORG

ELECTRIC / FIBER MOUNTAIN VIEW ELECTRIC ASSOCIATION 11140 E. WOODMEN RD. FALCON, CO 80831 TELE: (800) 388-9881 ATTN: GINA PERRY EMAIL: GINA.P@MVEA.COOP

NATURAL GAS BLACK HILLS ENERGY 198 COUNTY LINE RD. PALMER LAKE, CO 80133 TELE: (719) 332-5856 ATTN: BOB SWATEK EMAIL: BOB.SWATEK@BLACKHILLSCORP.COM

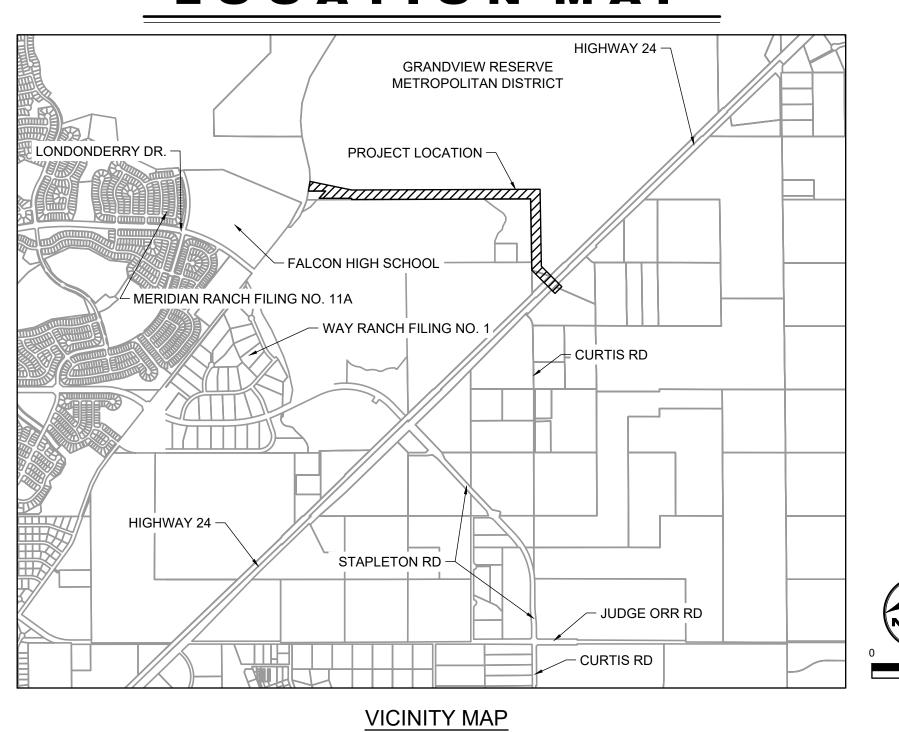
FIRE FALCON FIRE PROTECTION DISTRICT 7030 OLD MERIDIAN RD. FALCON, CO 80831 TELE: (719) 495-4050 ATTN: TRENT HARWIG EMAIL: THARWIG@FALCONFIREPD.ORG

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1975 RESEARCH PARKWAY, SUITE 230 | COLORADO SPRINGS, CO 80920 Phone: 719.300.4140 | Toll Free: 800.728.7805 | Fax: 713.965.0044 | HRGreen.com

AND EROSION CONTROL PLANS COUNTY OF EL PASO, STATE OF COLORADO LOCATION MAP



1"=2000'





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D.R. HORTON - GRANDVIEW RESERVE ON-SITE SANITARY SEWER **DESIGN & PERMITTING SERVICES** EL PASO COUNTY PEYTON, CO



REVIEW IS PROVIDED ONLY FOR GENERAL CONFORMANCE WITH COUNTY DESIGN CRITER FOR THE ACCURACY AND ADEQUACY OF THE DESIGN, DIMENSIONS, AND/ OR ELEVATIONS THE JOB SITE. THE COUNTY THROUGH THE APPROVAL OF THIS DOCUMENT ASSUMES NO S AND/ OR ACCURACY OF THIS DOCUMENT.	WHICH SHALL BE
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### WOODMEN HILLS METROPOLITAN DISTRICT STANDARD NOTES: (SOME NOTES MAY NOT BE APPLICABLE TO PROJECT)

- ALL UTILITY CONSTRUCTION TO BE CONDUCTED IN CONFORMANCE WITH THE CURRENT WOODMEN HILLS METROPOLITAN DISTRICT (WHMD, THE DISTRICT) SPECIFICATIONS.
- ALL PLANS ON THE JOB SITE SHALL BE SIGNED BY THE DISTRICT AND THE DISTRICT'S ENGINEER. 2. 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 3. 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 8. 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.
- 10. THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THE DRAWINGS ARE APPROXIMATE ONLY. THE LOCATION OF ALL UTILITIES SHALL BE FIELD VERIFIED PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES. THE DISTRICT SHALL BE NOTIFIED OF ANY DEVIATIONS TO THE LINE AND/OR GRADE AS DEPICTED ON THE PLANS. CONTRACTOR SHALL SUBMIT TO THE DISTRICT AND THE ENGINEER OF RECORD A REPORT OF THE FIELD-VERIFIED INFORMATION PRIOR TO THE START OF CONSTRUCTION.
- 11. ALL BENDS SHALL BE FIELD STAKED PRIOR TO THE START OF CONSTRUCTION.
- 12. BENDS, DEFLECTION, 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.
- 13. AT ALL LOCATIONS WHERE CAP AND STUB IS NOTED ON DRAWINGS. PROVIDE A PLUG AT THE END OF THE PIPE JOINT NEAREST THE SPECIFIED STATION. PROVIDE A REVERSE ANCHOR AT ALL WATER LINE PLUGS.
- 14. ALL UNUSED, SALVAGED WATER UTILITY MATERIAL SHALL BE RETURNED TO THE METROPOLITAN 32. DISTRICT AS REQUESTED.
- 15. AT THE CONTRACTOR'S EXPENSE, ALL UTILITY MAINS SHALL BE SUPPORTED AND PROTECTED SUCH THAT THEY SHALL FUNCTION CONTINUOUSLY DURING CONSTRUCTION OPERATIONS. SHOULD A UTILITY MAIN FAIL AS A RESULT OF THE CONTRACTOR'S OPERATION, IT SHALL BE REPLACED IMMEDIATELY BY THE CONTRACTOR OR BY THE DISTRICT AT FULL COST OF LABOR AND MATERIALS TO THE CONTRACTOR/DEVELOPER.
- 16. PUMPING OR BYPASS OPERATIONS SHALL BE REVIEWED AND APPROVED BY BOTH THE DISTRICT AND THE DISTRICT ENGINEER PRIOR TO EXECUTION.
- 17. THE CONTRACTOR SHALL REPLACE OR REPAIR DAMAGE TO ALL SURFACE IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO FENCES, LANDSCAPING, CURB AND GUTTER, AND/OR ASPHALT THAT MAY BE CAUSED DURING CONSTRUCTION.
- 18. ALL CONTRACTORS WORKING ON OR NEAR A WATER OR SEWER FACILITY (TO INCLUDE SERVICE LINES) SHALL HAVE LIABILITY INSURANCE NAMING THE DISTRICT AS AN ADDITIONAL INSURED AND SHALL PROVIDE A CURRENT COPY OF WORKERS COMPENSATION INSURANCE ON FILE WITH THE DISTRICT. NO WORK CAN PROCEED WITHOUT CURRENT CERTIFICATES ON FILE AT THE DISTRICTS' OFFICE.
- 19. THE CONTRACTOR SHALL NOTIFY THE DISTRICT AND ALL AFFECTED UTILITY COMPANIES ADJACENT TO THE PROPOSED UTILITY CONSTRUCTION A MINIMUM OF 48 HOURS AND A MAXIMUM OF 96 HOURS PRIOR TO THE START OF CONSTRUCTION. A WEEKLY CONSTRUCTION MEETING SHALL BE REQUIRED WITH THE CONTRACTOR, DISTRICT ENGINEER AND ALL OTHER PARTIES AS DEEMED NECESSARY BY THE DISTRICT.
- 20. COMMENCEMENT OF CONSTRUCTION OF WATER/SEWER SYSTEMS WITHIN METROPOLITAN DISTRICT:
  - PRIOR TO THE START OF CONSTRUCTION, A PRECONSTRUCTION MEETING IS REQUIRED A a) MINIMUM OF 48 HOURS IN ADVANCE OF COMMENCEMENT OF WORK. A REPRESENTATIVE OF WASTEWATER SYSTEM INSTALLATION NOTES 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 b) 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.
- 22. TESTING OF FACILITIES:
  - a) THE CONTRACTOR SHALL NOTIFY THE DISTRICT A MINIMUM OF 48 HOURS AND A MAXIMUM OF 96 HOURS PRIOR TO THE START OF ANY TESTING.
  - ALL SECTIONS OF WATER LINE ARE TO MEET THE FOLLOWING PRESSURE TESTING b) REQUIREMENTS
    - TEST 100% OF ALL LINES.
    - MUST PASS PRESSURE TEST TO 200 PSI FOR TWO HOURS (UNLESS OTHERWISE

- APPROVED ON THE PLANS).
- CCTV INSPECTION.
- DISTRICT FOR REVIEW AND APPROVAL.
- 23. PRELIMINARY ACCEPTANCE SHALL BE DEFINED AS THE POINT IN TIME THAT THE DISTRICT COMPLETE ALL SURFACE IMPROVEMENTS AND RESTORATION WITHIN 30 DAYS OF THE IMPROVEMENTS AT THE CONTRACTOR'S COST.
- 24.
- 25. ACCEPTANCE
  - LINES HAVE BEEN COMPLETED AND A WALK-THROUGH HAS OCCURRED.
- PREPARED AND APPROVED PRIOR TO PRELIMINARY ACCEPTANCE BY THE DISTRICT.
- MAIN ENTERS THE PROPERTY. THE END OF THE MAINS SHALL BE MARKED WITH THE APPROPRIATE COLORED CARSONITE MARKER ALONG WITH TRACER WIRE.
- SUBDIVISIONS AND 12 MONTHS FOR ANY COMMERCIAL INSTALLATIONS.
- 29. INSPECTION FEES: CALL THE DISTRICT (719-495-2500) FOR FEE SCHEDULE

WATER SYSTEM INSTALLATION NOTES

- FIVE-AND-ONE-HALF (5.5) FEET.
- 31. ALL WATER VALVES ASSOCIATED WITH THE POTABLE WATER SYSTEM SHALL BE OPEN MARKERS AS APPLICABLE.
- REVIEWED AND APPROVED BY THE APPLICABLE FIRE AUTHORITY.
- 34 BOXES CAN BE USED AT INTERSECTIONS AND SERVICE STUBS).
- 35. EXISTING LINES.
- WITH TRACER WIRE EXTENDING BACK TO THE MAIN LINE.
- 37. COMMENCEMENT OF USE OF WATER LINES AND/OR SYSTEMS:
  - DRAWINGS ARE SUBMITTED AND APPROVED BY THE DISTRICT.
  - NO WATER FACILITY SHALL BE PLACED IN SERVICE UNTIL ALL SERVICE LINES ARE b)
  - COMPLETED PRIOR TO USE OF THE FACILITY.
- RECORDED.

- BE APPROVED BY THE DISTRICT ON A CASE BY CASE BASIS
- APPROVED EQUAL, AND COATED.
- 40. ALL SEWER LINES MUST BE BEDDED WITH SQUEEGEE OR 3/4" CRUSHED ROCK.
- 41. COMMENCEMENT OF USE OF SEWER LINES AND/OR SYSTEMS:

c) ALL SANITARY SEWER FACILITIES ARE TO MEET THE FOLLOWING TESTING REQUIREMENTS: ALL LINES SHALL BE JET CLEANED PRIOR TO VACUUM OR PRESSURE TESTING. ALL MANHOLES SHALL BE VACUUM TESTED WITH DISTRICT STAFF PRESENT PRIOR TO

> SEWER MAINS TO BE PRESSURE TESTED PRIOR TO CCTV INSPECTION ALL LINES SHALL BE CCTV INSPECTED AND VIDEO SHALL TO BE SUBMITTED TO THE

ACCEPTS THE FACILITY FOR USE. ALL SURFACE IMPROVEMENTS AND RESTORATION SHALL BE COMPLETED WITHIN 30 DAYS OF COMMENCEMENT. SHOULD THE CONTRACTOR FAIL TO COMMENCEMENT OF SERVICE. THE DISTRICT, AT THEIR DISCRETION, MAY ELECT TO COMPLETE

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.

a) THE DISTRICT MAY GIVE PRELIMINARY ACCEPTANCE ONCE ALL OF THE TESTS ON ALL THE

b) 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).

26. ALL WATER AND SEWER MAINS, INCLUDING SERVICE LINES, SHALL HAVE "AS-BUILT" DRAWINGS

27. 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

28. AFTER REVIEW AND APPROVAL OF PLANS FOR THE EXTENSION OF LINES, FACILITIES, AND/OR SERVICES, CONSTRUCTION MUST HAVE COMMENCED WITHIN 18 MONTHS FOR RESIDENTIAL

30. 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

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

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

33. 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.

ALL MAIN LINES (PVC & DUCTILE IRON) SHALL BE INSTALLED WITH COATED #12 TRACER WIRE WITH TEST STATIONS AT INTERVALS NO GREATER THAN FIVE HUNDRED FEET (500') (VALVE

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

36. IRRIGATION SERVICES SHALL HAVE A STOP-AND-WASTE CURB STOP VALVE INSTALLED ALONG

a) NO WATER FACILITY SHALL BE PLACED IN SERVICE UNTIL AFTER THE COMPLETION OF ALL PRESSURE TESTING, FLUSHING, BAC-T TESTING, AND COMPACTION TESTING, AND AS-BUILT

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

c) ALL EASEMENTS (PLATTED OR DEEDED) ARE DEDICATED, EXECUTED BY THE DISTRICT, AND

38. 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

39. ALL SANITARY SEWER MANHOLES SHALL BE WRAPPED WITH RU116 - RUBR-NEK JOINT WRAP, OR

- a) 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
- 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.
- ALL NECESSARY EASEMENTS (PLATTED OR DEEDED) ARE DEDICATED, EXECUTED BY THE DISTRICT, AND RECORDED. d) DOWNSTREAM PLUG CAN BE REMOVED ONCE THE FIRST LIFT OF ASPHALT IS DOWN AND
- THE ABOVE REQUIREMENTS ARE MET.

THE ABOVE GUIDELINES ARE SUBJECT TO CHANGE AT ANY TIME.

### UTILITY NOTES

- 1. CONTRACTOR TO OBTAIN WORK IN THE ROW PERMIT FROM EL PASO COUNTY PRIOR TO CONSTRUCTION.
- 2. CONTRACTOR TO POTHOLE AND VERIFY EXISTENCE OF OTHER UTILITIES WITHIN ANY PUBLIC RIGHT OF WAYS AND WITHIN EASEMENTS WHERE PROPOSED UTILITY IS LOCATED.
- 3. CONTRACTOR TO MAINTAIN 5.5' MINIMUM COVER ALL OVER WATER MAINS
- CONSTRUCTED. 4. ALL VALVES SHOWN FOR SCHEMATIC PURPOSES ONLY. NO VALVES SHALL BE
- INSTALLED IN CURB AND GUTTER OR CROSS PANS. 5. STANDARD WATER SERVICES LOCATIONS TO BE 10' FROM THE DOWNSTREAM
- PROPERTY LINE AND EXTENDED 10' TO THE UTILITY EASEMENT. 6. STANDARD WASTEWATER SERVICES TO BE IN A COMMON TRENCH WITH STANDARD
- WATER SERVICES. SHALL BE LOCATION A MINIMUM OF 30" FROM CENTER OF PIPE. SEE WOODMEN HILLS METRO DISTRICT STANDARD SPECIFICATIONS DETAIL W-13. STANDARD SERVICES SHALL BE MARKED WITH 2"X4" POST AT TERMINATION POINT FOR 7 LOCATION DURING CONNECTION TO RESIDENCE. POSTS SHALL BE SPRAY-PAINTED
- BLUE FOR WATER AND GREEN FOR SEWER. 8. CURB STOPS ARE NOT TO BE INSTALLED IN CONCRETE CURB, CROSS PANS, SIDEWALKS, OR DRIVEWAYS.
- 9. SEE PLANS FOR THE LOCATION OF STANDARD SERVICES ON CORNER LOTS

### **CAUTION - NOTICE TO CONTRACTOR**

- 1. CONTRACTOR IS REQUIRED TO UTILIZE THE UTILITY ONE CALL SERVICE 811 AT LEAST 48 HOURS PRIOR TO EXCAVATING ANYWHERE ON THE PROJECT.
- 2. 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 CONTRACTORS RESPONSIBILITY TO FIELD VERIFY THE 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.
- NO CLAIMS FOR ADDITIONAL COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR FOR 3
- INTERFERENCE OR DELAY CAUSED BY REPAIRS FOR DAMAGED UTILITIES. 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.
- CONTRACTOR SHALL PROTECT ALL EXISTING SURVEY MONUMENTATION. CONTRACTOR SHALL HAVE LICENSED SURVEYOR REPLACE ANY DAMAGED OR DISTURBED MONUMENTATION AT THEIR COST.
- 6. CONTRACTOR MUST COORDINATE WORK WITH UTILITY COMPANY AND CITY/WHMD/OWNER PRIOR TO BEGINNING WORK AND IS RESPONSIBLE FOR ALL MATERIALS, LABOR, REPAIRS, ECT. TO COMPLETE WORK AND RESTORE AREA TO SAME STATE PRIOR TO STARTING WORK.
- CONTRACTOR RESPONSIBLE FOR AS-BUILT DRAWINGS, TESTS, REPORTS, AND/OR ANY OTHER CERTIFICATES OR INFORMATION AS REQUIRED FOR ACCEPTANCE OF WORK FROM CITY. UTILITY DISTRICTS OR ANY OTHER GOVERNING AGENCY.
- 8. SURVEYOR TO OBTAIN AUTOCAD FILE FROM ENGINEER AND VERIFY ALL HORIZONTAL CONTROL DIMENSIONING PRIOR TO CONSTRUCTION STAKING. SURVEYOR MUST VERIFY ALL BENCHMARK, BASIS OF BEARING AND DATUM INFORMATION TO ENSURE IMPROVEMENTS WILL BE AT THE SAME HORIZONTAL AND VERTICAL LOCATIONS SHOWN ON THE DESIGN CONSTRUCTION DRAWINGS. PRIOR TO CONSTRUCTION STAKING ANY DISCREPANCY MUST BE REPORTED TO OWNER AND ENGINEER PRIOR TO CONTINUATION OF ANY FURTHER STAKING OR CONSTRUCTION WORK.
- STORM SEWERS, CULVERTS, AND DITCHES: CONTRACTOR SHALL MONITOR THE WEATHER AND MAINTAIN STORM WATER FLOW AT ALL TIMES AND SHALL SCHEDULE REMOVALS SUCH THAT WET WEATHER AND RAIN EVENTS WILL NOT CREATE DAMAGING BACKUPS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FLOW DIVERTING AND/OR BYPASS PUMPING AS NECESSARY TO FACILITATE CONSTRUCTION. THE COST FOR MAINTAINING, DIVERTING, OR PUMP STORM FLOWS SHALL BE INCIDENTAL TO THE PROJECT.
- 10. CONTRACTOR TO MAINTAIN A MAXIMUM CONSTRUCTION EASEMENT WIDTH OF 24 FEET.

## **DESIGN NOTES/SPECIFICATIONS**

- 1. IN THE EVENT OF DISCREPANCIES, THE FOLLOWING IS THE ORDER OF PRECEDENCE FOR SPECIFICATIONS, FOLLOW WHAT IS MOST STRINGENT: HR GREEN OVER WHMD OVER CSU OVER EPC OVER CDOT
- 1.1. SPECIFICATIONS PERTAINING TO UTILITIES: WHMD, SUPPLEMENTED BY CSU. 1.2. SPECIFICATIONS PERTAINING TO RIGHT OF WAY AND SURFACING RESTORATION: EPC, SUPPLEMENTED BY CDOT.

2. CONTRACTOR SHALL UTILIZE THE SITE ACCESS AND STAGING AREAS AS IDENTIFIED IN THE DRAWINGS OR OTHERWISE CONTRACTOR SHALL OBTAIN APPROVAL ON OTHER SITES AND ACCESSES 3. CONTRACTOR SHALL STAY WITHIN THE CONSTRUCTION EASEMENTS AND/OR ROAD RIGHT OF WAY. DAMAGES OUTSIDE OF DESIGNATED AREAS SHALL BE REPAIRED/REMEDIED AT CONTRACTOR'S EXPENSE. ADDITIONAL AGREEMENTS OBTAINED BY THE CONTRACTOR SHALL NOT HOLD THE OWNER/ENGINEER RESPONSIBLE FOR ANY DAMAGES/GRIEVANCES.

#### 4. REMOVALS AND REPLACEMENT

- 4.1. ALL ITEMS NOTED FOR REMOVAL AND REPLACEMENT SHALL BE REPLACED IN KIND. CONTRACTOR SHALL FIELD VERIFY. CONTRACTOR SHALL COORDINATE AND CONFIRM WITH RESPECTIVE ENTITIES IF EXISTING CONDITIONS WOULD ALLOW FOR SALVAGE AND RESET
- 4.2. DAMAGED PAVEMENT FROM CONSTRUCTION ACTIVITIES SHALL BE REMEDIED TO EPC'S APPROVAL AT
- CONTRACTOR'S EXPENSE. PAVEMENT/ROADWAY TYPICAL SECTIONS FOR RESTORATION - CONTRACTOR SHALL FIELD VERIFY AND MATCH 4.3. EXISTING. ROADWAY REPLACEMENT/PATCHING/CONSTRUCTION SHALL COMPLY TO SPECIFICATIONS OF EPC, CDOT, OR RESPECTIVE AGENCY WITH JURISDICTION OVER THE ROAD

#### 5. GRAVITY SEWER

- 5.1. FOLLOW REQUIREMENTS PER WHMD STANDARD SPECIFICATIONS, UNLESS OTHERWISE NOTED IN DRAWINGS. 5.2. ALL PIPES FOR THE PROJECT SHALL BE AS SPECIFIED IN DRAWINGS.
  - INSTALL SEWER BEDDING PER "TYPICAL TRENCH DETAIL" ON SHEET C701
- TO PREVENT BUOYANCY, EACH MANHOLE LIP WIDTH SHALL BE A MINIMUM OF 3" WIDE ALL AROUND THE 5.4. MANHOLE RISERS, ALSO REFER TO STANDARD DETAIL WW-2 FOR ADDITIONAL REQUIREMENTS.

#### 6. PERMITS

5.3.

- 6.1. OWNER IS RESPONSIBLE FOR WETLAND/NATION WIDE PERMIT, ESQCP, APPROVAL FROM CDPHE, AND OBTAINING EASEMENTS
- ALL PERMITS REQUIRED FOR CONSTRUCTION, NOT PROVIDED, SHALL BE OBTAINED BY THE CONTRACTOR. 6.2. CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARATION, SUBMITTAL, FEES, AND ALL OTHER ITEMS ASSOCIATED WITH PERMITTING. THE FOLLOWING ANTICIPATED PERMIT LIST IS NOT ALL INCLUSIVE:
- 6.2.1. NPDES AND DEWATERING PERMITS
- 6.2.2. EPC ROW USE AND CONSTRUCTION PERMITS FLOODPLAIN DEVELOPMENT PERMIT 6.2.3.

#### 7. TRAFFIC CONTROL

- 7.1. CONTRACTOR SHALL BE RESPONSIBLE FOR TRAFFIC CONTROL PLAN, COORDINATION WITH ALL IMPACTED PARTIES (CDOT, EPC, ADJACENT LANDOWNERS, ETC) MODIFICATIONS, AND MAINTENANCE. MAINTAIN ONE LANE OF TRAFFIC AT ALL TIMES, WHERE POSSIBLE.
- 7.2. CONTRACTOR SHALL CONTACT EPC 2 WEEKS BEFORE CONSTRUCTION BEGINS TO ALLOW PUBLIC NOTIFICATION OF ROAD CLOSURES, IF APPLICABLE. CONTRACTOR SHALL COORDINATE CLOSURE DURATION AND PROCESS WITH ALL ENTITIES INVOLVED/IMPACTED. 7.3. CONTRACTOR SHALL COORDINATE MAILBOXES/DELIVERIES WITH THE LOCAL DELIVERIES SERVICES DURING
- CONSTRICTION ACTIVITIES DISTURBANCE OF MAILBOXES AND ROAD ACCESSES.

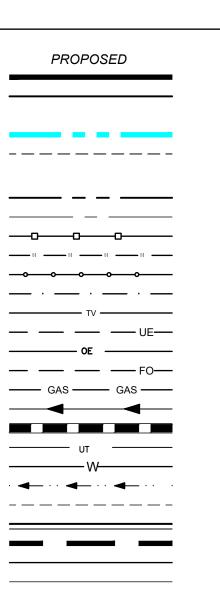
#### 8. AS-BUILTS

8.1. CONTRACTOR SHALL PROVIDE A THIRD PARTY INSPECTOR TO MAP IN POINTMAN THE ALIGNMENT AND DEPTH OF THE PIPE INSTALLED ACROSS THE ENTIRE WIDTH OF THE RIGHT-OF- WAY. 8.2. CONTRACTOR SHALL KEEP RECORD OF CHANGES TO DESIGN AND PROVIDE AS-BUILT DRAWING SET/CAD DRAWINGS TO OWNER.

### LEGEND

MATCH LINE PHASE LINE SECTION LINE PROPERTY LINE EASEMENT LINE ASSUMED EASEMENT RIGHT OF WAY CENTERLINE CHAIN LINK FENCE WOODEN FENCE ROD IRON FENCE GUARDRAIL CABLE TV U.G. ELECTRIC OVERHEAD ELECTRIC FIBER OPTIC GAS MAIN SANITARY SEWER STORM DRAIN TELEPHONE WATER MAIN SWALE TRAIL CURB & GUTTER DRAINAGE BASIN INDEX CONTOUR INTER. CONTOUR 100-YR FLOODPLAIN FLOODWAY

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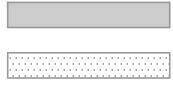
100 YR FLOOD

PENDING 100 YR FLOOD WETLANDS

DRAWN BY: <u>ELC</u>

APPROVED: <u>GP</u>

CAD DATE: <u>9/11/2024</u>



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STORM SEWER

STORM INLET FLARED END SECTION RIPRAP

SANITARY SEWER CLEAN OUT MANHOLE

#### WATER

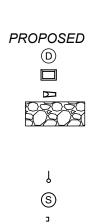
PLUG

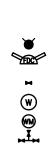
FIRE HYDRANT FIRE DEPT. CONNECTION GATE VALVE MANHOLE METER TEE REDUCER

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## SIGN





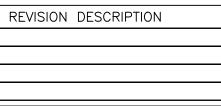
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D.R. HORTON - GRANDVIEW RESERVE ON-SITE SANITARY SEWER DESIGN & PERMITTING SERVICES EL PASO COUNTY PEYTON, CO

CIVIL	SHEET
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LEGEND	

### **PROJECT COORDINATE NOTES:**

THE PROJECT COORDINATES FOR GRANDVIEW WERE ESTABLISHED BY AN ENGINEERING AND SURVEYING CONSULTANT PRIOR TO EDWARD-JAMES SURVEYING'S (EJSI) INVOLVEMENT IN THE PROJECT. IN LATE 2005, EJSI WAS PROVIDED WITH PROJECT COORDINATES FOR SEVERAL SECTION CORNERS THROUGHOUT THE PROJECT AREA. EJSI CALIBRATED TO THE PROJECT COORDINATE SYSTEM AND BEGAN WORKING ON SEVERAL PROJECTS IN THE AREA. RECENTLY, IT HAS BEEN REQUESTED THAT A CORRELATION BETWEEN THE PROJECT COORDINATES AND STATE PLANE CENTRAL BE ESTABLISHED. IN ORDER TO ACCOMPLISH THIS, EJSI SURVEYED THE LOCATION OF TWO NGS MONUMENTS (E24 AND F24) USING THE PROJECT CALIBRATION. BELOW ARE THE STEPS REQUIRED TO CONVERT PROJECT COORDINATE TO STATE PLANE CENTRAL COORDINATES.

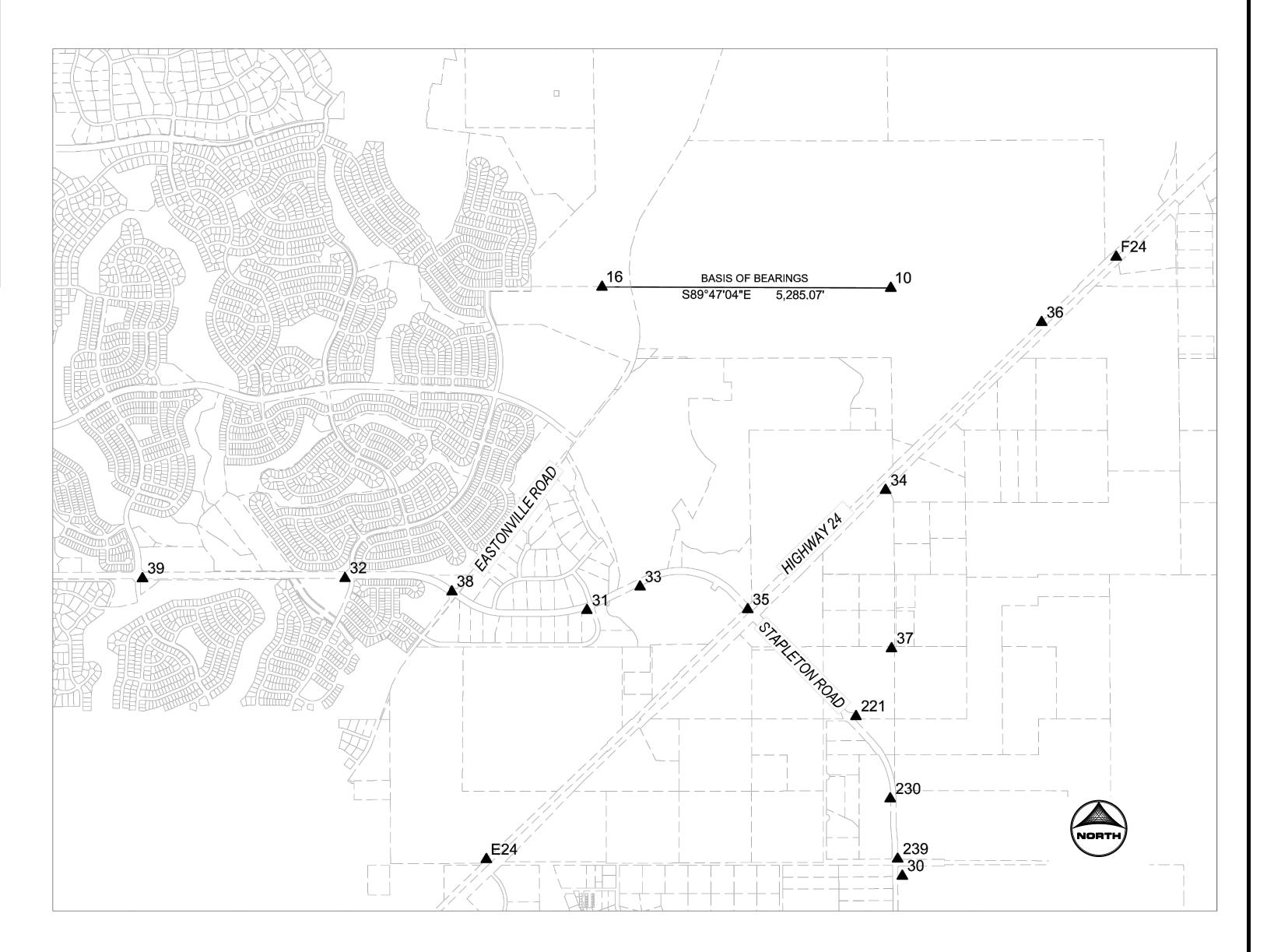
TO GET FROM STATE PLANE COORDINATES TO PROJECT COORDINATES, COMPLETE THE FOLLOWING STEPS:

- 1. SCALE THE STATE PLANE COORDINATES BY 1.0003921722 USING THE STATE PLANE COORDINATE FOR E24 AS THE POINT OF ORIGIN.
- 2. TRANSLATE THE SCALED COORDINATE FROM THE STATE PLANE COORDINATE FOR E24 TO THE PROJECT COORDINATE FOR E24.
- 3. ROTATE THE SCALED AND TRANSLATED COORDINATE HOLDING THE PROJECT COORDINATE FOR E24 AND ROTATING CLOCKWISE BY 0°00'26".

		ANE CENTRAL DINATES		W PROJECT DINATES	NAVD 88			
POINT NO.	NORTHING	EASTING	NORTHING	EASTING	ELEVATION	DESCRIPTION	LATITUDE	LONGITUDE
E 24	1409946.25	3261914.04	1410031.47	3262112.16	6,902.18	NGS E 24 (PID JK0239) - 3-1/4" BRASS DISK IN CONCRETE MONUMENT	N38°57'19.11389"	W104°34'44.20466'
F 24	1420961.49	3273427.68	1421049.58	3273631.70	6,866.33	NGS F 24 (PID JK0240) - 3-1/4" BRASS DISK IN CONCRETE MONUMENT	N38°59'06.81100"	W104°32'16.97772'
10	1420391.37	3269307.86	1420479.76	3269510.19	6,920.40	NORTHEAST CORNER SECTION 28 (3-1/4" AL CAP "PS INC LS 30087 1996")		
16	1420410.59	3264024.90	1420499.65	3264225.16	7,011.44	NORTHWEST CORNER SECTION 28 (3-1/4" AL CAP "PS INC LS 30087 1996")		
30	1409644.75	3269516.52	1409728.89	3269717.58	6,783.61	CP 30 NO. 5 REBAR		
31	1414500.64	3263750.88	1414587.41	3263950.29	6,926.49	CP 31 NO. 5 REBAR		
32	1415086.52	3259329.87	1415174.09	3259527.63	7,012.83	CP 32 "X" ON INLET		
33	1414929.81	3264719.53	1415016.64	3264919.38	6,925.37	CP 33 NO. 5 REBAR		
34	1416695.18	3269211.50	1416782.13	3269413.33	6,873.73	CP 34 NO. 5 REBAR		
35	1414515.45	3266686.82	1414601.86	3266887.39	6,886.64	CP 35 "X" ON NE CORNER OF INLET		
36	1419764.51	3272060.60	1419852.30	3272263.94	6,863.61	CP 36 NO. 5 REBAR		
37	1413802.62	3269320.13	1413888.42	3269521.64	6,830.00	CP 37 NO. 5 REBAR		
38	1414841.57	3261282.31	1414928.79	3261480.80	6,971.11	CP 38 "X" ON SOUTHWEST CORNER INLET		
39	1415081.32	3255628.10	1415169.35	3255824.40	7,059.26	CP 39 "X" ON TBC		
221	1412563.13	3268665.62	1412648.52	3268866.71	6,825.54	NO. 4 REBAR AND RED PLASTIC CAP "EPC PSD PLS22573"		
230	1411056.50	3269297.63	1411141.23	3269498.78	6,801.71	NAIL AND 1-1/2" WASHER IN CONCRETE "EPC PSD PLS 22573"		
239	1409955.40	3269433.32	1410039.67	3269634.39	6,788.26	NO. 4 REBAR AND RED PLASTIC CAP "EPC PSD PLS 22573"		

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# GRANDVIEW PROJECT COORDINATES

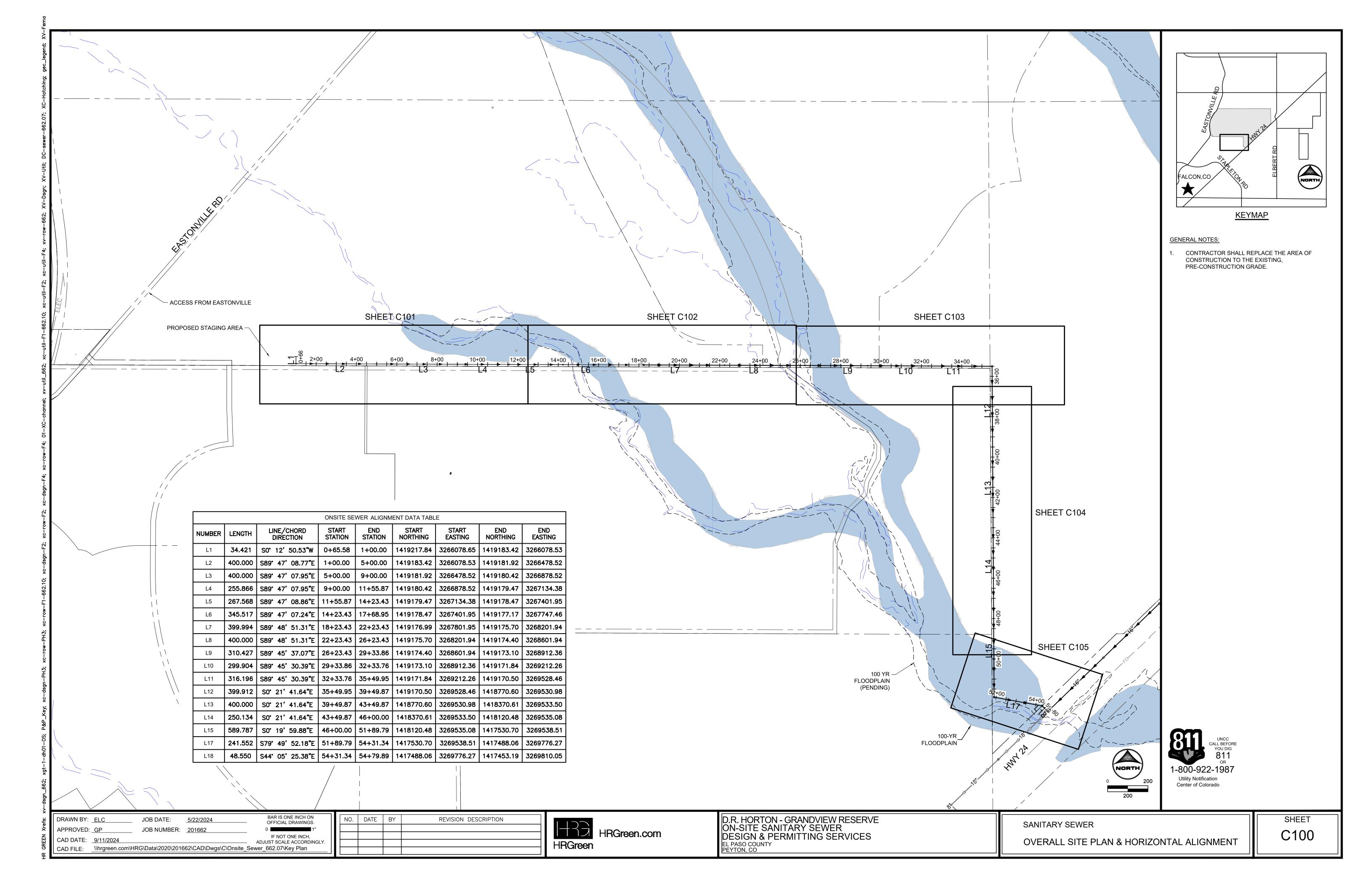


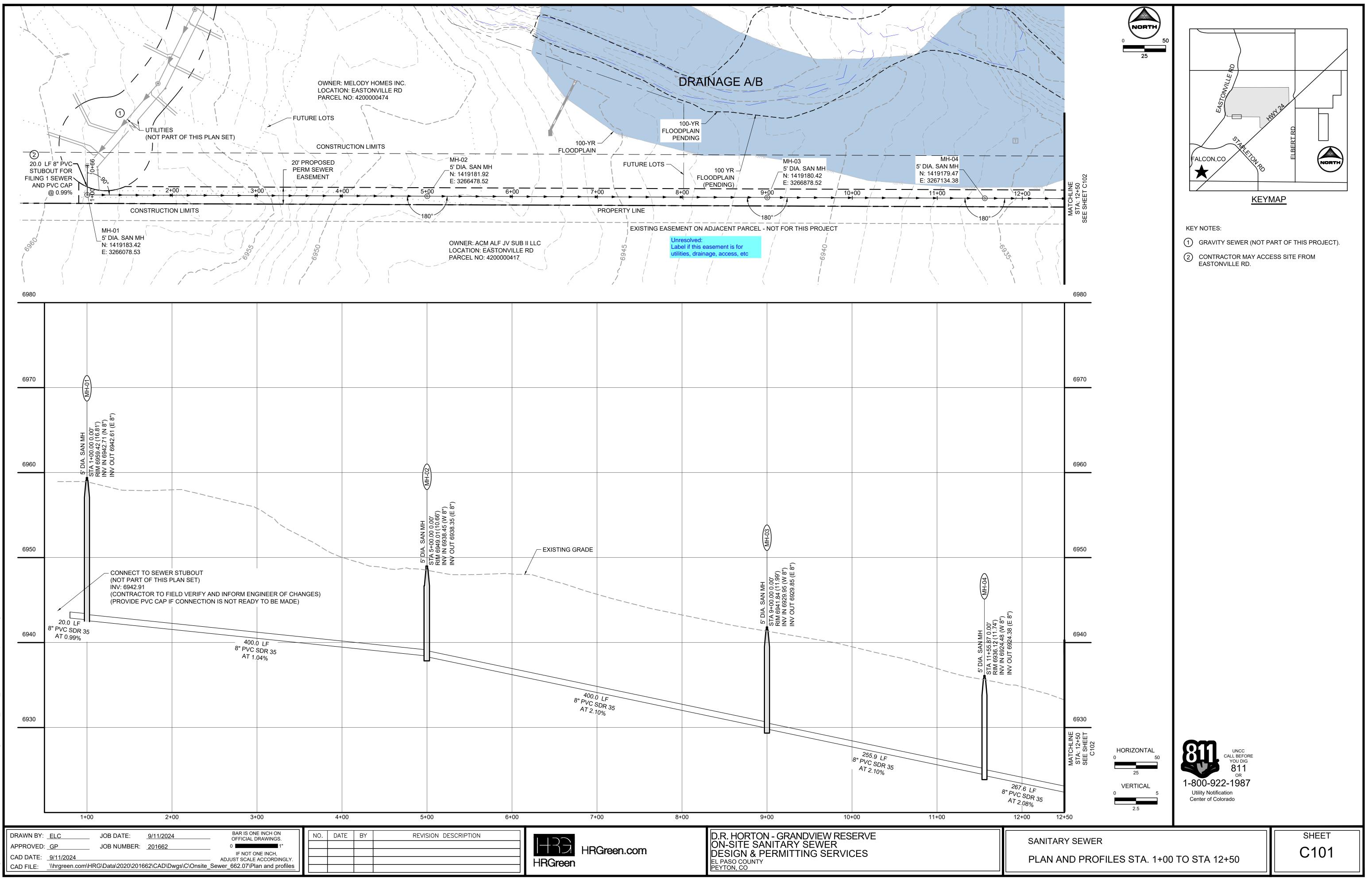


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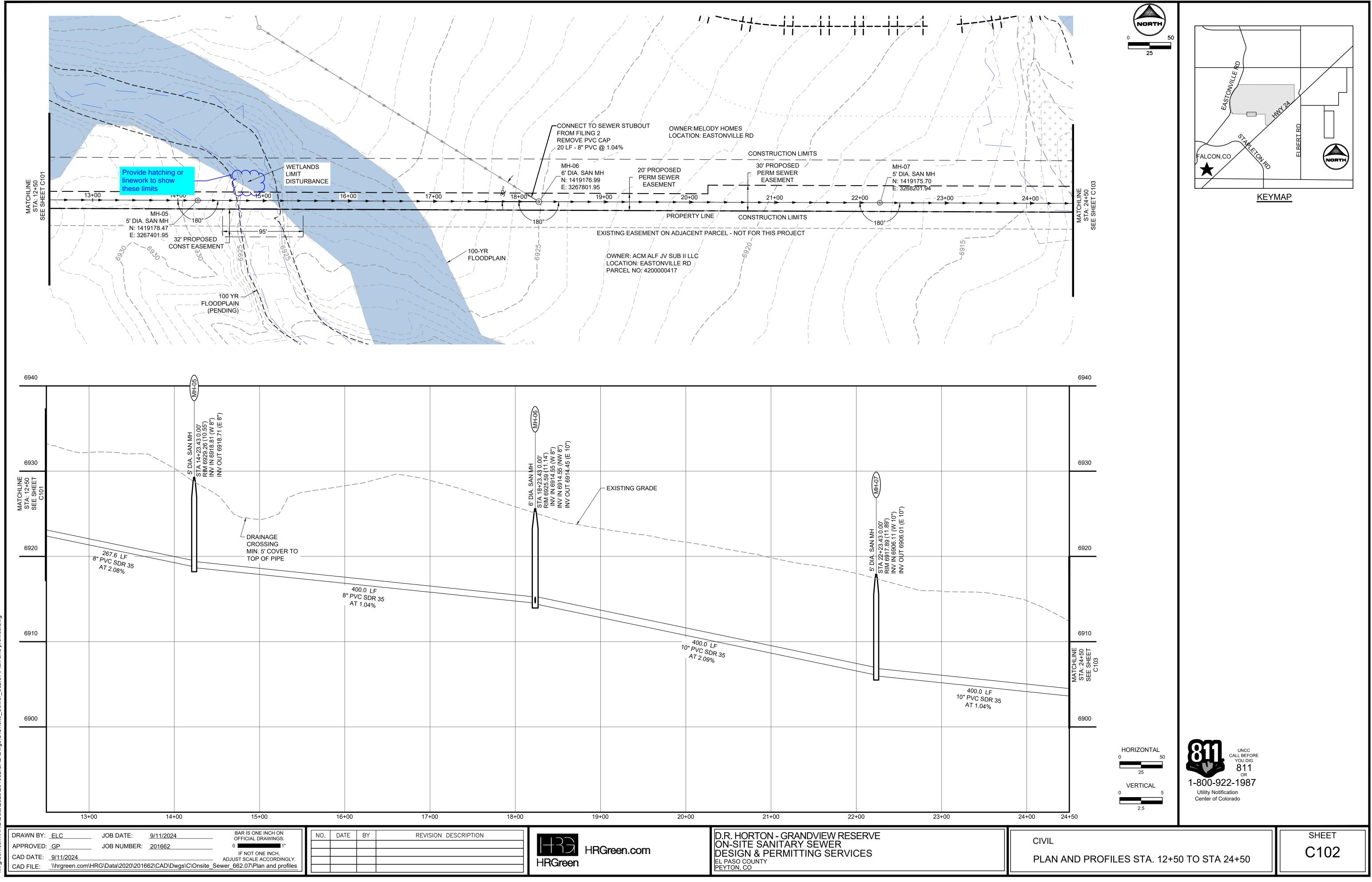
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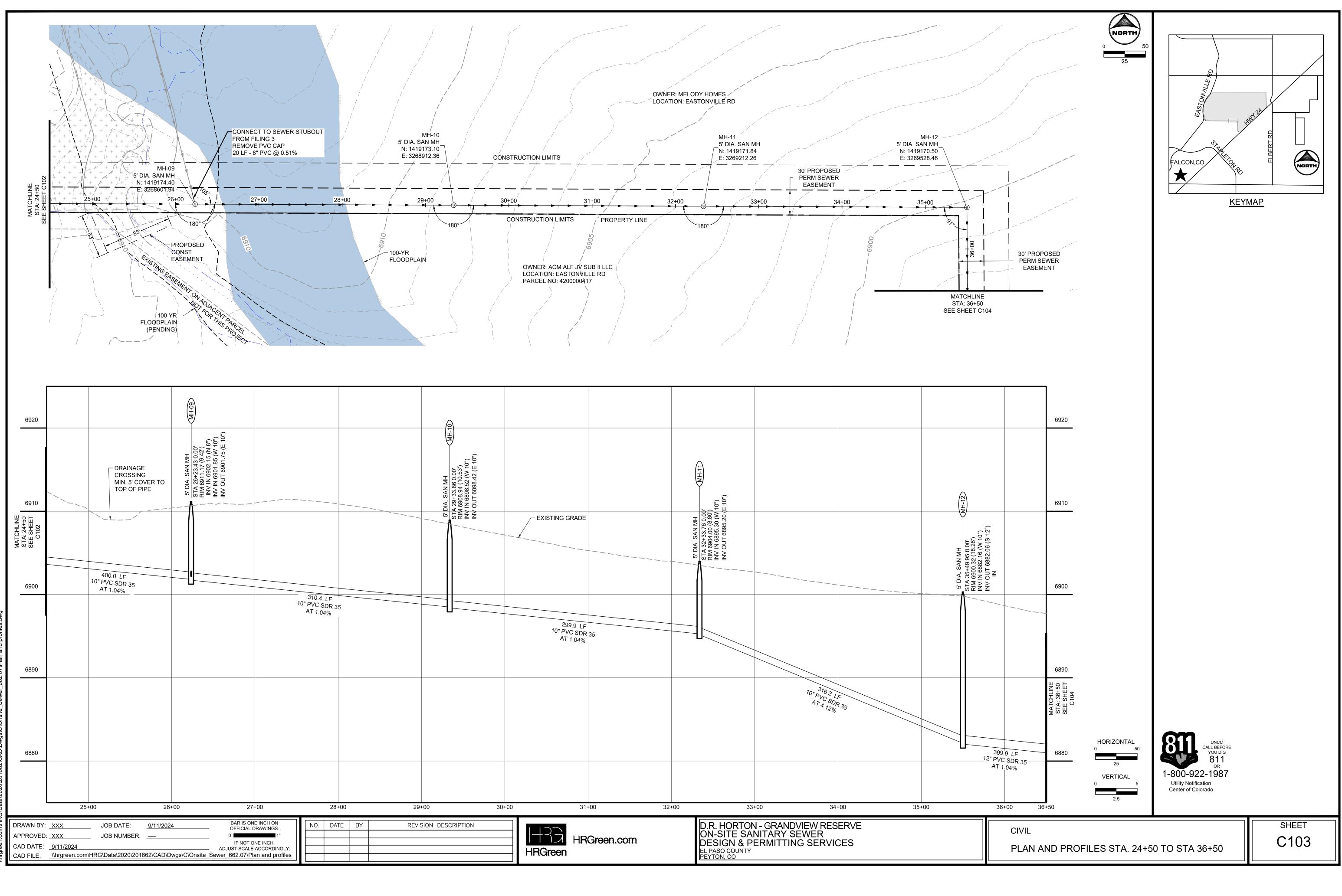




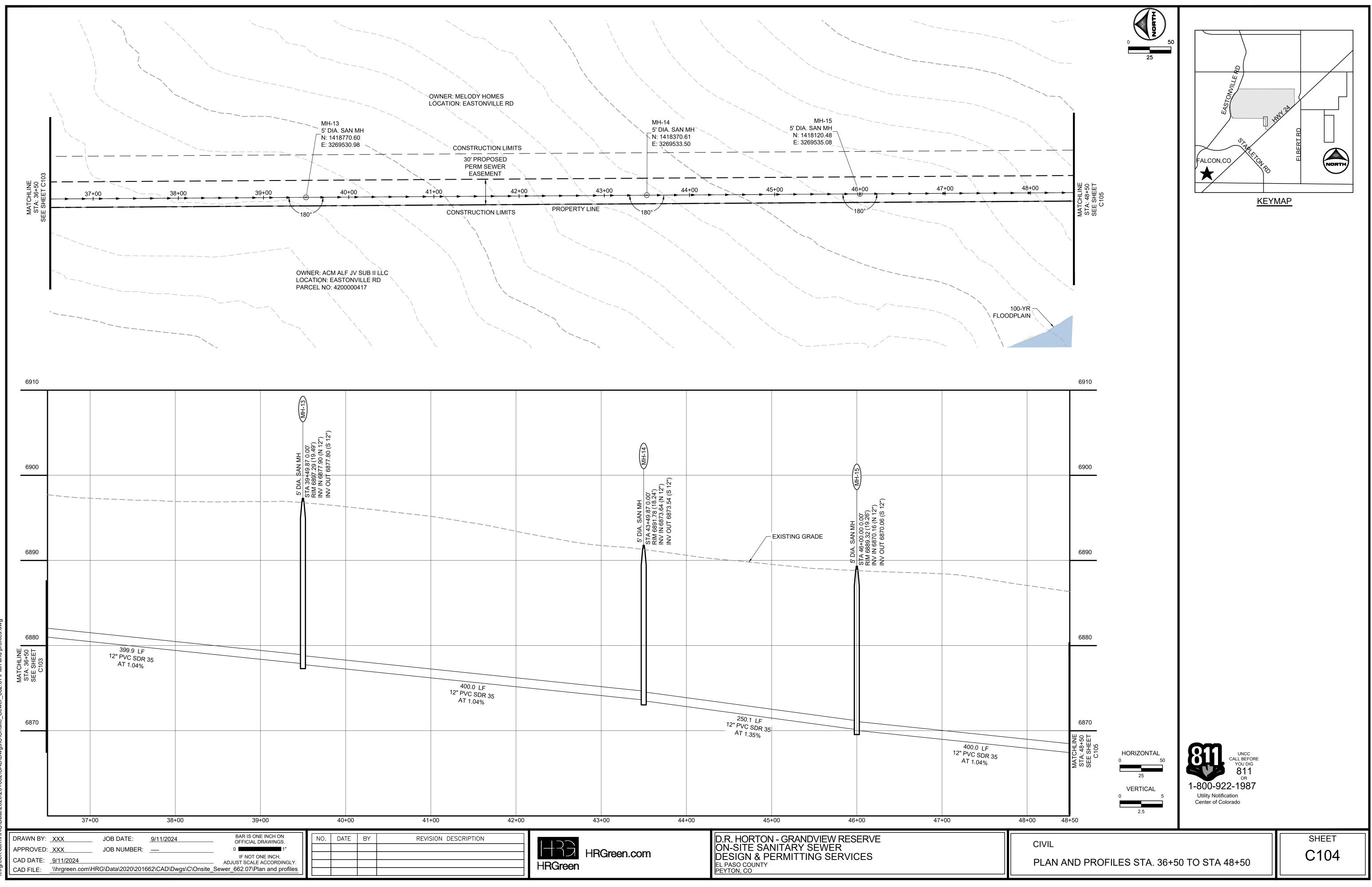
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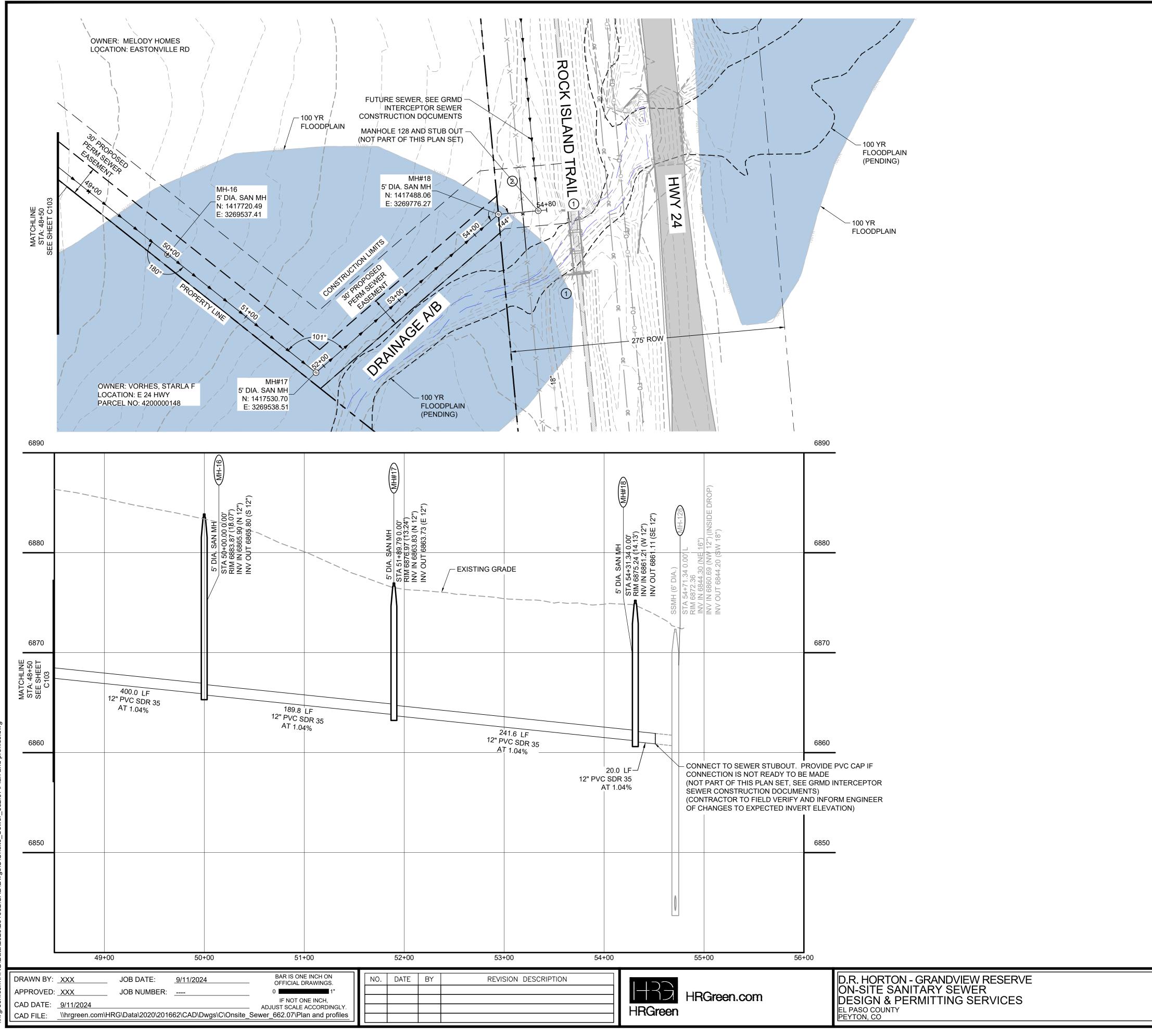
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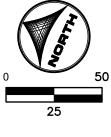


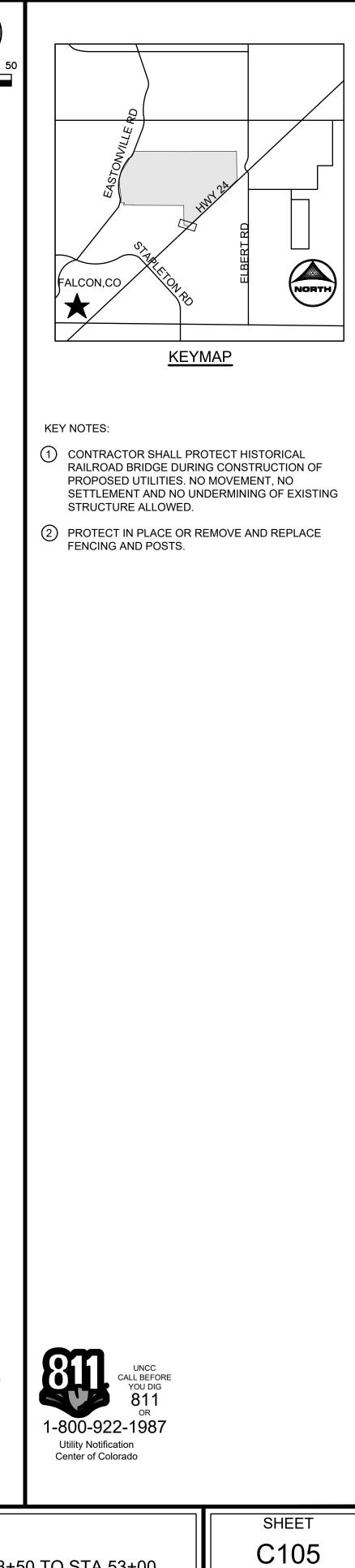
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#### STANDARD NOTES FOR EL PASO COUNTY GRADING AND EROSION CONTROL SHEETS: PERMANENT SEED SPECS 16 CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL WASTES FROM THE

- STORMWATER DISCHARGES FROM CONSTRUCTION SITES SHALL NOT CAUSE OR THREATEN TO CAUSE POLLUTION, CONTAMINATION, OR DEGRADATION OF STATE WATERS. ALL WORK AND EARTH DISTURBANCE SHALL BE DONE IN A MANNER THAT MINIMIZES POLLUTION OF ANY ON-SITE OR OFF-SITE WATERS, INCLUDING WETLANDS.
- NOTWITHSTANDING ANYTHING DEPICTED IN THESE PLANS IN WORDS OR GRAPHIC 2 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, THE ENGINEERING CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS FROM REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING.
- A SEPARATE STORMWATER MANAGEMENT PLAN (SMWP) FOR THIS PROJECT SHALL BE COMPLETED AND AN EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP) ISSUED PRIOR TO COMMENCING CONSTRUCTION. MANAGEMENT OF THE SWMP DURING CONSTRUCTION IS THE RESPONSIBILITY OF THE DESIGNATED QUALIFIED STORMWATER MANAGER OR CERTIFIED EROSION CONTROL INSPECTOR. THE SWMP SHALL BE LOCATED ON SITE AT ALL TIMES DURING CONSTRUCTION AND SHALL BE KEPT UP TO DATE WITH WORK PROGRESS AND CHANGES IN THE FIELD.
- 4. ONCE THE ESQCP IS APPROVED AND A "NOTICE TO PROCEED" HAS BEEN ISSUED, THE CONTRACTOR MAY INSTALL THE INITIAL STAGE EROSION AND SEDIMENT CONTROL MEASURES AS INDICATED ON THE APPROVED GEC. A PRECONSTRUCTION MEETING BETWEEN THE CONTRACTOR, ENGINEER, AND EL PASO COUNTY WILL BE HELD PRIOR TO ANY CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE APPLICANT TO COORDINATE THE MEETING TIME AND PLACE WITH COUNTY STAFF.
- 5. CONTROL MEASURES MUST BE INSTALLED PRIOR TO COMMENCEMENT OF ACTIVITIES THAT COULD CONTRIBUTE POLLUTANTS TO STORMWATER, CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, AND DISTURBED LAND AREAS SHALL BE INSTALLED IMMEDIATELY UPON COMPLETION OF THE DISTURBANCE.
- 6. ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE MAINTAINED AND REMAIN IN EFFECTIVE OPERATING CONDITION UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED AND FINAL STABILIZATION IS ESTABLISHED. ALL PERSONS ENGAGED IN LAND DISTURBANCE ACTIVITIES SHALL ASSESS THE ADEQUACY OF CONTROL MEASURES AT THE SITE AND IDENTIFY IF CHANGES TO THOSE CONTROL MEASURES ARE NEEDED TO ENSURE THE CONTINUED EFFECTIVE PERFORMANCE OF THE CONTROL MEASURES. ALL CHANGES TO TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES MUST BE INCORPORATED INTO THE STORMWATER MANAGEMENT PLAN.
- 7. TEMPORARY STABILIZATION SHALL BE IMPLEMENTED ON DISTURBED AREAS AND STOCKPILES WHERE GROUND DISTURBING CONSTRUCTION ACTIVITY HAS PERMANENTLY CEASED OR TEMPORARILY CEASED FOR LONGER THAN 14 DAYS.
- 8. FINAL STABILIZATION MUST BE IMPLEMENTED AT ALL APPLICABLE CONSTRUCTION SITES. FINAL STABILIZATION IS ACHIEVED WHEN ALL GROUND DISTURBING ACTIVITIES ARE COMPLETE AND ALL DISTURBED AREAS EITHER HAVE A UNIFORM VEGETATIVE COVER WITH INDIVIDUAL PLANT DENSITY OF 70 PERCENT OF PRE-DISTURBANCE LEVELS ESTABLISHED OR EQUIVALENT PERMANENT ALTERNATIVE STABILIZATION METHOD IS IMPLEMENTED. ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE REMOVED UPON FINAL STABILIZATION AND BEFORE PERMIT CLOSURE.
- ALL PERMANENT STORMWATER MANAGEMENT FACILITIES SHALL BE INSTALLED AS DESIGNED IN THE APPROVED PLANS, ANY PROPOSED CHANGES THAT EFFECT THE DESIGN OR FUNCTION OF PERMANENT STORMWATER MANAGEMENT STRUCTURES MUST BE APPROVED BY THE ECM ADMINISTRATOR PRIOR TO IMPLEMENTATION.
- 10. EARTH DISTURBANCES SHALL BE CONDUCTED IN SUCH A MANNER SO AS TO EFFECTIVELY MINIMIZE ACCELERATED SOIL EROSION AND RESULTING SEDIMENTATION. ALL DISTURBANCES SHALL BE DESIGNED, CONSTRUCTED, AND COMPLETED SO THAT THE EXPOSED AREA OF ANY DISTURBED LAND SHALL BE LIMITED TO THE SHORTEST PRACTICAL PERIOD OF TIME. PRE-EXISTING VEGETATION SHALL BE PROTECTED AND MAINTAINED WITHIN 50 HORIZONTAL FEET OF A WATERS OF THE STATE UNLESS SHOWN TO BE INFEASIBLE AND SPECIFICALLY REQUESTED AND APPROVED.
- 11. COMPACTION OF SOIL MUST BE PREVENTED IN AREAS DESIGNATED FOR INFILTRATION CONTROL MEASURES OR WHERE FINAL STABILIZATION WILL BE ACHIEVED BY VEGETATIVE COVER. AREAS DESIGNATED FOR INFILTRATION CONTROL MEASURES SHALL ALSO BE PROTECTED FROM SEDIMENTATION DURING CONSTRUCTION UNTIL FINAL STABILIZATION IS ACHIEVED. IF COMPACTION PREVENTION IS NOT FEASIBLE DUE TO SITE CONSTRAINTS, ALL AREAS DESIGNATED FOR INFILTRATION AND VEGETATION CONTROL MEASURES MUST BE LOOSENED PRIOR TO INSTALLATION OF THE CONTROL MEASURE(S).
- 12. ANY TEMPORARY OR PERMANENT FACILITY DESIGNED AND CONSTRUCTED FOR THE CONVEYANCE OF STORMWATER AROUND, THROUGH, OR FROM THE EARTH DISTURBANCE AREA SHALL BE A STABILIZED CONVEYANCE DESIGNED TO MINIMIZE EROSION AND THE DISCHARGE OF SEDIMENT OFF SITE.
- 13. CONCRETE WASH WATER SHALL BE CONTAINED AND DISPOSED OF IN ACCORDANCE WITH THE SWMP. NO WASH WATER SHALL BE DISCHARGED TO OR ALLOWED TO ENTER STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES. CONCRETE WASHOUTS SHALL NOT BE LOCATED IN AN AREA WHERE SHALLOW GROUNDWATER MAY BE PRESENT, OR WITHIN 50 FEET OF A SURFACE WATER BODY, CREEK OR STREAM.
- 14. DURING DEWATERING OPERATIONS OF UNCONTAMINATED GROUND WATER MAY BE DISCHARGED ON SITE, BUT SHALL NOT LEAVE THE SITE IN THE FORM OF SURFACE RUNOFF UNLESS AN APPROVED STATE DEWATERING PERMIT IS IN PLACE.
- 15. EROSION CONTROL BLANKETING OR OTHER PROTECTIVE COVERING SHALL BE USED ON SLOPES STEEPER THAN 3:1.

- 19. APPURTENANCES AS A RESULT OF SITE DEVELOPMENT.
- 20. ORIGINAL CONTAINERS, WITH ORIGINAL MANUFACTURER'S LABELS.
- 21.
- FACILITIES.
- OR DITCH EXCEPT WITH APPROVED SEDIMENT CONTROL MEASURES.
- OR REGULATIONS SHALL APPLY.
- ACCESS POINTS.

- 28. THE SOILS REPORT FOR THIS SITE HAS BEEN PREPARED BY CONSIDERED A PART OF THESE PLANS.
  - INFORMATION OR APPLICATION MATERIALS CONTACT:

COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT WATER QUALITY CONTROL DIVISION WQCD - PERMITS 4300 CHERRY CREEK DRIVE SOUTH DENVER, CO 80246-1530 ATTN: PERMITS UNIT

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CONSTRUCTION SITE FOR DISPOSAL IN ACCORDANCE WITH LOCAL AND STATE REGULATORY REQUIREMENTS. NO CONSTRUCTION DEBRIS, TREE SLASH, BUILDING MATERIAL WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURIED, DUMPED, OR DISCHARGED AT THE SITE.

17. WASTE MATERIALS SHALL NOT BE TEMPORARILY PLACED OR STORED IN THE STREET, ALLEY, OR OTHER PUBLIC WAY, UNLESS IN ACCORDANCE WITH AN APPROVED TRAFFIC CONTROL PLAN, CONTROL MEASURES MAY BE REQUIRED BY EL PASO COUNTY ENGINEERING IF DEEMED NECESSARY, BASED ON SPECIFIC CONDITIONS AND CIRCUMSTANCES.

18. TRACKING OF SOILS AND CONSTRUCTION DEBRIS OFF-SITE SHALL BE MINIMIZED. MATERIALS TRACKED OFF-SITE SHALL BE CLEANED UP AND PROPERLY DISPOSED OF IMMEDIATELY.

THE OWNER/DEVELOPER SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL CONSTRUCTION DEBRIS, DIRT, TRASH, ROCK, SEDIMENT, SOIL, AND SAND THAT MAY ACCUMULATE IN ROADS, STORM DRAINS AND OTHER DRAINAGE CONVEYANCE SYSTEMS AND STORMWATER

THE QUANTITY OF MATERIALS STORED ON THE PROJECT SITE SHALL BE LIMITED, AS MUCH AS PRACTICAL, TO THAT QUANTITY REQUIRED TO PERFORM THE WORK IN AN ORDERLY SEQUENCE. ALL MATERIALS STORED ON-SITE SHALL BE STORED IN A NEAT, ORDERLY MANNER, IN THEIR

NO CHEMICAL(S) HAVING THE POTENTIAL TO BE RELEASED IN STORMWATER ARE TO BE STORED OR USED ONSITE UNLESS PERMISSION FOR THE USE OF SUCH CHEMICAL(S) IS GRANTED IN WRITING BY THE ECM ADMINISTRATOR. IN GRANTING APPROVAL FOR THE USE OF SUCH CHEMICAL(S), SPECIAL CONDITIONS AND MONITORING MAY BE REQUIRED.

22. BULK STORAGE OF ALLOWED PETROLEUM PRODUCTS OR OTHER ALLOWED LIQUID CHEMICALS IN EXCESS OF 55 GALLONS SHALL REQUIRE ADEQUATE SECONDARY CONTAINMENT PROTECTION TO CONTAIN ALL SPILLS ONSITE AND TO PREVENT ANY SPILLED MATERIALS FROM ENTERING STATE WATERS, ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR OTHER

23. NO PERSON SHALL CAUSE THE IMPEDIMENT OF STORMWATER FLOW IN THE CURB AND GUTTER

24. OWNER/DEVELOPER AND THEIR AGENTS SHALL COMPLY WITH THE "COLORADO WATER QUALITY CONTROL ACT" (TITLE 25, ARTICLE 8, CRS), AND THE "CLEAN WATER ACT" (33 USC 1344), IN ADDITION TO THE REQUIREMENTS OF THE LAND DEVELOPMENT CODE, DCM VOLUME II AND THE ECM APPENDIX I. ALL APPROPRIATE PERMITS MUST BE OBTAINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION (1041, NPDES, FLOODPLAIN, 404, FUGITIVE DUST, ETC.). IN THE EVENT OF CONFLICTS BETWEEN THESE REQUIREMENTS AND OTHER LAWS, RULES, OR REGULATIONS OF OTHER FEDERAL, STATE, LOCAL, OR COUNTY AGENCIES, THE MOST RESTRICTIVE LAWS, RULES,

25. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE ONLY AT APPROVED CONSTRUCTION

26. PRIOR TO CONSTRUCTION THE PERMITTEE SHALL VERIFY THE LOCATION OF EXISTING UTILITIES.

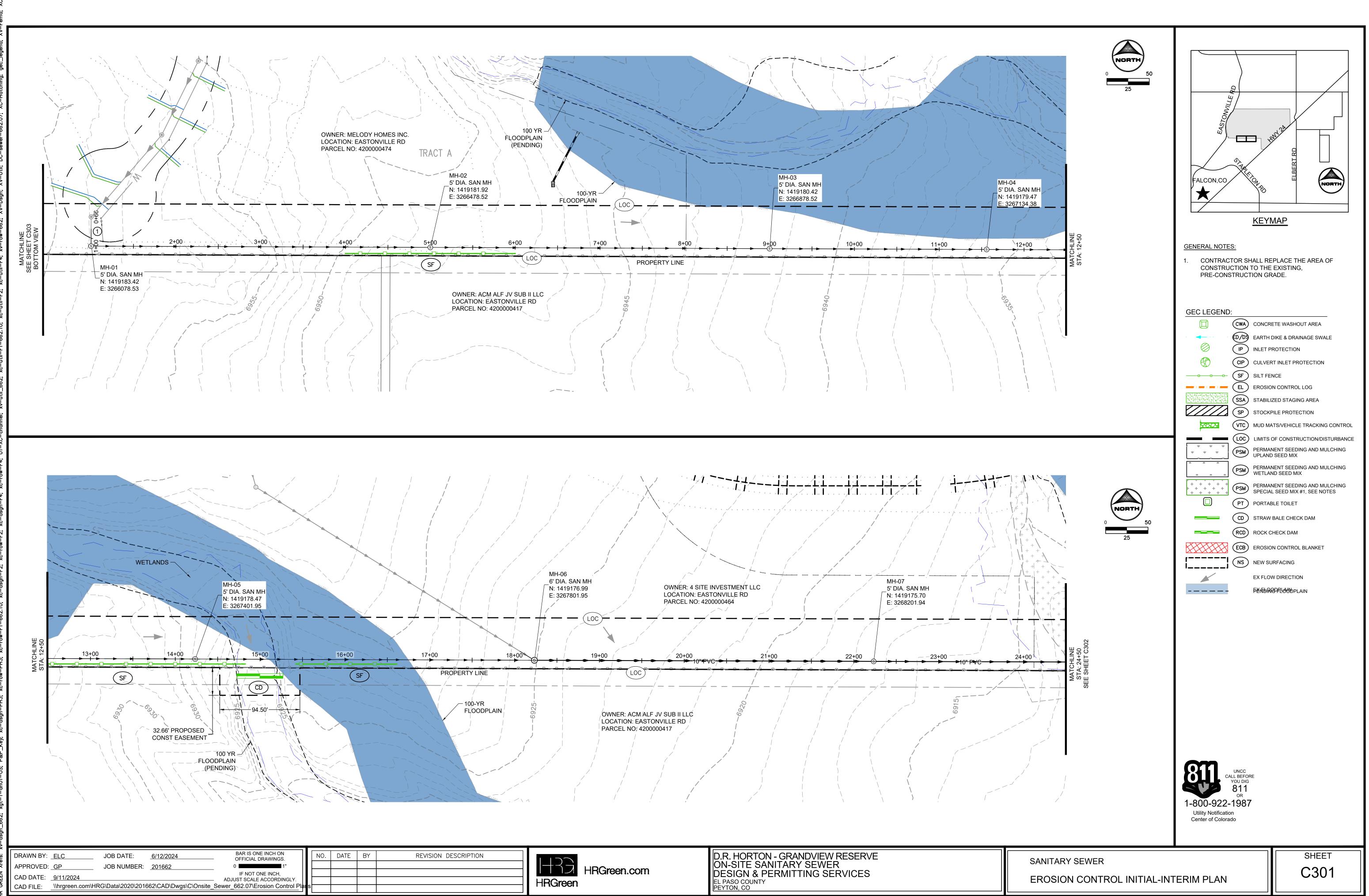
27. A WATER SOURCE SHALL BE AVAILABLE ON SITE DURING EARTHWORK OPERATIONS AND SHALL BE UTILIZED AS REQUIRED TO MINIMIZE DUST FROM EARTHWORK EQUIPMENT AND WIND.

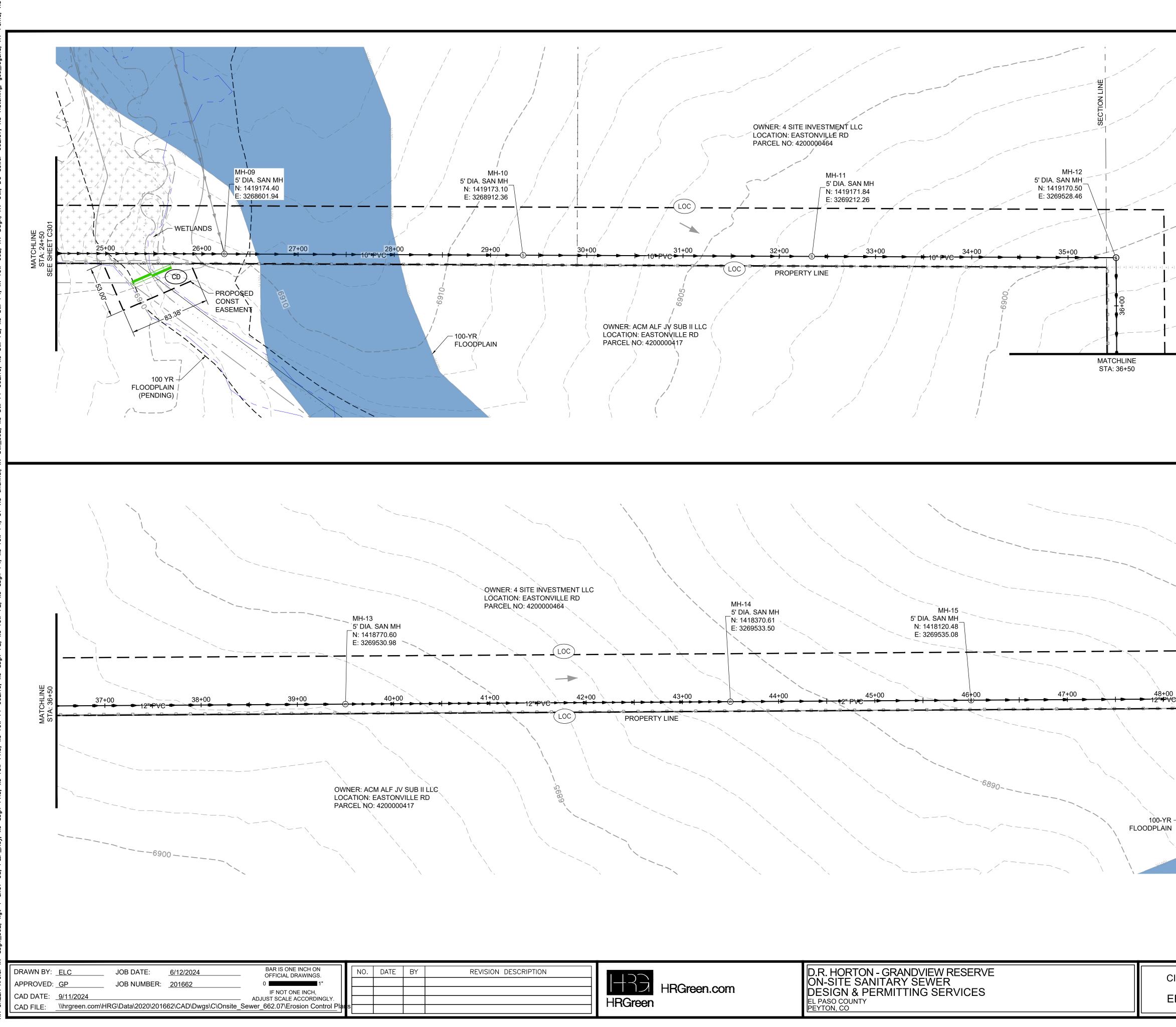
AND SHALL BE

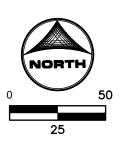
29. AT LEAST TEN (10) DAYS PRIOR TO THE ANTICIPATED START OF CONSTRUCTION, FOR PROJECTS THAT WILL DISTURB ONE (1) ACRE OR MORE, THE OWNER OR OPERATOR OF CONSTRUCTION ACTIVITY SHALL SUBMIT A PERMIT APPLICATION FOR STORMWATER DISCHARGE TO THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, WATER QUALITY DIVISION. THE APPLICATION CONTAINS CERTIFICATION OF COMPLETION OF A STORMWATER MANAGEMENT PLAN (SWMP), OF WHICH THIS GRADING AND EROSION CONTROL PLAN MAY BE A PART. FOR

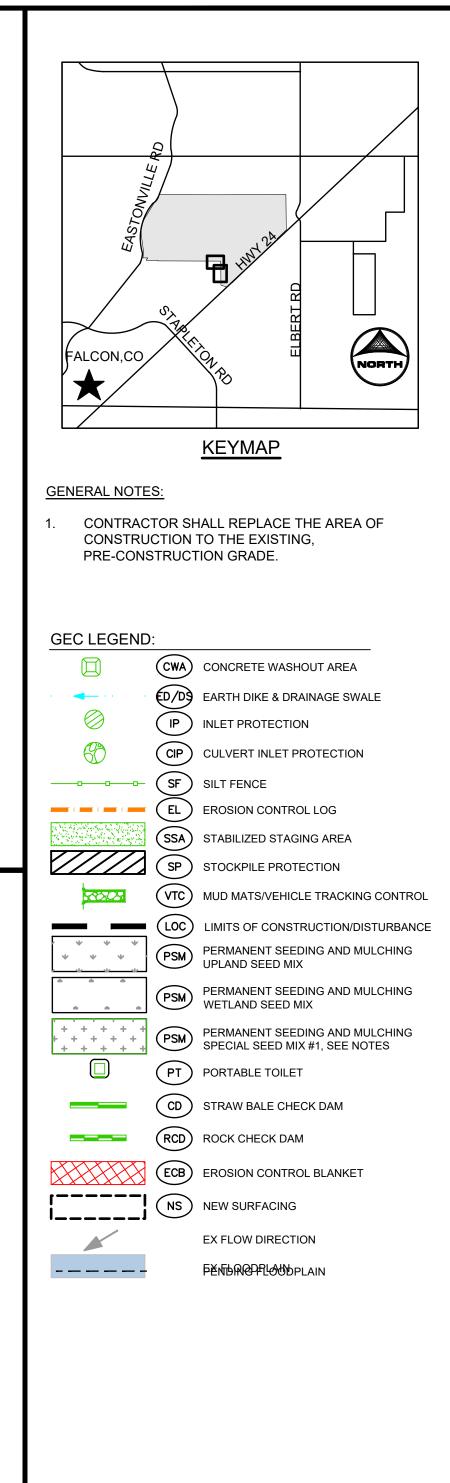
1. SPECIAL SEED MIX #1 - TBD SPECIAL ON PRIVATE LAND - LANDOWNER WILL WATER 2. SEE LEGEND AND EROSION CONTROL DETAILS FOR SEED MIX/TYPE.

CIVIL	
GRADING AND EROSION CONTROL NOTES	









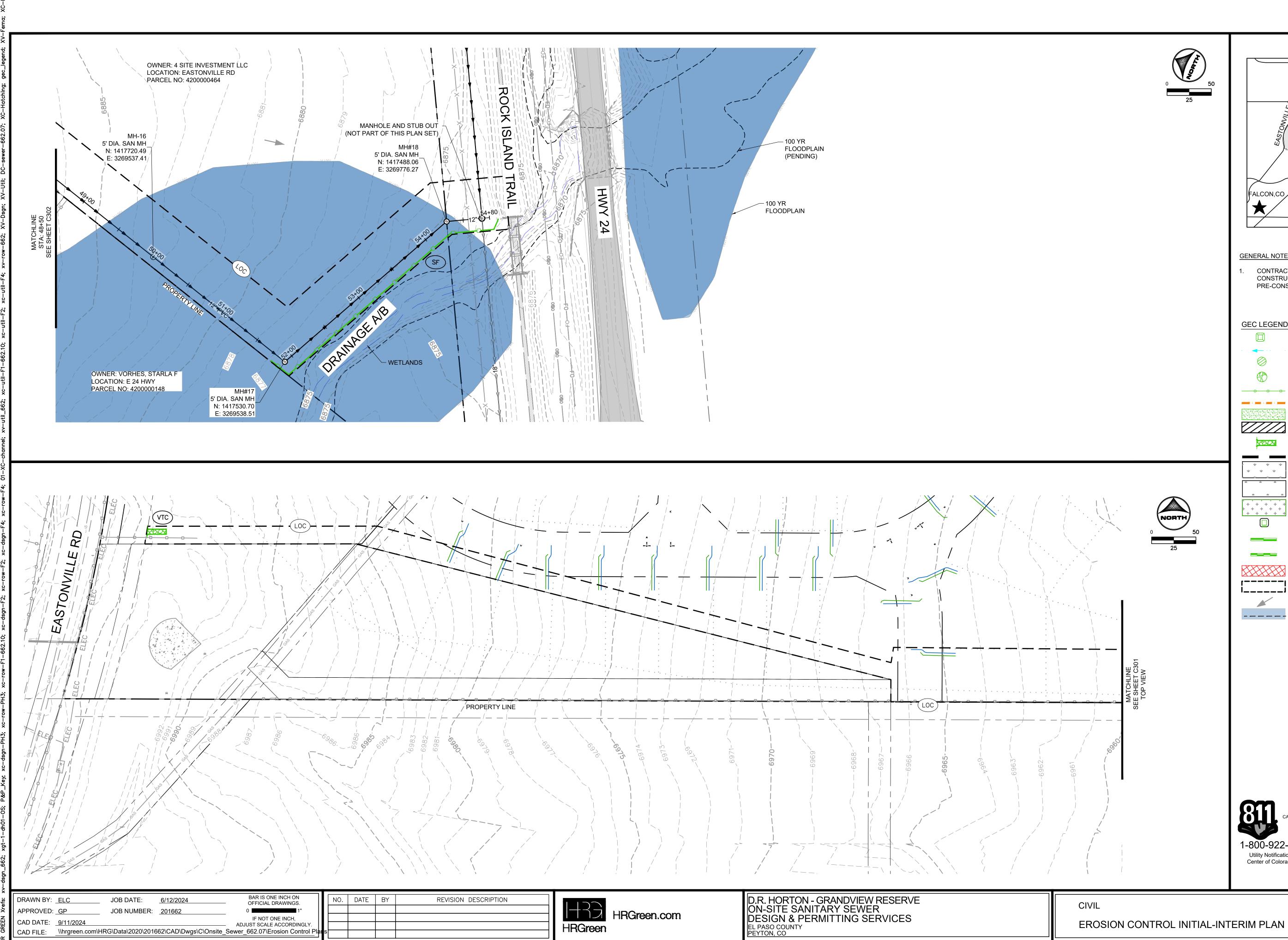


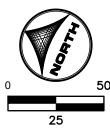
### CIVIL EROSION CONTROL INITIAL-INTERIM PLAN

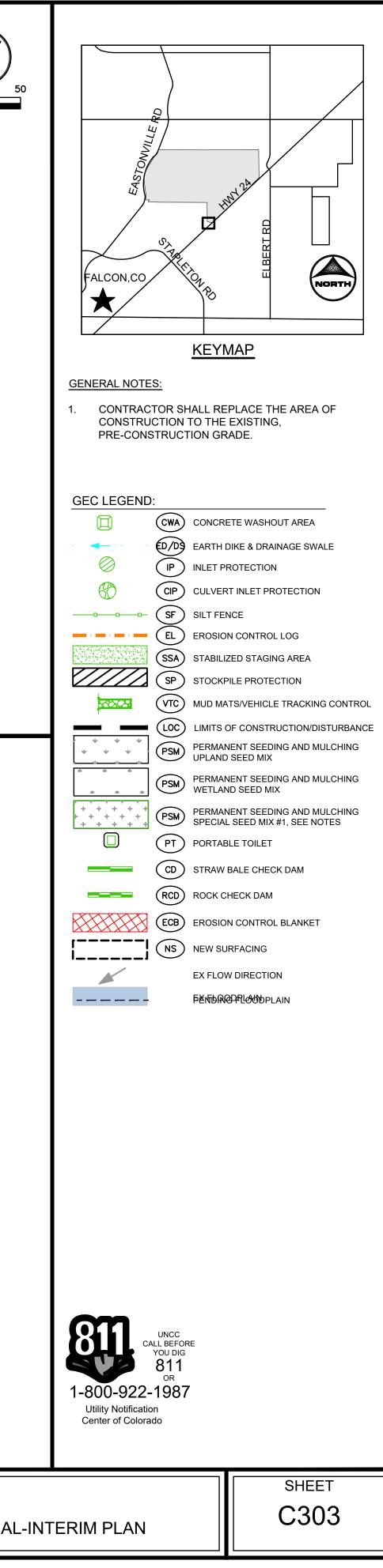
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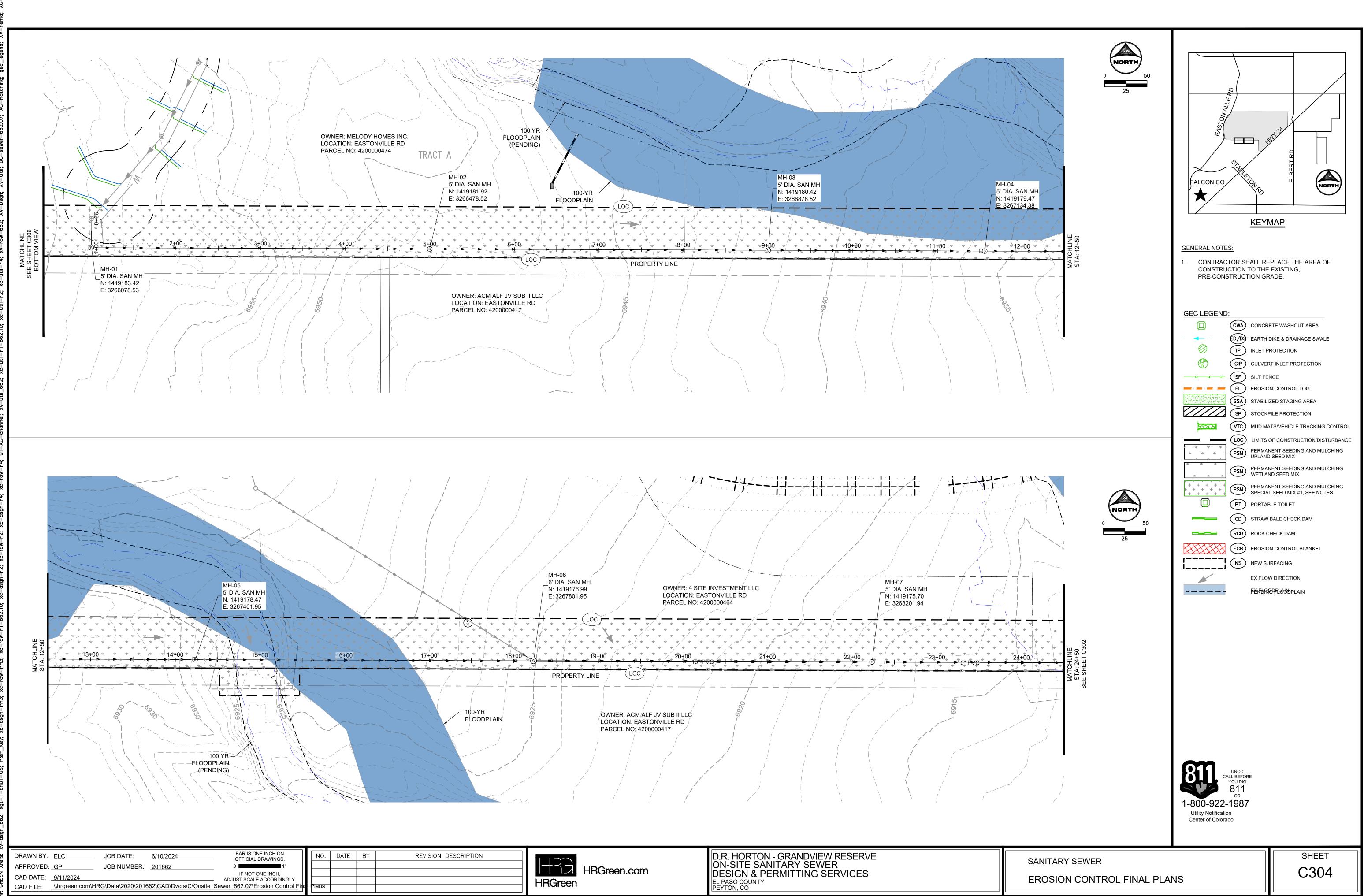
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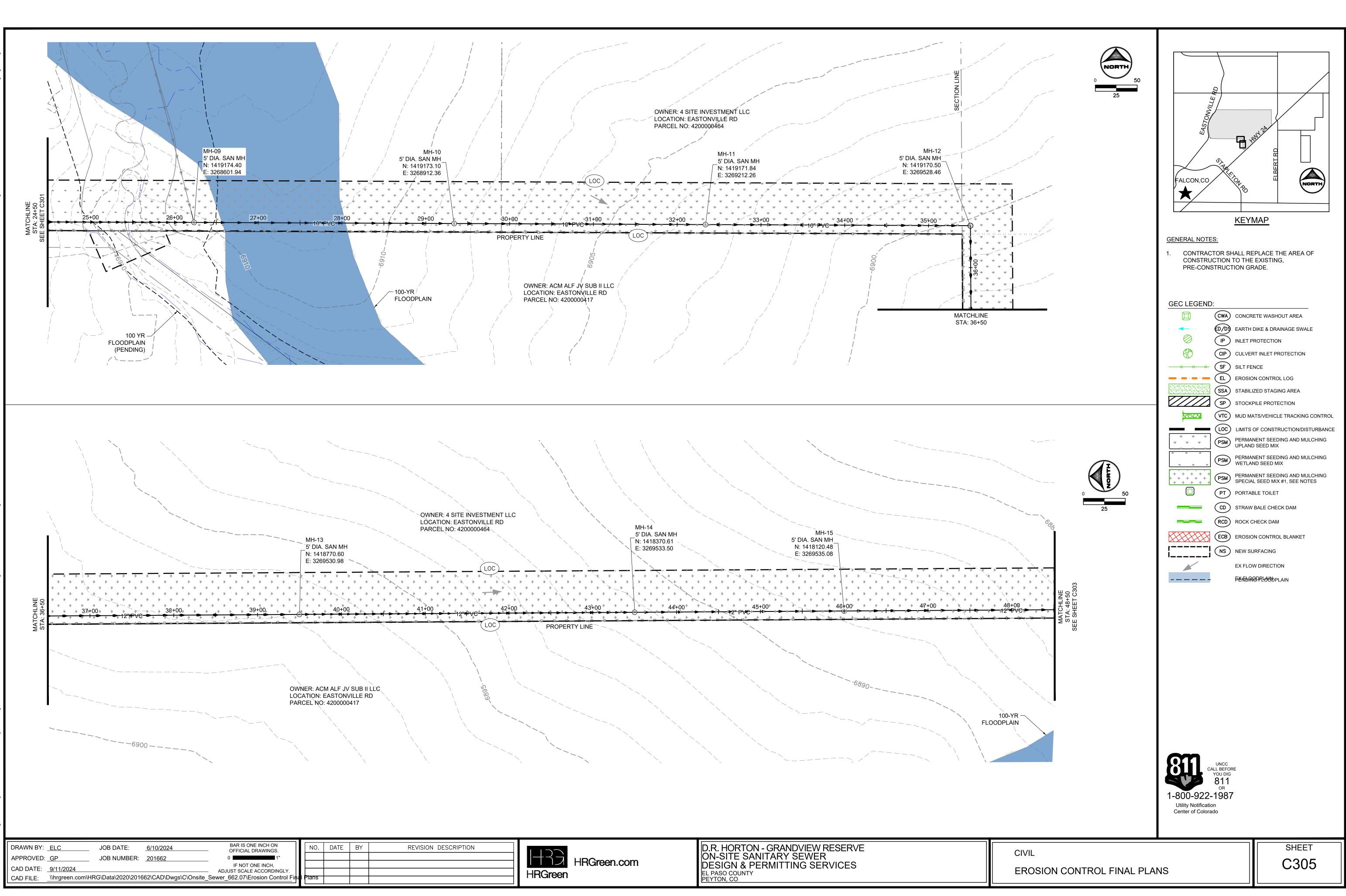
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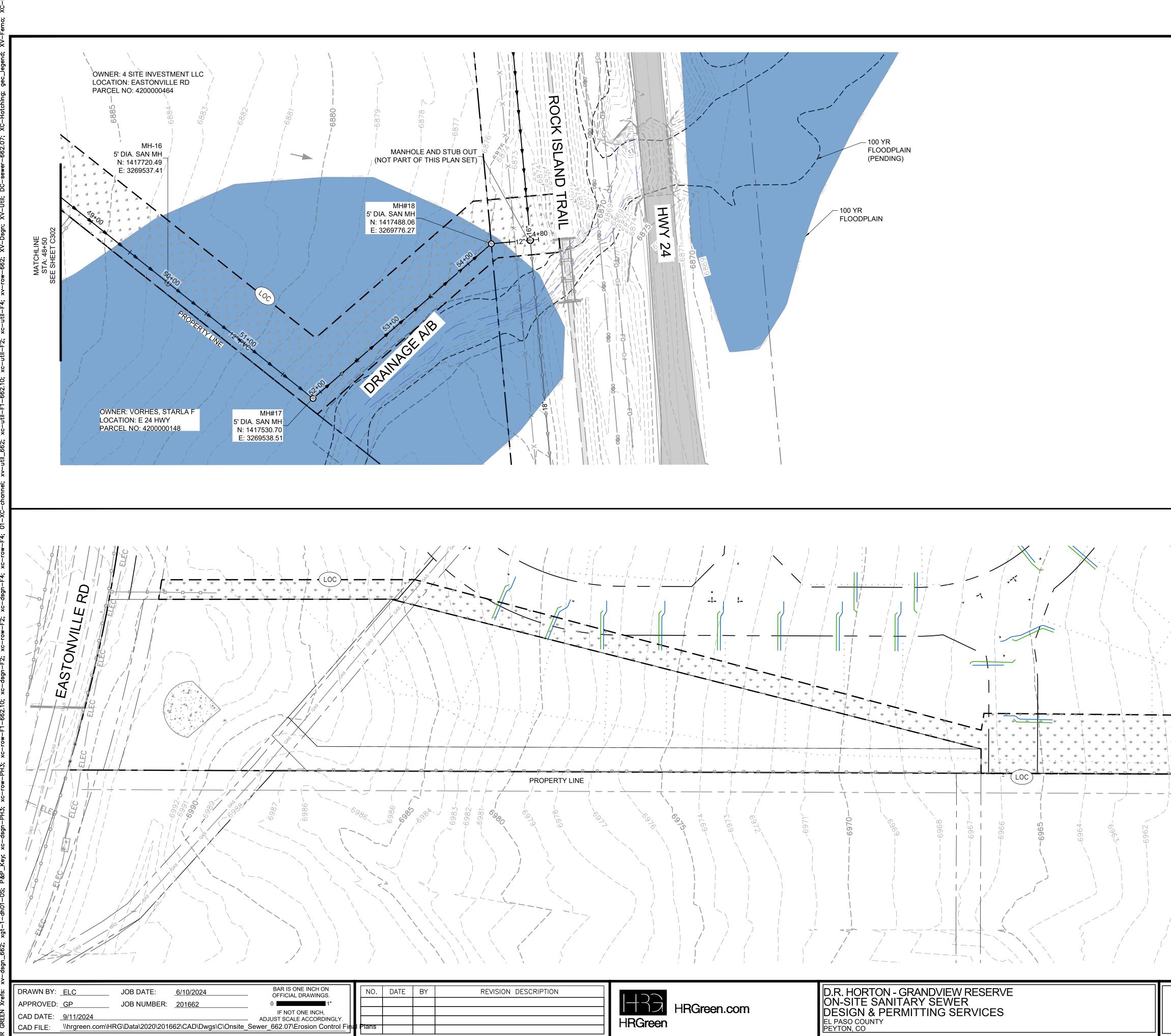


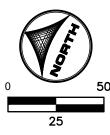


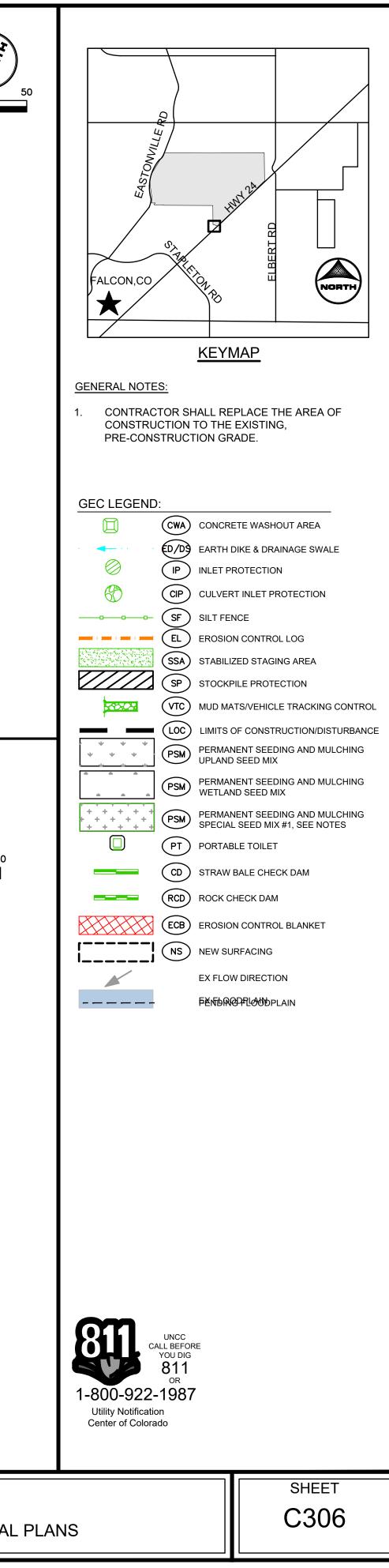






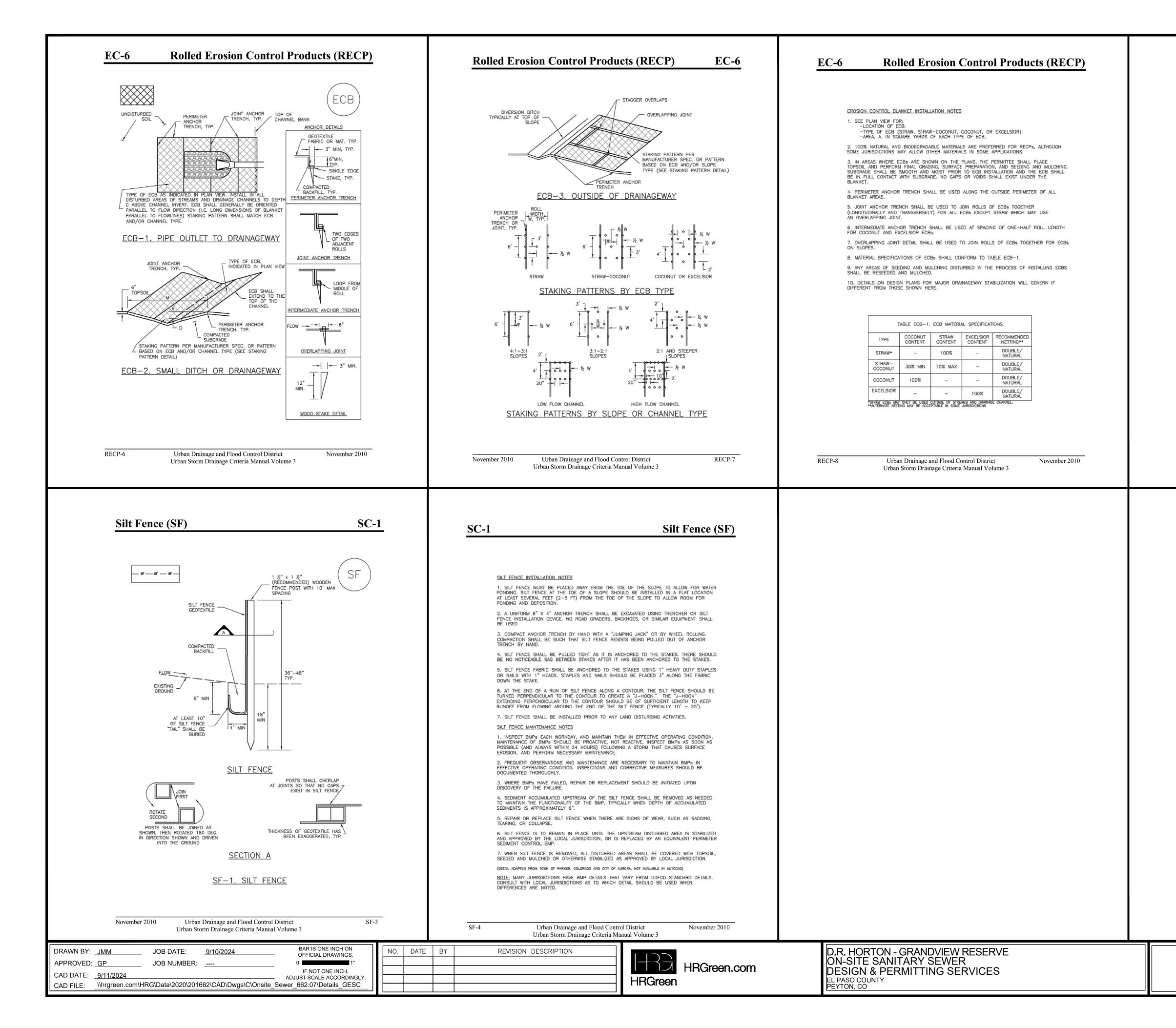






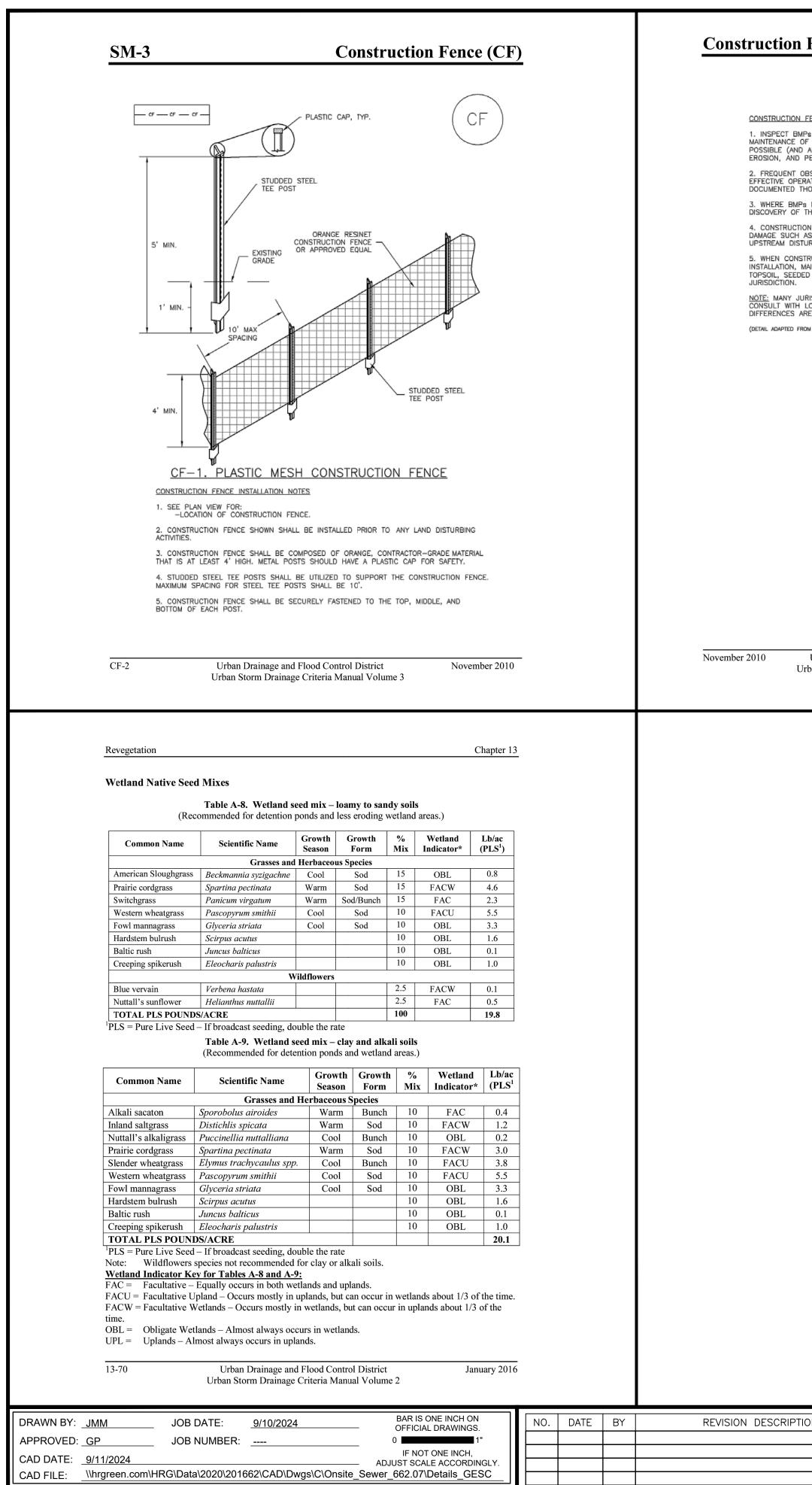
EROSION CONTROL FINAL PLANS

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### **Rolled Erosion Control Products (RECP)**

EROSION CONTROL BLANKET MAINTENANCE NOTES 1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE. 2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY. 3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE. 4. ECBs SHALL BE LEFT IN PLACE TO EVENTUALLY BIODEGRADE, UNLESS REQUESTED TO BE REMOVED BY THE LOCAL JURISDICTION. 5. ANY ECB PULLED OUT, TORN, OR OTHERWISE DAMAGED SHALL BE REPAIRED OR REINSTALLED. ANY SUBGRADE AREAS BELOW THE GEOTEXTILE THAT HAVE ERODED TO CREATED A VOID UNDER THE BLANKET, OR THAT REMAIN DEVOID OF GRASS SHALL BE REPAIRED, RESEEDED AND MULCHED AND THE ECB REINSTALLED. NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. DIFFERENCES ARE NOTED. (DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO AND TOWN OF PARKER COLORADO, NOT AVAILABLE IN AUTOCAD) November 2010 Urban Drainage and Flood Control District RECP-9 Urban Storm Drainage Criteria Manual Volume 3



Fence (CF) SM-3	Surface Roughening (SR)	<b>EC-</b> 1
NCE MAINTENANCE NOTES EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS WAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE RFORM NECESSARY MAINTENANCE. ERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN ING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE ROUGHLY. HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON E FAILURE. FENCE SHALL BE REPAIRED OR REPLACED WHEN THERE ARE SIGNS OF RIPS OR SAGS. CONSTRUCTION FENCE IS TO REMAIN IN PLACE UNTIL THE BED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION. JCTION FENCES ARE REMOVED, ALL DISTURBED AREAS ASSOCIATED WITH THE YTENANCE, AND/OR REMOVAL OF THE FENCE SHALL BE COVERED WITH AND MULCHED, OR OTHERWISE STABILIZED AS APPROVED BY LOCAL SDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN NOTED.	2" TO 4" DEEP SR -1. SURFACE ROUGHEN FOR STEEP SLOPES (3:1 OR STEEPER)	SPACING DURS
Urban Drainage and Flood Control District CF-3 ban Storm Drainage Criteria Manual Volume 3	November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume	3 SR-3
HRGreen.com	D.R. HORTON - GRANDVIEW RESERVE ON-SITE SANITARY SEWER DESIGN & PERMITTING SERVICES EL PASO COUNTY PEYTON, CO	

#### Chapter 13

Revegetation

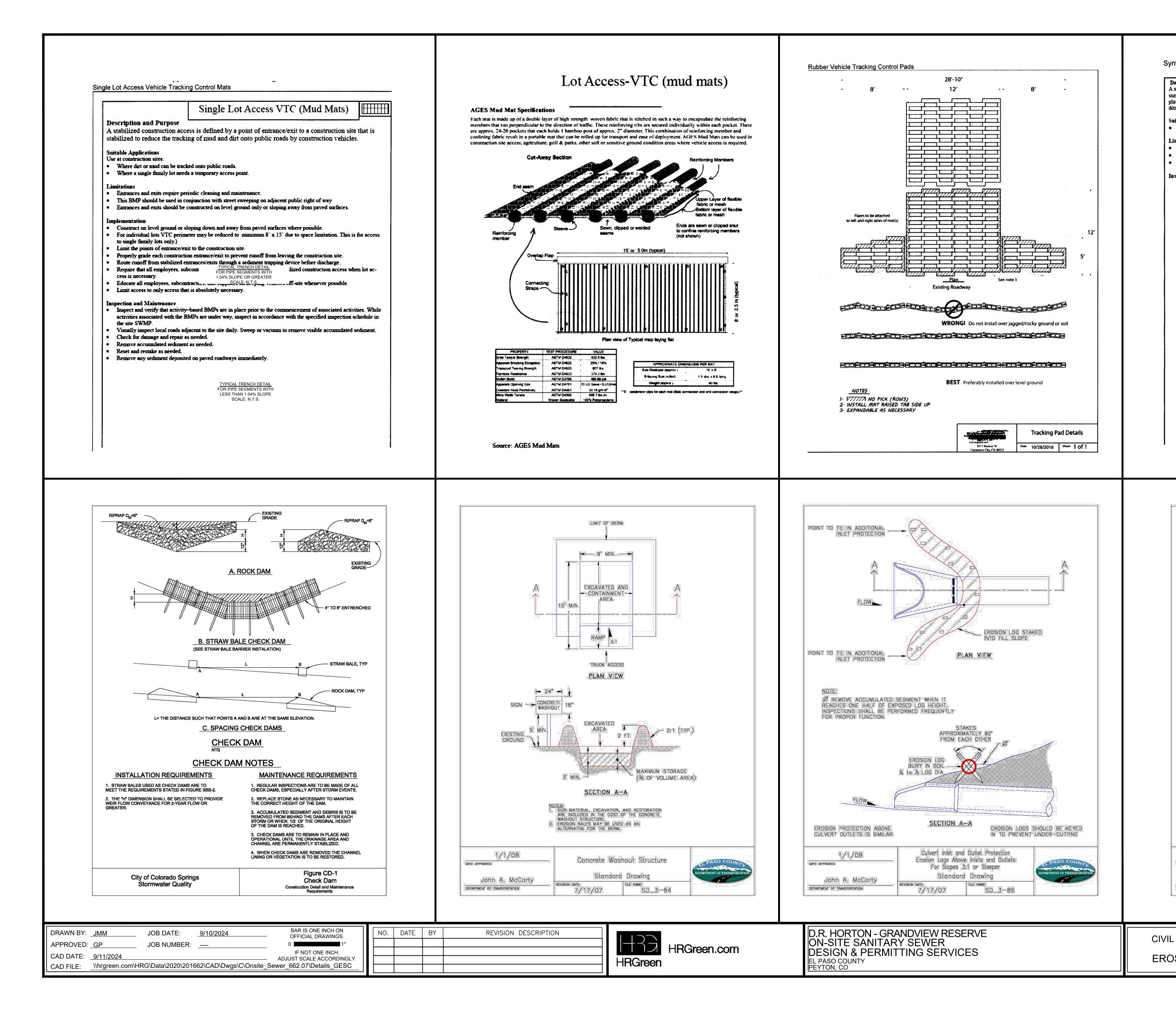
Table A-3. Upland/transitional area seed mix – alkali soil

Scientific Name	Growth Season	Growth Form	% Mix	Lb/ac (PLS <sup>1</sup> )
Bouteloua gracilis	Warm	Sod	20	1.5
Bouteloua curtipendula	Warm	Sod	15	4.7
Elymus trachycaulus	Cool	Bunch	15	5.7
Sporobolus airoides	Warm	Sod/Bunch	15	0.5
Distichlis spicata	Warm	Sod	15	1.7
Pascopyrum smithii	Cool	Sod	10	5.5
Sporobolus cryptandrus	Warm	Bunch	10	0.1
DS/ACRE			100	19.7
	Bouteloua gracilisBouteloua curtipendulaElymus trachycaulusSporobolus airoidesDistichlis spicataPascopyrum smithiiSporobolus cryptandrusDS/ACRE	Bouteloua gracilisSeasonBouteloua gracilisWarmBouteloua curtipendulaWarmElymus trachycaulusCoolSporobolus airoidesWarmDistichlis spicataWarmPascopyrum smithiiCoolSporobolus cryptandrusWarm	SeasonFormBouteloua gracilisWarmSodBouteloua curtipendulaWarmSodElymus trachycaulusCoolBunchSporobolus airoidesWarmSod/BunchDistichlis spicataWarmSodPascopyrum smithiiCoolSodSporobolus cryptandrusWarmBunchDS/ACRE	SeasonFormBouteloua gracilisWarmSod20Bouteloua curtipendulaWarmSod15Elymus trachycaulusCoolBunch15Sporobolus airoidesWarmSod/Bunch15Distichlis spicataWarmSod15Pascopyrum smithiiCoolSod10Sporobolus cryptandrusWarmBunch10DS/ACRE100100

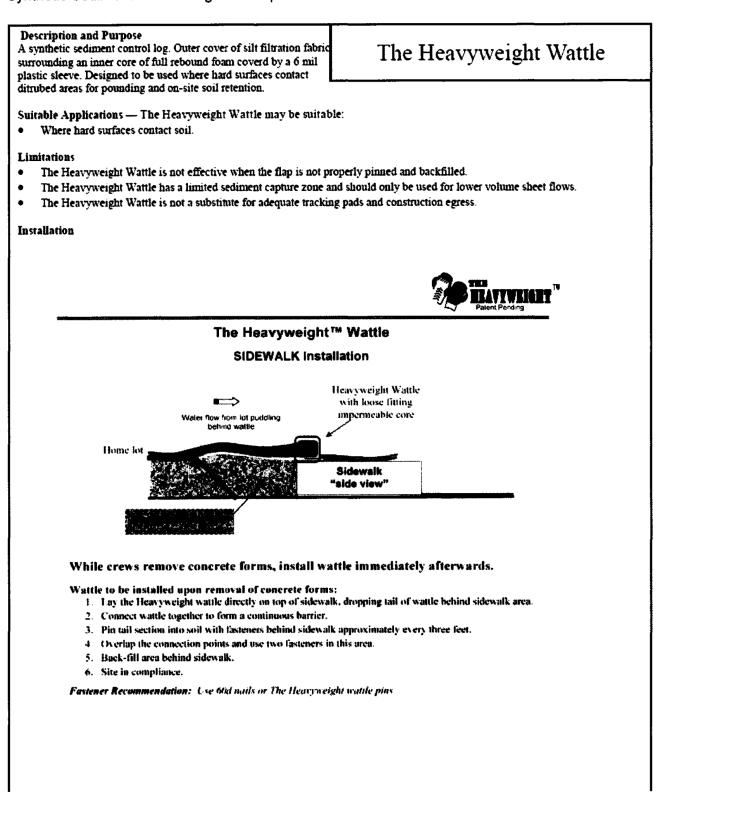
January 2016

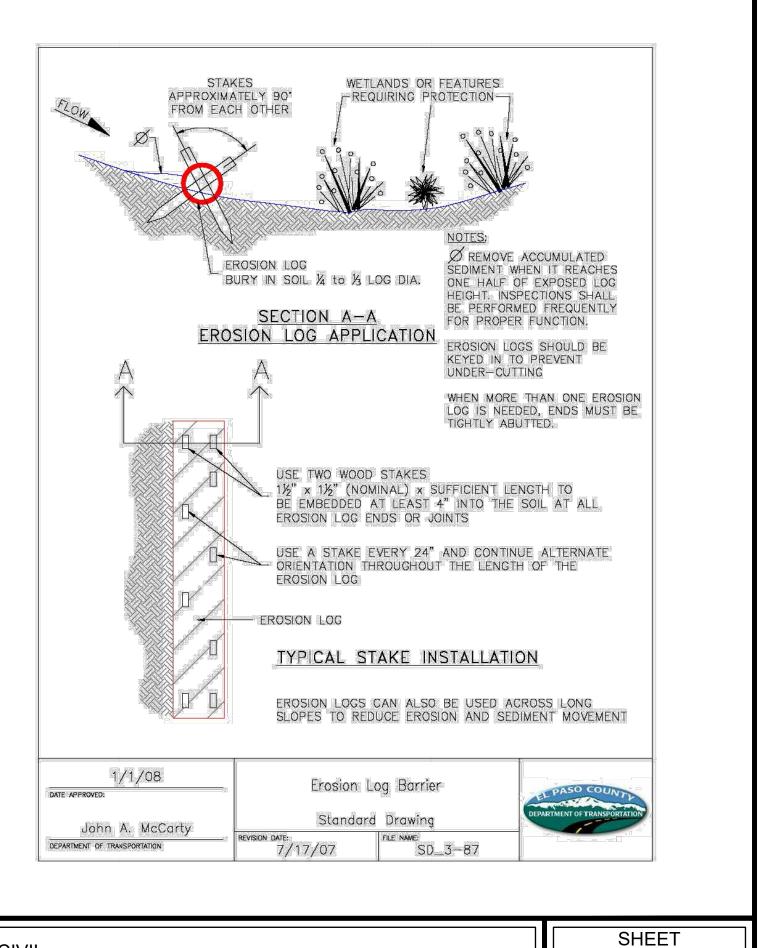
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CIVIL
EROSION CONTROL DETAILS



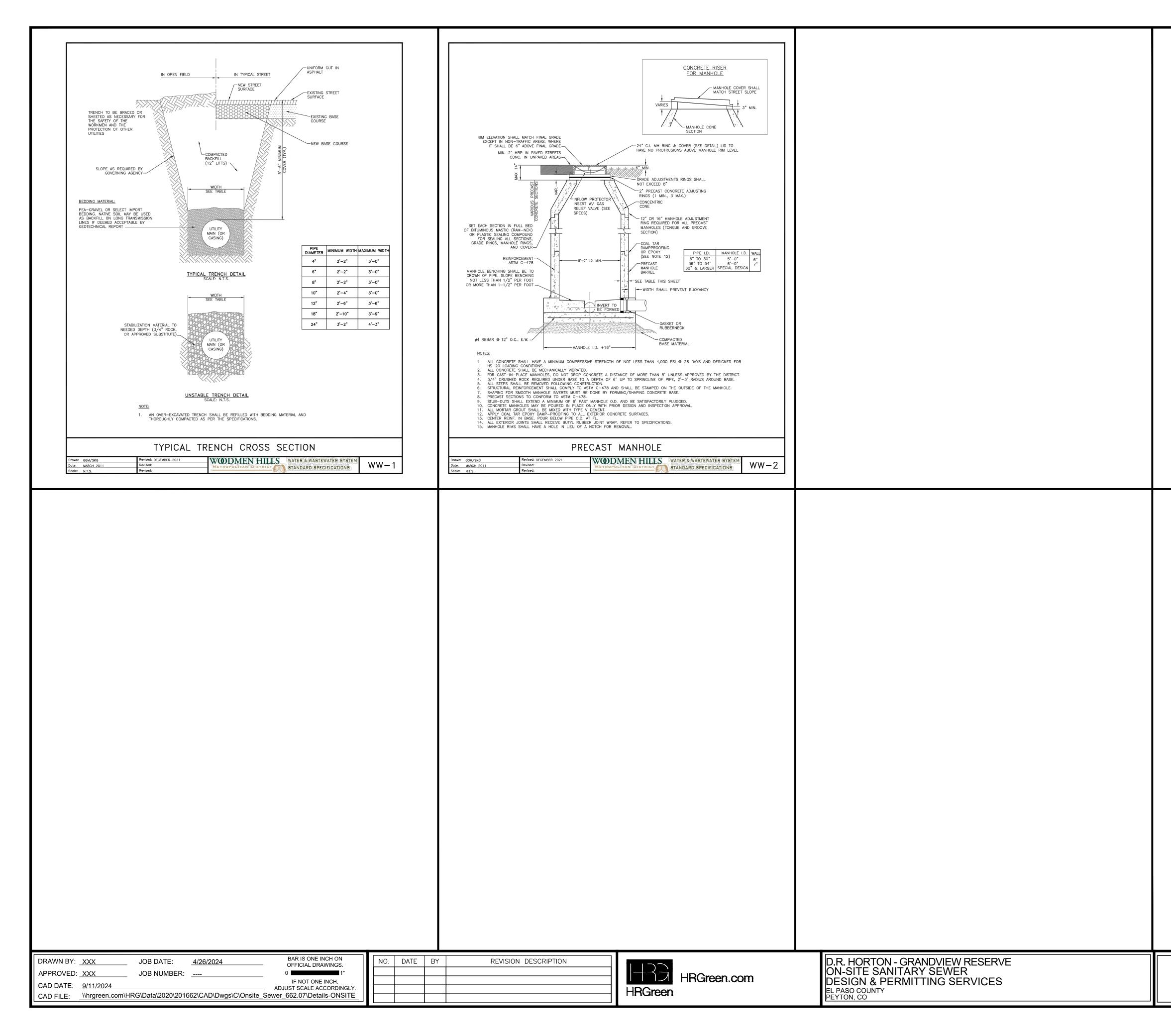






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EROSION CONTROL DETAILS



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DETAILS	C701

### v2\_Gravity Interceptor On-site CDS 2.pdf Markup Summary

