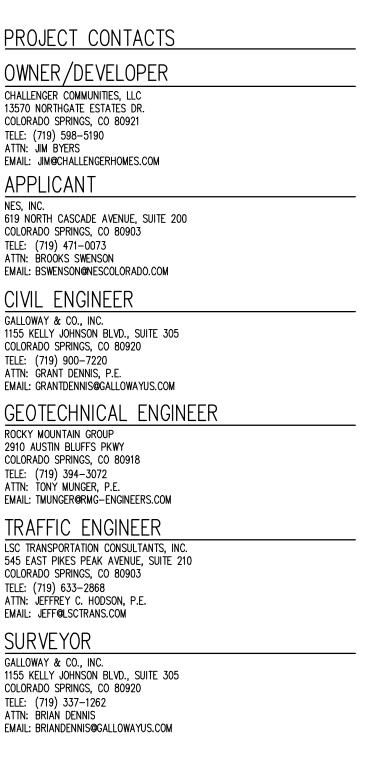
# FINAL GRADING AND EROSION CONTROL PLANS FALCON MEADOWS AT BENT GRASS FILING NO. 4 FALCON, CO 80831 - EL PASO COUNTY CHALLENGER COMMUNITIES, LLC



UTILITY CONTACTS

PROJECT CONTACTS

OWNER/DEVELOPER

CHALLENGER COMMUNITIES, LLC

13570 NORTHGATE ESTATES DR

COLORADO SPRINGS, CO 80921 TELE: (719) 598-5190 ATTN: JIM BYERS

**APPLICANT** 

EMAIL: JIM@CHALLENGERHOMES.COM

COLORADO SPRINGS, CO 80903

EMAIL: BSWENSON@NESCOLORADO.COI

1155 KELLY JOHNSON BLVD., SUITE 305 COLORADO SPRINGS, CO 80920 TELE: (719) 900-7220 ATTN: GRANT DENNIS, P.E.

EMAIL: GRANTDENNIS@GALLOWAYUS.COM

TELE: (719) 471-0073 ATTN: BROOKS SWENSON

CIVIL ENGINEER GALLOWAY & CO., INC.

ROCKY MOUNTAIN GROUP

TELE: (719) 394-3072

ATTN: TONY MUNGER, P.E

2910 AUSTIN BLUFFS PKWY

COLORADO SPRINGS, CO 80918

EMAIL: TMUNGER@RMG-ENGINEERS.COM

TRAFFIC ENGINEER

COLORADO SPRINGS, CO 80903 TELE: (719) 633-2868 ATTN: JEFFREY C. HODSON, P.E EMAIL: JEFF@LSCTRANS.COM

SURVEYOR

GALLOWAY & CO., INC.

LSC TRANSPORTATION CONSULTANTS, INC. 545 EAST PIKES PEAK AVENUE, SUITE 210

1155 KELLY JOHNSON BLVD., SUITE 305 COLORADO SPRINGS, CO 80920 TELE: (719) 337–1262 ATTN: BRIAN DENNIS

EMAIL: BRIANDENNIS@GALLOWAYUS.COM

619 NORTH CASCADE AVENUE, SUITE 200

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

**ELECTRIC** MOUNTAIN VIEW ELECRIC 11140 E WOODMEN RD FALCON, CO 80831 TELE: (719) 495-2283 CATHY HANSEN-LEE

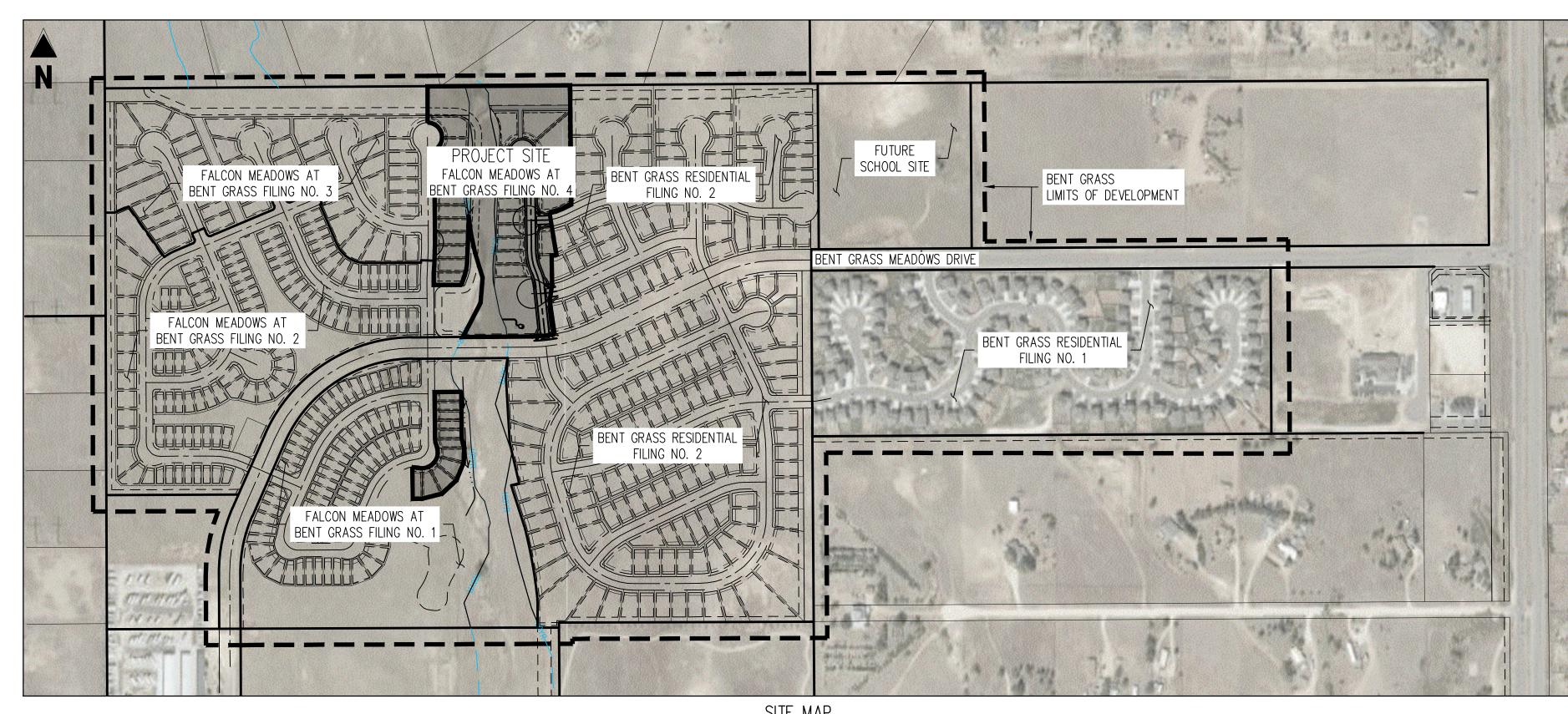
EMAIL: CATHY.H@MVEA.COOP

NATURAL GAS COLORADO SPRINGS UTILITIES (CSU) 7710 DURANT DRIVE, P.O. BOX 1103, MAIL CODE 2150

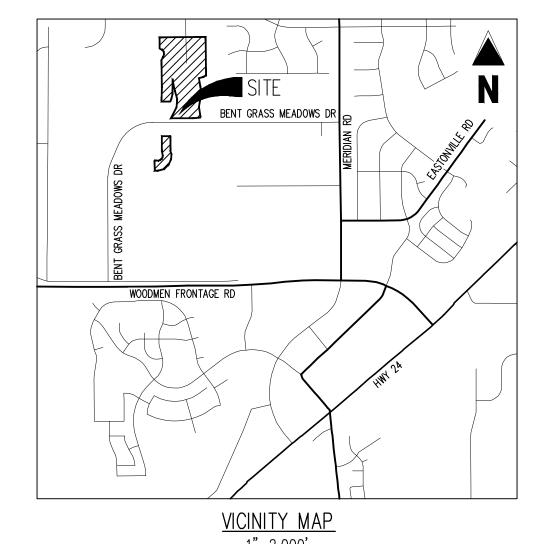
COLORADO SPRINGS, CO 80947-2150 TELE: (719) 668-5573 AARON CAŚSIO EMAIL: ACASSIO@CSU.ORG

EMAIL: FALCONFIRE@FALCONFIREPD.ORG

FALCON FIRE PROTECTION DISTRICT 7030 OLD MERIDIAN ROAD PEYTON, CO 80831 TELE: (719) 495-4050



SCALE: 1"=300'



Provide forebay design and details

**Engineering Review** 08/19/2022 2:51:35 PM dsdrice JeffRice@elpasoco.com (719) 520-7877 **EPC Planning & Community** 

**Development Department** 

PCD-ENGINEERING REVIEW COMMENTS IN BLUE BOXES WITH BLUE TEXT 

EPC STORMWATER REVIEW COMMENTS IN ORANGE BOXES WITH BLACK TEXT



Colorado Springs, CO 80920 719.900.7220 GallowayUS.com



#### ENGINEER'S STATEMEN

THIS GRADING AND EROSION CONTROL 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 THE CRITERIA ESTABLISHED BY THE COUNTY FOR GRADING AND EROSION CONTROL PLANS. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARING THIS PLAN.

RONALD G. DENNIS, COLORADO P.E. NO. 0051622

OWNER'S STATEMENT

I, THE OWNER/DEVELOPER HAVE READ AND WILL COMPLY WITH THE REQUIREMENTS OF THE GRADING AND EROSION CONTROL PLAN.

CHALLENGER COMMUNITIES, LLC

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. INTERIM COUNTY ENGINEER / ECM ADMINISTRATOR

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SHEET NUMBER	SHEET TITLE	SHEET DESCRIPTION
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2	GRADING & EROSION CONTROL NOTES	G0.1
3	GRADING & EROSION CONTROL TYPICAL SECTIONS	G0.2
4	OVERALL GRADING PLAN	G1.0
5	GRADING & EROSION CONTROL INITIAL PLAN	G1.1
6	GRADING & EROSION CONTROL INITIAL PLAN	G1.2
7	GRADING & EROSION CONTROL INITIAL PLAN	G1.3
8	GRADING & EROSION CONTROL INTERIM PLAN	G2.1
9	GRADING & EROSION CONTROL INTERIM PLAN	G2.2
10	GRADING & EROSION CONTROL INTERIM PLAN	G2.3
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16	GEC DETAILS	G5.2
17	GEC DETAILS	G5.3
18	GEC DETAILS	G5.4
19	GEC DETAILS	G5.5
20	GEC DETAILS	G5.6

\*SEE FALCON MEADOWS AT BENT GRASS FILING NO. 4 ROADWAY AND STORM SEWER CONSTRUCTION PLANS FOR ROADWAY AND STORM SEWER IMPROVEMENTS\* \*SEE FALCON MEADOWS AT BENT GRASS FILING NO. 4 UTILITY CONSTRUCTION PLANS

FOR WATER AND SANITARY IMPROVEMENTS\*

PCD FILING NO.

PUDSP-20-005 (FALCON MEADOWS AT BENT GRASS PRELIMINARY PLAN) SF-22-XXX (FALCON MEADOWS AT BENT GRASS FILING NO. 4)

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 N0013'46"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

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

SHOWN ON THE PLANS OR NOT, PRIOR TO CONSTRUCTION.

REPORT ANY DISCREPANCIES TO THE ENGINEEER PRIOR TO

CONSTRUCTION. 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

COPYRIGHT

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# Date Issue / Description

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CLH000021 Project No: CMWJ Checked By RGD 07/01/2022

**GRADING & EROSION CONTROL COVER SHEET** 

Sheet 1 of 20

#### STANDARD NOTES FOR GEC PLANS

- . 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 OFFSITE WATERS, INCLUDING WETLANDS.
- 2. NOTWITHSTANDING ANYTHING DEPICTED IN THESE 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, THE ENGINEERING CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS TO REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING.
- 3. 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. DURING CONSTRUCTION THE SWMP IS THE RESPONSIBILITY OF THE DESIGNATED QUALIFIED STORMWATER MANAGER OR CERTIFIED EROSION CONTROL INSPECTOR AND 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 MAY CONTRIBUTE POLLUTANTS TO STORMWATER. TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, OR ANY DISTURBED LAND AREA SHALL BE COMPLETED 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 IS 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 PRIOR TO IMPLEMENTATION.
- 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. AN AREA THAT IS GOING TO REMAIN IN AN INTERIM STATE FOR MORE THAN 60 DAYS SHALL ALSO BE STABILIZED.
- 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 PLAN 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
- 9. ALL PERMANENT STORMWATER MANAGEMENT FACILITIES SHALL BE INSTALLED AS DEFINED IN THE APPROVED PLANS. ANY PROPOSED CHANGES THAT EFFECT THE HYDROLOGY OR HYDRAULICS OF A 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 SHALL ALSO BE PROTECTED FROM SEDIMENTATION DURING CONSTRUCTION UNTIL FINAL STABILIZATION IS ACHIEVED.
- 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
- 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 RUNOFF TO STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES. CONCRETE WASHOUT SHALL NOT BE LOCATED IN AN AREA WHERE SHALLOW GROUNDWATER MAY BE PRESENT, OR WITHIN 50 FEET OF A SURFACE WATER BODY.
- 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.
- 16. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL WASTES FROM THE 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.
- 19. THE OWNER/DEVELOPER SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL CONSTRUCTION DEBRIS, DIRT, TRASH, ROCK, SEDIMENT, AND SAND THAT MAY ACCUMULATE IN ROADS, STORM DRAINS AND OTHER DRAINAGE CONVEYANCE SYSTEM AND STORMWATER APPURTENANCES AS A RESULT OF SITE DEVELOPMENT.
- 20. 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 ORIGINAL CONTAINERS, WITH ORIGINAL MANUFACTURER'S LABELS.
- 21. NO CHEMICALS ARE TO BE USED BY THE CONTRACTOR, WHICH HAVE THE POTENTIAL TO BE RELEASED IN STORMWATER UNLESS PERMISSION FOR THE USE OF A SPECIFIC CHEMICAL IS GRANTED IN WRITING BY THE ECM ADMINISTRATOR. IN GRANTING THE USE OF SUCH CHEMICALS, SPECIAL CONDITIONS AND MONITORING MAY BE REQUIRED.
- 22. BULK STORAGE OF PETROLEUM PRODUCTS OR OTHER LIQUID CHEMICALS IN EXCESS OF 55 GALLONS SHALL HAVE ADEQUATE SECONDARY CONTAINMENT PROTECTION TO CONTAIN ALL SPILLS AND PREVENT ANY SPILLED MATERIAL FROM ENTERING STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES.
- 23. NO PERSON SHALL CAUSE THE IMPEDIMENT OF STORMWATER FLOW IN THE FLOW LINE OF THE CURB AND GUTTER OR DITCH EXCEPT WITH APPROVED SEDIMENT CONTROL MEASURES.
- 24. INDIVIDUALS 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 INCLUDED IN THE DCM VOLUME II AND THE ECM APPENDIX I. ALL APPROPRIATE PERMITS MUST BE OBTAINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION (NPDES, FLOODPLAIN, 404, FUGITIVE DUST, ETC.). IN THE EVENT OF CONFLICTS BETWEEN THESE REQUIREMENTS AND LAWS, RULES, OR REGULATIONS OF OTHER FEDERAL, STATE, OR COUNTY AGENCIES, THE MORE RESTRICTIVE LAWS, RULES, OR REGULATIONS SHALL APPLY.
- 25. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS
- 26. PRIOR TO ACTUAL CONSTRUCTION THE PERMITEE SHALL VERIFY THE LOCATION OF EXISTING UTILITIES.
- 27. A WATER SOURCE SHALL BE AVAILABLE ON SITE DURING EARTHWORK OPERATIONS AND UTILIZED AS REQUIRED TO MINIMIZE DUST FROM EARTHWORK EQUIPMENT AND WIND.
- 28. THE SOILS REPORT, TITLED "FALCON MEADOWS AT BENT GRASS, EL PASO COUNTY, COLORADO" FOR THIS SITE HAS BEEN PREPARED BY ROCKY MOUNTAIN GROUP, JOB NO. 176147, DATED JUNE 22, 2020, REVISED DECEMBER 10, 2020 AND SHALL BE CONSIDERED A PART OF THESE PLANS.
- 29. AT LEAST TEN (10) DAYS PRIOR TO THE ANTICIPATED START OF CONSTRUCTION, FOR PROJECTS THAT WILL DISTURB 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 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

- STANDARD NOTES FOR CONSTRUCTION PLANS

  1. ALL DRAINAGE AND ROADWAY CONSTRUCTION SHALL MEET THE STANDARDS AND
- ALL DRAINAGE AND ROADWAY CONSTRUCTION SHALL MEET THE STANDARDS AND SPECIFICATIONS OF THE CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2, AND THE EL PASO COUNTY ENGINEERING CRITERIA MANUAL.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE NOTIFICATION AND FIELD NOTIFICATION OF ALL EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, BEFORE BEGINNING CONSTRUCTION. LOCATION OF EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CALL 811 TO CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO (UNCC).
- 3. CONTRACTOR SHALL KEEP A COPY OF THESE APPROVED PLANS, THE GRADING AND EROSION CONTROL PLAN, THE STORMWATER MANAGEMENT PLAN (SWMP), THE SOILS AND GEOTECHNICAL REPORT, AND THE APPROPRIATE DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS AT THE JOB SITE AT ALL TIMES, INCLUDING THE FOLLOWING:
- GEOTECHNICAL REPORT, AND THE APPROPRIATE DESIGN AND CONSTRUCTION STANDARDS
  AND SPECIFICATIONS AT THE JOB SITE AT ALL TIMES, INCLUDING THE FOLLOWING:

  A. EL PASO COUNTY ENGINEERING CRITERIA MANUAL (ECM)

  B. CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1
- AND 2

  C. COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION

D. CDOT M & S STANDARDS

- 4. NOTWITHSTANDING ANYTHING DEPICTED IN THESE 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, 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. ANY MODIFICATIONS NECESSARY TO MEET CRITERIA AFTER—THE—FACT WILL BE
- IT IS THE DESIGN ENGINEER'S RESPONSIBILITY TO ACCURATELY SHOW EXISTING CONDITIONS, BOTH ONSITE AND OFFSITE, ON THE CONSTRUCTION PLANS. ANY MODIFICATIONS NECESSARY DUE TO CONFLICTS, OMISSIONS, OR CHANGED CONDITIONS WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.

ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.

- CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH EL PASO COUNTY
  PLANNING AND COMMUNITY DEVELOPMENT (PCD) INSPECTIONS, PRIOR TO STARTING
  CONSTRUCTION.
- 7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO UNDERSTAND THE REQUIREMENTS OF ALL JURISDICTIONAL AGENCIES AND TO OBTAIN ALL REQUIRED PERMITS, INCLUDING BUT NOT LIMITED TO EL PASO COUNTY EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP), REGIONAL BUILDING FLOODPLAIN DEVELOPMENT PERMIT, U.S. ARMY CORPS OF ENGINEERS—ISSUED 401 AND/OR 404 PERMITS, AND COUNTY AND STATE FUGITIVE DUST DEPMITS
- 8. CONTRACTOR SHALL NOT DEVIATE FROM THE PLANS WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM THE DESIGN ENGINEER AND PCD. CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY ERRORS OR INCONSISTENCIES.
- 9. ALL STORM DRAIN PIPE SHALL BE CLASS III RCP UNLESS OTHERWISE NOTED AND APPROVED
- 10. CONTRACTOR SHALL COORDINATE GEOTECHNICAL TESTING PER ECM STANDARDS. PAVEMENT DESIGN SHALL BE APPROVED BY EL PASO COUNTY PCD PRIOR TO PLACEMENT OF CURB AND GUTTER AND PAVEMENT.
- 11. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION
- 12. SIGHT VISIBILITY TRIANGLES AS IDENTIFIED IN THE PLANS SHALL BE PROVIDED AT ALL INTERSECTIONS. OBSTRUCTIONS GREATER THAN 18 INCHES ABOVE FLOWLINE ARE NOT ALLOWED WITHIN SIGHT TRIANGLES.
- 13. SIGNING AND STRIPING SHALL COMPLY WITH EL PASO COUNTY DPW AND MUTCD CRITERIA.

  [IF APPLICABLE, ADDITIONAL SIGNING AND STRIPING NOTES WILL BE PROVIDED.]
- 14. CONTRACTOR SHALL OBTAIN ANY PERMITS REQUIRED BY EL PASO COUNTY DPW, INCLUDING WORK WITHIN THE RIGHT-OF-WAY AND SPECIAL TRANSPORT PERMITS.
- 15. THE LIMITS OF CONSTRUCTION SHALL REMAIN WITHIN THE PROPERTY LINE UNLESS OTHERWISE NOTED. THE OWNER/DEVELOPER SHALL OBTAIN WRITTEN PERMISSION AND EASEMENTS, WHERE REQUIRED, FROM ADJOINING PROPERTY OWNER(S) PRIOR TO ANY OFF—SITE DISTURBANCE, GRADING, OR CONSTRUCTION.

#### EROSION CONTROL NOTES

- 1. AT LEAST TEN DAYS PRIOR TO THE ANTICIPATED START OF CONSTRUCTION, FOR PROJECTS THAT WILL DISTURB 1 ACRE OR MORE, THE OWNER OR OPERATOR OF THE CONSTRUCTION ACTIVITY SHALL SUBMIT A PERMIT APPLICATION FOR STORMWATER DISCHARGE TO THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, WATER QUALITY CONTROL 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 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
- 2. ALL DISTURBED AREAS TO BE RESEEDED UPON COMPLETION OF OVERLOT GRADING AND EROSION CONTROL MEASURES HAVE BEEN INSTALLED OR WITHIN 60 DAYS, WHICHEVER IS
- CONSTRUCTION FENCE AND SILT FENCE OFFSET FOR CLARITY. CONTRACTOR TO ENSURE BMPS ARE PLACED DOWNSTREAM OF DISTURBED AREAS TO PREVENT SEDIMENT FROM LEAVING THE SITE.
- 4. BENT GRASS MEADOWS DRIVE SHALL BE STREET SWEPT AND INSPECTED ON A REGULAR BASIS DURING CONSTRUCTION.
- 5. NO NOTABLE EXISTING VEGETATION EXISTS ON THE SITE, APART FROM NATIVE GRASSES AND WEEDS. THE EXISTING SOIL TYPES WITHIN THE PROPERTY CONSISTS OF COLUMBINE GRAVELLY SANDY LOAM, BLAKELAND-FLUVAQUENTIC HAPLAQUOLLS, AND BLAKELAND LOAMY SAND. ALL SOILS ARE DEFINED AS HAVING A HYDROLOGIC SOIL GROUP OF A, AS DETERMINED BY THE NRCS WEB SOIL SURVEY FOR EL PASO COUNTY AREA.

#### GENERAL CONSTRUCTION NOTES

- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE AND LOCATION OF ALL UNDERGROUND UTILITIES ALONG THE ROUTE OF THE WORK. THE OMISSION FROM OR THE INCLUSION OF UTILITY LOCATIONS ON THE PLANS IS NOT TO BE CONSIDERED AS THE NONEXISTENCE OF OR A DEFINITE LOCATION OF EXISTING UNDERGROUND UTILITIES.
- 2. THE CONTRACTOR SHALL TAKE THE NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES FROM DAMAGE DUE TO THIS OPERATION. ANY DAMAGE TO THE UTILITIES WILL BE REPLACED AT THE CONTRACTORS EXPENSE AND ANY SERVICE DISRUPTION WILL BE SETTLED BY THE CONTRACTOR.
- 3. ADDITIONAL EROSION CONTROL STRUCTURES MAY BE REQUIRED AT THE TIME OF
- 4. ALL BACKFILL, SUB-BASE AND / OR BASE COURSE (CLASS 6) MATERIAL SHALL BE COMPACTED TO THE SOILS ENGINEERS RECOMMENDATIONS, AND APPROVED BY EL PASO COUNTY DEVELOPMENT SERVICES ENGINEERING DIVISION.
  - 5. ALL STATIONING IS CENTERLINE UNLESS OTHERWISE INDICATED. ALL ELEVATIONS ARE FLOW LINE UNLESS OTHERWISE INDICATED.
- 6. ALL DISTURBED PAVEMENT EDGES SHALL BE CUT TO NEAT LINES. REPAIR SHALL CONFORM TO THE EPC ECM APPENDIX K 1.2C.
- 7. ALL INTERSECTION ACCESSES TO BE CONSTRUCTED WITH A 25 FOOT SIGHT VISIBILITY TRIANGLES AND THERE SHALL BE NO OBSTRUCTIONS GREATER THAN 18" IN THIS AREA.
- 8. ALL CULVERT AND STORM PIPES SHALL BE SMOOTH INTERIOR CORRUGATED POLYETHYLENE PIPE (HDPE), OR REINFORCED CONCRETE PIPE (RCP), ALL CULVERTS SHALL BE PLACED COMPLETE WITH FLARED END SECTIONS. ADEQUACY OF MATERIAL THICKNESS FOR ANY CSP INSTALLED SHALL BE VERIFIED BY OWNERS GEOTECHNICAL ENGINEER TO SUPPORT MINIMUM 50 YEAR DESIGN LIFE. CULVERTS MUST CONFORM TO EPC ECM SECTION 3.32 CULVERTS.
- 9. ASPHALT THICKNESS AND BASE COURSE THICKNESS (COMPACTED FOR ROADS SHALL BE PER DESIGN REPORT BY OWNERS GEOTECHNICAL ENGINEER. OWNERS GEOTECHNICAL ENGINEER TO BE ON SITE AT TIME OF ROAD CONSTRUCTION TO EVALUATE SOIL CONDITIONS AND DETERMINE IF ADDITIONAL MEASURES ARE NECESSARY TO ASSURE STABILITY OF THE NEW ROADS. PAVEMENT DESIGN SHALL BE APPROVED BY EL PASO COUNTY DEVELOPMENT SERVICES ENGINEERING DIVISION PRIOR TO CONSTRUCTION.
- 10. TYPE M RIP-RAP WITH 4" OF TYPE II GRANULAR BEDDING AND MIRAFI 180N OR EQUAL MAY BE SUBSTITUTED WHERE TYPE L RIP-RAP WITH MIRAFI FW 700 OR EQUAL IS SPECIFIED.
- 11. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL BE IN COMPLIANCE WITH ANY AND ALL APPLICABLE EL PASO COUNTY STANDARDS AND WITH WOODMAN HILLS METRO DISTRICT CONSULTING ENGINEER APPROVAL.
- 12. ALL POTABLE WATER MAINS SHALL BE AWWA C900—SDR18 PVC WITH PUSH—ON SINGLE GASKET TYPE JOINTS AND SHALL MEET THE REQUIREMENTS OF ANSI / NSF 61.
- 13. ALL WATER MAIN FITTINGS SHALL BE MADE FROM GRAY-IRON OR DUCTILE IRON AND FURNISHED WITH MECHANICAL JOINT ENDS. ALL FITTINGS SHALL HAVE A PRESSURE RATING OF 250 PSI AND SHALL MEET THE REQUIREMENTS OF ANSI / NSF 61.
- 14. ALL WATER LINE BENDS, TEES, BLOW-OFFS AND PLUGS AT DEAD-END MAINS SHALL BE PROTECTED FROM THRUST BY USING CONCRETE THRUST BLOCKS AND / OR RODDING AND RESTRAINED PIPE PER THE WOODMEN HILLS METRO DISTRICT CONSULTING ENGINEER
- 15. MAXIMUM DEFLECTION OF 8" OR 12" PVC WATER MAIN JOINTS IS 4 DEGREES.

  CORRESPONDING MINIMUM CURVE RADIUS IS 286'. ADDITIONAL 11.25' OR 22.5' BENDS MAY BE REQUIRED FOR PROPER ALIGNMENT.
- 16. CONTRACTOR IS RESPONSIBLE FOR PROVIDING DETAILED AS—BUILTS OF ALL WATER MAIN, STORM SEWER AND SANITARY SEWER MAIN INSTALLATIONS, INCLUDING ACCURATE DISTANCES OF MAIN LINES, VALVES, FITTINGS, MANHOLES AND LOCATIONS OF WATER AND SEWER SEPARCES
- 17. SANITARY SEWER PIPE AND FITTINGS: PVC 4" 8" ASTM D3034, TYPE PSM, SDR 35: PUSH-ON JOINTS AND MOLDED RUBBER GASKETS MAXIMUM HORIZONTAL DEFLECTIONS, AFTER INSTALLATION AND BACK FILLING SHALL NOT EXCEED 3% OF THE PIPE DIAMETER. (MINIMUM CURVE RADIUS IS 100' FOR 8" PVC SANITARY SEWER MAIN)

Revise according to DCMv2 - Section 3.2 - General Principles – Basic Grading, Erosion and Stormwater Quality Requirements and General Prohibitions #16.



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UCTION DOCUMENTS
MEADOWS AT BENT GRASS FILING
NGER COMMUNTIES, LLC

USTRI CON I

 Project No:
 CLH000021

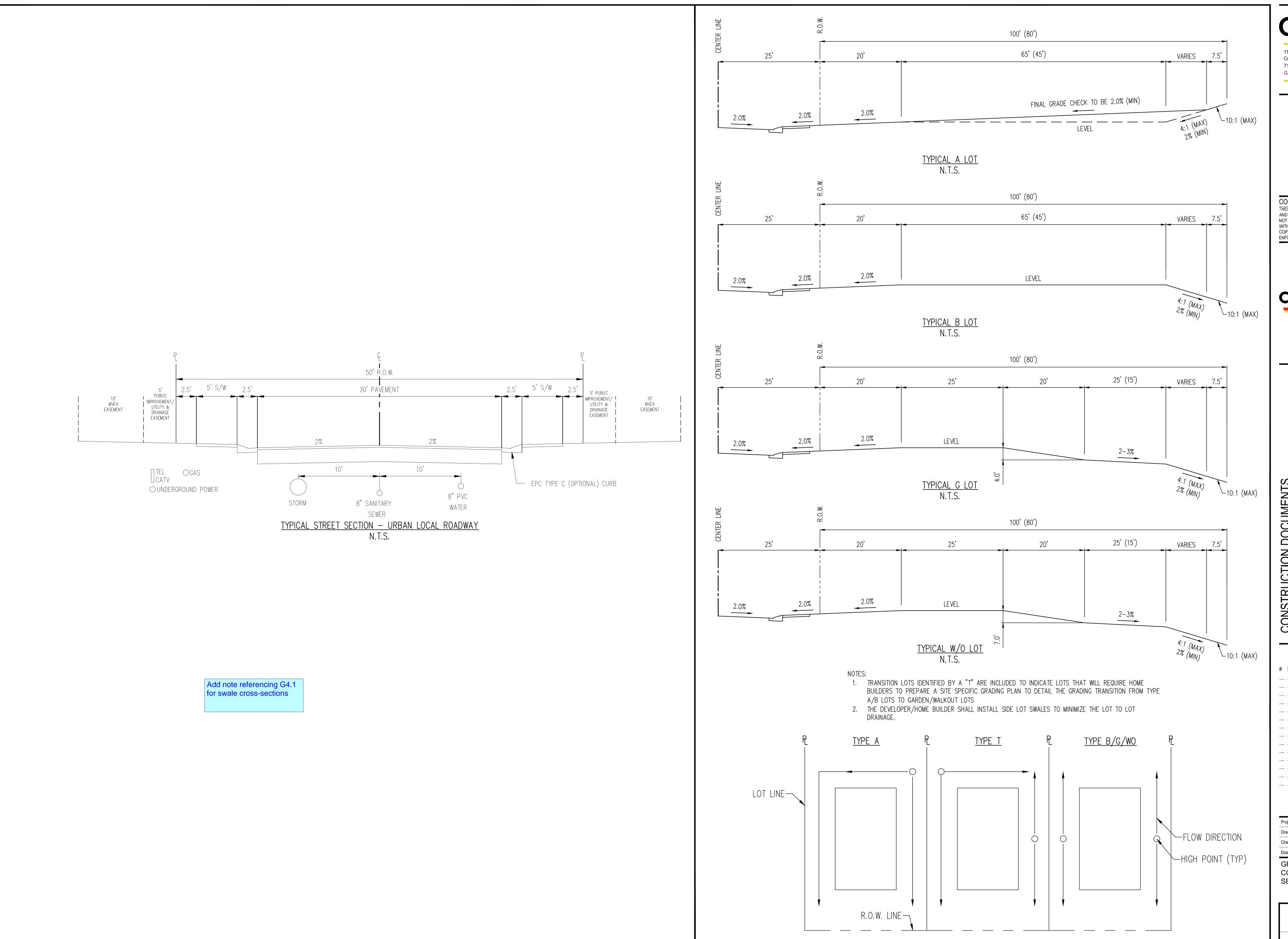
 Drawn By:
 CMWJ

 Checked By:
 RGD

 Date:
 07/01/2022

Sheet 2 of 20

GRADING & EROSION CONTROL NOTES



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CHALLENGER HOMES—

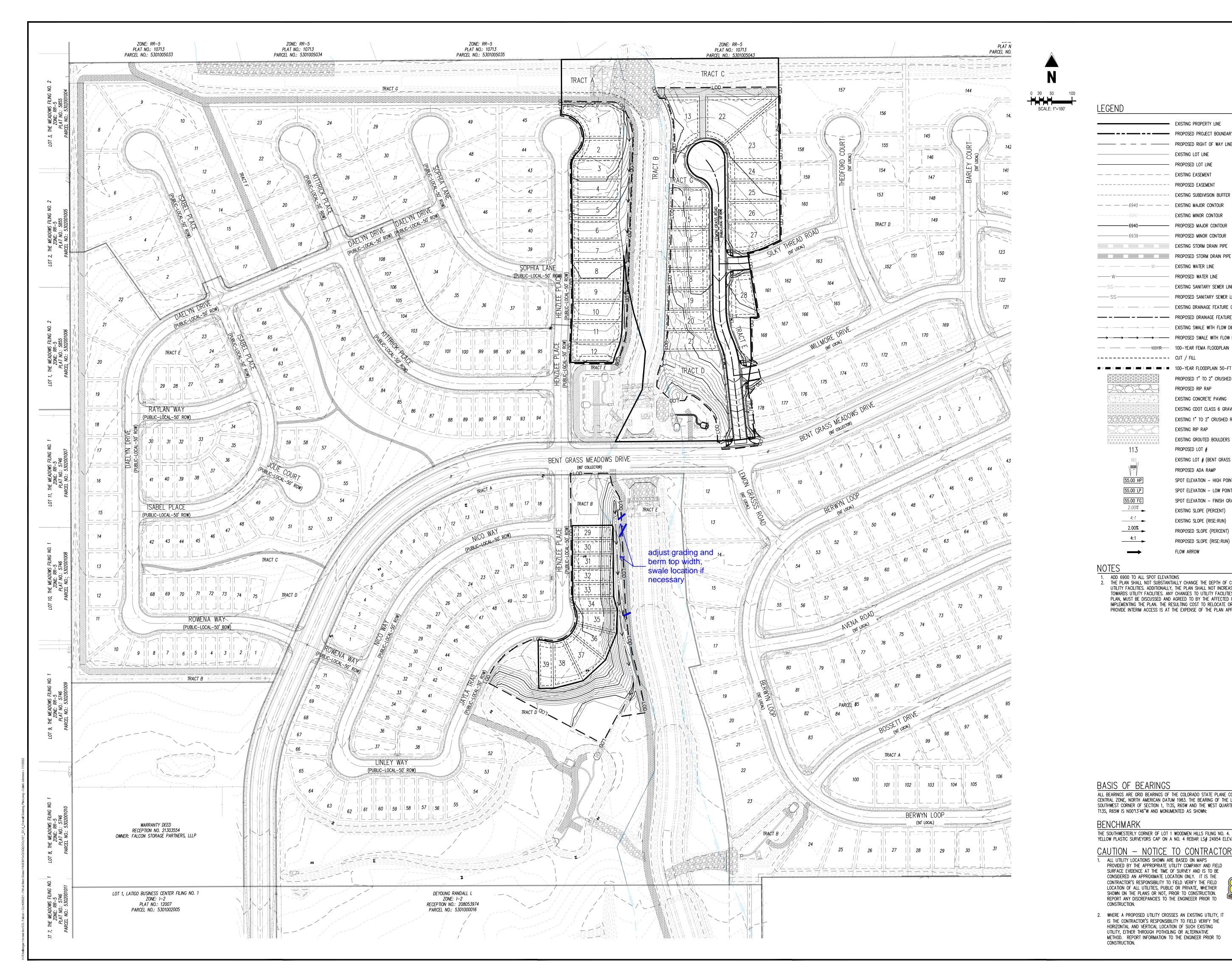
FILING NO. ITS IT GRASS I CONSTRUCTION DOCUMENTS
FALCON MEADOWS AT BENT GRAS
FOR
CHALLENGER COMMUNTIES, LLC

# Date Issue / Description

CLH000021 CMWJ RGD

07/01/2022 GRADING & EROSION CONTROL TYPICAL SECTIONS

> G0.2 Sheet 3 of 20





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CHALLENGER HOMES—

HALLENGER

# Date Issue / Description

ONSTRUCTION DO ALCON MEADOWS

THE PLAN SHALL NOT SUBSTANTIALLY CHANGE THE DEPTH OF COVER, OR ACCESS TO UTILITY FACILITIES. ADDITIONALLY, THE PLAN SHALL NOT INCREASE OR DIVERT WATER TOWARDS UTILITY FACILITIES. ANY CHANGES TO UTILITY FACILITIES TO ACCOMMODATE THE PLAN, MUST BE DISCUSSED AND AGREED TO BY THE AFFECTED UTILITY PRIOR TO IMPLEMENTING THE PLAN. THE RESULTING COST TO RELOCATE OR PROTECT UTILITIES, OR PROVIDE INTERIM ACCESS IS AT THE EXPENSE OF THE PLAN APPLICANT.

EXISTING PROPERTY LINE

EXISTING LOT LINE PROPOSED LOT LINE

EXISTING MINOR CONTOUR

EXISTING WATER LINE PROPOSED WATER LINE

EXISTING SANITARY SEWER LINE PROPOSED SANITARY SEWER LINE EXISTING DRAINAGE FEATURE OUTLINE

EXISTING SWALE WITH FLOW DIRECTION

PROPOSED 1" TO 2" CRUSHED ROCK

PROPOSED RIP RAP

EXISTING RIP RAP

PROPOSED LOT #

PROPOSED ADA RAMP

SPOT ELEVATION - HIGH POINT

SPOT ELEVATION - LOW POINT SPOT ELEVATION - FINISH GRADE

EXISTING SLOPE (PERCENT)

EXISTING SLOPE (RISE:RUN) PROPOSED SLOPE (PERCENT) PROPOSED SLOPE (RISE: RUN)

FLOW ARROW

EXISTING CONCRETE PAVING

EXISTING CDOT CLASS 6 GRAVEL

EXISTING 1" TO 2" CRUSHED ROCK

EXISTING LOT # (BENT GRASS FILING NO. 2)

EXISTING GROUTED BOULDERS

—6940———— PROPOSED MAJOR CONTOUR

PROPOSED SWALE WITH FLOW DIRECTION

1 | Maria | Ma

113

55.00 LP

ADD 6900 TO ALL SPOT ELEVATIONS

PROPOSED PROJECT BOUNDARY

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 N0013'46"W AND MONUMENTED AS SHOWN:

#### BENCHMARK

CONSTRUCTION.

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

<u>CAUTION - NOTICE TO CONTRACTOR</u>

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

UTILITY, EITHER THROUGH POTHOLING OR ALTERNATIVE METHOD. REPORT INFORMATION TO THE ENGINEER PRIOR TO

2. WHERE A PROPOSED UTILITY CROSSES AN EXISTING UTILITY, IT Call before you dig. IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF SUCH EXISTING

Know what's below.

Project No:

Checked By

Sheet 4 of 20

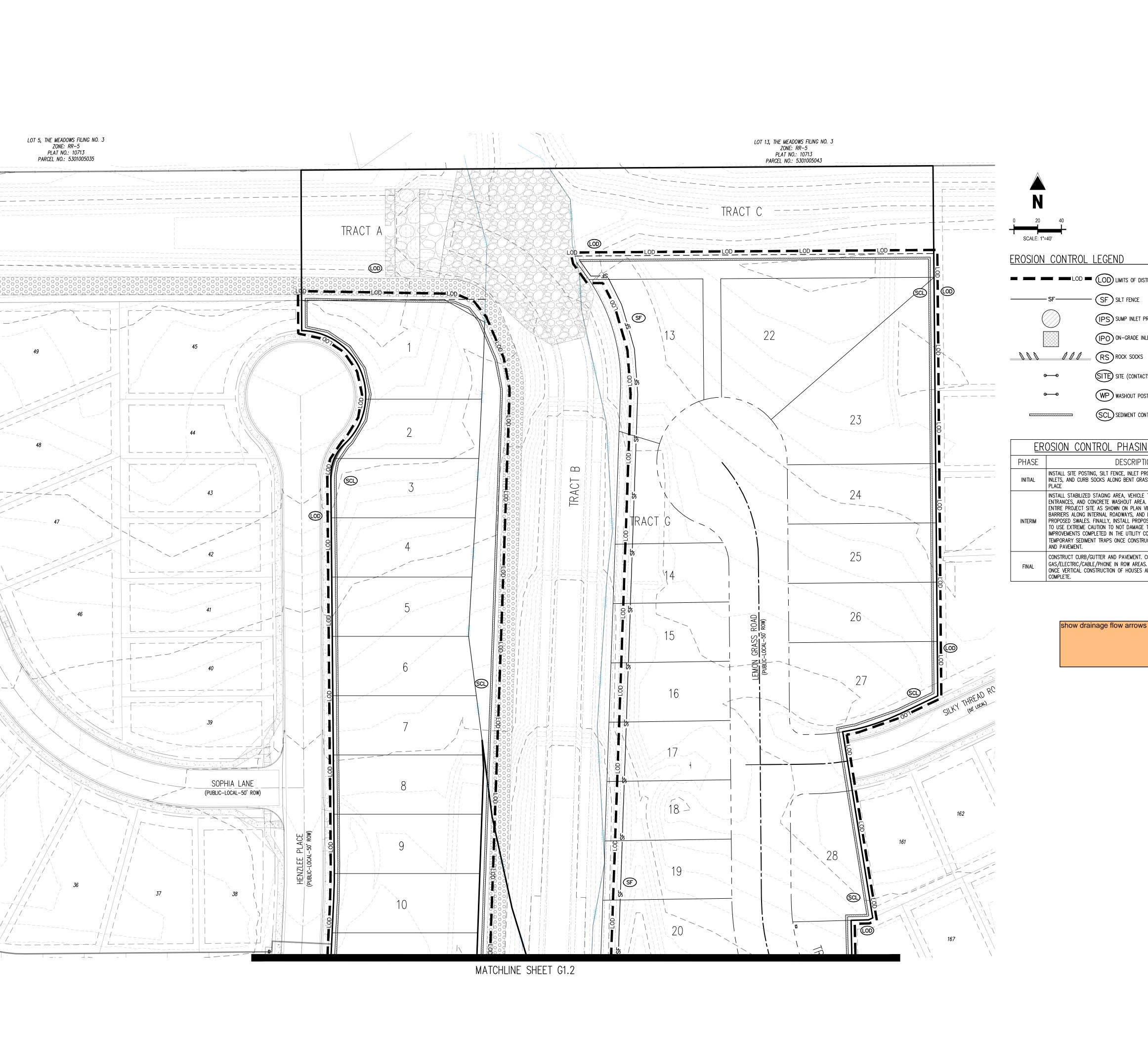
OVERALL GRADING PLAN

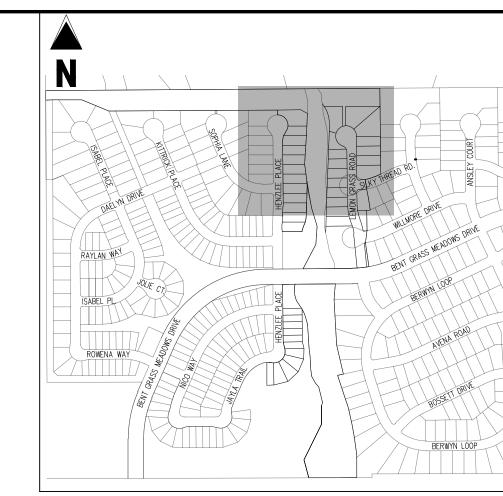
CLH000021

07/01/2022

CMWJ

RGD





# KEY MAP SCALE: 1"=500'

#### LEGEND

LOD LIMITS OF DISTURBANCE / CONSTRUCTION EXISTING MAJOR CONTOUR EXISTING MINOR CONTOUR IPS SUMP INLET PROTECTION (IPO) ON-GRADE INLET PROTECTION SITE SITE (CONTACTS AND PERMITS) WP WASHOUT POSTING SCL SEDIMENT CONTROL LOG

EROSION CONTROL PHASING SCHEDULE		
PHASE	DESCRIPTION	
INITIAL	INSTALL SITE POSTING, SILT FENCE, INLET PROTECTION MEASURES ON EXISTING INLETS, AND CURB SOCKS ALONG BENT GRASS MEADOWS DRIVE & HENZLEE PLACE	
INTERIM	INSTALL STABILIZED STAGING AREA, VEHICLE TRACKING CONTROL AT ENTRANCES, AND CONCRETE WASHOUT AREA. THEN OVERLOT GRADE THE ENTIRE PROJECT SITE AS SHOWN ON PLAN VIEW, INSTALL STRAW BALE BARRIERS ALONG INTERNAL ROADWAYS, AND INSTALL CHECK DAMS ALONG PROPOSED SWALES. FINALLY, INSTALL PROPOSED STORM SEWER. CONTRACTOR TO USE EXTREME CAUTION TO NOT DAMAGE THE WATER AND WASTEWATER IMPROVEMENTS COMPLETED IN THE UTILITY CONSTRUCTION PLANS. REMOVE THE TEMPORARY SEDIMENT TRAPS ONCE CONSTRUCTION BEGINS ON CURB/GUTTER AND PAVEMENT.	
FINAL	CONSTRUCT CURB/GUTTER AND PAVEMENT. CONSTRUCT GAS/ELECTRIC/CABLE/PHONE IN ROW AREAS. REMOVE CONSTRUCTION BMP'S ONCE VERTICAL CONSTRUCTION OF HOUSES AND APPLICABLE LANDSCAPING IS	

show drainage flow arrows on this sheet.

6960	PROPOSED MAJOR CONTOUR
	PROPOSED MINOR CONTOUR
	EXISTING PROPERTY LINE (PROPOSED PROJECT BOUNDARY)
	EXISTING PROPERTY LINE
	PROPOSED PROPERTY LINE (PROPOSED PROJECT BOUNDARY)
	PROPOSED RIGHT OF WAY LINE
	EXISTING LOT LINE
	PROPOSED LOT LINE
	EXISTING EASEMENT
	PROPOSED EASEMENT
	EXISTING STORM DRAIN PIPE
	PROPOSED STORM DRAIN PIPE
	EXISTING WATER LINE
	PROPOSED WATER LINE
	EXISTING SANITARY SEWER LINE
ss	PROPOSED SANITARY SEWER LINE
	EXISTING DRAINAGE FEATURE OUTLINE
	PROPOSED DRAINAGE FEATURE OUTLINE
$\longrightarrow \cdots \longrightarrow \cdots \longrightarrow \cdots$	EXISTING SWALE WITH FLOW DIRECTION
<b>→···→···</b>	PROPOSED SWALE WITH FLOW DIRECTION
	100-YEAR FEMA FLOODPLAIN
	PROPOSED CONCRETE
	PROPOSED CDOT CLASS 6 GRAVEL

ADD 6900 TO ALL SPOT ELEVATIONS EXISTING VEGETATION ON THE PROJECT SITE CONSISTS OF NATIVE GRASSES AND SHRUBS.

PROPOSED RIP RAP

EXISTING RIP RAP

PROPOSED LOT # EXISTING LOT #

EXISTING CONCRETE PAVING EXISTING CDOT CLASS 6 GRAVEL EXISTING 1" TO 2" CRUSHED ROCK

EXISTING GROUTED BOULDERS

EXISTING SLOPE (PERCENT) EXISTING SLOPE (RISE:RUN)

- NO WETLANDS ARE TO BE PERMANENTLY DISTURBED PER THIS PLAN. 4. NO GRADING IS TO OCCUR WITHIN THE 100-YEAR FLOODPLAIN. 6. THE EROSION CONTROL DELINEATED ON THIS PLAN SHALL BE REGULARLY UPDATED BY
- THE CONTRACTORS.
- 7. CONTRACTOR SHALL PROTECT ALL AREAS OUTSIDE OF THE CONSTRUCTION LIMITS WITH
- SILT FENCE OR OTHER METHOD TO PROTECT UNDISTURBED AREAS FROM EROSION. 8. ALL TEMPORARY OR PERMANENT GRADING DISTURBANCES SHALL BE RE-SEEDED AND MULCHED PER EL PASO COUNTY CRITERIA AND SPECIFICATIONS.

#### BASIS OF BEARINGS

113

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 NOO"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

### <u>CAUTION - NOTICE TO CONTRACTOR</u>

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2. WHERE A PROPOSED UTILITY CROSSES AN EXISTING UTILITY, IT Call before you dig. 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.



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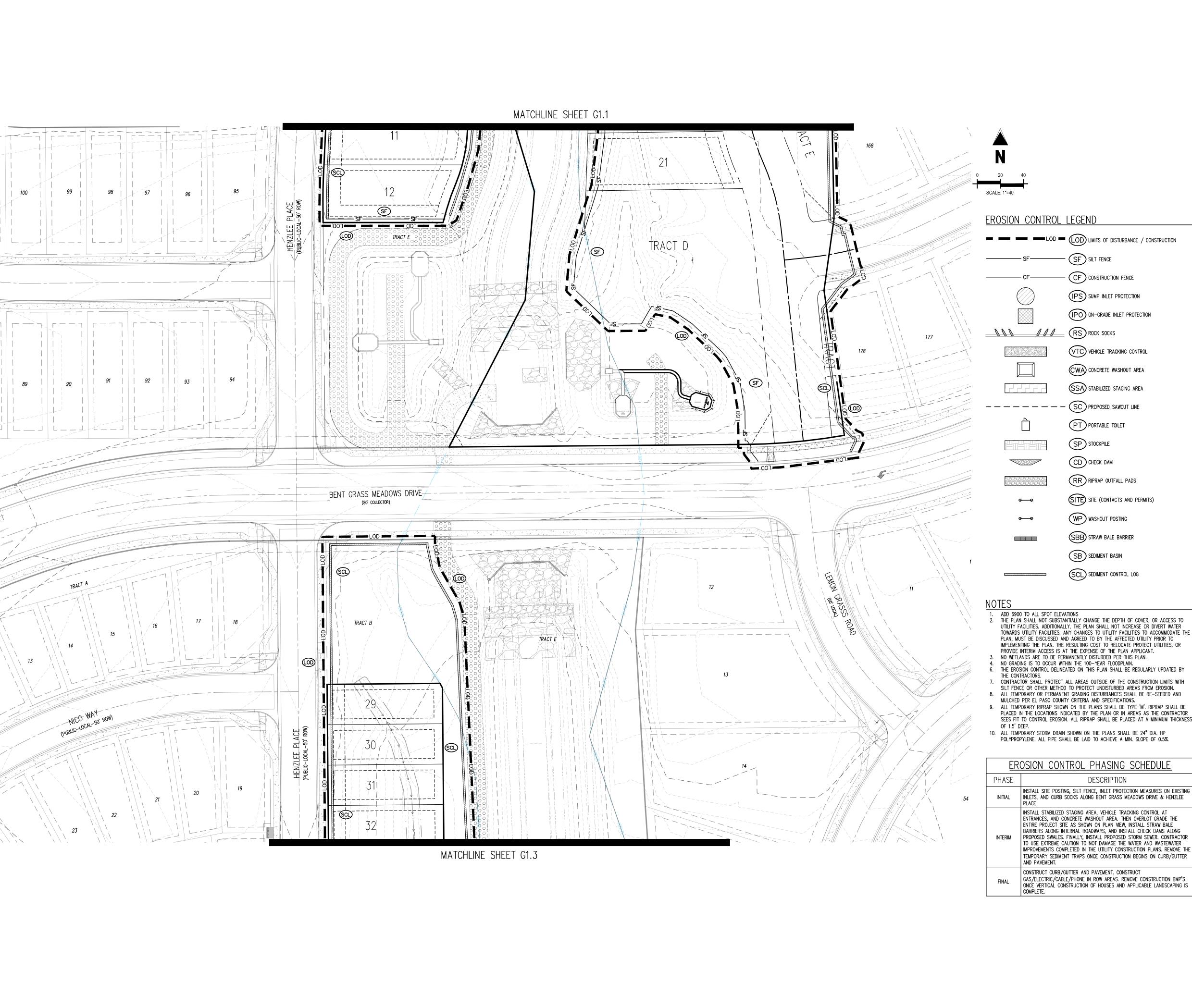


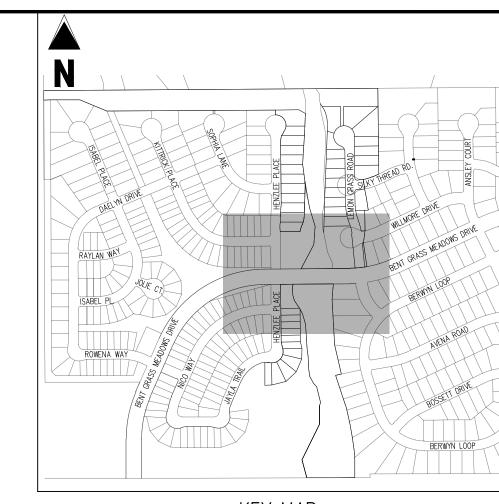
# Date Issue / Description

CLH000021 Project No: CMWJ Checked By: RGD 07/01/2022

GRADING & EROSION CONTROL INITIAL PLAN

Sheet 5 of 20





# <u>KEY MAP</u>

#### LEGEND

	EXISTING PROPERTY LINE
	PROPOSED PROJECT BOUNDARY
	PROPOSED RIGHT OF WAY LINE
	EXISTING LOT LINE
	PROPOSED LOT LINE
	EXISTING EASEMENT
	PROPOSED EASEMENT
	EXISTING SUBDIVISION BUFFER
— — — <i>— 6940</i> — — —	EXISTING MAJOR CONTOUR
6941	EXISTING MINOR CONTOUR
6940	PROPOSED MAJOR CONTOUR
6939	PROPOSED MINOR CONTOUR
	EXISTING STORM DRAIN PIPE
	PROPOSED STORM DRAIN PIPE
— — W——	EXISTING WATER LINE
——-w———	PROPOSED WATER LINE
——SS—— —— ——	EXISTING SANITARY SEWER LINE
—-ss———	PROPOSED SANITARY SEWER LINE
	EXISTING DRAINAGE FEATURE OUTLINE
	PROPOSED DRAINAGE FEATURE OUTLINE
<b>→</b> ··· <b>→</b> ··· <b>→</b> ··· <b>→</b> ··· <b>→</b> ··· <b>→</b>	EXISTING SWALE WITH FLOW DIRECTION
<b></b>	PROPOSED SWALE WITH FLOW DIRECTION
— — 100YR—	100-YEAR FEMA FLOODPLAIN
	CUT / FILL
	100-YEAR FLOODPLAIN 50-FT BUFFER
	PROPOSED 1" TO 2" CRUSHED ROCK
	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 #
<del></del> 161,	EXISTING LOT # (BENT GRASS FILING NO. 2)
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	PROPOSED ADA RAMP
E	SPOT ELEVATION - HIGH POINT

THE EROSION CONTROL DELINEATED ON THIS PLAN SHALL BE REGULARLY UPDATED BY 7. CONTRACTOR SHALL PROTECT ALL AREAS OUTSIDE OF THE CONSTRUCTION LIMITS WITH SILT FENCE OR OTHER METHOD TO PROTECT UNDISTURBED AREAS FROM EROSION.

CF CONSTRUCTION FENCE

(IPS) SUMP INLET PROTECTION

IPO ON-GRADE INLET PROTECTION

VTC VEHICLE TRACKING CONTROL

CWA CONCRETE WASHOUT AREA

(SSA) STABILIZED STAGING AREA

PT PORTABLE TOILET

SP) STOCKPILE

CD CHECK DAM

(RR) RIPRAP OUTFALL PADS

WP) WASHOUT POSTING

SBB STRAW BALE BARRIER

SCL SEDIMENT CONTROL LOG

SB SEDIMENT BASIN

SITE SITE (CONTACTS AND PERMITS)

- 8. ALL TEMPORARY OR PERMANENT GRADING DISTURBANCES SHALL BE RE-SEEDED AND MULCHED PER EL PASO COUNTY CRITERIA AND SPECIFICATIONS. 9. ALL TEMPORARY RIPRAP SHOWN ON THE PLANS SHALL BE TYPE 'M'. RIPRAP SHALL BE PLACED IN THE LOCATIONS INDICATED BY THE PLAN OR IN AREAS AS THE CONTRACTOR SEES FIT TO CONTROL EROSION. ALL RIPRAP SHALL BE PLACED AT A MINIMUM THICKNESS
- 10. ALL TEMPORARY STORM DRAIN SHOWN ON THE PLANS SHALL BE 24" DIA. HP POLYPROPYLENE. ALL PIPE SHALL BE LAID TO ACHIEVE A MIN. SLOPE OF 0.5%.

#### FROSION CONTROL PHASING SCHEDLILE

EROSION CONTROL PHASING SCHEDULE	
PHASE	DESCRIPTION
INITIAL	INSTALL SITE POSTING, SILT FENCE, INLET PROTECTION MEASURES ON EXISTING INLETS, AND CURB SOCKS ALONG BENT GRASS MEADOWS DRIVE & HENZLEE PLACE
INTERIM	INSTALL STABILIZED STAGING AREA, VEHICLE TRACKING CONTROL AT ENTRANCES, AND CONCRETE WASHOUT AREA. THEN OVERLOT GRADE THE ENTIRE PROJECT SITE AS SHOWN ON PLAN VIEW, INSTALL STRAW BALE BARRIERS ALONG INTERNAL ROADWAYS, AND INSTALL CHECK DAMS ALONG PROPOSED SWALES. FINALLY, INSTALL PROPOSED STORM SEWER. CONTRACTOR TO USE EXTREME CAUTION TO NOT DAMAGE THE WATER AND WASTEWATER IMPROVEMENTS COMPLETED IN THE UTILITY CONSTRUCTION PLANS. REMOVE THE TEMPORARY SEDIMENT TRAPS ONCE CONSTRUCTION BEGINS ON CURB/GUTTER AND PAVEMENT.
FINAL	CONSTRUCT CURB/GUTTER AND PAVEMENT. CONSTRUCT GAS/ELECTRIC/CABLE/PHONE IN ROW AREAS. REMOVE CONSTRUCTION BMP'S ONCE VERTICAL CONSTRUCTION OF HOUSES AND APPLICABLE LANDSCAPING IS

#### BASIS OF BEARINGS

55.00 FG

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 NOO"13'46"W AND MONUMENTED AS SHOWN:

#### BENCHMARK

CONSTRUCTION.

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

# <u>CAUTION - NOTICE TO CONTRACTOR</u>

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

HORIZONTAL AND VERTICAL LOCATION OF SUCH EXISTING UTILITY, EITHER THROUGH POTHOLING OR ALTERNATIVE METHOD. REPORT INFORMATION TO THE ENGINEER PRIOR TO

2. WHERE A PROPOSED UTILITY CROSSES AN EXISTING UTILITY, IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE

Know what's below. Call before you dig.

Sheet 6 of 20

**GRADING & EROSION** 

CONTROL INITIAL PLAN

Project No:

Checked By:

CLH000021

07/01/2022

CMWJ

RGD

# Date Issue / Description

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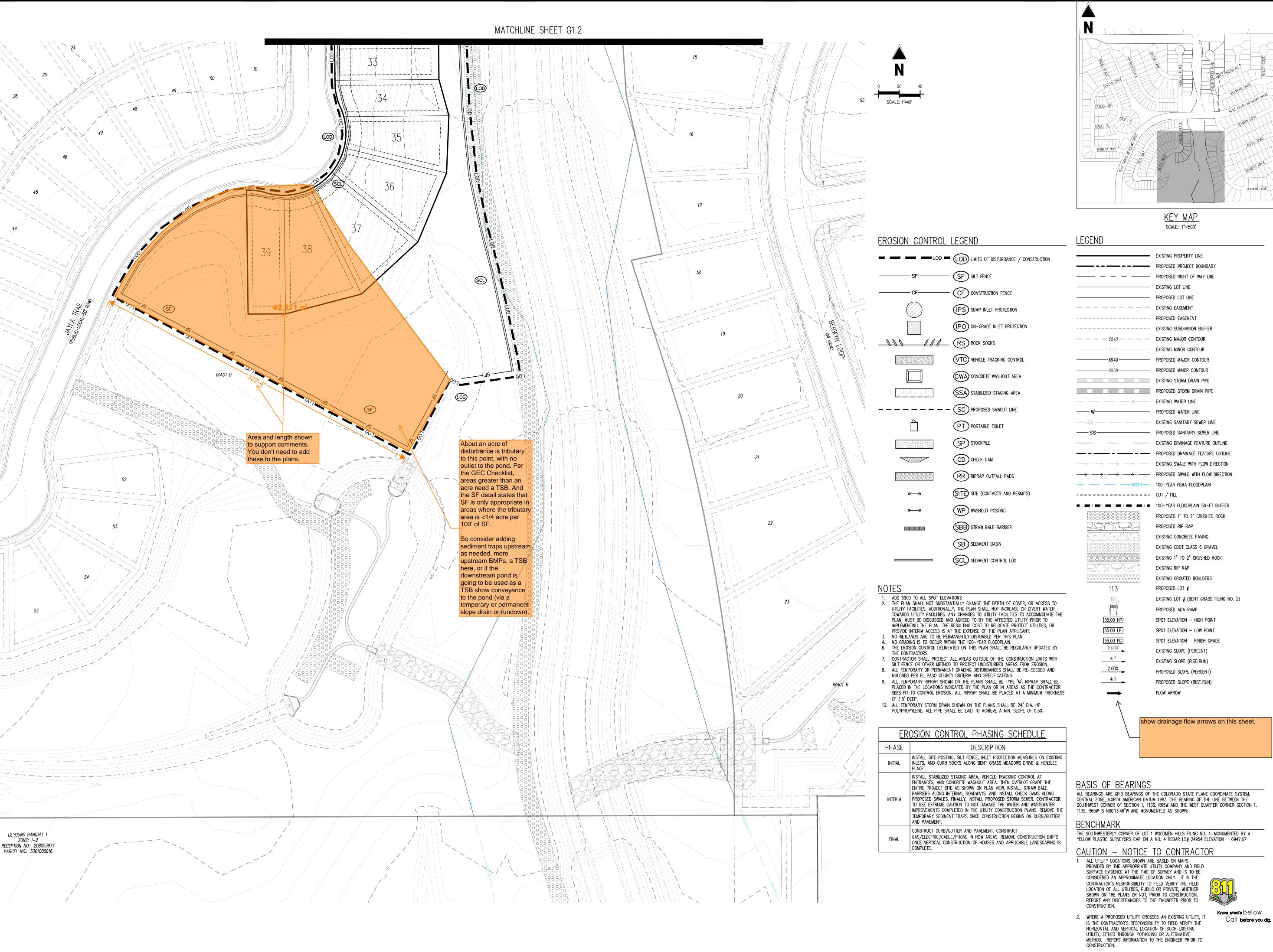
CHALLENGER HOMES—

SPOT ELEVATION - HIGH POINT 55.00 LP SPOT ELEVATION - LOW POINT SPOT ELEVATION — FINISH GRADE EXISTING SLOPE (PERCENT)

FLOW ARROW

EXISTING SLOPE (RISE:RUN) PROPOSED SLOPE (PERCENT) PROPOSED SLOPE (RISE: RUN)

show drainage flow arrows on this sheet.



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CONSTRUCTION DOCUMENTS
-ALCON MEADOWS AT BENT GRASS FILING
-OR
CHALLENGER COMMUNTIES, LLC

 Project No:
 CLH000021

 Drawn By:
 CMWJ

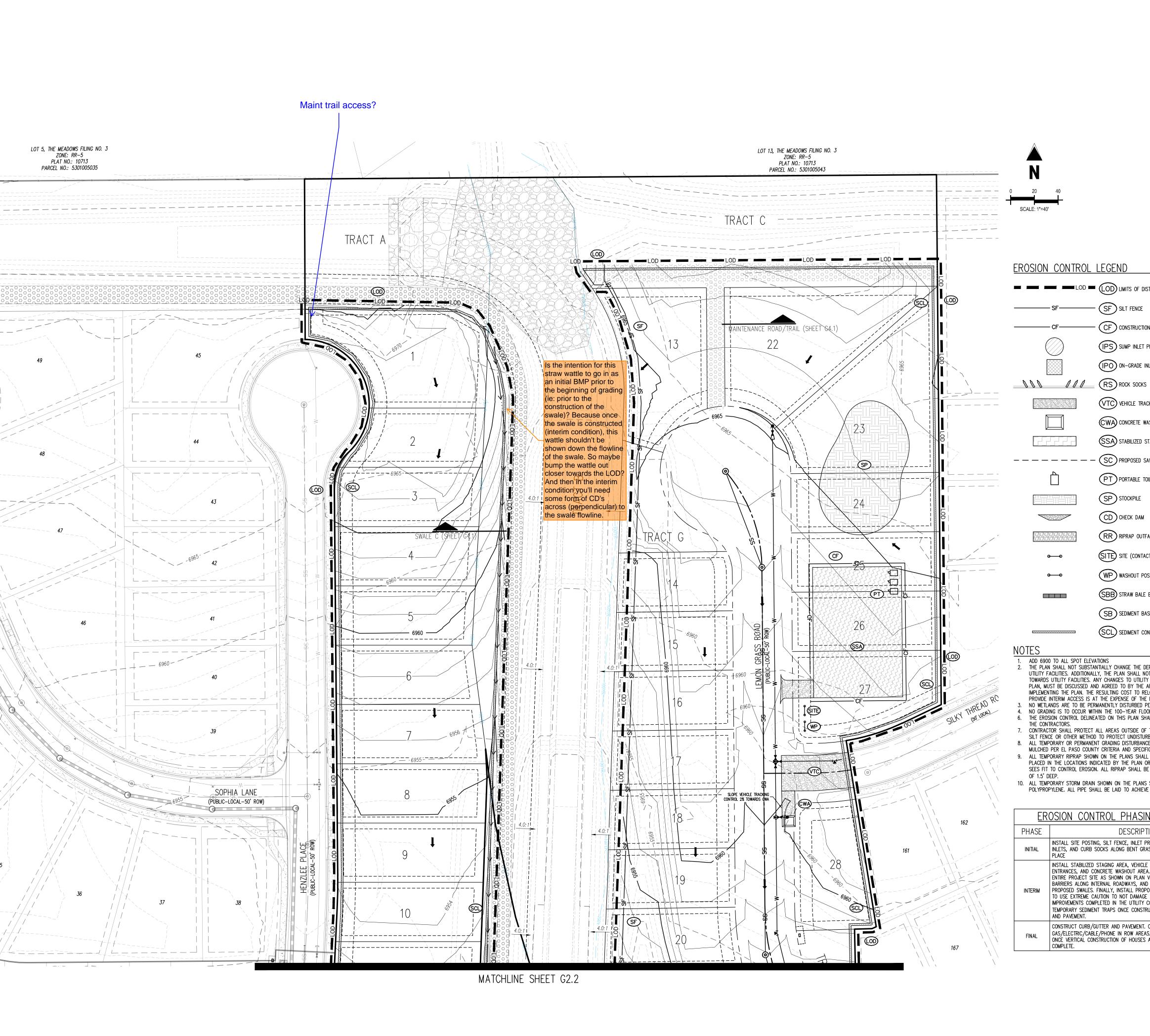
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 RGD

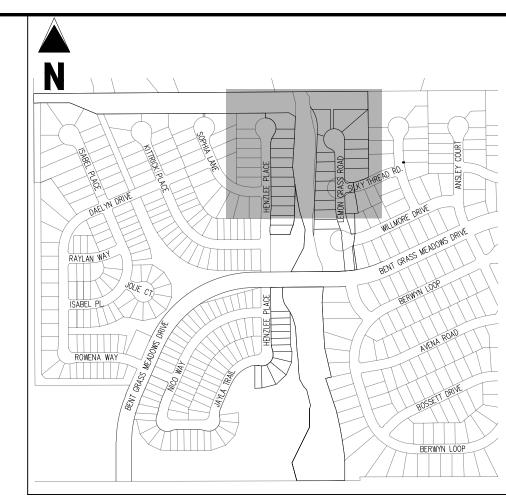
 Date:
 07/01/2022

GRADING & EROSION CONTROL INITIAL PLAN

G1.3

Sheet 7 of 20





<u>KEY MAP</u> SCALE: 1"=500'

EXISTING CDOT CLASS 6 GRAVEL

EXISTING GROUTED BOULDERS

SPOT ELEVATION - HIGH POINT

SPOT ELEVATION - LOW POINT

EXISTING SLOPE (PERCENT)

EXISTING SLOPE (RISE:RUN)

PROPOSED SLOPE (PERCENT)

PROPOSED SLOPE (RISE: RUN)

FLOW ARROW

SPOT ELEVATION - FINISH GRADE

EXISTING LOT # (BENT GRASS FILING NO. 2)

EXISTING RIP RAP

PROPOSED LOT #

PROPOSED ADA RAMP

EXISTING 1" TO 2" CRUSHED ROCK I'm not seeing this

linetype anywhere on these plans. Per GEC

Checklist item "p,"

please add it in.

#### LEGEND

	PROPOSED PROJECT BOUNDARY
	PROPOSED RIGHT OF WAY LINE
	EXISTING LOT LINE
	PROPOSED LOT LINE
	EXISTING EASEMENT
	PROPOSED EASEMENT
	EXISTING SUBDIVISION BUFFER
— — — 6940 — — —	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
6940	PROPOSED MAJOR CONTOUR
6939	PROPOSED MINOR CONTOUR
	EXISTING STORM DRAIN PIPE
	PROPOSED STORM DRAIN PIPE
	EXISTING WATER LINE
W	PROPOSED WATER LINE
——SS—— —— ——	EXISTING SANITARY SEWER LINE
——ss———	PROPOSED SANITARY SEWER LINE
	EXISTING DRAINAGE FEATURE OUTLINE
	PROPOSED DRAINAGE FEATURE OUTLINE
$\longrightarrow \cdots \longrightarrow \cdots \longrightarrow \cdots$	EXISTING SWALE WITH FLOW DIRECTION
<b></b>	PROPOSED SWALE WITH FLOW DIRECTION
	100-YEAR FEMA FLOODPLAIN
	CUT / FILL
	100-YEAR FLOODPLAIN 50-FT BUFFER
	PROPOSED 1" TO 2" CRUSHED ROCK
	PROPOSED RIP RAP
	EXISTING CONCRETE PAVING

ADD 6900 TO ALL SPOT ELEVATIONS THE PLAN SHALL NOT SUBSTANTIALLY CHANGE THE DEPTH OF COVER, OR ACCESS TO UTILITY FACILITIES. ADDITIONALLY, THE PLAN SHALL NOT INCREASE OR DIVERT WATER TOWARDS UTILITY FACILITIES. ANY CHANGES TO UTILITY FACILITIES TO ACCOMMODATE THE PLAN, MUST BE DISCUSSED AND AGREED TO BY THE AFFECTED UTILITY PRIOR TO IMPLEMENTING THE PLAN. THE RESULTING COST TO RELOCATE PROTECT UTILITIES, OR PROVIDE INTERIM ACCESS IS AT THE EXPENSE OF THE PLAN APPLICANT.

LOD LIMITS OF DISTURBANCE / CONSTRUCTION

CF CONSTRUCTION FENCE

IPS SUMP INLET PROTECTION

(IPO) ON-GRADE INLET PROTECTION

VTC VEHICLE TRACKING CONTROL

CWA CONCRETE WASHOUT AREA

SSA STABILIZED STAGING AREA

SC PROPOSED SAWCUT LINE

(RR) RIPRAP OUTFALL PADS

WP) WASHOUT POSTING

SBB STRAW BALE BARRIER

SCL SEDIMENT CONTROL LOG

SB SEDIMENT BASIN

SITE SITE (CONTACTS AND PERMITS)

PT PORTABLE TOILET

SP STOCKPILE

CD CHECK DAM

- NO WETLANDS ARE TO BE PERMANENTLY DISTURBED PER THIS PLAN. NO GRADING IS TO OCCUR WITHIN THE 100-YEAR FLOODPLAIN. THE EROSION CONTROL DELINEATED ON THIS PLAN SHALL BE REGULARLY UPDATED BY THE CONTRACTORS.
- CONTRACTOR SHALL PROTECT ALL AREAS OUTSIDE OF THE CONSTRUCTION LIMITS WITH SILT FENCE OR OTHER METHOD TO PROTECT UNDISTURBED AREAS FROM EROSION. ALL TEMPORARY OR PERMANENT GRADING DISTURBANCES SHALL BE RE-SEEDED AND MULCHED PER EL PASO COUNTY CRITERIA AND SPECIFICATIONS.
- ALL TEMPORARY RIPRAP SHOWN ON THE PLANS SHALL BE TYPE 'M'. RIPRAP SHALL BE PLACED IN THE LOCATIONS INDICATED BY THE PLAN OR IN AREAS AS THE CONTRACTOR SEES FIT TO CONTROL EROSION. ALL RIPRAP SHALL BE PLACED AT A MINIMUM THICKNESS
- 10. ALL TEMPORARY STORM DRAIN SHOWN ON THE PLANS SHALL BE 24" DIA. HP POLYPROPYLENE. ALL PIPE SHALL BE LAID TO ACHIEVE A MIN. SLOPE OF 0.5%.

	EROSION CONTROL PHASING SCHEDULE		
	PHASE	DESCRIPTION	
	INITIAL	INSTALL SITE POSTING, SILT FENCE, INLET PROTECTION MEASURES ON EXISTING INLETS, AND CURB SOCKS ALONG BENT GRASS MEADOWS DRIVE & HENZLEE PLACE	
	INSTALL STABILIZED STAGING AREA, VEHICLE TRACKING CONTROL AT ENTRANCES, AND CONCRETE WASHOUT AREA. THEN OVERLOT GRADE THE ENTIRE PROJECT SITE AS SHOWN ON PLAN VIEW, INSTALL STRAW BALE BARRIERS ALONG INTERNAL ROADWAYS, AND INSTALL CHECK DAMS ALONG PROPOSED SWALES. FINALLY, INSTALL PROPOSED STORM SEWER. CONTRACTOR TO USE EXTREME CAUTION TO NOT DAMAGE THE WATER AND WASTEWATER IMPROVEMENTS COMPLETED IN THE UTILITY CONSTRUCTION PLANS. REMOVE THE TEMPORARY SEDIMENT TRAPS ONCE CONSTRUCTION BEGINS ON CURB/GUTTER AND PAVEMENT.		
		GAS/ELECTRIC/CABLE/PHONE IN ROW AREAS. REMOVE CONSTRUCTION BMP'S ONCE VERTICAL CONSTRUCTION OF HOUSES AND APPLICABLE LANDSCAPING IS	

BASIS OF BEARINGS

113

55.00 HP

55.00 LP

55.00 FG

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 NOO'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

### <u>CAUTION - NOTICE TO CONTRACTOR</u>

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

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.



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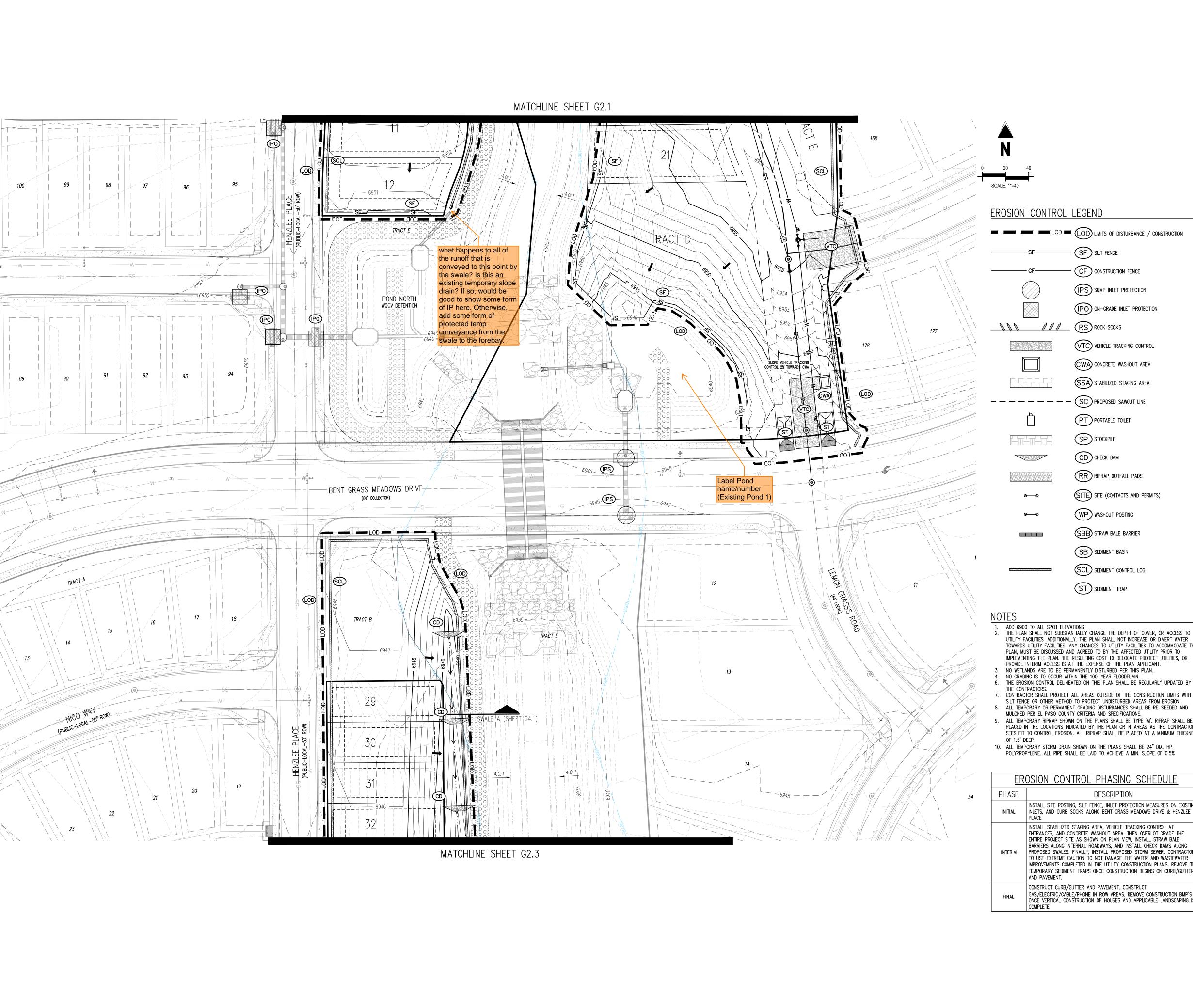
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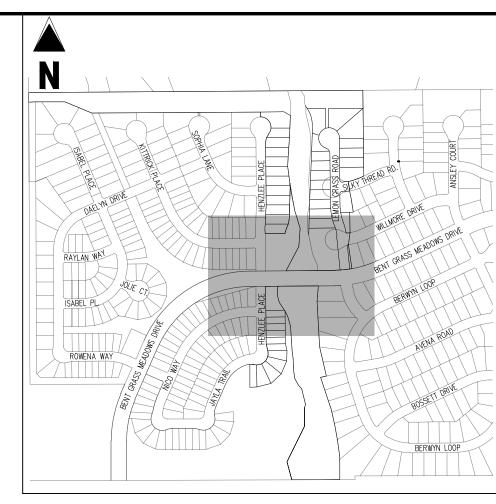
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Project No:	CLH000021
Drawn By:	CMWJ
Checked By:	RGD
Date:	07/01/2022
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GRADING & EROSION CONTROL INTERIM PLAN

Sheet 8 of 20





# <u>KEY MAP</u>

#### LEGEND

	EXISTING PROPERTY LINE
	PROPOSED PROJECT BOUNDAR
	PROPOSED RIGHT OF WAY LINE
	EXISTING LOT LINE
	PROPOSED LOT LINE
	EXISTING EASEMENT
	PROPOSED EASEMENT
	EXISTING SUBDIVISION BUFFER
— — — 6940 — — — —	EXISTING MAJOR CONTOUR
6941	EXISTING MINOR CONTOUR
6940	PROPOSED MAJOR CONTOUR
6939———	PROPOSED MINOR CONTOUR
	EXISTING STORM DRAIN PIPE
	PROPOSED STORM DRAIN PIPE
— — — W——	EXISTING WATER LINE
——w—	PROPOSED WATER LINE
—SS— — — —	EXISTING SANITARY SEWER LIN
——SS———	PROPOSED SANITARY SEWER L
	EXISTING DRAINAGE FEATURE (
	PROPOSED DRAINAGE FEATURE
$\longrightarrow \cdots \longrightarrow \cdots \longrightarrow \cdots$	EXISTING SWALE WITH FLOW DI
<del></del>	PROPOSED SWALE WITH FLOW
— — — 100YR—	100-YEAR FEMA FLOODPLAIN
	CUT / FILL
	100-YEAR FLOODPLAIN 50-FT
	PROPOSED 1" TO 2" CRUSHED

PROPOSED RIP RAP

EXISTING RIP RAP

EXISTING CONCRETE PAVING

EXISTING CDOT CLASS 6 GRAVEL

EXISTING GROUTED BOULDERS

EXISTING SLOPE (RISE:RUN)

PROPOSED SLOPE (PERCENT)

PROPOSED SLOPE (RISE: RUN)

FLOW ARROW

EXISTING 1" TO 2" CRUSHED ROCK PROPOSED LOT # EXISTING LOT # (BENT GRASS FILING NO. 2) PROPOSED ADA RAMP 55.00 HP SPOT ELEVATION - HIGH POINT 55.00 LP SPOT ELEVATION - LOW POINT 55.00 FG SPOT ELEVATION - FINISH GRADE EXISTING SLOPE (PERCENT)

#### 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 NOO'13'46"W AND MONUMENTED AS SHOWN:

#### BENCHMARK

CONSTRUCTION.

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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UTILITY, EITHER THROUGH POTHOLING OR ALTERNATIVE METHOD. REPORT INFORMATION TO THE ENGINEER PRIOR TO

Know what's below. 2. WHERE A PROPOSED UTILITY CROSSES AN EXISTING UTILITY, IT Call before you dig. IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF SUCH EXISTING

Project No:

Checked By:

**GRADING & EROSION** 

CONTROL INTERIM PLAN

Sheet 9 of 20

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CONSTRUCTION I

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CMWJ

RGD

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CHALLENGER HOMES—

LOD LIMITS OF DISTURBANCE / CONSTRUCTION

CF CONSTRUCTION FENCE (IPS) SUMP INLET PROTECTION (IPO) ON-GRADE INLET PROTECTION

VTC VEHICLE TRACKING CONTROL

> CWA CONCRETE WASHOUT AREA (SSA) STABILIZED STAGING AREA - SC PROPOSED SAWCUT LINE

> > PT PORTABLE TOILET SP STOCKPILE

CD CHECK DAM (RR) RIPRAP OUTFALL PADS

SITE SITE (CONTACTS AND PERMITS) WP) WASHOUT POSTING

(SBB) STRAW BALE BARRIER

SB SEDIMENT BASIN SCL SEDIMENT CONTROL LOG

ST) SEDIMENT TRAP

TOWARDS UTILITY FACILITIES. ANY CHANGES TO UTILITY FACILITIES TO ACCOMMODATE THE PLAN, MUST BE DISCUSSED AND AGREED TO BY THE AFFECTED UTILITY PRIOR TO IMPLEMENTING THE PLAN. THE RESULTING COST TO RELOCATE PROTECT UTILITIES, OR PROVIDE INTERIM ACCESS IS AT THE EXPENSE OF THE PLAN APPLICANT. 3. NO WETLANDS ARE TO BE PERMANENTLY DISTURBED PER THIS PLAN. NO GRADING IS TO OCCUR WITHIN THE 100-YEAR FLOODPLAIN. THE EROSION CONTROL DELINEATED ON THIS PLAN SHALL BE REGULARLY UPDATED BY

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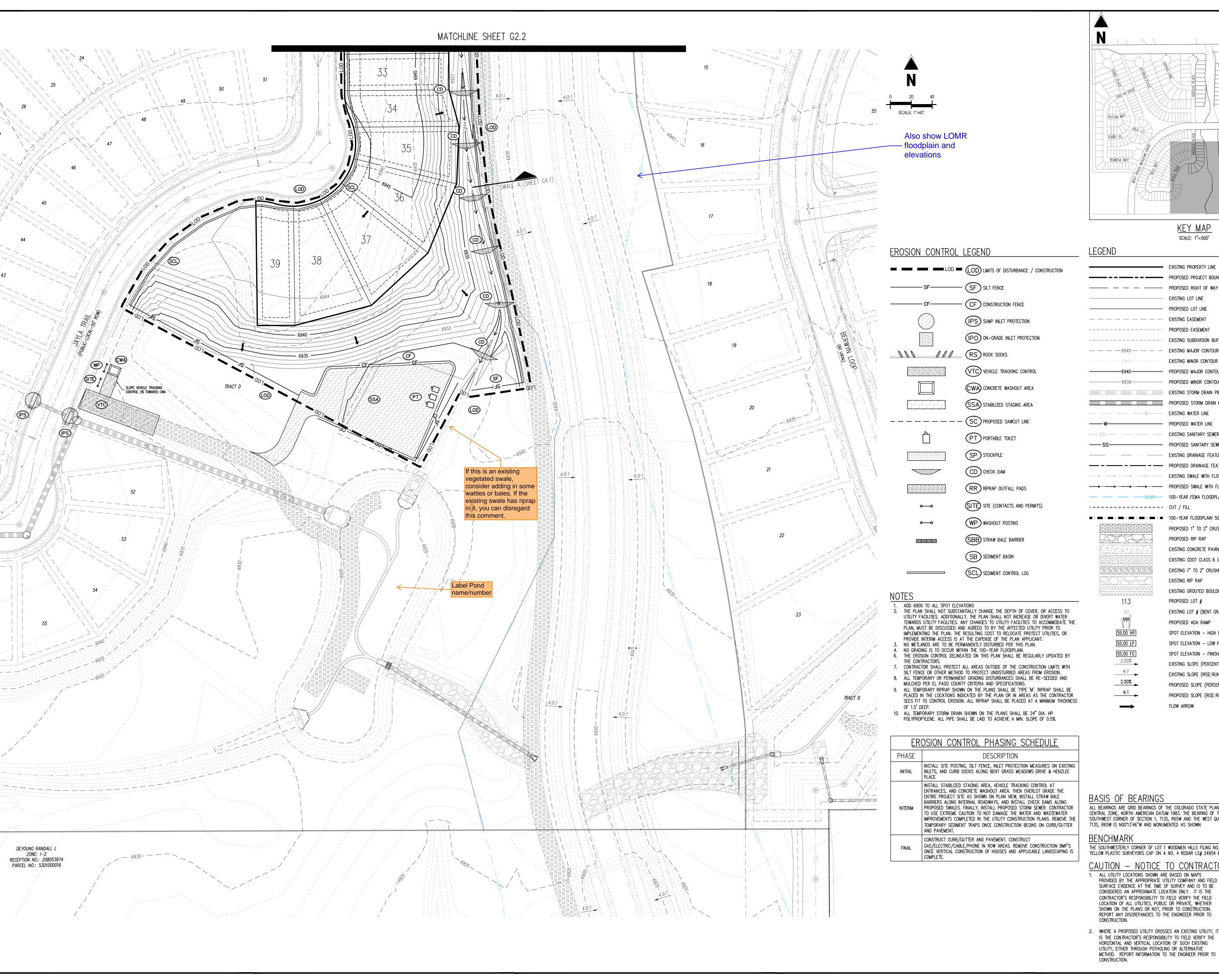
9. ALL TEMPORARY RIPRAP SHOWN ON THE PLANS SHALL BE TYPE 'M'. RIPRAP SHALL BE PLACED IN THE LOCATIONS INDICATED BY THE PLAN OR IN AREAS AS THE CONTRACTOR SEES FIT TO CONTROL EROSION. ALL RIPRAP SHALL BE PLACED AT A MINIMUM THICKNESS 10. ALL TEMPORARY STORM DRAIN SHOWN ON THE PLANS SHALL BE 24" DIA. HP

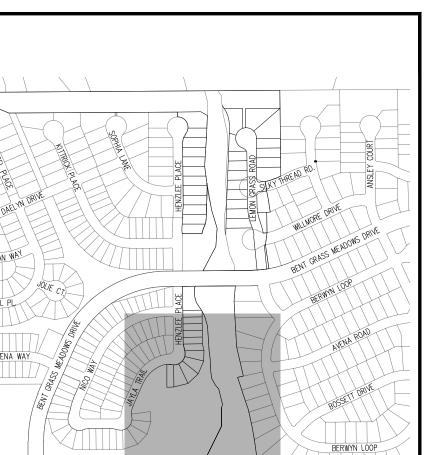
POLYPROPYLENE. ALL PIPE SHALL BE LAID TO ACHIEVE A MIN. SLOPE OF 0.5%.

<u>ER</u>	OSION CONTROL PHASING SCHEDULE
PHASE	DESCRIPTION
INITIAI	INSTALL SITE POSTING, SILT FENCE, INLET PROTECTION MEASURES ON EXISTI

INSTALL STABILIZED STAGING AREA, VEHICLE TRACKING CONTROL AT ENTRANCES, AND CONCRETE WASHOUT AREA. THEN OVERLOT GRADE THE ENTIRE PROJECT SITE AS SHOWN ON PLAN VIEW, INSTALL STRAW BALE BARRIERS ALONG INTERNAL ROADWAYS, AND INSTALL CHECK DAMS ALONG INTERIM PROPOSED SWALES. FINALLY, INSTALL PROPOSED STORM SEWER. CONTRACTOR TO USE EXTREME CAUTION TO NOT DAMAGE THE WATER AND WASTEWATER IMPROVEMENTS COMPLETED IN THE UTILITY CONSTRUCTION PLANS. REMOVE THE TEMPORARY SEDIMENT TRAPS ONCE CONSTRUCTION BEGINS ON CURB/GUTTER

AND PAVEMENT. CONSTRUCT CURB/GUTTER AND PAVEMENT. CONSTRUCT GAS/ELECTRIC/CABLE/PHONE IN ROW AREAS. REMOVE CONSTRUCTION BMP'S ONCE VERTICAL CONSTRUCTION OF HOUSES AND APPLICABLE LANDSCAPING IS





KEY MAP
SCALE: 1"=500'

	EXISTING PROPERTY LINE
	PROPOSED PROJECT BOUNDARY
	PROPOSED RIGHT OF WAY LINE
	EXISTING LOT LINE
	PROPOSED LOT LINE
	EXISTING EASEMENT
	PROPOSED EASEMENT
	EXISTING SUBDIVISION BUFFER
— — — 6940 — — — —	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
6940	PROPOSED MAJOR CONTOUR
6939	PROPOSED MINOR CONTOUR
	EXISTING STORM DRAIN PIPE
	PROPOSED STORM DRAIN PIPE
— — W——	EXISTING WATER LINE
——W———	PROPOSED WATER LINE
—SS— — — —	EXISTING SANITARY SEWER LINE
——SS———	PROPOSED SANITARY SEWER LINE
· · · ·	EXISTING DRAINAGE FEATURE OUTLINE
	PROPOSED DRAINAGE FEATURE OUTLINE
$\longrightarrow \cdots \longrightarrow \cdots \longrightarrow \cdots \longrightarrow \cdots$	EXISTING SWALE WITH FLOW DIRECTION
<del></del>	PROPOSED SWALE WITH FLOW DIRECTION
— — — 100YR—	100-YEAR FEMA FLOODPLAIN
	CUT / FILL
	100-YEAR FLOODPLAIN 50-FT BUFFER
	PROPOSED 1" TO 2" CRUSHED ROCK
	PROPOSED RIP RAP
	EXISTING CONCRETE PAVING
	EXISTING CDOT CLASS 6 GRAVEL
	EXISTING 1" TO 2" CRUSHED ROCK
ROSAS	EXISTING RIP RAP
	EVICTIVA ODOLITED DALILDEDO

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,

EXISTING GROUTED BOULDERS

SPOT ELEVATION - HIGH POINT

SPOT ELEVATION - LOW POINT

SPOT ELEVATION - FINISH GRADE

EXISTING SLOPE (PERCENT)

EXISTING SLOPE (RISE:RUN)

PROPOSED SLOPE (PERCENT)

PROPOSED SLOPE (RISE: RUN)

FLOW ARROW

EXISTING LOT # (BENT GRASS FILING NO. 2)

PROPOSED LOT #

PROPOSED ADA RAMP

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

### <u>CAUTION - NOTICE TO CONTRACTOR</u>

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

2. WHERE A PROPOSED UTILITY CROSSES AN EXISTING UTILITY, IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE

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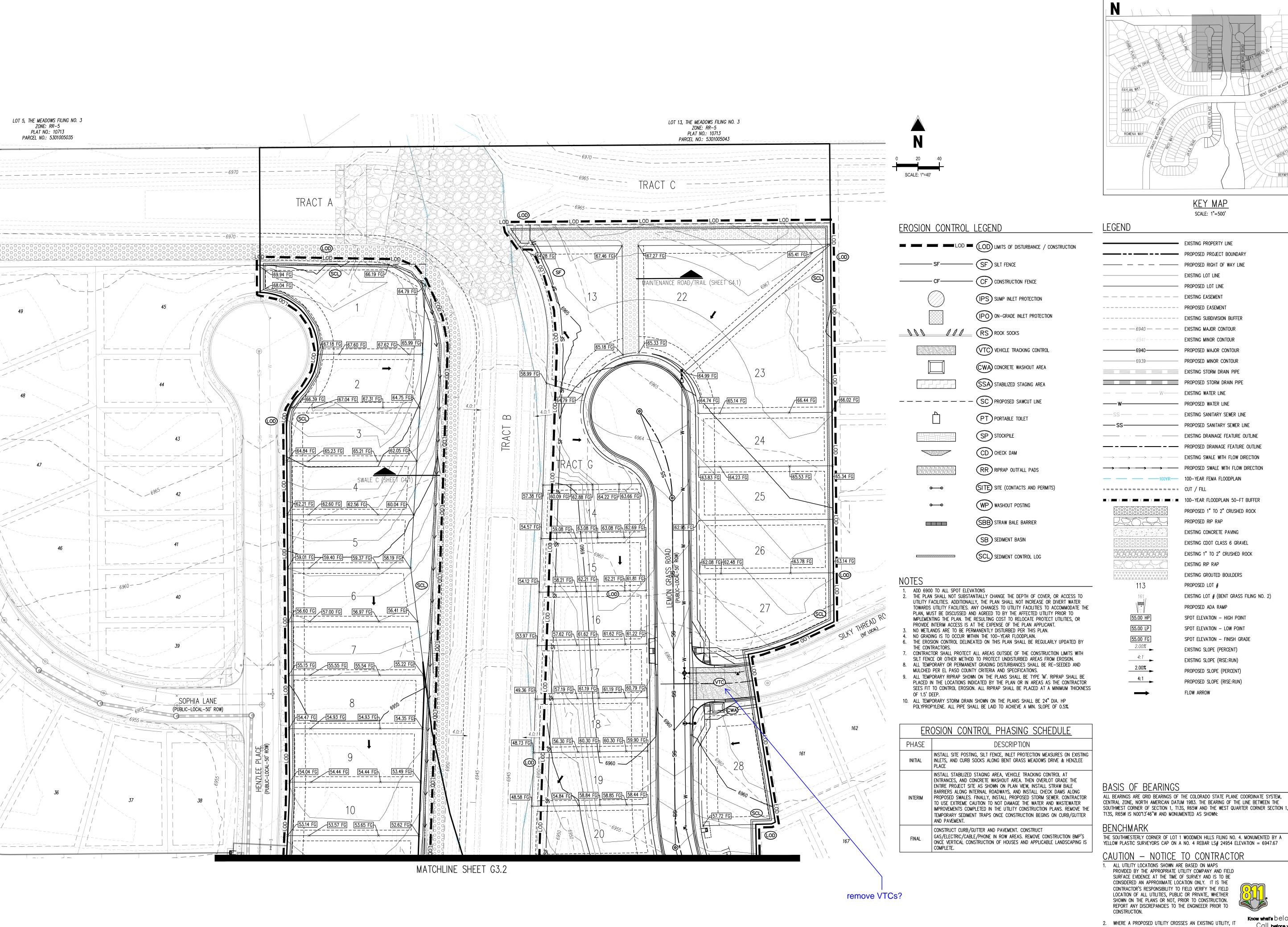
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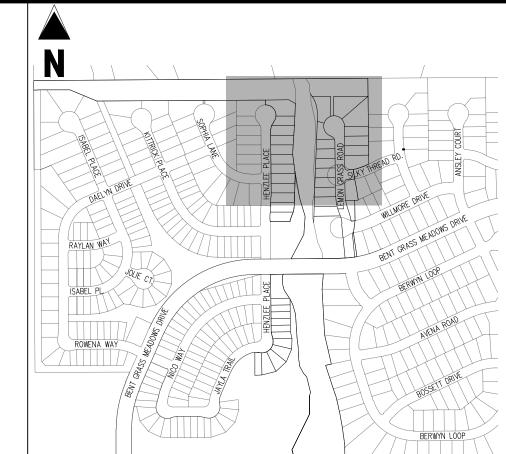
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**GRADING & EROSION** CONTROL INTERIM PLAN

Sheet 10 of 20





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YELLOW PLASTIC SURVEYORS CAP ON A NO. 4 REBAR LS# 24954 ELEVATION = 6947.67

METHOD. REPORT INFORMATION TO THE ENGINEER PRIOR TO

CONSTRUCTION.

IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF SUCH EXISTING UTILITY, EITHER THROUGH POTHOLING OR ALTERNATIVE



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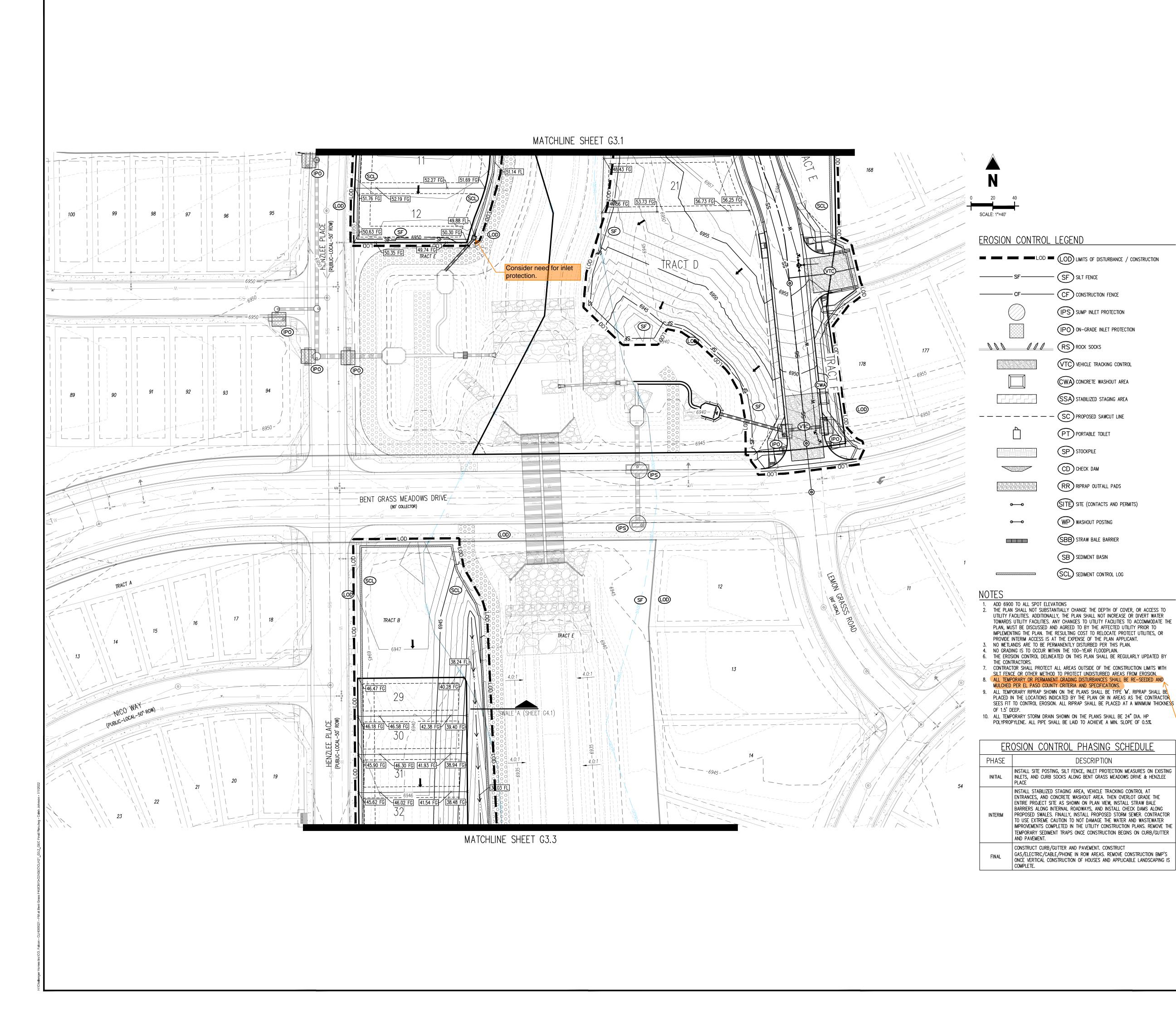
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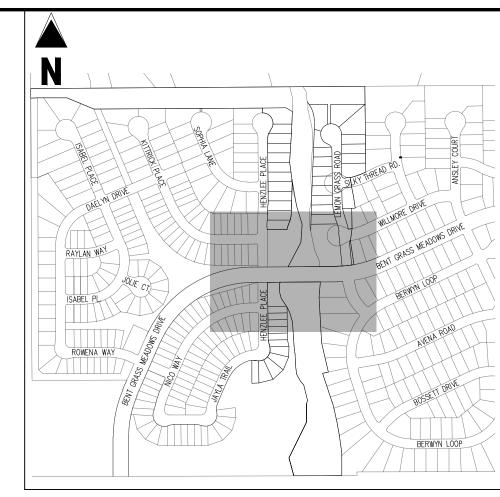
# Date Issue / Description

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**GRADING & EROSION** CONTROL FINAL PLAN

Sheet 11 of 20





# KEY MAP SCALE: 1"=500'

#### LEGEND

LEGEND	
	EXISTING PROPERTY LINE
	PROPOSED PROJECT BOUNDARY
	PROPOSED RIGHT OF WAY LINE
	EXISTING LOT LINE
	PROPOSED LOT LINE
	EXISTING EASEMENT
	PROPOSED EASEMENT
	EXISTING SUBDIVISION BUFFER
— — — 6940 — — — —	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
6940	PROPOSED MAJOR CONTOUR
6939	PROPOSED MINOR CONTOUR
	EXISTING STORM DRAIN PIPE
	PROPOSED STORM DRAIN PIPE
	EXISTING WATER LINE
W	PROPOSED WATER LINE
——SS—— —— ——	EXISTING SANITARY SEWER LINE
——ss———	PROPOSED SANITARY SEWER LINE
	EXISTING DRAINAGE FEATURE OUTL
	PROPOSED DRAINAGE FEATURE OU
$\longrightarrow \cdots \longrightarrow \cdots \longrightarrow \cdots$	EXISTING SWALE WITH FLOW DIRECT
<b></b>	PROPOSED SWALE WITH FLOW DIRE
— — — 100YR—	100-YEAR FEMA FLOODPLAIN

CUT / FILL

55.00 HP

PROPOSED ADA RAMP SPOT ELEVATION - HIGH POINT 55.00 LP SPOT ELEVATION - LOW POINT 55.00 FG SPOT ELEVATION - FINISH GRADE EXISTING SLOPE (PERCENT) EXISTING SLOPE (RISE:RUN) PROPOSED SLOPE (PERCENT) PROPOSED SLOPE (RISE: RUN)

#### Item Z. Include details for the following BMP's. Examples of acceptable details for each are provided:

		Detail # and Source	
вмр	DCM (Vol 2: Chap 3.3)	MHFD (USDCM Vol 3:	COS - Stormwate Construction
<b>*</b>	(VOI 2. Chap 3.3)	<u>Chap 7)</u>	Manual (App E
Mulching	MU-1	EC-4	X
Seeding	TS-1	EC-2	X

FLOW ARROW

100-YEAR FLOODPLAIN 50-FT BUFFER

PROPOSED 1" TO 2" CRUSHED ROCK

PROPOSED RIP RAP

EXISTING RIP RAP

PROPOSED LOT #

EXISTING CONCRETE PAVING

EXISTING CDOT CLASS 6 GRAVEL

EXISTING 1" TO 2" CRUSHED ROCK

EXISTING GROUTED BOULDERS

EXISTING LOT # (BENT GRASS FILING NO. 2)

#### BASIS OF BEARINGS

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#### BENCHMARK

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

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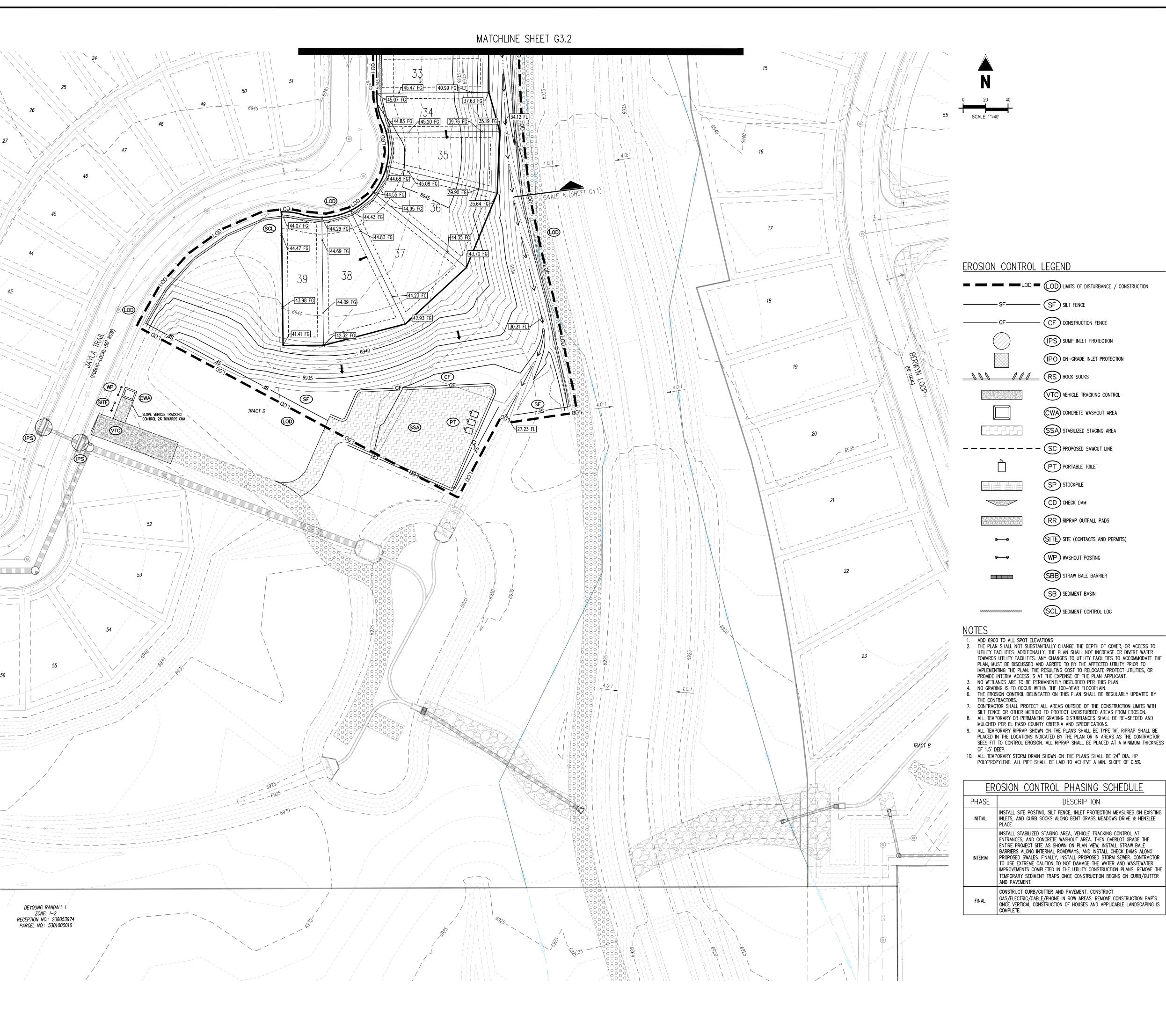
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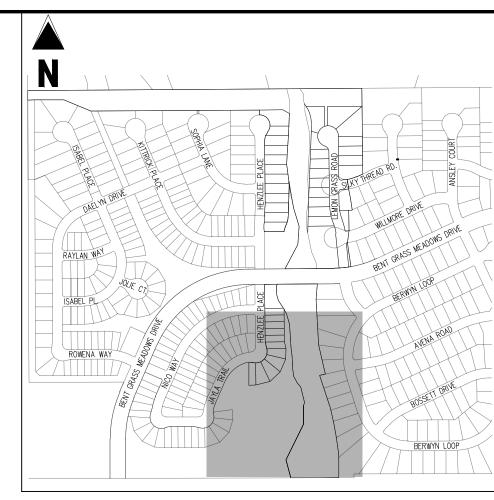
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**GRADING & EROSION** CONTROL FINAL PLAN

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# <u>KEY MAP</u>

#### LEGEND

LOD LIMITS OF DISTURBANCE / CONSTRUCTION EXISTING LOT LINE CF CONSTRUCTION FENCE PROPOSED LOT LINE (IPS) SUMP INLET PROTECTION ---- Existing easement PROPOSED EASEMENT (IPO) ON-GRADE INLET PROTECTION EXISTING SUBDIVISION BUFFER EXISTING MAJOR CONTOUR EXISTING MINOR CONTOUR VTC VEHICLE TRACKING CONTROL PROPOSED MINOR CONTOUR CWA CONCRETE WASHOUT AREA SSA) STABILIZED STAGING AREA - SC PROPOSED SAWCUT LINE EXISTING SANITARY SEWER LINE PT PORTABLE TOILET SP) STOCKPILE CD CHECK DAM (RR) RIPRAP OUTFALL PADS 100-YEAR FEMA FLOODPLAIN SITE SITE (CONTACTS AND PERMITS) CUT / FILL ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | 100-YEAR FLOODPLAIN 50-FT BUFFER WP) WASHOUT POSTING

113

55.00 HP 55.00 LP 55.00 FG

PROPOSED LOT # EXISTING LOT # (BENT GRASS FILING NO. 2) PROPOSED ADA RAMP SPOT ELEVATION - HIGH POINT SPOT ELEVATION - LOW POINT SPOT ELEVATION - FINISH GRADE EXISTING SLOPE (PERCENT) EXISTING SLOPE (RISE:RUN) PROPOSED SLOPE (PERCENT) PROPOSED SLOPE (RISE: RUN)

FLOW ARROW

PROPOSED 1" TO 2" CRUSHED ROCK

PROPOSED RIP RAP

EXISTING RIP RAP

EXISTING CONCRETE PAVING

EXISTING CDOT CLASS 6 GRAVEL

EXISTING 1" TO 2" CRUSHED ROCK

EXISTING GROUTED BOULDERS

INSTALL SITE POSTING, SILT FENCE, INLET PROTECTION MEASURES ON EXISTING INITIAL INLETS, AND CURB SOCKS ALONG BENT GRASS MEADOWS DRIVE & HENZLEE INSTALL STABILIZED STAGING AREA, VEHICLE TRACKING CONTROL AT ENTRANCES, AND CONCRETE WASHOUT AREA. THEN OVERLOT GRADE THE ENTIRE PROJECT SITE AS SHOWN ON PLAN VIEW, INSTALL STRAW BALE BARRIERS ALONG INTERNAL ROADWAYS, AND INSTALL CHECK DAMS ALONG PROPOSED SWALES. FINALLY, INSTALL PROPOSED STORM SEWER. CONTRACTOR TO USE EXTREME CAUTION TO NOT DAMAGE THE WATER AND WASTEWATER IMPROVEMENTS COMPLETED IN THE UTILITY CONSTRUCTION PLANS. REMOVE THE TEMPORARY SEDIMENT TRAPS ONCE CONSTRUCTION BEGINS ON CURB/GUTTER

DESCRIPTION

CONSTRUCT CURB/GUTTER AND PAVEMENT. CONSTRUCT GAS/ELECTRIC/CABLE/PHONE IN ROW AREAS. REMOVE CONSTRUCTION BMP'S ONCÉ VERTICAL CONSTRUCTION OF HOUSES AND APPLICABLE LANDSCAPING IS

#### 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 N0013'46"W AND MONUMENTED AS SHOWN:

#### BENCHMARK

CONSTRUCTION.

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

#### <u>CAUTION - NOTICE TO CONTRACTOR</u>

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

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



Call before you dig.

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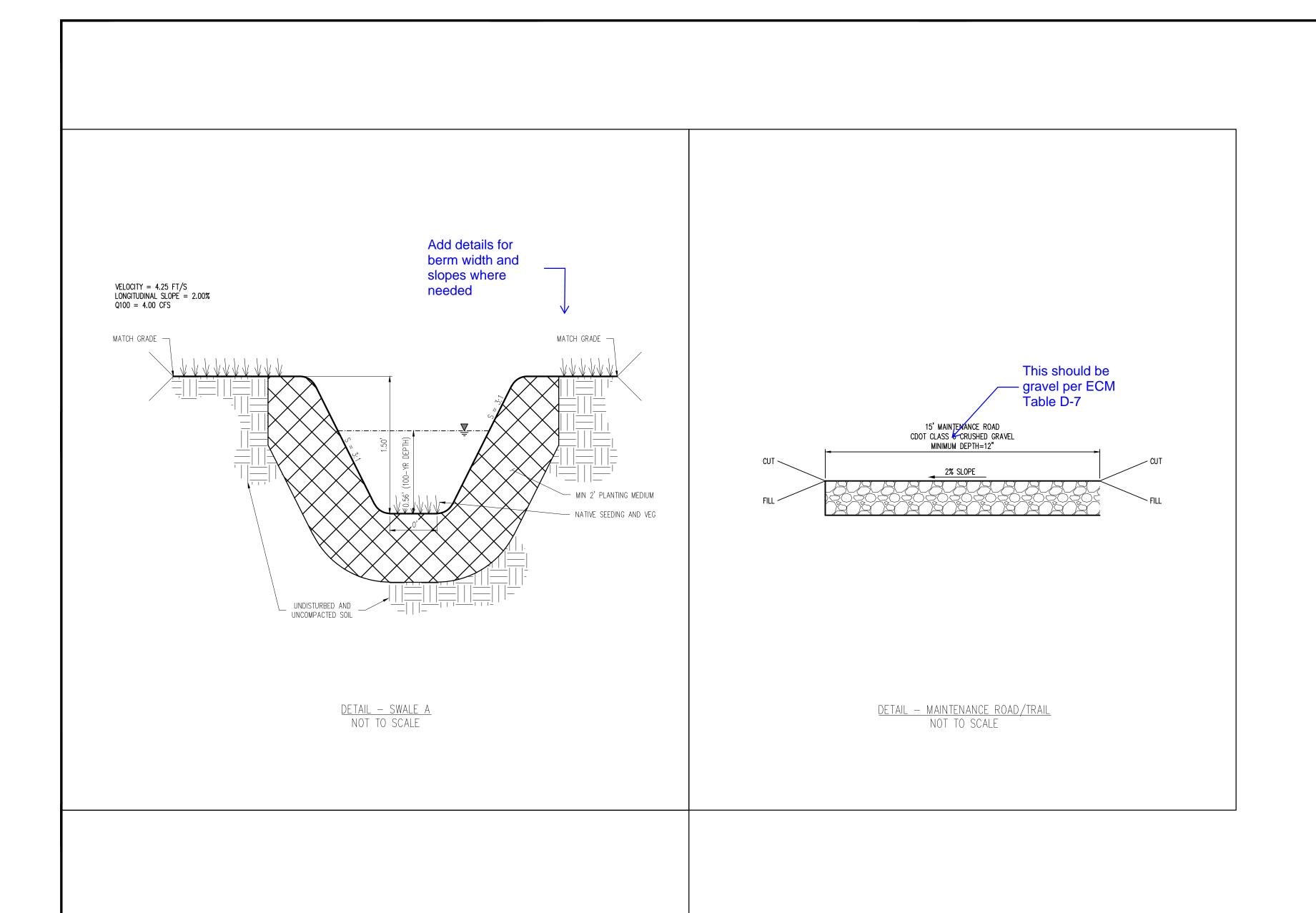
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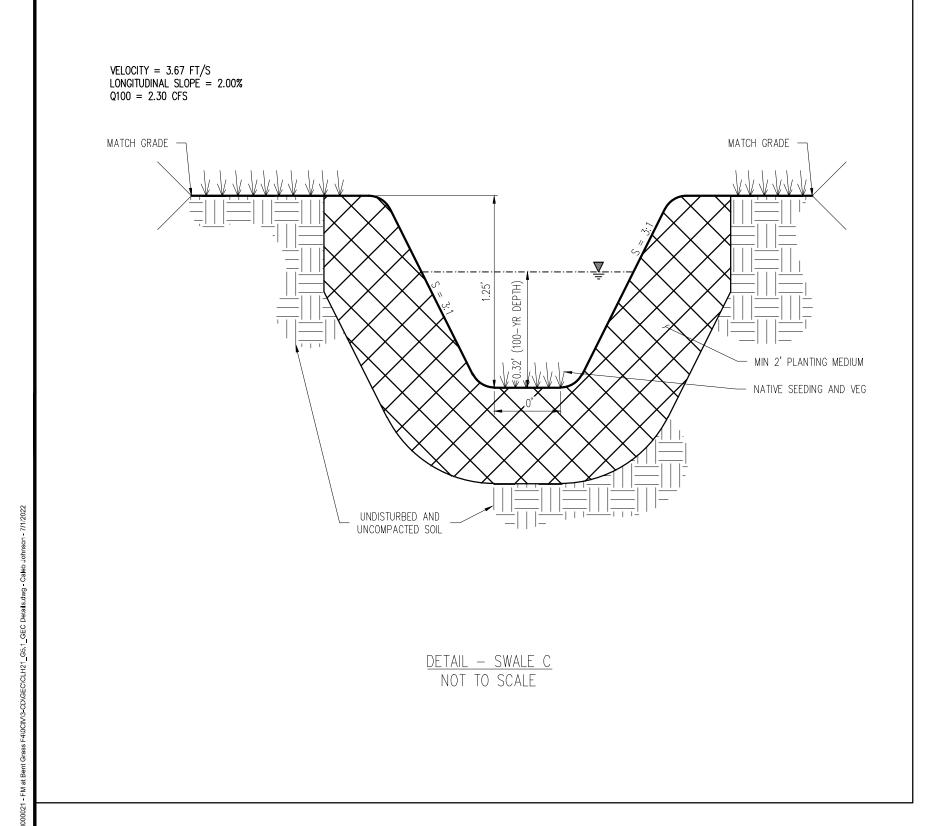
# Date Issue / Description

CLH000021 Project No: CMWJ Drawn By: Checked By: RGD

07/01/2022

**GRADING & EROSION** CONTROL FINAL PLAN







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FILING NO. CONSTRUCTION DOCUMENTS
FALCON MEADOWS AT BENT GRAS
FOR
CHALLENGER COMMUNTIES, LLC

# Date Issue / Description Init.

CLH000021 CMWJ RGD Date: 07/01/2022
SWALE CROSS SECTIONS 07/01/2022

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**EC-12 Check Dams (CD)** 

CHECK DAM INSTALLATION NOTES

OR TYPE L (D50 9").

 SEE PLAN VIEW FOR:
 -LOCATION OF CHECK DAMS. -CHECK DAM TYPE (CHECK DAM OR REINFORCED CHECK DAM). -LENGTH (L), CREST LENGTH (CL), AND DEPTH (D).

2. CHECK DAMS INDICATED ON INITIAL SWMP SHALL BE INSTALLED AFTER CONSTRUCTION FENCE, BUT PRIOR TO ANY UPSTREAM LAND DISTURBING ACTIVITIES.

3. RIPRAP UTILIZED FOR CHECK DAMS SHOULD BE OF APPROPRIATE SIZE FOR THE APPLICATION. TYPICAL TYPES OF RIPRAP USED FOR CHECK DAMS ARE TYPE M (D50 12")

4. RIPRAP PAD SHALL BE TRENCHED INTO THE GROUND A MINIMUM OF 1'.

5. THE ENDS OF THE CHECK DAM SHALL BE A MINIMUM OF 1' 6" HIGHER THAN THE CENTER OF THE CHECK DAM.

#### CHECK DAM MAINTENANCE NOTES

DOCUMENTED THOROUGHLY.

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

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON

4. SEDIMENT ACCUMULATED UPSTREAM OF THE CHECK DAMS SHALL BE REMOVED WHEN THE SEDIMENT DEPTH IS WITHIN 1/2 OF THE HEIGHT OF THE CREST.

5. CHECK DAMS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.

6. WHEN CHECK DAMS ARE REMOVED, EXCAVATIONS SHALL BE FILLED WITH SUITABLE COMPACTED BACKFILL. DISTURBED AREA SHALL BE SEEDED AND MULCHED AND COVERED WITH GEOTEXTILE OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

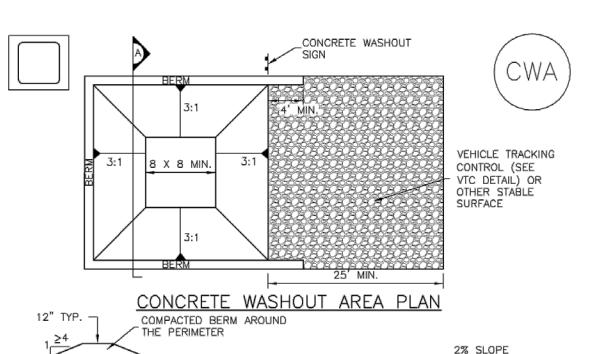
(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)

 $\underline{\text{NOTE:}}$  MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

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**Concrete Washout Area (CWA)** 



DETAIL ) CWA-1. CONCRETE WASHOUT AREA

8 X 8 MIN.

CWA INSTALLATION NOTES

UNDISTURBED OR 1

COMPACTED SOIL

1. SEE PLAN VIEW FOR: -CWA INSTALLATION LOCATION.

2. DO NOT LOCATE AN UNLINED CWA WITHIN 400' OF ANY NATURAL DRAINAGE PATHWAY OR WATERBODY, DO NOT LOCATE WITHIN 1,000' OF ANY WELLS OR DRINKING WATER SOURCES. IF SITE CONSTRAINTS MAKE THIS INFEASIBLE, OR IF HIGHLY PERMEABLE SOILS EXIST ON SITE, THE CWA MUST BE INSTALLED WITH AN IMPERMEABLE LINER (16 MIL MIN. THICKNESS) OR SURFACE STORAGE ALTERNATIVES USING PREFABRICATED CONCRETE WASHOUT DEVICES OR A LINED ABOVE GROUND STORAGE ARE SHOULD BE USED.

3. THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.

4. CWA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 8' BY 8' SLOPES LEADING OUT OF THE SUBSURFACE PIT SHALL BE 3:1 OR FLATTER. THE PIT SHALL BE AT LEAST 3' DEEP.

5. BERM SURROUNDING SIDES AND BACK OF THE CWA SHALL HAVE MINIMUM HEIGHT OF 1'.

6. VEHICLE TRACKING PAD SHALL BE SLOPED 2% TOWARDS THE CWA.

7. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CWA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CWA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.

8. USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

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Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 CWA-3

November 2010

**MM-1** 

**Stockpile Management (SP)** 

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REQUIRED SPACING FOR CHECK

DAMS

SLOPE OF DITCH | SPACING (FT) (H :

1.5 FT)

150.00

75.00

50.00

37.50

30.00 25.00

21.50

18.75

FLOW LINE

1%

2%

3%

4%

6%

8%

MM-2

SP-3

CD-4

**MM-2** 

STOCKPILE PROTECTION 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

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON

STOCKPILE PROTECTION MAINTENANCE NOTES

PERIMETER CONTROLS BY THE END OF THE WORKDAY.

5. STOCKPILE PERIMETER CONTROLS CAN BE REMOVED ONCE ALL THE MATERIAL FROM THE

(DETAILS ADAPTED FROM PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD)

 ${\underline{\sf NOTE:}}$  MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN

MM-1

CWA-4

**Concrete Washout Area (CWA)** 

VEHICLE TRACKING

CONTROL (SEE VTC -

CWA 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

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. THE CWA SHALL BE REPAIRED, CLEANED, OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE. CONCRETE MATERIALS, ACCUMULATED IN PIT, SHALL BE REMOVED ONCE THE MATERIALS HAVE REACHED A DEPTH OF 2'.

5. CONCRETE WASHOUT WATER, WASTED PIECES OF CONCRETE AND ALL OTHER DEBRIS IN THE SUBSURFACE PIT SHALL BE TRANSPORTED FROM THE JOB SITE IN A WATER-TIGHT CONTAINER AND DISPOSED OF PROPERLY.

6. THE CWA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED. 7. WHEN THE CWA IS REMOVED, COVER THE DISTURBED AREA WITH TOP SOIL, SEED AND

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MULCH OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION. (DETAIL ADAPTED FROM DOUGLAS COUNTY, COLORADO AND THE CITY OF PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD). NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN

\_\_\_\_\_

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Project No: CLH000021 CMWJ Drawn By RGD Checked By 07/01/2022

SWALE CROSS SECTIONS

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STOCKPILE. SILT FENCE (SEE SF DETAIL FOR INSTALLATION REQUIREMENTS) STOCKPILE PROTECTION PLAN SILT FENCE (SEE SF DETAIL FOR INSTALLATION REQUIREMENTS) SECTION A SP-1. STOCKPILE PROTECTION STOCKPILE PROTECTION INSTALLATION NOTES SEE PLAN VIEW FOR: -LOCATION OF STOCKPILES. -TYPE OF STOCKPILE PROTECTION. 2. INSTALL PERIMETER CONTROLS IN ACCORDANCE WITH THEIR RESPECTIVE DESIGN DETAILS. SILT FENCE IS SHOWN IN THE STOCKPILE PROTECTION DETAILS; HOWEVER, OTHER TYPES OF PERIMETER CONTROLS INCLUDING SEDIMENT CONTROL LOGS OR ROCK SOCKS MAY BE SUITABLE IN SOME CIRCUMSTANCES. CONSIDERATIONS FOR DETERMINING THE APPROPRIATE TYPE OF PERIMETER CONTROL FOR A STOCKPILE INCLUDE WHETHER THE STOCKPILE IS LOCATED ON A PERVIOUS OR IMPERVIOUS SURFACE, THE RELATIVE HEIGHTS OF THE PERIMETER CONTROL AND STOCKPILE, THE ABILITY OF THE PERIMETER CONTROL TO CONTAIN THE STOCKPILE WITHOUT FAILING IN THE EVENT THAT MATERIAL FROM THE STOCKPILE SHIFTS OR SLUMPS AGAINST THE PERIMETER, AND OTHER FACTORS. 3. STABILIZE THE STOCKPILE SURFACE WITH SURFACE ROUGHENING, TEMPORARY SEEDING AND MULCHING, EROSION CONTROL BLANKETS, OR SOIL BINDERS. SOILS STOCKPILED FOR AN EXTENDED PERIOD (TYPICALLY FOR MORE THAN 60 DAYS) SHOULD BE SEEDED AND MULCHED WITH A TEMPORARY GRASS COVER ONCE THE STOCKPILE IS PLACED (TYPICALLY WITHIN 14 DAYS). USE OF MULCH ONLY OR A SOIL BINDER IS ACCEPTABLE IF THE STOCKPILE WILL BE IN PLACE FOR A MORE LIMITED TIME PERIOD (TYPICALLY 30-60 DAYS). 4. FOR TEMPORARY STOCKPILES ON THE INTERIOR PORTION OF A CONSTRUCTION SITE, WHERE OTHER DOWNGRADIENT CONTROLS, INCLUDING PERIMETER CONTROL, ARE IN PLACE, STOCKPILE PERIMETER CONTROLS MAY NOT BE REQUIRED.

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**Stockpile Management (SM)** 

POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE

DISCOVERY OF THE FAILURE.

4. IF PERIMETER PROTECTION MUST BE MOVED TO ACCESS SOIL STOCKPILE, REPLACE

STOCKPILE HAS BEEN USED.

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DIFFERENCES ARE NOTED.

November 2010

SC-1 Silt Fence (SF)

SILT FENCE INSTALLATION NOTES

DOWN THE STAKE.

DISCOVERY OF THE FAILURE.

1. SILT FENCE MUST BE PLACED AWAY FROM THE TOE OF THE SLOPE TO ALLOW FOR WATER PONDING. SILT FENCE AT THE TOE OF A SLOPE SHOULD BE INSTALLED IN A FLAT LOCATION AT LEAST SEVERAL FEET (2-5 FT) FROM THE TOE OF THE SLOPE TO ALLOW ROOM FOR

2. A UNIFORM 6" X 4" ANCHOR TRENCH SHALL BE EXCAVATED USING TRENCHER OR SILT FENCE INSTALLATION DEVICE. NO ROAD GRADERS, BACKHOES, OR SIMILAR EQUIPMENT SHALL

3. COMPACT ANCHOR TRENCH BY HAND WITH A "JUMPING JACK" OR BY WHEEL ROLLING. COMPACTION SHALL BE SUCH THAT SILT FENCE RESISTS BEING PULLED OUT OF ANCHOR

4. SILT FENCE SHALL BE PULLED TIGHT AS IT IS ANCHORED TO THE STAKES. THERE SHOULD BE NO NOTICEABLE SAG BETWEEN STAKES AFTER IT HAS BEEN ANCHORED TO THE STAKES. 5. SILT FENCE FABRIC SHALL BE ANCHORED TO THE STAKES USING 1" HEAVY DUTY STAPLES OR NAILS WITH 1" HEADS. STAPLES AND NAILS SHOULD BE PLACED 3" ALONG THE FABRIC

6. AT THE END OF A RUN OF SILT FENCE ALONG A CONTOUR, THE SILT FENCE SHOULD BE TURNED PERPENDICULAR TO THE CONTOUR TO CREATE A "J-HOOK," THE "J-HOOK" EXTENDING PERPENDICULAR TO THE CONTOUR SHOULD BE OF SUFFICIENT LENGTH TO KEEP RUNOFF FROM FLOWING AROUND THE END OF THE SILT FENCE (TYPICALLY 10' - 20').

7. SILT FENCE SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES. SILT FENCE 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

4. SEDIMENT ACCUMULATED UPSTREAM OF THE SILT FENCE SHALL BE REMOVED AS NEEDED TO MAINTAIN THE FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 6".

5. REPAIR OR REPLACE SILT FENCE WHEN THERE ARE SIGNS OF WEAR, SUCH AS SAGGING, TEARING, OR COLLAPSE.

6. SILT FENCE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION, OR IS REPLACED BY AN EQUIVALENT PERIMETER SEDIMENT CONTROL BMP.

7. WHEN SILT FENCE IS REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION. (DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO AND CITY OF AURORA, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

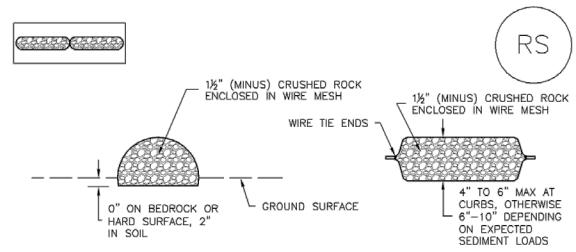
SF-4

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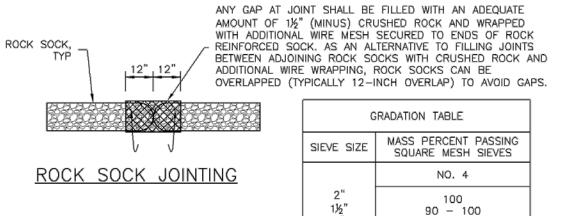
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SC-5 Rock Sock (RS)



ROCK SOCK SECTION ROCK SOCK PLAN



ROCK SOCK INSTALLATION NOTES 1. SEE PLAN VIEW FOR:

-LOCATION(S) OF ROCK SOCKS.

MATCHES SPECIFICATIONS FOR NO. 4 COARSE AGGREGATE FOR CONCRETE FRACTURED FACE, ALL SIDES.

2. CRUSHED ROCK SHALL BE 11/2" (MINUS) IN SIZE WITH A FRACTURED FACE (ALL SIDES) AND SHALL COMPLY WITH GRADATION SHOWN ON THIS SHEET (11/2" MINUS).

3. WIRE MESH SHALL BE FABRICATED OF 10 GAGE POULTRY MESH, OR EQUIVALENT, WITH A MAXIMUM OPENING OF 1/2", RECOMMENDED MINIMUM ROLL WIDTH OF 48"

4. WIRE MESH SHALL BE SECURED USING "HOG RINGS" OR WIRE TIES AT 6" CENTERS ALONG ALL JOINTS AND AT 2" CENTERS ON ENDS OF SOCKS.

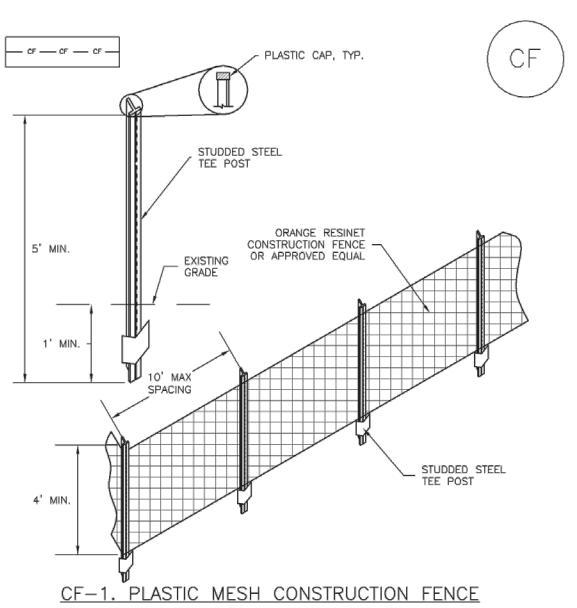
5. SOME MUNICIPALITIES MAY ALLOW THE USE OF FILTER FABRIC AS AN ALTERNATIVE TO WIRE MESH FOR THE ROCK ENCLOSURE. RS-1. ROCK SOCK PERIMETER CONTROL

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**SM-3** 

CF-2

**Construction Fence (CF)** 



CONSTRUCTION FENCE INSTALLATION NOTES SEE PLAN VIEW FOR:

-LOCATION OF CONSTRUCTION FENCE.

2. CONSTRUCTION FENCE SHOWN SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING

3. CONSTRUCTION FENCE SHALL BE COMPOSED OF ORANGE, CONTRACTOR-GRADE MATERIAL THAT IS AT LEAST 4' HIGH. METAL POSTS SHOULD HAVE A PLASTIC CAP FOR SAFETY. 4. STUDDED STEEL TEE POSTS SHALL BE UTILIZED TO SUPPORT THE CONSTRUCTION FENCE. MAXIMUM SPACING FOR STEEL TEE POSTS SHALL BE 10'.

5. CONSTRUCTION FENCE SHALL BE SECURELY FASTENED TO THE TOP, MIDDLE, AND BOTTOM OF EACH POST.

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**Construction Fence (CF)** 

EROSION, AND PERFORM NECESSARY MAINTENANCE.

**SM-3** 

CF-3

CONSTRUCTION FENCE 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

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. CONSTRUCTION FENCE SHALL BE REPAIRED OR REPLACED WHEN THERE ARE SIGNS OF DAMAGE SUCH AS RIPS OR SAGS. CONSTRUCTION FENCE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.

5. WHEN CONSTRUCTION FENCES ARE REMOVED, ALL DISTURBED AREAS ASSOCIATED WITH THE INSTALLATION, MAINTENANCE, AND/OR REMOVAL OF THE FENCE SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED, OR OTHERWISE STABILIZED AS APPROVED BY LOCAL

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

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(DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD)

Rock Sock (RS)

ROCK SOCK 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. ROCK SOCKS SHALL BE REPLACED IF THEY BECOME HEAVILY SOILED, OR DAMAGED BEYOND REPAIR.

5. SEDIMENT ACCUMULATED UPSTREAM OF ROCK SOCKS SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 1/2 OF THE HEIGHT OF THE ROCK SOCK.

6. ROCK SOCKS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.

7. WHEN ROCK SOCKS ARE REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL

(DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO AND CITY OF AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

NOTE: THE DETAILS INCLUDED WITH THIS FACT SHEET SHOW COMMONLY USED, CONVENTIONAL METHODS OF ROCK SOCK INSTALLATION IN THE DENVER METROPOLITAN AREA. THERE ARE MANY OTHER SIMILAR PROPRIETARY PRODUCTS ON THE MARKET. UDFCD NEITHER NDORSES NOR DISCOURAGES USE OF PROPRIETARY PROTECTION PRODUCTS; HOWEVER, IN THE EVENT PROPRIETARY METHODS ARE USED, THE APPROPRIATE DETAIL FROM THE MANUFACTURER MUST BE INCLUDED IN THE SWMP AND THE BMP MUST BE INSTALLED AND MAINTAINED AS SHOWN IN THE MANUFACTURER'S DETAILS.

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RS-3

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FILING SS CUMENT AT BENT OMMUNTIE MS WS CONSTRUCTION I FALCON MEADOW FOR CHALLENGER CO

Date Issue / Description

Project No: CLH000021 CMWJ Drawn Bv:

RGD

07/01/2022

GEC DETAILS

Checked By

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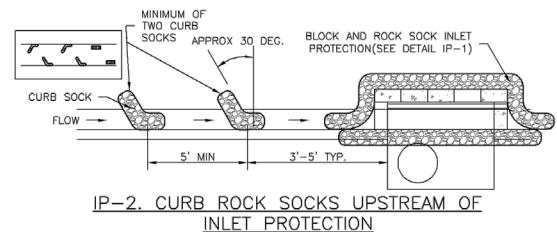
IP-1. BLOCK AND ROCK SOCK SUMP OR ON GRADE INLET PROTECTION

BLOCK AND CURB SOCK INLET PROTECTION INSTALLATION NOTES

1. SEE ROCK SOCK DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.

2. CONCRETE "CINDER" BLOCKS SHALL BE LAID ON THEIR SIDES AROUND THE INLET IN A SINGLE ROW, ABUTTING ONE ANOTHER WITH THE OPEN END FACING AWAY FROM THE CURB.

3. GRAVEL BAGS SHALL BE PLACED AROUND CONCRETE BLOCKS, CLOSELY ABUTTING ONE ANOTHER AND JOINTED TOGETHER IN ACCORDANCE WITH ROCK SOCK DESIGN DETAIL.



CURB ROCK SOCK INLET PROTECTION INSTALLATION NOTES

- SEE ROCK SOCK DESIGN DETAIL INSTALLATION REQUIREMENTS.
- 2. PLACEMENT OF THE SOCK SHALL BE APPROXIMATELY 30 DEGREES FROM PERPENDICULAR IN THE OPPOSITE DIRECTION OF FLOW.
- 3. SOCKS ARE TO BE FLUSH WITH THE CURB AND SPACED A MINIMUM OF 5 FEET APART.
- 4. AT LEAST TWO CURB SOCKS IN SERIES ARE REQUIRED UPSTREAM OF ON-GRADE INLETS.

INLETS TO SEDIMENT BASIN

SHALL ENTER AT FURTHEST

SEDIMENT BASIN PLAN

\*EXCEPT WHERE THE HOLES EXCEED 1"
DIAMETER, THEN UP TO TWO COLUMNS

OF SAME SIZED HOLES MAY BE USED

CREST LENGTH

RIPRAP BEDDING -

IP-4 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3

**Sediment Basin (SB)** 

HOLE DIAMETER,

PVC OR GREATER

**EMBANKMENT** MATERIAL

August 2013

EXCAVATION

August 2013

CRUSHED ROCK

August 2013

**Inlet Protection (IP)** 

ROCK SOCK

## **Sediment Basin (SB)**

**SC-6** 

INLET GRATE

<u>IP-3. ROCK SOCK SUMP/AREA INLET PROTECTION</u>

2. STRAW WATTLES/SEDIMENT CONTROL LOGS MAY BE USED IN PLACE OF ROCK SOCKS FOR

IP-4. SILT FENCE FOR SUMP INLET PROTECTION

2. POSTS SHALL BE PLACED AT EACH CORNER OF THE INLET AND AROUND THE EDGES

3. STRAW WATTLES/SEDIMENT CONTROL LOGS MAY BE USED IN PLACE OF SILT FENCE FOR

ROCK SOCK SUMP/AREA INLET PROTECTION INSTALLATION NOTES

SILT FENCE INLET PROTECTION INSTALLATION NOTES

AT A MAXIMUM SPACING OF 3 FEET.

1. SEE SILT FENCE DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.

INLETS IN PERVIOUS AREAS. INSTALL PER SEDIMENT CONTROL LOG DETAIL.

Urban Drainage and Flood Control District

Urban Storm Drainage Criteria Manual Volume 3

SEE ROCK SOCK DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.

INLETS IN PERVIOUS AREAS. INSTALL PER SEDIMENT CONTROL LOG DETAIL.

SEE ROCK SOCK DETAIL

FOR JOINTING

— INLET GRATE

SILT FENCE (SEE SILT FENCE DESIGN DETAIL

TABLE SB-1. SIZING INFORMATION FOR STANDARD SEDIMENT BASIN			
Upstream Drainage Area (rounded to nearest acre), (ac)	Basin Bottom Width (W), (ft)	Spillway Crest Length (CL), (ft)	Hole Diameter (HD), (in)
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	12 ½ 21 28 33 ½ 38 ½ 43 47 ¼ 51 55 58 ¼ 61 64 67 ½ 70 ½ 73 ¼	2 3 5 6 8 9 11 12 13 15 16 18 19 21 22	932 1 76 12 96 2132 2132 2132 2132 156 3132 1 166 1 166 1 166

SEDIMENT BASIN INSTALLATION NOTES

1. SEE PLAN VIEW FOR: -LOCATION OF SEDIMENT BASIN. -TYPE OF BASIN (STANDARD BASIN OR NONSTANDARD BASIN). -FOR STANDARD BASIN, BOTTOM WIDTH W, CREST LENGTH CL, AND HOLE

2. FOR STANDARD BASIN, BOTTOM DIMENSION MAY BE MODIFIED AS LONG AS BOTTOM AREA IS NOT REDUCED.

-FOR NONSTANDARD BASIN, SEE CONSTRUCTION DRAWINGS FOR DESIGN OF BASIN INCLUDING RISER HEIGHT H, NUMBER OF COLUMNS N, HOLE DIAMETER HD AND PIPE

3. SEDIMENT BASINS SHALL BE INSTALLED PRIOR TO ANY OTHER LAND—DISTURBING ACTIVITY THAT RELIES ON ON BASINS AS AS A STORMWATER CONTROL.

4. EMBANKMENT MATERIAL SHALL CONSIST OF SOIL FREE OF DEBRIS, ORGANIC MATERIAL, AND ROCKS OR CONCRETE GREATER THAN 3 INCHES AND SHALL HAVE A MINIMUM OF 15 PERCENT BY WEIGHT PASSING THE NO. 200 SIEVE.

5. EMBANKMENT MATERIAL SHALL BE COMPACTED TO AT LEAST 95 PERCENT OF MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D698.

6. PIPE SCH 40 OR GREATER SHALL BE USED.

7. THE DETAILS SHOWN ON THESE SHEETS PERTAIN TO STANDARD SEDIMENT BASIN(S) FOR DRAINAGE AREAS LESS THAN 15 ACRES. SEE CONSTRUCTION DRAWINGS FOR EMBANKMENT, STORAGE VOLUME, SPILLWAY, OUTLET, AND OUTLET PROTECTION DETAILS FOR ANY SEDIMENT BASIN(S) THAT HAVE BEEN INDIVIDUALLY DESIGNED FOR DRAINAGE AREAS

Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 August 2013

**Inlet Protection (IP) SC-6** 

GENERAL INLET PROTECTION INSTALLATION NOTES

1. SEE PLAN VIEW FOR: -LOCATION OF INLET PROTECTION.

-TYPE OF INLET PROTECTION (IP.1, IP.2, IP.3, IP.4, IP.5, IP.6)

2. INLET PROTECTION SHALL BE INSTALLED PROMPTLY AFTER INLET CONSTRUCTION OR PAVING IS COMPLETE (TYPICALLY WITHIN 48 HOURS). IF A RAINFALL/RUNOFF EVENT IS FORECAST, INSTALL INLET PROTECTION PRIOR TO ONSET OF EVENT.

3. MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

INLET PROTECTION 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

4. SEDIMENT ACCUMULATED UPSTREAM OF INLET PROTECTION SHALL BE REMOVED AS NECESSARY TO MAINTAIN BMP EFFECTIVENESS, TYPICALLY WHEN STORAGE VOLUME REACHES 50% OF CAPACITY, A DEPTH OF 6" WHEN SILT FENCE IS USED, OR 1/4 OF THE HEIGHT FOR

5. INLET PROTECTION IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS PERMANENTLY STABILIZED, UNLESS THE LOCAL JURISDICTION APPROVES EARLIER REMOVAL OF INLET PROTECTION IN STREETS.

6. WHEN INLET PROTECTION AT AREA INLETS IS REMOVED, THE DISTURBED AREA SHALL BE COVERED WITH TOP SOIL, SEEDED AND MULCHED, OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

(DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO AND CITY OF AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD)

 ${\underline{\sf NOTE:}}$  MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN

NOTE: THE DETAILS INCLUDED WITH THIS FACT SHEET SHOW COMMONLY USED, CONVENTIONAL METHODS OF INLET PROTECTION IN THE DENVER METROPOLITAN AREA. THERE ARE MANY PROPRIETARY INLET PROTECTION METHODS ON THE MARKET. UDFCD NEITHER ENDORSES NOR DISCOURAGES USE OF PROPRIETARY INLET PROTECTION; HOWEVER, IN THE EVENT PROPRIETARY METHODS ARE USED, THE APPROPRIATE DETAIL FROM THE MANUFACTURER MUST BE INCLUDED IN THE SWMP AND THE BMP MUST BE INSTALLED AND MAINTAINED AS SHOWN IN THE MANUFACTURER'S DETAILS.

NOTE: SOME MUNICIPALITIES DISCOURAGE OR PROHIBIT THE USE OF STRAW BALES FOR INLET PROTECTION. CHECK WITH LOCAL JURISDICTION TO DETERMINE IF STRAW BALE INLET PROTECTION IS ACCEPTABLE.

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**Sediment Basin (SB)** 

**SC-7** 

SEDIMENT BASIN 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

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. SEDIMENT ACCUMULATED IN BASIN SHALL BE REMOVED AS NEEDED TO MAINTAIN BMP EFFECTIVENESS, TYPICALLY WHEN SEDIMENT DEPTH REACHES ONE FOOT (I.E., TWO FEET BELOW THE SPILLWAY CREST).

IS STABILIZED AND GRASS COVER IS ACCEPTED BY THE LOCAL JURISDICTION. 6. WHEN SEDIMENT BASINS ARE REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

5. SEDIMENT BASINS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

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GEC DETAILS

Sheet 17 of 20

Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3

∠ D50=9" RIPRAP TYPE L

D50=9" RIPRAP

MD-7, MAJOR

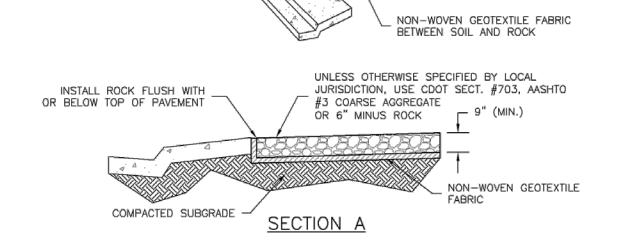
TYPE L. (SEE TABLE

DRAINAGE, VOL. 1)

SB-5

August 2013

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VTC-1. AGGREGATE VEHICLE TRACKING CONTROL

November 2010

Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3

VTC-3

UNLESS OTHERWISE SPECIFIED

- CDOT SECT. #703, AASHTO #3

BY LOCAL JURISDICTION, USE

COARSE AGGREGATE OR 6"

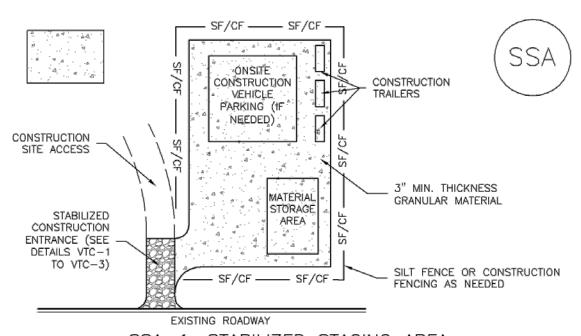
MINUS ROCK

#### Stabilized Staging Area (SSA)

PUBLIC

ROADWAY

**SM-6** 



SSA-1. STABILIZED STAGING AREA

STABILIZED STAGING AREA INSTALLATION NOTES

1. SEE PLAN VIEW FOR -LOCATION OF STAGING AREA(S).

-CONTRACTOR MAY ADJUST LOCATION AND SIZE OF STAGING AREA WITH APPROVAL

2. STABILIZED STAGING AREA SHOULD BE APPROPRIATE FOR THE NEEDS OF THE SITE. OVERSIZING RESULTS IN A LARGER AREA TO STABILIZE FOLLOWING CONSTRUCTION.

3. STAGING AREA SHALL BE STABILIZED PRIOR TO OTHER OPERATIONS ON THE SITE. 4. THE STABILIZED STAGING AREA SHALL CONSIST OF A MINIMUM 3" THICK GRANULAR

5. UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT

SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK. 6. ADDITIONAL PERIMETER BMPs MAY BE REQUIRED INCLUDING BUT NOT LIMITED TO SILT

STABILIZED STAGING AREA MAINTENANCE NOTES

FENCE AND CONSTRUCTION FENCING.

November 2010

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.

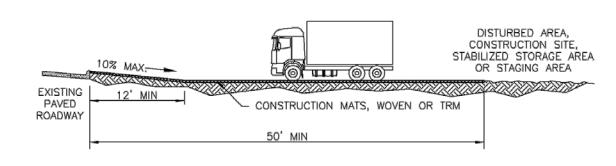
4. ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY IF RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.

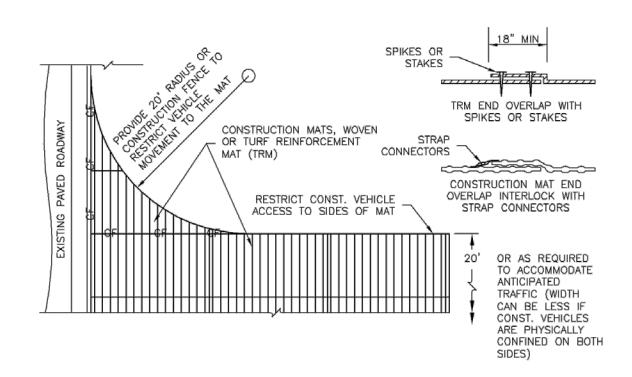
> Urban Drainage and Flood Control District SSA-3 Urban Storm Drainage Criteria Manual Volume 3

**Vehicle Tracking Control (VTC)** 

**SM-4** 







VTC-3. VEHICLE TRACKING CONTROL W/ CONSTRUCTION MAT OR TURF REINFORCEMENT MAT (TRM)

November 2010

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VTC-5

November 2010

**SM-6** 

SSA-4

**Stabilized Staging Area (SSA)** 

STABILIZED STAGING AREA MAINTENANCE NOTES

5. STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING/LOADING OPERATIONS.

6. THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE GRANULAR MATERIAL SHALL BE REMOVED OR, IF APPROVED BY THE LOCAL JURISDICTION, USED ON SITE, AND THE AREA COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY LOCAL JURISDICTION.

NOTE: MANY MUNICIPALITIES PROHIBIT THE USE OF RECYCLED CONCRETE AS GRANULAR MATERIAL FOR STABILIZED STAGING AREAS DUE TO DIFFICULTIES WITH RE-ESTABLISHMENT OF VEGETATION IN AREAS WHERE RECYCLED CONCRETE WAS PLACED.

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

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(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)

**SM-4** 

**Vehicle Tracking Control (VTC)** 

STABILIZED CONSTRUCTION ENTRANCE/EXIT INSTALLATION NOTES

SEE PLAN VIEW FOR

-LOCATION OF CONSTRUCTION ENTRANCE(S)/EXIT(S). -TYPE OF CONSTRUCTION ENTRANCE(S)/EXITS(S) (WITH/WITHOUT WHEEL WASH, CONSTRUCTION MAT OR TRM).

2. CONSTRUCTION MAT OR TRM STABILIZED CONSTRUCTION ENTRANCES ARE ONLY TO BE USED ON SHORT DURATION PROJECTS (TYPICALLY RANGING FROM A WEEK TO A MONTH) WHERE THERE WILL BE LIMITED VEHICULAR ACCESS.

3. A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE LOCATED AT ALL ACCESS POINTS WHERE VEHICLES ACCESS THE CONSTRUCTION SITE FROM PAVED RIGHT-OF-WAYS.

4. STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE INSTALLED PRIOR TO ANY LAND

5. A NON-WOVEN GEOTEXTILE FABRIC SHALL BE PLACED UNDER THE STABILIZED CONSTRUCTION ENTRANCE/EXIT PRIOR TO THE PLACEMENT OF ROCK.

6. UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.

STABILIZED CONSTRUCTION ENTRANCE/EXIT 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. ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY TO THE STABILIZED ENTRANCE/EXIT TO MAINTAIN A CONSISTENT DEPTH.

5. SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED THROUGHOUT THE DAY AND AT THE END OF THE DAY BY SHOVELING OR SWEEPING. SEDIMENT MAY NOT BE WASHED DOWN STORM SEWER DRAINS.

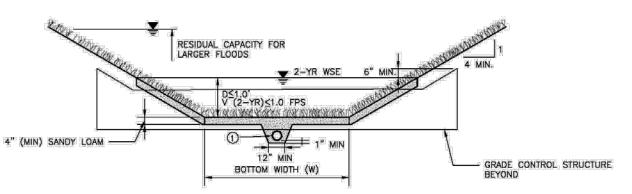
NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN

(DETAILS ADAPTED FROM CITY OF BROOMFIELD, COLORADO, NOT AVAILABLE IN AUTOCAD)

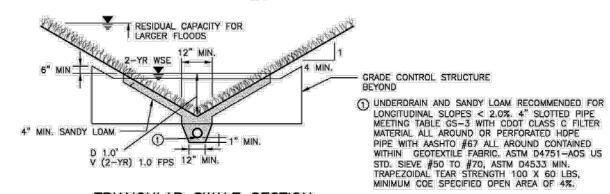
VTC-6

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**Grass Swale** 



TRAPEZOIDAL SWALE SECTION



TRIANGULAR SWALE SECTION

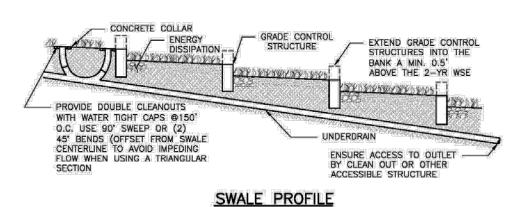


Figure GS-1. Grass Swale Profile and Sections

Design Example

The *UD-BMP* workbook, designed as a tool for both designer and reviewing agency is available at www.udfcd.org. This section provides a completed design form from this workbook as an example.

GS-6

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CLH000021 Project No: CMWJ RGD Checked By 07/01/2022

GEC DETAILS

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### SC-2 **Sediment Control Log (SCL)** " DIAMETER (MIN) COMPOST SEDIMENT CONTROL LOG NOTES: 1.THIS DETAIL IS FOR USE WITH SEDIMENT CONTROL LOGS THA ARE A MINIMUM OF 8 LB/FT 2.PLACE LOG AGAINST SIDEWALK OR BACK OF CURB WHEN ADJACENT TO THESE FEATURES. COMPOST SEDIMENT CONTROL LOG (WEIGHTED) CENTER STAKE IN CONTROL LOG 9" DIAMETER (MIN) COMPOST SEDIMENT CONTROL LOG BLOWN/PLACED FILTER MEDIA OR SOIL FLOW ---COMPOST SEDIMENT CONTROL LOG

12" OVERLAP -

SCL-2. COMPOST SEDIMENT CONTROL LOG (WEIGHTED)

LOG JOINTS

Urban Drainage and Flood Control District SCL-4 November 2015 Urban Storm Drainage Criteria Manual Volume 3

November 2015

SCL-5

SC-2

Urban Drainage and Flood Control District

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2. ONLY USE FOR DRAINAGE AREAS LESS THAN 1 ACRE.

SCL-3. SEDIMENT CONTROL LOGS TO CONTROL

SLOPE LENGTH

4. SEDIMENT TRAP BERM SHALL BE CONSTRUCTED FROM MATERIAL FROM EXCAVATION. THE BERM SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY IN ACCORDANCE WITH ASTM

5. SEDIMENT TRAP OUTLET TO BE CONSTRUCTED OF RIPRAP, TYPE M (D50=12") TYP.SMALLER ROCK SIZE MAY BE ALLOWABLE FOR SMALLER TRAPS IF APPROVED BY LOCAL JURISDICTION. 6. THE TOP OF THE EARTHEN BERM SHALL BE A MINIMUM OF 6" HIGHER THAN THE TOP OF

7. THE ENDS OF THE RIPRAP OUTLET STRUCTURE SHALL BE A MINIMUM OF 6" HIGHER THAN THE CENTER OF THE OUTLET STRUCTURE.

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

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE

DISCOVERY OF THE FAILURE.

THE BMP, TYPICALLY WHEN THE SEDIMENT DEPTH REACHES 1/2 THE HEIGHT OF THE RIPRAP OUTLET.

STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.

TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

Urban Drainage and Flood Control District

ST-3

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**CHALLENGER** 

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Project No: CLH000021 CMWJ Drawn Bv: RGD Checked By 07/01/2022

GEC DETAILS

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**Sediment Control Log (SCL)** 

SEDIMENT CONTROL LOG INSTALLATION NOTES

TO ANY UPGRADIENT LAND-DISTURBING ACTIVITIES.

1. SEE PLAN VIEW FOR LOCATION AND LENGTH OF SEDIMENT CONTROL LOGS. 2. SEDIMENT CONTROL LOGS THAT ACT AS A PERIMETER CONTROL SHALL BE INSTALLED PRIOR

3. SEDIMENT CONTROL LOGS SHALL CONSIST OF STRAW, COMPOST, EXCELSIOR OR COCONUT FIBER, AND SHALL BE FREE OF ANY NOXIOUS WEED SEEDS OR DEFECTS INCLUDING RIPS, HOLES AND OBVIOUS WEAR.

4. SEDIMENT CONTROL LOGS MAY BE USED AS SMALL CHECK DAMS IN DITCHES AND SWALES. HOWEVER, THEY SHOULD NOT BE USED IN PERENNIAL STREAMS.

5. IT IS RECOMMENDED THAT SEDIMENT CONTROL LOGS BE TRENCHED INTO THE GROUND TO A DEPTH OF APPROXIMATELY 1/3 OF THE DIAMETER OF THE LOG. IF TRENCHING TO THIS DEPTH IS NOT FEASIBLE AND/OR DESIRABLE (SHORT TERM INSTALLATION WITH DESIRE NOT TO DAMAGE LANDSCAPE) A LESSER TRENCHING DEPTH MAY BE ACCEPTABLE WITH MORE ROBUST STAKING, COMPOST LOGS THAT ARE 8 LB/FT DO NOT NEED TO BE TRENCHED.

6. THE UPHILL SIDE OF THE SEDIMENT CONTROL LOG SHALL BE BACKFILLED WITH SOIL OR FILTER MATERIAL THAT IS FREE OF ROCKS AND DEBRIS. THE SOIL SHALL BE TIGHTLY COMPACTED INTO THE SHAPE OF A RIGHT TRIANGLE USING A SHOVEL OR WEIGHTED LAWN ROLLER OR BLOWN IN PLACE.

7. FOLLOW MANUFACTURERS' GUIDANCE FOR STAKING. IF MANUFACTURERS' INSTRUCTIONS DO NOT SPECIFY SPACING, STAKES SHALL BE PLACED ON 4' CENTERS AND EMBEDDED A MINIMUM OF 6" INTO THE GROUND. 3" OF THE STAKE SHALL PROTRUDE FROM THE TOP OF THE LOG. STAKES THAT ARE BROKEN PRIOR TO INSTALLATION SHALL BE REPLACED. COMPOST LOGS SHOULD BE STAKED 10' ON CENTER.

SEDIMENT CONTROL LOG 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. SEDIMENT ACCUMULATED UPSTREAM OF SEDIMENT CONTROL LOG SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 1/2 OF THE HEIGHT OF THE SEDIMENT CONTROL LOG.

5. SEDIMENT CONTROL LOG SHALL BE REMOVED AT THE END OF CONSTRUCTION.COMPOST FROM COMPOST LOGS MAY BE LEFT IN PLACE AS LONG AS BAGS ARE REMOVED AND THE AREA SEEDED. IF DISTURBED AREAS EXIST AFTER REMOVAL, THEY SHALL BE COVERED WITH TOP SOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY

(DETAILS ADAPTED FROM TOWN OF PARKER, COLORADO, JEFFERSON COUNTY, COLORADO, DOUGLAS COUNTY, COLORADO, AND CITY OF AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD)

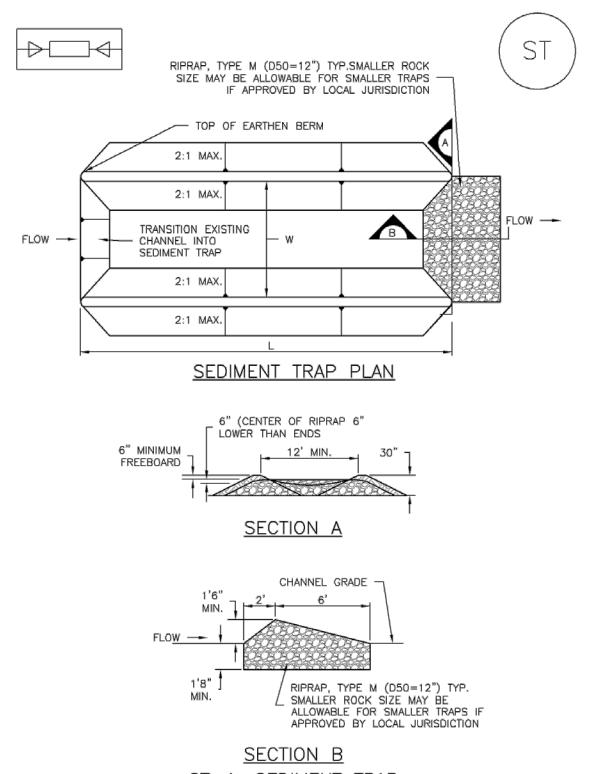
NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN

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9" DIAMETER (MIN SEDIMENT CONTROL LOG

**Sediment Trap (ST)** 

1½" x 1½" x 18" (MIN) \_ WOODEN STAKE



**Sediment Trap (ST)** 

SEDIMENT TRAP INSTALLATION NOTES

SEDIMENT TRAP MAINTENANCE NOTES

**Sediment Control Log (SCL)** 

4' MAX FOR TRENCHED SCLs

SEE PLAN VIEW FOR:
 -LOCATION, LENGTH AND WIDTH OF SEDIMENT TRAP.

3. SEDIMENT TRAPS SHALL BE INSTALLED PRIOR TO ANY UPGRADIENT LAND-DISTURBING

THE RIPRAP OUTLET STRUCTURE.

POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

DOCUMENTED THOROUGHLY. 3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON

4. REMOVE SEDIMENT ACCUMULATED IN TRAP AS NEEDED TO MAINTAIN THE FUNCTIONALITY OF

5. SEDIMENT TRAPS SHALL REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS

6. WHEN SEDIMENT TRAPS ARE REMOVED, THE DISTURBED AREA SHALL BE COVERED WITH

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ST-1. SEDIMENT TRAP

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STRAW BALE INSTALLATION NOTES

1. SEE PLAN VIEW FOR: -LOCATION(S) OF STRAW BALES.

2. STRAW BALES SHALL CONSIST OF CERTIFIED WEED FREE STRAW OR HAY. LOCAL JURISDICTIONS MAY REQUIRE PROOF THAT BALES ARE WEED FREE.

3. STRAW BALES SHALL CONSIST OF APPROXIMATELY 5 CUBIC FEET OF STRAW OR HAY AND

4. WHEN STRAW BALES ARE USED IN SERIES AS A BARRIER, THE END OF EACH BALE SHALL BE TIGHTLY ABUTTING ONE ANOTHER.

5. STRAW BALE DIMENSIONS SHALL BE APPROXIMATELY 36"X18"X18".

6. A UNIFORM ANCHOR TRENCH SHALL BE EXCAVATED TO A DEPTH OF 4". STRAW BALES SHALL BE PLACED SO THAT BINDING TWINE IS ENCOMPASSING THE VERTICAL SIDES OF THE BALE(S). ALL EXCAVATED SOIL SHALL BE PLACED ON THE UPHILL SIDE OF THE STRAW BALE(S)

7. TWO (2) WOODEN STAKES SHALL BE USED TO HOLD EACH BALE IN PLACE, WOODEN STAKES SHALL BE 2"X2"X24". WOODEN STAKES SHALL BE DRIVEN 6" INTO THE GROUND. STRAW BALE 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

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. STRAW BALES SHALL BE REPLACED IF THEY BECOME HEAVILY SOILED, ROTTEN, OR DAMAGED BEYOND REPAIR.

5. SEDIMENT ACCUMULATED UPSTREAM OF STRAW BALE BARRIER SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 1/4 OF THE HEIGHT OF THE STRAW BALE BARRIER.

6. STRAW BALES ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.

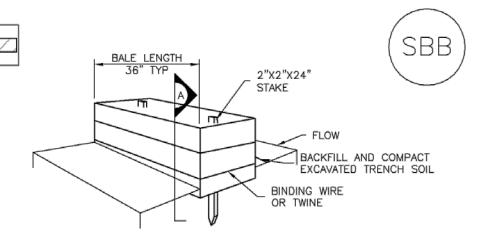
7. WHEN STRAW BALES ARE REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL

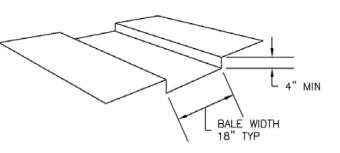
(DETAILS ADAPTED FROM TOWN OF PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

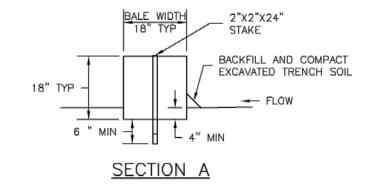
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SC-3 **Straw Bale Barrier (SBB)** 





TRENCH FOR STRAW BALE



SBB-1. STRAW BALE

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9 FILING GRASS

CONSTRUCTION DOCUMENTS FALCON MEADOWS AT BENT G FOR CHALLENGER COMMUNTIES, L

# Date Issue / Description Init.

	Project No:	CLH000021
	Drawn By:	CMW
	Checked By:	RGD
ı	Date:	07/01/2022

GEC DETAILS

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