

STORMWATER DISCHARGES FROM CONSTRUCTION SITES SHALL NOT CAUSE OR THREATEN TO CAUSE POLLUTION, CONTAMINATION, OR DEGRADATION OF STATE WATERS. ALL WORK AND EROSION DISTURBANCE SHALL BE DONE IN A MANNER THAT MINIMIZES POLLUTION OF ANY ON-SITE OR OFFSITE WATERS, INCLUDING METLAKES.

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 ANY OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE LAND DEVELOPMENT CODE, THE ENGINEERING CRITERIA MANUAL, THE DAMAGE CRITERIA MANUAL, AND THE DAMAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS TO REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING.

3. A SEPARATE STORMWATER MANAGEMENT PLAN (SWMP) 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 CONTRACTOR. EROSION CONTROL INSPECTION SHALL BE CONDUCTED 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 DEC. 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 TO EROSION AND SEDIMENTATION. EROSION CONTROL MEASURES SHALL BE INSTALLED IMMEDIATELY UPON COMPLETION OF THE DISTURBANCE.

6. ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE MAINTAINED AND REMAIN IN EFFECTIVE OPERATING CONDITION UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED AND FINAL STABILIZATION IS ESTABLISHED. ALL PERSONS ENGAGED IN LAND DISTURBANCE ACTIVITIES SHALL ASSESS THE ADEQUACY OF CONTROL MEASURES AT THE SITE AND IDENTIFY IF CHANGES TO THE CONTROL MEASURES IS NEEDED TO ENSURE THE CONTINUED EFFECTIVE OPERATION 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 DURING DISTURBING CONSTRUCTION ACTIVITY HAS PERMANENTLY CEASED OR TEMPORARILY CEASED FOR LONGER THAN 14 DAYS. AN AREA THAT IS GOING TO REMAIN IN AN INTERMEDIATE STATE FOR MORE THAN 60 DAYS SHALL ALSO BE STABILIZED.

8. FINAL STABILIZATION MUST BE IMPLEMENTED AT ALL APPLICABLE CONSTRUCTION SITES. FINAL STABILIZATION IS ANY PROPOSED CHANGES THAT EFFECT THE HYDROLOGY OR HYDRAULICS OF A PERMANENT STORMWATER MANAGEMENT STRUCTURES MUST BE APPROVED BY THE ECOM ADMINISTRATOR PRIOR TO IMPLEMENTATION.

9. EARTH DISTURBANCES SHALL BE CONDUCTED IN SUCH A MANNER SO AS TO EFFECTIVELY MINIMIZE ACCELERATED SOIL EROSION AND RESULTING SEDIMENTATION. AN 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.

10. 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.

11. ANY TEMPORARY OR PERMANENT FACILITY DESIGNED AND CONSTRUCTED FOR THE CONVEYANCE OF STORMWATER AROUND, THROUGH, OR FROM THE EARTH DISTURBANCE AREA SHALL BE A STABILIZED CONVEYANCE DESIGNED TO MINIMIZE EROSION AND THE DISCHARGE OF SEDIMENT OFF SITE.

12. 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.

13. DURING DEWATERING OPERATIONS OF UNCONTAMINATED GROUND WATER MAY BE DISCHARGED ON SITE, BUT SHALL NOT LEAVE THE SITE IN THE FORM OF A SURFACE RUNOFF UNLESS AN APPROVED STATE DEWATERING PERMIT IS IN PLACE.

14. EROSION CONTROL, BLANKETING OR OTHER PROTECTIVE COVERING SHALL BE USED ON SLOPES STEEPER THAN 3:1.

15. BUILDING, CONSTRUCTION, EXCAVATION, OR OTHER WASTE MATERIALS SHALL NOT BE TEMPORARILY PLACED OR STORED ON STREET OR OTHER PUBLIC USE AREAS UNLESS IN ACCORDANCE WITH AN APPROVED TRAFFIC CONTROL PLAN. BMPs MAY BE REQUIRED BY EL PASO COUNTY ENGINEERING IF DEEMED NECESSARY, BASED ON SPECIFIC CONDITIONS AND CIRCUMSTANCES.

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

17. 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.

18. THE OWNER, SITE DEVELOPER, CONTRACTOR, AND/OR THEIR AUTHORIZED AGENTS SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL CONSTRUCTION DEBRIS, DIRT, TRASH, ROCK, SEDIMENT, AND SAND THAT MAY ACCUMULATE IN THE STORMWATER OR OTHER DRAINAGE CONVEYANCE SYSTEM AND STORMWATER APPEARANCES AS A RESULT OF SITE DEVELOPMENT.

19. THE QUANTITY OF MATERIALS STORED ON THE PROJECT SITE SHALL BE LIMITED, AS MUCH AS PRACTICAL, TO THAT QUANTITY OF MATERIALS STORED ON-SITE THAT CAN BE REMOVED FROM THE SITE BY THE END OF THE PROJECT. NO MATERIALS ARE TO BE STORED IN A NEAT, ORDERLY MANNER, IN THEIR ORIGINAL CONTAINERS, WITH ORIGINAL MANUFACTURER'S LABELS.

20. 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 ECOM ADMINISTRATOR. IN GRANTING THE USE OF SUCH CHEMICALS, SPECIAL CONDITIONS AND MONITORING MAY BE REQUIRED.

21. 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.

22. NO PERSON SHALL CAUSE THE IMPEDIMENT OF STORMWATER FLOW IN THE FLOW LINE OF THE CURB AND GUTTER OR IN THE DITCH FLOW LINE.

23. INDIVIDUALS SHALL COMPLY WITH THE COLORADO WATER QUALITY CONTROL ACT (TITLE 25, ARTICLE 6, CRS), AND THE CLEAN WATER ACT (33 USC 1344), IN ADDITION TO THE REQUIREMENTS INCLUDED IN THE DOCUMENT II AND THE ECOM APPENDIX I. ALL APPROPRIATE PERMITS MUST BE OBTAINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION (WQDES, FLOODPLAIN, 404, FUGITIVE DUST, ETC.). IN THE EVENT OF CONFLICTS BETWEEN THESE REQUIREMENTS AND LOCAL, STATE, OR REGULATIONS OF OTHER FEDERAL, STATE, OR COUNTY AGENCIES, THE MORE RESTRICTIVE LAWS, RULES, OR REGULATIONS SHALL APPLY.

24. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.

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

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

27. THE SOILS REPORT, TITLED "BOYCE GRASS RESIDENTIAL, FLING NO. 2 EL PASO COUNTY, CO" FOR THIS SITE HAS BEEN PREPARED BY BOYCE MOUNTAIN GROUP, JOB NO. 169644, DATED OCTOBER 21, 2019 AND SHALL BE CONSIDERED A PART OF THESE PLANS.

28. AT LEAST TEN (10) DAYS PRIOR TO THE ANTICIPATED START OF CONSTRUCTION, FOR PROJECTS THAT WILL DISTURB GRASS OR WOODS, THE OWNER OR OPERATOR OF CONSTRUCTION ACTIVITY SHALL SUBMIT A PERMIT APPLICATION FOR STORMWATER DRAINAGE 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 INFORMATION, CONTACT THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, WATER QUALITY DIVISION, 1000 SOUTH GAVELIN AVENUE, SUITE 100, DENVER, CO 80202, (303) 861-2600.

1. 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.
2. 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 (SUMP), THE SOILS AND 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 HIGHWAYS AND BRIDGE CONSTRUCTION
 - D. CDOT M & S STANDARDS
4. NOTHING STANDING ANYTHING DEPICTED IN THESE PLANS IN WORDS OR GRAPHIC REPRESENTATION, 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 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 ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.
5. 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.
6. 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 (ESQP), REGIONAL BUILDING FLOODPLAIN DEVELOPMENT PERMIT, U.S. ARMY CORPS OF ENGINEERS-ISSUED 401 AND/OR 404 PERMITS, AND COUNTY STATE FUGITIVE DUST PERMITS.
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 BY PCD.
10. CONTRACTOR SHALL COORDINATE GEOTECHNICAL TESTING PER EGM 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 ACCESS POINTS.
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 STRIPPING SHALL COMPLY WITH EL PASO COUNTY DOT AND MUTCD CRITERIA. [IF APPLICABLE, ADDITIONAL SIGNING AND STRIPPING NOTES WILL BE PROVIDED].
14. CONTRACTOR SHALL OBTAIN ANY PERMITS REQUIRED BY EL PASO COUNTY DOT, 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 ADJACENT PROPERTY OWNER(S) PRIOR TO ANY OFF-SITE DISTURBANCE, GRADING, OR CONSTRUCTION.

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 PROJECT MUST 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 RESEED UPON COMPLETION OF OVERLOT GRADING AND EROSION CONTROL MEASURES HAVE BEEN INSTALLED OR WITHIN 60 DAYS, WHICHEVER IS LESS TIME.
3. 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 SWEEP AND INSPECTED ON A REGULAR BASIS DURING CONSTRUCTION.

1. 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 THE CONTRACTOR TO VERIFY THE EXISTENCE OF UTILITIES 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 CONSTRUCTION.
4. ALL BACKFILL, SUB-BASE AND / OR BASE COURSE (CLASS 6) MATERIAL SHALL BE COMPACTED TO THE SOLIS 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 EPCV EMD 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. ALL CULVERTS SHALL BE PLACED CONFORM 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 EPCV EMD SECTION 3.32 - CULVERTS.
9. ASPHALT THICKNESS AND BASE COURSE THICKNESS (COMPECTED) FOR ROADS SHALL BE PER DESIGN SPECIFIED 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 1 RRP-W/PAW WITH 4" OF TYPE II GRANULAR BEDDING AND MIRAFI 180N OR EQUAL MAY BE SUBSTITUTED WHERE TYPE 1 RRP-W/PAW WITH MIRAFI FV 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 PIPE WITH PUSH-ON SINGLE GASKET TYPE JOINTS AND SHALL MEET THE REQUIREMENTS OF AWWA / NSF 61.
13. ALL POTABLE 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 AWWA / NSF 61.
14. ALL WATER LINE DEEPS, TEES, BLOW-OFFS AND PLUGS AT DEAD-END MAINS SHALL BE PROTECTED FROM THURST BY USING CONCRETE THROAT BLOCKS AND / OR RODDING AND RESTRAINED PIPE PER THE WOODMAN HILLS METRO DISTRICT CONSULTING ENGINEER APPROVAL.
15. MAXIMUM DEFLECTION OF 8" OR 12" PVC WATER MAIN JOINTS IS 4 DEGREES. CORRESPONDING MINIMUM CURVE RADII IS 286' ADDITIONAL 11.25" OR 22.5" DEEPS MAY BE REQUIRED FOR PROPER ALIGNMENT.
16. CONTRACTOR IS RESPONSIBLE FOR PROVIDING DETAILLED AS-BUILTS OF ALL WATER MAIN, STORM SEWER AND SANITARY SEWER MAIN INSTALLATIONS, INCLUDING ACCURATE DISTANCES OF ALL LINES, VALVES, FITTINGS, MANHOLES AND LOCATIONS OF WATER AND SEWER SERVICES.
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 4" PVC SANITARY SEWER MAIN)

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

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

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

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

IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF SUCH EXISTING UTILITY, EITHER THROUGH POT-HOLING OR ALTERNATIVE METHOD. REPORT INFORMATION TO THE ENGINEER PRIOR TO CONSTRUCTION.

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



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CHALLENGER HOMES

FINAL GRADING & EROSION CONTROL PLANS
BENT GRASS RESIDENTIAL FILING NO. 2

CHALLENGER COMMUNITIES, LLC.

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

[illegible]

Date: 2/10/2020

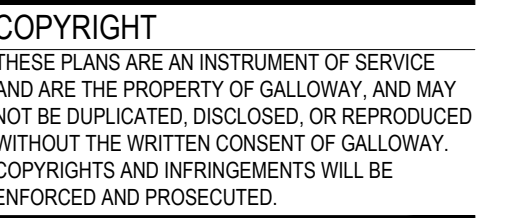
NOTES



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

G0.02

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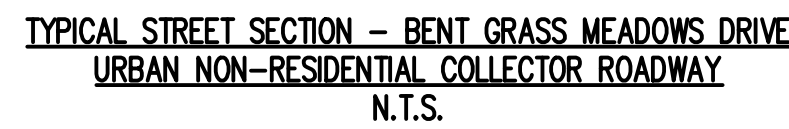
FINAL GRADING & EROSION CONTROL PLANS
BENT GRASS RESIDENTIAL FILING NO. 2
FOR
CHALLENGER COMMUNITIES, LLC.
BENT GRASS MEADOWS DRIVE & MERIDIAN ROAD
FALCON, CO 80831 - EL PASO COUNTY

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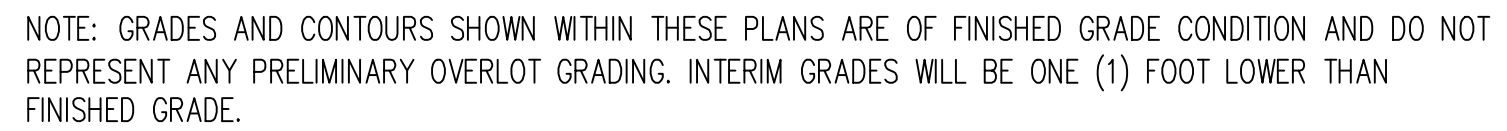
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Drawn By:	JDP
Checked By:	RGD
Date:	2/10/2020

TYPICAL ROADWAY SECTIONS AND LOT TEMPLATES

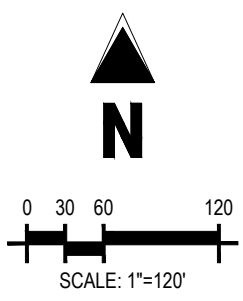
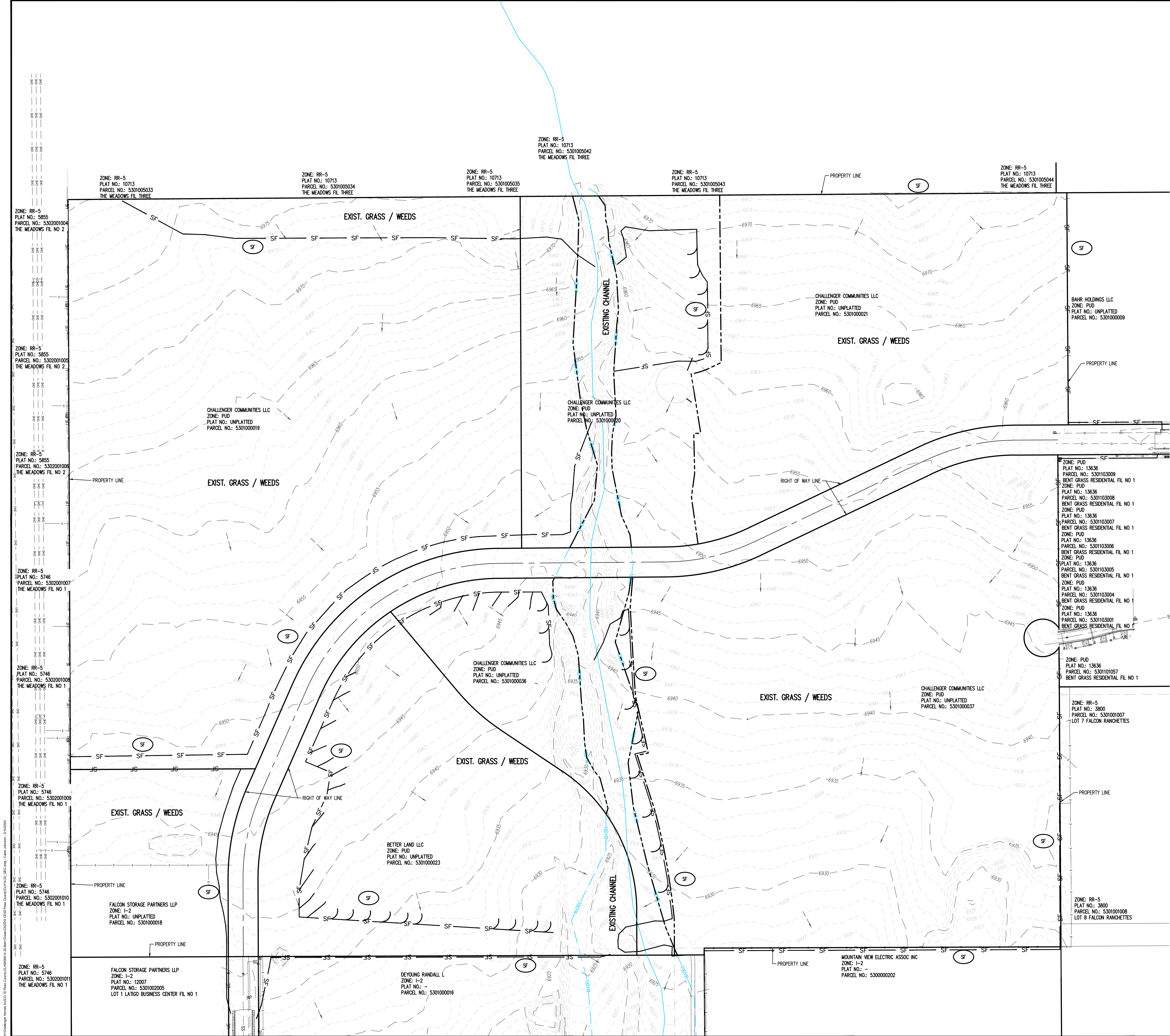
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1. TRANSITION LOTS IDENTIFIED BY A "T" ARE INCLUDED TO INDICATE LOTS THAT WILL REQUIRE HOME BUILDERS TO PREPARE A SITE SPECIFIC GRADING PLAN TO DETAIL THE GRADING TRANSITION FROM TYPE A/B LOTS TO GARDEN/WALKOUT LOTS
2. THE DEVELOPER/HOME BUILDER SHALL INSTALL SIDE LOT SWALES TO MINIMIZE THE LOT TO LOT DRAINAGE.



TYPICAL FINISHED GRADING COMPARED TO OVERLOT GRADING
N.T.S.



- LEGEND**
- 69.31 — EXISTING MINOR CONTOUR
 - 69.30 — EXISTING MAJOR CONTOUR
 - 69.41 — PROPOSED MINOR CONTOUR
 - 69.40 — PROPOSED MAJOR CONTOUR
 - — EXISTING PROPERTY BOUNDARY
 - — PROPOSED PROPERTY BOUNDARY
 - 100-YR — 100 - YR FLOODPLAIN LINE
 - — EXISTING STORM SEWER
 - — EXISTING FLOW
 - SF SILT FENCE

LEGAL DESCRIPTION
BENT GRASS RESIDENTIAL FILING NO. 2, LOCATED IN THE NORTHWEST QUARTER AND SOUTHWEST QUARTER OF SECTION 1, T13S, R65W AND THE WEST QUARTER CORNER SECTION 1, T13S, R65W IS NORTH 15° 46' 10" W AND MONUMENTED AS SHOWN.

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 NORTH 15° 46' 10" 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 Labeled 24954 ELEVATION = 6947.67

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



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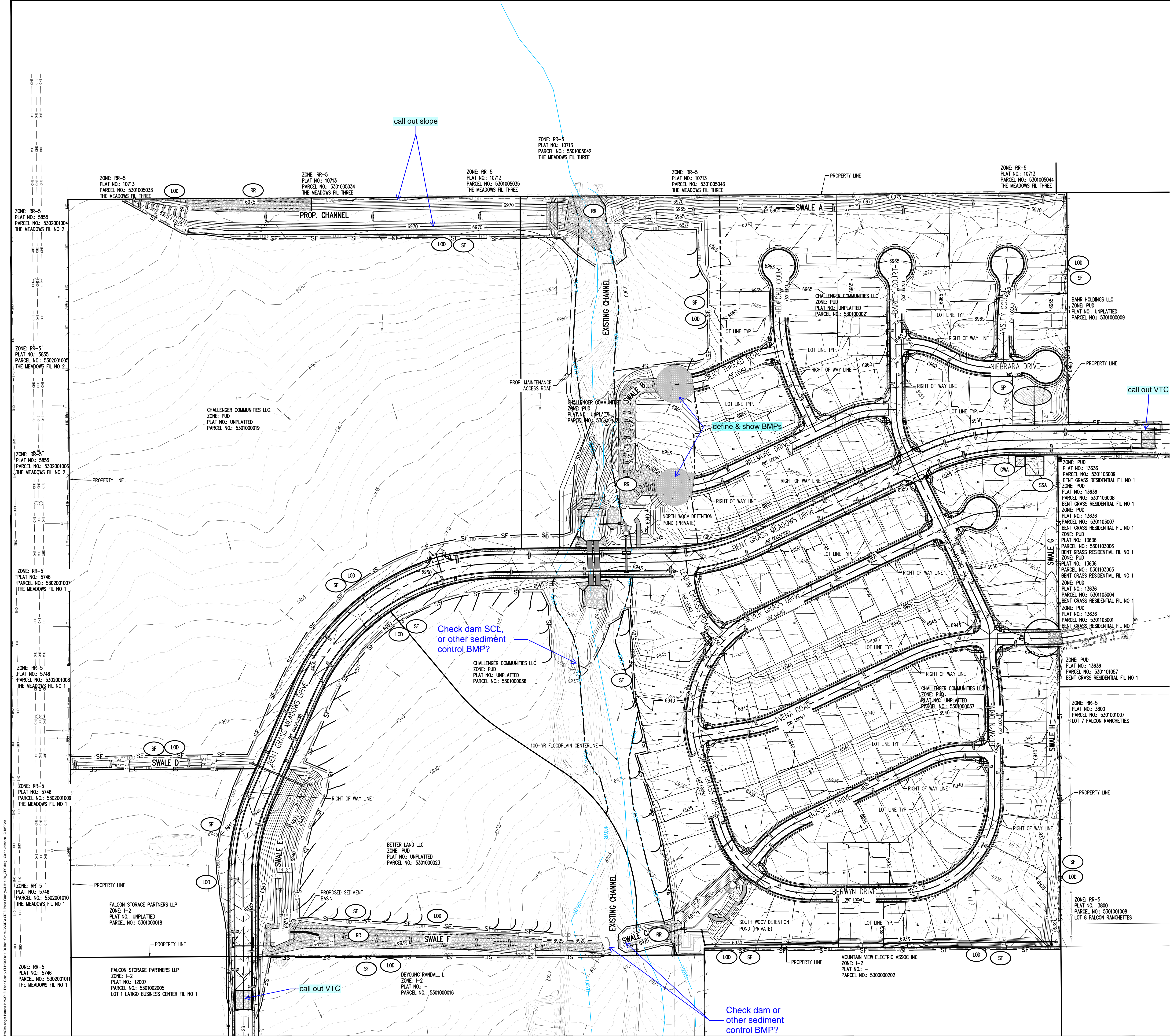
CHALLENGER HOMES

**FINAL GRADING & EROSION CONTROL PLANS
BENT GRASS RESIDENTIAL FILING NO. 2
FOR
CHALLENGER COMMUNITIES, LLC.**
BENT GRASS MEADOWS DRIVE & MERIDIAN ROAD
FALCON, CO 80831 - EL PASO COUNTY

#	Date	Issue / Description	Init.
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Project No:	CLH000014.20
Drawn By:	JDP
Checked By:	RGD
Date:	2/10/2020

INITIAL OVERALL EROSION CONTROL PLAN



0 30 60 120
SCALE: 1"=120'

LEGEND

---	EXISTING MINOR CONTOUR
---	EXISTING MAJOR CONTOUR
---	PROPOSED MINOR CONTOUR
---	PROPOSED MAJOR CONTOUR
---	PROPERTY BOUNDARY
---	PROPOSED PROPERTY BOUNDARY
---	100 - YR FLOODPLAIN LINE
---	EXISTING STORM SEWER
---	PROPOSED STORM SEWER
---	GROUTED BOULDERS
---	GRAVEL (NOT GRASS) B
SF	SILT FENCE
LOD	LIMITS OF DISTURBANCE
IP	INLET PROTECTION
RR	RIP RAP / OUTFALL PADS
SSA	STABILIZED STAGING AREA
SP	STOCKPILE
VTC	VEHICLE TRACKING CONTROL
CWA	CONCRETE WASHOUT AREA
SB	SEDIMENT BASIN

PROPOSED FLOW
PROPOSED SPOT ELEVATION
PROPOSED STRAW CHECK DAM

Show rock sock locations at curb cuts (as discussed in the SWMP)

NOTES

1. STRAW EOB SHALL BE PLACED ON ALL POND SIDE SLOPES
2. STRAW EOB SHALL BE PLACED ON ALL 4:1 SLOPES AND STEEPER
3. UNLESS OTHERWISE NOTED, ALL RIPRAP SHOWN IS TO BE TYPE 1-18" DEPTH.

LEGAL DESCRIPTION

BENT GRASS RESIDENTIAL FILING NO. 2, LOCATED IN THE NORTHWEST QUARTER AND SOUTHWEST QUARTER OF SECTION 1, T13S, R65W AND THE WEST QUARTER CORNER SECTION 1, T13S, R65W IS NORTH 15° 46' 10" W AND MONUMENTED AS SHOWN.

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 NORTH 15° 46' 10" W AND MONUMENTED AS SHOWN.

BENCHMARK

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

CAUTION - NOTICE TO CONTRACTOR

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



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CHALLENGER HOMES

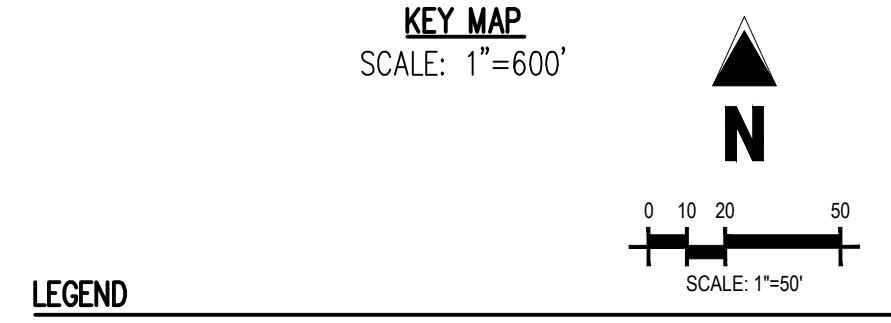
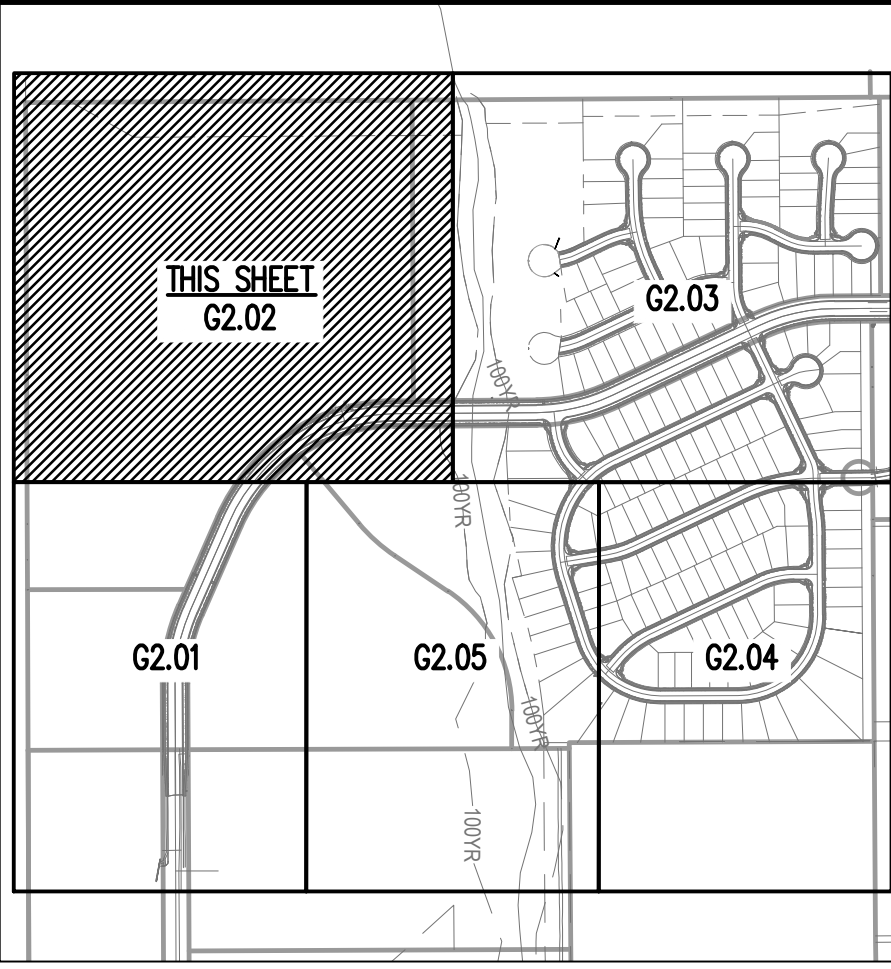
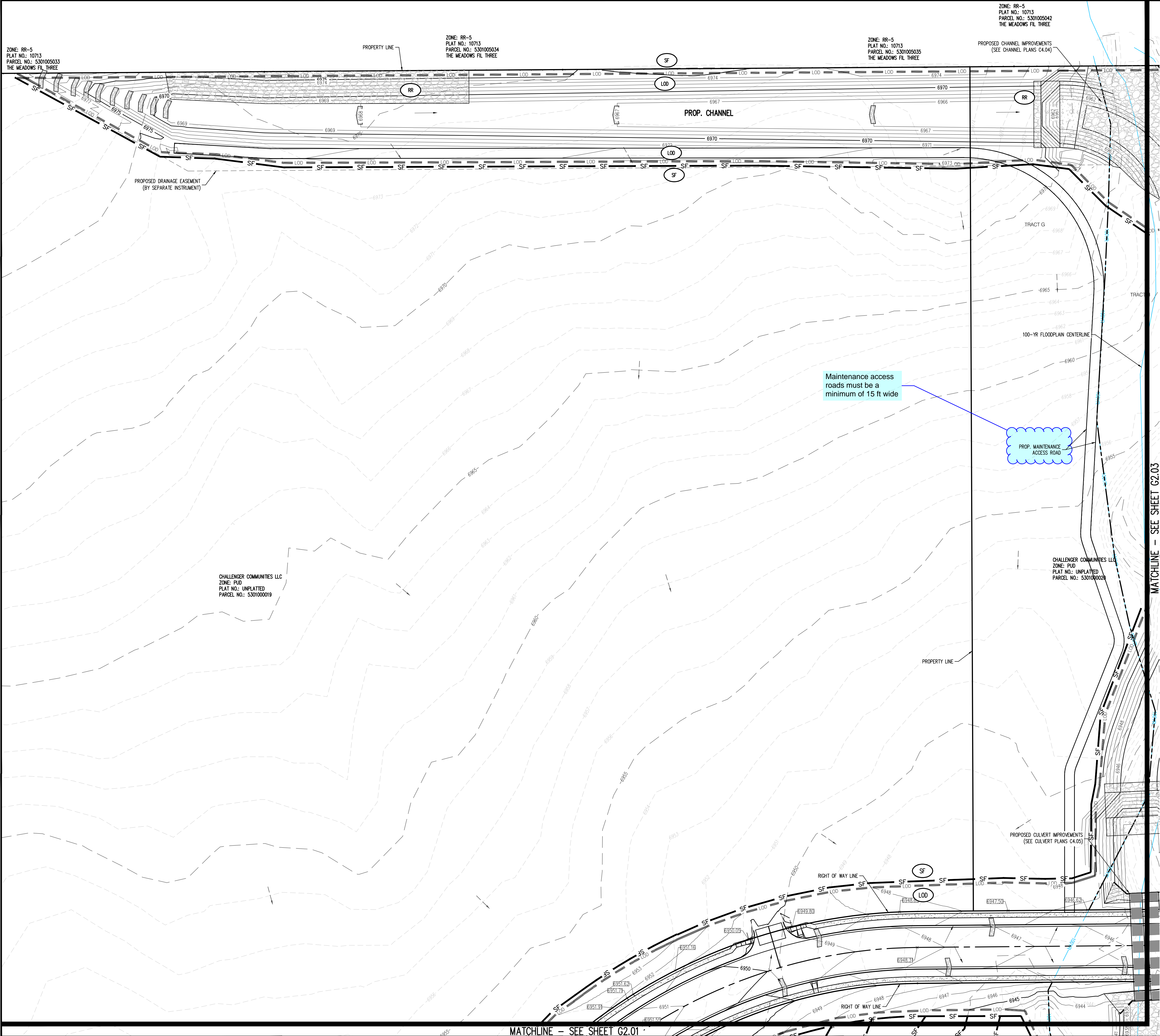
FINAL GRADING & EROSION CONTROL PLANS
BENT GRASS RESIDENTIAL FILING NO. 2
FOR
CHALLENGER COMMUNITIES, LLC.
BENT GRASS MEADOWS DRIVE & MERIDIAN ROAD
FALCON, CO 80831 - EL PASO COUNTY

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Project No: CLH000014.20
Drawn By: JDP
Checked By: RGD
Date: 2/10/2020

INTERIM OVERALL GRADING & EROSION CONTROL PLAN

G2.00
Sheet 5 of 16



- LEGEND**
- EXISTING MINOR CONTOUR
 - EXISTING MAJOR CONTOUR
 - PROPOSED MINOR CONTOUR
 - PROPOSED MAJOR CONTOUR
 - EXISTING PROPERTY BOUNDARY
 - PROPOSED PROPERTY BOUNDARY
 - 100 - YR FLOODPLAIN LINE
 - TOE OF SLOPE
 - TOP OF BANK
 - MATCHLINE
 - EXISTING STORM SEWER
 - PROPOSED STORM SEWER
 - GROUTED BOULDERS
 - GRAVEL (DOT CLASS 6)
 - SILT FENCE
 - LIMITS OF DISTURBANCE
 - INLET PROTECTION
 - RR RAP / OUTFALL PADS
 - STABILIZED STAGING AREA
 - STOCKPILE
 - VEHICLE TRACKING CONTROL
 - CONCRETE WASHOUT AREA
 - SEDIMENT BASIN
 - EXISTING FLOW
 - PROPOSED FLOW
 - PROPOSED SPOT ELEVATION
 - PROPOSED STRAW CHECK DAM

NOTES

- STRAW EOB SHALL BE PLACED ON ALL POND SIDE SLOPES
- STRAW EOB SHALL BE PLACED ON ALL 4:1 SLOPES AND STEEPER
- UNLESS OTHERWISE NOTED, ALL RIPRAP SHOWN IS TO BE TYPE L-15" DEPTH.

LEGAL DESCRIPTION

BENT GRASS RESIDENTIAL FILING NO. 2, LOCATED IN THE NORTHWEST QUARTER AND SOUTHWEST QUARTER OF SECTION 1, T13S, R65W AND THE WEST QUARTER CORNER SECTION 1, T13S, R65W IS NORTH 15° 46' W AND MONUMENTED AS SHOWN.

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 NORTH 15° 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 LOCATION OF ALL UTILITIES, PUBLIC OR PRIVATE, WHETHER SHOWN ON THE PLANS OR NOT, PRIOR TO CONSTRUCTION. REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO CONSTRUCTION.
- 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 POT-HOLING OR ALTERNATIVE METHOD. REPORT INFORMATION TO THE ENGINEER PRIOR TO CONSTRUCTION.

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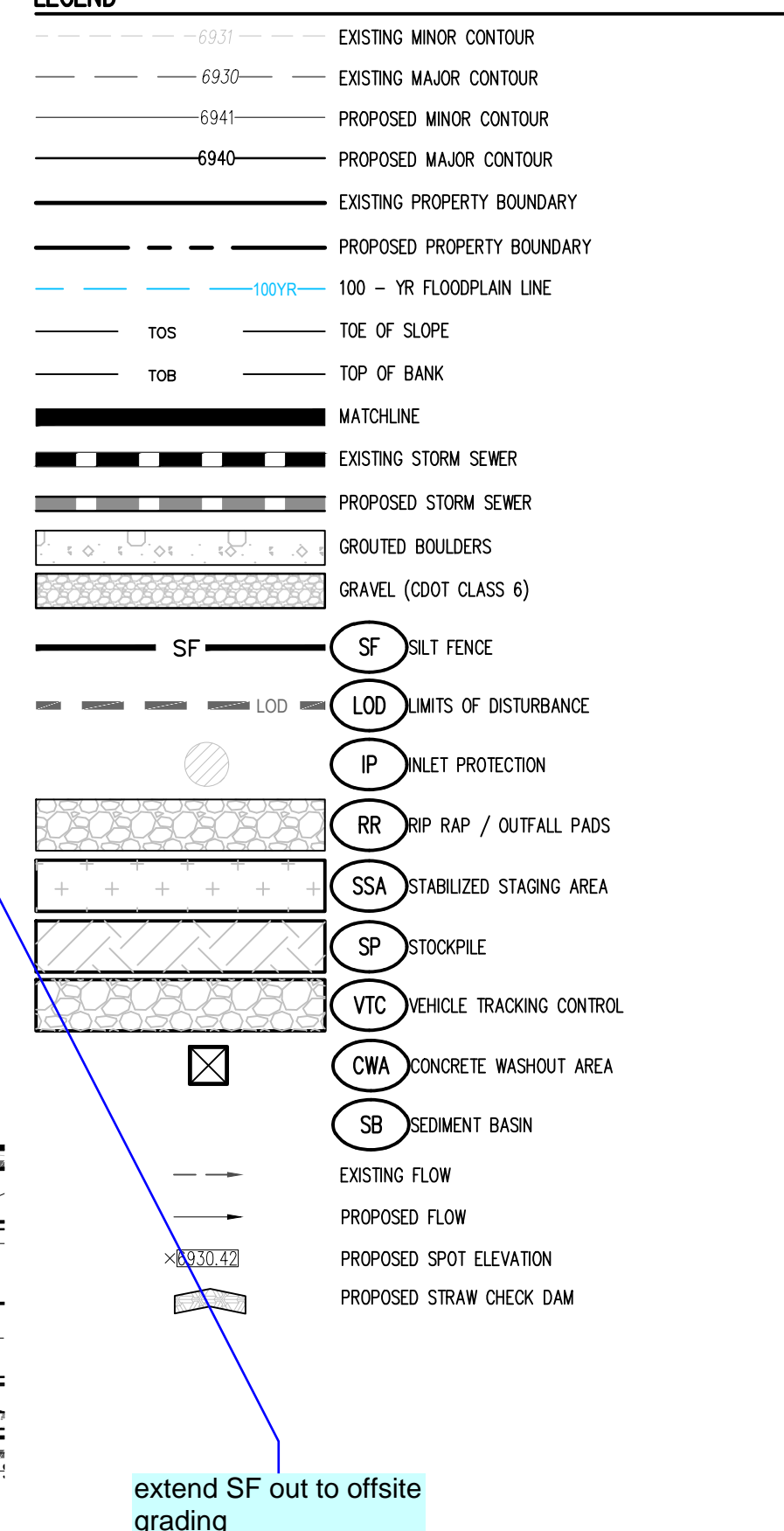
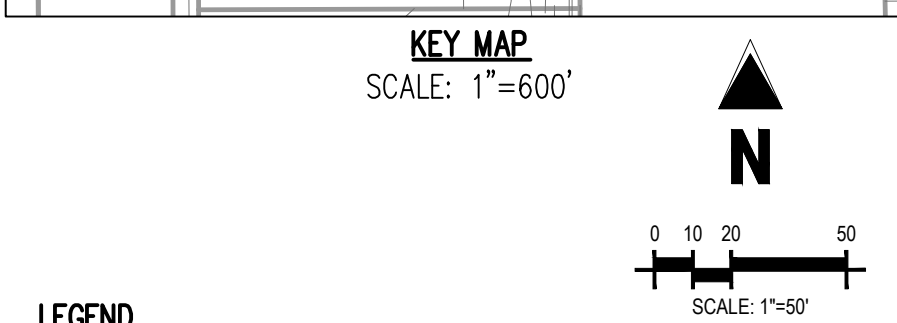
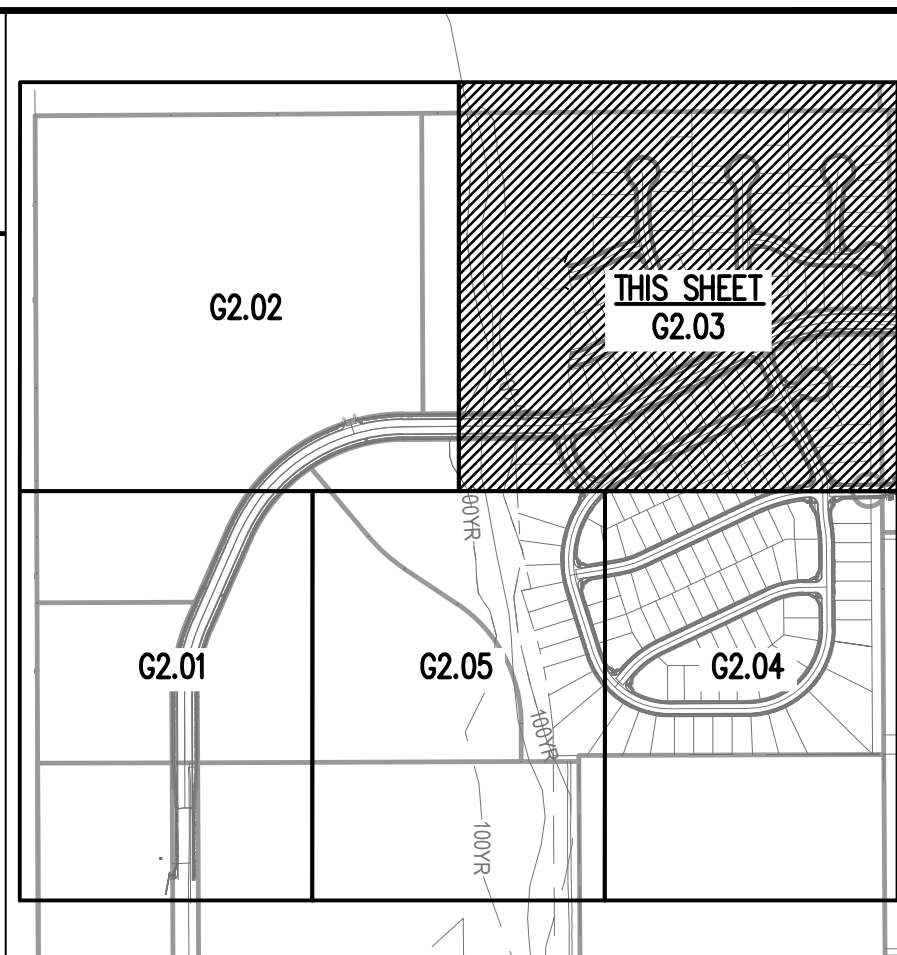
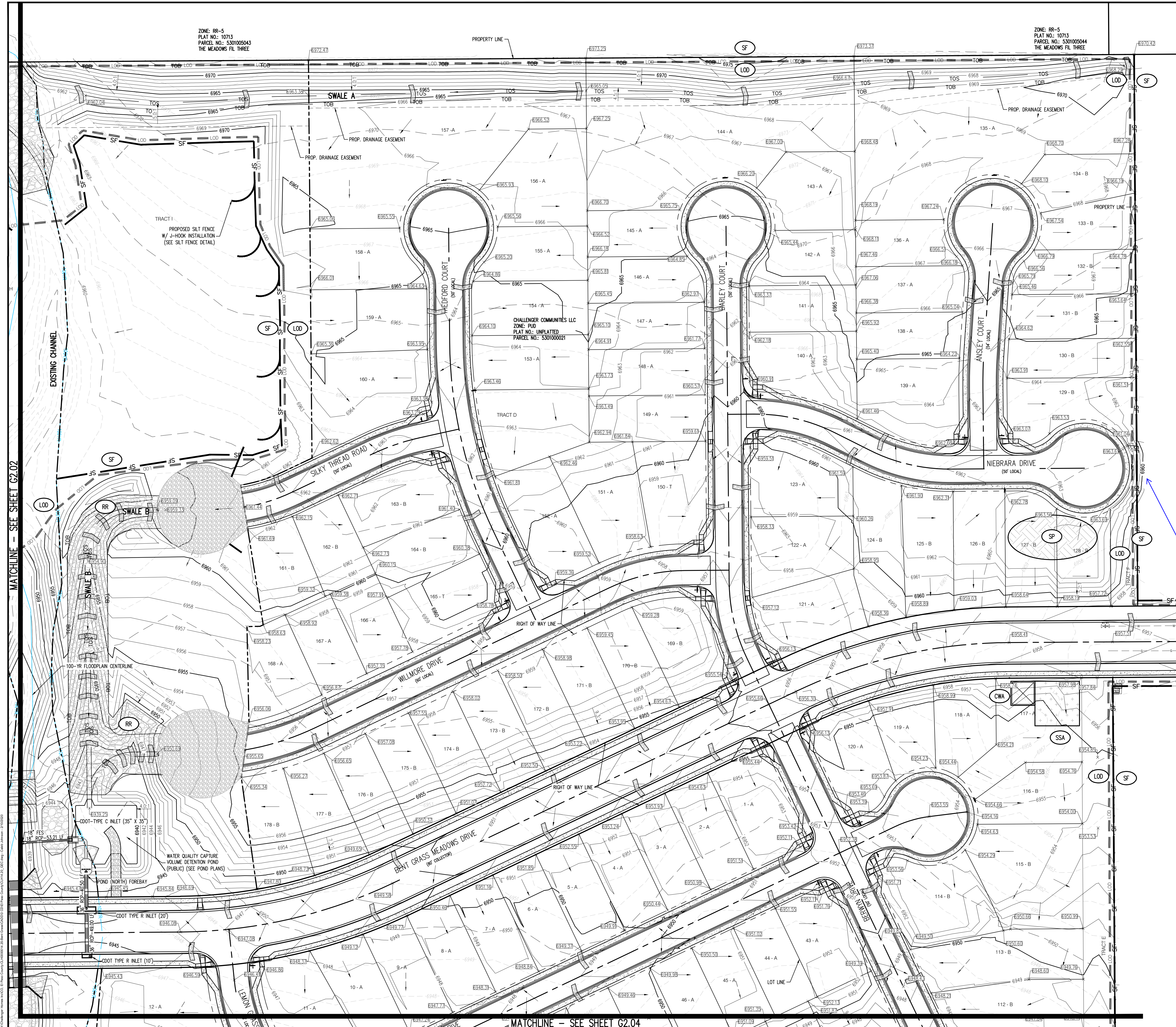
FINAL GRADING & EROSION CONTROL PLANS
BENT GRASS RESIDENTIAL FILING NO. 2
FOR
CHALLENGER COMMUNITIES, LLC.
BENT GRASS MEADOWS DRIVE & MERIDIAN ROAD
FALCON, CO 80831 - EL PASO COUNTY

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Project No: CLH000014.20
Drawn By: JDP
Checked By: RGD
Date: 2/10/2020

INTERIM GRADING & EROSION CONTROL PLAN

G2.02
Sheet 7 of 16



NOTES

1. STRAW EOB SHALL BE PLACED ON ALL POND SIDE SLOPES
2. STRAW EOB SHALL BE PLACED ON ALL 4:1 SLOPES AND STEEPER
3. UNLESS OTHERWISE NOTED, ALL RIPRAP SHOWN IS TO BE TYPE L-18" DEPTH.

LEGAL DESCRIPTION

BENT GRASS RESIDENTIAL FILING NO. 2, LOCATED IN THE NORTHWEST QUARTER AND SOUTHWEST QUARTER OF SECTION 1, T13S, R65W AND THE WEST QUARTER CORNER SECTION 1, T13S, R65W IS NORTH 14° 46' 00" W AND MONUMENTED AS SHOWN.

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 NORTH 14° 46' 00" W AND MONUMENTED AS SHOWN.

BENCHMARK

THE SOUTHWEST CORNER OF LOT 1 WOODMEN HILLS FILING NO. 4, MONUMENTED BY A YELLOW PLASTIC SURVEYOR'S CAP ON A NO. 4 REBAR L# 24954 ELEVATION = 6947.67

CAUTION - NOTICE TO CONTRACTOR

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CHALLENGER HOMES

FINAL GRADING & EROSION CONTROL PLANS
BENT GRASS RESIDENTIAL FILING NO. 2
FOR
CHALLENGER COMMUNITIES, LLC.

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

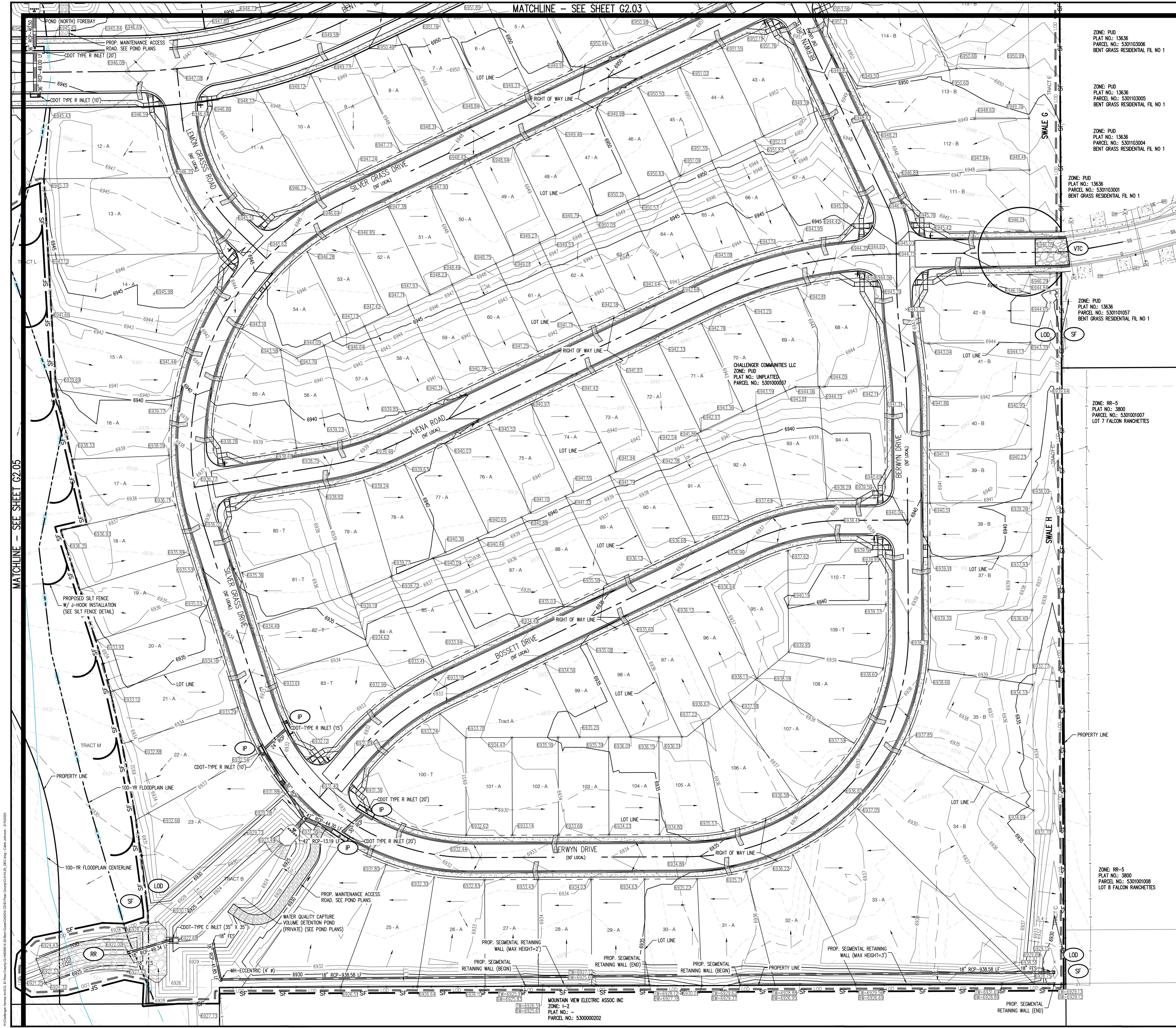
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Project No: CLH000014.20
Drawn By: JDP
Checked By: RGD
Date: 2/10/2020

INTERIM GRADING & EROSION CONTROL PLAN

G2.03

Sheet 8 of 16



ZONE: PUD
PLAT NO.: 13636
PARCEL NO.: 530103006
BENT GRASS RESIDENTIAL FIL NO 1

ZONE: PUD
PLAT NO.: 13636
PARCEL NO.: 530103005
BENT GRASS RESIDENTIAL FIL NO 1

ZONE: PUD
PLAT NO.: 13636
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BENT GRASS RESIDENTIAL FIL NO 1

ZONE: PUD
PLAT NO.: 13636
PARCEL NO.: 530103001
BENT GRASS RESIDENTIAL FIL NO 1

ZONE: PUD
PLAT NO.: 13636
PARCEL NO.: 530101057
BENT GRASS RESIDENTIAL FIL NO 1

ZONE: RR-5
PLAT NO.: 3800
PARCEL NO.: 5301001007
LOT 7 FALCON RANCHETTES

ZONE: RR-5
PLAT NO.: 3800
PARCEL NO.: 5301001008
LOT 8 FALCON RANCHETTES

KEY MAP
SCALE: 1"=600'

0 10 20 50
SCALE: 1"=50'

LEGEND

- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- EXISTING PROPERTY BOUNDARY
- PROPOSED PROPERTY BOUNDARY
- 100-YR FLOODPLAIN LINE
- TOE OF SLOPE
- TOP OF BANK
- MATCHLINE
- EXISTING STORM SEWER
- PROPOSED STORM SEWER
- GROUTED BOULDERS
- GRAVEL (CDOT CLASS 6)
- SILT FENCE
- LIMITS OF DISTURBANCE
- INLET PROTECTION
- RIP RAP / OUTFALL PADS
- STABILIZED STAGING AREA
- STOCKPILE
- VEHICLE TRACKING CONTROL
- CONCRETE WASHOUT AREA
- SEDIMENT BASIN
- EXISTING FLOW
- PROPOSED FLOW
- PROPOSED SPOT ELEVATION
- PROPOSED STRAW CHECK DAM

NOTES

- STRAW EOB SHALL BE PLACED ON ALL POND SIDE SLOPES
- STRAW EOB SHALL BE PLACED ON ALL 4:1 SLOPES AND STEEPER
- UNLESS OTHERWISE NOTED, ALL RIPRAP SHOWN IS TO BE TYPE 1-18" DEPTH.

LEGAL DESCRIPTION

BENT GRASS RESIDENTIAL FILING NO. 2, LOCATED IN THE NORTHWEST QUARTER AND SOUTHWEST QUARTER OF SECTION 1, T13S, R65W AND THE WEST QUARTER CORNER SECTION 1, T13S, R65W IS NORTH 146° 14' 10" WEST AND MONUMENTED AS SHOWN.

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 NORTH 146° 14' 10" WEST AND MONUMENTED AS SHOWN.

BENCHMARK

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

CAUTION - NOTICE TO CONTRACTOR

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

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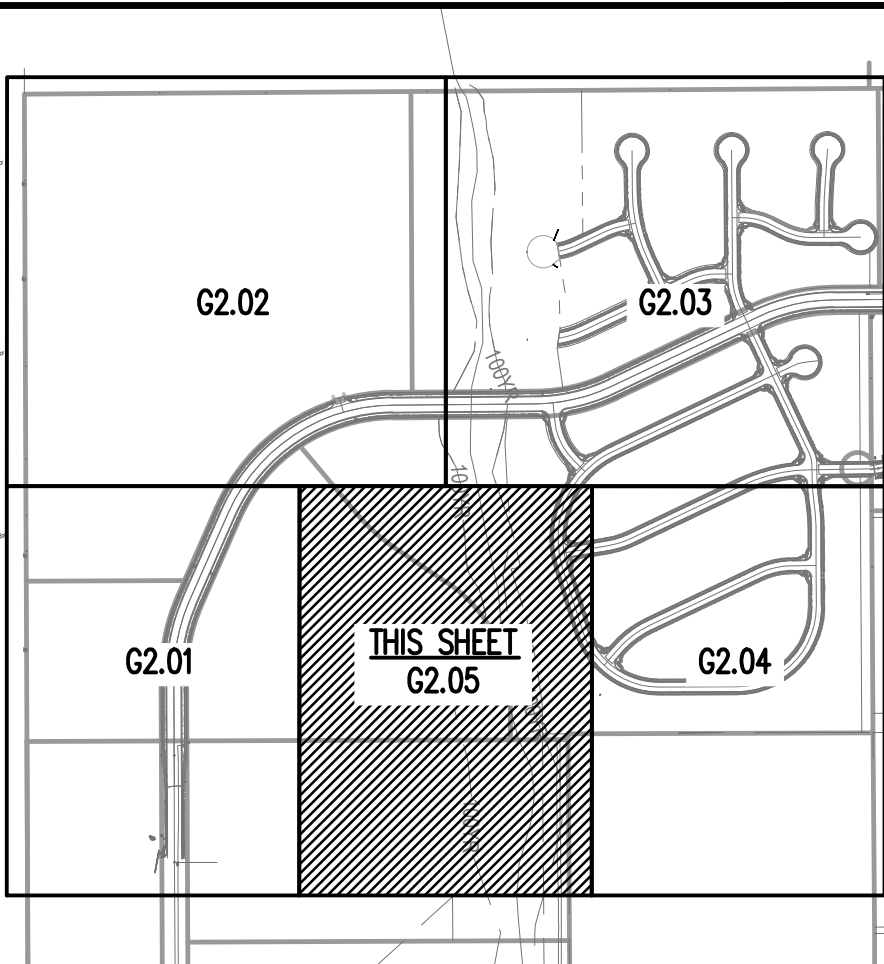
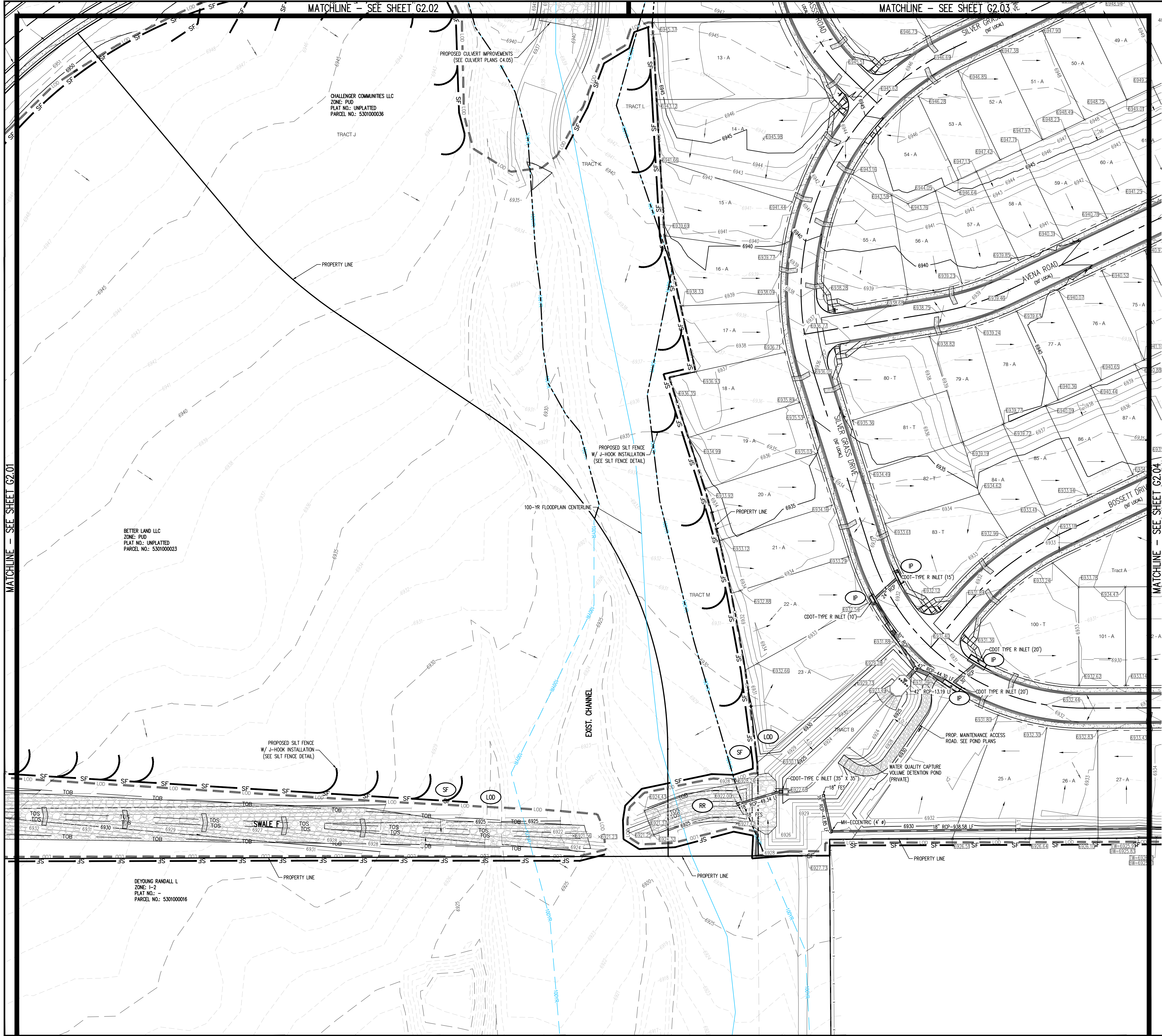
CHALLENGER HOMES

FINAL GRADING & EROSION CONTROL PLANS
BENT GRASS RESIDENTIAL FILING NO. 2
FOR
CHALLENGER COMMUNITIES, LLC.

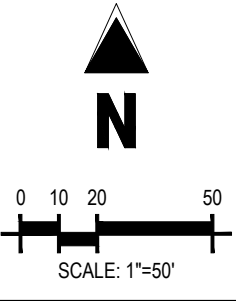
BENT GRASS MEADOWS DRIVE & MERIDIAN ROAD
FALCON, CO 80831 - EL PASO COUNTY

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G2.04
Sheet 9 of 16



KEY MAP
SCALE: 1"=600'



LEGEND

- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- EXISTING PROPERTY BOUNDARY
- PROPOSED PROPERTY BOUNDARY
- 100 - YR FLOODPLAIN LINE
- TOE OF SLOPE
- TOP OF BANK
- MATCHLINE
- EXISTING STORM SEWER
- PROPOSED STORM SEWER
- GROUTED BOULDERS
- GRAVEL (CDOT CLASS 6)
- SILT FENCE
- LOD LIMITS OF DISTURBANCE
- IP INLET PROTECTION
- RR RIP RAP / OUTFALL PADS
- SSA STABILIZED STAGING AREA
- SP STOCKPILE
- VTC VEHICLE TRACKING CONTROL
- CWA CONCRETE WASHOUT AREA
- SB SEDIMENT BASIN
- EXISTING FLOW
- PROPOSED FLOW
- PROPOSED SPOT ELEVATION
- PROPOSED STRAW CHECK DAM

NOTES

1. STRAW EOB SHALL BE PLACED ON ALL POND SIDE SLOPES
2. STRAW EOB SHALL BE PLACED ON ALL 4:1 SLOPES AND STEEPER
3. UNLESS OTHERWISE NOTED, ALL RIPRAP SHOWN IS TO BE TYPE 1-18" DEPTH.

LEGAL DESCRIPTION

BENT GRASS RESIDENTIAL FILING NO. 2, LOCATED IN THE NORTHWEST QUARTER AND SOUTHWEST QUARTER OF SECTION 1, T13S, R65W AND THE WEST QUARTER CORNER SECTION 1, T13S, R65W IS NORTH 15° 46' W AND MONUMENTED AS SHOWN.

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 NORTH 15° 46' W AND MONUMENTED AS SHOWN.

BENCHMARK

THE SOUTHWESTERLY CORNER OF LOT 1 WOODMEN HILLS FILING NO. 4, MONUMENTED BY A YELLOW PLASTIC SURVEYOR'S CAP ON A NO. 4 REBAR L@ 24954 ELEVATION = 6947.67

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CHALLENGER
HOMES

FINAL GRADING & EROSION CONTROL PLANS
BENT GRASS RESIDENTIAL FILING NO. 2
FOR
CHALLENGER COMMUNITIES, LLC.

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

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Project No: CLH000014.20
Drawn By: JDP
Checked By: RGD
Date: 2/10/2020

INTERIM GRADING &
EROSION CONTROL PLAN

G2.05

Sheet 10 of 16



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FINAL GRADING & EROSION CONTROL PLANS
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BENT GRASS MEADOWS DRIVE & MERIDIAN ROAD
FALCON, CO 80831 - EL PASO COUNTY

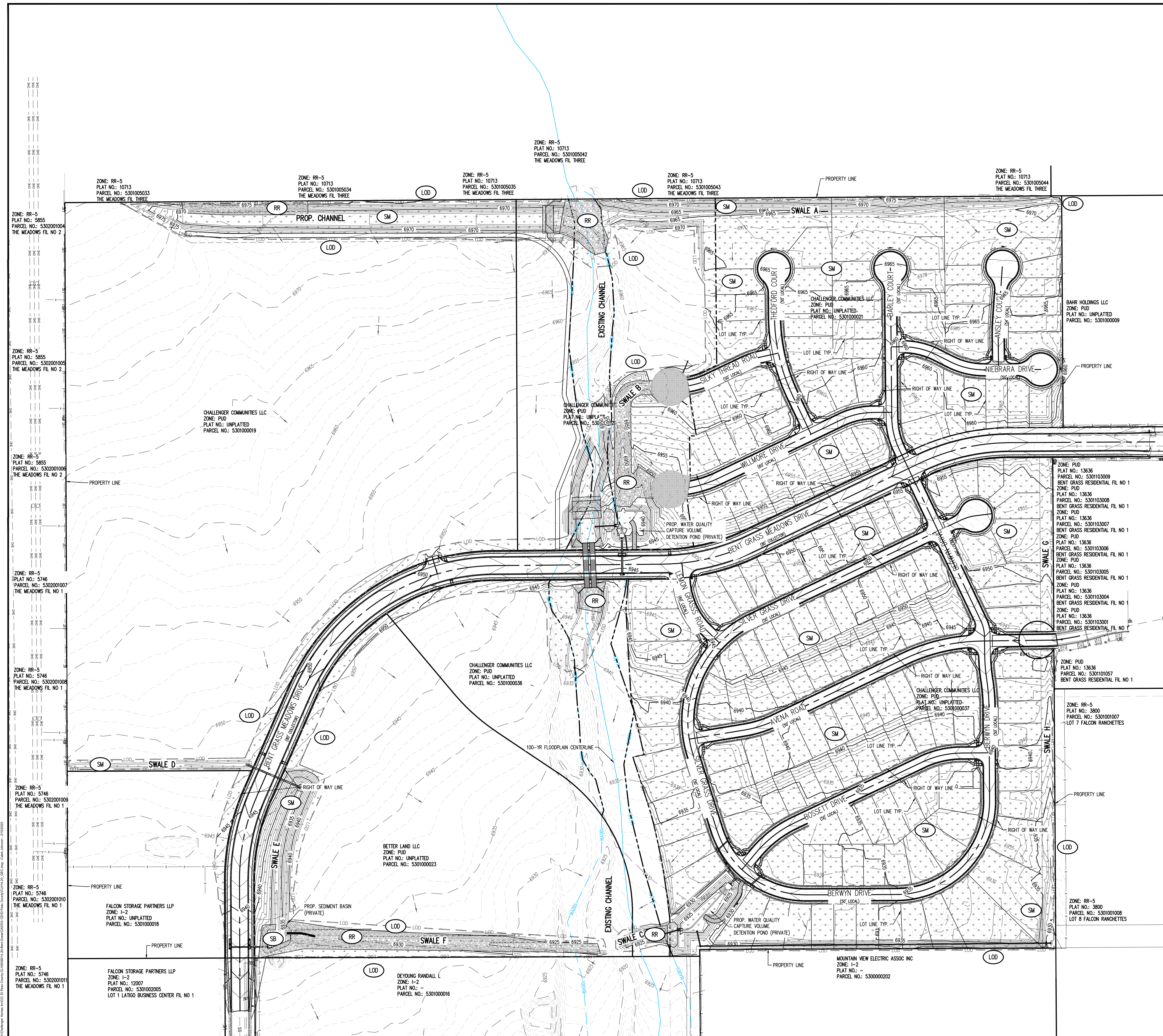
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Project No:	CLH000014.20
Drawn By:	JDP
Checked By:	RGD
Date:	2/10/2020

FINAL OVERALL GRADING & EROSION CONTROL PLAN

G3.00

Sheet 11 of 16



NOTES

1. STRAW ECB SHALL BE PLACED ON ALL POND SIDE SLOPES
2. STRAW ECB SHALL BE PLACED ON ALL 4:1 SLOPES AND STEEPER
3. UNLESS OTHERWISE NOTED, ALL RIPRAP SHOWN IS TO BE TYPE L-18" DEPTH.

LEGAL DESCRIPTION

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

BASIS OF BEARINGS

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

BENCHMARK

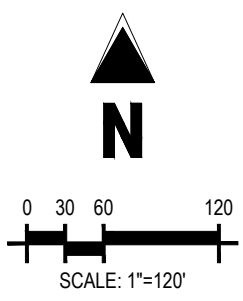
THE SOUTHWESTERLY CORNER OF LOT 1 WOODMEN HILLS FILING NO. 4. MONUMENTED BY A YELLOW PLASTIC SURVEYORS CAP ON A NO. 4 REBAR LS# 24954 ELEVATION = 6947.67

CAUTION - NOTICE TO CONTRACTOR

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



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



LEGEND	
	EXISTING MINOR CONTOUR
	EXISTING MAJOR CONTOUR
	PROPOSED MINOR CONTOUR
	PROPOSED MAJOR CONTOUR
	EXISTING PROPERTY BOUNDARY
	PROPOSED PROPERTY BOUNDARY
	100 - YR FLOODPLAIN LINE
	AREAS OF FILL
	AREAS OF CUT

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

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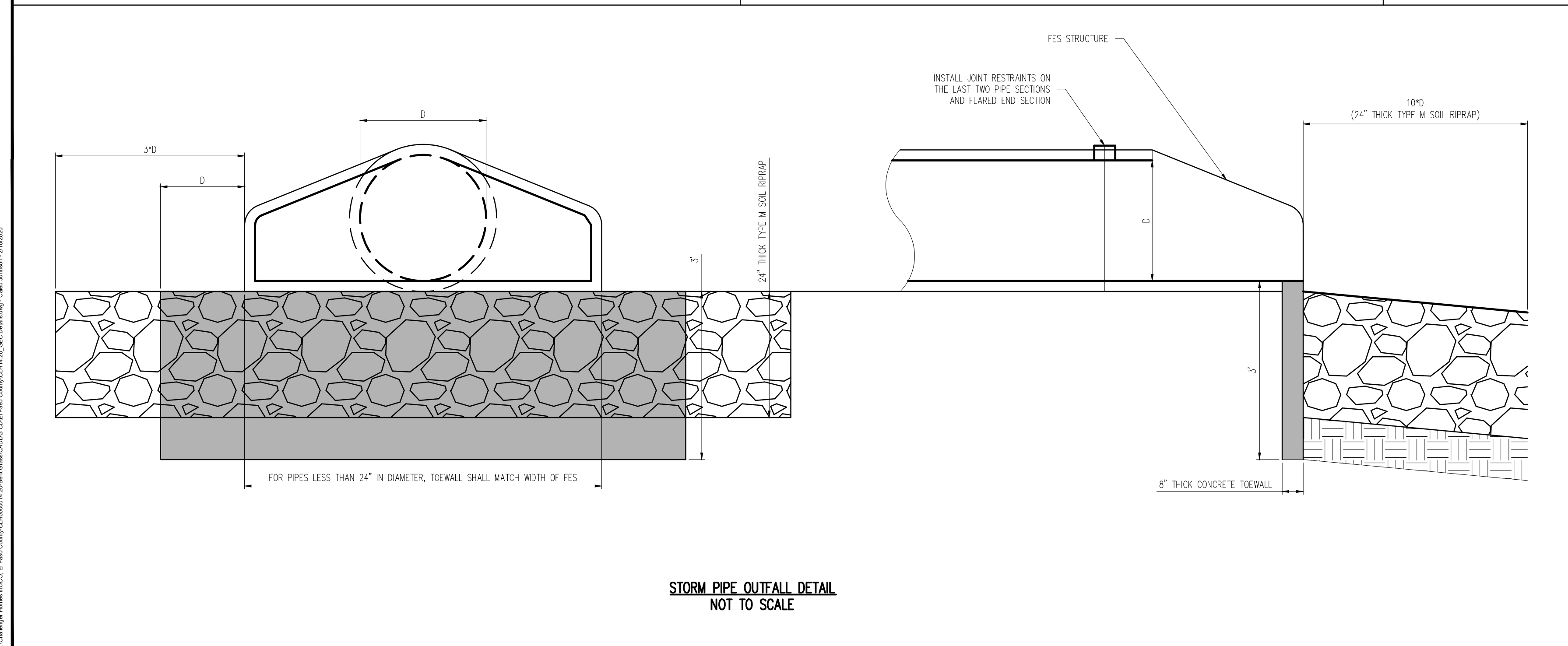
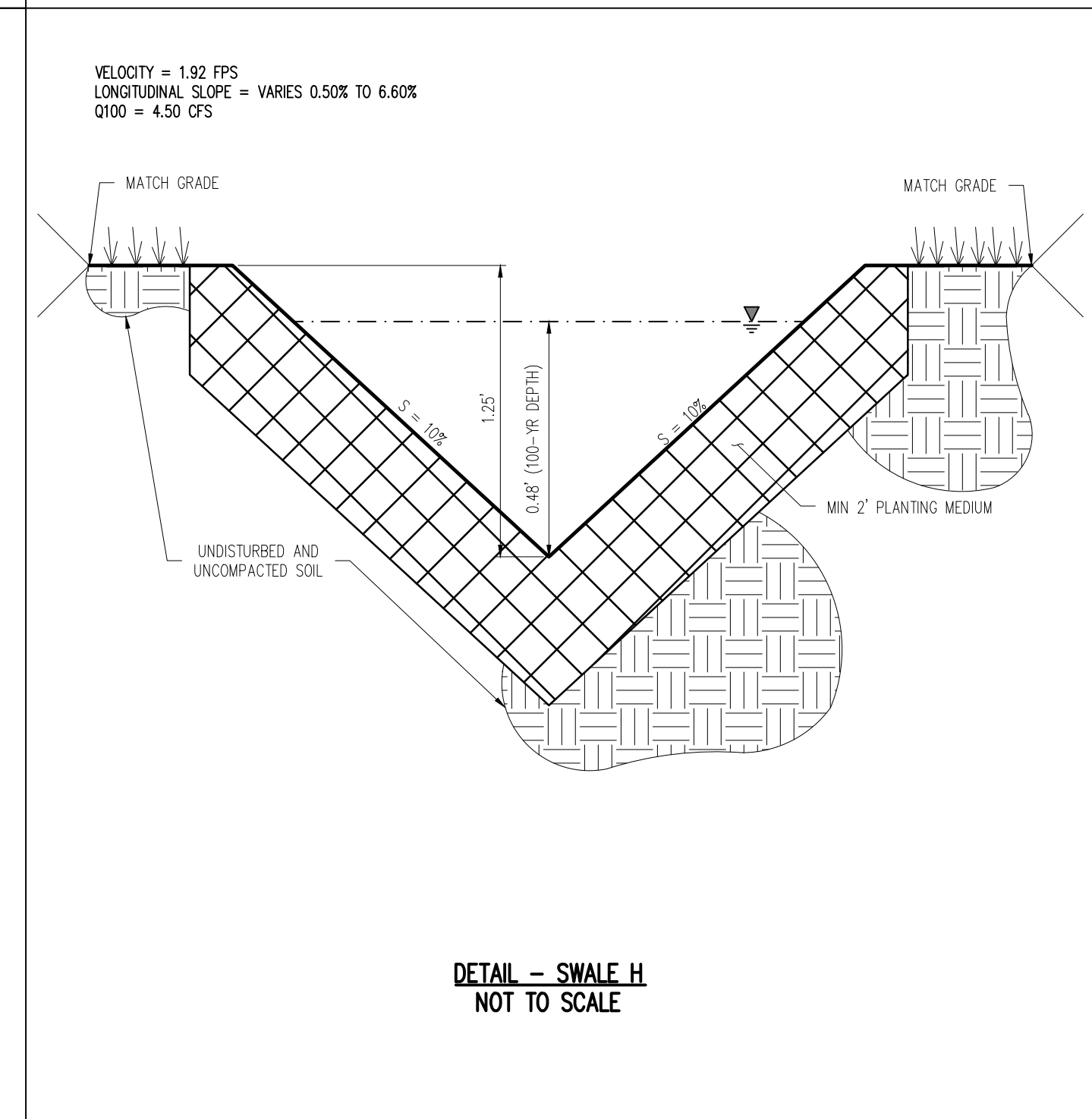
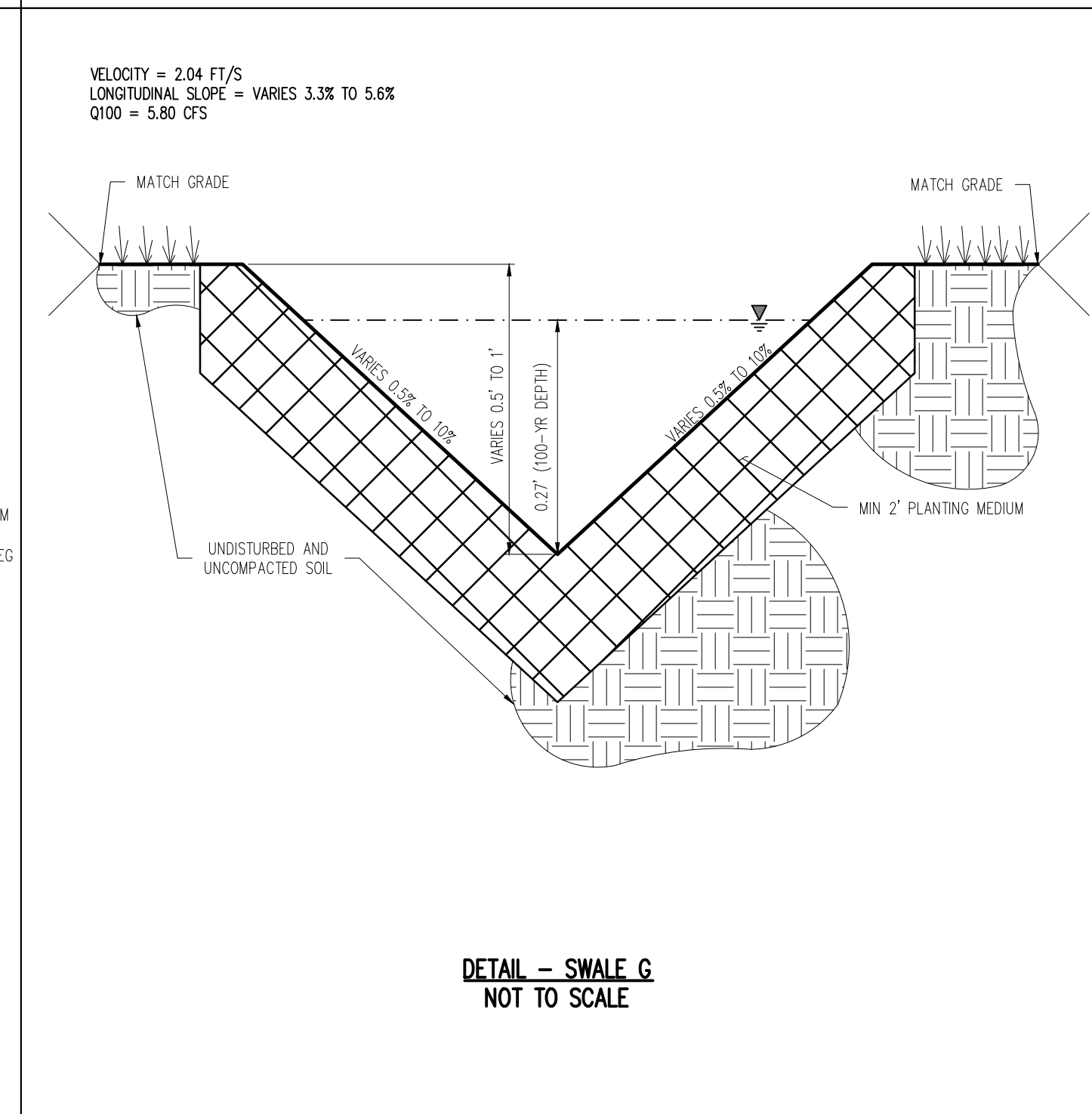
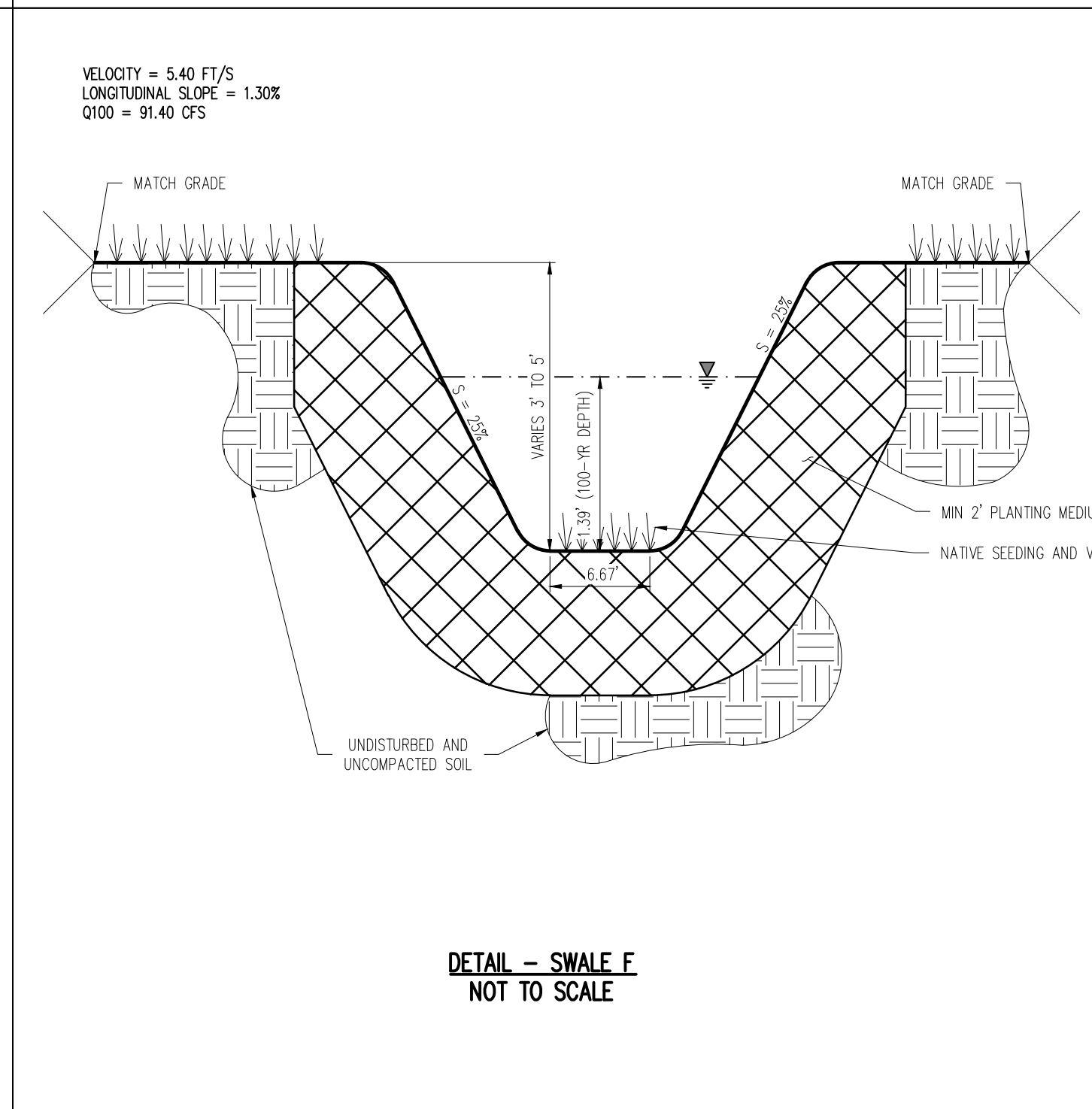
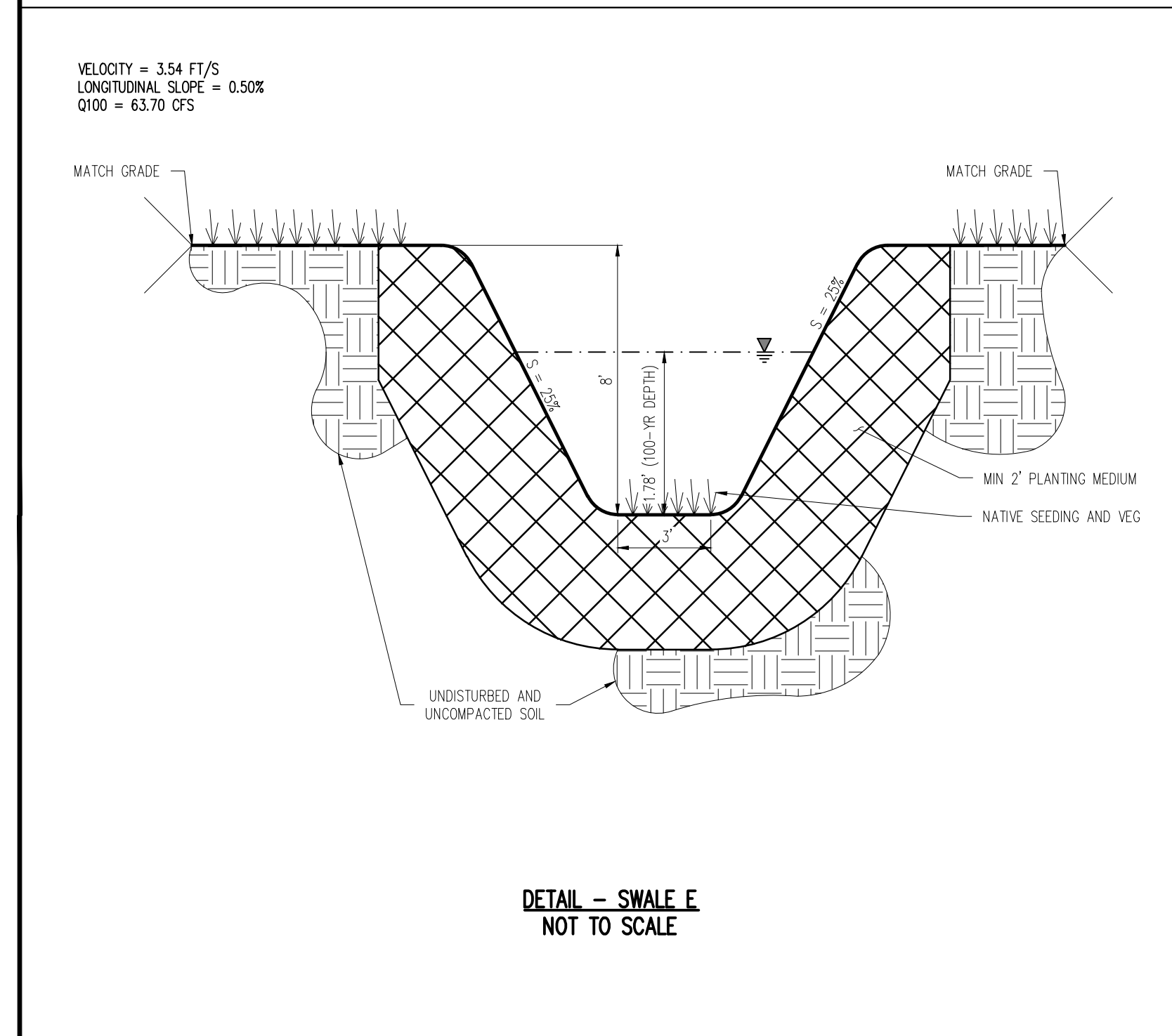
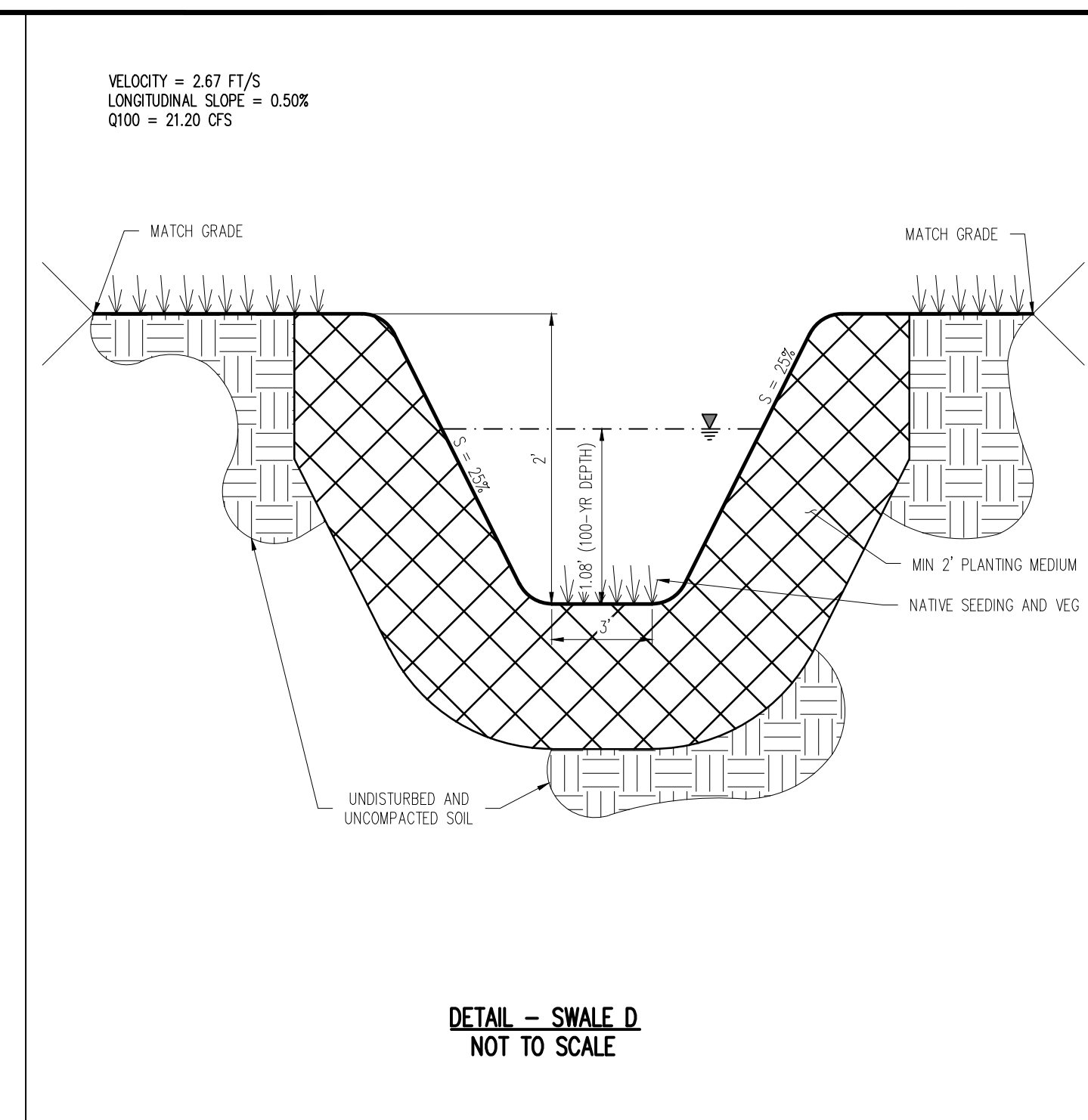
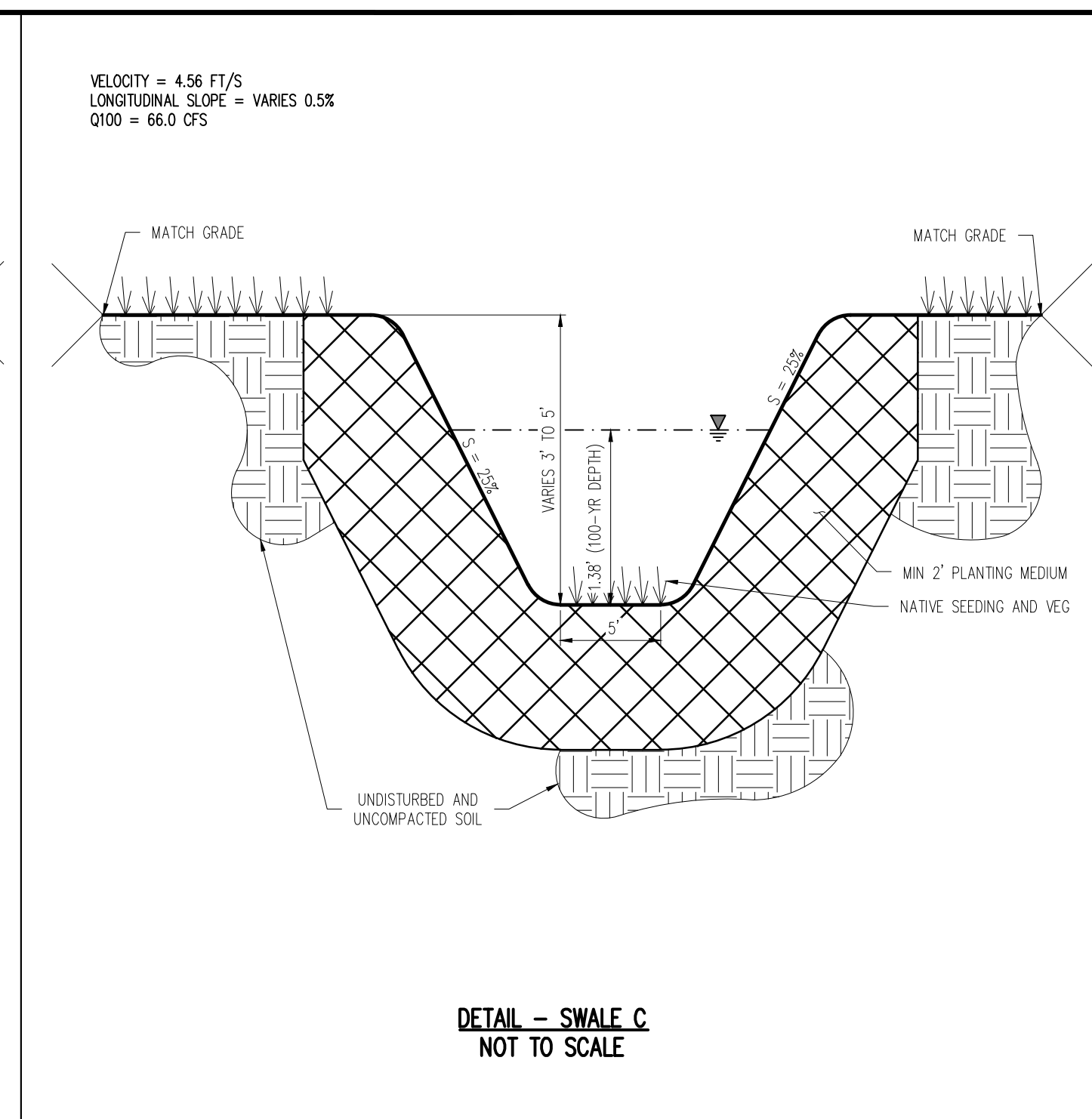
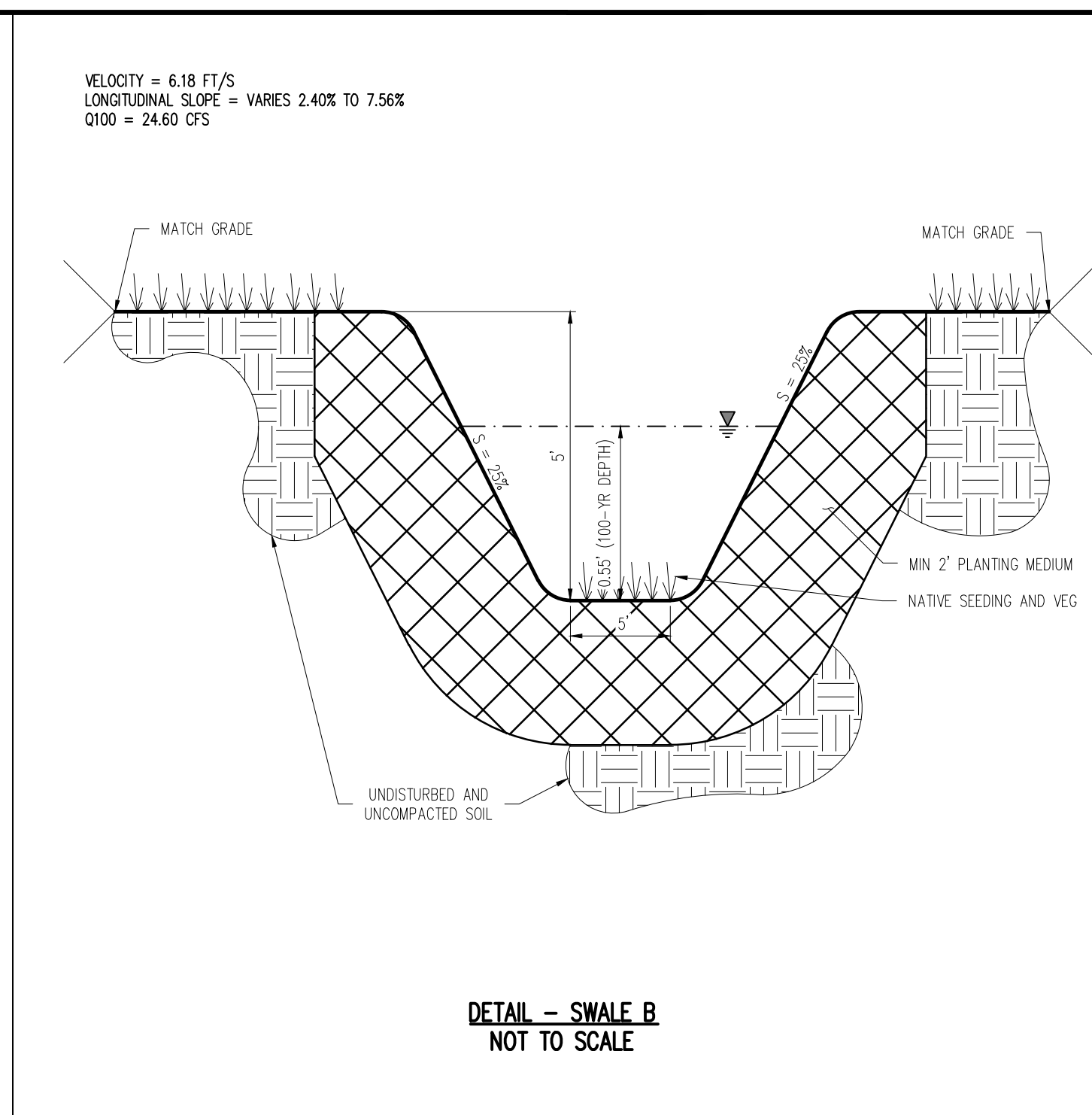
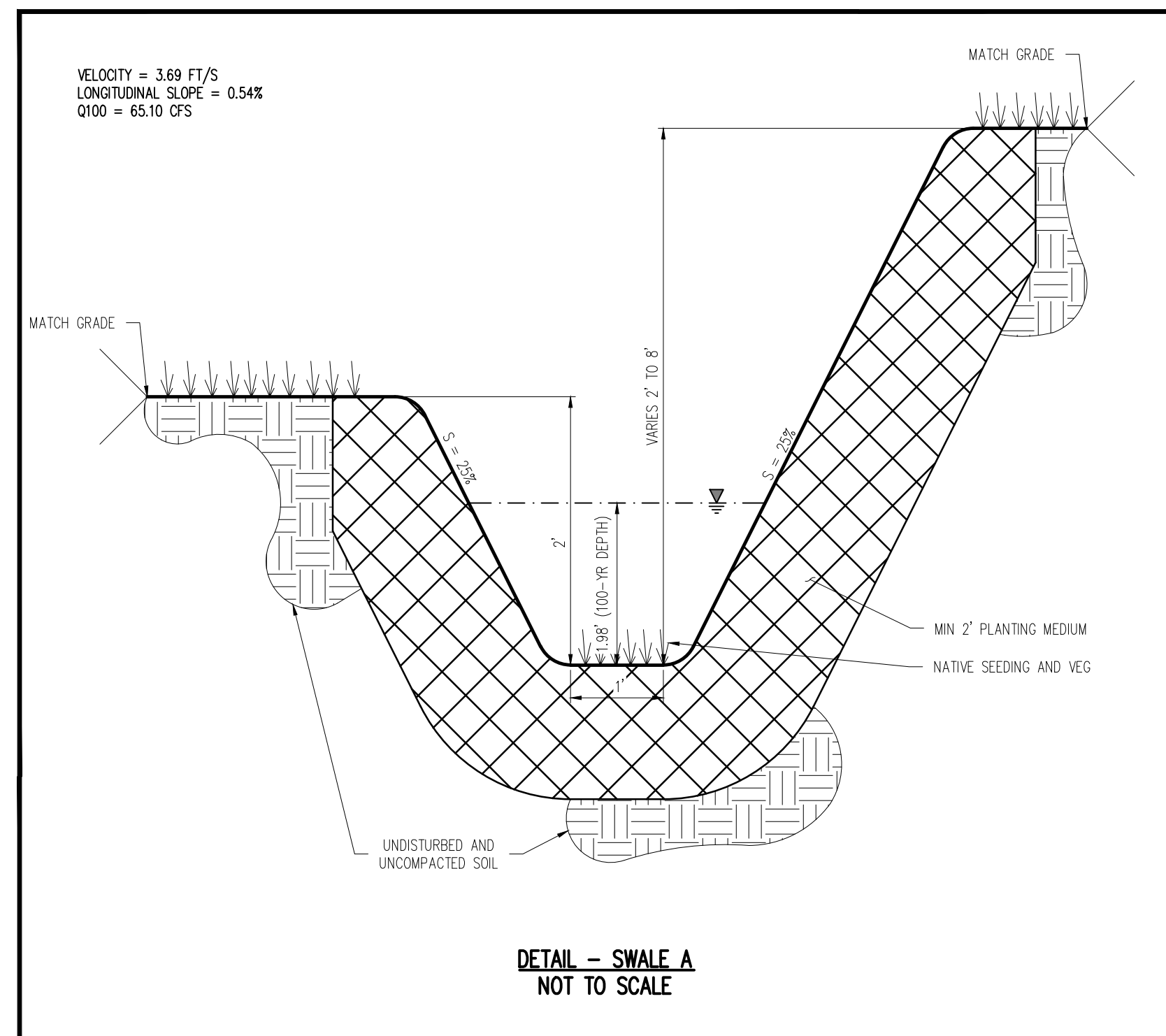
CHALLENGER HOMES

**FINAL GRADING & EROSION CONTROL PLANS
BENT GRASS RESIDENTIAL FILING NO. 2
FOR
CHALLENGER COMMUNITIES, LLC.
BENT GRASS MEADOWS DRIVE & MERIDIAN ROAD
FALCON, CO 80831 - EL PASO COUNTY**

#	Date	Issue / Description	Init.
1			
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Project No:	CLH000014.20
Drawn By:	JDP
Checked By:	RGD
Date:	2/10/2020

CUT AND FILL AREAS



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CHALLENGER HOMES

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

[illegible]

Project No:	CLH000014.20
Drawn By:	JDP
Checked By:	RGD
Date:	2/10/2020

GRADING & EROSION CONTROL DETAILS

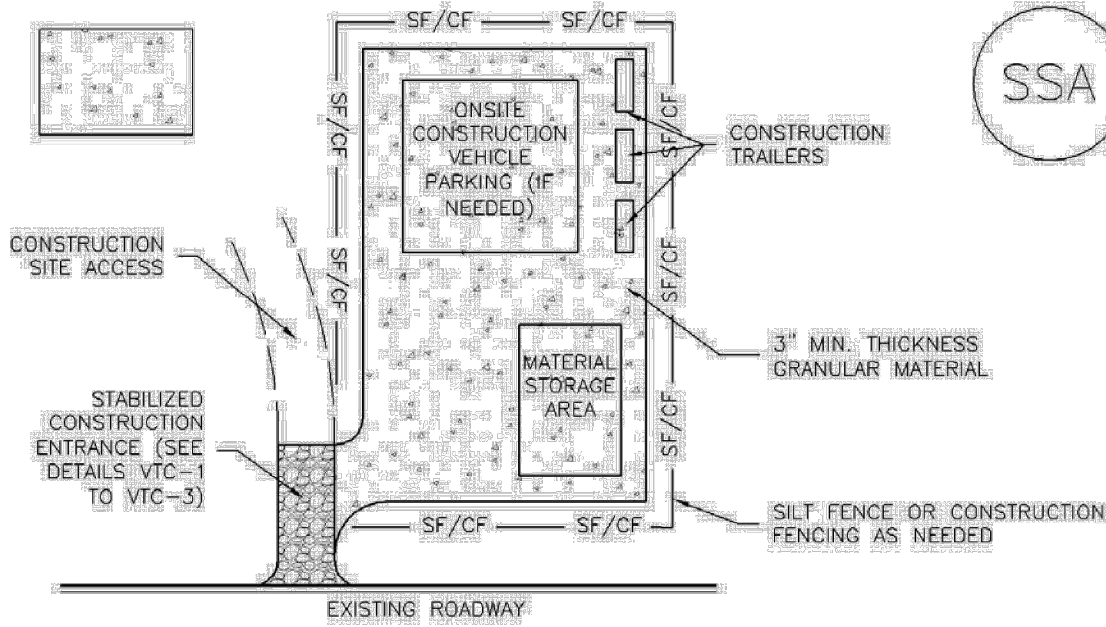
G5.01

EROSION CONTROL CRITERIA

- EROSION CONTROL MEASURES SHALL BE IMPLEMENTED IN A MANNER THAT WILL PROTECT PROPERTIES AND PUBLIC FACILITIES FROM THE ADVERSE EFFECTS OF EROSION AND SEDIMENTATION AS A RESULT OF CONSTRUCTION AND EARTHWORK ACTIVITIES WITHIN THE PROJECT SITE.
1. THE OMISSION FROM OR THE INCLUSION OF UTILITY LOCATIONS ON THE PLANS IS NOT TO BE CONSIDERED AS THE NON-EXISTENCE OF OR A DEFINITE LOCATION OF EXISTING UNDERGROUND UTILITIES.
 2. DURING GRADING OPERATIONS, LOCATE AND SET THE STRAW BALE CHECK DAMS AND SILT FENCES AS SHOWN ON THE EROSION CONTROL PLAN. AT THIS TIME RESEED ALL DISTURBED AREAS WITH AN EL PASO COUNTY APPROVED SEED MIX.
 3. SEEDING APPLICATION: DRILLED TO A DEPTH OF 0.25" TO 0.50" INTO SOIL WHERE POSSIBLE. BROADCAST AND RANKEO TO COVER ON STEEPER THAN 3:1 SLOPES WHERE ACCESS IS LIMITED OR UNSAFE FOR EQUIPMENT.
 4. MULCHING REQUIREMENTS AND APPLICATION: 1.5 TONS PER ACRE NATIVE HAY MECHANICALLY CRIMPED INTO SOIL.
 5. THE STRAWBALE CHECK DAMS AND SILT FENCES SHALL BE KEPT IN PLACE AND MAINTAINED UNTIL EROSION AND SEDIMENTATION POTENTIAL IS MITIGATED. REMOVAL OF SILT AND SEDIMENT COLLECTED BY THE STRAWBALES IS REQUIRED ONCE IT REACHED HALF THE HEIGHT OF THE STRAWBALES OR SILT FENCE.
 6. DISTURBED SOIL SHALL BE VEGETATED WITHIN 60 DAYS AFTER SUBSTANTIAL FINAL GRADING IS COMPLETE. PROVIDE TEMPORARY VEGETATION TO DISTURBED AREAS THAT WILL HAVE A PERIOD OF EXPOSURE OF MONTHS OR LONGER PRIOR TO FINAL STABILIZATION.
 7. ALL FACILITIES, VEGETATION AND OTHER ITEMS REQUIRED BY THE APPROVED FINAL GRADING, EROSION CONTROL AND RECLAMATION PLAN SHALL BE PROPERLY MAINTAINED BY THE OWNERS OF THE PROPERTY. SUCH MAINTENANCE SHALL INCLUDE, BUT NOT BE LIMITED TO KEEPING ALL EROSION CONTROL FACILITIES IN GOOD ORDER AND FUNCTIONAL, REPAIRING ANY EROSION DAMAGE THAT OCCURS, KEEPING ALL VEGETATION HEALTHY AND IN GROWING CONDITION AND REPLACING ANY DEAD VEGETATION AS SOON AS PRACTICABLE.
 8. ALL SILT FENCES ARE TO BE REGULARLY INSPECTED AND REPAIRED AS NEEDED.
 9. THE CONTRACTOR SHALL PROVIDE VEHICLE TRACING CONTROL FACILITIES FOR EACH ENTRANCE / EXIT TO THE SITE. THE CONTRACTOR SHALL SUBMIT A PLAN WHICH WILL ASSURE USAGE OF THE FACILITY BY ALL VEHICLES LEAVING THE SITE.
 10. EROSION CONTROL MEASURES SHALL BE CHECKED AFTER EACH STORM EVENT AND REPAIRED WHEN NECESSARY.
 11. CONTRACTOR SHALL MAINTAIN ALL TEMPORARY EROSION CONTROL FACILITIES IN GOOD WORKING ORDER UNTIL SUCH TIME AS PERMANENT FACILITIES ARE IN PLACE AND THE CONSTRUCTION MANAGER HAS APPROVED THEIR REMOVAL.
 12. ADDITIONAL EROSION CONTROL STRUCTURES MAY BE REQUIRED AT THE TIME OF CONSTRUCTION.
 13. THE EROSION CONTROL MEASURES OUTLINED ON THE PLAN ARE THE RESPONSIBILITY OF THE DEVELOPER TO MONITOR AND REPLACE, REGRADE AND REBUILD AS NECESSARY UNTIL VEGETATION IS ESTABLISHED.
 14. MAXIMUM ACREAGE OPEN AT ANY GIVEN TIME IS TO BE 97 ACRES.

Stabilized Staging Area (SSA)

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 FROM THE LOCAL JURISDICTION.
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 MATERIAL.
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 FENCE AND CONSTRUCTION FENCING.

STABILIZED STAGING AREA 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 IF RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.

November 2010 Urban Drainage and Flood Control District SSA-3
Urban Storm Drainage Criteria Manual Volume 3

SM-6

Stabilized Staging Area (SSA)

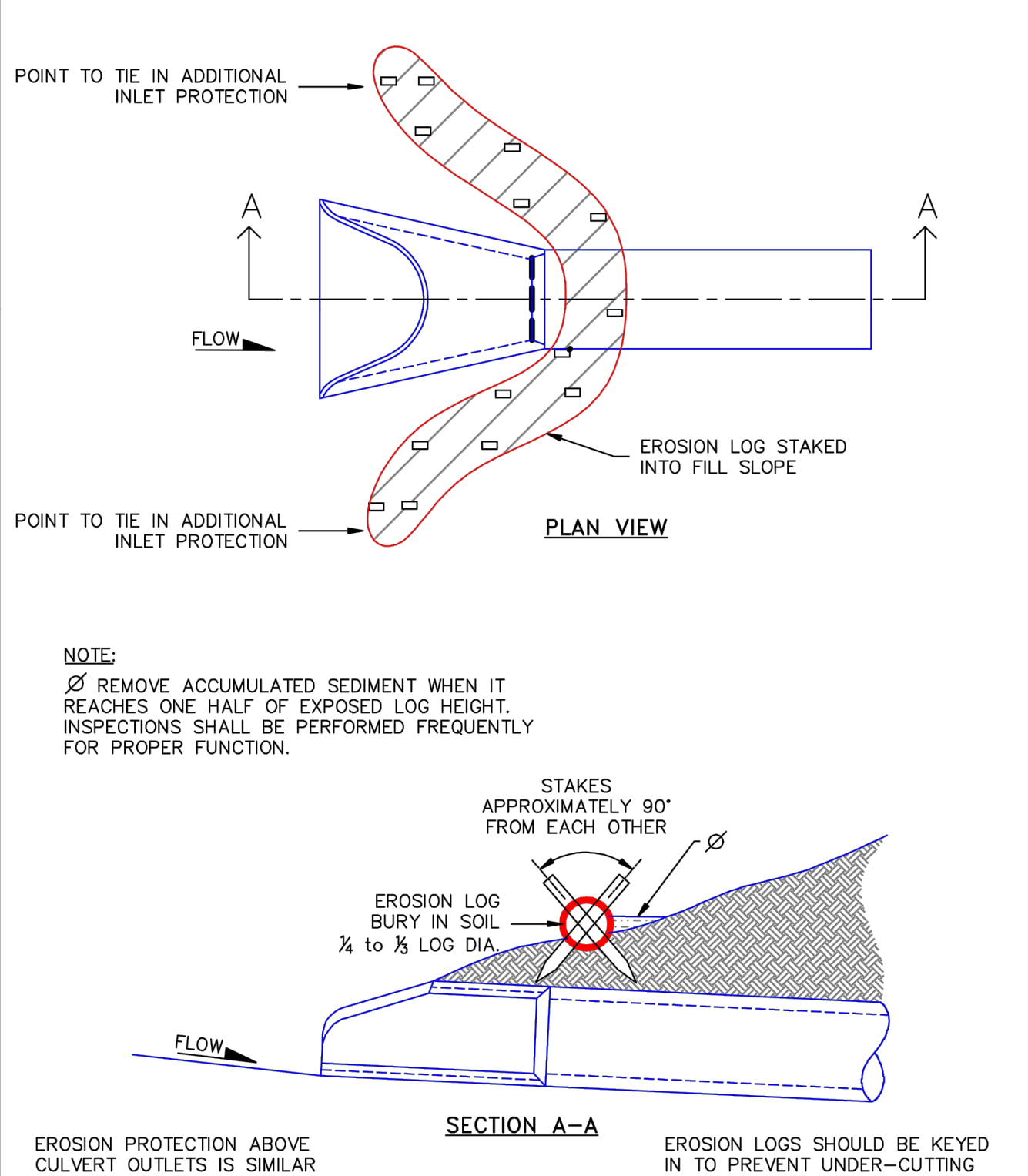
STABILIZED STAGING AREA MAINTENANCE NOTES

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, SEED, AND MULCH OR OTHERWISE STABILIZED IN A MANNER APPROVED BY LOCAL JURISDICTION.

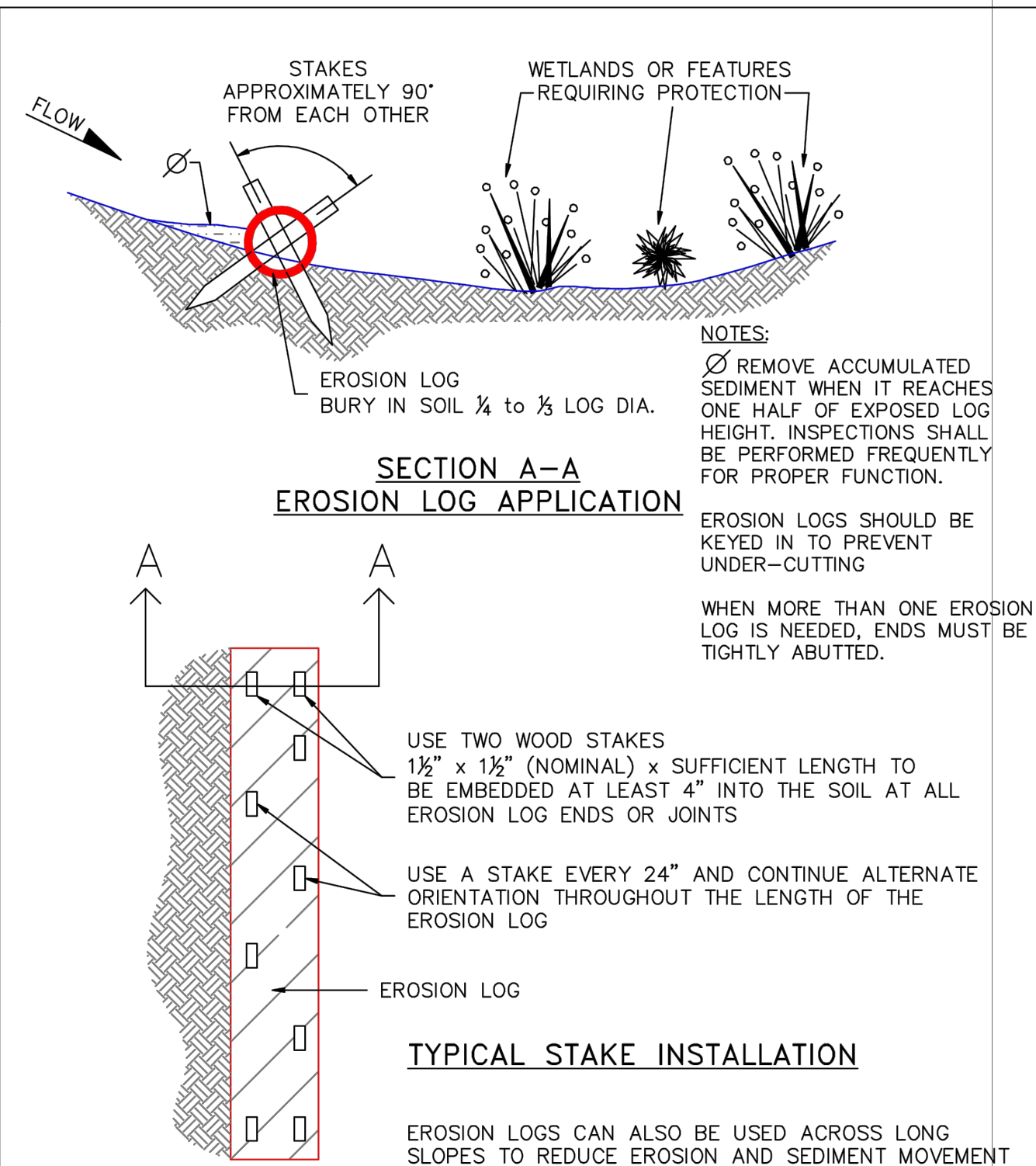
NOTE: MANY MUNICIPALITIES PROHIBIT THE USE OF RECYCLED CONCRETE AS GRANULAR MATERIAL FOR STABILIZED STAGING AREAS DUE TO DIFFICULTIES WITH RE-ESTABLISHMENT OF VEGETATION IN AREAS WHERE RECYCLED CONCRETE WAS PLACED.

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.

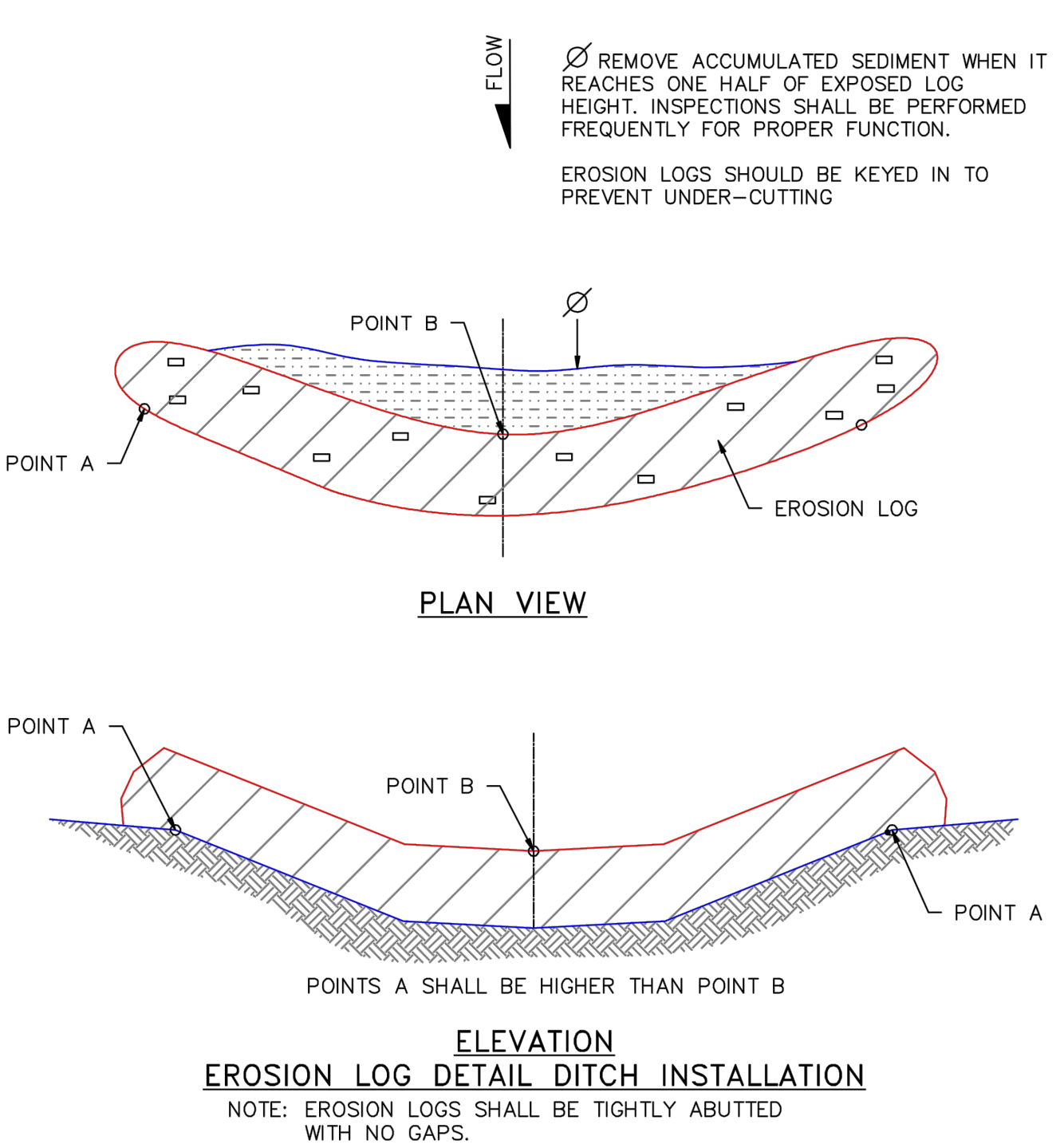
(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)



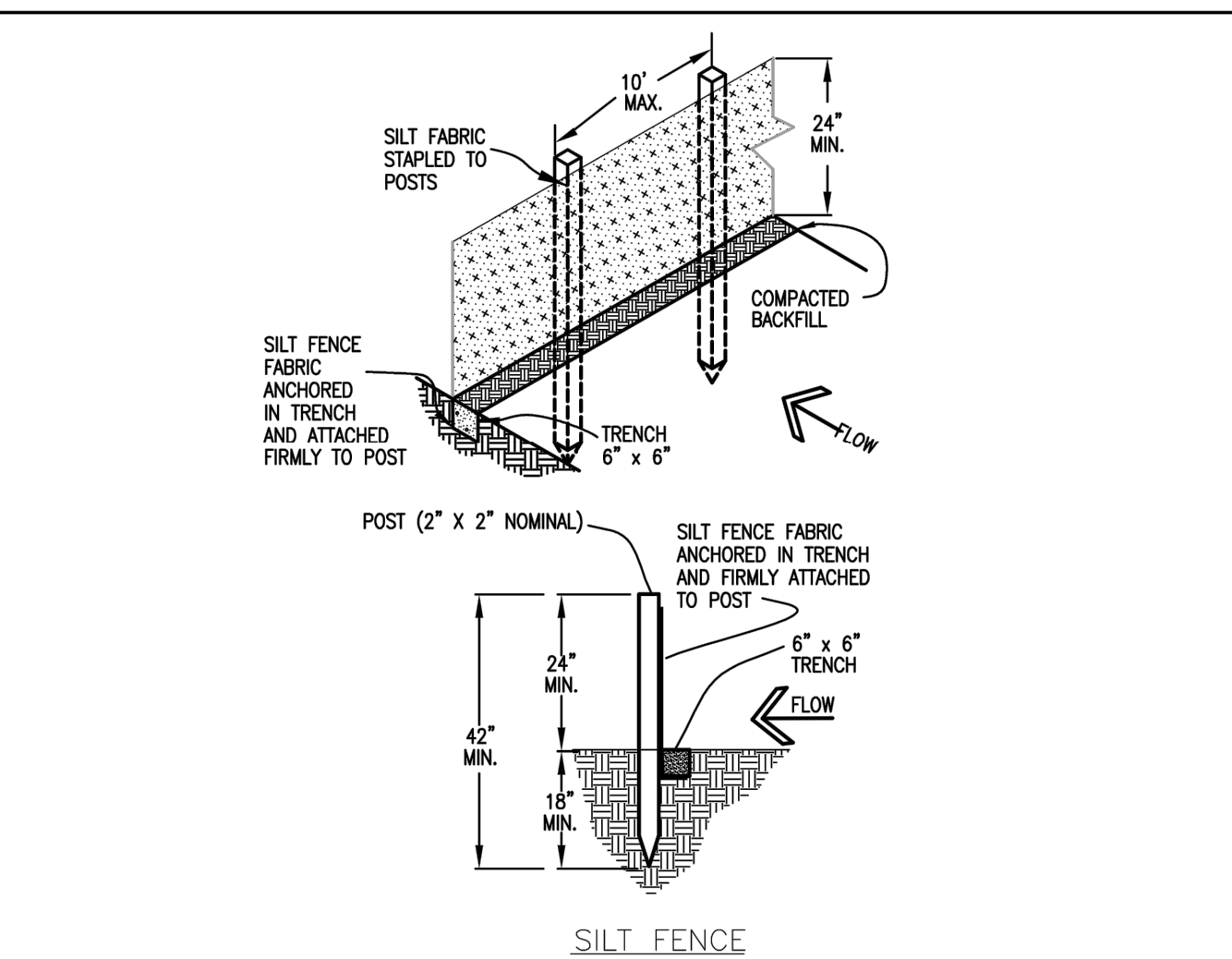
1/1/08	Culvert Inlet and Outlet Protection Erosion Logs Above Inlets and Outlets For Slopes 3:1 or Steeper	SD_3-86
DATE APPROVED:	REVISION DATE:	FILE NAME:
John A. McCarty	7/17/07	SD_3-86
DEPARTMENT OF TRANSPORTATION		



1/1/08	Erosion Log Barrier	SD_3-87
DATE APPROVED:	REVISION DATE:	FILE NAME:
John A. McCarty	7/17/07	SD_3-87
DEPARTMENT OF TRANSPORTATION		



1/1/08	Erosion Log Check Dams	SD_3-85
DATE APPROVED:	REVISION DATE:	FILE NAME:
John A. McCarty	7/17/07	SD_3-85
DEPARTMENT OF TRANSPORTATION		

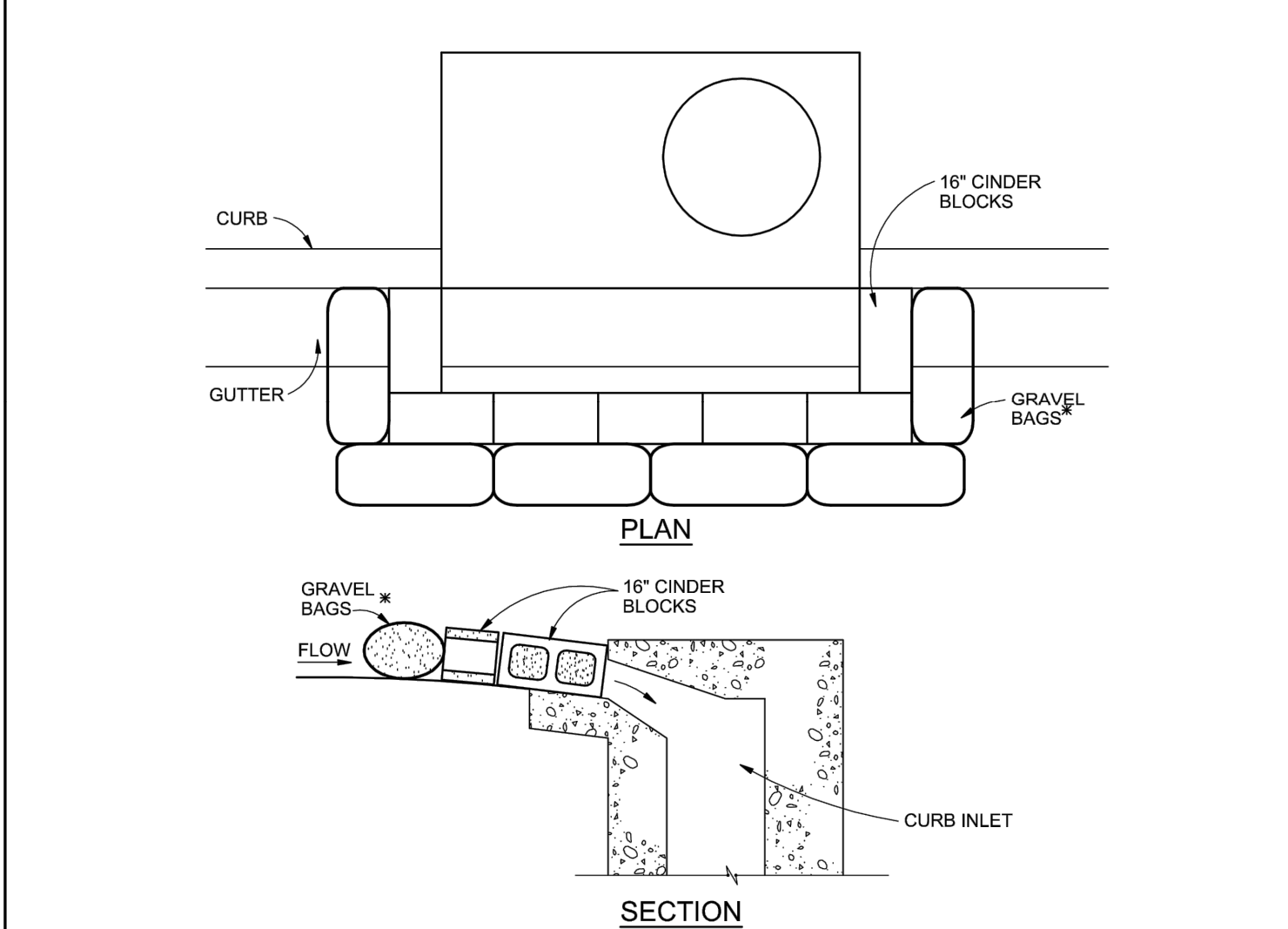


SILT FENCE NOTES

INSTALLATION REQUIREMENTS

1. SILT FENCES SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
2. WHEN JOINTS ARE NECESSARY, SILT FENCE GEOTEXTILE SHALL BE SPLICED TOGETHER ONLY AT SUPPORT POST AND SECURELY SEALED.
3. METAL POSTS SHALL BE "STUDDED TEE" OR "U" TYPE WITH MINIMUM WEIGHT OF 1.33 POUNDS PER LINEAR FOOT. SECTION DIMENSION OF 2 INCHES.
4. THE FILTER MATERIAL SHALL BE FASTENED SECURELY TO METAL OR WOOD POSTS USING WIRE TIES OR TO WOOD POSTS WITH 3/4" LONG #9 HEAVY-DUTY STAPLES. THE SILT FENCE GEOTEXTILE SHALL NOT BE STAPLED TO EXISTING TREES.
5. WHILE NOT REQUIRED, WIRE MESH FENCE MAY BE USED TO SUPPORT THE GEOTEXTILE. WIRE FENCE SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY-DUTY WIRE STAPLES AT LEAST 3/4" LONG. TIE WIRES OR HOG RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 6" AND SHALL NOT EXTEND MORE THAN 3" ABOVE THE ORIGINAL GROUND SURFACE.
6. ALONG THE TOE OF FILLS, INSTALL THE SILT FENCE ALONG A LEVEL CONTOUR AND PROVIDE AN AREA BEHIND THE FENCE FOR RUNOFF TO POND AND SEDIMENT TO SETTLE. A MINIMUM DISTANCE OF 5 FEET FROM THE TOE OF THE FILL IS RECOMMENDED.
7. THE HEIGHT OF THE SILT FENCE FROM THE GROUND SURFACE SHALL BE MINIMUM OF 24 INCHES AND SHALL NOT EXCEED 36 INCHES. HIGHER FENCES MAY INPOUND VOLUMES OF WATER SUFFICIENT TO CAUSE FAILURE OF THE STRUCTURE.
8. THE CONTRACTOR SHALL INSPECT SILT FENCES IMMEDIATELY AFTER EACH RAINFALL, AT LEAST DAILY DURING PROLONGED RAINFALL, AND WEEKLY DURING PERIODS OF NO RAINFALL. DAMAGED, COLLAPSED, UNREINFORCED OR INEFFECTIVE SILT FENCES SHALL BE PROMPTLY REPAIRED OR REPLACED.
9. SEDIMENT SHALL BE REMOVED FROM BEHIND SILT FENCE WHEN IT ACCUMULATES TO HALF THE EXPOSED GEOTEXTILE HEIGHT.
10. SILT FENCES SHALL BE REMOVED WHEN ADEQUATE VEGETATIVE COVER IS ATTAINED AS APPROVED BY THE CITY.

City of Colorado Springs Stormwater Quality	Figure SF-2 Silt Fence
	Construction Detail and Maintenance Requirements



BLOCK AND GRAVEL BAG*CURB INLET PROTECTION

BLOCK AND GRAVEL BAG*CURB INLET PROTECTION NOTES

INSTALLATION REQUIREMENTS

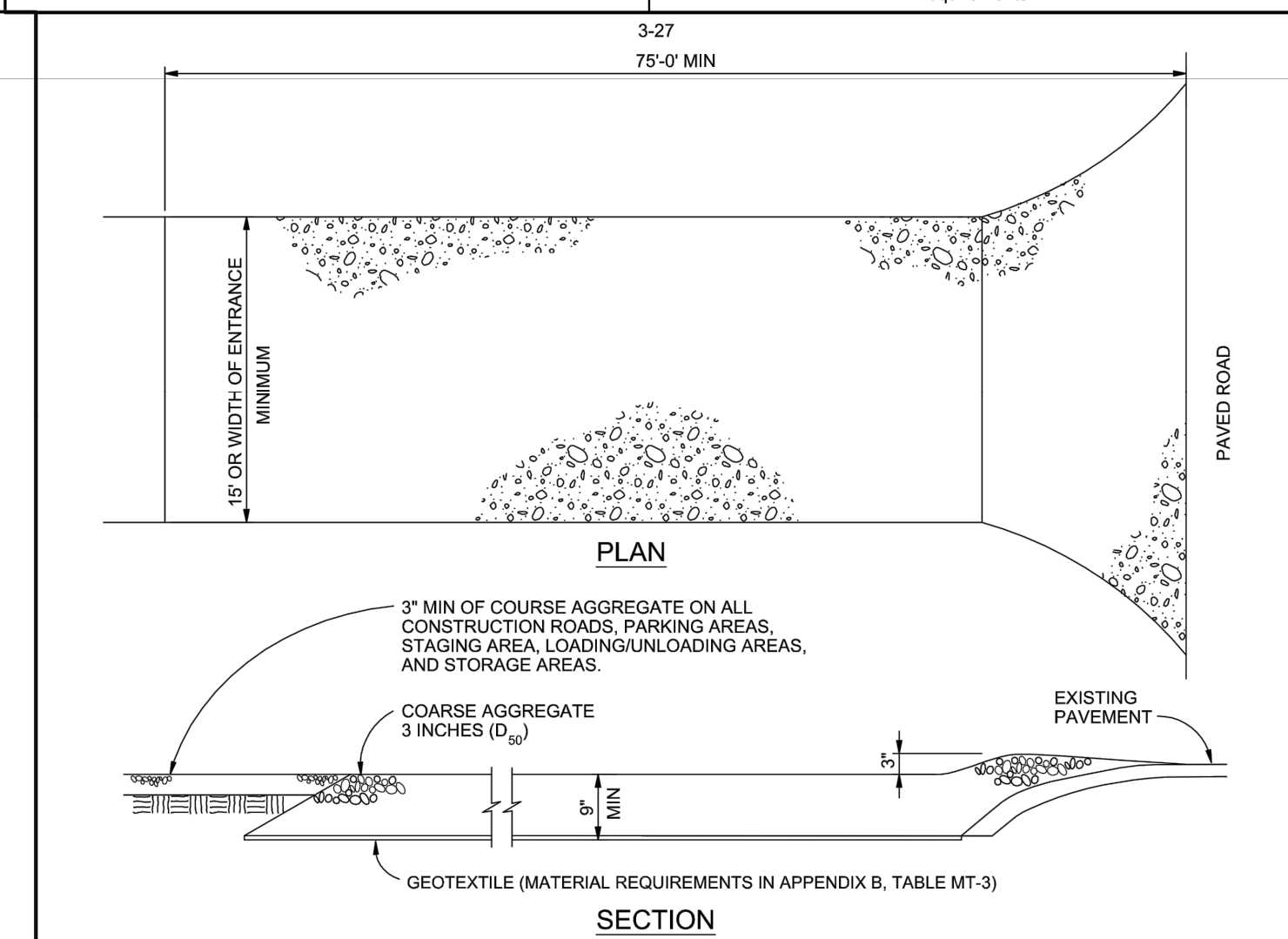
1. INLET PROTECTION SHALL BE INSTALLED IMMEDIATELY AFTER CONSTRUCTION OF INLET.
2. CONCRETE BLOCKS ARE TO BE LAID AROUND THE INLET IN A SINGLE ROW ON THEIR SIDES, ABUTTING ONE ANOTHER WITH THE OPEN ENDS OF THE BLOCK FACING OUTWARD.
3. GRAVEL BAGS ARE TO BE PLACED AROUND THE CONCRETE BLOCKS CLOSELY ABUTTING ONE ANOTHER SO THERE ARE NO GAPS.
4. GRAVEL BAGS ARE TO CONTAIN WASHED SAND OR GRAVEL APPROXIMATELY 3/4 INCH IN DIAMETER. BAGS ARE TO BE MADE OF 14" INCH WIRE MESH (USED WITH GRAVEL ONLY) OR GEOTEXTILE.

MAINTENANCE REQUIREMENTS

1. CONTRACTOR SHALL INSPECT INLET PROTECTION IMMEDIATELY AFTER EACH RAINFALL, AT LEAST DAILY DURING PROLONGED RAINFALL, AND WEEKLY DURING PERIODS OF NO RAINFALL.
2. DAMAGED OR INEFFECTIVE INLET PROTECTION SHALL PROMPTLY BE REPAIRED OR REPLACED.
3. SEDIMENT SHALL BE REMOVED WHEN SEDIMENT HAS ACCUMULATED TO APPROXIMATELY 1/2 THE DESIGN DEPTH OF THE TRAP.
4. INLET PROTECTION SHALL BE REMOVED WHEN ADEQUATE VEGETATIVE COVER IS ATTAINED WITHIN THE DRAINAGE AREA AS APPROVED BY THE CITY.

*AN ALTERNATE 3/4" TO 1" GRAVEL FILTER OVER A WIRE SCREEN MAY BE USED IN PLACE OF GRAVEL BAGS. THE WIRE MESH SHALL EXTEND ABOVE THE TOP OF THE CONCRETE BLOCKS AND THE GRAVEL PLACED OVER THE WIRE SCREEN TO THE TOP OF THE CONCRETE BLOCKS.

City of Colorado Springs Stormwater Quality	Figure IP-3 Block & Gravel Bag Curb Inlet Protection
	Construction Detail and Maintenance Requirements



VEHICLE TRACKING

VEHICLE TRACKING NOTES

INSTALLATION REQUIREMENTS

1. ALL ENTRANCES TO THE CONSTRUCTION SITE ARE TO BE STABILIZED PRIOR TO CONSTRUCTION BEGINNING.
2. CONSTRUCTION ENTRANCES ARE TO BE BUILT WITH AN APRON TO ALLOW FOR TURNING TRAFFIC, BUT SHOULD NOT BE BUILT OVER EXISTING PAVEMENT EXCEPT FOR A SLIGHT OVERLAP.
3. AREAS TO BE STABILIZED ARE TO BE PROPERLY GRADED AND COMPACTED PRIOR TO LAYING DOWN GEOTEXTILE AND STONE.
4. CONSTRUCTION ROADS, PARKING AREAS, LOADING/UNLOADING ZONES, STORAGE AREAS, AND STAGING AREAS ARE TO BE STABILIZED.
5. CONSTRUCTION ROADS ARE TO BE BUILT TO CONFORM TO SITE GRADES, BUT SHOULD NOT HAVE SIDE SLOPES OR ROAD GRADES THAT ARE EXCESSIVELY STEEP.

MAINTENANCE REQUIREMENTS

1. REGULAR INSPECTIONS ARE TO BE MADE OF ALL STABILIZED AREAS, ESPECIALLY AFTER STORM EVENTS.
2. STONES ARE TO BE REAPPLIED PERIODICALLY AND WHEN REPAIR IS NECESSARY.
3. SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED DAILY BY SHOVELING OR SWEEPING. SEDIMENT IS NOT TO BE WASHED DOWN STORM SEWER DRAINS.
4. STORM SEWER INLET PROTECTION IS TO BE IN PLACE, INSPECTED, AND CLEANED IF NECESSARY.
5. OTHER ASSOCIATED SEDIMENT CONTROL MEASURES ARE TO BE INSPECTED TO ENSURE GOOD WORKING CONDITION.

City of Colorado Springs Stormwater Quality	Figure VT-2 Vehicle Tracking
	Application Examples

Galloway

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



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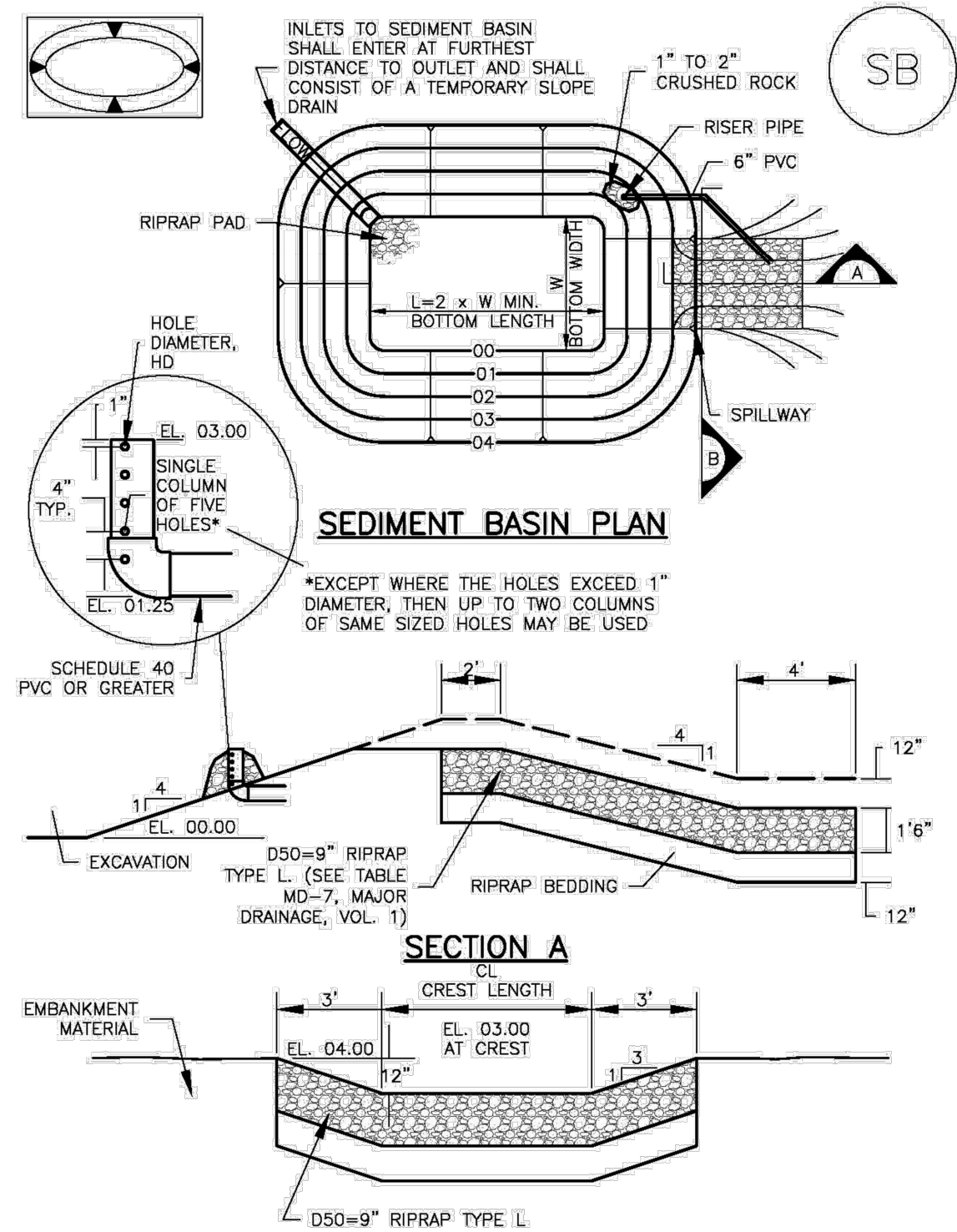
Project No:	CLH000014.20
Drawn By:	JDP
Checked By:	RGD
Date:	2/10/2020

GRADING & EROSION
CONTROL DETAILS

G5.02

Sediment Basin (SB)

SC-7



August 2013 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 SB-5

Sediment Basin (SB)

SC-7

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	12 1/2	2	9/32
2	21	3	15/16
3	28	5	5/8
4	33 1/2	6	9/16
5	38 1/2	8	23/32
6	43	9	25/32
7	47 1/2	11	23/32
8	51	12	1 5/16
9	55	13	1 1/8
10	58 1/2	15	1 1/2
11	61	16	1 5/8
12	64	18	1 3/4
13	67 1/2	19	1 7/8
14	70 1/2	21	2
15	73 1/2	22	2 1/8

- SEDIMENT BASIN INSTALLATION NOTES**
- 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 DIAMETER, HD.
 - FOR NONSTANDARD BASIN, SEE CONSTRUCTION DRAWINGS FOR DESIGN OF BASIN INCLUDING RISER HEIGHT H, NUMBER OF COLUMNS N, HOLE DIAMETER HD AND PIPE DIAMETER D.
 - FOR STANDARD BASIN, BOTTOM DIMENSION MAY BE MODIFIED AS LONG AS BOTTOM AREA IS NOT REDUCED.
 - SEDIMENT BASINS SHALL BE INSTALLED PRIOR TO ANY OTHER LAND-DISTURBING ACTIVITY THAT RELIES ON ON BASINS AS A STORMWATER CONTROL.
 - 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.
 - EMBANKMENT MATERIAL SHALL BE COMPACTED TO AT LEAST 95 PERCENT OF MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D698.
 - PIPE SCH 40 OR GREATER SHALL BE USED.
 - 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 LARGER THAN 15 ACRES.

SB-6 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 August 2013

Sediment Basin (SB)

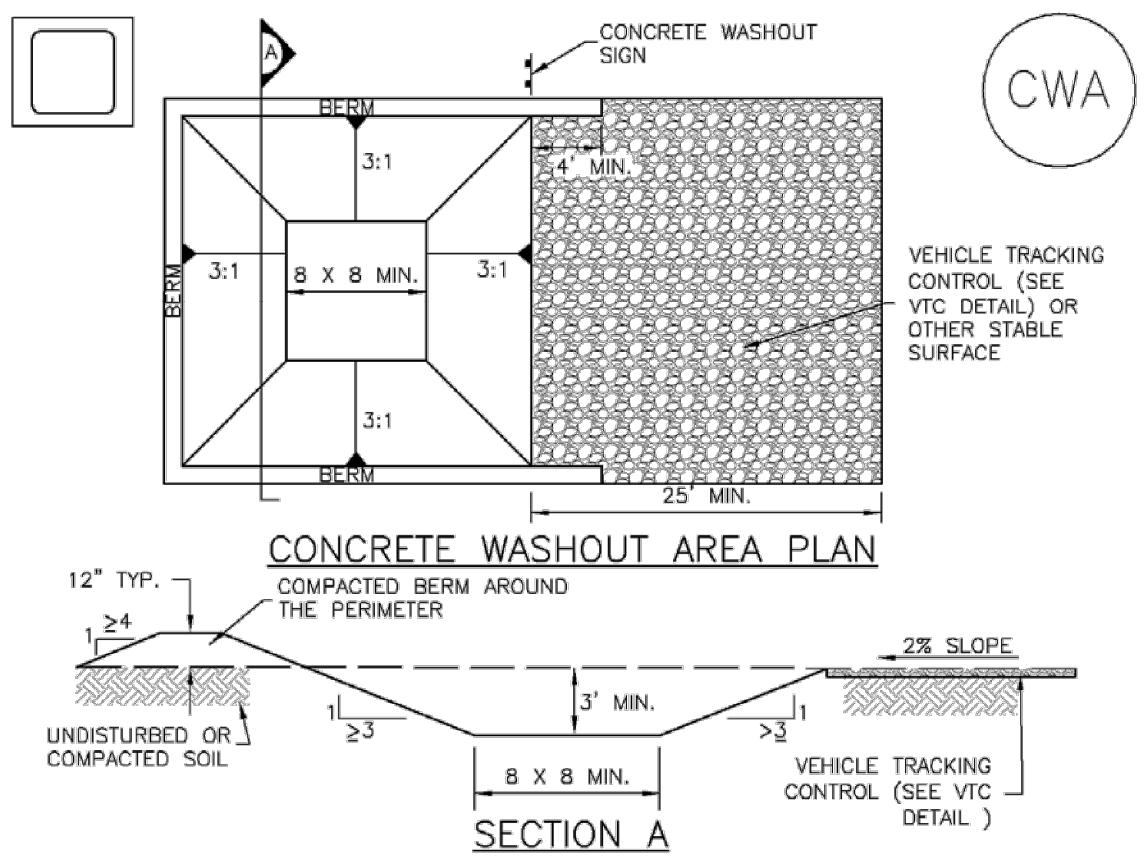
SC-7

- SEDIMENT BASIN MAINTENANCE NOTES**
- 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.
 - FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
 - WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
 - 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).
 - SEDIMENT BASINS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS ACCEPTED BY THE LOCAL JURISDICTION.
 - WHEN SEDIMENT BASINS ARE REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.
- (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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Concrete Washout Area (CWA)

MM-1



- CWA-1. CONCRETE WASHOUT AREA**
- CWA INSTALLATION NOTES**
- SEE PLAN VIEW FOR:
 - CWA INSTALLATION LOCATION.
 - 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.
 - THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
 - 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.
 - BERM SURROUNDING SIDES AND BACK OF THE CWA SHALL HAVE MINIMUM HEIGHT OF 1'.
 - VEHICLE TRACKING PAD SHALL BE SLOPED 2% TOWARDS THE CWA.
 - 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.
 - USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 CWA-3

Concrete Washout Area (CWA)

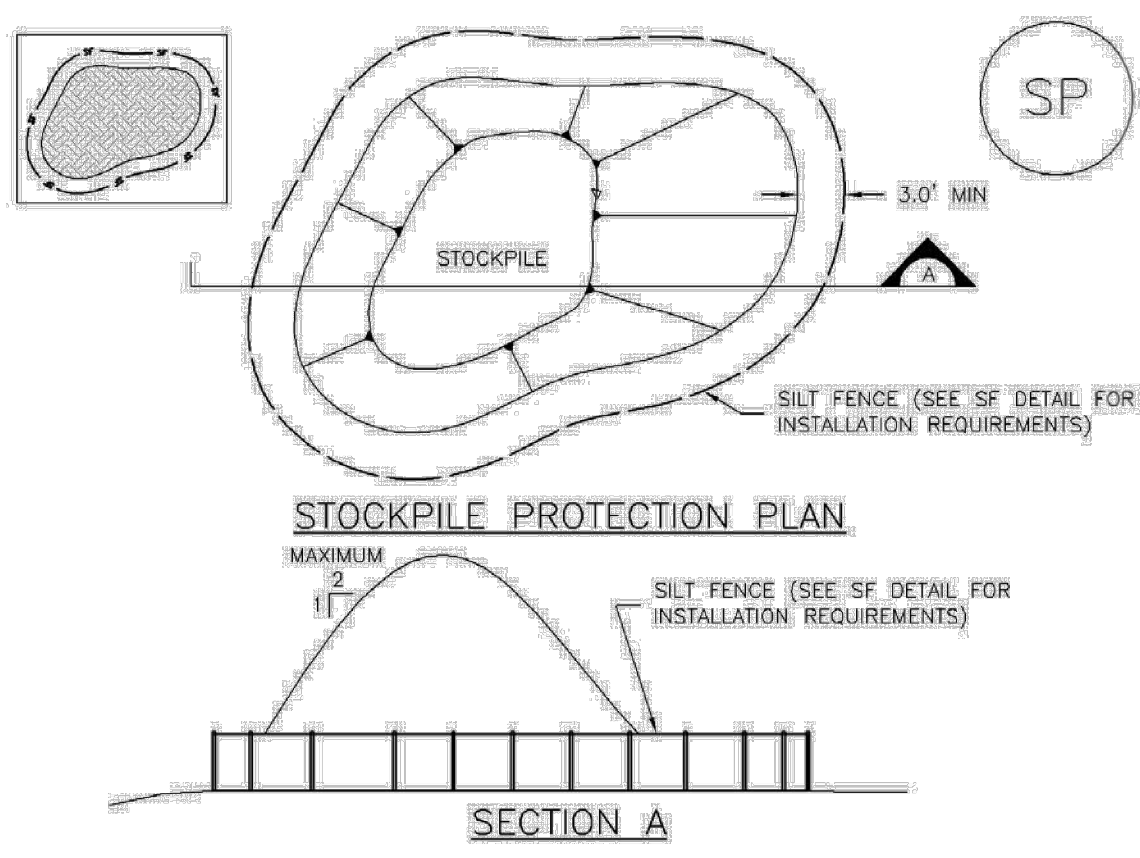
MM-1

- CWA MAINTENANCE NOTES**
- 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.
 - FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
 - WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
 - 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'.
 - 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.
 - THE CWA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED.
 - WHEN THE CWA IS REMOVED, COVER THE DISTURBED AREA WITH TOP SOIL, SEED AND 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 DIFFERENCES ARE NOTED.

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Stockpile Management (SP)

MM-2



- SP-1. STOCKPILE PROTECTION**
- STOCKPILE PROTECTION INSTALLATION NOTES**
- SEE PLAN VIEW FOR:
 - LOCATION OF STOCKPILES
 - TYPE OF STOCKPILE PROTECTION.
 - 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.
 - 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).
 - 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.

November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 SP-3

MM-2

Stockpile Management (SM)

- STOCKPILE PROTECTION MAINTENANCE NOTES**
- 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.
 - FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
 - WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
- STOCKPILE PROTECTION MAINTENANCE NOTES**
- IF PERIMETER PROTECTION MUST BE MOVED TO ACCESS SOIL STOCKPILE, REPLACE PERIMETER CONTROLS BY THE END OF THE WORKDAY.
 - STOCKPILE PERIMETER CONTROLS CAN BE REMOVED ONCE ALL THE MATERIAL FROM THE STOCKPILE HAS BEEN USED.
- (DETAILS ADAPTED FROM 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.

SP-4 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010

Galloway

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GallowayUS.com



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CHALLENGER
HOMES

FINAL GRADING & EROSION CONTROL PLANS
BENT GRASS RESIDENTIAL FILING NO. 2
FOR
CHALLENGER COMMUNITIES, LLC.
BENT GRASS MEADOWS DRIVE & MERIDIAN ROAD
FALCON, CO 80831 - EL PASO COUNTY

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Drawn By: JDP
Checked By: RGD
Date: 2/10/2020

GRADING & EROSION
CONTROL DETAILS

G5.03

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CONSTRUCTION FENCE INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
-LOCATION OF CONSTRUCTION FENCE.
2. CONSTRUCTION FENCE SHOWN SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
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.

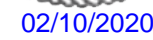
CONSTRUCTION FENCE MAINTENANCE NOTES

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 EROSION, OR WHEN PERIODIC 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. 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 JURISDICTION.

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.

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

provide WQ Pond details, including forebay, trickle channel, outlet structure, spillway, etc.



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CHALLENGER HOMES

FINAL GRADING & EROSION CONTROL PLANS
BENT GRASS RESIDENTIAL FILING NO. 2

**FUR
CHALLENGER COMMUNITIES, LLC.**

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

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GRADING & EROSION CONTROL DETAILS

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