CONSTRUCTION PLANS
FOR

PONDEROSA AT LORSON RANCH FILING NO. 3

EARLY GRADING/EROSION CONTROL PLANS

WITH DETAILED GRADING PLAN (FOR INFORMATION ONLY)

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

CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES

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VICINITY MAP
NO SCALE

LEGEND

— — —	STREET R.O.W.
—— ST ——	PVC STORM SEWER BY DEVELOPER (PRIVATE)
—— · · ——>	PVC STORM SEWER BY HOME BUILDER (PRIVATE)
▩▩▩▩▩▩	EXISTING RCP STORM SEWER (PUBLIC)
▬▬▬▬▬▬	PROPOSED RCP STORM SEWER (PUBLIC)

PREPARED FOR:
LORSON, LLC
N. WAHSATCH AVE., SUITE 301
COLORADO SPRINGS, CO 80903
719-635-3200
CONTACT: JEFF MARK

PREPARED BY:
CORE ENGINEERING GROUP
15004 1ST AVENUE S.
BURNSVILLE, MN 55306
719-570-1100
CONTACT: RICHARD L. SCHINDLER P.E.

WATER / SANITARY
WIDEFIELD WATER AND SANITATION DISTRICT
8495 FONTAINE BLVD.
COLORADO SPRINGS, CO 80925
719-390-7111

CABLE
COMCAST
P.O. BOX 173838
DENVER, CO 80217
970-641-4774

ELECTRIC
MOUNTAIN VIEW ELECTRIC
11140 E. WOODMEN RD.
COLORADO SPRINGS, CO 80831
719-495-2283

SECURITY FIRE PROTECTION DISTRICT
400 SECURITY BOULEVARD
SECURITY, CO 80911
719-392-7121

TELEPHONE
CENTURYLINK
7925 INDUSTRY ROAD
COLORADO SPRINGS, CO 80939
719-278-4651

GAS
BLACK HILLS ENGERGY
7060 ALLEGRE ST.
FOUNTAIN, CO 80817
719-393-6639

EL PASO COUNTY
PLANNING AND COMMUNITY DEVELOPMENT
2880 INTERNATIONAL CIRCLE
COLORADO SPRINGS, CO 80910
719-520-6300

BASIS OF BEARING
BEARINGS ARE BASED ON THE SOUTH LINE OF THE NORTH HALF OF SECTION 23, TOWNSHIP 15 SOUTH, RANGE 65 WEST OF THE 6TH PRINCIPAL MERIDIAN AS BEING SOUTH 8941'52" WEST. THE EAST QUARTER CORNER OF SAID SECTION 23 IS A FOUND 3-1/2" ALUMINUM CAP MONUMENT AND THE WEST QUARTER CORNER OF SAID SECTION 23 IS A FOUND 2-1/2" ALUMINUM CAP MONUMENT

BENCHMARK
FIMS MONUMENT F204 LOCATED AT THE NORTHWEST CORNER OF FONTAINE BLVD AND COTTONWOOD GROVE DR. ELEVATION 5724.072 (N.G.V.D. 29)

TRAFFIC CONTROL NOTE
THE CONTRACTOR SHALL PROVIDE ALL TRAFFIC CONTROL DEVICES AND MONITORING NECESSARY TO SAFELY COMPLETE THE WORK SHOWN IN THESE CONSTRUCTION DOCUMENTS IN CONFORMANCE WITH M.U.T.C.D. GUIDELINES. THE CONTRACTOR SHALL COMPLETE ALL NECESSARY WORK FOR PLAN REVIEW, PERMITS AND PROCESSING. TRAFFIC CONTROL WILL NOT BE PAID SEPARATELY BUT IS INCLUDED IN THE COST OF THE PROJECT.

Engineering Review
05/11/2020 10:39:05 AM
dsdrice
JeffRice@elpasoco.com
(719) 520-7877
EPC Planning & Community Development Department

See comment letter

Cursory redlines - overlot grading, utility and storm drain review only for PUDSP.

Provide GEC and SWMP checklists.

update in accordance with GEC Checklist Items ff, hh, and jj

DEVELOPER'S STATEMENT
THE UNDERSIGNED OWNER/DEVELOPER HAS READ AND WILL COMPLY WITH ALL THE REQUIREMENTS SPECIFIED IN THESE CONSTRUCTION PLANS AND THE ACCOMPANYING DRAINAGE REPORT.

BUSINESS NAME LORSON, LLC

BY JEFF MARK DATE

TITLE MANAGER

ADDRESS 212 N. WAHSATCH AVE, SUITE 301
COLORADO SPRINGS, CO 80903

FIRE DISTRICT APPROVAL
THE NUMBER OF FIRE HYDRANTS AND HYDRANT LOCATIONS TOGETHER WITH THE MAIN SIZES INDICATED ON THIS WATER INSTALLATION PLAN ARE ADEQUATE TO SATISFY THE REQUIREMENTS OF THE SECURITY FIRE PROTECTION DISTRICT'S FIRE AND RESCUE DEPARTMENT. THIS APPROVAL IS BASED ON THE INFORMATION IN THESE PLANS, SPECIFICATIONS AND SUPPLEMENTAL INFORMATION PROVIDED BY THE DESIGN ENGINEER WHOSE SIGNATURE APPEARS IN THESE PLANS, AND THE WIDEFIELD WATER AND SANITATION DISTRICT.

SIGNED _____ DATE _____
BY FIRE PROTECTION CHIEF OR COORDINATOR

CONSTRUCTION APPROVAL
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 MANUALS VOLUME 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 TWO YEARS THE PLANS WILL NEED TO BE RESUBMITTED FOR APPROVAL, INCLUDING PAYMENT OF REVIEW FEES AT THE PLANNING AND COMMUNITY DEVELOPMENT DIRECTOR'S DISCRETION

JENNIFER IRVINE, COUNTY ENGINEER/ECM ADMINISTRATOR DATE
CONDITIONS:

ENGINEER'S APPROVAL
THESE DETAILED PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECTION AND SUPERVISION. SAID PLANS AND SPECIFICATIONS HAVE BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR DETAILED ROADWAY, DRAINAGE, GRADING AND EROSION CONTROL PLANS AND SPECIFICATIONS, AND SAID PLANS AND SPECIFICATIONS ARE IN CONFORMITY WITH APPLICABLE MASTER DRAINAGE PLANS AND MASTER TRANSPORTATION PLANS. SAID PLANS AND SPECIFICATIONS MEET THE PURPOSES FOR WHICH THE PARTICULAR ROADWAY AND DRAINAGE FACILITIES ARE DESIGNED AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARATION OF THESE DETAILED PLANS AND SPECIFICATIONS.

RICHARD L. SCHINDLER, P.E. # 33997
FOR AND ON BEHALF OF CORE ENGINEERING GROUP

COLORADO REGISTERED 33997 4-8-2020 PROFESSIONAL ENGINEER

PUDSP-19-010

CORE ENGINEERING GROUP
15004 1ST AVENUE S.
BURNSVILLE, MN 55306
PH: 719-658-7800
CONTACT: RICHARD L. SCHINDLER, P.E.
EMAIL: Rick@ceg1.com

NO.	DESCRIPTION	DATE

PREPARED FOR:
LORSON, LLC
212 N. WAHSATCH AVE, SUITE 301
COLORADO SPRINGS, COLORADO 80903
(719) 635-3200
CONTACT: JEFF MARK

PROJECT:
PONDEROSA AT LORSON RANCH FILING NO. 3
LITTLE DOGIE DR - OLD GLORY DR
COLORADO SPRINGS, COLORADO

DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

COVER SHEET
EARLY GRADING
AND EROSION CONTROL PLANS

DATE:
APR 8, 2020

PROJECT NO.
100.050

SHEET NUMBER
C0.1
TOTAL SHEETS: 14

CONSTRUCTION NOTES

1. ALL WORK SHALL COMPLY WITH THE CODES AND POLICIES FOR EL PASO COUNTY.

2. EXISTING TOPOGRAPHIC INFORMATION SHOWN ON THIS GRADING PLAN WAS OBTAINED FROM AERIAL CONTOURS AND PREVIOUS CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE TO EXAMINE THE SITE AND BE FAMILIAR WITH THE EXISTING CONDITIONS.

3. DEPTH OF MOISTURE-DENSITY CONTROL FOR THIS PROJECT SHALL BE AS FOLLOWS:
   BASE OF ALL CUTS AND FILLS – 12 INCHES,
   FULL DEPTH OF ALL EMBANKMENTS

4. THE CONTRACTOR IS RESPONSIBLE FOR THE RE-ESTABLISHMENT OF ALL SURVEY MONUMENTS DISTURBED WITHIN THE PROJECT LIMITS.

5. THE CONTRACTOR SHALL PROTECT ALL WORK AREAS AND FACILITIES FROM FLOODING AT ALL TIMES. AREAS AND FACILITIES SUBJECTED TO FLOODING, REGARDLESS OF THE SOURCE OF WATER, SHALL BE PROMPTLY DEWATERED AND RESTORED.

6. PRIOR TO PAVING OPERATIONS, THE ENTIRE SUBGRADE SHALL BE PROOF-ROLLED WITH A LOADED 988 FRONT-END LOADER OR SIMILAR HEAVY RUBBER TIRED VEHICLE (GVW OF 50,000 POUNDS WITH 18 KIP PER AXLE AT TIRE PRESSURES OF 90 PSI) TO DETECT ANY SOFT OR LOOSE AREAS. IN AREAS WHERE SOFT OR LOOSE SOILS, PUMPING OR EXCESSIVE MOVEMENT IS OBSERVED, THE EXPOSED MATERIALS SHALL BE OVER-EXCAVATED TO A MINIMUM DEPTH OF TWO FEET BELOW PROPOSED FINAL GRADE OR TO A DEPTH AT WHICH SOILS ARE STABLE. AFTER THIS HAS BEEN COMPLETED, THE EXPOSED MATERIALS SHALL BE SCARIFIED TO A DEPTH OF 12 INCHES AND MOISTURE CONDITIONED. THE SUBGRADE SHALL THEN BE UNIFORMLY COMPACTED TO A MINIMUM OF 95% OF STANDARD PROCTOR DENSITY (ASTMM D-698) AT 0 TO +4.0% OF OPTIMUM MOISTURE CONTENT FOR A-6 AND A-7-6 SOILS ENCOUNTERED. OTHER SUBGRADE TYPES SHALL BE UNIFORMLY COMPACTED TO A MINIMUM OF 95% OF MODIFIED PROCTOR DENSITY (ASTM D-1557) AT PLUS OR MINUS 2.0% OF OPTIMUM MOISTURE CONTENT. AREAS WHERE STABLE NATURAL SOILS ARE ENCOUNTERED AT PROPOSED SUBGRADE ELEVATION SHALL ALSO BE SCARIFIED (18 INCHES FOR A-7-6 SOILS BELOW FULL-DEPTH ASPHALT CONCRETE) AND COMPACTED AS OUTLINED ABOVE PRIOR TO PAVING OPERATIONS. SUBGRADE FILL SHALL BE PLACED IN SIX-INCH LIFTS AND UNIFORMLY COMPACTED, MEETING THE REQUIREMENTS AS PREVIOUSLY DESCRIBED.

7. SUBGRADE MATERIALS DEEMED UNSUITABLE BY THE ENGINEER SHALL BE EXCAVATED, DISPOSED OF AND REPLACED WITH APPROVED MATERIALS.

8. FILL SHALL BE PLACED IN 8-INCH MAXIMUM LOOSE LIFTS AND SHALL BE COMPACTED PRIOR TO SUCCESSIVE LIFTS.

9. THE CONTRACTOR IS RESPONSIBLE FOR PREVENTING AND CONTROLLING EROSION DURING CONSTRUCTION ACTIVITIES AT ALL TIMES DURING GRADING AND CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE THE FOLLOWING EROSION AND SEDIMENT CONTROL MEASURES:
   - HAY BALE BARRIERS WHERE NEEDED AND/OR AS DIRECTED BY THE ENGINEER.
   - SILT FENCE WHERE NEEDED AND/OR AS DIRECTED BY THE ENGINEER.
   - TEMPORARY SEDIMENTATION BASINS WHERE NEEDED AND/OR AS DIRECTED BY THE ENGINEER.
   - MULCHING AND SEEDING OF EXCESSIVE SLOPED AREAS AS NEEDED OR AS DIRECTED BY THE ENGINEER.
   - TEMPORARY VEHICLE TRACKING CONTROL AS NEEDED AND/OR DIRECTED BY THE ENGINEER.
   - CONCRETE WASH AREAS.
   - INLET PROTECTION.

   THESE AND ALL EROSION CONTROL BEST MANAGEMENT PRACTICES AS SHOWN IN THE GRADING AND EROSION CONTROL PLANS SHALL BE STRICTLY ADHERED TO.

10. FINISHED CONTOURS/SPOT ELEVATIONS SHOWN HEREON REPRESENT FINISHED GRADES. ALL PAVEMENT SUBGRADES ARE BASED ON THE COMPOSITE ASPHALT PAVEMENT RECOMMENDATIONS MADE IN THE "GEOTECHNICAL STUDY" FOR THIS PROJECT.

EL PASO COUNTY STANDARD CONSTRUCTION NOTES:

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 (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:*
   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 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 (ESQCP), REGIONAL BUILDING FLOODPLAIN DEVELOPMENT PERMIT, U.S. ARMY CORPS OF ENGINEERS-ISSUED 401 AND/OR 404 PERMITS, AND COUNTY AND STATE FUGITIVE DUST PERMITS.*

8. *CONTRACTOR SHALL NOT DEVIATE FROM THE PLANS WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM THE DESIGN ENGINEER AND DSD. 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 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 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 STRIPING SHALL COMPLY WITH EL PASO COUNTY PUBLIC WORK DEPARTMENT AND MUTCD CRITERIA.*

14. *CONTRACTOR SHALL OBTAIN ANY PERMITS REQUIRED BY EL PASO COUNTY PWD, 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.*

ADDITIONAL SWMP PLAN CONTRACTOR NOTES.

1. *CONTRACTOR MUST ADD THEIR CONTACT INFORMATION TO THE SWMP PLANS PRIOR TO CONSTRUCTION*

2. *IF THE GRADING IS TO BE PHASED THE CONTRACTOR MUST PROVIDE PHASING MAPS FOR INSERTION INTO THE SWMP PLANS.*

3. *THE CONTRACTOR MUST PROVIDE THE CLIENT THE LOCATION OF ANY POTENTIAL SOURCES OF POLUTIONS SUCH AS FUELING AREAS, ETC TO BE INSERTED INTO THE SWMP PLANS.*

4. *THE ON-SITE SWMP PLAN SHALL BE LOCATED AT THE SE CORNER OF OLD GLORY DRIVE AND BEARCAT LOOP UNLESS OTHERWISE DOCUMENTED.*

STANDARD NOTES FOR EL PASO COUNTY GRADING AND EROSION CONTROL PLANS (rev. 7/02/2019)

1. *Stormwater discharges from construction sites shall not cause or threaten to cause pollution, contamination, or degradation of State Waters. All work and earth disturbance shall be done in a manner that minimizes pollution of any on-site or off-site waters, including wetlands.*

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 from 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. Management of the SWMP during construction is the responsibility of the designated Qualified Stormwater Manager or Certified Erosion Control Inspector. The SWMP shall be located on site at all times during construction and shall be kept up to date with work progress and changes in the field.*

4. *Once the ESQCP is approved and a "Notice to Proceed" has been issued, the contractor may install the initial stage erosion and sediment control measures as indicated on the approved GEC. A Preconstruction Meeting between the contractor, engineer, and El Paso County will be held prior to any construction. It is the responsibility of the applicant to coordinate the meeting time and place with County staff.*

5. *Control measures must be installed prior to commencement of activities that could contribute pollutants to stormwater. Control measures for all slopes, channels, ditches, and disturbed land areas shall be installed immediately upon completion of the disturbance.*

6. *All temporary sediment and erosion control measures shall be maintained and remain in effective operating condition until permanent soil erosion control measures are implemented and final stabilization is established. All persons engaged in land disturbance activities shall assess the adequacy of control measures at the site and identify if changes to those control measures are needed to ensure the continued effective performance of the control measures. All changes to temporary sediment and erosion control measures must be incorporated into the Stormwater Management Plan.*

7. *Temporary stabilization shall be implemented on disturbed areas and stockpiles where ground disturbing construction activity has permanently ceased or temporarily ceased for longer than 14 days.*

8. *Final stabilization must be implemented at all applicable construction sites. Final stabilization is achieved when all ground disturbing activities are complete and all disturbed areas either have a uniform vegetative cover with individual plant density of 70 percent of pre-disturbance levels established or equivalent permanent alternative stabilization method is implemented. All temporary sediment and erosion control measures shall be removed upon final stabilization and before permit closure.*

9. *All permanent stormwater management facilities shall be installed as designed in the approved plans. Any proposed changes that affect the design or function of permanent stormwater management structures must be approved by the ECM Administrator prior to implementation.*

10. *Earth disturbances shall be conducted in such a manner so as to effectively minimize accelerated soil erosion and resulting sedimentation. All disturbances shall be designed, constructed, and completed so that the exposed area of any disturbed land shall be limited to the shortest practical period of time. Pre-existing vegetation shall be protected and maintained within 50 horizontal feet of a waters of the state unless shown to be infeasible and specifically requested and approved.*

11. *Compaction of soil must be prevented in areas designated for infiltration control measures or where final stabilization will be achieved by vegetative cover. Areas designated for infiltration control measures shall also be protected from sedimentation during construction until final stabilization is achieved. If compaction prevention is not feasible due to site constraints, all areas designated for infiltration and vegetation control measures must be loosened prior to installation of the control measure(s).*

12. *Any temporary or permanent facility designed and constructed for the conveyance of stormwater around, through, or from the earth disturbance area shall be a stabilized conveyance designed to minimize erosion and the discharge of sediment off site.*

13. *Concrete wash water shall be contained and disposed of in accordance with the SWMP. No wash water shall be discharged to or allowed to enter State Waters, including any surface or subsurface storm drainage system or facilities. Concrete washouts shall not be located in an area where shallow groundwater may be present, or within 50 feet of a surface water body, creek or stream.*

14. *During dewatering operations of uncontaminated ground water may be discharged on site, but shall not leave the site in the form of surface runoff unless an approved State dewatering permit is in place.*

15. *Erosion control blanketing or other protective covering shall be used on slopes steeper than 3:1.*

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, soil, and sand that may accumulate in roads, storm drains and other drainage conveyance systems 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 chemical(s) having the potential to be released in stormwater are to be stored or used onsite unless permission for the use of such chemical(s) is granted in writing by the ECM Administrator. In granting approval for the use of such chemical(s), special conditions and monitoring may be required.*

22. *Bulk storage of allowed petroleum products or other allowed liquid chemicals in excess of 55 gallons shall require adequate secondary containment protection to contain all spills onsite and to prevent any spilled materials from entering State Waters, any surface or subsurface storm drainage system or other facilities.*

23. *No person shall cause the impediment of stormwater flow in the curb and gutter or ditch except with approved sediment control measures.*

24. *Owner/developer and their agents shall comply with the "Colorado Water Quality Control Act" (Title 25, Article 8, CRS), and the "Clean Water Act" (33 USC 1344), in addition to the requirements of the Land Development Code, DCM Volume II and the ECM Appendix I. All appropriate permits must be obtained by the contractor prior to construction (1041, NPDES, Floodplain, 404, fugitive dust, etc.). In the event of conflicts between these requirements and other laws, rules, or regulations of other Federal, State, local, or County agencies, the most restrictive laws, rules, or regulations shall apply.*

25. *All construction traffic must enter/exit the site only at approved construction access points.*

26. *Prior to construction the permittee shall verify the location of existing utilities.*

27. *A water source shall be available on site during earthwork operations and shall be utilized as required to minimize dust from earthwork equipment and wind.*

28. *The soils report for this site has been prepared by* RMG, "PRELIMINARY SOILS AND GEOLOGY FOR PONDEROSA AT LORSON RANCH FIL NO. 3", DATED NOVEMBER, 2019 *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 one (1) acre or more, the owner or operator of construction activity shall submit a permit application for stormwater discharge to the Colorado Department of Public Health and Environment, Water Quality Division. The application contains certification of completion of a stormwater management plan (SWMP), of which this Grading and Erosion Control Plan may be a part. For 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

CORE ENGINEERING GROUP
15004 1ST AVENUE S.
BURNSVILLE, MN 55306
PH: 719-659-7800
CONTACT: RICHARD L. SCHINDLER, P.E.
EMAIL: Rich@ceg1.com

NO.	DESCRIPTION	DATE

PREPARED FOR:
LORSON, LLC
212 N. WAHSATCH AVE, SUITE 301
COLORADO SPRINGS, COLORADO 80903
(719) 635-3200
CONTACT: JEFF MARK

PROJECT:
PONDEROSA AT LORSON RANCH FILING NO. 3
LITTLE DOGIE DR - OLD GLORY DR
COLORADO SPRINGS, COLORADO

DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

EARLY SITE GRADING AND EROSION CONTROL PLAN NOTES

COLORADO REGISTERED 33997 PROFESSIONAL ENGINEER 4-8-2020

DATE: APR 8, 2020

PROJECT NO. 100.050

SHEET NUMBER C0.2

TOTAL SHEETS: 14

NOTE:
Pavement section to be determined by Hveem analysis and design. Design to be approved by El Paso County Engineering

TYPICAL SECTION 50' TRACT
RESIDENTIAL URBAN LOCAL
NOT TO SCALE

WINTER GEM GROVE

NOTE:
Concrete Pavement section to be determined by Geotechnical Engineer

TYPICAL SECTION 40' TRACT
PRIVATE ROAD (lots 1-6, 37-44, 65-68)
NOT TO SCALE

WHITEWOLF POINT

NOTE:
Pavement section to be determined by Hveem analysis and design. Design to be approved by El Paso County Engineering

TYPICAL SECTION 40' TRACT
RESIDENTIAL URBAN LOCAL LOW VOLUME
NOT TO SCALE

WHITEWOLF POINT
PRIVATE STREET

THIS SHEET FOR INFORMATION ONLY!!!!!

TYPICAL HOUSE LAYOUT

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EMAIL: Rich@eg1.com

NO.	DESCRIPTION	DATE

PREPARED FOR:
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(719) 635-3200
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PROJECT:
PONDEROSA AT LORSON RANCH FILING NO. 3
LITTLE DOGIE DR - OLD GLORY DR
COLORADO SPRINGS, COLORADO

DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

TYPICAL STREET/DRIVEWAY SECTIONS AND TYPICAL SECTIONS

COLORADO REGISTERED PROFESSIONAL ENGINEER
RICHARD L. SCHINDLER
33997
4-8-2020

DATE: APR 8, 2020
PROJECT NO. 100.050
SHEET NUMBER C0.3
TOTAL SHEETS: 14

NOTES

1. GRADES AND ELEVATIONS SHOWN ON THIS PLAN MUST BE VERIFIED AND AS-BUILTED BY HOME BUILDER PRIOR TO CONSTRUCTING BUILDINGS. HOME BUILDER SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES.

2. HOME BUILDER SHALL CONNECT ROOF DRAINS TO STORM SEWER STUBS PROVIDED WHERE POSSIBLE. ACTUAL CONNECTIONS ARE NOT SHOWN ON THIS PLAN

3. SURFACE DRAINS ARE REQUIRED FOR DRAINING AREAS BETWEEN THE SIDEWALK AND PORCH (FRONT STEPS). HOME BUILDER SHALL VERIFY GRADES AND DESIGN INLETS AS NECESSARY TO DRAIN THIS AREA IN CONJUNCTION WITH ROOF DRAIN CONNECTIONS

LEGEND

5721	EXISTING MINOR CONTOUR
5720	EXISTING MAJOR CONTOUR
5720	PROPOSED CONTOUR
P/L	PROPERTY LINE
ST	PVC STORM SEWER BY DEVELOPER
	PVC STORM SEWER BY HOME BUILDER
	EXISTING RCP STORM SEWER (PUBLIC)
	PROPOSED RCP STORM SEWER (PUBLIC)

-N-

20 10 0 20 40

SCALE: 1"=20'

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CONTACT: JEFF MARK

PROJECT:
PONDEROSA AT LORSON RANCH FILING NO. 3
LITTLE DOGIE DR - OLD GLORY DR
COLORADO SPRINGS, COLORADO

DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

PONDEROSA AT LORSON RANCH FILING NO. 3 DETAILED GRADING PLAN

COLORADO REGISTERED PROFESSIONAL ENGINEER 33997 4-8-2020

DATE: APR 8, 2020

PROJECT NO. 100.050

SHEET NUMBER C4.1

TOTAL SHEETS: 14

NOTES

1. GRADES AND ELEVATIONS SHOWN ON THIS PLAN MUST BE VERIFIED AND AS-BUILTED BY HOME BUILDER PRIOR TO CONSTRUCTING BUILDINGS. HOME BUILDER SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES.

2. HOME BUILDER SHALL CONNECT ROOF DRAINS TO STORM SEWER STUBS PROVIDED WHERE POSSIBLE. ACTUAL CONNECTIONS ARE NOT SHOWN ON THIS PLAN

3. SURFACE DRAINS ARE REQUIRED FOR DRAINING AREAS BETWEEN THE SIDEWALK AND PORCH (FRONT STEPS). HOME BUILDER SHALL VERIFY GRADES AND DESIGN INLETS AS NECESSARY TO DRAIN THIS AREA IN CONJUNCTION WITH ROOF DRAIN CONNECTIONS

LEGEND

- 5721 — EXISTING MINOR CONTOUR
- 5720 — EXISTING MAJOR CONTOUR
- 5720 — PROPOSED CONTOUR
- P/L — PROPERTY LINE
- ST — PVC STORM SEWER BY DEVELOPER
- PVC STORM SEWER BY HOME BUILDER
- EXISTING RCP STORM SEWER (PUBLIC)
- PROPOSED RCP STORM SEWER (PUBLIC)

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PONDEROSA AT LORSON RANCH FILING NO. 3
DETAILED GRADING PLAN

COLORADO REGISTERED PROFESSIONAL ENGINEER 33997 4-8-2020

DATE: APR 8, 2020

PROJECT NO. 100.050

SHEET NUMBER C4.2

TOTAL SHEETS: 14

NOTES

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2. HOME BUILDER SHALL CONNECT ROOF DRAINS TO STORM SEWER STUBS PROVIDED WHERE POSSIBLE. ACTUAL CONNECTIONS ARE NOT SHOWN ON THIS PLAN
3. SURFACE DRAINS ARE REQUIRED FOR DRAINING AREAS BETWEEN THE SIDEWALK AND PORCH (FRONT STEPS). HOME BUILDER SHALL VERIFY GRADES AND DESIGN INLETS AS NECESSARY TO DRAIN THIS AREA IN CONJUNCTION WITH ROOF DRAIN CONNECTIONS

LEGEND

5721	EXISTING MINOR CONTOUR
5720	EXISTING MAJOR CONTOUR
5720	PROPOSED CONTOUR
P/L	PROPERTY LINE
ST	PVC STORM SEWER BY DEVELOPER
	PVC STORM SEWER BY HOME BUILDER
	EXISTING RCP STORM SEWER (PUBLIC)
	PROPOSED RCP STORM SEWER (PUBLIC)

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PONDEROSA AT LORSON RANCH FILING NO. 3 DETAILED GRADING PLAN

COLORADO REGISTERED PROFESSIONAL ENGINEER 33997 4-8-2020

DATE: APR 8, 2020
PROJECT NO. 100.050
SHEET NUMBER C4.3
TOTAL SHEETS: 14

THIS SHEET FOR INFORMATION ONLY!!!!!

NOTES

1. GRADES AND ELEVATIONS SHOWN ON THIS PLAN MUST BE VERIFIED AND AS-BUILTED BY HOME BUILDER PRIOR TO CONSTRUCTING BUILDINGS. HOME BUILDER SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES.

2. HOME BUILDER SHALL CONNECT ROOF DRAINS TO STORM SEWER STUBS PROVIDED WHERE POSSIBLE. ACTUAL CONNECTIONS ARE NOT SHOWN ON THIS PLAN

3. SURFACE DRAINS ARE REQUIRED FOR DRAINING AREAS BETWEEN THE SIDEWALK AND PORCH (FRONT STEPS). HOME BUILDER SHALL VERIFY GRADES AND DESIGN INLETS AS NECESSARY TO DRAIN THIS AREA IN CONJUNCTION WITH ROOF DRAIN CONNECTIONS

LEGEND

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5720	EXISTING MAJOR CONTOUR
5720	PROPOSED CONTOUR
P/L	PROPERTY LINE
ST	PVC STORM SEWER BY DEVELOPER
	PVC STORM SEWER BY HOME BUILDER
	EXISTING RCP STORM SEWER (PUBLIC)
	PROPOSED RCP STORM SEWER (PUBLIC)

N

20 10 0 20 40

SCALE: 1"=20'

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PROJECT:
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DESIGNED: RLS
CHECKED: RLS

PONDEROSA AT LORSON RANCH FILING NO. 3
DETAILED GRADING PLAN

COLORADO REGISTERED PROFESSIONAL ENGINEER 33997 4-8-2020

DATE: APR 8, 2020

PROJECT NO. 100.050

SHEET NUMBER C4.4

TOTAL SHEETS: 14

INITIAL BMP'S:
1. PERIMETER SILT FENCE
2. VEHICLE TRACKING CONTOL PADS
3. INLET PROTECTION FOR EXISTING INLETS ON OLD GLORY DRIVE AND THE EXISTING STORM SEWER FOR POND A3
4. ROCK SOCKS ALONG OLD GLORY DRIVE
5. PLACEMENT OF ON-SITE SWMP MANUAL

INTERIM BMP'S:
1. TEMPORARY SEDIMENT BASINS AS GRADING PROGRESSES
2. TEMPORARY SEEDING/MULCHING AS NEEDED
3. STRAW BALE CHECKS AS NEEDED DURING GRADING

FINAL BMP'S:
1. FINAL SEEDING AND MULCHING
2. STRAW ECB ON PERMANENT SLOPES 6:1 OR STEEPER
3. POND OUTLET STRUCTURE

Show proposed Stabilized Storage Area location

NOTE:
1. SLOPES SHALL BE 4:1 MAX. UNLESS OTHERWISE NOTED
2. STRAW ECB SHALL BE PLACED ON ALL SIDE SLOPES AND PERMANENT SLOPES 6:1 OR STEEPER.
3. TEMPORARY SEEDING REQUIRED ON DISTURBED AREAS AND STOCKPILES WHICH ARE NOT AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 30 DAYS SHALL ALSO BE MULCHED AND SEEDED WITHIN 21 DAYS AFTER INTERIM GRADING. (TS)
4. THE GRADING AREAS SHOWN ON THIS PLAN ARE IN FILL EXCEPT GRADING FOR EXPANSION OF POND A3.
5. THERE ARE NO ASPHALT BATCH PLANTS OR CONSTRUCTION OFFICE TRAILERS PLANNED FOR THIS SITE OR CONTRACTOR SHALL OBTAIN PERMIT IF DESIRED.
6. CONTRACTOR TO DETERMINE STOCKPILE AREAS AND STAGING AREAS AND SHOW THEM ON THE WORKING MAPS.
7. EXISTING VEGETATION CONSISTS OF GRASSES AND WEEDS. GROUND COVER ESTIMATED AT 70% DENSITY AND SHALL BE VISUALLY VERIFIED PRIOR TO ACTIVITY.

Add a note stating that there are no streams or wetlands crossing the Site.

LEGEND
- PROPERTY LINE OR TRACT LINE
- ROW LINE
- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- PROPOSED CONTOUR
- LOT/TRACT LINES
- PERIMETER EROSION CONTROL SILT FENCE, EROSION LOG, OR EARTH BERM
- SUBDIVISION BOUNDARY
- LIMITS OF CONSTRUCTION
- PVC STORM SEWER BY DEVELOPER
- PVC STORM SEWER BY HOME BUILDER (FOR INFORMATION ONLY)
- EXISTING RCP STORM SEWER (PRIVATE)
- PROPOSED RCP STORM SEWER (PRIVATE)
- RUNOFF FLOW DIRECTION
- SLOPE DIRECTION AND GRADE
- VEHICLE TRACKING CONTROL
- STRAW BALE CHECK

SCALE: 1"=40'

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PROJECT:
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COLORADO SPRINGS, COLORADO

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DESIGNED: RLS
CHECKED: RLS

PONDEROSA AT LORSON RANCH FILING NO. 3
GRADING AND EROSION CONTROL PLAN

COLORADO REGISTERED PROFESSIONAL ENGINEER 33997 4-8-2020

DATE: APR 8, 2020

PROJECT NO. 100.050

SHEET NUMBER C4.5

TOTAL SHEETS: 14

Access ramp shall be a minimum of 15 ft wide, in accordance with DCM Vol. 1 Section 11.2.2

MAINTENANCE ACCESS ROAD
NO SCALE

LOW FLOW CHANNEL DETAIL
NO SCALE

LENGTH FOR RADII
A = 1/2"
C = 1-1/2"

POINT TABLE				
NUMBER	NORTHING	EASTING	ELEVATION	NOTES
1	23612.64	22551.12	5709	POND BOTTOM
2	23645.41	22536.78	5709	POND BOTTOM
3	23662.88	22554.12	5709	POND BOTTOM
4	23675.30	22554.19	5709	POND BOTTOM
5	23700.48	22648.05	5710	POND BOTTOM
6	23679.84	22517.59	5711	

N

20 10 0 20 40
SCALE: 1"=20'

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POND A3 GRADING AND POND DETAILS

COLORADO REGISTERED PROFESSIONAL ENGINEER
RICHARD L. SCHINDLER
33997
4-8-2020

DATE: APR 8, 2020
PROJECT NO. 100.050
SHEET NUMBER C4.6
TOTAL SHEETS: 14

FOREBAY SECTION A-A
NO SCALE

POND A3 – FOREBAY LAYOUT
SCALE: 1"=5'

3-BAR RAIL DETAIL
NO SCALE

SCALE: 1"=5'

FOREBAY SECTION B-B
NO SCALE

NOTE: ALL CONCRETE FOR FOREBAY SHALL BE CDOT TYPE D

CORE
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POND A3

FOREBAY DETAILS

COLORADO REGISTERED PROFESSIONAL ENGINEER
RICHARD L. SCHINDLER
33997
4-8-2020

DATE:
APR 8, 2020

PROJECT NO.
100.050

SHEET NUMBER
C4.7
TOTAL SHEETS: 14

DETAIL A
NO SCALE

OUTLET STRUCTURE DETAIL – PLAN VIEW
NO SCALE

OUTLET RESTRICTOR PLATE
NO SCALE

NOTE:
AFTER CONCRETE STRUCTURE HAS BEEN POURED ALL GRATE DIMENSIONS SHALL BE FIELD VERIFIED PRIOR TO GRATE CONSTRUCTION

GRATE 1
NO SCALE

GRATES 2,3,4,5
NO SCALE

NOTE A:
SLOT FOR CLOSE MESH GRATES

OUTLET STRUCTURE DETAIL – SECTION A–A
NO SCALE

OUTLET STRUCTURE DETAIL – SECTION B–B
NO SCALE

TRASH RACK DETAIL
NO SCALE

ORIFICE PLATE DETAIL
NO SCALE

OUTLET STRUCTURE, FOREBAY, AND DRAIN CHANNEL NOTES:

1. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR ALL COMPONENTS OF THE OUTLET STRUCTURE.
2. GRADE 60 REINFORCING STEEL REQUIRED. SEE TABLE FOR THE MINIMUM LAP SPLICE LENGTH FOR REINFORCING BARS. ALL REINFORCING STEEL SHALL HAVE A TWO–INCH MINIMUM CLEARANCE FROM EDGE OF CONCRETE, UNLESS OTHERWISE NOTED.

BAR SIZE	#4	#5	#6
MIN. SPLICE LENGTH	1'–3"	1'–7"	2'–0"

3. CONCRETE FOR THE OUTLET STRUCTURE AND FOREBAY SHALL BE CDOT CLASS D CONCRETE.
4. CONCRETE FOR DRAIN CHANNELS SHALL BE CDOT CLASS B CONCRETE
5. EXPANSION JOINT MATERIAL SHALL MEET AASHTO SPECIFICATION M–213. EXPANSION JOINT MATERIAL SHALL BE ½" THICK, SHALL EXTEND THE FULL DEPTH OF CONTACT SURFACE AND THE JOINT SHALL BE SEALED, REFER TO DETAILS.
6. ALL EXPOSED CONCRETE CORNERS SHALL HAVE A ¾" CHAMFER UNLESS OTHERWISE NOTED.
7. SUBGRADE TO BE 12" THICK CLEAN FILL COMPACTED TO 95% STANDARD PROCTOR DENSITY PER ASTM M698 UNDER STRUCTURE.
8. REFER TO POND DETAILS FOR PRESEDIMENTATION/FOREBAY DESIGN.
9. ENGINEER SHALL BE NOTIFIED PRIOR TO BEGINNING CONSTRUCITON OF OUTLET STRUCTURE TO SCHEDULE OBSERVATION VISITS FOR STRUCTURES.

WQCV WELL–SCREEN NOTES:

1. Well–Screen shall be stainless steel and attached by stainless steel bolts along edge of the mounting frame.

2. WQCV Well Screen
- Type of Screen: Stainless steel #93 Vee Wire (Johnson Vee Wire (tm) Stainless Steel Screen or equivalent with 60% open area)
- Screen slot opening dimension: 0.139" (Screen #93 Vee Wire Slot Opening)
- Type and Size of Support Rod: TE 0.074"X0.50"
- Spacing of Support Rod (O.C.): 1.0 Inch
- Total Screen Thickness: 0.655"
- Carbon Steel Holding Frame Type: 3/4" x 1.0" angle

OUTLET STRUCTURE DETAIL – SECTION B–B
NO SCALE

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POND A3 FULL SPECTRUM OUTLET STRUCTURE DETAILS

COLORADO REGISTERED 33997 4-8-2020 PROFESSIONAL ENGINEER

DATE: APR 8, 2020
PROJECT NO. 100.050
SHEET NUMBER C4.8
TOTAL SHEETS: 14

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.

IP-2. CURB ROCK SOCKS UPSTREAM OF INLET PROTECTION

CURB ROCK SOCK INLET PROTECTION INSTALLATION NOTES

1. 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.

ROCK SOCK SECTION ROCK SOCK PLAN

ROCK SOCK JOINTING

GRADATION TABLE	
SIEVE SIZE	MASS PERCENT PASSING SQUARE MESH SIEVES
	NO. 4
2"	100
1½"	90 – 100
1"	20 – 55
¾"	0 – 15
⅜"	0 – 5
MATCHES SPECIFICATIONS FOR NO. 4 COARSE AGGREGATE FOR CONCRETE PER AASHTO M43. ALL ROCK SHALL BE FRACTURED FACE, ALL SIDES.	

ROCK SOCK INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   -LOCATION(S) OF ROCK SOCKS.
2. CRUSHED ROCK SHALL BE 1½" (MINUS) IN SIZE WITH A FRACTURED FACE (ALL SIDES) AND SHALL COMPLY WITH GRADATION SHOWN ON THIS SHEET (1½" MINUS).
3. WIRE MESH SHALL BE FABRICATED OF 10 GAGE POULTRY MESH, OR EQUIVALENT, WITH A MAXIMUM OPENING OF ½", 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

NOTES:
1. SIGN MATERIAL, EXCAVATION, AND RESTORATION ARE INCLUDED IN THE COST OF THE CONCRETE WASHOUT STRUCTURE.
2. EROSION BALES MAY BE USED AS AN ALTERNATIVE FOR THE BERM.

1/1/08 DATE APPROVED: John A. McCarty DEPARTMENT OF TRANSPORTATION	Concrete Washout Structure Standard Drawing	EL PASO COUNTY DEPARTMENT OF TRANSPORTATION
	REVISION DATE: 7/17/07 FILE NAME: SD_3-84	

STRAW BALE INLET PROTECTION
NTS

STRAW BALE INLET PROTECTION NOTES

INSTALLATION REQUIREMENTS

1. INLET PROTECTION SHALL BE INSTALLED IMMEDIATELY AFTER CONSTRUCTION OF INLET.
2. BALES ARE TO BE PLACED IN A SINGLE ROW AROUND THE INLET WITH THE END OF THE BALES TIGHTLY ABUTTING ONE ANOTHER.
3. SEE STRAW BALE BARRIER FIGURE SBB-2 FOR INSTALLATION REQUIREMENTS.

MAINTENANCE REQUIREMENTS

1. CONTRACTOR SHALL INSPECT STRAW BALE INLET PROTECTION IMMEDIATELY AFTER EACH RAINFALL, AT LEAST DAILY DURING PROLONGED RAINFALL; AND WEEKLY DURING PERIODS NO RAINFALL.
2. DAMAGED OR INEFFECTIVE INLET PROTECTION SHALL PROMPTLY BE REPAIRED, REPLACING BALES IF NECESSARY, AND UNENTRENCHED BALES NEED TO BE REPAIRED WITH COMPACTED BACKFILL MATERIAL.
3. SEDIMENT SHALL BE REMOVED FROM BEHIND STRAW BALES WHEN IT ACCUMULATES TO APPROXIMATELY 1/3 THE HEIGHT OF THE BARRIER.
4. INLET PROTECTION SHALL BE REMOVED WHEN ADEQUATE VEGETATIVE COVER IS ATTAINED WITHIN THE DRAINAGE AREA AS APPROVED BY THE CITY.

City of Colorado Springs Stormwater Quality	Figure IP-2 Straw Bale Inlet Protection Construction Detail and Maintenance Requirements

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GRADING AND EROSION CONTROL DETAILS

COLORADO REGISTERED PROFESSIONAL ENGINEER 33997 4-8-2020

DATE: APR 8, 2020

PROJECT NO. 100.050

SHEET NUMBER C12.1

TOTAL SHEETS: 14

Vehicle Tracking Control (VTC) SM-4

VTC-1. AGGREGATE VEHICLE TRACKING CONTROL

CHECK DAM
NTS

CHECK DAM NOTES

INSTALLATION REQUIREMENTS

1. STRAW BALES USED AS CHECK DAMS ARE TO MEET THE REQUIREMENTS STATED IN FIGURE SBB-2.
2. THE "H" DIMENSION SHALL BE SELECTED TO PROVIDE WEIR FLOW CONVEYANCE FOR 2-YEAR FLOW OR GREATER.

MAINTENANCE REQUIREMENTS

1. REGULAR INSPECTIONS ARE TO BE MADE OF ALL CHECK DAMS, ESPECIALLY AFTER STORM EVENTS.
2. REPLACE STONE AS NECESSARY TO MAINTAIN THE CORRECT HEIGHT OF THE DAM.
3. ACCUMULATED SEDIMENT AND DEBRIS IS TO BE REMOVED FROM BEHIND THE DAMS AFTER EACH STORM OR WHEN 1/2 OF THE ORIGINAL HEIGHT OF THE DAM IS REACHED.
3. CHECK DAMS ARE TO REMAIN IN PLACE AND OPERATIONAL UNTIL THE DRAINAGE AREA AND CHANNEL ARE PERMANENTLY STABILIZED.
4. WHEN CHECK DAMS ARE REMOVED THE CHANNEL LINING OR VEGETATION IS TO BE RESTORED.

City of Colorado Springs Stormwater Quality | Figure CD-1 Check Dam — Construction Detail and Maintenance Requirements

SEDIMENT BASIN
NTS

SEDMENT BASIN NOTES

INSTALLATION REQUIREMENTS

1. SEDIMENT BASINS SHALL BE INSTALLED BEFORE ANY CLEARING AND/OR GRADING IS UNDERTAKEN.
2. THE AREA UNDER WHICH THE EMBANKMENT IS TO BE INSTALLED SHALL BE CLEARED, GRUBBED, AND STRIPPED OF ALL VEGETATION AND ROOT MAT.
3. THE OUTLET OF THE BASIN SHALL BE DESIGNED TO DRAIN ITS VOLUME IN 40 HOURS.
4. THE OUTLET IS TO BE LOCATED AT THE FURTHEST DISTANCE FROM THE INLET OF THE BASIN. BAFFLES MAY BE NEEDED TO INCREASE THE FLOW LENGTH AND SETTLING TIME.
5. EMBANKMENT MATERIAL SHALL CONSIST OF SOIL WITH A MINIMUM OF 15% PASSING A #200 SIEVE. EXCAVATED SOIL CAN BE USED IF IT MEETS THIS REQUIREMENT.
6. EMBANKMENT IS TO BE COMPACTED TO AT LEAST 90% OF MAXIMUM DENSITY AND WITHIN 2% OF OPTIMUM MOISTURE CONTENT ACCORDING TO ASTM D 698.
7. WHEN A BASIN IS INSTALLED NEAR A RESIDENTIAL AREA, FOR SAFETY REASONS, A SIGN SHALL BE POSTED AND THE AREA SECURED WITH A FENCE.

MAINTENANCE REQUIREMENTS

1. CONTRACTOR SHALL INSPECT SEDIMENT BASINS AFTER EACH RAINFALL, AT LEAST DAILY DURING PROLONGED RAINFALL, AND WEEKLY DURING PERIODS NO RAINFALL.
2. SEDIMENT BASINS SHALL BE CLEANED OUT BEFORE SEDIMENT HAS FILLED HALF THE VOLUME OF THE BASIN.
3. SEDIMENT BASINS SHALL REMAIN OPERATIONAL AND PROPERLY MAINTAINED UNTIL THE SITE AREA IS PERMANENTLY STABILIZED WITH ADEQUATE VEGETATIVE COVER AND/OR OTHER PERMANENT STRUCTURE AS APPROVED BY THE CITY.

City of Colorado Springs Stormwater Quality | Figure SB-1 Sediment Basin — Construction Detail and Maintenance Requirements

SILT FENCE

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. WOOD POSTS SHALL HAVE A MINIMUM DIAMETER OR CROSS 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.

MAINTENANCE REQUIREMENTS

1. CONTRACTOR SHALL INSPECT SILT FENCES IMMEDIATELY AFTER EACH RAINFALL, AT LEAST DAILY DURING PROLONGED RAINFALL, AND WEEKLY DURING PERIODS OF NO RAINFALL. DAMAGED, COLLAPSED, UNENTRENCHED OR INEFFECTIVE SILT FENCES SHALL BE PROMPTLY REPAIRED OR REPLACED.
2. SEDIMENT SHALL BE REMOVED FROM BEHIND SILT FENCE WHEN IT ACCUMULATES TO HALF THE EXPOSED GEOTEXTILE HEIGHT.
3. 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

City of Colorado Springs Stormwater Quality | Figure SF-3 Silt Fence Joint Tying — Construction Detail and Maintenance Requirements

SANDBAG ROW SPACING TABLE

STREET GRADE %	INTERVAL (FT)
0–2	500
2+4	200
4–6	120
6–8	90
8–10	70
10–12	50
12–15	35

DATE: APPROVED
DEPARTMENT OF TRANSPOTATION

Typical Check Dam Detail
Standard Drawing
REVISION DATE: 11/10/04 | FILE NAME: SD_3-62

EL PASO COUNTY DEPARTMENT OF TRANSPORTATION

Sediment Control Log (SCL) SC-2

SCL-1. SEDIMENT CONTROL LOG

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PH: 719-659-7800
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NO.	DESCRIPTION	DATE

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CONTACT: JEFF MARK

PROJECT:
PONDEROSA AT LORSON RANCH FILING NO. 3
LITTLE DOGIE DR - OLD GLORY DR
COLORADO SPRINGS, COLORADO

DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

GRADING AND EROSION CONTROL DETAILS

COLORADO REGISTERED PROFESSIONAL ENGINEER 33997 4-8-2020

DATE: APR 8, 2020
PROJECT NO. 100.050
SHEET NUMBER C12.2
TOTAL SHEETS: 14

Table TS/PS-2. Minimum Drill Seeding Rates for Perennial Grasses

Common[a] Name	Botanical Name	Growth Season[b]	Growth Form	Seeds/ Pound	Pounds of PLS/acre
Alakali Soil Seed Mix					
Alkali sacaton	*Sporobolus airoides*	Cool	Bunch	1,750,000	0.25
Basin wildrye	*Elymus cinereus*	Cool	Bunch	165,000	2.5
Sodar streambank wheatgrass	*Agropyron riparium 'Sodar'*	Cool	Sod	170,000	2.5
Jose tall wheatgrass	*Agropyron elongatum 'Jose'*	Cool	Bunch	79,000	7.0
Arriba western wheatgrass	*Agropyron smithii 'Arriba'*	Cool	Sod	110,000	5.5
Total					**17.75**
Fertile Loamy Soil Seed Mix					
Ephriam crested wheatgrass	*Agropyron cristatum 'Ephriam'*	Cool	Sod	175,000	2.0
Dural hard fescue	*Festuca ovina 'duriuscula'*	Cool	Bunch	565,000	1.0
Lincoln smooth brome	*Bromus inermis leyss 'Lincoln'*	Cool	Sod	130,000	3.0
Sodar streambank wheatgrass	*Agropyron riparium 'Sodar'*	Cool	Sod	170,000	2.5
Arriba western wheatgrass	*Agropyron smithii 'Arriba'*	Cool	Sod	110,000	7.0
Total					**15.5**
High Water Table Soil Seed Mix					
Meadow foxtail	*Alopecurus pratensis*	Cool	Sod	900,000	0.5
Redtop	*Agrostis alba*	Warm	Open sod	5,000,000	0.25
Reed canarygrass	*Phalaris arundinacea*	Cool	Sod	68,000	0.5
Lincoln smooth brome	*Bromus inermis leyss 'Lincoln'*	Cool	Sod	130,000	3.0
Pathfinder switchgrass	*Panicum virgatum 'Pathfinder'*	Warm	Sod	389,000	1.0
Alkar tall wheatgrass	*Agropyron elongatum 'Alkar'*	Cool	Bunch	79,000	5.5
Total					**10.75**
Transition Turf Seed Mix[c]					
Ruebens Canadian bluegrass	*Poa compressa 'Ruebens'*	Cool	Sod	2,500,000	0.5
Dural hard fescue	*Festuca ovina 'duriuscula'*	Cool	Bunch	565,000	1.0
Citation perennial ryegrass	*Lolium perenne 'Citation'*	Cool	Sod	247,000	3.0
Lincoln smooth brome	*Bromus inermis leyss 'Lincoln'*	Cool	Sod	130,000	3.0
Total					**7.5**

Table TS/PS-2. Minimum Drill Seeding Rates for Perennial Grasses (cont.)

Common Name	Botanical Name	Growth Season[b]	Growth Form	Seeds/ Pound	Pounds of PLS/acre
Sandy Soil Seed Mix					
Blue grama	*Bouteloua gracilis*	Warm	Sod-forming bunchgrass	825,000	0.5
Camper little bluestem	*Schizachyrium scoparium 'Camper'*	Warm	Bunch	240,000	1.0
Prairie sandreed	*Calamovilfa longifolia*	Warm	Open sod	274,000	1.0
Sand dropseed	*Sporobolus cryptandrus*	Cool	Bunch	5,298,000	0.25
Vaughn sideoats grama	*Bouteloua curtipendula 'Vaughn'*	Warm	Sod	191,000	2.0
Arriba western wheatgrass	*Agropyron smithii 'Arriba'*	Cool	Sod	110,000	5.5
Total					**10.25**
Heavy Clay, Rocky Foothill Seed Mix					
Ephriam crested wheatgrass[d]	*Agropyron cristatum 'Ephriam'*	Cool	Sod	175,000	1.5
Oahe Intermediate wheatgrass	*Agropyron intermedium 'Oahe'*	Cool	Sod	115,000	5.5
Vaughn sideoats grama[e]	*Bouteloua curtipendula 'Vaughn'*	Warm	Sod	191,000	2.0
Lincoln smooth brome	*Bromus inermis leyss 'Lincoln'*	Cool	Sod	130,000	3.0
Arriba western wheatgrass	*Agropyron smithii 'Arriba'*	Cool	Sod	110,000	5.5
Total					**17.5**

[a] All of the above seeding mixes and rates are based on drill seeding followed by crimped straw mulch. These rates should be doubled if seed is broadcast and should be increased by 50 percent if the seeding is done using a Brillion Drill or is applied through hydraulic seeding. Hydraulic seeding may be substituted for drilling only where slopes are steeper than 3:1. If hydraulic seeding is used, hydraulic mulching should be done as a separate operation.

[b] See Table TS/PS-3 for seeding dates.

[c] If site is to be irrigated, the transition turf seed rates should be doubled.

[d] Crested wheatgrass should not be used on slopes steeper than 6H to 1V.

[e] Can substitute 0.5 lbs PLS of blue grama for the 2.0 lbs PLS of Vaughn sideoats grama.

Seeding dates for the highest success probability of perennial species along the Front Range are generally in the spring from April through early May and in the fall after the first of September until the ground freezes. If the area is irrigated, seeding may occur in summer months, as well. See Table TS/PS-3 for appropriate seeding dates.

Table TS/PS-1. Minimum Drill Seeding Rates for Various Temporary Annual Grasses

Species* (Common name)	Growth Season[b]	Pounds of Pure Live Seed (PLS)/acre[c]	Planting Depth (inches)
1. Oats	Cool	35 - 50	1 - 2
2. Spring wheat	Cool	25 - 35	1 - 2
3. Spring barley	Cool	25 - 35	1 - 2
4. Annual ryegrass	Cool	10 - 15	½
5. Millet	Warm	3 - 15	½ - ¾
6. Sudangrass	Warm	5–10	½ - ¾
7. Sorghum	Warm	5–10	½ - ¾
8. Winter wheat	Cool	20–35	1 - 2
9. Winter barley	Cool	20–35	1 - 2
10. Winter rye	Cool	20–35	1 - 2
11. Triticale	Cool	25–40	1 - 2

[a] Successful seeding of annual grass resulting in adequate plant growth will usually produce enough dead-plant residue to provide protection from wind and water erosion for an additional year. This assumes that the cover is not disturbed or mowed closer than 8 inches.

Hydraulic seeding may be substituted for drilling only where slopes are steeper than 3:1 or where access limitations exist. When hydraulic seeding is used, hydraulic mulching should be applied as a separate operation, when practical, to prevent the seeds from being encapsulated in the mulch.

[b] See Table TS/PS-3 for seeding dates. Irrigation, if consistently applied, may extend the use of cool season species during the summer months.

[c] Seeding rates should be doubled if seed is broadcast, or increased by 50 percent if done using a Brillion Drill or by hydraulic seeding.

Table TS/PS-3. Seeding Dates for Annual and Perennial Grasses

	Annual Grasses (Numbers in table reference species in Table TS/PS-1)		Perennial Grasses	
Seeding Dates	**Warm**	**Cool**	**Warm**	**Cool**
January 1–March 15			✓	✓
March 16–April 30	4	1,2,3	✓	✓
May 1–May 15	4		✓	
May 16–June 30	4,5,6,7			
July 1–July 15	5,6,7			
July 16–August 31				
September 1–September 30		8,9,10,11		
October 1–December 31			✓	✓

Mulch

Cover seeded areas with mulch or an appropriate rolled erosion control product to promote establishment of vegetation. Anchor mulch by crimping, netting or use of a non-toxic tackifier. See the Mulching BMP Fact Sheet for additional guidance.

Maintenance and Removal

Monitor and observe seeded areas to identify areas of poor growth or areas that fail to germinate. Reseed and mulch these areas, as needed.

An area that has been permanently seeded should have a good stand of vegetation within one growing season if irrigated and within three growing seasons without irrigation in Colorado. Reseed portions of the site that fail to germinate or remain bare after the first growing season.

Seeded areas may require irrigation, particularly during extended dry periods. Targeted weed control may also be necessary.

Protect seeded areas from construction equipment and vehicle access.

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