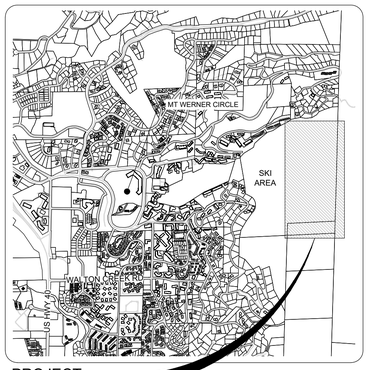
GRADING & EXCAVATION PERMIT SET

FOR

GREEN HORN RANCH

LOCATED IN THE SE1/4 SECTION 22, THE SW1/4 SECTION 23, AND IN THE NW1/4 SECTION 26
TOWNSHIP 6 NORTH, RANGE 84 WEST, 6TH P.M.;
COUNTY OF ROUTT, STATE OF COLORADO



NORTH

VICINITY MAP
1" = 2000'

CONTACT INFORMATION

PROJECT TEAM:

OWNER
STEAMBOAT SKI & RESORT CORP.
2305 MT. WERNER CIRCLE
STEAMBOAT SPRINGS, CO 80487
(303) 749-8262
ATTN: MIKE SCHMIDT

DESIGNER
SE GROUP
131 CHURCH ST, SUITE 200
BURLINGTON, VT 05401
(802) 681-0874
ATTN: MITCH LEFEVRE

GENERAL CONTRACTOR
SAUNDERS CONSTRUCTION, INC.
86 INVERNESS PLACE NORTH
CENTENNIAL, CO 80112
(303) 699-9000
ATTN: ADAM CLEVELAND

CIVIL ENGINEERS & SURVEYORS
LANDMARK CONSULTANTS, INC.
141 9TH STREET
STEAMBOAT SPRINGS, CO 80487
(970) 871-9494
ATTN: ERIK GRIEPENTROG, P.E.

GEOTECHNICAL ENGINEER
NORTHWEST COLORADO CONSULTANTS, INC.
2580 COPPER RIDGE DRIVE
STEAMBOAT SPRINGS, CO 80487
(970) 879-7888
ATTN: BRIAN LEN

UTILITY CONTACT LIST:

UTILITY COMPANY	CONTACT	PHONE NUMBER
CITY PUBLIC WORKS	BEN BEALL, P.E.	(970) 871.8293
CITY OF STEAMBOAT SPRINGS UTILITIES	MICHELLE CARR, P.E.	(970) 871.8207
MT. WERNER WATER	RICHARD BUCCINO	(970) 879.2424
YAMPA VALLEY ELECTRIC ASSOC.	LARRY BALL	(970) 871.2282
ATMOS ENERGY	DON CRANE	(970) 879.3223
CENTURY LINK	JASON SHARPE	(970) 328.8290
COMCAST	ANDY NEWBY	(303) 547.4584
UTILITY NOTIFICATION CTR. OF CO	N/A	(800) 922.1987

THIS LIST IS PROVIDED AS A COURTESY REFERENCE ONLY. LANDMARK CONSULTANTS, INC. ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OR COMPLETENESS OF THIS LIST. IN NO WAY SHALL THIS LIST RELINQUISH THE CONTRACTOR'S RESPONSIBILITY FOR LOCATING ALL UTILITIES PRIOR TO COMMENCING ANY CONSTRUCTION ACTIVITY. PLEASE CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO (UNCC) AT 811 FOR ADDITIONAL INFORMATION

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C.604 - Erosion Control Plan - Detailed
C.605 - Erosion Control Plan - Detailed
C.610 - Erosion Control Details
C.611 - Erosion Control Details

EARTHWORK QUANTITIES FOR PERMITTING FEE BASIS*:

CUT = 68,702 CY
FILL = 85,786 CY
TOTAL = 154,488 CY
VOLUMES DO NOT REFLECT SOIL BEHAVIOR. SITE IS ANTICIPATED TO BE BALANCED

* THESE QUANTITIES SHOULD NOT BE USED FOR CONTRACTING PURPOSES AS THEY REFLECT THE ESTIMATED RAW EARTHWORK ONLY AND NOT THE SPECIFIC MATERIAL MAKEUP SUCH AS TOPSOIL, STRUCTURAL EMBANKMENT, AND UNCLASSIFIED EXCAVATION. ROAD GRAVELS WERE NOT INCLUDED IN THE CALCULATION.

CALL UTILITY NOTIFICATION CENTER OF COLORADO
811
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.

COLORADO LICENSED ERIK T. GRIEPENTROG 33280 PROFESSIONAL ENGINEER
NOT VALID WITHOUT ORIGINAL SIGNATURE AND DATE

CIVIL ENGINEERS | SURVEYORS
141 9th Street ~ P.O. Box 774943
Steamboat Springs, Colorado 80477
(970) 871-9494
www.LANDMARK-CO.com

LANDMARK CONSULTANTS, INC.

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NO.	DATE:	BY:	DESCRIPTION:

PROJECT: 1012-048
DATE: 6/18/2021
CONTACT: Erik Griepentrog
EMAIL: erikg@landmark-co.com

GREEN HORN RANCH

Cover

SHEET
C.001

[DRAWING FILENAME: P:\1012-048\DWG\Production Drawings\GA&E Permit\1012-048-GE-C001-Cover.dwg LAYOUT NAME: Layout1 DATE: Jun 18, 2021 - 3:24pm CAD OPERATOR: Matt LIST OF XREFS: [ATCRAFT][ATCRDES.ctb] Permit]

GENERAL NOTES

1. TOPOGRAPHIC AND EXISTING CONDITIONS PER CITY GIS DATA AND SUPPLEMENTED WITH LANDMARK CONSULTANTS, INC. ARCHIVED SURVEY FIELD DATA. LANDMARK IS NOT RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF THE EXISTING CONDITIONS AND/OR PROPERTY INFORMATION (INCLUDING EASEMENTS AND ENCUMBRANCES) AND THE OWNER ASSUMES ALL RISK WITH COMPLYING WITH THE LEGAL REQUIREMENTS OF THIS PROJECT.

2. CITY OF STEAMBOAT SPRINGS PLAN REVIEW AND APPROVAL IS ONLY FOR GENERAL CONFORMANCE WITH CITY DESIGN CRITERIA AND THE CITY CODE. THE CITY IS NOT RESPONSIBLE FOR THE COMPLETENESS, ACCURACY AND ADEQUACY OF THE DRAWINGS. DESIGN, DIMENSIONS, AND ELEVATIONS SHALL BE CONFIRMED AND CORRELATED AT THE JOB SITE.

3. ONE COPY OF THE APPROVED CONSTRUCTION PLANS AND SPECIFICATIONS SHALL BE KEPT ON THE JOB SITE AT ALL TIMES. PRIOR TO THE START OF CONSTRUCTION, VERIFY WITH PROJECT ENGINEER THE LATEST REVISION DATE OF THE APPROVED CONSTRUCTION PLANS.

4. ALL MATERIALS, WORKMANSHIP, AND CONSTRUCTION OF PUBLIC IMPROVEMENTS SHALL MEET OR EXCEED THE STANDARDS AND SPECIFICATIONS SET FORTH IN THE CITY OF STEAMBOAT SPRINGS TECHNICAL SPECIFICATIONS (MARCH, 2018 EDITION), THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" BY THE COLORADO DEPARTMENT OF TRANSPORTATION, (2017 EDITION), AND APPLICABLE STATE AND FEDERAL REGULATIONS. WHERE THERE IS A DIRECT CONFLICT BETWEEN THESE PLANS AND THE SPECIFICATIONS, OR ANY APPLICABLE STANDARDS, THE MOST RESTRICTIVE STANDARD SHALL APPLY.

5. ALL WATER AND SANITARY SEWER CONSTRUCTION AND RELATED WORK SHALL CONFORM TO THE MOUNT WERNER WATER STANDARD SPECIFICATIONS FOR WATER AND WASTEWATER UTILITIES, CURRENT EDITION STANDARDS AND SPECIFICATIONS.

6. ALL NECESSARY PERMITS AND APPROVALS FROM ALL APPLICABLE AGENCIES AS REQUIRED MUST BE OBTAINED IN ORDER TO PERFORM THE WORK. THIS INCLUDES, BUT IS NOT LIMITED TO, RIGHT-OF-WAY PERMIT, GRADING AND EXCAVATION PERMIT, CONSTRUCTION DEWATERING PERMIT, STORM WATER QUALITY PERMIT, ARMY CORP OF ENGINEER PERMIT, ETC. IT IS THE APPLICABLE CONTRACTOR'S RESPONSIBILITY TO OBTAIN A COPY OF ALL APPLICABLE CODES, LICENSES, SPECIFICATIONS, AND STANDARDS NECESSARY TO PERFORM THE WORK, AND BE FAMILIAR WITH THEIR CONTENTS PRIOR TO COMMENCING ANY WORK.

7. PRIOR TO ANY WORK IN THE CITY RIGHT-OF-WAY INCLUDING STREET CUTS, CONTACT THE CITY OF STEAMBOAT SPRINGS STREET DEPARTMENT AT 970.879.1807 FOR PERMIT REQUIREMENTS. NO WORK SHALL OCCUR IN THE ROW BETWEEN NOVEMBER 1 - APRIL 1 UNLESS A WRITTEN VARIANCE HAS BEEN APPROVED AND ISSUED BY THE CITY PUBLIC WORKS DIRECTOR.

8. PRIOR TO CLOSURE OF ANY STREET OR PART OF STREET, AN APPROVED OBSTRUCTION PERMIT MUST BE ISSUED BY CITY CONSTRUCTION SERVICES FOREMAN.

9. PRIOR TO START OF CONSTRUCTION A PRE-CONSTRUCTION MEETING SHALL BE SCHEDULED WITH THE APPROPRIATE CONTRACTORS, ENGINEER, SURVEYOR, TESTING COMPANY, AFFECTED AGENCIES AND KEY SUBCONTRACTORS A MINIMUM OF 48-HOURS PRIOR TO THE START OF WORK.

10. THE LOCAL ENTITY AND ENGINEER SHALL BE NOTIFIED AT LEAST 2 WORKING DAYS PRIOR TO THE START OF ANY EARTH DISTURBING ACTIVITY, OR CONSTRUCTION ON ANY AND ALL PUBLIC IMPROVEMENTS. THE LOCAL ENTITY RESERVES THE RIGHT NOT TO ACCEPT THE IMPROVEMENTS IF SUBSEQUENT TESTING REVEALS AN IMPROPER INSTALLATION.

11. COORDINATE WITH THE PROJECT ENGINEER TO IDENTIFY PROJECT INSPECTION AND TESTING REQUIREMENTS. PROVIDE FOR INSPECTIONS AND TESTING AT AN ADEQUATE FREQUENCY FOR THE PROJECT ENGINEER TO DOCUMENT THAT PROJECT IS CONSTRUCTED IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS. PRIOR TO MAKING ANY CHANGES TO THE APPROVED PLANS, IT IS THE APPROPRIATE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH THE PROJECT ENGINEER.

12. PROVIDE THE OWNER, ENGINEER, THEIR CONSULTANTS, INDEPENDENT TESTING LABORATORIES, ANY GOVERNMENTAL AGENCIES WITH JURISDICTIONAL INTERESTS, OTHER REPRESENTATIVES AND PERSONNEL, ACCESS TO THE SITE AND THE WORK AT REASONABLE TIMES FOR THEIR OBSERVATION, INSPECTING, AND TESTING. PROVIDE THEM PROPER AND SAFE CONDITIONS FOR SUCH ACCESS AND ADVISE THEM OF THE DEVELOPER'S SITE SAFETY PROCEDURES AND PROGRAMS SO THAT THEY MAY COMPLY THEREWITH AS IS APPLICABLE. COORDINATE WITH THE PROJECT ENGINEER SO THAT INSPECTING AND TESTING ARE PROVIDED AT AN ADEQUATE FREQUENCY FOR THE PROJECT ENGINEER TO AFFIRM THAT WORK WAS COMPLETED IN SUBSTANTIAL CONFORMANCE WITH THESE APPROVED PLANS.

13. NO WORK MAY COMMENCE WITHIN ANY IMPROVED PUBLIC RIGHT-OF-WAY UNTIL A RIGHT-OF-WAY PERMIT OR APPROPRIATE CONSTRUCTION PERMIT IS OBTAINED, IF APPLICABLE. SUBMIT A CONSTRUCTION TRAFFIC CONTROL PLAN, IN ACCORDANCE WITH MUTCD, TO THE APPROPRIATE RIGHT-OF-WAY AUTHORITY, (LOCAL ENTITY, COUNTY OR STATE), FOR APPROVAL PRIOR TO ANY CONSTRUCTION ACTIVITIES WITHIN, OR AFFECTING, THE RIGHT-OF-WAY. PROVIDE ANY AND ALL TRAFFIC CONTROL DEVICES AS MAY BE REQUIRED BY THE CONSTRUCTION ACTIVITIES.

14. SUBMIT A CONSTRUCTION SITE MANAGEMENT PLAN (CSMP) FOR REVIEW AND APPROVAL BY THE CITY CONSTRUCTION SERVICES FOREMAN PRIOR TO START OF CONSTRUCTION. THE CSMP MUST BE MAINTAINED ON-SITE AND UPDATED AS NEEDED TO REFLECT CURRENT CONDITIONS.

15. ALL CONTRACTORS ARE SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES, AS SHOWN ON THESE PLANS, IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO (UNCC) AT 1-800-922-1987, AT LEAST 2 WORKING DAYS PRIOR TO BEGINNING EXCAVATION OR GRADING, TO HAVE ALL REGISTERED UTILITY LOCATIONS MARKED. OTHER UNREGISTERED UTILITY ENTITIES (I.E. DITCH / IRRIGATION COMPANY) ARE TO BE LOCATED BY CONTACTING THE RESPECTIVE REPRESENTATIVE. UTILITY SERVICE LATERALS ARE ALSO TO BE LOCATED PRIOR TO BEGINNING EXCAVATION OR GRADING. THE TYPE, SIZE, LOCATION AND NUMBER OF ALL KNOWN UNDERGROUND UTILITIES ARE APPROXIMATE WHEN SHOWN ON THE DRAWINGS. VERIFY THE EXISTENCE AND LOCATION OF ALL UNDERGROUND UTILITIES ALONG THE ROUTE OF THE WORK BEFORE COMMENCING NEW CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ALL EXISTING UTILITIES THAT CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS.

16. FIELD LOCATE AND VERIFY ELEVATIONS OF ALL EXISTING SEWER MAINS, WATER MAINS, CURBS, GUTTERS AND OTHER UTILITIES AT THE POINTS OF CONNECTION SHOWN ON THE PLANS, AND AT ANY UTILITY CROSSINGS PRIOR TO INSTALLING ANY OF THE NEW IMPROVEMENTS. IF A CONFLICT EXISTS AND/OR A DESIGN MODIFICATION IS REQUIRED, COORDINATE WITH THE ENGINEER TO MODIFY THE DESIGN. DESIGN MODIFICATION(S) MUST BE APPROVED BY THE LOCAL ENTITY PRIOR TO BEGINNING CONSTRUCTION.

17. ALL UTILITY INSTALLATIONS WITHIN OR ACROSS THE ROADBED OR OTHER PAVED AREAS MUST BE COMPLETED PRIOR TO THE FINAL STAGES OF ROAD CONSTRUCTION. FOR THE PURPOSES OF THESE STANDARDS, ANY WORK INCLUDING, GRAVELS, PAVEMENTS, CURB AND GUTTER ABOVE THE SUBGRADE IS CONSIDERED FINAL STAGE WORK. ALL SERVICE LINES MUST BE STUBBED BEYOND THE ROAD PLATFORM OR TO THE PROPERTY LINES AND MARKED SO AS TO REDUCE THE EXCAVATION NECESSARY FOR BUILDING CONNECTIONS.

18. COORDINATE AND COOPERATE WITH THE LOCAL ENTITY, AND ALL UTILITY COMPANIES INVOLVED, WITH REGARD TO RELOCATIONS, ADJUSTMENTS, EXTENSIONS AND REARRANGEMENTS OF EXISTING UTILITIES DURING CONSTRUCTION, AND TO ASSURE THAT THE WORK IS ACCOMPLISHED IN A TIMELY FASHION AND WITH A MINIMUM DISRUPTION OF SERVICE. CONTACT, IN ADVANCE, ALL PARTIES AFFECTED BY ANY DISRUPTION OF ANY UTILITY SERVICE AS WELL AS THE UTILITY COMPANIES.

19. NO WORK MAY COMMENCE WITHIN ANY PUBLIC STORM WATER, SANITARY SEWER OR POTABLE WATER SYSTEM UNTIL THE UTILITY PROVIDERS ARE NOTIFIED. NOTIFICATION SHALL BE A MINIMUM OF TWO (2) WORKING DAYS PRIOR TO COMMENCEMENT OF ANY WORK. AT THE DISCRETION OF THE WATER UTILITY PROVIDER, A PRE-CONSTRUCTION MEETING MAY BE REQUIRED PRIOR TO COMMENCEMENT OF ANY WORK.

20. PROTECT ALL UTILITIES DURING CONSTRUCTION AND FOR COORDINATE WITH THE APPROPRIATE UTILITY COMPANY FOR ANY UTILITY CROSSINGS REQUIRED.

21. WHEN APPLICABLE, THE DEVELOPER AND/OR CONTRACTOR SHALL HAVE ONSITE AT ALL TIMES, EACH OF THE FOLLOWING:
- BEST MANAGEMENT PRACTICES (BMP) MAINTENANCE FOLDER
- UP TO DATE STORMWATER MANAGEMENT PLAN (SWMP) THAT ACCURATELY REPRESENTS CURRENT FIELD CONDITIONS
- ONE (1) SIGNED COPY OF THE APPROVED PLANS
- ONE (1) COPY OF THE APPROPRIATE STANDARDS AND SPECIFICATIONS
- A COPY OF ANY PERMITS AND EXTENSION AGREEMENTS NEEDED FOR THE JOB.

23. IF, DURING THE CONSTRUCTION PROCESS, CONDITIONS ARE ENCOUNTERED WHICH COULD INDICATE A SITUATION THAT IS NOT IDENTIFIED IN THE PLANS OR SPECIFICATIONS, CONTACT THE DESIGNER AND THE LOCAL ENTITY ENGINEER IMMEDIATELY.

24. ALL REFERENCES TO ANY PUBLISHED STANDARDS SHALL REFER TO THE LATEST REVISION OF SAID STANDARD, UNLESS SPECIFICALLY STATED OTHERWISE.

25. PROVIDE ALL LABOR AND MATERIALS NECESSARY FOR THE COMPLETION OF THE INTENDED IMPROVEMENTS SHOWN ON THESE DRAWINGS, OR DESIGNATED TO BE PROVIDED, INSTALLED, OR CONSTRUCTED, UNLESS SPECIFICALLY NOTED OTHERWISE.

26. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RECORDING AS-BUILT INFORMATION ON A SET OF RECORD DRAWINGS KEPT ON THE CONSTRUCTION SITE, AND AVAILABLE TO THE LOCAL ENTITY'S INSPECTOR AT ALL TIMES.

27. DIMENSIONS FOR LAYOUT AND CONSTRUCTION ARE NOT TO BE SCALED FROM ANY DRAWING. IF PERTINENT DIMENSIONS OR ELEVATIONS ARE NOT SHOWN, CONTACT THE DESIGNER FOR CLARIFICATION, AND ANNOTATE THE PROVIDED DIMENSION ON THE AS-BUILT RECORD DRAWINGS. CONTOURS ARE NOT SUITABLE FOR CONSTRUCTION LAYOUT.

28. SEQUENCE INSTALLATION OF UTILITIES IN SUCH A MANNER AS TO MINIMIZE POTENTIAL UTILITY CONFLICTS. IN GENERAL, GRADE RESTRICTED UTILITIES SUCH AS STORM SEWER AND SANITARY SEWER, SHOULD BE CONSTRUCTED PRIOR TO INSTALLATION OF THE WATER LINES AND DRY UTILITIES.

29. EXISTING FENCES, TREES, STREETS, SIDEWALKS, CURBS AND GUTTERS, LANDSCAPING, STRUCTURES, AND IMPROVEMENTS DESTROYED, DAMAGED OR REMOVED DUE TO CONSTRUCTION OF THIS PROJECT SHALL BE REPLACED OR RESTORED IN LIKE KIND AT THE CONTRACTOR'S EXPENSE, UNLESS OTHERWISE INDICATED ON THESE PLANS.

30. THESE CONSTRUCTION PLANS SHALL BE VALID FOR A PERIOD OF THREE YEARS FROM THE DATE OF APPROVAL BY THE AHJ. USE OF THESE PLANS AFTER THE EXPIRATION DATE WILL REQUIRE A NEW REVIEW AND APPROVAL PROCESS BY THE LOCAL ENTITY PRIOR TO COMMENCEMENT OF ANY WORK SHOWN IN THESE PLANS.

31. ALL CONSTRUCTION IN AREAS DESIGNATED AS WILD FIRE HAZARD AREAS SHALL BE DONE IN ACCORDANCE WITH THE CONSTRUCTION CRITERIA AS ESTABLISHED IN THE WILD FIRE HAZARD AREA MITIGATION REGULATIONS IN FORCE AT THE TIME OF CONSTRUCTION.

32. THE CONTRACTOR AGREES THAT BY COMMENCING CONSTRUCTION THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE CONSTRUCTION OF THE PROJECT, INCLUDING, BUT NOT LIMITED TO THE SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD T THE ENGINEER, AND THE GOVERNING AGENCIES AND THE OFFICERS, DIRECTORS, PARTNERS, EMPLOYEES, AGENTS AND OTHER CONSULTANTS OF EACH AND ANY OF THEM HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPT FOR LIABILITY ARISING FROM THE NEGLIGENCE OF THE OWNER, THE ENGINEER, OR THE GOVERNING AGENCIES.

33. NOTIFY THE ENGINEER IMMEDIATELY UPON DISCOVERING ANY CONFLICTS OR OTHER PROBLEMS IN CONFORMING TO THE APPROVED CONSTRUCTION DRAWINGS, SPECIFICATIONS OR DETAILS FOR ANY ELEMENT OF THE PROPOSED IMPROVEMENTS PRIOR TO PROCEEDING WITH ITS CONSTRUCTION.

34. COORDINATE THE INSTALLATION OR RELOCATION OF THE DRY UTILITY COMPANY'S FACILITIES. COST OF THE DRY UTILITY WORK SHALL BE BORNE BY THE OWNER, EXCEPT AS INDICATED IN THE PLANS AND SPECIFICATIONS.

35. PRESERVE PRIVATE AND PUBLIC PROPERTY AND PROTECT IT FROM DAMAGE THAT MAY RESULT FROM CONSTRUCTING THESE PROPOSED IMPROVEMENTS.

36. ACCESS TO ALL ADJACENT PROPERTIES AND FACILITIES SHALL BE MAINTAINED AT ALL TIMES. REQUIRED INTERRUPTION OF ACCESS SHALL BE COORDINATED WITH THE PROPERTY AND PROJECT OWNERS.

37. IF HAZARDOUS MATERIAL OR SUSPECT MATERIAL IS ENCOUNTERED NOTIFY THE OWNER AND ENGINEER BEFORE CONTINUING WORK. HAZARDOUS MATERIALS SHALL BE REMOVED AS REQUIRED.

38. THE APPROPRIATE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SOURCE OF CONSTRUCTION WATER FOR USE ON THIS PROJECT.

39. EXCESS MATERIAL SHALL BE REMOVED FROM SITE AND HANDLED IN ACCORDANCE TO ALL RULES AND REQUIREMENTS. A SEPARATE PERMIT MAY BE REQUIRED AND SHALL BE COORDINATED WITH THE AUTHORITY HAVING JURISDICTION.

40. OFFSITE AND ADJACENT SITE DATA IS FOR REFERENCE PURPOSES ONLY.

41. ALL LANDSCAPING, REVEGETATION AND WETLANDS REQUIREMENTS DESIGN BY OTHERS. ALL DISTURBED AREAS ARE TO BE REVEGETATED UNLESS OTHERWISE NOTED.

42. ENSURE THAT WORK FOR THIS PROJECT BE PERFORMED BY CONTRACTORS (INCLUDING CONTRACTOR'S EMPLOYEES AND AGENTS) POSSESSING THE SKILLS, EXPERTISE AND UNDERSTANDING OF ALL APPLICABLE CODES, SPECIFICATIONS, STANDARDS AND MANUFACTURER REQUIREMENTS. BY COMMENCING WORK, THE CONTRACTORS REPRESENT THAT THEY UNDERSTAND AND ACCEPT THIS REQUIREMENT.

43. ALL CONSTRUCTION ACTIVITIES AND DISTURBANCES SHALL OCCUR WITHIN THE PROPERTY LIMITS. WHERE OFF-SITE WORK IS APPROVED, WRITTEN PERMISSION OF THE ADJACENT PROPERTY OWNER MUST BE OBTAINED PRIOR TO ANY OFF-SITE GRADING OR CONSTRUCTION.

CONSTRUCTION NOTES

A. GRADING AND DRAINAGE

44. NO WORK SHALL OCCUR IN WETLANDS OR FLOODPLAINS WITHOUT PERMITS. ANY WORK SHALL BE IN ACCORDANCE WITH ISSUED PERMITS.

45. VEGETATED SLOPES GREATER THAN 3:1 REQUIRE SOIL STABILIZATION.

46. CLEAN ALL INSTALLED CULVERTS AND STORM SEWERS PRIOR TO SUBSTANTIAL COMPLETION INSPECTIONS.

47. LENGTHS SHOWN ON PLANS ARE HORIZONTAL LENGTHS FROM CENTER OF MANHOLE TO CENTER OF MANHOLE OR TO THE END OF THE FLARED END SECTIONS, ACTUAL LENGTHS MAY VARY.

48. SLOPES ARE CALCULATED FROM INSIDE EDGE OF MANHOLE/STRUCTURE TO INSIDE EDGE OF MANHOLE/STRUCTURE.

49. IMPERVIOUS CLAY DAMS ARE REQUIRED IN TRENCH AT 50-FT INTERVALS AND AT CHANGES IN PIPE DIRECTION AND/OR AT PIPE JUNCTIONS FOR ALL DRAINAGE STRUCTURES.

50. MINIMUM RECOMMENDATIONS (TO BE CONFIRMED OR REPLACED BY GEOTECHNICAL ENGINEER): PROPOSED FILL AREAS WHERE PAVEMENT OR SITE CONCRETE IS ANTICIPATED SHOULD BE PREPARED BY STRIPPING EXISTING TOPSOIL AND ORGANIC MATERIALS, SCARIFICATION TO A DEPTH OF AT LEAST 8 INCHES AND COMPACTION TO MINIMUM VALUES GIVEN BELOW. MOISTURE CONDITIONING MAY BE REQUIRED TO ATTAIN STABILITY AND MINIMUM COMPACTION.

SITE FILLS AND TRENCH BACKFILL SHOULD CONSIST OF APPROVED ON-SITE OR IMPORTED MATERIALS. FILLS SHOULD BE UNIFORMLY PLACED AND COMPACTED IN 6 TO 8 INCH LOOSE LIFTS TO AT LEAST 95 PERCENT OF THE MAXIMUM STANDARD PROCTOR DENSITY AND WITHIN 2 PERCENT OF THE OPTIMUM MOISTURE CONTENT (ASTM D698). MOISTURE CONDITIONING OF FILL MATERIALS MAY BE REQUIRED TO ATTAIN MINIMUM COMPACTION AND STABILITY REQUIREMENTS.

51. TWO GEOTECHNICAL REPORTS FOR THIS PROJECT WERE PREPARED UNDER THE TITLE OF "GEOTECHNICAL INVESTIGATION, GREENHORN RANCH/WILDBLUE, NEW BOULEVARD ROAD, STEAMBOAT SKI RESORT, ROUTT COUNTY COLORADO" BY "NWCC" DATED "JANUARY 16, 2020", AND "SUBSOIL AND FOUNDATION INVESTIGATION, THE WILD BLUE TERMINAL AND RESTAURANT, STEAMBOAT SKI RESORT, STEAMBOAT SPRINGS, COLORADO" BY "NWCC" DATED "JULY 19, 2019" AND THEIR RECOMMENDATIONS ARE HEREBY INCORPORATED HEREIN. IF A CONFLICT OR DISCREPANCY OCCURS, NOTIFY THE ENGINEER IMMEDIATELY UPON DISCOVERY.

B. CONSTRUCTION SITE AND STORMWATER MANAGEMENT

52. CONTRACTOR SHALL SUBMIT A CONSTRUCTION SITE MANAGEMENT PLAN TO THE CITY FOR APPROVAL PRIOR TO BUILDING PERMIT ISSUANCE.

53. WHEN REQUIRED THE CONTRACTOR SHALL PREPARE A STORMWATER MANAGEMENT PLAN. THE STORMWATER MANAGEMENT PLAN SHALL BE PREPARED BY A QUALIFIED INDIVIDUAL WITH KNOWLEDGE IN THE PRINCIPLES AND PRACTICES OF EROSION AND SEDIMENT CONTROL AND POLLUTION PREVENTION. THIS INDIVIDUAL SHOULD BE RESPONSIBLE FOR DEVELOPING, IMPLEMENTING, MAINTAINING, AND REVISING THE STORMWATER MANAGEMENT PLAN FOR THE DURATION OF THE PROJECT.

54. THE STORMWATER MANAGEMENT PLAN SHOULD ADDRESS INSTALLATION, INSPECTION AND MAINTENANCE OF ALL NECESSARY EROSION AND SEDIMENT CONTROL DURING CONSTRUCTION AND REMOVE EROSION CONTROL WHEN PROJECT IS COMPLETE AND VEGETATION IS ESTABLISHED. WHEN TEMPORARY EROSION CONTROL MEASURES ARE REMOVED, CLEAN UP AND REMOVE ALL SEDIMENT AND DEBRIS FROM ALL DRAINAGE INFRASTRUCTURE AND OTHER PUBLIC FACILITIES.

55. ALL REQUIRED PERIMETER SILT AND CONSTRUCTION FENCING SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITY (STOCKPILING, STRIPPING, GRADING, ETC). ALL OTHER REQUIRED EROSION CONTROL MEASURES SHALL BE INSTALLED AT THE APPROPRIATE TIME IN THE CONSTRUCTION SEQUENCE AS INDICATED IN THE APPROVED PROJECT SCHEDULE, CONSTRUCTION PLANS, AND STORMWATER MANAGEMENT PLAN.

56. ENSURE THAT NO MUD OR DEBRIS SHALL BE TRACKED ONTO THE EXISTING PUBLIC STREET SYSTEM. MUD AND DEBRIS MUST BE REMOVED BY THE END OF EACH WORKING DAY BY AN APPROPRIATE MECHANICAL METHOD (I.E. MACHINE BROOM SWEEP, LIGHT DUTY FRONT-END LOADER, ETC.) OR AS APPROVED BY THE LOCAL ENTITY STREET INSPECTOR.

57. ALL STRUCTURAL EROSION CONTROL MEASURES SHALL BE INSTALLED AT THE LIMITS OF CONSTRUCTION AND AT AREAS WITH DISTURBED SOIL, ON- OR OFF-SITE, PRIOR TO ANY OTHER GROUND-DISTURBING ACTIVITY. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED IN GOOD REPAIR, UNTIL SUCH TIME AS THE ENTIRE DISTURBED AREAS IS STABILIZED WITH HARD SURFACE OR LANDSCAPING. TO MITIGATE EROSION, UTILIZE STANDARD EROSION CONTROL TECHNIQUES DESCRIBED IN THE URBAN STORM DRAINAGE CRITERIA MANUAL, VOLUME 3 - BEST MANAGEMENT PRACTICES, AS PUBLISHED BY THE URBAN DRAINAGE AND FLOOD CONTROL DISTRICT (UDFCD).

58. PRE-DISTURBANCE VEGETATION SHALL BE PROTECTED AND RETAINED WHEREVER POSSIBLE. REMOVAL OR DISTURBANCE OF EXISTING VEGETATION SHALL BE LIMITED TO THE AREA(S) REQUIRED FOR IMMEDIATE CONSTRUCTION OPERATIONS, AND FOR THE SHORTEST PRACTICAL PERIOD OF TIME.

59. IMMEDIATELY CLEAN UP ANY CONSTRUCTION MATERIALS INADVERTENTLY DEPOSITED ON EXISTING STREETS, SIDEWALKS, OR OTHER PUBLIC RIGHTS OF WAY, AND MAKE SURE STREETS AND WALKWAYS ARE CLEANED AT THE END OF EACH WORKING DAY.

60. ALL RETAINED SEDIMENTS, PARTICULARLY THOSE ON PAVED ROADWAY SURFACES, SHALL BE REMOVED AND DISPOSED OF IN A MANNER AND LOCATION SO AS NOT TO CAUSE THEIR RELEASE INTO ANY WATERS OF THE UNITED STATES.

61. THE STORMWATER VOLUME CAPACITY OF DETENTION PONDS WILL BE RESTORED AND STORM SEWER LINES WILL BE CLEANED UPON COMPLETION OF THE PROJECT.

62. THE COLORADO DISCHARGE PERMIT SYSTEM (CDPS) REQUIREMENTS MAKE IT UNLAWFUL TO DISCHARGE OR ALLOW THE DISCHARGE OF ANY POLLUTANT OR CONTAMINATED WATER FROM CONSTRUCTION SITES. POLLUTANTS INCLUDE, BUT ARE NOT LIMITED TO DISCARDED BUILDING MATERIALS, CONCRETE TRUCK WASHOUT, CHEMICALS, OIL AND GAS PRODUCTS, LITTER, AND SANITARY WASTE. TAKE WHATEVER MEASURES ARE NECESSARY TO ASSURE THE PROPER CONTAINMENT AND DISPOSAL OF POLLUTANTS ON THE SITE IN ACCORDANCE WITH ANY AND ALL APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS.

D. WATER AND SEWER NOTES

63. ALL WATER AND SEWER CONSTRUCTION SHALL BE PER MT. WERNER WATER OR THE CITY OF STEAMBOAT SPRINGS WATER & SEWER STANDARD SPECIFICATIONS, LATEST EDITION, AS APPLICABLE.

64. MAINTAIN 10' HORIZONTAL AND 18" VERTICAL MINIMUM SEPARATION BETWEEN ALL SANITARY SEWER MAINS, WATER MAINS & SERVICES.

65. MANHOLES LOCATED OUTSIDE OF THE ROADWAY SHALL PROTRUDE 1' ABOVE EXISTING GRADE TO REDUCE INFILTRATION. GRADE SURFACE TO DRAIN AROUND/AWAY FROM MANHOLE RIMS.

66. ALL MANHOLES LOCATED IN THE ROADWAY SHALL HAVE RIM ELEVATIONS ADJUSTED TO ¼" BELOW FINISHED GRADE. IF NECESSARY, CONE SECTIONS SHALL BE ROTATED TO PREVENT LIDS BEING LOCATED WITHIN VEHICLE OR BICYCLE WHEEL PATHS.

67. SEWER SERVICE SHALL HAVE A MINIMUM OF 4-FT OF COVER.

68. WATER SERVICE SHALL HAVE A MINIMUM OF 7-FT OF COVER.

69. ALL WATER PIPE SHALL BE INSTALLED WITH A #10 SOLID COPPER WIRE COATED WITH 45 MIL POLYETHYLENE FOR LOCATING PURPOSES. "GLENN TEST STATIONS" BY VALVCO, INC TRACER WIRE TEST STATIONS SHALL BE INSTALLED ADJACENT TO ALL FIRE HYDRANTS. ADDITIONAL LOCATIONS MAY BE REQUIRED.

70. THE PARTICLE SIZE OF BEDDING AND SHADING MATERIAL SHALL BE 3/4 INCH WASHED OR SCREENED ROCK (NOT ROAD BASE OR CLASS 6) AND SHALL EXTEND THE FULL WIDTH OF THE TRENCH.

71. ALL MATERIALS USED FOR BACKFILL SHALL BE FREE FROM REFUSE ORGANIC MATERIAL, COBBLES, BOULDERS, LARGE ROCKS OR STONES OR FROZEN SOILS GREATER THAN 6-INCHES IN DIAMETER.

72. ALL TRENCHES SHALL BE COMPACTED TO 95% AS DETERMINED BY ASTM D698 (STANDARD PROCTOR) OR AS SPECIFIED BY GEOTECHNICAL ENGINEER.

PROJECT NOTES:

73. AN AUTOCAD COMPATIBLE FILE WILL BE PROVIDED FOR CONSTRUCTION STAKING PURPOSES, UPON ACCEPTANCE OF LANDMARK'S CAD RELEASE POLICY.

74. IF THESE DRAWINGS ARE PRESENTED IN A FORMAT OTHER THAN 24" X 36", THE GRAPHIC SCALE SHOULD NOT BE USED.

75. THE CONTRACTOR ACKNOWLEDGES AND UNDERSTANDS THAT THE CONTRACT DOCUMENTS MAY REPRESENT IMPERFECT DATA AND MAY CONTAIN ERRORS, OMISSIONS, CONFLICTS, INCONSISTENCIES, CODE VIOLATIONS AND IMPROPER USE OF MATERIALS. SUCH DEFICIENCIES WILL BE CORRECTED WHEN IDENTIFIED. THE CONTRACTOR AGREES TO CAREFULLY STUDY AND COMPARE THE INDIVIDUAL CONTRACT DOCUMENTS AND REPORT AT ONCE IN WRITING T THE OWNER ANY DEFICIENCIES THE CONTRACTOR MAY DISCOVER. THE CONTRACTOR FURTHER AGREES TO REQUIRE EACH SUBCONTRACTOR TO LIKEWISE STUDY THE DOCUMENTS AND REPORT AT ONCE ANY DEFICIENCIES DISCOVERED.

THE CONTRACTOR SHALL RESOLVE ALL REPORTED APPLICABLE DEFICIENCIES WITH LANDMARK PRIOR TO AWARDING ANY SUBCONTRACTS OR STARTING ANY WORK WITH THE CONTRACTOR'S OWN EMPLOYEES. IF ANY DEFICIENCIES CANNOT BE RESOLVED BY THE CONTRACTOR WITHOUT ADDITIONAL TIME OR ADDITIONAL EXPENSES, THE CONTRACTOR SHALL SO INFORM THE OWNER IN WRITING. ANY SUCH ADDITIONAL WORK PERFORMED PRIOR TO RECEIPT OF INSTRUCTIONS FROM THE OWNER WILL BE DONE AT THE CONTRACTOR'S RISK.

CONSTRUCTION PHASE SERVICES:

IT IS UNDERSTOOD AND AGREED THAT LANDMARK DOES NOT HAVE AN OBLIGATION TO CONDUCT CONSTRUCTION OBSERVATION OR REVIEW OF THE CONTRACTOR'S PERFORMANCE OR ANY OTHER CONSTRUCTION PHASE SERVICES, AND THAT SUCH SERVICES WILL BE PROVIDED FOR BY THE OWNER AS MAY BE REQUIRED BY THE AUTHORITY HAVING JURISDICTION. THE OWNER ASSUMES ALL RESPONSIBILITY FOR INTERPRETATION OF THESE CONSTRUCTION DOCUMENTS AND FOR CONSTRUCTION OBSERVATION AND THE OWNER WAIVES ANY CLAIMS AGAINST LANDMARK THAT MAY BE IN ANY WAY CONNECTED THERETO.

IN ADDITION, THE OWNER AGREES, TO THE FULLEST EXTENT PERMITTED BY LAW, TO INDEMNIFY AND HOLD HARMLESS LANDMARK, ITS OFFICERS, DIRECTORS, EMPLOYEES AND SUBCONSULTANTS (COLLECTIVELY, LANDMARK) AGAINST ALL DAMAGES, LIABILITIES OR COSTS, INCLUDING REASONABLE ATTORNEYS' FEES AND DEFENSE COSTS, ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE PERFORMANCE OF SUCH SERVICES BY OTHER PERSONS OR ENTITIES AND FROM ANY AND ALL CLAIMS ARISING FROM MODIFICATIONS, CLARIFICATIONS, INTERPRETATIONS, ADJUSTMENTS OR CHANGES MADE TO THESE CONSTRUCTION DOCUMENTS TO REFLECT CHANGED FIELD OR OTHER CONDITIONS, EXCEPT FOR CLAIMS ARISING FROM THE SOLE NEGLIGENCE OR WILLFUL MISCONDUCT OF LANDMARK.

ABBREVIATIONS

ADA	AMERICAN'S WITH DISABILITIES ACT
APR	APPROXIMATE
BMP	BEST MANAGEMENT PRACTICE
BOT	BOTTOM
BVCS	BEGIN VERTICAL CURVE STATION
BVCE	BEGIN VERTICAL CURVE ELEVATION
BW OR BOW	BOTTOM OF WALL
C&C	CUT & CAPPED
CAP	CORRUGATED ALUMINUM PIPE
CIP	CAST-IN-PLACE
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
C.O.	CLEAN OUT
CP	CONCRETE PIPE
CSP	CORRUGATED STEEL PIPE
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
EG	EXISTING GROUND
EL	ELEVATION
EOA OR EA	EDGE OF ASPHALT
EOC	EDGE OF CONCRETE
EOP	EDGE OF PAVEMENT
EVCE	END VERTICAL CURVE ELEVATION
EVCS	END VERTICAL CURVE STATION
EX	EXISTING
F&G	FRAME & GRATE
F&C	FRAME & COVER
FES	FLARED END SECTION
FFE	FINISH FLOOR ELEVATION
FH	FIRE HYDRANT
FL	FLOW LINE
FG	FINISH GRADE
FG@BW	FINISH GRADE AT BOTTOM OF WALL
GB	GRADE BREAK
GFFE	GARAGE

Appendix F- Wildland Fire Plan

This Wildland Fire Plan was developed by the Medicine Bow-Routt National Forest & Thunder Basin National Grassland, Hahns Peak/Bears Ears Ranger District; Routt Zone Fire Management Program. Wildland fire[1] planning, responsibilities, notifications, and prevention actions are outlined within this document and will be referenced for any Wildfire[2] or Prescribed Fire[3] activity. This plan will apply to the Permittee or anyone working within the permitted area on National Forest System lands and will not relieve the Permittee or its contractors of any requirements or obligations set forth in the Permittee's special use permit or timber sale purchase agreement.

Wildfire Responsibilities

Forest Service

The Forest Service is responsible for all wildland fire operations on National Forest System Lands within the permitted area. Fire Management Representatives will be available to the Permittee and or contractor working within the permitted area for interpretation, discussion and assistance with any item appearing in this Wildland Fire Plan.

Fire Management Representatives will take action on all wildfires within the permitted area as described in the 2011 Medicine Bow-Routt National Forest and Thunder Basin National Grassland Fire Management Plan.

Permittee

The Permittee will report any wildfire located on or threatening National Forest System lands within the permit boundary. This wildfire report will first be communicated to dispatch centers for the initial response to the fire area. Only qualified personnel equipped with the proper Personal Protective Equipment will perform initial attack suppression actions.

The Permittee will monitor the permit area for compliance with the prevention and detection section of this wildland fire plan. If prevention methods are not followed within this plan, both parties will cooperate in taking corrective actions.

Notification and Communication
Critical information on Wildfires will need to be communicated first and foremost to the representative Dispatch Centers:

1. ***Routt County Emergency Dispatch Center: 911***
2. ***Craig Interagency Wildland Fire Dispatch Center: (970) 826-5037***

The following information will be provided when reporting a *Wildfire*:

- Exact location of wildfire and values at risk
- Size of fire and fuel type – grass, brush, timber, and or slash
- Character of fire – smoldering, creeping, running, and or torching
- Best access to fire area
- Weather conditions – cloudy, windy, sunny and or raining

Prevention and Detection

A wildfire precautionary period will initiate on May 15th and run throughout the summer months until November 15th unless otherwise stated. During this period the Permittee will be required to keep equipment that will aid in the initial control of human caused wildfire started by the Permittee and or contractor completing work operations for the Permittee. This equipment will be strategically located in places that are easily accessible for the Permittee or contactor while conducting work operations that have ignition potential. The Permittee will also insure that field going personnel will have means of communication in case of a wildfire.

- Suggested tools to help with the initial action on Wildfires:
  - Long handle spade shovel
  - Pulaski or Axe
  - Backpack pump or water bucket

During fire restrictions Steamboat Ski Resort Corporation in considered exempt (36 C.F.R. § 261.50 (e)) from restrictions provided that the following precautionary measures are in place:

Under Stage 1 Fire Restrictions:

- A shovel and fire extinguisher will be readily accessible in every SSRC vehicle.
- Employees shall attend a yearly fire prevention and safety briefing.
- A watchperson will be on duty after any explosives are used and will patrol the detonation area for at least one hour after operations have ceased.
- Welding will be accomplished in buildings when possible. If welding at field locations is required, the welding will be done at a location where all flammable material has been cleared to a minimum distance of 15 feet. Water and tools must also be located at this site.
- Flammables will be stored in appropriate containers and will be labeled. Storage buildings will be adequately signed if containing flammables. Areas containing flammables will be devoid of fuels within a 25 foot radius.
- Fueling will occur in areas that are devoid of flammable fuels and or are surrounded by mineral soils.
- Smoking will take place in designated areas and/or areas that are devoid of flammable fuels.

Additional Actions under Stage 2 Fire Restrictions:

- A water source will be available on each active worksite (e.g. snowmaking, ATV mounted tank).
- A 10lb or larger fire extinguisher will be available on each active worksite.
- Employees will visually inspect spark arrestors on chainsaws and other gasoline powered hand tools.
- Any spark requiring fire suppression activities will be monitored for 24 hours after the incident to ensure fire is extinguished.

Wildfire Costs

The Permittee may be held responsible for costs associated with human caused fire ignitions resulting from project operations by the Permittee or contractor/personnel working on behalf of the Permittee within the permitted area. Standard reimbursement cost rates will be used if reimbursement is sought for any such fires. The Forest Service will be responsible for all management costs associated with any naturally ignited wildfire on National Forest System Lands.

Prescribed Fire Responsibilities

Forest Service

Fire Management Representatives will periodically communicate with the Permittee to insure adequate prescribed fire preparation of designated projects.

Permittee

The Permittee will designate a contact person for the planning and implementation of prescribed fire projects within the permitted area.

The Permittee will cooperate and assist the Forest Service in the preparation and location of prescribed fire project areas.
The Permittee is responsible for all prescribed fire planning, smoke management planning and implementation of projects within the permitted area on National Forest System Lands pursuant to the Regional 2 policy and forms (attached).

Planning and Implementation
The Permittee will develop a prescribed fire burn plan that will guide the implementation of prescribed fire projects. All Colorado Department of Air Quality smoke permits and local fire permits will be obtained by the Permittee.

Communication between the Permittee and Forest Service will periodically take place to insure the location, size and composition of prescribed fuels meet planning document requirements.

Implementation of prescribed fire projects will be conducted and coordinated by the Permittee in cooperation with the Forest Service.

Prescribed Fire Costs

The Permittee will be responsible for costs associated with the planning and implementation of prescribed fire within the permitted area, on National Forest System Lands.

Project Name		
Project Latitude / Longitude	**N**	**W**

KEY ELEMENT CHECKLIST	YES	NO
Are the Administrative Burning Requirements up to date with the current year's information?		
Are ALL county or state permits and clearances obtained?		
Are ALL fire prescription elements met?		
Has Permittee obtained the fire weather forecast and is it favorable?		
There are **NO** USFS, State or County burn restrictions in effect for the planned burn area?		
Are ALL planned personnel and equipment on-site, available, and operational?		
Have ALL assigned personnel been briefed on the project objectives, their assignment, safety hazards, escape routes, and safety zones?		
Have ALL the required pre-burn notifications been made?		
Is a USFS District Fire Duty Officer available to contact as needed?		
Is the contingency plan prepared?		
In your judgment, can this burn be carried out according to the Plan to meet the objectives?		
Permittee Project Supervisor:	*Date*	*Time (24 hr.)*

Permittee Supervisory Responsibility:
The Permittee shall have a representative (project supervisor) on site that shall be authorized to receive and carry out on behalf of the Permittee any and all notices or instructions by the Forest Service Approving Officer in regard to burning and fire precautions. The project supervisor's duties and responsibilities will be to supervise all debris and slash burning activities in accordance with these requirements provisions of this plan.

Pre-Burn Notifications:
Prior to ignition, the permittee will notify the following agencies and/or individuals:

Name	Phone #	Fax #
Name County 911 Dispatch Center		
Name Forest Fire Duty Officer		
Name Interagency Fire Dispatch		
Notifications required in APCD Permit		
Name Ski Area Permit Administrator		
Other		

General Requirements:

Access: Access to burn piles by firefighting personnel shall not be restricted. Access to burn project areas must be maintained or no burning will be allowed.

Minimum Equipment and Staffing: The permittee is responsible for ensuring the staffing and equipment on site is adequate for maintaining control of the pile burning operation.

- 1 Project Leader, minimum of 2 additional personnel. *Staffing should increase proportional to the number of piles burning and the area involved.*
- 1 hand tool (shovel, Pulaski, chainsaw, axe, etc.) per person assigned.
- Ignition devices (Fussees, drip torches, etc.) and fuel.
- Personnel Protective Equipment (PPE): Hardhat, leather gloves, non-synthetic clothing, and boots.
- Heavy equipment (tractor/dozer) including operator or a readily available water source must be on site if burning without persistent snow cover.

Communication: Radio frequencies and channels used for the burn operation must be consistent with the Permittee's Annual Operating Plan.

Size and Location of Burn Piles: Burn piles shall not be located or constructed in such a manner that improvements or adjacent trees could be damaged.

Weather Monitoring: The Permittee Project Supervisor shall record the following weather every 2 hours: Location of Observations, Cloud Cover %, Dry Bulb Temperature, Relative Humidity, Wind Speed and Direction. All records will be provided to the Forest Service upon request.

Cost: All costs associated with burning operations are the responsibility of the permit holder.

PRESCRIPTION

- Compliance with State Air Pollution Control Division and/or county open burn permit conditions, including pile size, favorable smoke dispersion forecast and wind vectors.
- Snow cover of **3" over 75% of the unit - *OR* - > 0.25 inches precipitation in the last 48 hours**, measured on site or at the *name* weather (RAWS, NWS or Snotel) station.
- Fire Danger is rated Low or Moderate
- The 3 day General Weather Forecast for the Zone has NO Red Flag Watches or Warnings, NO predicted frontal passages and meets the following criteria:
  - If relative humidity is 20-29%, then 20 ft winds must be < 10 mph
  - If relative humidity is 30-39%, then 20 ft winds must be < 20 mph
  - If relative humidity is > 50%, then 20 ft winds must be < 30 mph

HOLDING ACTIONS

General Procedures to maintain the fire within the project area and meet objectives until declared 'out':

A. 'Snow cover' provision:
Ignited piles may be left unattended at night and for multiple days as long as prescription snow cover conditions exist. Periodic checks should be performed on all ignited piles until no heat is detected and the piles can be declared "out". Frequency and duration of the checks will be determined by the Project Leader.

B. Without 'Snow cover' provisions
Ignited piles may be left unattended overnight if prescription conditions are forecast to exist for the next 24 hours. All piles ignited under this condition must be checked daily until no heat is detected and the piles can be declared "out". Mop-up of piles may be required.

CONTINGENCY ACTIONS

If any of the following **Trigger Points** are met, the associated **Contingency Actions** should be implemented:

Trigger Points	Contingency Actions	Results
Consumption objectives are not being met.	1. Cease Ignitions.	If conditions become favorable, ignition may continue.
Smoke or changing conditions are not consistent with Colorado APCD smoke permit	1. Cease Ignitions. 2. Mitigate as possible including mop-up as needed	If contingency actions or change in conditions bring the project back within the scope of this prescribed fire plan, ignition may continue.
Significant weather changes which were not forecasted, particularly an increase in wind or drying.	1. Cease Ignitions. 2. Contact the FS Duty Officer 3. Monitor fire behavior and conditions, adding additional resources as necessary.	If contingency actions bring the project back within the scope of this prescribed fire plan, ignition may continue.
Unwanted fire spread within project boundary	1. Cease ignitions.	If contingency actions bring the project back within the scope of this

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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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ERIC J. GRIESHAMMER
33280
PROFESSIONAL ENGINEER

NOT VALID WITHOUT ORIGINAL SIGNATURE AND DATE

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NO.	DATE:	BY:	DESCRIPTION:

PROJECT: 1012.048
DATE: 6/18/2021
CONTACT: Erik Griepentrog
EMAIL: erik@landmark-co.com

GREEN HORN RANCH
Notes
SSRC Wildfire Plan

SHEET
C.003

DRAWING FILENAME: P:\1012-048\DWG\Production Drawings\Exhibit Permit\1012-048-LDE-C-002-Notes.dwg LAYOUT NAME: C.003 DATE: Jun 18, 2021 - 3:21pm CAD OPERATOR: Matt
LAST SF XREFS: [xBORDER-P.ewol.ttanner] [xXCMAP]

Emergency Response:

Fire plan- Steamboat has a fire plan (Appendix F) which outlines preventative measures and responses related to fire mitigation. Additionally, this plan outlines necessary measures for exemptions to Stage 2 fire restrictions for welding and using vehicles off-road. This operating plan and authorized officer approval of the plan equates to the requirement that an exemption must be applied for in writing, include an appropriate mitigation plan (see Appendix) and must be authorized in writing by the appropriate Forest Service official.

Notice regarding Exemptions: Holders of valid Forest Service permits, leases and authorizations and all other persons are on notice that when proceeding with activities that are authorized pursuant to these Exemptions, such persons are responsible for conducting authorized activities in a safe and prudent manner using extra precautions and are electing to proceed at their own risk. An exemption does not absolve an individual or organization from liability or responsibility for damage, injury or loss to the United States for any fire started while undertaking the exempted activity.

Fire, Health & Sanitation Plan- The Colorado Department of Health, Routt County Building Department, Environmental Health Department, Steamboat Springs Rural Fire Protection District, as well as SSRC's insurance companies (both property and worker's compensation carriers) actively inspect the facilities and operations owned by SSRC. SSRC maintains a separate file of all fire inspections in the Facilities Maintenance offices, health and sanitation inspections in the Food & Beverage offices and other safety reviews in office of the Risk Manager. These files are available for inspection by the Forest Service administering offices. As a function of Hahns Peak/Bear's Ears District's monitoring role of the Special Use Permittee, Forest Service representatives may from time to time participate in insurance and/or regulatory agency inspections and reviews.

Emergency Management Plan- SSRC maintains an up-to-date Emergency Management Plan with copies distributed to key directors and supervisors that might have involvement in a crisis situation.

Law Enforcement- The USFS is responsible for enforcing National Forest regulations as established in Title 36, Code of Federal Regulations.

- SSRC will cooperate with federal, state, and local law enforcement agencies in the performance of their respective duties, i.e., enforcement of Colorado Ski Safety Act of 1979, local ordinances, state laws, etc.
- The Routt County Sheriff has jurisdiction to enforce county and state law on the Steamboat Ski Area.
- The Colorado Division of Wildlife has jurisdiction to enforce state law on the Steamboat Ski Area.

7. Vegetation Management

Trees or shrubbery may be removed or destroyed only after the authorized officer or designated representative has approved in writing and marked or otherwise identified what may be removed or destroyed (Permit III G). See Appendix E for administrative use documentation. It is understood that tree removal could change the character of the forest and affect forest health where concentrated removal is proposed. Therefore, if concentrated removal is proposed through an operating plan or project record sheet, approval would be contingent upon consultation with the Forest Service and conformance with the ski area's vegetation management plan.

Trees that pose a safety concern to guests and infrastructure are authorized for removal.

Currently, SSRC cuts vegetation on groomed runs and mostly focused on those that receive snowmaking; this practice is authorized. Hollyhock, Rabbit Ears gilia, lady fern, broad-leaved twayblade, and white-veined wintergreen may not be damaged. Additionally, a 100-foot buffer around intermittent and perennial streams must be maintained unless authorized by the Forest Service botanist and/or hydrologist. The following ski runs have buffer exemptions: none *(Permit III G).*

Trees are authorized to be planted or transplanted following consultation with Forest Service botanist *(Permit III G).*

To the extent possible, management actions shall integrate SSRC's vegetation management plan recommendations when changing the vegetative component or when efficiencies can be made when working in a coincident area.

SSRC is responsible for nonnative and invasive species treatment. Treatments within the resort shall be reported on an annual basis and include: weed species, treatment locations (a map or GPS), acres treated, name of the herbicide(s) used and the quantity applied (total chemical used and application rate, if possible). Known invasive/noxious species on the resort include but are not limited to: These include whitetop or hoary cress, Canada thistle, bull thistle, yellow toadflax, houndstongue, and scentless chamomile, and reed canarygrass.

Herbicide and pesticide use required annual written approval (Permit V E). This operating plan authorizes the use of: Kernight (6oz/gallon), Curtail (2oz/gallon), 2-4-D (16oz 2-4-D, 4 grams Escort, splash of Activator 90 per 20 gallons).

The approved seed mix for the resort is:
40% mountain brome, 33% blue wildrye, 23% slender wheatgrass and 4% Poa ampla or canbyi.

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NO.	DATE:	BY:	DESCRIPTION:

PROJECT: 1012.048
DATE: 6/18/2021
CONTACT: Erik Griepentrog
EMAIL: erik@landmark-co.com

GREEN HORN RANCH
Notes
SSRC Emergency & Seeding Plan

SHEET
C.004

DRAWING FILENAME: P:\1012-048\DWGs\Production Drawings\SAE Permit\1012-048-LDE-C-002-Notes.dwg LAYOUT NAME: C.004 DATE: Jun 18, 2021 - 3:27pm CAD OPERATOR: Matt
LAST SF XREFS: (ab)ROBERT (west) Server) (VICMAP)



NORTH

200 0 200 400 600 Feet

(IN FEET)
1 inch = 200 ft.

LEGEND:

- PROPERTY BOUNDARY
- ADJACENT PROPERTY BOUNDARY
- EASEMENT
- SECTION LINE
- CENTERLINE
- FOUND MONUMENT
- FOUND SECTION CORNER
- BUILDING
- FENCE
- MAJOR CONTOUR
- MINOR CONTOUR
- FEMA SPECIAL FLOOD HAZARD AREA
- 30-FT WATER/BODY SETBACK
- WATERCOURSE PER CDC SECTION 802
- SIGN
- SANITARY SEWER
- SANITARY SEWER MANHOLE AND CLEANOUT
- WATER LINE
- FIRE HYDRANT, GATE VALVE & CURB STOP
- GAS
- GAS METER AND MANHOLE/VAULT
- CABLE
- CABLE PEDESTAL
- FIBER OPTIC
- TELEPHONE
- TELEPHONE PEDESTAL AND MANHOLE/VAULT
- ELECTRIC
- ELECTRIC PED, JUNCTION BOX AND METER
- LIGHT POLE AND LIGHT POLE W/ MAST
- OVERHEAD
- UTILITY POLE AND GUY WIRE
- WETLANDS (PROVIDED BY SSRC)
- DITCH/SWALE
- CULVERT W/ END SECTIONS
- INLET AND STORM MANHOLE
- FLOW ARROW
- CONIFEROUS AND DECIDUOUS TREE

- FLOOD HAZARD LIMITS
- 30-FT WATER BODY SETBACK

NOTES:

1. ALL REFERENCES HEREON TO BOOKS, PAGES, FILES, RECEPTION NUMBERS AND FILE NUMBERS ARE TO PUBLIC DOCUMENTS FILED IN THE RECORDS OF ROUTT COUNTY, COLORADO.
2. EASEMENTS AND PUBLIC DOCUMENTS SHOWN OR NOTED HEREON WERE EXAMINED AS TO LOCATION AND PURPOSE AND WERE NOT EXAMINED AS TO RESERVATIONS, RESTRICTIONS, CONDITIONS, OBLIGATIONS, TERMS, OR AS TO THE RIGHT TO GRANT THE SAME.
3. UTILITIES ARE SHOWN PER APPARENT SURFACE EVIDENCE TOGETHER WITH RECORD INFORMATION. IF MORE ACCURATE LOCATIONS OF UNDERGROUND UTILITIES ARE REQUIRED, THE UTILITY WILL HAVE TO BE VERIFIED BY FIELD POTHOLING. LANDMARK CONSULTANTS, INC. AND THE SURVEYOR OF RECORD SHALL NOT BE LIABLE FOR THE LOCATION OF OR THE FAILURE TO NOTE THE LOCATION OF NON-VISIBLE UTILITIES.
4. BASIS OF BEARINGS: THE NORTH LINE OF SECTION 27, T6N, R84W, 6TH P.M., BEING MONUMENTED AS SHOWN HEREON AND BEING ASSUMED TO BEAR N86°54'01"E. BEARINGS SHOWN HEREON HAVE BEEN ROTATED FROM RECORD BEARINGS.
5. ANY PERSON WHO KNOWINGLY REMOVES, ALTERS OR DEFACES ANY PUBLIC LAND SURVEY MONUMENT OR LAND MONUMENT OR ACCESSORY, COMMITS A CLASS TWO (2) MISDEMEANOR PURSUANT TO STATE STATUTE 18-4-508, C.R.S.
6. THIS SITE CONTAINS A CALCULATED AREA OF 173.88 ACRES.
7. A PORTION OF THE SITE IS LOCATED WITHIN SPECIAL FLOOD HAZARD AREA ZONE A OF THE UNNAMED TRIBUTARY TO BURGESS CREEK AS DETERMINED BY FEMA FLOOD INSURANCE RATE MAP NUMBER 08107C0883D, WITH AN EFFECTIVE DATE OF FEBRUARY 4, 2005 AND LOMR 18-08-0922P.
8. THE MEASURED DISTANCES SHOWN HEREON ARE IN U.S. SURVEY FEET.
9. ALL SYMBOLS ARE ONLY GRAPHICALLY REPRESENTED AND ARE NOT TO SCALE.
10. WETLAND LIMITS PROVIDED BY SSRC.

PROPERTY DESCRIPTION:

11. PARCEL XV AS DESCRIBED IN THAT SPECIAL WARRANTY DEED RECORDED IN BOOK 646 AT PAGE 476 IN THE ROUTT COUNTY RECORD;
EXCEPTING THEREFROM THE NORTHERLY 10 ACRES OF THE SE¼ OF THE NE¼ OF SECTION 27, TOWNSHIP 6 NORTH, RANGE 84 WEST, 6TH P.M.;

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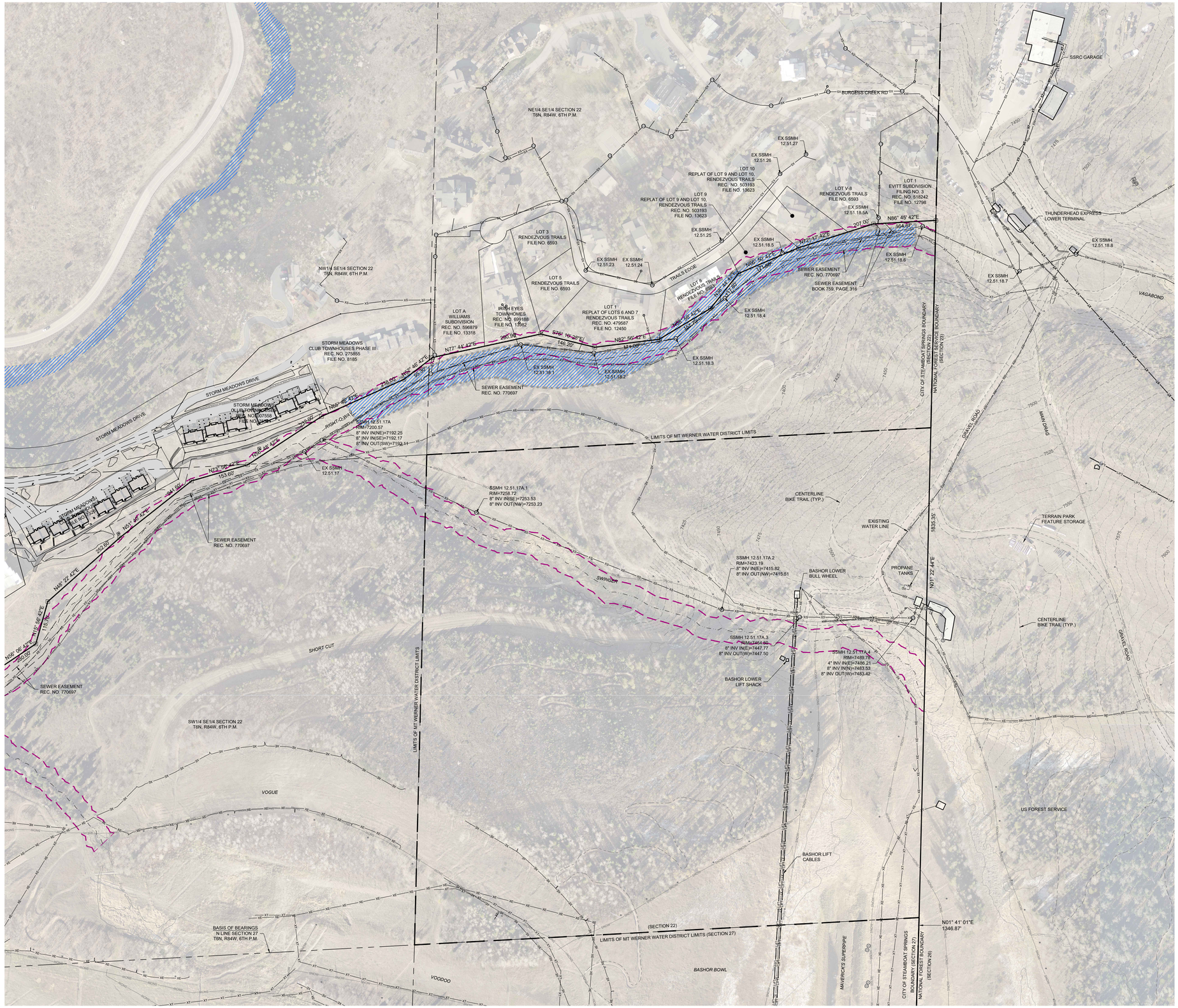
PROJECT: 1012-048
DATE: 6/18/2021
CONTACT: Erik Grespenthog
EMAIL: erikg@landmark-co.com

GREEN HORN RANCH

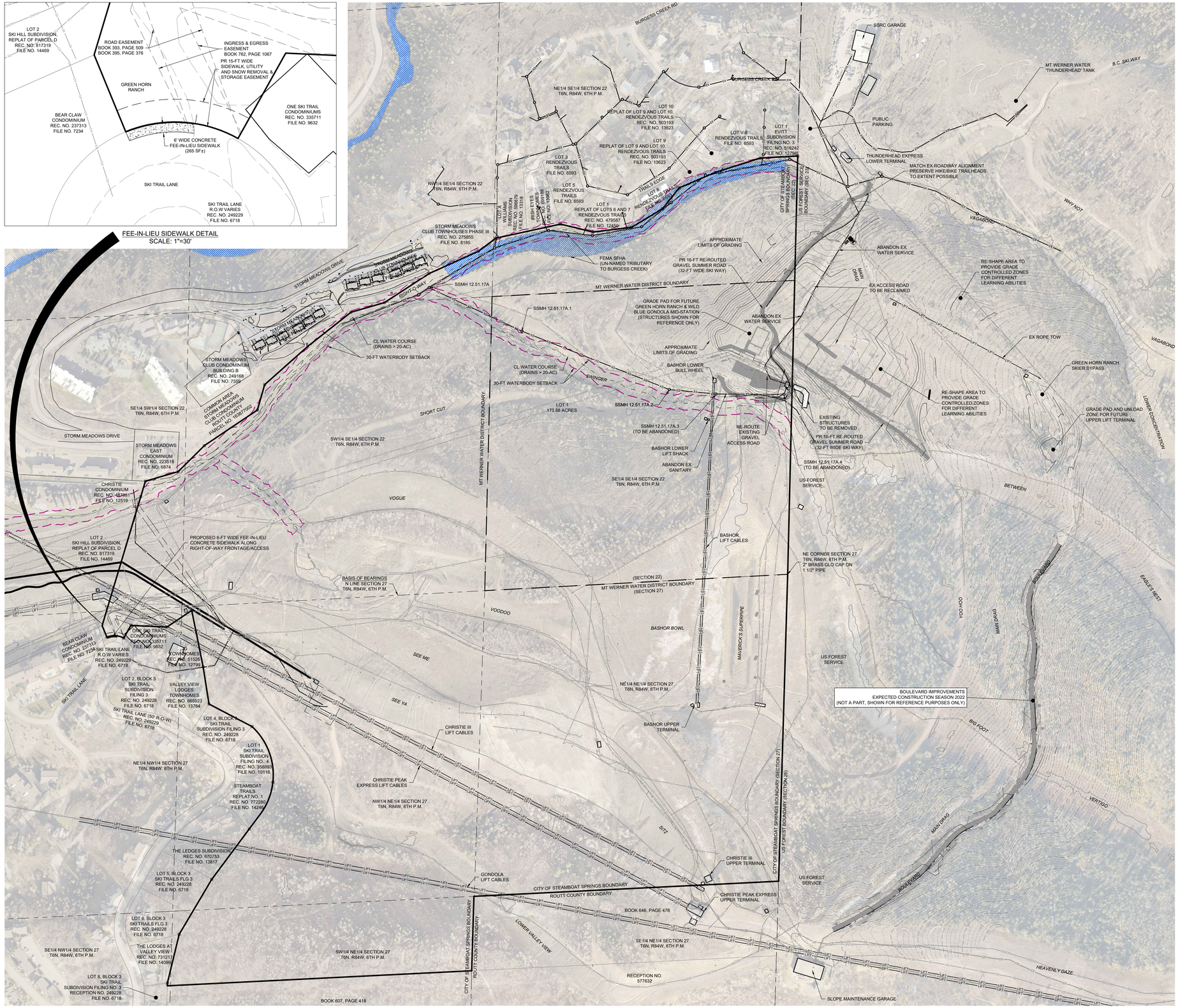
Existing Conditions - Overall

SHEET
C.005

DRAWING FILENAME: P:\1012-048\Work\Production Drawings\Civil Permit\1012-048-SE-C-005 Existing Conditions Overall.dwg LAYOUT NAME: C-005 DATE: Jun 18, 2021 - 3:29pm CAD-OPERATOR: Matt
LIST OF XREFS: [1012-048-xEarthFig] [1012-048-xBndy-MTN] [1012-048-xBndy] [1012-048-xDist Data] [xDIST_Leg] [1012-048-xMDP-Aplines] [1012-048-xMDP-Civil Engineering] [SBORDE C&E Perm]


NE1/4 SE1/4 SECTION 22
T6N, R84W, 6TH P.M.
NW1/4 SE1/4 SECTION 22
T6N, R84W, 6TH P.M.
SW1/4 SE1/4 SECTION 22
T6N, R84W, 6TH P.M.
BURGESS CREEK RD
SSRC GARAGE
THUNDERHEAD EXPRESS LOWER TERMINAL
VAGABOND
MAIN DRAG
GRAVEL ROAD
LOT 10 REPLAT OF LOT 9 AND LOT 10, RENDEZVOUS TRAILS REC. NO. 503193 FILE NO. 13623
LOT 9 REPLAT OF LOT 9 AND LOT 10, RENDEZVOUS TRAILS REC. NO. 503193 FILE NO. 13623
LOT V-8 RENDEZVOUS TRAILS FILE NO. 6593
LOT 1 EVITT SUBDIVISION FILING NO. 3 REC. NO. 515242 FILE NO. 12798
LOT 3 RENDEZVOUS TRAILS FILE NO. 6593
LOT 5 RENDEZVOUS TRAILS FILE NO. 6593
LOT 8 RENDEZVOUS TRAILS FILE NO. 6593
TRAILS EDGE
LOT A WILLIAMS SUBDIVISION REC. NO. 596879 FILE NO. 13318
IRISH EYES TOWNHOMES REC. NO. 691188 FILE NO. 13582
LOT 1 REPLAT OF LOTS 6 AND 7 RENDEZVOUS TRAILS REC. NO. 479587 FILE NO. 12450
STORM MEADOWS CLUB TOWNHOUSES PHASE III REC. NO. 275855 FILE NO. 8185
STORM MEADOWS DRIVE
STORM MEADOWS CLUBHOUSE REC. NO. 597558 FILE NO. 13582
STORM MEADOWS CLUB TOWNHOUSES REC. NO. 275855 FILE NO. 8185
SEWER EASEMENT REC. NO. 770697
SEWER EASEMENT BOOK 759, PAGE 316
RIGHT-OF-WAY
LIMITS OF MT WERNER WATER DISTRICT LIMITS
LIMITS OF MT WERNER WATER DISTRICT LIMITS (SECTION 27)
CITY OF STEAMBOAT SPRINGS (BOTTOM) (SECTION 27) NATIONAL FOREST BOUNDARY (SECTION 20)
CITY OF STEAMBOAT SPRINGS (BOTTOM) (SECTION 27) NATIONAL FOREST BOUNDARY (SECTION 09)
SSMH 12.51.17A RIM=7220.57 8" INV IN(NE)=7192.25 8" INV IN(SE)=7192.17 8" INV OUT(SW)=7192.11
SSMH 12.51.17A.1 RIM=7258.72 8" INV IN(SE)=7253.53 8" INV OUT(NW)=7253.23
SSMH 12.51.17A.2 RIM=7423.19 8" INV IN(E)=7415.82 8" INV OUT(NW)=7415.51
SSMH 12.51.17A.3 RIM=7447.68 8" INV IN(E)=7447.77 8" INV OUT(W)=7447.50
SSMH 12.51.17A.4 RIM=7489.78 4" INV IN(E)=7486.21 8" INV IN(N)=7483.53 8" INV OUT(W)=7483.42
EX SSMH 12.51.27
EX SSMH 12.51.26
EX SSMH 12.51.25
EX SSMH 12.51.18.5
EX SSMH 12.51.18.6A
EX SSMH 12.51.18.6
EX SSMH 12.51.18.8
EX SSMH 12.51.18.7
EX SSMH 12.51.23
EX SSMH 12.51.24
EX SSMH 12.51.18.4
EX SSMH 12.51.18.3
EX SSMH 12.51.18.1
EX SSMH 12.51.18.2
EX SSMH 12.51.17
BASHOR LOWER BULL WHEEL
BASHOR LOWER LIFT SHACK
BASHOR LIFT CABLES
PROPANE TANKS
EXISTING WATER LINE
CENTERLINE BIKE TRAIL (TYP.)
TERRAIN PARK FEATURE STORAGE
US FOREST SERVICE
SWINGER
SHORT CUT
VOGUE
VOODOO
BASHOR BOWL
MAVERICK'S SUPERPIPE
BASIS OF BEARINGS N LINE SECTION 27 T6N, R84W, 6TH P.M.
N01° 41' 01"E 1346.87'
N01° 22' 44"E 1835.35'
N12° 17' 42"E 207.00'
N86° 45' 42"E 164.69'
N65° 45' 42"E 317.49'
N82° 56' 42"E 147.49'
N77° 44' 42"E 260.09'
S28° 16' 28"E 146.20'
N65° 45' 42"E 738.00'
N24° 56' 42"E 153.69'
N48° 22' 42"E 203.80'
N65° 45' 42"E 115.76'
N66° 06' 42"E 200.00'
N65° 45' 42"E 38.93'
N65° 45' 42"E 70.00'
N65° 45' 42"E 44.99'
N01° 22' 44"E 115.76'
N65° 45

FEE-IN-LIEU SIDEWALK DETAIL
SCALE: 1"=30'



NORTH

200 0 200 400 600 Feet

(IN FEET)
1 inch = 200 ft.

LEGEND:

- PROPERTY BOUNDARY
- EASEMENT
- SECTION LINE
- FOUND MONUMENT
- FOUND SECTION CORNER
- FENCE
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- ASPHALT
- CONCRETE
- GRAVEL
- SIGN
- PROPOSED SANITARY SEWER W/ MH
- EXISTING SANITARY SEWER W/ MH
- PROPOSED WATER
- PROPOSED GV, FH & CS
- EXISTING WATER
- GAS
- GAS METER AND MANHOLE/VAULT
- CABLE
- CABLE PEDESTAL
- FIBER OPTIC
- TELEPHONE
- TELEPHONE PEDESTAL AND MANHOLE/VAULT
- ELECTRIC
- ELECTRIC PED, JUNCTION BOX AND METER
- LIGHT POLE AND LIGHT POLE W/ MAST
- OVERHEAD ELECTRIC
- UTILITY POLE AND GUY WIRE
- DITCH/SWALE
- EXISTING STORM SEWER W/ FES
- PROPOSED STORM SEWER W/ FES
- INLET AND STORM MANHOLE
- OVERLAND AND CHANNEL FLOW ARROWS
- CONIFEROUS AND DECIDUOUS TREE
- FLOOD HAZARD LIMITS
- 30-FT WATER BODY SETBACK
- WATERCOURSE PER CDC SECTION 802

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6. A PORTION OF THE SITE IS LOCATED WITHIN SPECIAL FLOOD HAZARD AREA ZONE A OF THE UNNAMED TRIBUTARY TO BURGESS CREEK AS DETERMINED BY FEMA FLOOD INSURANCE RATE MAP NUMBER 08107C0883D, WITH AN EFFECTIVE DATE OF FEBRUARY 4, 2005 AND LOMR 18-08-0922P.
7. THE MEASURED DISTANCES SHOWN HEREON ARE IN U.S. SURVEY FEET.

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COLORADO LICENSED
ERIK T. GRIEPENTROG
PROFESSIONAL ENGINEER
33280
6/18/21

NOT VALID WITHOUT ORIGINAL SIGNATURE AND DATE

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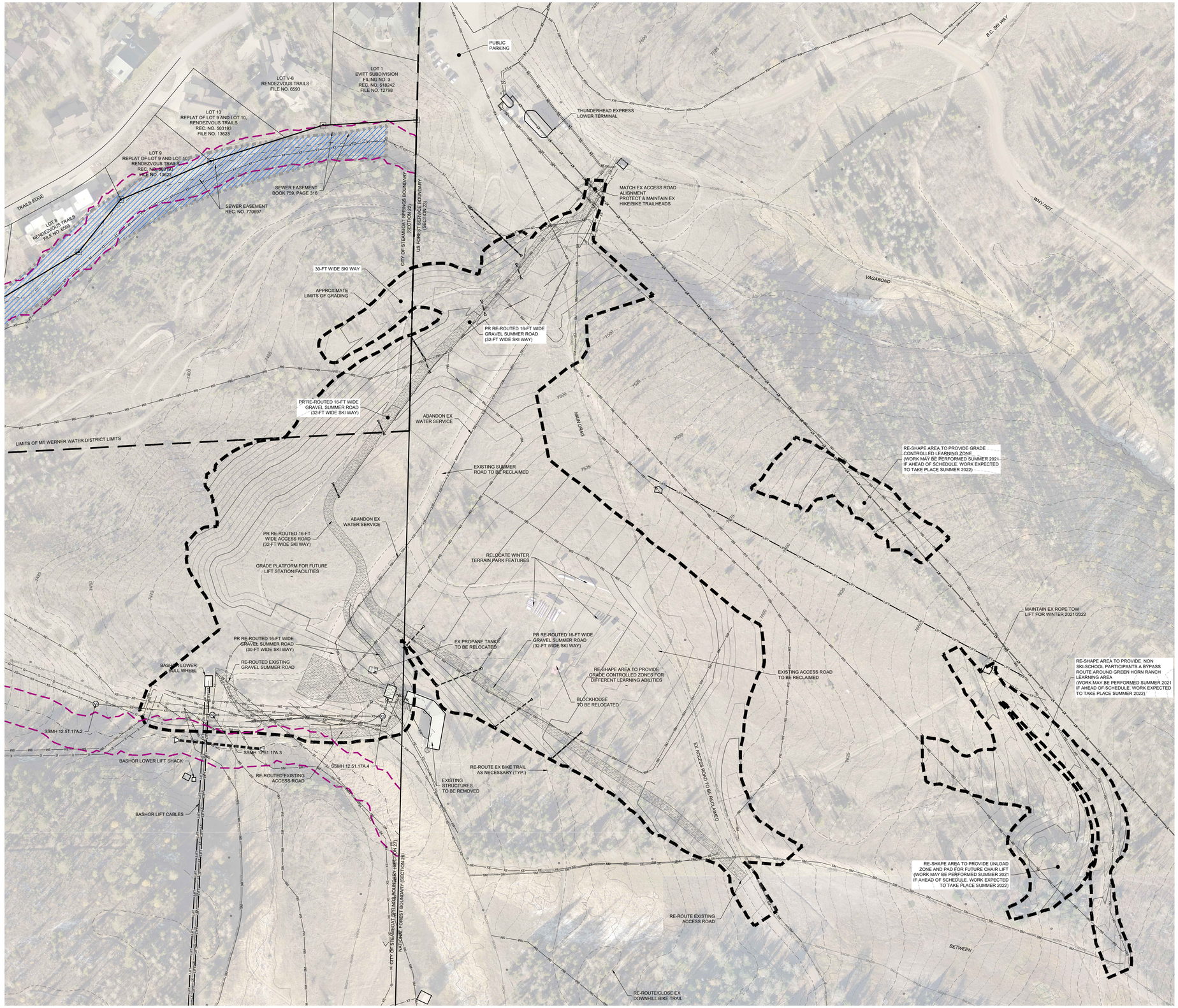
PROJECT: 1012-048
DATE: 6/18/2021
CONTACT: Erik Griepentrog
EMAIL: erikg@landmark-co.com

GREEN HORN RANCH

Site Plan

SHEET
C.100

DRAWING FILENAME: P:\1012-048\Work\Production Drawings\Site Plans\1012-048 ISE C.100 Site Plan Overall.dwg [LAYOUT NAME: C.100 DATE: Jun 18, 2021 - 3:56pm OSD OPERATOR: Matt
LIST OF XREFS: [1012-048-xEasMTN] [1012-048-xImages] [ARCHIVES-PP] [BACKGROUND] [1012-048-xEasin] [1012-048-xSite] [1012-048-xSite-PP] [1012-048-xSite-PP-BLDG only for reference] [1012-048-xSite-PP-BLDG only for reference] [1012-048-xPlanting - TP] [1012-048-xHatch]



NORTH

80 0 80 160 240 Feet

(IN FEET)
1 inch = 80 ft.

LEGEND:

- PROPERTY BOUNDARY
- EASEMENT
- SECTION LINE
- FOUND MONUMENT
- FOUND SECTION CORNER
- FENCE
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
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- ASPHALT
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- PROPOSED SANITARY SEWER W/ MH
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COLORADO LICENSED PETER J. GREENTREE 33280 6/18/21 PROFESSIONAL ENGINEER

NOT VALID WITHOUT ORIGINAL SIGNATURE AND DATE

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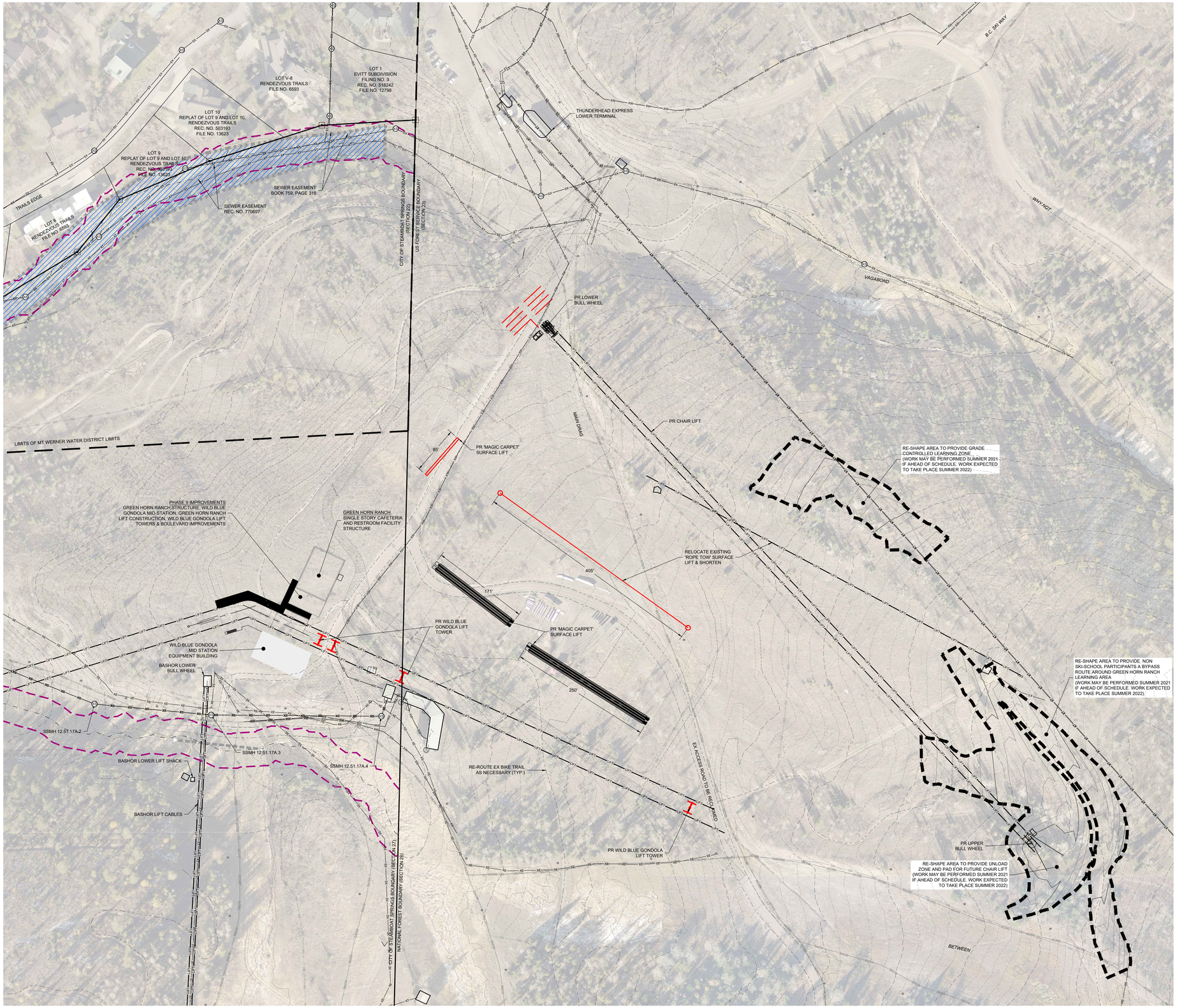
PROJECT: 1012-048
DATE: 6/18/2021
CONTACT: Erik Greenetnog
EMAIL: erikg@landmark-co.com

GREEN HORN RANCH

Detailed Site Plan

SHEET
C.110

DRAWING FILENAME: P:\1012-048\DWG\Production Drawings\048 Permit\1012-048 C.110 Site Plan Detailing LAYOUT NAME: C.110 DATE: Jun 18, 2021 - 5:51pm USER: GREENTREE
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NORTH

80 0 80 160 240 Feet

(IN FEET)
1 inch = 80 ft.

LEGEND:

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- EASEMENT
- SECTION LINE
- FOUND MONUMENT
- FOUND SECTION CORNER
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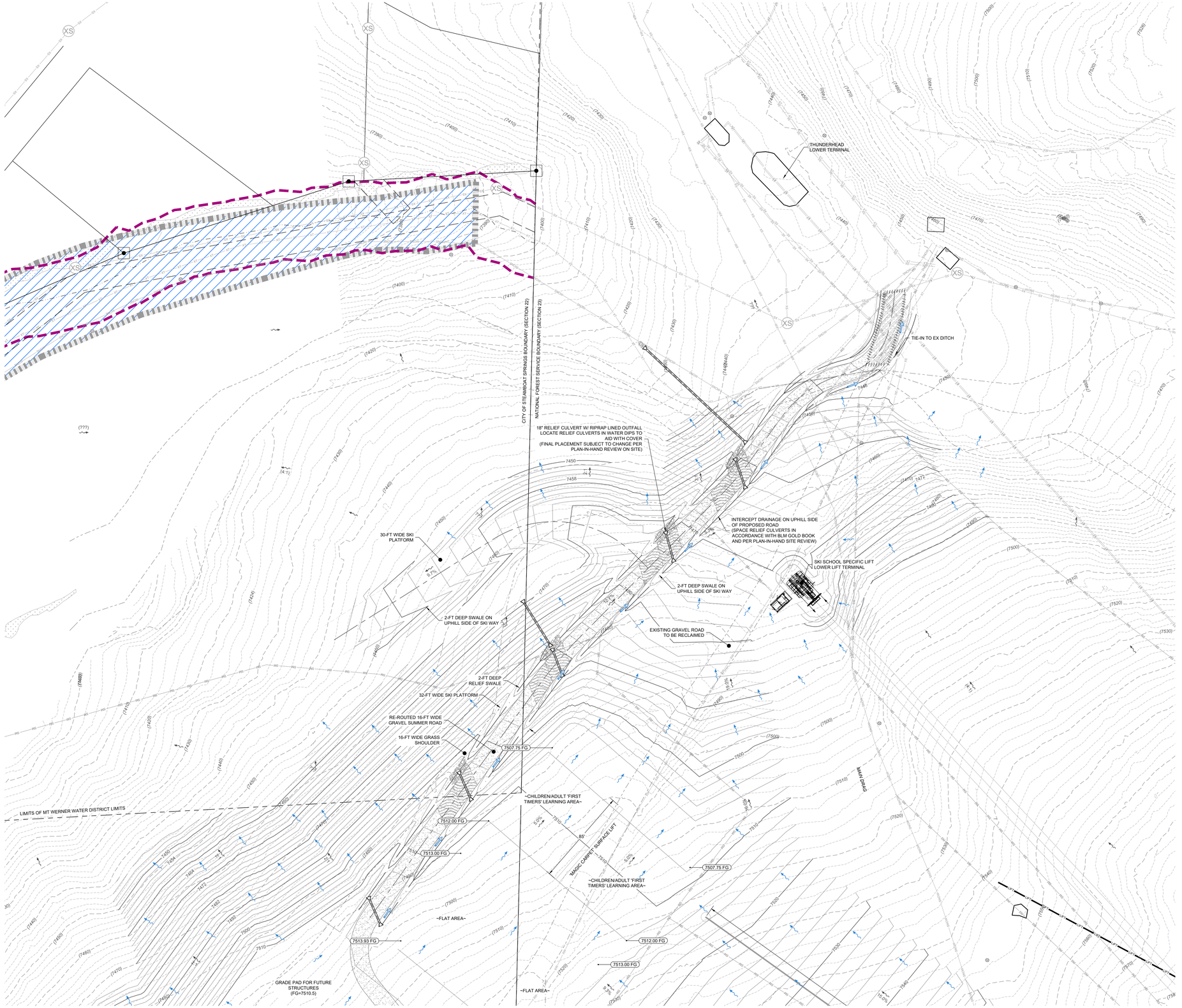
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GREEN HORN RANCH

Detailed Site Plan

SHEET
C.110

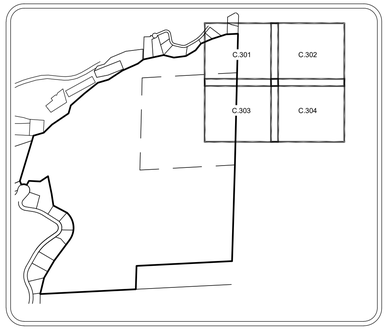
DRAWING FILENAME: P:\1012-048\DWG\Production Drawings\048 Permit\1012-048 C.110 Site Plan Detailing LAYOUT NAME: C.111 DATE: Jun 18, 2021 - 5:51pm CAD OPERATOR: Matt
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NORTH

40 0 40 80 120 Feet

(IN FEET)
1 inch = 40 ft.



KEY MAP
N.T.S.

LEGEND:

- EXISTING STORM SEWER
- PROPOSED STORM SEWER
- PROPOSED STORM INLET (CURB & AREA)
- PROPOSED MAJOR CONTOUR (6805)
- PROPOSED MINOR CONTOUR
- EXISTING MAJOR CONTOUR (6805)
- EXISTING MINOR CONTOUR
- PROPOSED SWALE
- PROPOSED CURB & GUTTER
- PROPERTY BOUNDARY
- PROPOSED LOT LINE
- EXISTING RIGHT OF WAY
- PROPOSED SPOT ELEVATION (00.10)
- EXISTING SPOT ELEVATION (00.10 X)
- PROPOSED OVERLAND FLOW DIRECTION W/SLOPE (2.0%)
- PROPOSED CHANNELIZED FLOW DIRECTION W/ SLOPE (2.0%)
- EXISTING CHANNELIZED FLOW DIRECTION
- SKI RUN
- FLOOD HAZARD LIMITS
- 30-FT WATER BODY SETBACK

NOTES:

1. THE SIZE, TYPE AND LOCATION OF ALL KNOWN UNDERGROUND UTILITIES ARE APPROXIMATE WHEN SHOWN ON THESE DRAWINGS. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER TO VERIFY THE EXISTENCE OF ALL UNDERGROUND UTILITIES IN THE AREA OF THE WORK. BEFORE COMMENCING NEW CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES AND SHALL BE RESPONSIBLE FOR FOR ALL UNKNOWN UNDERGROUND UTILITIES.
2. ALL PROJECT DATA IS ON VERTICAL DATUM; NAVD 88. SEE NOTES SHEET FOR BENCHMARK REFERENCES.
3. ELEVATIONS FOR IMPROVEMENTS THAT ARE CONTROLLED BY ADJACENT EXISTING FACILITIES (SUCH AS PROPOSED GUTTERS ALONG EXISTING ASPHALT) MAY REQUIRE ADJUSTMENT BASED ON ACTUAL CONDITIONS. COORDINATE WITH ENGINEER TO ENSURE A CONSISTENT SECTION WITH SMOOTH TRANSITIONS WHERE NECESSARY.
4. SEE SOILS REPORT FOR PAVEMENT, SUBGRADE AND MATERIAL PREPARATION, DESIGN AND RECOMMENDATIONS.
5. ALL CURB SPOTS SHOWN ARE FLOWLINE ELEVATIONS, UNLESS NOTED OTHERWISE. ALL OTHER SPOTS ARE FINISHED GRADE ELEVATIONS.

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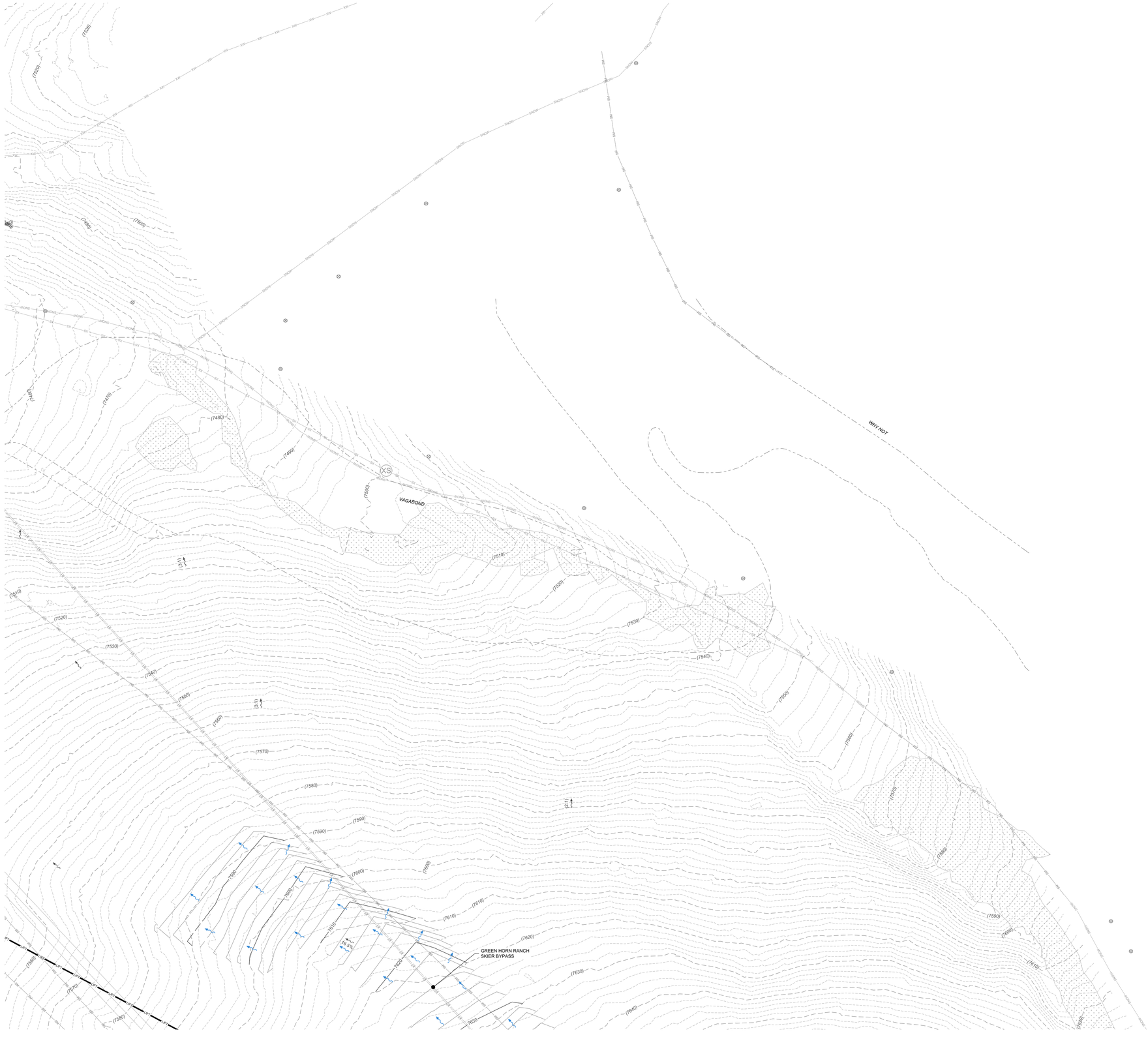
NO.	DATE:	BY:	DESCRIPTION:

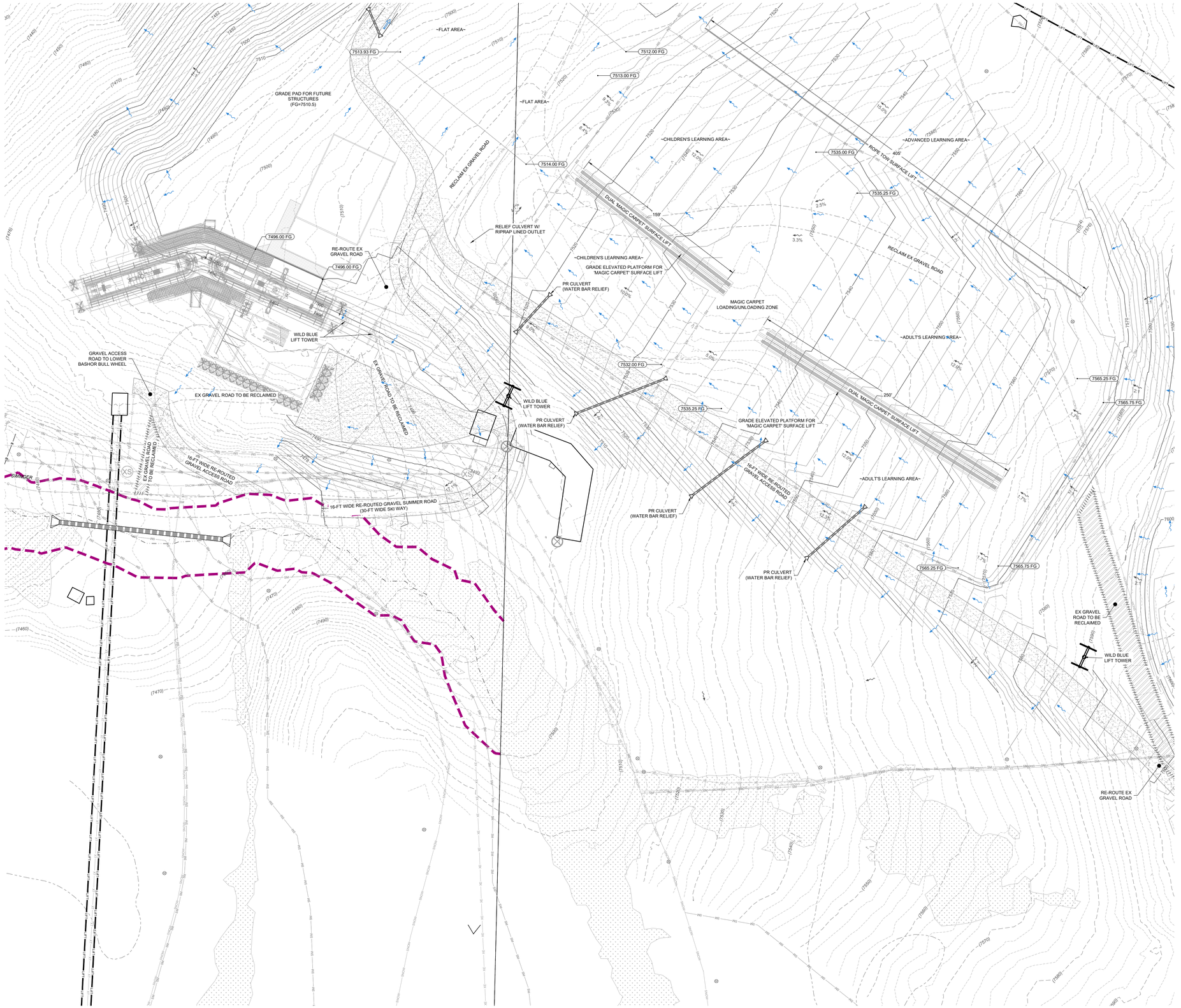
PROJECT: 1012-048
DATE: 6/18/2021
CONTACT: Erik Griepentrog
EMAIL: erikg@landmark-co.com

GREEN HORN RANCH
Grading Plan - Detailed

SHEET
C.301

DRAWING FILENAME: P:\1012-048\CWD\Plan\Production Drawings\GAE Permit\1012-048-GE-C.301 Grading Detail.dwg LAYOUT NAME: C.301 DATE: Jun 18, 2021 - 3:54pm CAD OPERATOR: Matt
LDT: CP: XREFS: [1012-048-xBaseMTN] [1012-048-xBridgeMTN] [pBOREHOLES] [1012-048-xBase] [1012-048-xBasePP] [1012-048-xBaseUtil] [1012-048-EROSION CONTROL] [1012-048-xSITE - FINAL DEVELOPMENT] [1012-048-xtext]

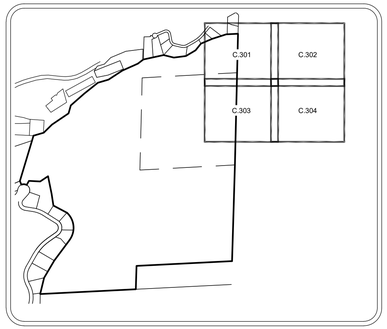

WHY NOT
VAGABOND
GREEN HORN RANCH
SKIER BYPASS
(7500)
(7510)
(7520)
(7530)
(7540)
(7550)
(7560)
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(7800)
(7810)
(7820)
(7830)
(7840)
(7850)
(7860)
(7870)
(7880)
(7890)



NORTH

40 0 40 80 120 Feet

(IN FEET)
1 inch = 40 ft.



KEY MAP
N.T.S.

LEGEND:

- EXISTING STORM SEWER
- PROPOSED STORM SEWER
- PROPOSED STORM INLET (CURB & AREA)
- PROPOSED MAJOR CONTOUR — 6805
- PROPOSED MINOR CONTOUR
- EXISTING MAJOR CONTOUR — 6805
- EXISTING MINOR CONTOUR
- PROPOSED SWALE
- PROPOSED CURB & GUTTER
- PROPERTY BOUNDARY
- PROPOSED LOT LINE
- EXISTING RIGHT OF WAY
- PROPOSED SPOT ELEVATION — 00.10
- EXISTING SPOT ELEVATION — 00.10 X
- PROPOSED OVERLAND FLOW DIRECTION W/SLOPE — 2.0%
- PROPOSED CHANNELIZED FLOW DIRECTION W/ SLOPE — 2.0%
- EXISTING CHANNELIZED FLOW DIRECTION
- SKI RUN FLOOD HAZARD LIMITS
- 30-FT WATER BODY SETBACK

NOTES:

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3. ELEVATIONS FOR IMPROVEMENTS THAT ARE CONTROLLED BY ADJACENT EXISTING FACILITIES (SUCH AS PROPOSED GUTTERS ALONG EXISTING ASPHALT) MAY REQUIRE ADJUSTMENT BASED ON ACTUAL CONDITIONS. COORDINATE WITH ENGINEER TO ENSURE A CONSISTENT SECTION WITH SMOOTH TRANSITIONS WHERE NECESSARY.
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COLORADO LICENSED ERIK J. GREGENTROG 33280 6/18/21 PROFESSIONAL ENGINEER

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NO.	DESCRIPTION:	BY:	DATE:

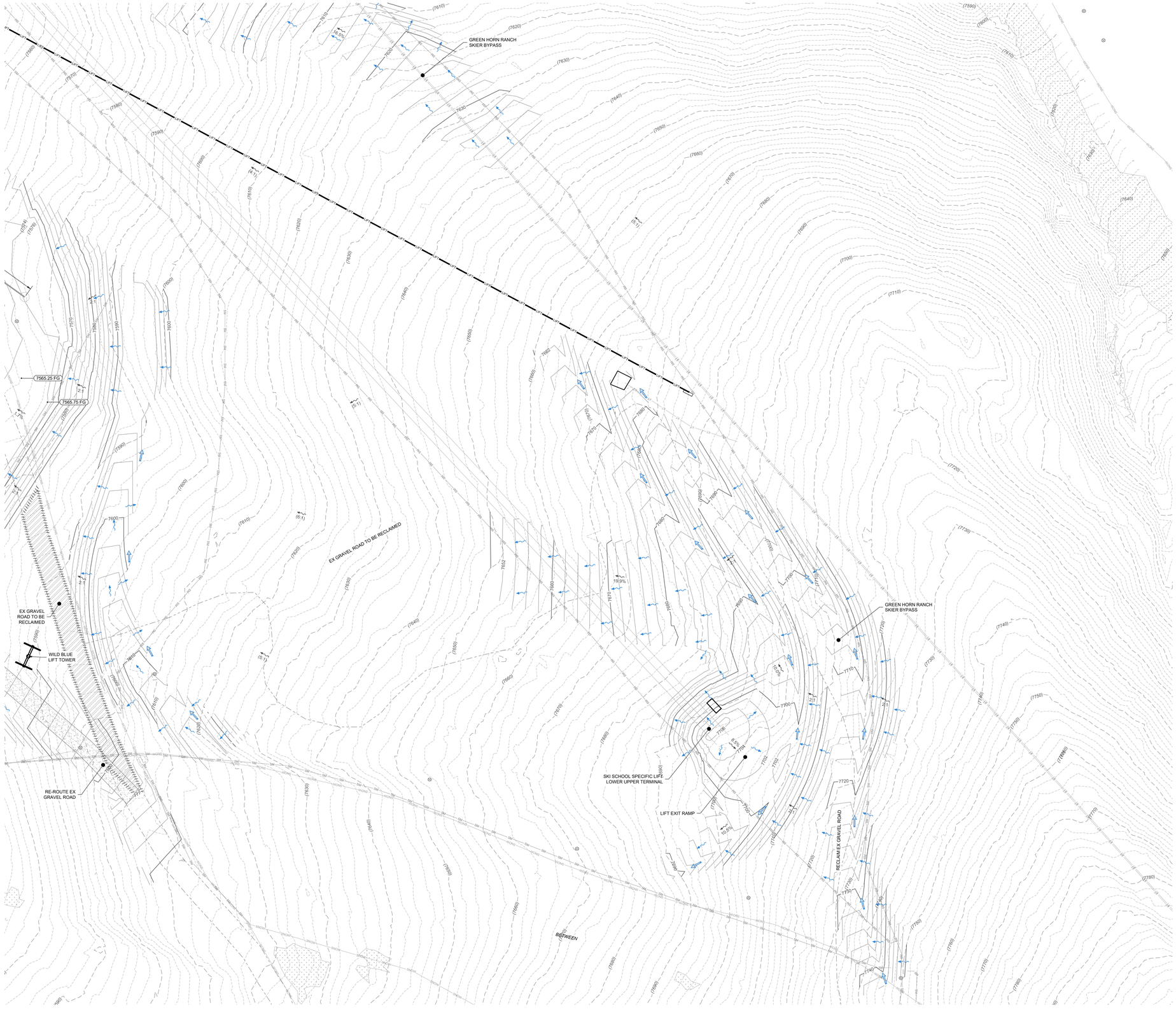
PROJECT: 1012.048
DATE: 6/18/2021
CONTACT: Erik Gregenmog
EMAIL: erik@landmark-co.com

GREEN HORN RANCH

Grading Plan - Detailed

SHEET
C.303

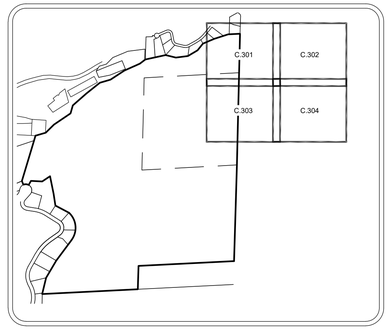
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NORTH

40 0 40 80 120 Feet

(IN FEET)
1 inch = 40 ft.



KEY MAP
N.T.S.

LEGEND:

EXISTING STORM SEWER	
PROPOSED STORM SEWER	
PROPOSED STORM INLET (CURB & AREA)	
PROPOSED MAJOR CONTOUR	6805
PROPOSED MINOR CONTOUR	
EXISTING MAJOR CONTOUR	6805
EXISTING MINOR CONTOUR	
PROPOSED SWALE	
PROPOSED CURB & GUTTER	
PROPERTY BOUNDARY	
PROPOSED LOT LINE	
EXISTING RIGHT OF WAY	
PROPOSED SPOT ELEVATION	00.10
EXISTING SPOT ELEVATION	00.10 X
PROPOSED OVERLAND FLOW DIRECTION W/SLOPE	2.0%
PROPOSED CHANNELIZED FLOW DIRECTION W/ SLOPE	2.0%
EXISTING CHANNELIZED FLOW DIRECTION	
SKI RUN FLOOD HAZARD LIMITS	
30-FT WATER BODY SETBACK	

NOTES:

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ERIK J. GRIEPENTROG
33280
6/18/21
PROFESSIONAL ENGINEER

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NO.	DATE:	BY:	DESCRIPTION:

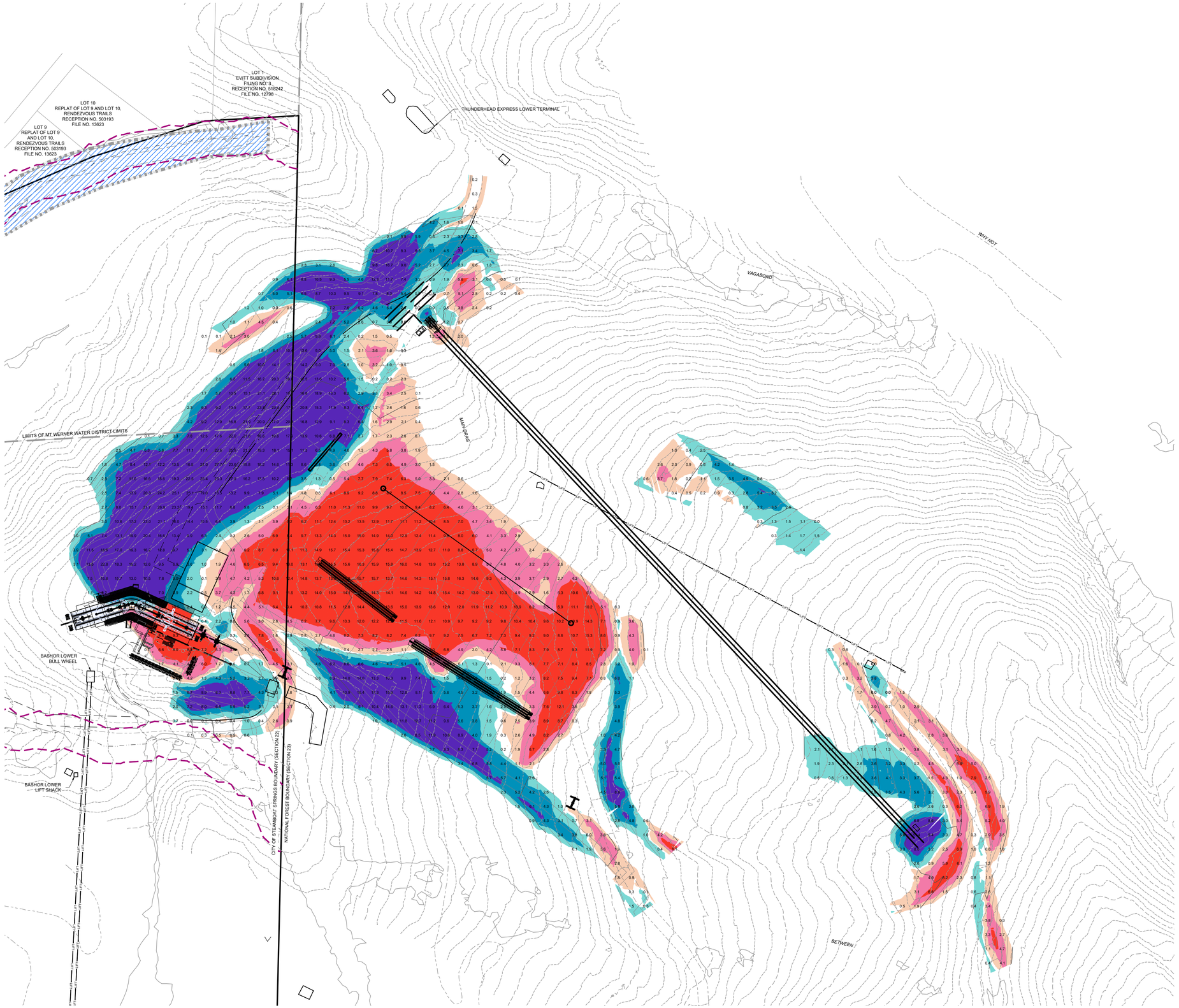
PROJECT: 1012.048
DATE: 6/18/2021
CONTACT: Erik Griepentrog
EMAIL: erikg@landmark-co.com

GREEN HORN RANCH

Grading Plan - Detailed

SHEET
C.304

[DRAWING FILENAME: P:\1012\048\DWG\Production Drawings\Sub] [Permit\1012-048-05 C.301 Grading Detailing - LAYOUT NAME: C.304 DATE: Jun 18, 2021 - 5:13pm CAD OPERATOR: Matt [LIST OF XREFS:] [1012-048-xSubArea10Year.dwg] [1012-048-xBldg.dwg] [ARCHDESK PATH:] [1012-048-xEarthWall.dwg] [1012-048-xSkiRun.dwg] [1012-048-xSkiTrail.dwg] [1012-048-xSITE - FINAL DEVELOPMENT] [1012-048-xNaish]



NORTH

80 0 80 160 240 Feet

(IN FEET)
1 inch = 80 ft.

LEGEND:

- EXISTING STORM SEWER
- PROPOSED STORM SEWER
- PROPOSED STORM INLET (CURB & AREA)
- PROPOSED MAJOR CONTOUR — 6805
- PROPOSED MINOR CONTOUR
- EXISTING MAJOR CONTOUR — 6805
- EXISTING MINOR CONTOUR
- PROPOSED SWALE
- PROPOSED CURB & GUTTER
- PROPERTY BOUNDARY
- PROPOSED LOT LINE
- EXISTING RIGHT OF WAY
- PROPOSED SPOT ELEVATION — 00.10
- EXISTING SPOT ELEVATION — 00.10 X
- PROPOSED OVERLAND FLOW DIRECTION W/SLOPE — 2.0%
- PROPOSED CHANNELIZED FLOW DIRECTION W/ SLOPE — 2.0%
- EXISTING CHANNELIZED FLOW DIRECTION
- FLOOD HAZARD LIMITS
- 30-FT WATER BODY SETBACK

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NO.	DESCRIPTION:	DATE:	BY:

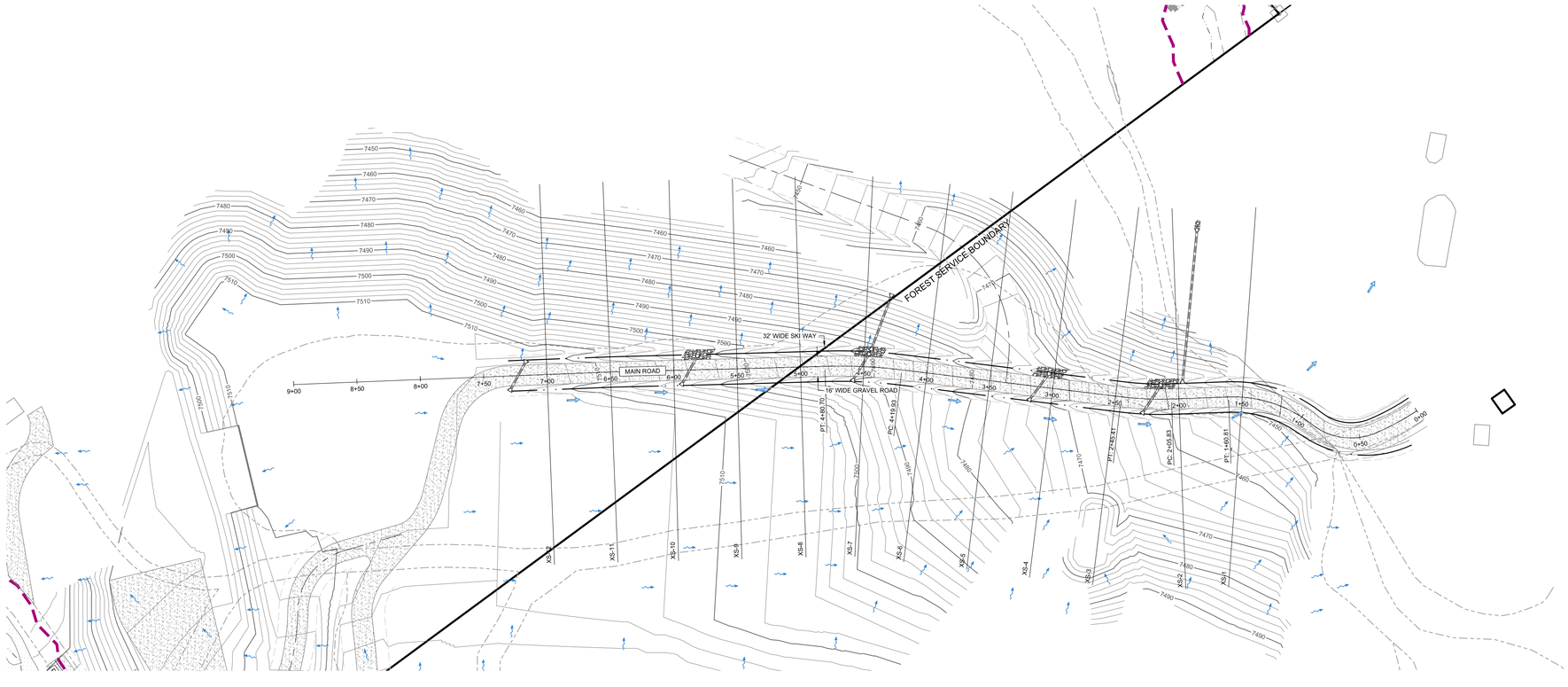
PROJECT: 1012-048
DATE: 6/18/2021
CONTACT: Erik Griepentrog
EMAIL: erikg@landmark-co.com

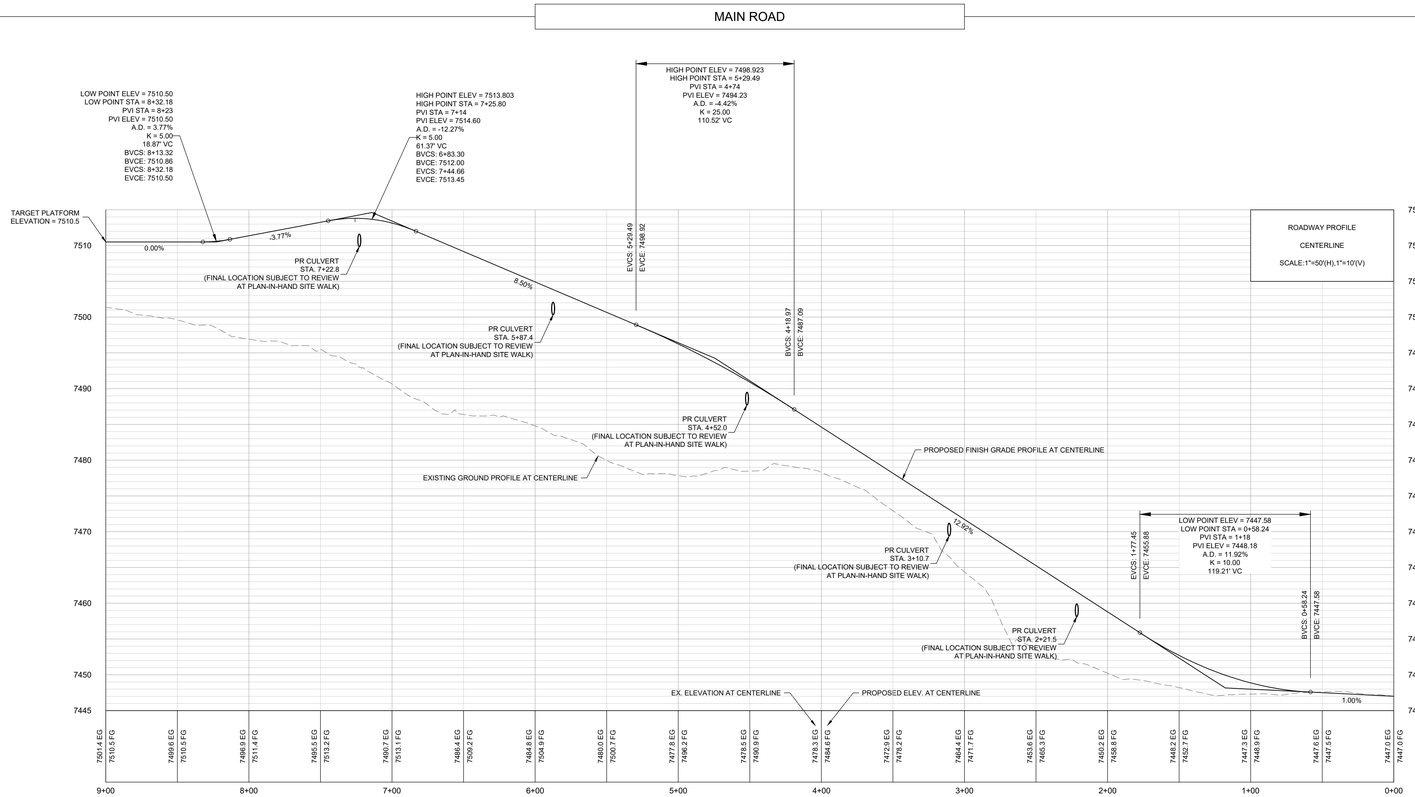
GREEN HORN RANCH

Grading Cut-Fill Heatmap

SHEET
C.310

DRAWING FILENAME: P:\1012-048\Office\Production Drawings\GSE Permit\1012-048 GE C.310 Grading Heatmap.dwg - LAYOUT NAME: C.310 - DATE: Jun 18, 2021 - 5:10pm CAD OPERATOR: Matt
LIST OF XREFS: [1012-048-xSiteFP BLDG only for reference] [1012-048-xSite PP] [1012-048-xMWDH Draft] [1012-048-xEast Infra] [1012-048-xEngineering] [1012-048-xEast Roads] [xBASE_Log] [1012-048-DRAGING VIC MAP] [1012-048-Viewports]





52.26°

NORTH

50 0 50 100 150 Feet

(IN FEET)
1 inch = 50 ft.

LEGEND:

EXISTING STORM SEWER	
PROPOSED STORM SEWER	
PROPOSED STORM INLET (CURB & AREA)	
PROPOSED MAJOR CONTOUR	6805
PROPOSED MINOR CONTOUR	
EXISTING MAJOR CONTOUR	6805
EXISTING MINOR CONTOUR	
PROPOSED SWALE	
PROPOSED CURB & GUTTER	
PROPERTY BOUNDARY	
PROPOSED LOT LINE	
EXISTING RIGHT OF WAY	
PROPOSED SPOT ELEVATION	00.10
EXISTING SPOT ELEVATION	00.10 X
PROPOSED OVERLAND FLOW DIRECTION W/SLOPE	2.0%
PROPOSED CHANNELIZED FLOW DIRECTION W/ SLOPE	2.0%
EXISTING CHANNELIZED FLOW DIRECTION	
FLOOD HAZARD LIMITS	
30-FT WATER BODY SETBACK	

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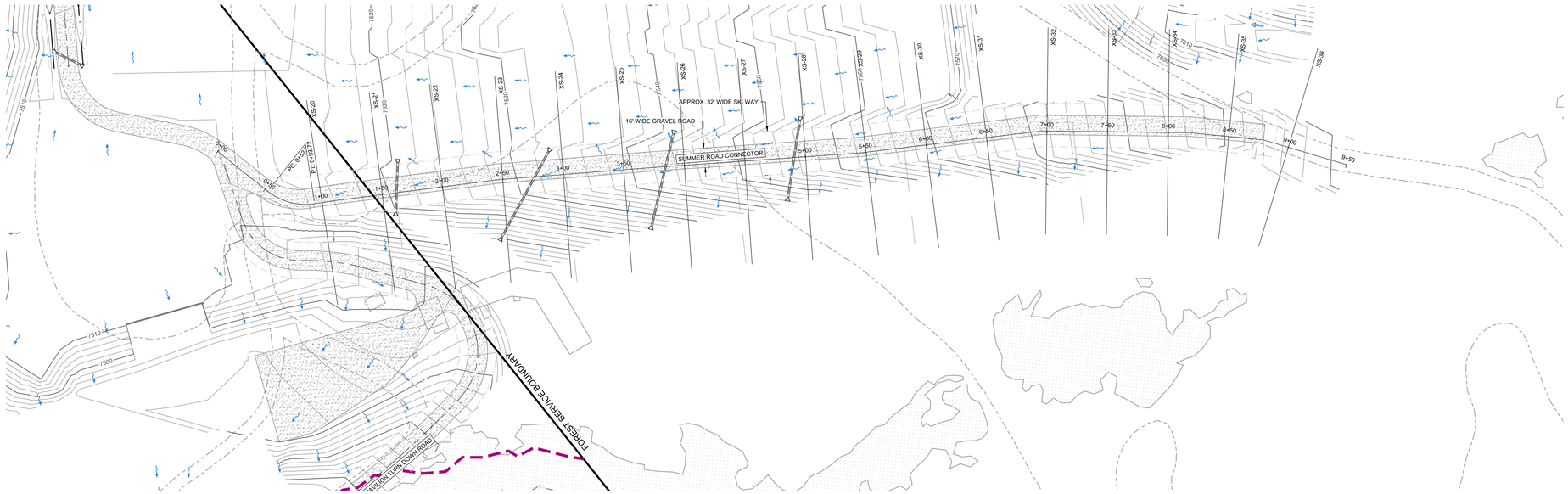
NO.	DESCRIPTION:	DATE:	BY:

PROJECT: 1012.048
DATE: 6/16/2021
CONTACT: Erik Gregentrog
EMAIL: erikg@landmark-co.com

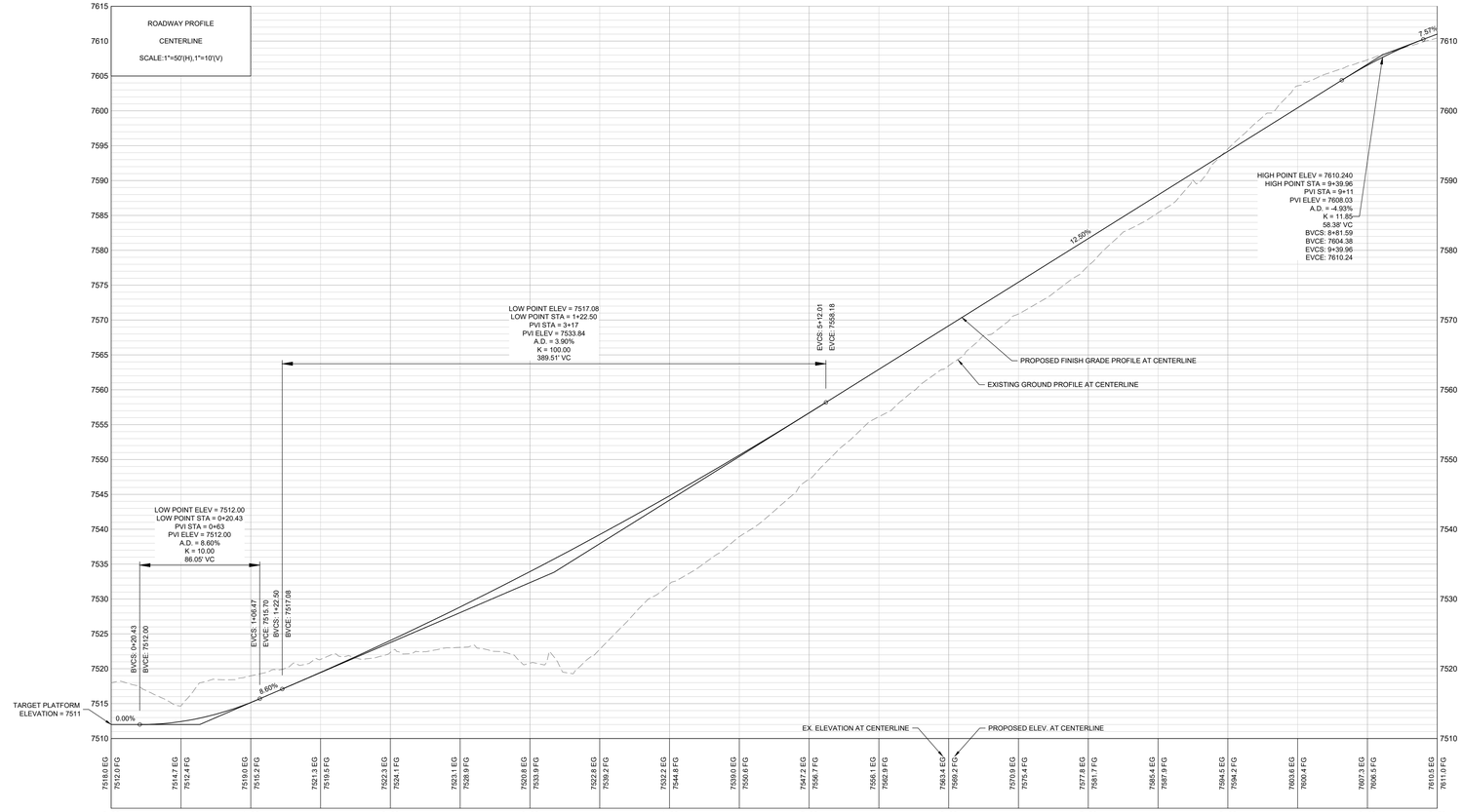
GREEN HORN RANCH
Roadway Plan & Profile
Main Road

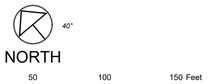
SHEET
C.410

DRAWING FILENAME: P:\1012.048\05\Work\Production Drawings\048 Permit\1012.048 02E-C.410 Roadway Plan and Profile.dwg LAYOUT NAME: C.410 DATE: Jun 16, 2021 - 5:15pm CAD OPERATOR: Matt
LIST OF XREFS: [ABORDER] [xDRAD_Log] [1012.048.dsh07-Draft Engineering] [1012.048.dsd2-Draft] [1012.048.dcad-Utility] [1012.048.dsb4-Utility] [1012.048.dsh4-Utility] [1012.048.dsh6]



SUMMER ROAD CONNECTOR





LEGEND:

- EXISTING STORM SEWER
- PROPOSED STORM SEWER
- PROPOSED STORM INLET (CURB & AREA)
- PROPOSED MAJOR CONTOUR — 6805
- PROPOSED MINOR CONTOUR
- EXISTING MAJOR CONTOUR — 6805
- EXISTING MINOR CONTOUR
- PROPOSED SWALE
- PROPOSED CURB & GUTTER
- PROPERTY BOUNDARY
- PROPOSED LOT LINE
- EXISTING RIGHT OF WAY
- PROPOSED SPOT ELEVATION — 00.10
- EXISTING SPOT ELEVATION — 00.10 X
- PROPOSED OVERLAND FLOW DIRECTION W/SLOPE — 2.0%
- PROPOSED CHANNELIZED FLOW DIRECTION W/ SLOPE — 2.0%
- EXISTING CHANNELIZED FLOW DIRECTION
- FLOOD HAZARD LIMITS
- 30-FT WATER BODY SETBACK

NOTES:

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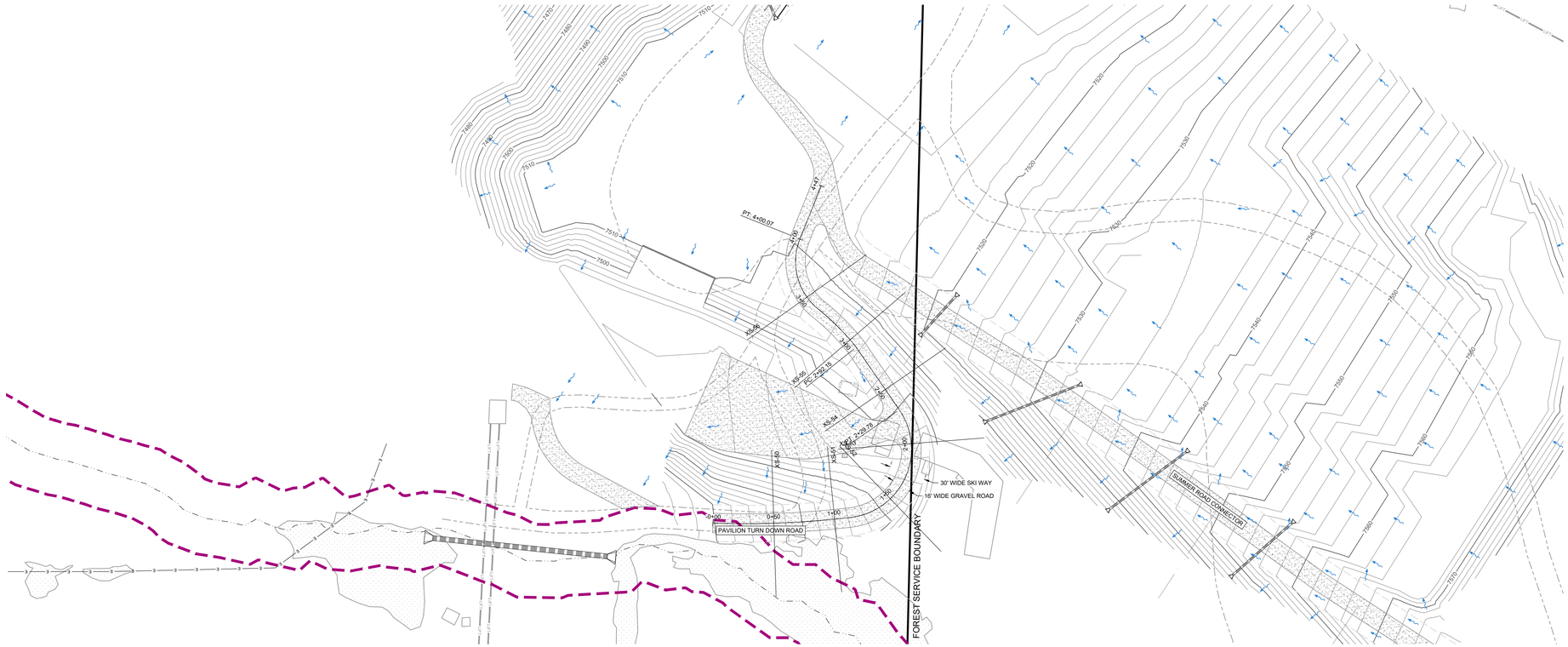
NO.	DESCRIPTION:	DATE:	BY:

PROJECT:	1012-048
DATE:	6/18/2021
CONTACT:	Erik Gieqentog
EMAIL:	erikg@landmark-co.com

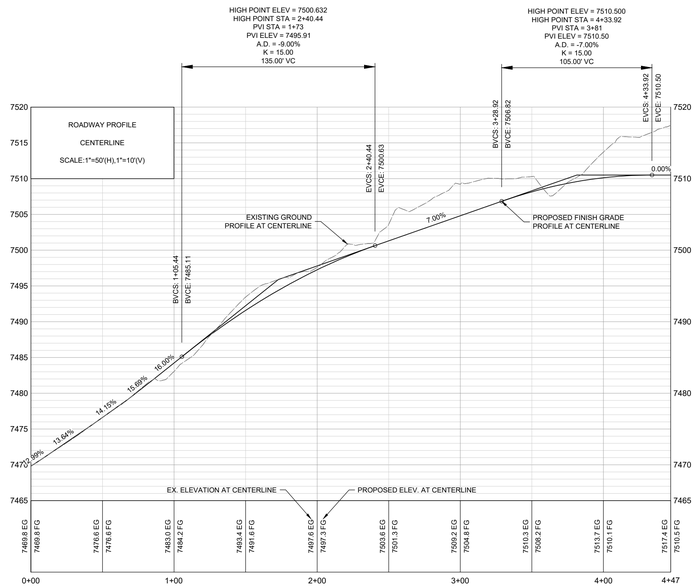
GREEN HORN RANCH
Roadway Plan & Profile
Summer Road Connector

SHEET
C.411

DRAWING FILENAME: P:\1012-048\300\Production Drawings\G&E Permit\1012-048-GE-C-411-Roadway Plan and Profile.dwg LAYOUT NAME: C-411 DATE: Jun 18, 2021 - 3:15pm CAD OPERATOR: Matt
LIST OF XREFS: [I0] [ROAD] [1012-048-300-PROD-Log] [1012-048-400-TP-Cadet-Engineering] [1012-048-410-Cadet-RTK] [1012-048-420-Cadet-Utility] [1012-048-430-Cadet-Grading] [1012-048-440-TP] [1012-048-444-TP]



ROADWAY PLAN & PROFILE (STA 0+00 - 10+00)



NORTH

SCALE 0 SCALE SCALE SCALE Feet

(IN FEET)
1 inch = SCALE ft.

LEGEND:

- EXISTING STORM SEWER
- PROPOSED STORM SEWER
- PROPOSED STORM INLET (CURB & AREA)
- PROPOSED MAJOR CONTOUR (6805)
- PROPOSED MINOR CONTOUR
- EXISTING MAJOR CONTOUR (6805)
- EXISTING MINOR CONTOUR
- PROPOSED SWALE
- PROPOSED CURB & GUTTER
- PROPERTY BOUNDARY
- PROPOSED LOT LINE
- EXISTING RIGHT OF WAY
- PROPOSED SPOT ELEVATION (00.10)
- EXISTING SPOT ELEVATION (00.10 X)
- PROPOSED OVERLAND FLOW DIRECTION W/SLOPE (2.0%)
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- 30-FT WATER BODY SETBACK

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COLORADO LICENSED ERIK J. GREGENTROG 33280 6/18/21 PROFESSIONAL ENGINEER

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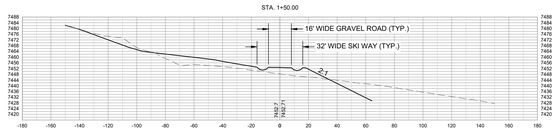
PROJECT: 1012-048
DATE: 6/18/2021
CONTACT: Erik Gregenmog
EMAIL: erik@landmark-co.com

GREEN HORN RANCH

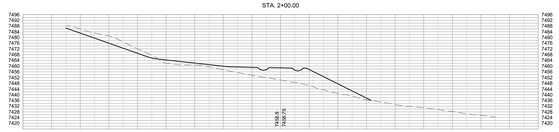
Roadway Plan & Profile

SHEET
C.412

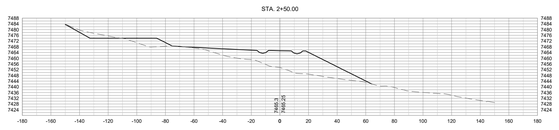
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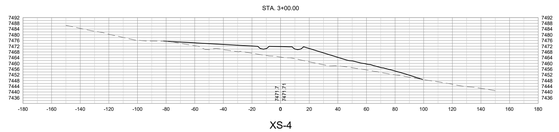
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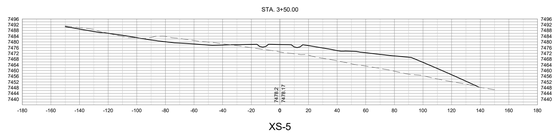
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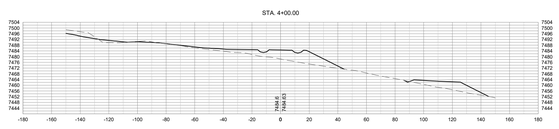
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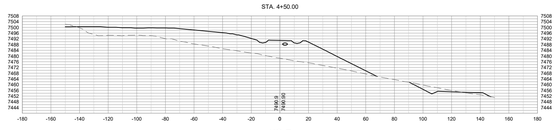
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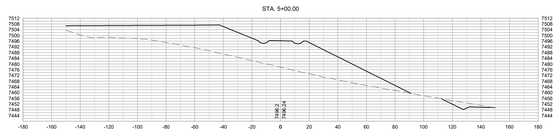
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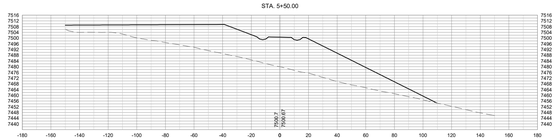
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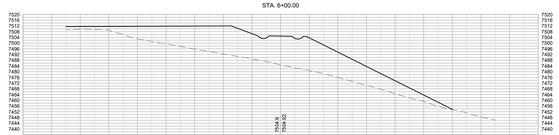
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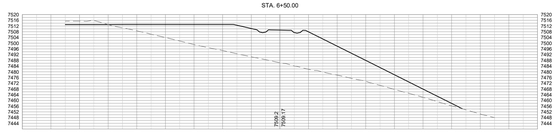
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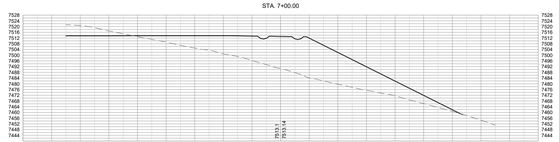
XS-9



XS-10



XS-11



XS-12



(IN FEET)
1 inch = SCALE ft.

LEGEND:

- EXISTING STORM SEWER
- PROPOSED STORM SEWER
- PROPOSED STORM INLET (CURB & AREA)
- PROPOSED MAJOR CONTOUR — 6805
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33280
6/18/21
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PROJECT: 1012.048
DATE: 6/18/2021
CONTACT: Erik Greppentrog
EMAIL: erik@landmark-co.com

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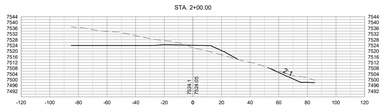
Roadway Plan & Profile

SHEET
C.412

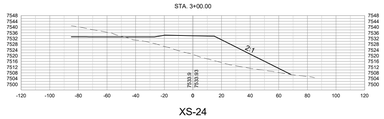
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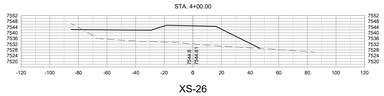
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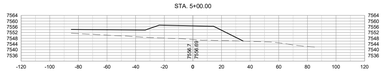
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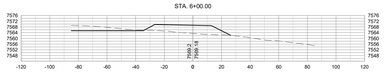
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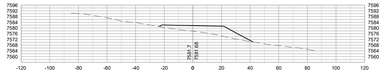
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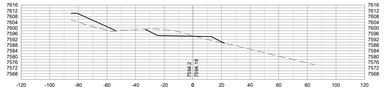
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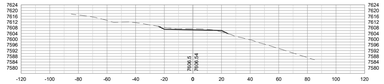
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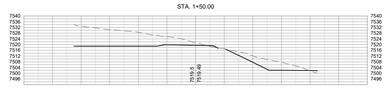
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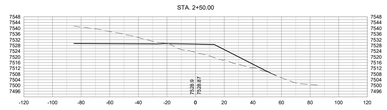
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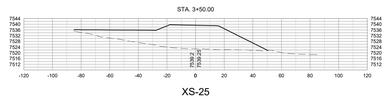
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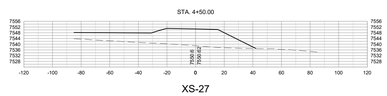
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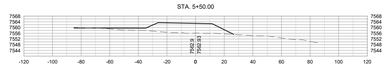
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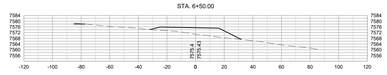
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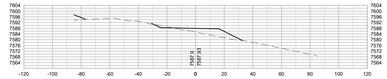
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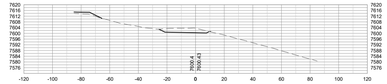
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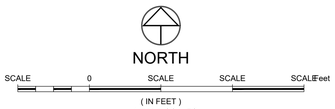
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XS-33



XS-35



LEGEND:

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PROPOSED STORM SEWER

PROPOSED STORM INLET (CURB & AREA)

PROPOSED MAJOR CONTOUR — 6805

PROPOSED MINOR CONTOUR

EXISTING MAJOR CONTOUR — 6805

EXISTING MINOR CONTOUR

PROPOSED SWALE

PROPOSED CURB & GUTTER

PROPERTY BOUNDARY

PROPOSED LOT LINE

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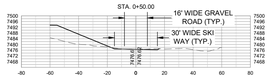
PROJECT: 1012.048
DATE: 6/18/2021
CONTACT: Erik Greppstrog
EMAIL: erik@landmark-co.com

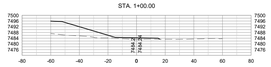
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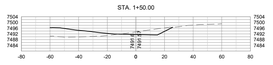
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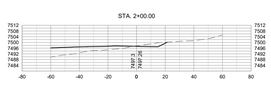
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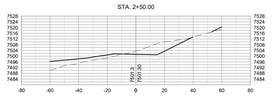
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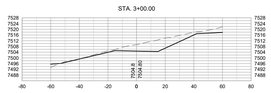


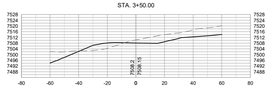












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NORTH

SCALE 0 SCALE SCALE SCALE Feet

(IN FEET)
1 inch = SCALE ft.

LEGEND:

EXISTING STORM SEWER	
PROPOSED STORM SEWER	
PROPOSED STORM INLET (CURB & AREA)	
PROPOSED MAJOR CONTOUR	6805
PROPOSED MINOR CONTOUR	
EXISTING MAJOR CONTOUR	6805
EXISTING MINOR CONTOUR	
PROPOSED SWALE	
PROPOSED CURB & GUTTER	
PROPERTY BOUNDARY	
PROPOSED LOT LINE	
EXISTING RIGHT OF WAY	
PROPOSED SPOT ELEVATION	00.10
EXISTING SPOT ELEVATION	00.10 X
PROPOSED OVERLAND FLOW DIRECTION W/SLOPE	2.0%
PROPOSED CHANNELIZED FLOW DIRECTION W/ SLOPE	2.0%
EXISTING CHANNELIZED FLOW DIRECTION	
FLOOD HAZARD LIMITS	
30-FT WATER BODY SETBACK	

NOTES:

1. THE SIZE, TYPE AND LOCATION OF ALL KNOWN UNDERGROUND UTILITIES ARE APPROXIMATE WHEN SHOWN ON THESE DRAWINGS. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER TO VERIFY THE EXISTENCE OF ALL UNDERGROUND UTILITIES IN THE AREA OF THE WORK. BEFORE COMMENCING NEW CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES AND SHALL BE RESPONSIBLE FOR FOR ALL UNKNOWN UNDERGROUND UTILITIES.
2. ALL PROJECT DATA IS ON VERTICAL DATUM; NAVD 88. SEE NOTES SHEET FOR BENCHMARK REFERENCES.
3. ELEVATIONS FOR IMPROVEMENTS THAT ARE CONTROLLED BY ADJACENT EXISTING FACILITIES (SUCH AS PROPOSED GUTTERS ALONG EXISTING ASPHALT) MAY REQUIRE ADJUSTMENT BASED ON ACTUAL CONDITIONS. COORDINATE WITH ENGINEER TO ENSURE A CONSISTENT SECTION WITH SMOOTH TRANSITIONS WHERE NECESSARY.
4. SEE SOILS REPORT FOR PAVEMENT, SUBGRADE AND MATERIAL PREPARATION, DESIGN AND RECOMMENDATIONS.
5. ALL CURB SPOTS SHOWN ARE FLOWLINE ELEVATIONS, UNLESS NOTED OTHERWISE. ALL OTHER SPOTS ARE FINISHED GRADE ELEVATIONS.

CALL UTILITY NOTIFICATION CENTER OF COLORADO

811 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.

COLORADO LICENSED ERIC J. GRIEPENTROG 33280 6/18/21 PROFESSIONAL ENGINEER

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NO.	DATE:	BY:	DESCRIPTION:

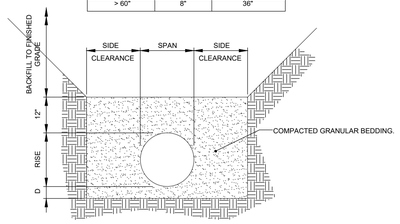
PROJECT: 1012-048
DATE: 6/18/2021
CONTACT: Erik Griepentrog
EMAIL: erik.g@landmark-co.com

GREEN HORN RANCH

Roadway Plan & Profile

SHEET
C.412

PIPE SPAN	BEDDING DEPTH, D	MAX. SIDE CLEARANCE
15" OR LESS	3"	SPAN
18" TO 30"	4"	18"
36" TO 60"	6"	SPAN/2
> 60"	8"	36"



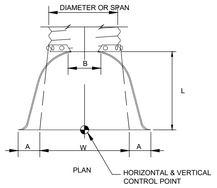
STORM SEWER NOTES

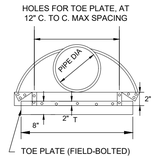
1. ADEQUATE COVER SHALL BE PROVIDED DURING CONSTRUCTION TO PROTECT THE STRUCTURE FROM DAMAGE.
2. PIPE SHALL BE PLACED WITH LONGITUDINAL SEAMS AT THE SIDES OR QUARTER POINTS BUT NOT ALONG TOP OF VERTICAL AXIS.
3. STRUCTURAL PLATE PIPES OF EQUAL OR GREATER DIAMETER, CONFORMING TO THE SPECIFICATIONS, MAY BE USED WITH PERMISSION OF THE ENGINEER.
4. WHEN A CULVERT IS TO BE EXTENDED WITH PIPE OF A DIFFERENT MATERIAL, THE CONNECTION SHALL CONFORM TO THE DETAILS ON THE PLANS OR BE APPROVED.
5. EXTENSIONS FOR CMP ARCH CULVERT SHALL MATCH THE CORRUGATIONS AND THE SPAN AND RISE DIMENSIONS OF THE CULVERT TO BE EXTENDED.
6. MINIMUM COVER FOR METAL AND PLASTIC PIPE IS THE DISTANCE FROM THE TOP OF THE PIPE TO THE TOP OF RIGID PAVEMENT OR TO THE TOP OF SUBGRADE FOR FLEXIBLE PAVEMENT.
7. ALL FOUNDATION, BEDDING AND BACKFILL SHALL BE COMPACTED TO NO LESS THAN 90% DENSITY AND WITHIN 2% OF THE OPTIMUM MOISTURE CONTENT OF THE MODIFIED PROCTOR.
8. ADDITIONAL TRENCH EXCAVATION OR MEASURES MAY BE REQUIRED FOR UNANTICIPATED SOIL CONDITIONS.
9. LENGTHS ARE MEASURED HORIZONTALLY FROM END OF END SECTION TO END OF END SECTION OR CENTER OF MANHOLE.

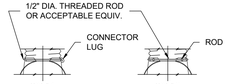
STORM PIPE TRENCH DETAIL
N.T.S

THIN-WALL ROUND PIPE

PIPE DIA.	THICK.	DIMENSIONS					
		A	B	H	L	W	T
		(inches)					
12	0.064	6	6	6	21	24	34
18	0.064	8	10	6	31	36	46
21	0.064	9	12	6	36	42	52
24	0.064	10	13	6	41	48	58
30	0.079	12	16	8	51	60	70
36	0.079	14	19	9	60	72	94
42	0.109	16	22	11	69	84	106
48	0.109	18	27	12	78	90	112
54	0.109	18	30	12	84	102	124
60	0.109	18	33	12	87	114	136
66	0.109	18	36	12	87	120	142
72	0.109	18	39	12	87	126	148
78	0.109	18	42	12	87	132	154
84	0.109	18	45	12	87	138	160

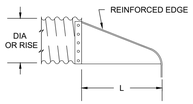






FOR 18 IN. THRU 24 IN. ROUND PIPE WITH ANNULAR CORRUGATIONS. NOT TO BE USED ON HELICALLY0 FORMED PIPE UNLESS RECORRUGATED

FOR 30 IN. THRUE 36 IN. ROUND PIPE WITH ANNULAR CORRUGATIONS. NOT TO BE USED ON HELICALLY-FORMED PIPE UNLESS RECORRUGATED.

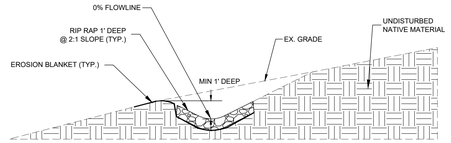


END SECTION AND CONNECTION DETAILS FOR THIN WALL PIPE CULVERTS

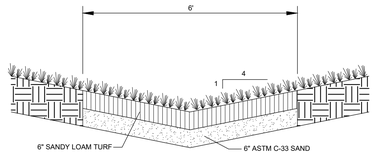
FLARED END SECTION
N.T.S

METAL END SECTION NOTES

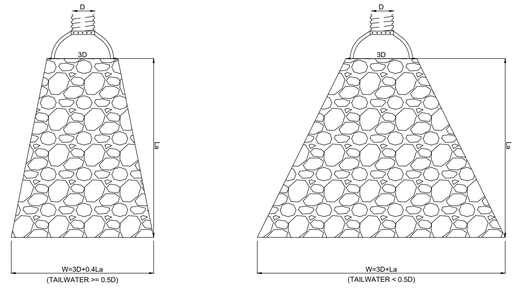
1. DIMENSIONS OF END SECTIONS MAY VARY SLIGHTLY FROM THOSE SHOWN ON THE TABLES DUE TO DIFFERENT MANUFACTURER'S VARIATIONS.
2. END SECTIONS FOR CMP ARCH CULVERT SHALL MATCH THE DIMENSIONS OF THE CULVERT SHOWN ON THE PLANS.
3. GALVANIZED TOE PLATE, AS SHOWN, REQUIRED ON END SECTIONS FOR ALL THIN WALL PIPE AND SHALL BE THE SAME THICKNESS AS END SECTIONS. TOE PLATE SHALL BE FIELD-BOLTED TO END SECTION WITH 3/8" GALVANIZED BOLTS, NUTS AND WASHERS.
4. GALVANIZED STEEL SHALL BE IN CONFORMANCE WITH AASHTO M 111, M 218 OR M 232.



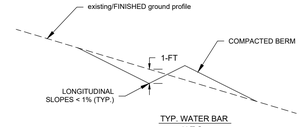
LEVEL SPREADER SWALE
N.T.S



GRASS LINED SWALE
N.T.S



RIP-RAP OUTFALL
N.T.S



TYP. WATER BAR
N.T.S.

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NO.	DESCRIPTION:	DATE:	BY:

PROJECT: 1913.048
DATE: 6/18/2021
CONTACT: Erik Grepentrog
EMAIL: erikg@landmark-co.com

GREEN HORN RANCH

Details

SHEET
C.500

DRAWING FILENAME: P:\1913.048\Work\Production Drawings\Grade E Permit\1913.048-GE-C.500 Details.dwg LAYOUT NAME: C.500 DATE: Jun 18, 2021 - 5:16pm OLD OPERATOR: Matt LAST SAVE BY: JMEYER (Last Saved by:JMEYER)

TYPICAL BEST MANAGEMENT PRACTICES

CLEARING AND GRUBBING:

1. STUMPS AND SLASH MUST BE DISPOSED OF IN A MANNER PRE-APPROVED BY THE USFS OR PROJECT ENGINEER. STUMPS SHOULD BE FLUSH CUT; HOWEVER, IN SOME CASES, AND IF PRE-APPROVED, STUMPS MAY BE BURIED OR HAULED OFF THE PROJECT SITE. SLASH MAY BE CHIPPED OR LOPPED AND SCATTERED BASED ON THE TYPE AND VOLUME OF SLASH AND SITE SPECIFIC CONDITIONS.

2. FELLED TREES, SLASH, AND ANY OTHER CLEARING DEBRIS WILL NOT BE ALLOWED TO ACCUMULATE OUTSIDE OF THE ROAD LIMITS UNLESS SPECIFICALLY PRE-AUTHORIZED BY THE USFS. BOULDERS SHOULD BE BLASTED, BURIED OR REMOVED. THEY SHOULD NOT BE STOCKPILED.

3. USE OF APPROVED HERBICIDES FOR CONTROLLING NOXIOUS WEEDS WILL CONFORM TO CURRENT USFS REQUIREMENTS. ALL HERBICIDES WILL BE APPROVED IN WRITING BY THE USFS.

CONSTRUCTION ACCESS:

1. THE NORMAL ACCESS TO PROJECT SITES WILL BE ON EXISTING ROADS, OLD ROADS, AND TRAILS WHEN POSSIBLE.

2. PROJECT ACCESS WILL BE ASSESSED ON A CASE BY CASE BASIS DETERMINED BY MOISTURE CONTENT OF SOILS, COMPACTION NATURE OF SOILS, AND VEGETATION COVER. AVOID SOIL DISTURBING ACTIONS DURING PERIODS OF HEAVY RAIN OR WET SOILS.

3. EXCAVATION EQUIPMENT SHALL BE TRACK VEHICLES UNLESS PROJECT SITE ALLOWS FOR RUBBER TIRED EQUIPMENT.

4. MOTORIZED VEHICLES SHOULD NOT TRAVEL CROSS COUNTRY. CROSS COUNTRY TRAVEL NEEDS APPROVAL PRIOR TO ACTIVITY.

GRADING:

1. MINIMIZE THE AREA OF EXPOSED SOILS AT ANY ONE TIME TO THAT ABSOLUTELY NECESSARY FOR PROJECT CONSTRUCTION.

2. DOZED SURFACES SHOULD BE LEFT ROUGH OR STEPPED INSTEAD OF BACKBLADED SMOOTH. A ROUGH SURFACE WILL AID IN HOLDING MOISTURE AND REDUCING EROSION.

3. ALL ERODIBLE CUT AND FILL AREAS MUST BE BACKSLOPED TO A DEGREE WHICH WILL ALLOW PROPER REVEGETATION.

4. THE RECONTOURED SURFACE OF THE GRADED AREAS SHOULD BLEND AND MATCH GRADE WITH THE SURROUNDING UNDISTURBED TERRAIN. CLEARING WIDTH FOR TREES SHOULD GENERALLY BE 6 FEET BEYOND THE TOP OF CUT, OR WIDE ENOUGH TO PREVENT EXPOSURE OF TREE ROOTS, AND THE FORMATION OF TURFCAP.

5. GRADING AND OTHER GROUND DISTURBING ACTIVITIES SHOULD NOT BE CARRIED OUT DURING PERIODS OF HEAVY PRECIPITATION.

SURFACE RUNOFF AND EROSION CONTROL:

1. INTERCEPT AND CAPTURE RUNOFF FROM UNDISTURBED AREAS AND PREVENT IT FROM ENTERING THE DISTURBED AREAS.

2. STRAW WATTLES SHALL BE INSTALLED AND MAINTAINED ALONG THE LOWER PORTION OF THE DISTURBED AREAS TO INTERCEPT AND DETAIN SEDIMENT CARRIED ACROSS THE DISTURBED AREA BY ONSITE RUNOFF.

3. HAVE AN ADEQUATE SUPPLY OF SURFACE AND EROSION CONTROL MATERIALS (WATTLES, WEED-FREE HAY/STRAW BALES, AND TOOLS) ONSITE AT ALL TIMES FOR EMERGENCIES.

4. WATER BARS SHOULD MEET THE FOLLOWING SPECIFICATIONS:

A. THE OVERALL GRADE SHALL TRAVERSE THE DISTURBED AREA AT A CONSTANT GRADIENT OF BETWEEN FIVE AND TEN PERCENT WITH AN INCREASING GRADE TOWARDS THE END FOR SELF CLEANING.

B. THEY SHOULD BE CONSTRUCTED BY EXCAVATING A TRENCH ONE FOOT DEEP AND SIDECASTING THE MATERIAL TO THE LOWER SIDE, CREATING A WATER BAR APPROXIMATELY 18 INCHES DEEP.

C. THEY MUST CARRY THE WATER COMPLETELY OFF THE DISTURBED AREA AND SPREAD IT AS WIDELY AS POSSIBLY ON AN UNDISTURBED AREA. THE WATER BARS MUST NOT MERELY MOVE THE WATER OFF THE TRAILS AND CONCENTRATE IT NEAR THE EDGE OF THE TRAIL.

D. ENERGY DISSIPATERS SHOULD BE CONSTRUCTED AT THE POINT OF WATER BAR DISCHARGE, IF NECESSARY

E. EACH WATER BAR MUST HAVE A SEPARATE DISCHARGE POINT. SEVERAL WATER BARS SHALL NOT EMPTY INTO ONE WATER BAR WHICH COULD CAUSE OVERLOADING AND FAILURE.

F. WATERBARS SHOULD INCORPORATE NATURAL TERRAIN FEATURES.

G. CONSTRUCT WATER BARS ACROSS ALL DISTURBED AREAS AT THE FOLLOWING RECOMMENDED SPACING:

SLOPE GRADIENT (%)	INTERVAL (FEET)
10	150
15	100
20	50
30	40

H. ONCE BARS ARE CONSTRUCTED, ALL VEHICLE TRAFFIC, INCLUDING TRACKED VEHICLES, MUST AVOID THE WATER BARRED AREA TO AVOID BREAKING DOWN THE BERM.

TOPSOIL MANAGEMENT

1. TOPSOIL SHOULD BE CONSIDERED AS ANY SOIL MATERIAL THAT IS SUITABLE AS A PLANT GROWTH MEDIUM WHICH WILL ULTIMATELY PRODUCE A VEGETATIVE GROUND COVER CAPABLE OF PREVENTING SURFACE EROSION. TOPSOIL SUITABILITY IS DEPENDENT ON DEPTH, TEXTURE, ORGANIC MATTER, FERTILITY, AND COARSE FRAGMENT CHARACTERISTICS.

2. THE SALVAGED TOPSOIL SHOULD BE SECURELY STORED AWAY FROM ALL CONSTRUCTION ACTIVITIES AND HYDROLOGICALLY ISOLATED FROM WATERCOURSES.

3. ALL TOPSOIL IDENTIFIED IN AREAS TO BE GRADED SHOULD BE SELECTIVELY REMOVED FROM UNSUITABLE SUBSOILS WITH THE MINIMUM AMOUNT OF SOIL MIXING.

4. SELECTIVE BOULDER REMOVAL MAY BE REQUIRED TO FACILITATE ADEQUATE TOPSOIL RESPREADING AND REVEGETATION.

5. TOPSOIL SHOULD BE RESPREAD TO A DEPTH NORMAL FOR THE SITE. ALL AVAILABLE TOPSOIL SHOULD BE SALVAGED, STORED, AND RESPREAD.

REVEGETATION

1. REVEGETATION ON ANY AREA MAY BE REQUIRED WHERE GROUND COVER IS DISTURBED. AS A GENERAL GUIDELINE, GROUND COVER SHOULD RECOVER TO ITS NORMAL RANGE OF VARIABILITY FOR THE LANDTYPE AND GEOCLIMATIC AREA BY THE END OF THE THIRD GROWING SEASON. NATIVE PLANT SPECIES SHOULD ULTIMATELY DOMINATE THE SITE, ALTHOUGH INTRODUCING ANNUAL SPECIES MAY BE USED TO ENSURE VEGETATION COVER INITIALLY.

2. SEEDING SHOULD OCCUR IN THE FALL AND IMMEDIATELY AFTER A RAIN OR THE FIRST SNOWFALL. ON HIGH ELEVATION SLOPES OR AREAS OF SPECIAL EROSION CONCERNS, REVEGETATION SHOULD BE COMPLETED IMMEDIATELY AFTER THE DISTURBANCE.

3. WHEN NO SEEDING IS NEEDED OR SEEDING WILL BE ACCOMPLISHED IN THE FALL, THEN EROSION CONTROL MEASURES AND MULCHING NEED TO BE APPLIED IMMEDIATELY AFTER RECONTOURING IS COMPLETED ON ALL AREAS WITH ERODIBILITY POTENTIAL.

SEED BED PREPARATION

1. LEAVE AN IRREGULAR OR ROUGHENED SURFACE AS IN A DISKED FIELD. DO NOT BACKBLADE SMOOTH.

2. SOIL SHOULD BE MOIST AND FLUFFY, CONSISTING OF SUFFICIENT TOPSOIL WHEN AVAILABLE.

3. COMPACTED AREAS SHALL BE SCARIFIED AND LOOSENED BY DISK, HARROW OR HAND RAKE.

SEEDING

1. SEED MIXTURES SHOULD BE DESIGNED BASED ON SITE-SPECIFIC CONDITIONS OF A PARTICULAR AREA (IE. ELEVATION, ASPECT, VEGETATION COMMUNITY TYPE, SITE MOISTURE, SOIL TYPE ETC.) TO MEET THE SPECIFIC OBJECTIVES OF REVEGETATION. SPECIES NAME AND VARIETY, GERMINATION PERCENT, AND PURE LIVE SEED SHOULD BE SPECIFIED ON THE BAG.

2. ONLY CERTIFIED WEED-FREE SEED SOURCES WILL BE UTILIZED. ALL SEED PURCHASED WILL BE REQUIRED TO BE TESTED FOR "ALL STATES NOXIOUS WEEDS" ACCORDING TO THE ASSOCIATION OF OFFICIAL SEED ANALYSTS (AOSA) STANDARDS AND WILL BE CERTIFIED IN WRITING BY A REGISTERED SEED TECHNOLOGIST OR SEED ANALYST AS MEETING THE REQUIREMENTS OF THE FEDERAL SEED ACT AND THE APPROPRIATE STATE SEED LAW REGARDING TESTING, LABELING, SALE AND TRANSPORT OF PROHIBITED AND RESTRICTED NOXIOUS WEEDS.

3. SEED SHOULD BE PRIMARILY OF NATIVE SPECIES AND VARIETIES. IF NON-NATIVE SPECIES ARE DEMONSTRATED TO NOT BE OVERLY AGGRESSIVE AND ALLOW FOR ESTABLISHMENT OF NATIVE SPECIES, THEN SEED MIX CONTAINING NON-NATIVES MAY BE ALLOWED, SUCH AS STERILE WHEAT OR WINTER RYE.

4. BROADCAST SEEDING SHOULD BE AT A RATE OF 40 TO 80 LBS PER ACRE.

5. IF HYDROMULCH IS USED, APPLICATION OF THE SEED SHOULD BE SEPARATE FROM THE MULCH TO PREVENT THE SEED FROM BEING "CAUGHT-UP" IN THE MULCH, GERMINATING, AND NOT COMING IN CONTACT WITH THE MINERAL SOIL.

6. SEED SHOULD BE LIGHTLY RAKED OR HARROWED INTO THE SOIL.

7. SEED DRILLING SHOULD BE DONE ON THE CONTOUR AND AT A RATE OF 15 TO 20 LBS. PER ACRE.

8. WHEN DRILLSEEDING, SEED SHALL BE PLANTED USING A DRILL EQUIPPED WITH A DEPTH REGULATOR TO ENSURE PROPER DEPTH OF PLANTING.

9. THE SEED MIXTURE SHALL BE EVENLY AND UNIFORMLY PLANTED OVER THE DISTURBED AREA. IFUSING A SPREADER OR DRILL AND SEEDS ARE SIMILAR IN SIZE, THEY CAN BE SEEDED TOGETHER; OTHERWISE, THEY NEED TO BE SEEDED SEPARATELY.

10. THE USFS WILL APPROVE SEED MIXTURES AND RATE OF APPLICATION.

FERTILIZATION

1. USE OF FERTILIZERS MUST BE PRE-APPROVED BY THE USFS.

2. FERTILIZER MAY BE USED ON PROBLEM AREAS WHERE LACK OF ADEQUATE TOPSOIL AND OTHER SITE CONDITIONS WOULD PREVENT THE ESTABLISHMENT OF AN ADEQUATE GROUND COVER.

3. UTILIZE CHEMICAL FERTILIZERS OR OTHER CHEMICALS WHERE SUCH USE WILL NOT REACH SURFACE OR GROUND WATER SOURCES.

MULCH

I. MULCHING WILL BE REQUIRED IN MOST SITUATIONS WHERE THERE IS SOIL DISTURBANCE.

2. MULCHING MATERIALS TO BE USED CAN BE STRAW, HYDROMULCH (1,500 LBS PER ACRE), WOOD FIBER, AND MULCH TACKIFIERS. THEY SHOULD BE APPLIED AT A RATE OF 1 TO 2 TONS PER ACRES.

3. ONLY CERTIFIED WEED-FREE STRAW/HAY MULCH WILL BE USED.

4. CARE SHALL BE TAKEN TO AVOID THICK (GREATER THEN THREE INCHES OF DEPTH) SPOTS.

5. CRIMPING, TACKIFYING, AND NETTING MAY BE REQUIRED TO BIND THE LOOSE MULCH TO THE SOIL SURFACE TO MINIMIZE REMOVAL BY WIND OR SURFACE RUNOFF. THE METHOD SELECTED SHOULD BE DETERMINED BY THE CONDITION OF THE AREA.

6. A TACKIFIER MAY BE USED AFTER REPLACEMENT OF TOPSOIL TO REDUCE THE POTENTIAL FOR SOIL LOSS. THE RATE SHOULD BE 90 TO 100 LBS/ACRE.

7. EVALUATE EACH REVEGETATED SITE REGULARLY IN ORDER TO DETERMINE SUCCESS.

8. HIGH TRAFFIC AREAS NEED TO BE FENCED OFF OR IDENTIFIED IN SOME WAY UNTIL REVEGETATION IS ESTABLISHED.

TABLE OF CONSTRUCTION SEQUENCE AND BMP APPLICATION/REMOVAL

Project: Green Horn Ranch — Date: 4/21/2021

Contractor to utilize this table to indicate when construction activities occur and when each associated BMP is installed or removed.

CONSTRUCTION PHASE (Monthly)	1	2	3	4	5	6	7	8	9	10	11	12	Comments
Grading													
Overlot													
Gravel Roads													
Swales, Drainageways													
Pipeline Installation													
Stormwater													
Water Service													
Sanitary Sewer Service													
Snowmaking Main													
Gas Service													
BEST MANAGEMENT PRACTICES													
Temporary													
Contour Furrows and Diversion Dikes (Ripping/Disking)													
Inlet Protection (IP)													
Vehicle Tracking Control (VTC)													
Flow Barriers (Bales, Wattles, Etc) (WD)													
Concrete Washout Area (CWA)													
Preventative Maintenance Activities/Meetings/ etc.													
Permanent													
Mulching/Sealant													
Permanent Seed Planting													

STANDARD CHECK DAM SPACING CRITERIA

FLOW LINE GRADIENT	2%	3%	4%	5%	6%
SPACING (FEET)	100	67	50	40	33

STANDARD EROSION LOG SPACING CRITERIA

FLOW LINE GRADIENT	MAXIMUM CHECK DAM SPACING BASED ON NOMINAL LOG DIAMETER (FEET)		
	8 - 9 INCHES	12 INCHES	18 - 20 INCHES
0% - 2%	33	55	75
2% - 5%	25	40	55
5% - 10%	15	30	40
10% - 33%	10	15	20
33% - 50%	5	10	15

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NO.	DATE:	BY:	DESCRIPTION:

PROJECT: 1012-048
DATE: 6/18/2021
CONTACT: Erik Greppentrog
EMAIL: erikg@landmark-co.com

GREEN HORN RANCH

Erosion Control Notes

SHEET
C.600

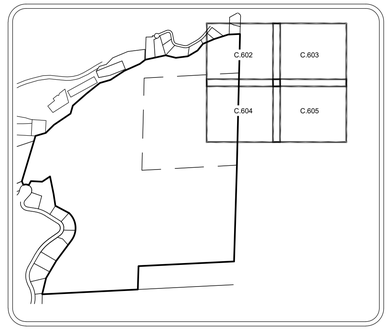
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LIST OF XREFS: (XCHRDER# if used Service)



NORTH

200 0 200 400 600 Feet

(IN FEET)
1 inch = 200 ft.



KEY MAP
N.T.S.

LEGEND:

- PROPOSED STORM SEWER
- PROPOSED MAJOR CONTOUR — 6805
- PROPOSED MINOR CONTOUR
- EXISTING MAJOR CONTOUR — 6805
- EXISTING MINOR CONTOUR
- PROPOSED SWALE
- REVEGETATION AREA

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- RIPRAP PROTECTION (RP)

TEMPORARY BMP'S

- WATTLE DIKE (WD)
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- SILT FENCE (SF) — SF
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DRAINAGE

- OVERLAND FLOW
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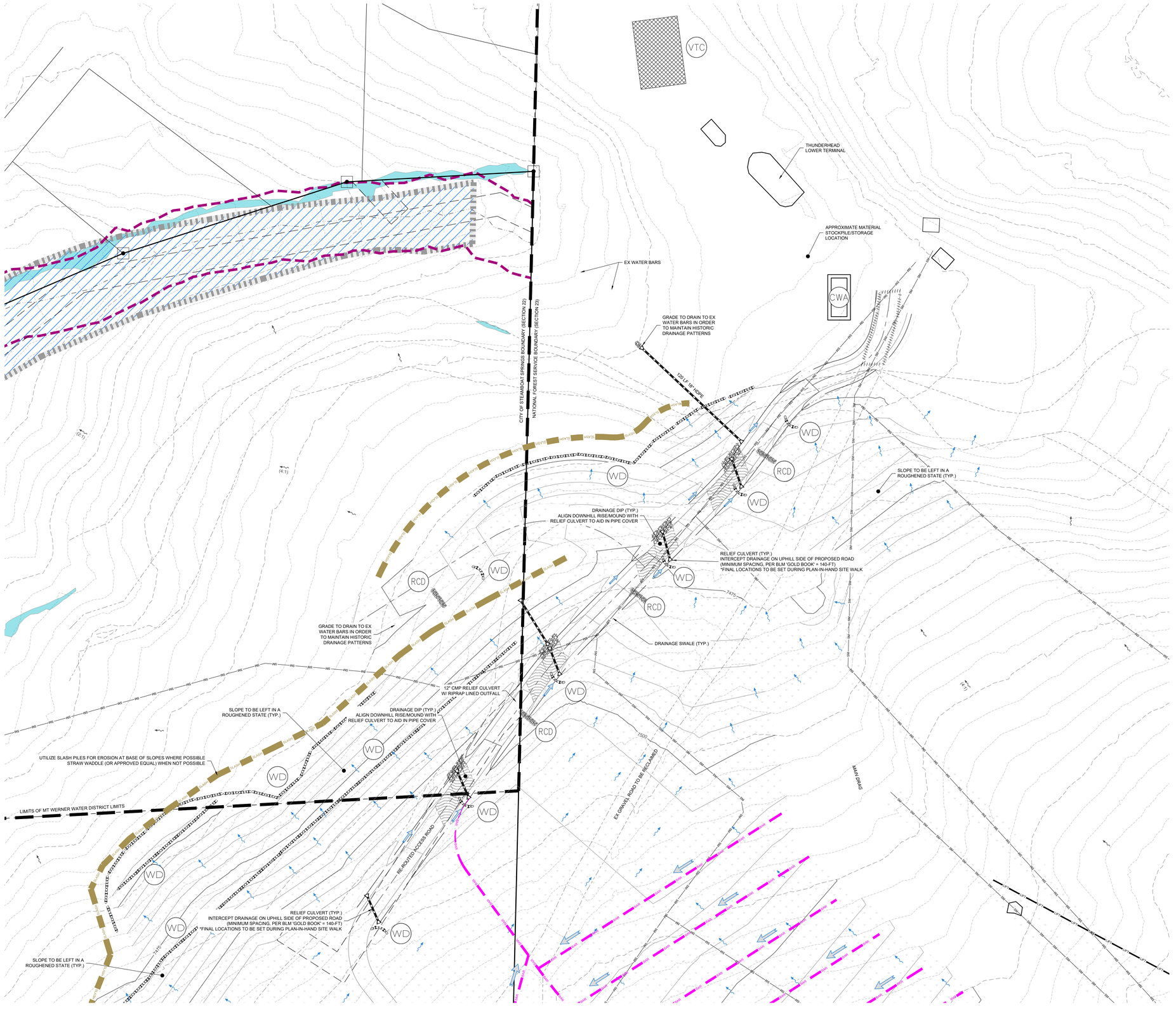
NO.	DESCRIPTION:	DATE:	BY:

PROJECT: 1012.048
DATE: 6/18/2021
CONTACT: Erik Grepentrog
EMAIL: erik@landmark-co.com

GREEN HORN RANCH
Erosion Control Plan Overall

SHEET
C.601

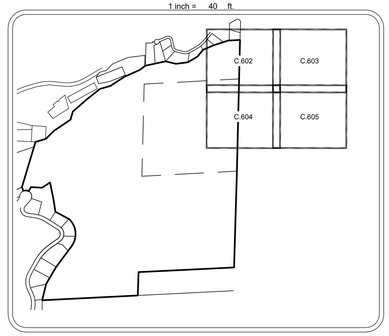
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NORTH

40 0 40 80 120 Feet

(IN FEET)
1 inch = 40 ft.



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DRAINAGE

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NO.	DATE:	BY:	DESCRIPTION:

PROJECT: 19124.048
DATE: 6/16/2021
CONTACT: Erik Grepenstrog
EMAIL: erik@landmark-co.com

GREEN HORN RANCH
Erosion Control Plan Detailed

SHEET
C.602

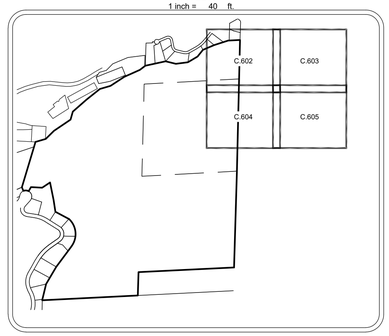
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NO.	DESCRIPTION:	DATE:	BY:

PROJECT: 1012.048
DATE: 6/18/2021
CONTACT: Erik Greenstroq
EMAIL: erik@landmark-co.com

GREEN HORN RANCH
Erosion Control Plan Detailed

SHEET
C.603

DRAWING FILENAME: P:\1012.048\00\Civil\Production Drawings\048 Permit\1012.048.SE.C.603 Erosion Control.dwg LAYOUT NAME: C.603 DATE: Jun 18, 2021 - 5:17pm CAD OPERATOR: Matt
LIST OF XREFS: [1012.048 xEsta#4 Plt] [1012.048 xBldg Plt] [1012.048 xEsta#3 Plt] [1012.048 xEsta#2 Plt] [1012.048 xEsta Plt] [1012.048 xEISDBA Plt] MAP] [xPROPLINE] [1012.048 Permit] [1012.048 Image#]

RELIEF CULVERT (TYP.)
INTERCEPT DRAINAGE ON UPHILL SIDE OF PROPOSED ROAD
(MINIMUM SPACING, PER BLM GOLD BOOK = 140-FT)
*FINAL LOCATIONS TO BE SET DURING PLAN-IN-HAND SITE WALK

SLOPE TO BE LEFT IN A ROUGHENED STATE (TYP.)

RELIEF CULVERT W/ RIPRAP LINED OUTLET

INTERCEPT DRAINAGE ON UPHILL SIDE OF PROPOSED ROAD

SWINGER

SILT FENCE ALONG WETLANDS BOUNDARY (TYP.)

WATER BARS (TYP.)

RE-ROUTED GRAVEL ACCESS ROAD

SLOPE TO BE LEFT IN A ROUGHENED STATE (TYP.)

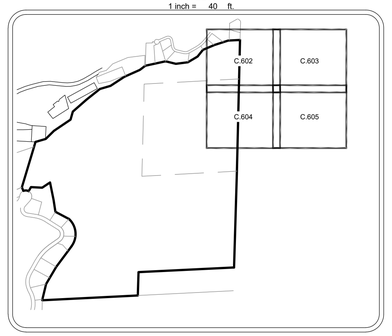
UTILIZE SLASH PILES FOR EROSION AT BASE OF SLOPES WHERE POSSIBLE STRAW WADDLE (OR APPROVED EQUAL) WHEN NOT POSSIBLE

WETLANDS (TYP.)

NORTH

40 0 40 80 120 Feet

(IN FEET)
1 inch = 40 ft.



KEY MAP
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PROPOSED MAJOR CONTOUR	6805
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VEHICLE TRACKING CONTROL PAD	VTC
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CONCRETE WASHOUT AREA	CWA
MULCH/HYDROMULCH	HMU

DRAINAGE

OVERLAND FLOW	
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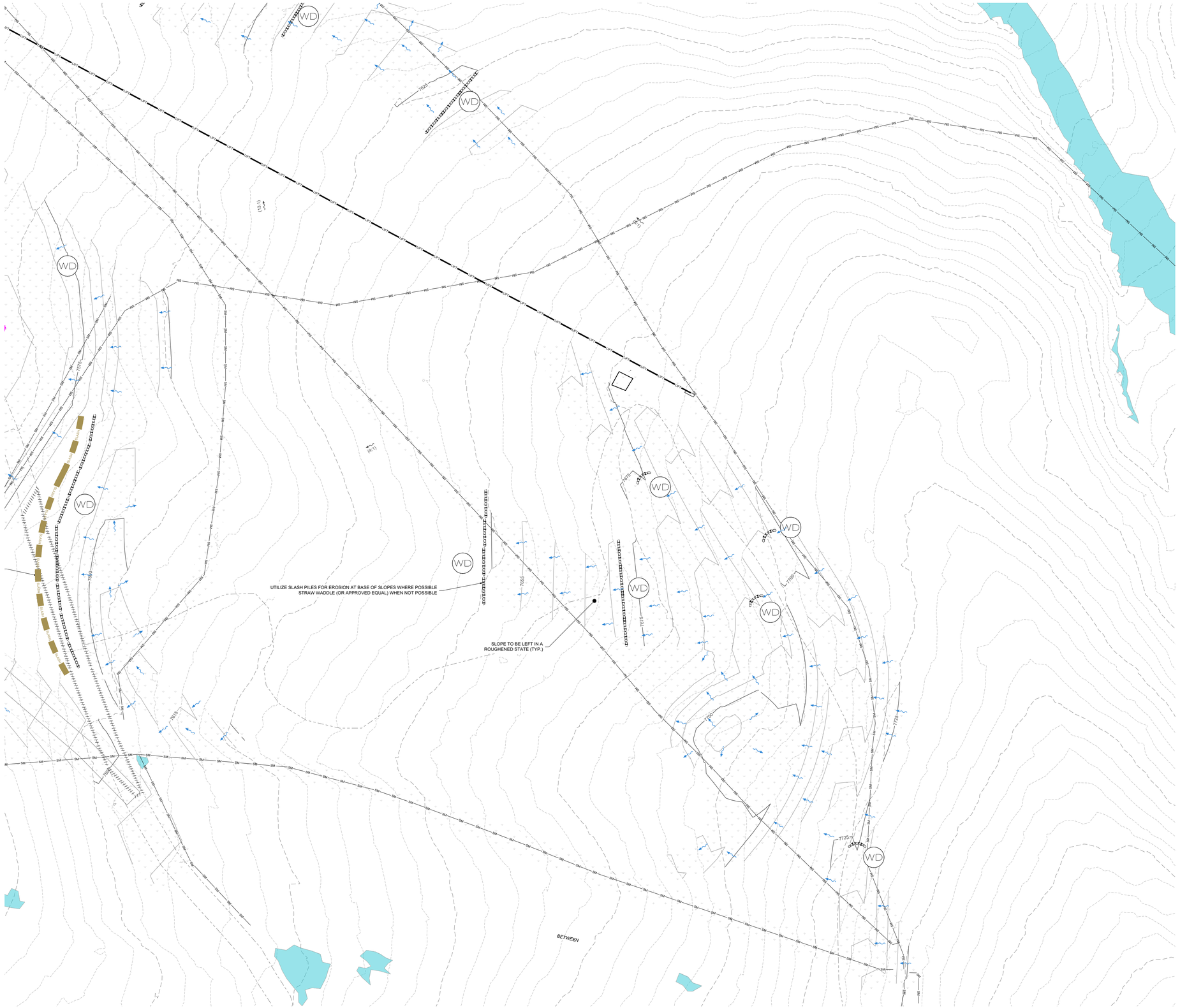
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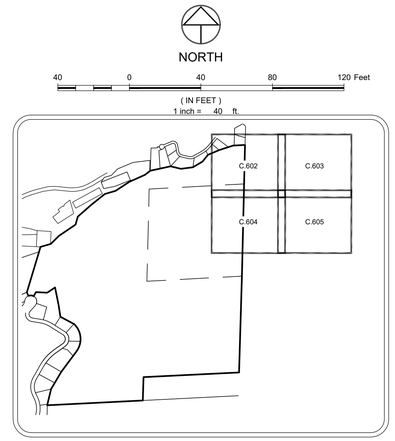
PROJECT: 1012-048
DATE: 6/18/2021
CONTACT: Erik Grepentrog
EMAIL: erikg@landmark-co.com

GREEN HORN RANCH
Erosion Control Plan Detailed

SHEET
C.604

DRAWING FILENAME: P:\1012-048\CAD\Production Drawings\GAE Permit\1012-048-GE-C-601-Erosion Control.dwg [LAYOUT NAME: C.604 DATE: Jun 18, 2021 - 5:17pm CAD OPERATOR: Matt
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- RIPRAP PROTECTION (RP)

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- SILT FENCE (SF) — SF
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- CONCRETE WASHOUT AREA (CWA)
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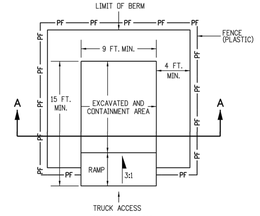
DRAINAGE

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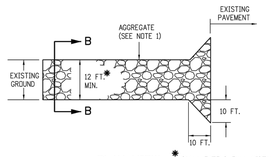
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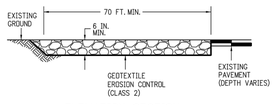
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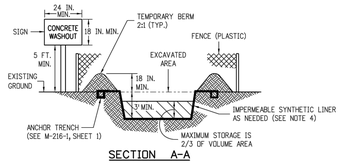
PLAN VIEW



PLAN VIEW



ELEVATION SECTION

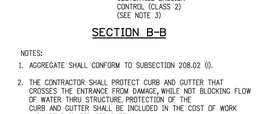


SECTION A-A

NOTES:

1. A FENCE (PLASTIC) CONFORMING TO SECTION 607 SHALL BE INSTALLED AROUND THE CONCRETE WASHOUT AREA, EXCEPT AT THE OPENING.
2. THE CONCRETE WASHOUT SIGN SHALL HAVE LETTERS AT LEAST 3 INCHES HIGH AND CONFORM TO SUBSECTION 630.02.
3. ALL MATERIALS AND LABOR TO COMPLETE THE CONCRETE WASHOUT STRUCTURE SHALL BE INCLUDED IN THE COST OF WORK AND NOT PAID FOR SEPARATELY.
4. THE BOTTOM OF EXCAVATION SHALL BE A MINIMUM OF FIVE FEET ABOVE GROUND WATER. IF NOT, THE BOTTOM OF EXCAVATION SHALL BE IN ACCORDANCE WITH 208.02 (J).
5. THE PAY ITEM NUMBER FOR CONCRETE WASHOUT STRUCTURE (EACH) IS 208-00045.

CONCRETE WASHOUT STRUCTURE



SECTION B-B

NOTES:

1. AGGREGATE SHALL CONFORM TO SUBSECTION 208.02 (I).
2. THE CONTRACTOR SHALL PROTECT CURB AND GUTTER THAT CROSSES THE ENTRANCE FROM DAMAGE, WHILE NOT BLOCKING FLOW OF WATER THRU STRUCTURE. PROTECTION OF THE CURB AND GUTTER SHALL BE INCLUDED IN THE COST OF WORK AND NOT PAID FOR SEPARATELY.
3. GEOTEXTILE SHALL CONFORM TO SUBSECTION 712.08.
4. ALL MATERIALS AND LABOR TO COMPLETE THE VEHICLE TRACKING PAD SHALL BE INCLUDED IN THE COST OF WORK AND NOT PAID FOR SEPARATELY.
5. THE PAY ITEM NUMBER FOR VEHICLE TRACKING PAD (EACH) IS 208-00070.

VEHICLE TRACKING PAD

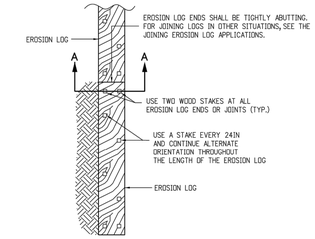
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Detailer Initials: LTA	RCX		
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English	RCX		

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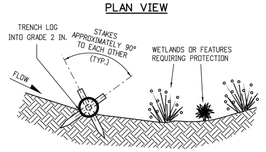
TEMPORARY EROSION CONTROL

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STANDARD PLAN NO.
M-208-1
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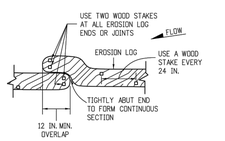
PLAN VIEW



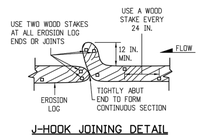
SECTION A-A

TYPICAL STAKE INSTALLATION

NOTE: THE TOPS OF ALL STAKES SHALL NOT EXTEND MORE THAN 2 INCHES ABOVE THE TOPS OF EROSION LOGS.



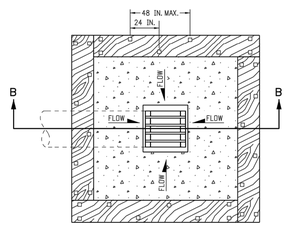
OVERLAP JOINING DETAIL



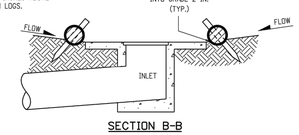
J-HOOK JOINING DETAIL

JOINING EROSION LOG APPLICATIONS

EROSION LOGS PAY ITEMS	
NUMBER	DESCRIPTION
208-00012	TYPE 1 (9 IN.)
208-00002	TYPE 1 (12 IN.)
208-00013	TYPE 1 (20 IN.)
208-00007	TYPE 2 (8 IN.)
208-00008	TYPE 2 (12 IN.)
208-00009	TYPE 2 (18 IN.)
208-00022	TYPE 3 (9 IN.)
208-00023	TYPE 3 (12 IN.)
208-00024	TYPE 3 (20 IN.)



PLAN VIEW



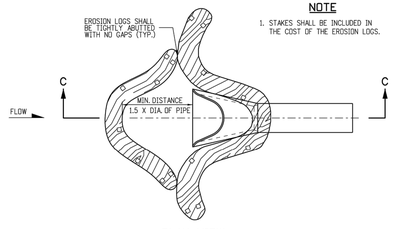
SECTION B-B

NOTE: LOCATE EROSION LOGS AT THE OUTSIDE EDGE OF THE CONCRETE APRON.

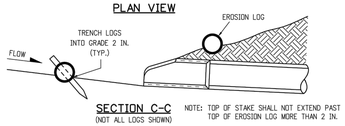
EROSION LOG FILTER AT DROP INLET

NOTE

1. STAKES SHALL BE INCLUDED IN THE COST OF THE EROSION LOGS.



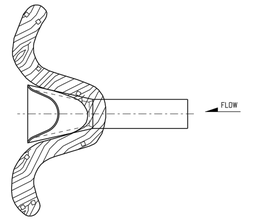
PLAN VIEW



SECTION C-C
(NOT ALL LOGS SHOWN)

NOTE: TOP OF STAKE SHALL NOT EXTEND PAST TOP OF EROSION LOG MORE THAN 2 IN.

EROSION LOG CULVERT INLET PROTECTION



EROSION LOG CULVERT OUTLET PROTECTION

EROSION LOG APPLICATIONS

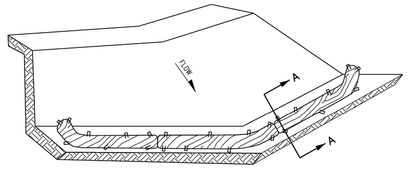
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Designer Initials: JBK	RCX		
Last Modification Date: 07/31/19	RCX		
Detailer Initials: LTA	RCX		
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English	RCX		

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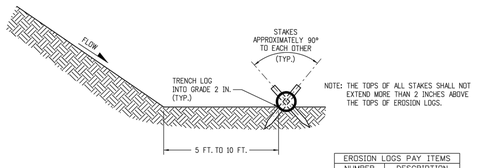
TEMPORARY EROSION CONTROL

Issued by the Project Development Branch: July 31, 2019

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Standard Sheet No. 2 of 11
Project Sheet Number:



ISOMETRIC VIEW



SECTION A-A

EROSION LOGS PAY ITEMS	
NUMBER	DESCRIPTION
208-00012	TYPE 1 (9 IN.)
208-00002	TYPE 1 (12 IN.)
208-00013	TYPE 1 (20 IN.)
208-00007	TYPE 2 (8 IN.)
208-00008	TYPE 2 (12 IN.)
208-00009	TYPE 2 (18 IN.)
208-00022	TYPE 3 (9 IN.)
208-00023	TYPE 3 (12 IN.)
208-00024	TYPE 3 (20 IN.)

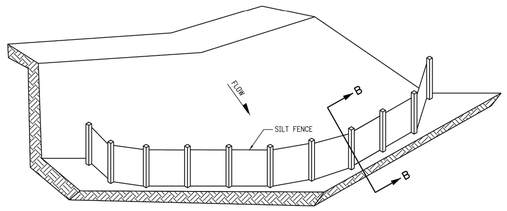
NOTES:

1. EROSION LOGS USED AT TOE OF SLOPE SHALL BE PLACED 5 TO 10 FEET BEYOND TOE OF SLOPE TO PROVIDE STORAGE CAPACITY.
2. EROSION LOGS SHALL BE PLACED ON THE CONTOUR WITH ENDS FLARED UP SLOPE.
3. SEE SHEET 2 OF 11 FOR JOINING LOGS DETAIL.

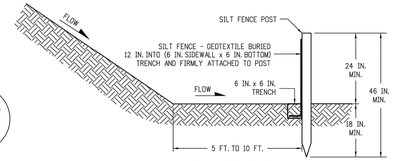
EROSION LOG TOE OF SLOPE PROTECTION

NOTES

1. SILT FENCE SHALL HAVE A MAXIMUM DRAINAGE AREA OF ONE-QUARTER ACRE PER 100 FEET OF SILT FENCE LENGTH; MAXIMUM SLOPE LENGTH BEHIND BARRIER IS 100 FEET.
2. SILT FENCE USED AT TOE OF SLOPE SHALL BE PLACED 5 TO 10 FEET BEYOND TOE OF SLOPE TO PROVIDE STORAGE CAPACITY.
3. SILT FENCE SHALL BE PLACED PARALLEL TO THE CONTOUR WITH ENDS FLARED UP SLOPE.
4. THE MAXIMUM LENGTH OF EROSION LOGS OR SILT FENCES WITHOUT A FLARED END TURNING UPSLOPE IS 150 FEET.



ISOMETRIC VIEW



SECTION B-B

SILT FENCE TOE OF SLOPE PROTECTION

NOTE: THE PAY ITEM NUMBER FOR SILT FENCE (LF) IS 208-00020.

TOE OF SLOPE PROTECTION APPLICATIONS

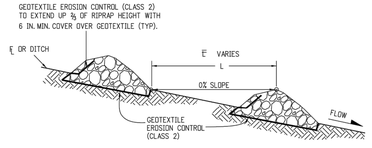
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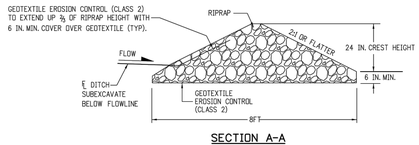
TEMPORARY EROSION CONTROL

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STANDARD PLAN NO.
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Standard Sheet No. 3 of 11
Project Sheet Number:



SECTION VIEW ALONG DITCH FLOWLINE



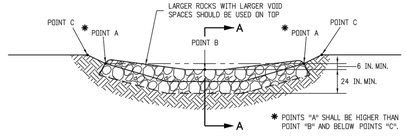
SECTION A-A

NOTES:

1. RIPRAP SIZE D_{30} = 6IN OR AS SHOWN ON THE PLANS.
2. THE GEOTEXTILE EROSION CONTROL SHALL BE CLASS 2 AND CONFORM TO THE REQUIREMENTS OF SUBSECTION 712.08.
3. THE ENDS OF RIPRAP CHECK DAM SHALL BE A MINIMUM OF 6 IN. HIGHER THAN CENTER OF CHECK DAM.
4. FOR USE AS TEMPORARY CHECK DAMS ONLY AND NOT FOR PERMANENT INSTALLATIONS.
5. THE PAY ITEM NUMBER FOR ROCK CHECK DAM (EA) IS 208-00041.

NOTE: ALL MATERIALS AND LABOR TO COMPLETE THE ROCK CHECK DAM SHALL BE INCLUDED IN THE COST OF WORK.

ROCK CHECK DAM



TYPICAL SECTION VIEW

Computer File Information		Sheet Revisions	
Creation Date: 07/31/19		Date:	Comments
Designer Initials: JBK	RCX		
Last Modification Date: 07/31/19	RCX		
Detailer Initials: LTA	RCX		
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English	RCX		

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TEMPORARY EROSION CONTROL

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STANDARD PLAN NO.
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Standard Sheet No. 4 of 11
Project Sheet Number:

CALL UTILITY NOTIFICATION CENTER OF COLORADO
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.

NOT VALID WITHOUT ORIGINAL SIGNATURE AND DATE

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NO.	DATE:	BY:

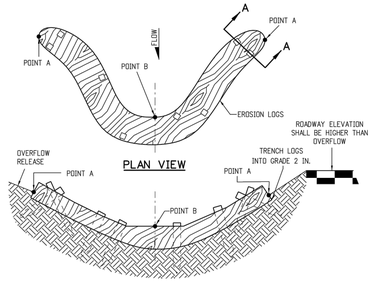
PROJECT: 1012.048
DATE: 6/18/2021
CONTACT: Erik Grieppentrog
EMAIL: erikg@landmark-co.com

GREEN HORN RANCH

Erosion Control Details

SHEET
C.610

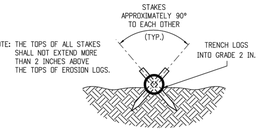
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PLAN VIEW

NOTE: POINTS "A" SHALL BE A MINIMUM 4 IN. HIGHER THAN POINT "B".

ELEVATION

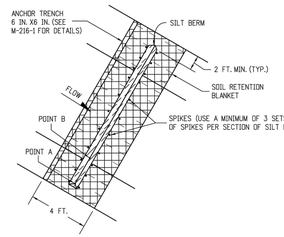


SECTION A-A

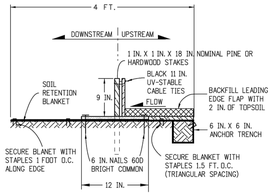
NOTES:

1. EROSION LOGS SHALL BE EMBEDDED 2 INCHES INTO THE SOIL.
2. EROSION LOGS SHALL BE TIGHTLY ABUTTED WITH NO GAPS.
3. V-SHAPED TEMPORARY DITCHES SHALL NOT BE USED. DITCHES SHAL BE GRADED IN A PARABOLIC OR TRAPEZOIDAL SHAPE.

EROSION LOG INSTALLATION



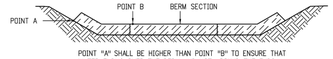
PLAN VIEW



NOTES:

1. MINIMUM 4 NAILS PER SEGMENT (UPSTREAM).
2. MINIMUM 2 NAILS PER SEGMENT (DOWNSTREAM).
3. MINIMUM 2 WOOD STAKES PER SEGMENT.

SILT BERM (2) SECTION VIEW



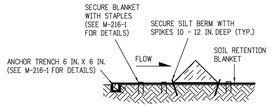
POINT "A" SHALL BE HIGHER THAN POINT "B" TO ENSURE THAT WATER FLOWS OVER THE BERM AND NOT AROUND THE ENDS.

FRONT VIEW

NOTES

1. ANCHOR SOIL RETENTION BLANKET INTO TRENCH WITH 8 INCHES MIN. STAPLES PLACED AT 1 FOOT INTERVALS ALONG EDGE.
2. FILL AND COMPACT TRENCH.
3. SECTIONS OF THE SILT BERM SHALL BE OVERLAPPED WITH NO GAPS.
4. FOR SLOPE AND CHANNEL SPACING SEE THE "SECTION VIEW ALONG DITCH FLOWLINE" DETAIL ON SHEET 11 OF 11.
5. SOIL RETENTION BLANKET SHALL ALWAYS BE REQUIRED.
6. THE PAY ITEM NUMBER FOR SILT BERM (LF) IS 208-00004.

SILT BERM INSTALLATION



SILT BERM (1) SECTION VIEW

DRAINAGE DITCH APPLICATIONS

WD

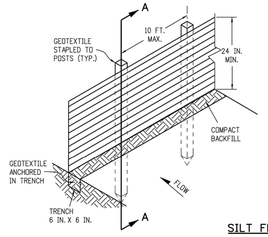
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CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English	R-X		

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TEMPORARY EROSION CONTROL

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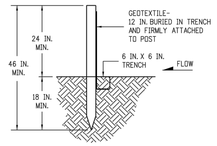
STANDARD PLAN NO. M-208-1
Standard Sheet No. 6 of 11
Project Sheet Number:



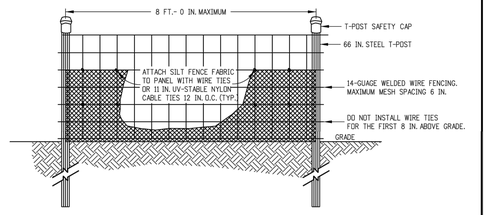
SILT FENCE

NOTES:

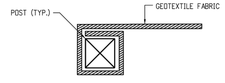
1. GEOTEXTILE SHALL BE ATTACHED TO WOOD POSTS WITH THREE OR MORE STAPLES PER POST. STAPLES SHALL BE HEAVY DUTY WIRE AND AT LEAST 1 INCH LONG.
2. WOOD POST SHALL BE 1 IN. X 1 IN. NOMINAL.
3. THE PAY ITEM NUMBER FOR SILT FENCE (LF) IS 208-00020.
4. THE SILT FENCE SHALL BE PLACED ON THE CONTOUR (AT THE SAME ELEVATION ±6 IN.). THE ENDS SHALL BE FLARED UP SLOPE (MINIMUM ELEVATION GAIN OF 18 IN.).



SECTION A-A



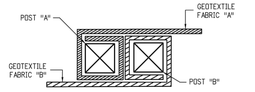
ELEVATION VIEW



END SECTION DETAIL (PLAN VIEW)

NOTE:

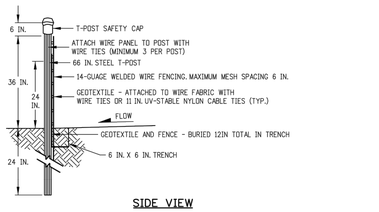
1. THE END OF THE SILT FENCE FABRIC SHALL BE WRAPPED APPROX. 6 INCHES AROUND A WOODEN POST ONE FULL TURN, THEN SECURED ALONG THE POST WITH 6 HEAVY DUTY WIRE STAPLES AT LEAST 1 INCH LONG.



JOINING SECTION DETAIL (PLAN VIEW)

NOTES:

1. THE ENDS OF THE SILT FENCE FABRIC SHALL BE JOINED TOGETHER BY WRAPPING APPROX. 6 INCHES OF EACH END AROUND A WOODEN POST ONE FULL TURN, THEN SECURED ALONG THE POST WITH 6 HEAVY DUTY WIRE STAPLES AT LEAST 1 INCH LONG.
2. POSTS SHALL BE TIGHTLY ABUTTED WITH NO GAPS TO PREVENT POTENTIAL FLOW-THROUGH OF SEDIMENT AT JOINT.



SIDE VIEW

NOTES:

1. THE ENDS OF THE SILT FENCE FABRIC SHALL BE JOINED TOGETHER BY WRAPPING APPROX. 6 INCHES OF EACH END AROUND A STEEL T-POST, THEN SECURED ALONG THE POST WITH WIRE TIES (MINIMUM 3 PER POST).
2. POSTS SHALL BE TIGHTLY ABUTTED WITH NO GAPS TO PREVENT POTENTIAL FLOW-THROUGH OF SEDIMENT AT JOINT.
3. SILT FENCES SHALL NOT BE USED FOR CHECK DAMS.
4. THE PAY ITEM NUMBER FOR SILT FENCE (REINFORCED) (LF) IS 208-00021.

SILT FENCE (REINFORCED)

SF

SILT FENCE APPLICATIONS

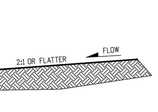
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Designer Initials: JBK	R-X		
Last Modification Date: 07/31/19	R-X		
Detailer Initials: LTA	R-X		
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English	R-X		

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TEMPORARY EROSION CONTROL

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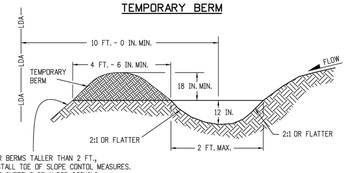
STANDARD PLAN NO. M-208-1
Standard Sheet No. 8 of 11
Project Sheet Number:



NOTES:

1. BERMS SHALL HAVE A HEIGHT OF 18 INCHES, SIDE SLOPES OF 2:1 OR FLATTER AND A MINIMUM BASE WIDTH OF 4 FT. - 6 IN.
2. BERMS SHALL BE USED TO INTERCEPT AND DIVERT DRAINAGE TO A DESIGNATED OUTLET.
3. BERMS SHALL NOT BE USED WHERE DRAINAGE AREA EXCEEDS 10 ACRES.
4. BERMS SHALL BE CONSTRUCTED OUT OF ACCEPTABLE MATERIAL THAT CAN BE COMPACTED AND RECEIVE AT A MINIMUM HEAVY EQUIPMENT WHEEL ROLLED COMPACTION.
5. TEMPORARY BERMS SHALL BE CONSTRUCTED OUT OF EMBANKMENT (SUBSOIL) AND IN NO CIRCUMSTANCE CONSTRUCTED OUT OF SALVAGED TOPSOIL.
6. THE PAY ITEM NUMBER FOR TEMPORARY BERM (LF) IS 208-00300.

TEMPORARY BERM

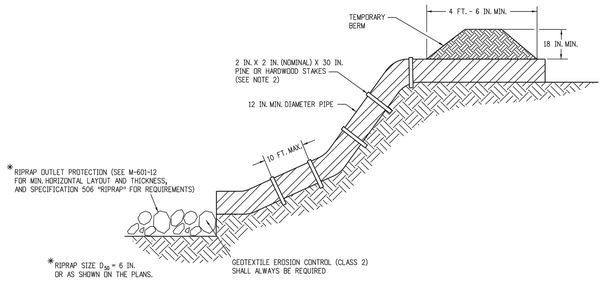


FOR BERMS TALLER THAN 2 FT., INSTALL TOE OF SLOPE CONTOL MEASURES. SEE SHEET 3 OF 11 FOR DETAILS.

NOTES:

1. TEMPORARY DIVERSION DITCHES SHALL BE CONSTRUCTED ACROSS THE SLOPE TO INTERCEPT RUNOFF AND DIRECT IT TO A STABLE OUTLET OR SEDIMENT TRAP.
2. USE THE TEMPORARY DIVERSION DITCH IMMEDIATELY ABOVE A NEW CUT, FILL SLOPE, OR AROUND THE PERIMETER OF A DISTURBED AREA.
3. THE GRADIENT ALONG THE FLOW PATH SHALL HAVE A POSITIVE GRADE TO ASSURE DRAINAGE, BUT SHALL NOT BE SO STEEP AS TO RESULT IN EROSION DUE TO HIGH VELOCITY.
4. THE DIVERSION FLOWLINE SHALL ALWAYS BE LOCATED A MINIMUM 10 FEET FROM THE OUTSIDE LIMITS OF DISTURBED AREA BOUNDARY.
6. DIVERSION BERMS SHALL BE CONSTRUCTED OUT OF EMBANKMENT (SUBSOIL) AND IN NO CIRCUMSTANCE CONSTRUCTED OUT OF SALVAGED TOPSOIL.
5. THE PAY ITEM NUMBER FOR TEMPORARY DIVERSION (LF) IS 208-00301.

TEMPORARY DIVERSION



NOTES:

1. ANCHOR SIZE VARIES ACCORDING TO PIPE SIZE
2. TO SECURE THE PIPE, DRIVE STAKES INTO GROUND, THEN TIE A 12 GUAGE WIRE BETWEEN THEM ABOVE AND ACROSS THE PIPE'S WIDTH.
3. THE OUTLET SHALL BE ALIGNED WITH THE FLOW DIRECTION OF THE EXISTING GRADE. PERPENDICULAR DISCHARGE TO A CHANNEL SHALL NOT BE ACCEPTABLE.
4. THE GRADE AROUND THE INLET TO THE PIPE SHALL BE COMPACTED.
5. THE PAY ITEM NUMBER FOR TEMPORARY SLOPE DRAINS (LF) IS 208-00060.

TEMPORARY SLOPE DRAINS

(NOT SPECIFIED - DETAIL PROVIDED IF FIELD CONDITIONS WARRANT APPLICATION)

GRADING APPLICATIONS

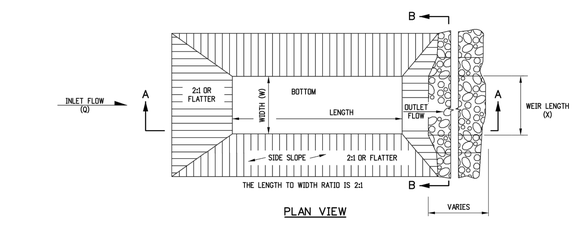
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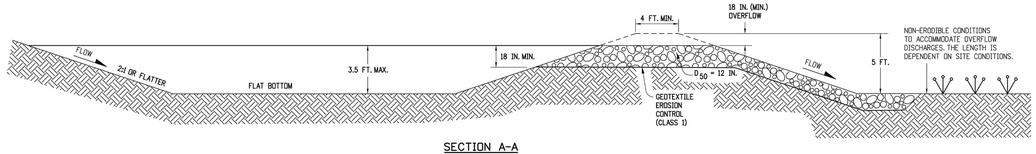
STANDARD PLAN NO. M-208-1
Standard Sheet No. 7 of 11
Project Sheet Number:



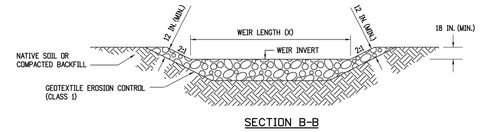
PLAN VIEW

NOTES

1. THE MAXIMUM DRAINAGE AREA IS 5 ACRES.
2. THE MAXIMUM STRUCTURE LIFE IS 2 YEARS.
3. THE STORAGE AREA IS 1800 CUBIC FEET PER ACRE.
4. THE MAXIMUM EMBANKMENT HEIGHT SHALL BE 5 FT. MEASURED ON THE DOWNSTREAM SIDE.
5. THE LENGTH/WIDTH RATIO MAY BE ADJUSTED TO MEET SITE CONDITIONS WHEN APPROVED BY THE ENGINEER.
6. WIDTH (W) OF SEDIMENT TRAP IS APPROXIMATELY EQUAL TO THE WEIR LENGTH (X).
7. SEDIMENT TRAP DESIGN SHALL BE APPROVED BY THE ENGINEER.
8. THE DOWN GRADE FROM WEIR SHALL BE STABLE AND NON-ERODIABLE.
9. THE PAY ITEM NUMBER FOR SEDIMENT TRAP (LF) IS 208-00033.



SECTION A-A



SECTION B-B

DRAINAGE AREA (ACRES)	WEIR LENGTH (FEET)
1	4
2	6
3	8
4	10
5	12

WEIR LENGTH TABLE

ST

SEDIMENT TRAP

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STANDARD PLAN NO. M-208-1
Standard Sheet No. 9 of 11
Project Sheet Number:

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Know what's below. Call before you dig.

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NO.	DATE:	BY:	DESCRIPTION:

PROJECT: 1012.048
DATE: 6/18/2021
CONTACT: Erik Gregentrog
EMAIL: erikg@landmark-co.com

GREEN HORN RANCH

Erosion Control Details

SHEET C.611

DRAWING FILENAME: P:\1012\048\DWG\Production Drawings\Sht2 Permit\1012-048_C.E.C.Erosion Control Details.dwg LAYOUT NAME: C.611 DATE: Jun 18, 2021 - 3:17pm USER: ERIKGREGENTROG
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