SPECIAL MEETING AGENDA

City of Black Hawk City Council
211 Church Street, Black Hawk, CO

March 17, 2021
3:00 p.m.

The City of Black Hawk is hosting Virtual City Council meetings in Zoom in response to the Coronavirus COVID-19 until further notice. There are no physical meetings at this time.

Join from a PC, Mac, iPad, iPhone, or Android device:
Please click this URL to join: ~~https://us02web.zoom.us/s/82169734350~~
new link: https://us02web.zoom.us/s/82823437408

Or join by phone:

888-475-4499 (Toll-Free)

Webinar ID: ~~**821 6973 4350**~~ **new ID:** 828 2343 7408
International numbers available:

Phone commands using your phone's dial pad while in a Zoom meeting:

*6 – Toggle mute/unmute
*9 – Raise your hand to make a public comment or to
speak for or against a Public Hearing matter

Public Comment:

If you wish to make a public comment during the meeting,
please go to:
https://www.cityofblackhawk.org/comment_signup
and provide your Name, Email address, and Telephone.
During the Public comment section of the meeting, the host will
go in order of sign up to ask for comments from those who have signed up

1. CALL TO ORDER:
2. ROLL CALL & PLEDGE OF ALLEGIANCE:
3. AGENDA CHANGES:
4. CONFLICTS OF INTEREST: (Council disclosures are on file w/City Clerk and Sec. of State)
5. EXECUTIVE SESSION:

   The City Council will be meeting in Executive Session to hold a conference with the City's Attorney to receive legal advice on specific legal questions, pursuant to C.R.S. § 24-6-402(4)(b), and to determine positions relative to matters that may be subject to negotiations, develop a strategy for negotiations, and/or instruct negotiators, pursuant to C.R.S. § 24-6-402(4)(e).

6. PUBLIC COMMENT:
7. APPROVAL OF MINUTES: February 24, 2021
8. ACTION ITEM:

   A. Resolution 8-2021, A Resolution Conditionally Approving the Black Hawk Park Preliminary and Final Plat (continued from February 10, 2021)

9. PUBLIC HEARINGS:

   A. CB6, An Ordinance Approving a Water Lease Agreement Between the City of Black Hawk and the County of Clear Creek

   B. Resolution 9-2021, A Resolution Conditionally Approving a Site Development Plan and a Certificate of Architectural Compatibility for Hawk's Landing Located at 990 Miners Mesa Road

10. ACTION ITEMS:

   A. Resolution 10-2021, A Resolution Approving the First Addendum to Professional Services Agreement with SAFEbuilt, LLC

   B. Resolution 11-2021, A Resolution Making Certain Address Changes Within the City for Certain Properties on Gregory Street

   C. Resolution 12-2021, A Resolution of the City of Black Hawk, Colorado, to File Water Court Application, Ratifying Prior Acts, and Authorizing the Taking of all Necessary Steps

   D. Resolution 13-2021, A Resolution Adopting the Residential Exterior Paint Program Guide to Programs, Dated March 2021

11. CITY MANAGER REPORT:

12. CITY ATTORNEY REPORT:

13. EXECUTIVE SESSION:

14. ADJOURNMENT:

City of Black Hawk
City Council

February 24, 2021

MEETING MINUTES

1. CALL TO ORDER:	Mayor Spellman called the regular meeting of the City Council to order on Wednesday, February 24, 2021, at 3:00 p.m.
2. ROLL CALL:	Present were: Mayor Spellman, Aldermen Armbright, Bennett, Johnson, Midcap, Moates, and Torres.
Virtual/Present Staff:	City Attorney Hoffmann, City Manager Cole, Fire Chief Woolley, Public Works Director Isbester, Community Planning & Development Director Linker, Baseline Engineering Consultants Harris and Esterl, IT Manager Muhammad, and Deputy City Clerk Martin.
PLEDGE OF ALLEGIANCE:	Mayor Spellman led the meeting in the recitation of the Pledge of Allegiance.
3. AGENDA CHANGES:	Deputy City Clerk Martin confirmed there were no changes to the agenda.
4. CONFLICTS OF INTEREST:	City Attorney Hoffmann confirmed since the only item on the agenda was the continuation of Resolution 8-2021 to the Special Meeting date of March 17, 2021, there was no need to ask for any Conflicts of Interest.
5. PUBLIC COMMENT:	Deputy City Clerk Martin confirmed that no one had signed up for public comment.
6. APPROVAL OF MINUTES:	February 10, 2021
MOTION TO APPROVE	Alderman Armbright **MOVED** and was **SECONDED** by Alderman Torres to approve the Minutes as presented.
MOTION PASSED	There was no discussion and the motion unanimously.

DRAFT

7. PUBLIC HEARINGS:

None

8. ACTION ITEMS:

A. Resolution 8-2021, A Resolution Conditionally Approving the Black Hawk Park Preliminary and Final Plat

Mayor Spellman read the title and continued this item to a special City Council meeting to be held on March 17, 2021 at 3:00 p.m.

MOTION TO CONTINUE Alderman Bennett **MOVED** and was **SECONDED** by Alderman Johnson to continue the consideration of Resolution 8-2021 to the March 17, 2021 special City Council meeting.

MOTION PASSED There was no discussion, and the motion **PASSED** unanimously.

9. CITY MANAGER REPORTS: City Manager Cole had nothing to report.

10. CITY ATTORNEY: City Attorney Hoffmann had nothing to report.

11. EXECUTIVE SESSION: City Attorney Hoffmann recommended item number 5 only for Executive Session to discuss strategy for negotiations for a land-use issue and related to Marchant Street.

MOTION TO ADJOURN INTO EXECUTIVE SESSION Alderman Bennett **MOVED** and was **SECONDED** by Alderman Johnson to adjourn into Executive Session at 3:03 p.m. to determine positions relative to matters that may be subject to negotiations, develop a strategy for negotiations, and/or instruct negotiators, pursuant to C.R.S. § 24-6-402(4)(e).

MOTION PASSED There was no discussion, and the motion **PASSED** unanimously.

MOTION TO ADJOURN Alderman Bennett **MOVED** and was **SECONDED** by Alderman Johnson to adjourn the Executive Session at 3:30 p.m.

MOTION PASSED There was no discussion, and the motion **PASSED** unanimously.

DRAFT

12. ADJOURNMENT: Mayor Spellman declared the Regular Meeting of the City Council closed at 3:30 p.m.

Michele Martin, CMC
Deputy City Clerk

David D. Spellman
Mayor

DRAFT

RESOLUTION 8-2021

A RESOLUTION CONDITIONALLY APPROVING THE BLACK HAWK PARK PRELIMINARY AND FINAL PLAT (continued from February 10, 2021)

CITY OF BLACK HAWK
REQUEST FOR COUNCIL ACTION

SUBJECT: Black Hawk Park Preliminary and Final Plat
(Continued from February 10, 2021)

RECOMMENDATION: Staff recommends the following motion to the Mayor and Board of Aldermen:

MOTION TO APPROVE Resolution 8 - 2021, a Resolution continuing this agenda item to the March 24, 2021 City Council meeting.

SUMMARY AND BACKGROUND OF SUBJECT MATTER:
The City of Black Hawk has received an application from Dalton Horan of Ventana Capital, Inc and Jason Krall of Rick Engineering on behalf of the property owner Club Vista Properties II, LLC requesting review and approval of a Preliminary Plat and a Final Plat for the Black Hawk Park subdivision. The applicants request the subdivision of Lot 1 Block 1 Miners Mesa Subdivision Filing No. 4 into nine (9) commercial lots and one (1) tract for the purpose of developing the property with an Airstream RV Campground, a distillery and other commercial uses. Refer to the Staff Report included with this Request for Council Action originally provided at the February 10, 2021 City Council agenda. As a reminder, the City Council opened and closed the public hearing on February 10 and did not make a decision to approve or deny, but continued the decision to this March 17, 2021 agenda. The reason for no decision was that a Subdivision and Development Agreement was not yet signed on that date. As of this updated Request for Council Action – a signature is still not yet provided on the Agreement but staff is hopefull such agreement and a signature is provided by March 17, 2021. Also - since February 10, 2021 staff has coordinated with the applicant to add a new Note 9 found in Condition 3. above of the recommended motion to approve a resolution for this project. Staff will update City Council at the meeting if a signature is obtained related to the Agreement.

AGENDA DATE: March 17, 2021

WORKSHOP DATE: N/A

FUNDING SOURCE: N/A

DEPARTMENT DIRECTOR APPROVAL: [X]Yes [ ]No

STAFF PERSON RESPONSIBLE: Cynthia L. Linker
CP&D Director

DOCUMENTS ATTACHED:

1. RFCA
2. Exhibit A
3. Exhibit B

RECORD: [X]Yes [ ]No

CoBH CERTIFICATE OF INSURANCE REQUIRED [ ]Yes [X]No

CITY ATTORNEY REVIEW: [X]Yes [ ]N/A

SUBMITTED BY:

Cynthia L. Linker, CP&D Director

Vincent Harris, AICP, Baseline Corporation

REVIEWED BY:

Stephen N. Cole, City Manager

EXHIBIT A

BLACK HAWK PARK SUBDIVISION
PRELIMINARY PLAT

BLACK HAWK PARK

PRELIMINARY PLAT

A REPLAT OF LOT 1, BLOCK 1, MINERS MESA SUBDIVISION FILING NO. 4, BEING LOCATED IN NORTH HALF OF SECTION 18, AND THE SOUTHWEST QUARTER OF SECTION 7 BOTH BEING WITHIN TOWNSHIP 3 SOUTH, RANGE 72 WEST 6TH P.M. CITY OF BLACK HAWK, COUNTY OF GILPIN, STATE OF COLORADO

SHEET 1 OF 2

DEDICATION

KNOW ALL MEN BY THESE PRESENTS: CLUB VISTA PROPERTIES II, LLC, IS THE OWNER OF THAT REAL PROPERTY SITUATED IN THE CITY OF BLACK HAWK, GILPIN COUNTY, AND THAT HAS CAUSED SAID REAL PROPERTY TO BE LAID OUT AND SURVEYED AS BLACK HAWK PARK, AND DOES HEREBY DEDICATE AND SET APART ALL THE STREETS, ALLEYS AND OTHER PUBLIC WAYS AND PLACES SHOWN ON THE ACCOMPANYING PLAT FOR THE USE OF THE PUBLIC FOREVER, AND DOES HEREBY GRANT TO THE CITY OF BLACK HAWK USE OF THOSE PORTIONS OF SAID REAL PROPERTY WHICH ARE INDICATED AS EASEMENTS ON THE ACCOMPANYING PLAT AS PERMANENT PUBLIC EASEMENTS. IN WITNESS WHEREOF, _____ HAS CAUSED HIS NAME TO BE HEREUNTO SUBSCRIBED THIS ____ DAY OF _____, 20___.

_____
OWNER SIGNATURE

NOTARY

STATE OF _____)
)SS
COUNTY OF _____)

THE FOREGOING INSTRUMENT WAS ACKNOWLEDGED BEFORE ME THIS _____ DAY OF _____, 20___,
BY_____ AS_____

WITNESS MY HAND AND SEAL _____

MY COMMISSION EXPIRES _____

LEGAL DESCRIPTION

A REPLAT OF LOT 1, BLOCK 1, MINERS' MESA SUBDIVISION FILING NO. 4, RECORDED AT RECEPTION NUMBER R013116, A PARCEL OF LAND LOCATED IN THE SOUTHWEST QUARTER OF SECTION 7, AND THE NORTH HALF OF SECTION 18, BOTH WITHIN TOWNSHIP 3 SOUTH, RANGE 72 WEST OF THE 6TH PRINCIPAL MERIDIAN, CITY OF BLACK HAWK, COUNTY OF GILPIN, STATE OF COLORADO AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BASIS OF BEARINGS:

BEARINGS ARE BASED ON THE NORTH LINE OF THE NORTHWEST QUARTER OF SECTION 18, BEING ASSUMED TO BEAR NORTH 89°07'38" WEST, A DISTANCE OF 3189.53 FEET BETWEEN THE FOLLOWING DESCRIBED MONUMENTS:

–NORTHWEST CORNER OF SECTION 18, 3.25" ALUMINUM CAP, DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT "1979".

–NORTH QUARTER CORNER OF SECTION 18, 3.25" ALUMINUM CAP, DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT "1979".

BEGINNING AT THE NORTH QUARTER CORNER OF SECTION 18, BEING ALSO THE NORTHEAST CORNER OF SAID LOT 1, BLOCK 1, MINERS' MESA SUBDIVISION FILING NO. 4;

THENCE ALONG THE EASTERLY SIDE OF SAID LOT 1, BLOCK 1 THE FOLLOWING EIGHT (8) COURSES AND DISTANCES:

1. THENCE ALONG THE EAST LINE OF THE NORTHWEST QUARTER OF SECTION 18 BEING ALSO THE EASTERLY LINE OF SAID LOT 1, BLOCK 1 SOUTH 00°43'40" EAST, A DISTANCE OF 627.36 FEET;
2. THENCE DEPARTING SAID EAST LINE SOUTH 21°11'02" EAST, A DISTANCE OF 84.74 FEET;
3. THENCE NORTH 68°30'00" EAST, A DISTANCE OF 348.31 FEET;
4. THENCE SOUTH 21°51'21" EAST, A DISTANCE OF 61.39 FEET;
5. THENCE SOUTH 67°50'00" WEST, A DISTANCE OF 191.40 FEET;
6. THENCE SOUTH 19°13'48" EAST, A DISTANCE OF 101.14 FEET;
7. THENCE SOUTH 64°28'07" WEST, A DISTANCE OF 82.20 FEET;
8. THENCE SOUTH 24°59'36" WEST, A DISTANCE OF 68.43 FEET TO THE NORTHERLY RIGHT–OF–WAY OF MINERS MESA ROAD;

THENCE CONTINUING ALONG THE SOUTHERLY BOUNDARY OF SAID LOT 1, BLOCK 1, THE FOLLOWING SEVEN (7) COURSES AND DISTANCES

1. THENCE ALONG SAID RIGHT–OF–WAY BEING ALONG A NON–TANGENT CURVE TO THE RIGHT, HAVING A RADIUS OF 440.16 FEET, A CENTRAL ANGLE OF 16°54'43", WHOSE CHORD BEARS NORTH 87°21'36" WEST A DISTANCE OF 129.45 FEET, FOR AN ARC DISTANCE OF 129.92 FEET;
2. THENCE CONTINUING ALONG SAID RIGHT–OF–WAY AND RIGHT–OF–WAY LINE EXTENDED NORTH 78°54'15" WEST, A DISTANCE OF 396.59 FEET;
3. THENCE ALONG A NON–TANGENT CURVE TO THE LEFT, HAVING A RADIUS OF 400.00 FEET, A CENTRAL ANGLE OF 31°17'25", WHOSE CHORD BEARS SOUTH 85°27'03" WEST A DISTANCE OF 215.74 FEET, FOR AN ARC DISTANCE OF 218.45 FEET;
4. THENCE ALONG A REVERSE CURVE, HAVING A RADIUS OF 500.00 FEET, A CENTRAL ANGLE OF 52°56'24", WHOSE CHORD BEARS NORTH 83°43'28" WEST A DISTANCE OF 445.73 FEET, FOR AN ARC DISTANCE OF 461.99 FEET;
5. NORTH 57°15'16" WEST, A DISTANCE OF 68.07 FEET;
6. THENCE ALONG A CURVE TO THE LEFT, HAVING A RADIUS OF 275.00 FEET, A CENTRAL ANGLE OF 21°09'31", WHOSE CHORD BEARS NORTH 67°50'01" WEST A DISTANCE OF 100.98 FEET, FOR AN ARC DISTANCE OF 101.55 FEET;
7. NORTH 75°07'40" WEST, A DISTANCE OF 1199.64 FEET TO THE SOUTHWESTERLY CORNER OF SAID LOT 1, BLOCK 1;

THENCE ALONG THE WESTERLY BOUNDARY OF LOT 1, BLOCK 1, THE FOLLOWING SIX (6) COURSES AND DISTANCES;

1. NORTH 10°55'57" EAST, A DISTANCE OF 663.89 FEET;
2. THENCE NORTH 54°39'54" EAST, A DISTANCE OF 719.57 FEET;
3. THENCE NORTH 53°04'00" WEST, A DISTANCE OF 171.33 FEET;
4. THENCE NORTH 71°30'03" EAST, A DISTANCE OF 148.55 FEET;
5. THENCE NORTH 18°30'03" WEST, A DISTANCE OF 40.00 FEET;
6. THENCE NORTH 54°15'00" EAST, A DISTANCE OF 300.00 FEET TO THE MOST NORTHERLY CORNER OF SAID LOT 1, BLOCK 1;

THENCE ALONG THE NORTHERLY BOUNDARY OF SAID LOT THE FOLLOWING THREE (3) COURSES AND DISTANCES:

1. SOUTH 07°42'11" WEST, A DISTANCE OF 838.29 FEET;
2. THENCE SOUTH 67°00'00" EAST, A DISTANCE OF 899.92 FEET;
3. THENCE NORTH 77°14'02" EAST, A DISTANCE OF 702.06 FEET, TO THE POINT OF BEGINNING.

CONTAINING 2,079,423 SQUARE FEET OR 47.737 ACRES, MORE OR LESS.

TRACT/LOT TABLE

LOT/TRACT	SQ. FT.	ACRES±	PURPOSE
LOT 1	560,268	12.862	*
LOT 2	44,272	1.016	*
LOT 3	45,423	1.043	*
LOT 4	46,785	1.074	*
LOT 5	44,579	1.023	*
LOT 6	172,609	3.963	*
LOT 7	99,428	2.283	*
LOT 8	46,626	1.070	*
ROW DEDICATION	101,438	2.329	DEDICATION
TRACT A	917,975	21.074	OPEN SPACE, UTILITIES, DRAINAGE

*USES CONFORMING TO C/BS ZONING INCLUDING SRU OF RV CAMPGROUND AND INDOOR SHOOTING FACILITIES

GENERAL NOTES

1.) THE PURPOSE OF THIS MINOR SUBDIVISION PLAT IS TO RECONFIGURE LOT AND TRACT LINES AS SHOWN HEREON, PURSUANT TO C.R.S. 31–23–201, ET SEQ., AND CHAPTER 17 OF THE CITY OF BLACK HAWK MUNICIPAL CODE. NOTHING IN THE APPROVAL OF THIS PLAT SHALL ALLOW, PERMIT, OR CAUSE TO BE ALLOWED OR PERMITTED ANY DEVELOPMENT OR CONSTRUCTION ON ANY LOT HEREON WITH OUT A SUBSEQUENT LAND DEVELOPMENT APPLICATION AND APPROVAL THAT INCLUDES, AT A MINIMUM, PROVISIONS FOR THE CONSTRUCTION OF NECESSARY PUBLIC IMPROVEMENTS AND OTHER CONDITIONS OF APPROVAL AS DETERMINED BY THE BOARD OF ALDERMAN, INCLUDING AT A MINIMUM THOSE PROVISIONS REQUIRED BY 17–63 AND 17–64 OF THE CITY OF BLACK HAWK MUNICIPAL CODE, AS THE SAME MAY BE AMENDED FROM TIME TO TIME. NO CONSTRUCTION OF ANY TYPE SHALL OCCUR ON THE PROPERTY THAT IS PLATTED HEREON UNTIL A SUBSEQUENT AGREEMENT HAS BEEN REACHED BETWEEN THE SUBDIVIDER, OR ITS SUCCESSOR ON IN INTEREST, AND THE CITY REGARDING, AT A MINIMUM, THE NECESSARY PUBLIC IMPROVEMENTS, AND A FINANCIAL GUARANTEE APPROVED BY THE CITY FOR SAID PUBLIC IMPROVEMENTS.

2.) DISTANCES ON THIS SITE ADJUSTMENT DEDICATION PLAT ARE EXPRESSED IN U.S. SURVEY FEET AND DECIMALS THEREOF. A U.S. SURVEY FOOT IS DEFINED AS EXACTLY 1220/3937 METERS. ALL BEARINGS SHOWN HERE ON ARE IN DEGREE–MINUTES–SECONDS.

3.) ANY PERSON WHO KNOWINGLY REMOVES, ALTERS OR DEFACES ANY PUBLIC LAND SURVEY MONUMENT, LAND SURVEY BOUNDARY MONUMENT OR ACCESSORY COMMITS A CLASS TWO (2) MISDEMEANOR PURSUANT TO STATE STATUE 18–4–508, C.R.S.

4.) NOTICE: ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT MAY ANY ACTION BASED UPON ANY DEFECT IN THIS SURVEY BE COMMENCED MORE THAN TEN YEARS FROM THE DATE OF CERTIFICATION SHOWN HEREON.

5.) COMMONWEALTH LAND TITLE COMPANY COMMITMENT NUMBER 597–H0508532–023CNX, AMENDMENT NO. 1, EFFECTIVE DATE JULY 22, 2020 AT 7:00 A.M., WAS ENTIRELY RELIED UPON FOR RECORDED RIGHTS–OF–WAY, EASEMENTS AND ENCUMBRANCES IN THE PREPARATION OF THIS SURVEY.

6.) RICK ENGINEERING, HAS MADE NO INVESTIGATION OR INDEPENDENT SEARCH FOR RECORDED/UNRECORDED EASEMENTS, ENCUMBRANCES, RESTRICTIVE COVENANTS, OWNERSHIP TITLE EVIDENCE OR ANY OTHER FACTS THAT AN ACCURATE AND CURRENT TITLE SEARCH MAY DISCLOSE.

7.) BASIS OF BEARINGS: BEARINGS ARE BASED ON THE NORTH LINE OF THE NORTHWEST QUARTER OF SECTION 18 BEING ASSUMED TO BEAR N 89°07'38" W BETWEEN MONUMENTS AS SHOWN WITHIN THIS PLAT.

OWNER/DEVELOPER

IN WITNESS WHEREOF, DAVID D. SPELLMAN, AS MAYOR AND MELISSA GREINER AS CITY CLERK OF THE CITY OF BLACK HAWK. HAS CAUSED THEIR NAMES TO BE HEREUNTO SUBSCRIBED THIS ____ DAY OF _____, 2020

CITY OF BLACK HAWK

BY:_____
DAVID D. SPELLMAN, MAYOR

ATTEST:

_____
MELISSA GREINER, CITY CLERK

NOTARY PUBLIC

STATE OF _____)
)SS
COUNTY OF _____)

THE FOREGOING INSTRUMENT WAS ACKNOWLEDGED BEFORE ME THIS _____ DAY OF _____, 20___, BY DAVID D. SPELLMAN AS MAYOR AND MELISSA GREINER AS CITY CLERK OF THE CITY OF BLACK HAWK, FOR AND BEHALF OF THE CITY.

WITNESS MY HAND AND SEAL

_____
NOTARY PUBLIC

MY COMMISSION EXPIRES _____

IN WITNESS WHEREOF, _____, AS _____ OF CLUB VISTA PROPERTIES II, LLC, A NEVADA LIMITED LIABILITY COMPANY, HAS CAUSED _____ NAME TO BE HEREUNTO SUBSCRIBED THIS ____ DAY OF _____, 20___.

_____
BY:

NOTARY PUBLIC

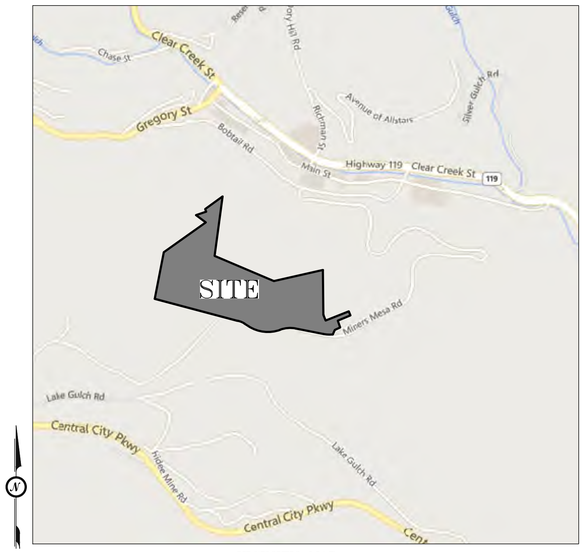
STATE OF _____)
)SS
COUNTY OF _____)

THE FOREGOING INSTRUMENT WAS ACKNOWLEDGED BEFORE ME THIS _____ DAY OF _____, 20___, BY _____, AS _____ OF CLUB VISTA PROPERTIES II, LLC.

WITNESS MY HAND AND SEAL

_____
NOTARY PUBLIC

MY COMMISSION EXPIRES _____



VICINITY MAP

SCALE: 1"=1000'

MAYOR'S CERTIFICATE

APPROVED AND ACCEPTED THIS _____ DAY OF _____, 2020 BY THE BOARD OF ALDERMEN OF THE CITY OF BLACK HAWK, SITUATED IN GILPIN COUNTY, COLORADO. THIS APPROVAL DOES NOT GUARANTEE THAT THE SIZE OR SOIL CONDITION OF ANY LOT SHOW HERE ON ARE SUCH THAT A BUILDING PERMIT CAN BE ISSUED.

CITY OF BLACK HAWK

ATTEST: BY:_____
DAVID D. SPELLMAN, MAYOR

_____
MELISSA GREINER, CITY CLERK

SURVEYOR'S CERTIFICATE

I ROBERT J. HENNESSY, A REGISTERED LAND SURVEYOR IN THE STATE OF COLORADO, DO HEREBY CERTIFY THAT THE SURVEY OF BLACK HAWK PARK, WAS MADE BY ME OR UNDER MY DIRECT SUPERVISION AND THE ACCOMPANYING PLAT COMPLIES WITH THE REQUIREMENTS OF TITLE 38, ARTICLE 51, C.R.S., AND THAT THE MONUMENTS REQUIRED BY SAID STATUTE AND BY THE SUBDIVISION ORDINANCE FOR THE CITY OF BLACK HAWK HAVE BEEN PLACED ON THE GROUND. THAT THE SURVEY ACCURATELY AND PROPERLY WITHIN APPLICABLE STANDARDS OF PRACTICE SHOWS SAID SURVEY BASED UPON MY KNOWLEDGE, INFORMATION AND BELIEF. THIS SURVEY IS NOT A GUARANTY OR WARRANTY, EITHER EXPRESSED OR IMPLIED.

_____
ROBERT J. HENNESSY
REGISTERED COLORADO LAND SURVEYOR NO. 34580
FOR AND ON BEHALF OF RICK ENGINEERING

CLERK AND RECORDER'S CERTIFICATE

_____
RECEPTION NUMBER

ACCEPTING FOR FILING IN THE OFFICE OF THE CLERK AND RECORDER OF GILPIN COUNTY, AT CENTRAL CITY COLORADO ON THIS _____ DAY OF _____, 202__ AT _____ O'CLOCK.

_____
GILPIN COUNTY CLERK AND RECORDER

_____
BY: DEPUTY CLERK

FOR CLERK AND RECORDER USE ONLY

RICK ENGINEERING COMPANY
9801 E EASTER AVE,
CENTENNIAL, CO 80112
PH. (303) 537-9020

\\CP.RICKENG.COM\PROJECTS\D_CEN_L\1055_BLACKHAWK\SURVEY\PLAT\1055 PLAT 11–23–20.DWG

BLACK HAWK PARK

PRELIMINARY PLAT
A REPLAT OF LOT 1, BLOCK 1, MINERS MESA SUBDIVISION FILING NO. 4, BEING LOCATED IN NORTH HALF OF SECTION 18, AND THE SOUTHWEST QUARTER OF SECTION 7 BOTH BEING WITHIN TOWNSHIP 3 SOUTH, RANGE 72 WEST 6TH P.M. CITY OF BLACK HAWK, COUNTY OF GILPIN, STATE OF COLORADO
SHEET 2 OF 2

CURVE TABLE					
CURVE #	LENGTH	RADIUS	DELTA	CHORD BEARING	CHORD LENGTH
C1	77.79'	400.00'	011°08'33"	S75°22'37"W	77.67'
C2	140.66'	400.00'	020°08'51"	N88°58'41"W	139.93'

LINE TABLE		
LINE #	LENGTH	BEARING
L1	45.06'	S78°54'15"E

LEGEND

- SET #5X24" REBAR AND 1" YELLOW PLASTIC CAP PLS 34580
- FOUND #5 REBAR AND YELLOW PLASTIC CAP MARKED MOORE LS 10945
- FOUND #5 REBAR
- AC FOUND 2" ALUMINUM CAP CITY OF BLACK HAWK LS 26298
- FOUND SECTION CORNER AS DESCRIBED HEREON

LOT LINE
ACCESS EASEMENT
PUBLIC SERVICE CO. EASEMENT
POWER LINE EASEMENT
PROPOSED UTILITY EASEMENT
SECTION LINE
BOUNDARY LINE
TO BE VACATED

FOR CLERK AND RECORDER USE ONLY

RICK ENGINEERING COMPANY
9801 E EASTER AVE,
CENTENNIAL, CO 80112
PH. (303) 537-8020

ORIGINAL SCALE: 1"= 100' HORIZ.

\\CP.RICKENG.COM\PROJECTS\D_CEN_L\1055_BLACKHAWK\SURVEY\PLAT\1055 PLAT 11-23-20.DWG

EXHIBIT B

BLACK HAWK PARK SUBDIVISION
FINAL PLAT

V Harris - 3-10-2021
THIS PAGE INTENDED TO BE REPLACED WITH NEW PAGE ONCE RECEIVED FROM APPLICANT

BLACK HAWK PARK

FINAL PLAT

A REPLAT OF LOT 1, BLOCK 1, MINERS MESA SUBDIVISION FILING NO. 4, BEING LOCATED IN NORTH HALF OF SECTION 18, AND THE SOUTHWEST QUARTER OF SECTION 7 BOTH BEING WITHIN TOWNSHIP 3 SOUTH, RANGE 72 WEST 6TH P.M. CITY OF BLACK HAWK, COUNTY OF GILPIN, STATE OF COLORADO

SHEET 1 OF 2

DEDICATION

KNOW ALL MEN BY THESE PRESENTS: CLUB VISTA PROPERTIES II, LLC, A NEVADA LIMITED LIABILITY COMPANY, IS THE OWNER OF THAT REAL PROPERTY SITUATED IN THE CITY OF BLACK HAWK, GILPIN COUNTY, AND HAS CAUSED SAID REAL PROPERTY TO BE LAID OUT AND SURVEYED AS BLACK HAWK PARK, AND DOES HEREBY DEDICATE AND SET APART ALL THE STREETS, ALLEYS AND OTHER PUBLIC WAYS AND PLACES SHOWN ON THE ACCOMPANYING PLAT FOR THE USE OF THE PUBLIC FOREVER, AND DOES HEREBY GRANT TO THE CITY OF BLACK HAWK USE OF THOSE PORTIONS OF SAID REAL PROPERTY WHICH ARE INDICATED AS EASEMENTS ON THE ACCOMPANYING PLAT AS PERMANENT PUBLIC EASEMENTS, AND DOES HEREBY GRANT AND CONVEY TO THE CITY OF BLACK HAWK, IN FEE SIMPLE, LOT 6.

LEGAL DESCRIPTION

A REPLAT OF LOT 1, BLOCK 1, MINERS' MESA SUBDIVISION FILING NO. 4, RECORDED AT RECEPTION NUMBER 147815, A PARCEL OF LAND LOCATED IN THE SOUTHWEST QUARTER OF SECTION 7, AND THE NORTH HALF OF SECTION 18, BOTH WITHIN TOWNSHIP 3 SOUTH, RANGE 72 WEST OF THE 6TH PRINCIPAL MERIDIAN, CITY OF BLACK HAWK, COUNTY OF GILPIN, STATE OF COLORADO AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

LOT 1, BLOCK 1, MINER'S MESA SUBDIVISION FILING NO. 4, COUNTY OF GILPIN, STATE OF COLORADO, EXCEPT THAT PORTION CONVEYED IN THE DEED RECORDED AUGUST 7, 2020 AT RECEPTION NO. 166682 AND RE-RECORDED AUGUST 7, 2020 AT RECEPTION NO. 166800.

CONTAINING 1,977,984 SQUARE FEET OR 45.408 ACRES, MORE OR LESS.

TRACT/LOT TABLE

LOT/TRACT	SQ. FT.	ACRES±	PURPOSE
LOT 1	235,073	5.397	*
LOT 2	44,272	1.016	*
LOT 3	45,423	1.043	*
LOT 4	46,785	1.074	*
LOT 5	50,119	1.151	*
LOT 6	171,627	3.940	*
LOT 7	99,429	2.283	*
LOT 8	142,888	3.280	*
LOT 9	50,102	1.150	*
TRACT A	1,092,269	24.075	OPEN SPACE, UTILITIES, DRAINAGE HISTORIC PRESERVATION AND CONSERVATION EASEMENT

*USES CONFORMING TO C/BS ZONING INCLUDING SRU OF RV CAMPGROUND AND INDOOR SHOOTING FACILITIES

GENERAL NOTES

1.) THE PURPOSE OF THIS FINAL SUBDIVISION PLAT IS TO RECONFIGURE LOT AND TRACT LINES AS SHOWN HEREON, PURSUANT TO C.R.S. 31-23-201, ET SEQ., AND CHAPTER 17 OF THE CITY OF BLACK HAWK MUNICIPAL CODE. NOTHING IN THE APPROVAL OF THIS PLAT SHALL ALLOW, PERMIT, OR CAUSE TO BE ALLOWED OR PERMITTED ANY DEVELOPMENT OR CONSTRUCTION ON ANY LOT HEREON WITH OUT A SUBSEQUENT LAND DEVELOPMENT APPLICATION AND APPROVAL THAT INCLUDES, AT A MINIMUM, PROVISIONS FOR THE CONSTRUCTION OF NECESSARY PUBLIC IMPROVEMENTS AND OTHER CONDITIONS OF APPROVAL AS DETERMINED BY THE BOARD OF ALDERMAN, INCLUDING AT A MINIMUM THOSE PROVISIONS REQUIRED BY 17-63 AND 17-64 OF THE CITY OF BLACK HAWK MUNICIPAL CODE, AS THE SAME MAY BE AMENDED FROM TIME TO TIME. NO CONSTRUCTION OF ANY TYPE SHALL OCCUR ON THE PROPERTY THAT IS PLATTED HEREON UNTIL A SUBSEQUENT AGREEMENT HAS BEEN REACHED BETWEEN THE SUBDIVIDER, OR ITS SUCCESSOR ON IN INTEREST, AND THE CITY REGARDING, AT A MINIMUM, THE NECESSARY PUBLIC IMPROVEMENTS, AND A FINANCIAL GUARANTEE APPROVED BY THE CITY FOR SAID PUBLIC IMPROVEMENTS.

2.) DISTANCES ON THIS FINAL PLAT ARE EXPRESSED IN U.S. SURVEY FEET AND DECIMALS THEREOF. A U.S. SURVEY FOOT IS DEFINED AS EXACTLY 1220/3937 METERS. ALL BEARINGS SHOWN HERE ON ARE IN DEGREE-MINUTES-SECONDS.

3.) ANY PERSON WHO KNOWINGLY REMOVES, ALTERS OR DEFACES ANY PUBLIC LAND SURVEY MONUMENT, LAND SURVEY BOUNDARY MONUMENT OR ACCESSORY COMMITS A CLASS TWO (2) MISDEMEANOR PURSUANT TO STATE STATUE 18-4-508, C.R.S.

4.) NOTICE: ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT MAY ANY ACTION BASED UPON ANY DEFECT IN THIS SURVEY BE COMMENCED MORE THAN TEN YEARS FROM THE DATE OF CERTIFICATION SHOWN HEREON.

5.) COMMONWEALTH LAND TITLE COMPANY COMMITMENT NUMBER 597-H0508532-023-CNX, AMENDMENT NO. 4, EFFECTIVE DATE DECEMBER 6, 2020 AT 7:00 A.M., WAS ENTIRELY RELIED UPON FOR RECORDED RIGHTS-OF-WAY, EASEMENTS AND ENCUMBRANCES IN THE PREPARATION OF THIS SURVEY.

6.) RICK ENGINEERING, HAS MADE NO INVESTIGATION OR INDEPENDENT SEARCH FOR RECORDED/UNRECORDED EASEMENTS, ENCUMBRANCES, RESTRICTIVE COVENANTS, OWNERSHIP TITLE EVIDENCE OR ANY OTHER FACTS THAT AN ACCURATE AND CURRENT TITLE SEARCH MAY DISCLOSE.

7.) BASIS OF BEARINGS: BEARINGS ARE BASED ON THE NORTH LINE OF THE NORTHWEST QUARTER OF SECTION 18 BEING ASSUMED TO BEAR N 89°07'38" W BETWEEN MONUMENTS AS SHOWN WITHIN THIS PLAT.

8.) LOT 6 IS DEDICATED TO THE CITY OF BLACK HAWK BY THIS PLAT.

OWNER/DEVELOPER

IN WITNESS WHEREOF, _____, AS _____ OF CLUB VISTA PROPERTIES II, LLC, A NEVADA LIMITED LIABILITY COMPANY, HAS CAUSED _____ NAME TO BE HEREUNTO SUBSCRIBED THIS _____ DAY OF _____, 20__.

_____
BY:

NOTARY PUBLIC

STATE OF _____)
)SS
COUNTY OF _____)

THE FOREGOING INSTRUMENT WAS ACKNOWLEDGED BEFORE ME THIS _____ DAY OF _____, 20__, BY _____, AS _____ OF CLUB VISTA PROPERTIES II, LLC.

WITNESS MY HAND AND SEAL

_____
NOTARY PUBLIC

MY COMMISSION EXPIRES _____

VICINITY MAP

SCALE: 1"=1000'

MAYOR'S CERTIFICATE

APPROVED AND ACCEPTED THIS _____ DAY OF _____, 2021 BY THE BOARD OF ALDERMEN OF THE CITY OF BLACK HAWK, SITUATED IN GILPIN COUNTY, COLORADO. THIS APPROVAL DOES NOT GUARANTEE THAT THE SIZE OR SOIL CONDITION OF ANY LOT SHOW HERE ON ARE SUCH THAT A BUILDING PERMIT CAN BE ISSUED.

CITY OF BLACK HAWK

ATTEST: BY:_____
DAVID D. SPELLMAN, MAYOR

_____
MELISSA A. GREINER, CMC, CITY CLERK

SURVEYOR'S CERTIFICATE

I ROBERT J. HENNESSY, A REGISTERED LAND SURVEYOR IN THE STATE OF COLORADO, DO HEREBY CERTIFY THAT THE SURVEY OF BLACK HAWK PARK, WAS MADE BY ME OR UNDER MY DIRECT SUPERVISION AND THE ACCOMPANYING PLAT COMPLIES WITH THE REQUIREMENTS OF TITLE 38, ARTICLE 51, C.R.S., AND THAT THE MONUMENTS REQUIRED BY SAID STATUTE AND BY THE SUBDIVISION ORDINANCE FOR THE CITY OF BLACK HAWK HAVE BEEN PLACED ON THE GROUND. THAT THE SURVEY ACCURATELY AND PROPERLY WITHIN APPLICABLE STANDARDS OF PRACTICE SHOWS SAID SURVEY BASED UPON MY KNOWLEDGE, INFORMATION AND BELIEF. THIS SURVEY IS NOT A GUARANTY OR WARRANTY, EITHER EXPRESSED OR IMPLIED.

_____
ROBERT J. HENNESSY
REGISTERED COLORADO LAND SURVEYOR NO. 34580
FOR AND ON BEHALF OF RICK ENGINEERING

FOR CLERK AND RECORDER USE ONLY

CLERK AND RECORDER'S CERTIFICATE

_____
RECEPTION NUMBER

ACCEPTING FOR FILING IN THE OFFICE OF THE CLERK AND RECORDER OF GILPIN COUNTY, AT CENTRAL CITY COLORADO ON THIS _____ DAY OF _____, 202__ AT _____ O'CLOCK.

_____
GILPIN COUNTY CLERK AND RECORDER

_____
BY: DEPUTY CLERK

RICK ENGINEERING COMPANY
9801 E EASTER AVE.
CENTENNIAL, CO 80112
PH. (303) 537-8020

\\CP.RICKENG.COM\PROJECTS\D_CEN_L\1055_BLACKHAWK\SURVEY\PLAT\1055 PLAT 2-4-21.DWG

V Harris - 3-10-2021
THIS PAGE INTENDED TO BE REPLACED WITH NEW PAGE ONCE RECEIVED FROM APPLICANT.

BLACK HAWK PARK

FINAL PLAT

A REPLAT OF LOT 1, BLOCK 1, MINERS MESA SUBDIVISION FILING NO. 4, BEING LOCATED IN NORTH HALF OF SECTION 18, AND THE SOUTHWEST QUARTER OF SECTION 7 BOTH BEING WITHIN TOWNSHIP 3 SOUTH, RANGE 72 WEST 6TH P.M. CITY OF BLACK HAWK, COUNTY OF GILPIN, STATE OF COLORADO

SHEET 2 OF 2

CURVE TABLE					
CURVE #	LENGTH	RADIUS	DELTA	CHORD BEARING	CHORD LENGTH
C1	139.36'	200.00'	039°55'21"	S84°54'40"W	136.55'
C2	46.45'	200.00'	013°18'27"	S58°17'46"W	46.35'
C3	185.81'	200.00'	053°13'48"	S78°15'26"W	179.20'
C4	55.63'	100.00'	031°52'35"	S35°42'15"W	54.92'

LINE TABLE		
LINE #	LENGTH	BEARING
L1	45.06'	S78°54'15"E
L2	31.49'	S38°20'03"W
L3	168.57'	N14°52'20"E
L4	143.57'	N14°52'20"E

LEGEND

- SET #5X24" REBAR AND 1" YELLOW PLASTIC CAP PLS 34580
- FOUND #5 REBAR AND YELLOW PLASTIC CAP MARKED MOORE LS 10945
- FOUND #5 REBAR
- AC FOUND 2" ALUMINUM CAP CITY OF BLACK HAWK LS 26298
- FOUND SECTION CORNER AS DESCRIBED HEREON

RECORD DISTANCE OR BEARING IF DIFFERENT THAN SHOWN (XXX.XX') (XX°XX'XX")

⁎=DEDICATED BY THIS PLAT

LOT LINE
ACCESS EASEMENT
PUBLIC SERVICE CO. EASEMENT
POWER LINE EASEMENT
PROPOSED UTILITY EASEMENT
SECTION LINE
BOUNDARY LINE
VACATED BY THIS PLAT

FOR CLERK AND RECORDER USE ONLY

RICK ENGINEERING COMPANY
9801 E EASTER AVE,
CENTENNIAL, CO 80112
PH. (303) 537-8020

\\CP.RICKENG.COM\PROJECTS\D_CEN_L\1055_BLACKHAWK\SURVEY\PLAT\1055 PLAT 2-4-21.DWG

EXHIBIT C

SUBDIVISION AND DEVELOPMENT AGREEMENT

AGREEMENT IS CURRENTLY UNDER NEGOTIATION - IT MAY BE AVAILABLE BY 3:00 P.M. MARCH 17, 2021

CITY OF BLACK HAWK
REQUEST FOR COUNCIL ACTION

SUBJECT: Black Hawk Park Preliminary and Final Plat.

RECOMMENDATION: Staff recommends the following motion to the Mayor and Board of Aldermen:

MOTION TO APPROVE WITH CONDITIONS Resolution 8-2021, a Resolution approving the Black Hawk Park Final Plat with the following conditions:

1. Final Engineering documents shall in the future be submitted with Site Development Plan (SDP) applications and be plans worthy of being Construction Documents for permitting of such work needed to develop a proposed SDP.
2. The Final Plat shall not be recorded until all redlines and comments by Black Hawk staff are addressed (including the dedication certificate on the Final Plat indicating that Lot 6 is herein dedicated to the City upon signatures added to the plat and recordation in the Gilpin County Clerk & Recorders Office) to the satisfaction of the Director of Public Works and the Community Planning and Development Director;
3. The Final Plat shall not be recorded until financial and written guarantees of completion of required public improvements are fully executed in the form of a Subdivision Improvements Agreement.
4. The plat shall not be effective until it is certified by the appropriate parties and recorded at the Office of the Gilpin County Clerk and Recorder.

SUMMARY AND BACKGROUND OF SUBJECT MATTER:
The City of Black Hawk has received an application from Dalton Horan of Ventana Capital, Inc and Jason Krall of Rick Engineering on behalf of the property owner Club Vista Properties II, LLC, requesting review and approval of a Preliminary Plat and a Final Plat for the Black Hawk Park subdivision. The applicants request the subdivision of Lot 1 Block 1 Miners Mesa Subdivision Filing No. 4 into ten (10) commercial lots and one (1) tract for the purpose of developing the property with an Airstream RV Campground, a distillery, and other commercial uses. Refer to the Staff Report included with this Request for Council Action.

AGENDA DATE: February 10, 2021

WORKSHOP DATE: N/A

FUNDING SOURCE: N/A

DEPARTMENT DIRECTOR APPROVAL: [X]Yes [ ]No

STAFF PERSON RESPONSIBLE: Cynthia L. Linker
CP&D Director

DOCUMENTS ATTACHED:

1. Resolution 8-2021
2. Staff Report
3. Overall Miners Mesa Improvements Exhibit
4. Black Hawk Park Preliminary Plat
5. Black Hawk Park Final Plat (Required corrections noted in red)
6. Black Hawk Park Combined Application

RECORD: [X]Yes [ ]No

CITY ATTORNEY REVIEW: [X]Yes [ ]N/A

SUBMITTED BY:

Cynthia L. Linker, CP&D Director

REVIEWED BY:

Stephen N. Cole, City Manager

Vincent Harris, AICP, Baseline Corporation

BLACK HAWK ®

Staff Report

CITY OF BLACK HAWK
PLANNING / LAND USE

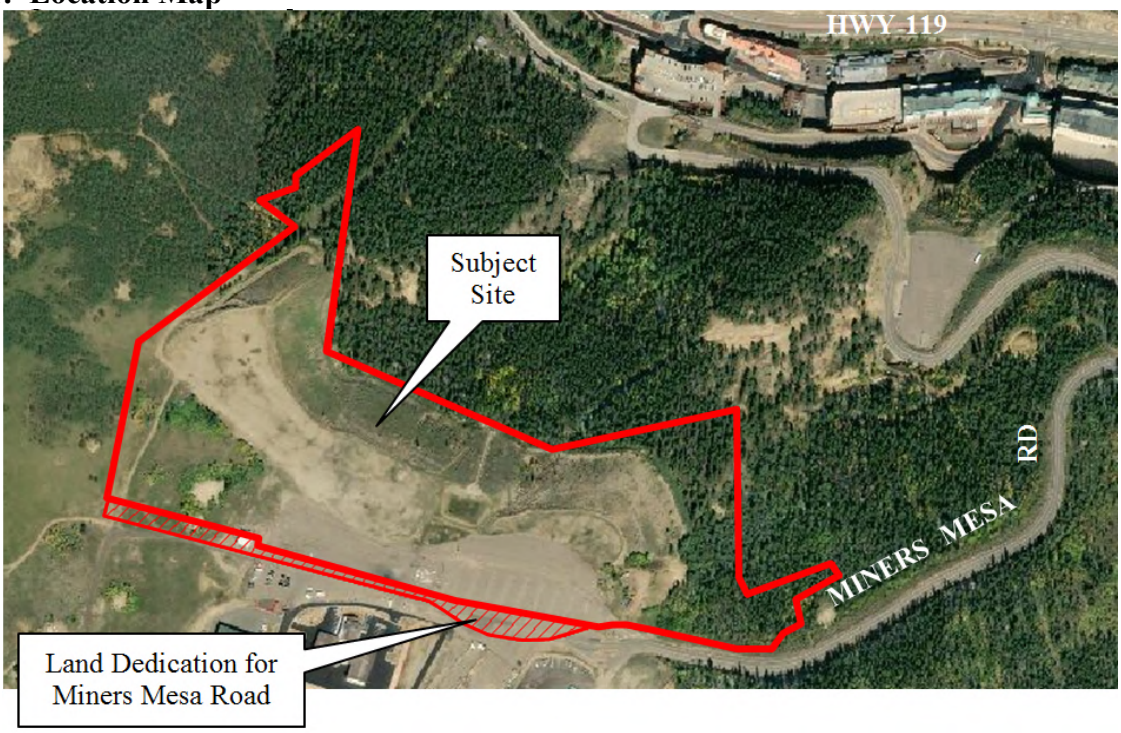
Date prepared: January 28, 2021
Meeting Date: February 10, 2021

STAFF REPORT:	**Preliminary and Final Plat: Black Hawk Park**
For:	City Council
Project:	P-20-13a Black Hawk Park Plat
Property Address:	830 Miners Mesa Road, Black Hawk, CO 80422
Applicants:	Dalton Horan, Ventana Capital, Inc. Jason Krall, Rick Engineering
Zoning:	Commercial/Business Services (C/BS)
Prepared by:	Julie Esterl - Baseline Corporation
Approved by:	Vincent Harris, AICP - Baseline Corporation
Reviewed by:	Cynthia Linker, CP&D Director

BACKGROUND:

On December 1, 2020, the City of Black Hawk received an application request for a Preliminary and Final Plat from Dalton Horan of Ventana Capital, Inc. and Jason Krall of Rick Engineering. The applicants, on behalf of the property owner, Club Vista Properties II, LLC are requesting review and approval of a subdivision on Miners Mesa for the purpose of developing the property with an Airstream campground, distillery and other future commercial uses. The proposed Black Hawk Park Final Plat will subdivide the existing Lot 1, Block 1, Miners' Mesa Subdivision Filing No. 4 into nine (9) commercial lots and one (1) tract. A land dedication to the City of Black Hawk for future right-of-way improvements for Miners Mesa Road was executed in June 2020.

Figure 1: Location Map



ZONING AND EXISTING CONDITIONS:
The Black Hawk Park property is located at 830 Miners' Mesa Road within the City of Black Hawk. The property is approximately 49 acres in size and is currently zoned Commercial/Business Services (C/BS). A Special Review Use (SRU) permit has been approved for the site to allow for the uses of RV campground and indoor shooting range facilities.

The majority of the property is a plateau at the top of Miner's Mesa Road overlooking the City of Black Hawk. The plateau area generally falls west to east, with a low point near the existing detention pond. The ground falls steeply from the plateau to the north and northeast extending past the property boundary. The majority of the property is vacant, but a few abandoned structures exist in the southeast corner of the property and are located within a Historic Preservation and Conservation Easement.

REQUEST:
The proposed subdivision of land is requested for the purpose of providing nine (9) developable commercial lots, and one (1) tract. The proposed Tract A will include all remaining undevelopable lands including the area covered by a Historic Preservation and Conservation Easement, and will continue to be owned by Club Vista Properties II, LLC. In addition, a portion of the original Lot 1, Block 1 Miners' Mesa Subdivision Filing No. 4 was previously dedicated to the City of Black Hawk for use as public right-of-way on June 5, 2020 and is recorded at the Gilpin County Clerk and Recorder's Office at Reception No. 166800.

The proposed uses for the Black Hawk Park development are:

- Airstream RV park including a caretaker/check-in facility, Airstream bar and outdoor beer garden, and possibly an indoor shooting range facility
- Distillery facilities including tasting rooms

The proposed development will provide public utility infrastructure improvements in accordance with development code, including stormwater, sanitary sewer, water distribution and telecommunication facilities. The project proposes to connect to the City of Black Hawk's water system via a looped water main connecting to the existing water main along the west side of the property and connecting into Miners Mesa Road. The project proposes to connect stormwater to the existing detention basin and outfall structure currently installed on the site, and will verify capacity and any improvements if required. The proposed on-site sanitary sewer facilities will connect to the new sewer main to be installed down Miner's Mesa Road. The developer will continue to work with the Black Hawk/Central City Sanitation District and the City of Black Hawk to coordinate the improvements for this new development. The proposed plat provides adequate utility easements as well as an access easement that will be used for access to lots that do not front Miners Mesa Road.

Discussion between the applicant and City staff that occurred after final plat review resulted in the decision to include the Historic Preservation and Conservation Easement land with Tract A because this land will essentially function as open space. It was determined that it was more appropriate for this piece of land be included with the tract rather than appear on the Final Plat as a "developable" Lot. Refer to Figure 3.

Figure 2: Black Hawk Park Preliminary Plat

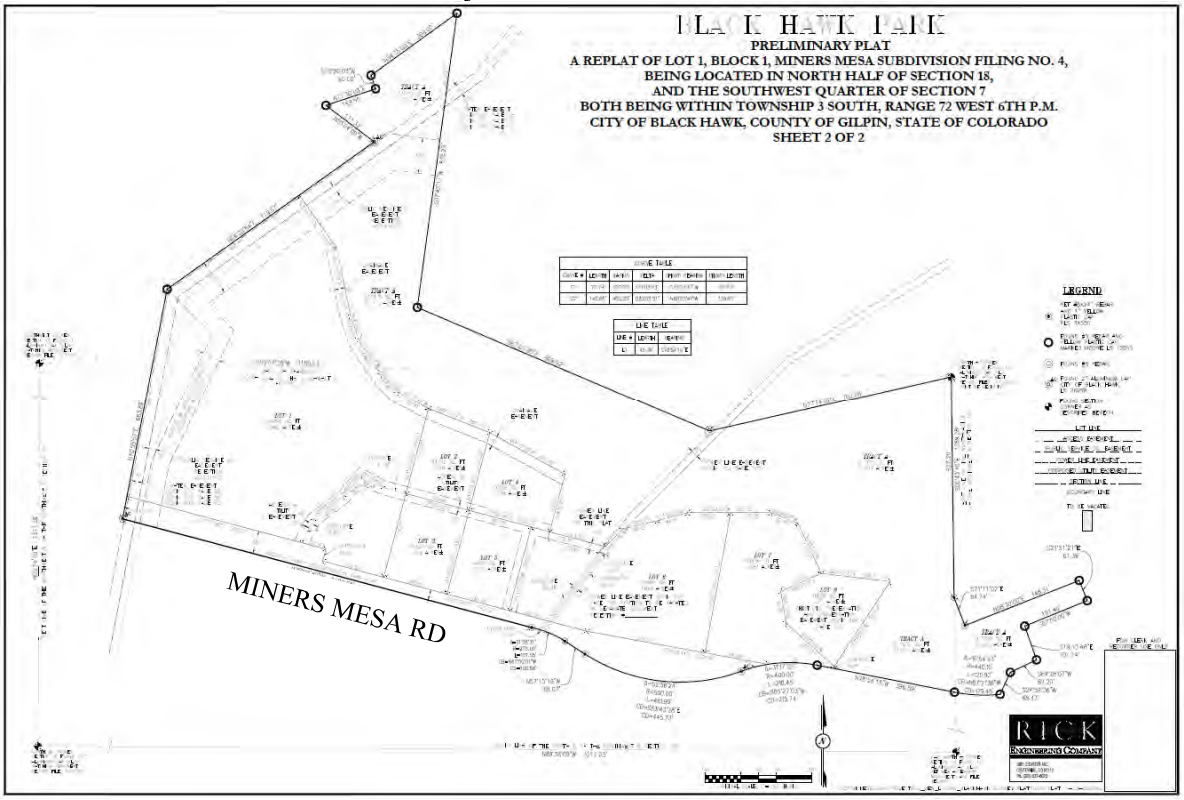
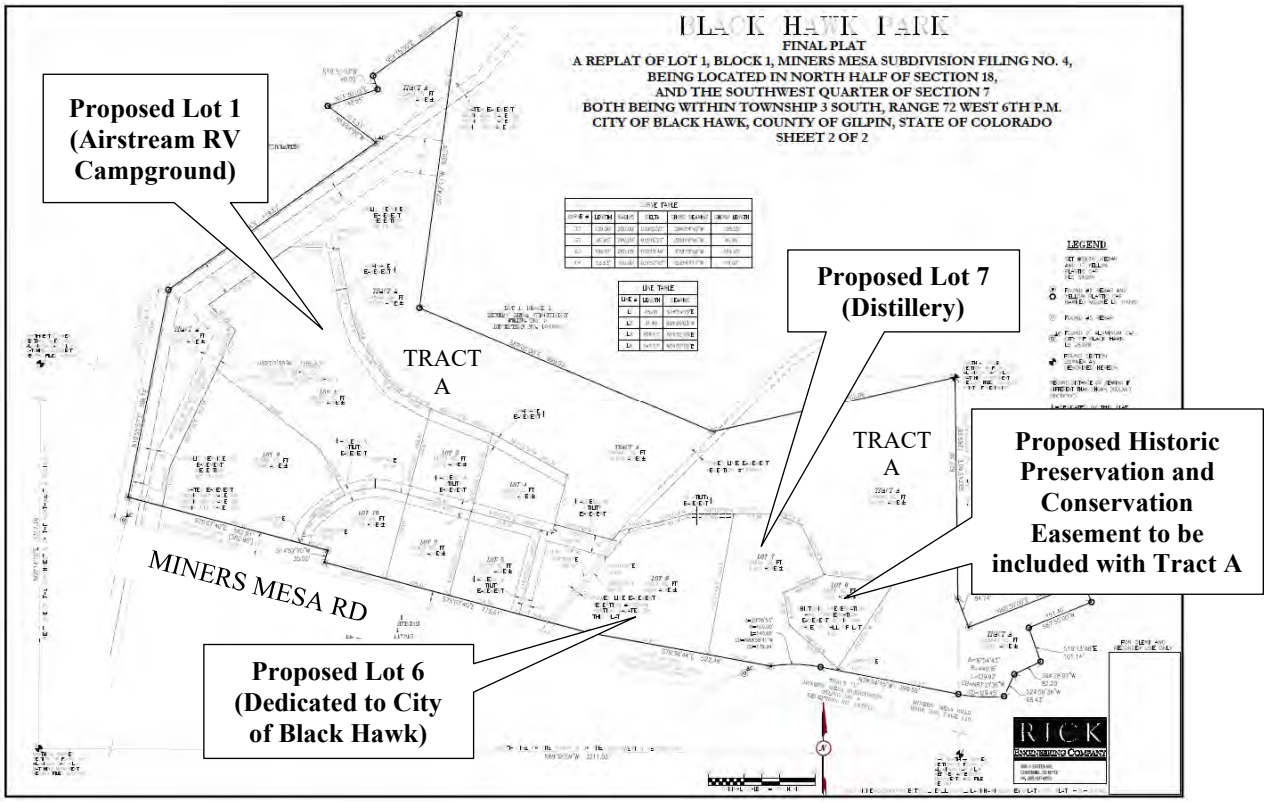


Figure 3: Black Hawk Park Final Plat



FUTURE SITE PLANS:
If approved, the applicant and property owner plan to develop Lot 1 with an Airstream RV campground with 50 permanent Airstream trailers for rent. The campground will include a check-in building, an Airstream bar, and common areas for outdoor recreation. Refer to Figure 4 for preliminary site plan concepts for the future campground. Plans are currently proceeding for Lot 8 to be provided to another entity for the development of a distillery. Refer to Figure 5 for preliminary site plan concepts for the proposed distillery. There are no immediate plans determined for the remaining commercial Lots 2-6 and 8-9. Lot 6, being 3.9 acres in size, is set aside herein to be dedicated to the City of Black Hawk with the approval and recordation of this Final Plat. All future and proposed development will require Site Development Plan (SDP) review and approval as well as the issuance of a Certificate of Architectural Compatibility (COAC) by the City Council prior to the commencement of any improvements being built on any of the platted lots, including Lot 6 that will be soon be owned by the City of Black Hawk.

Figure 4: Proposed Airstream Campground Concept (Proposed Lot 1)

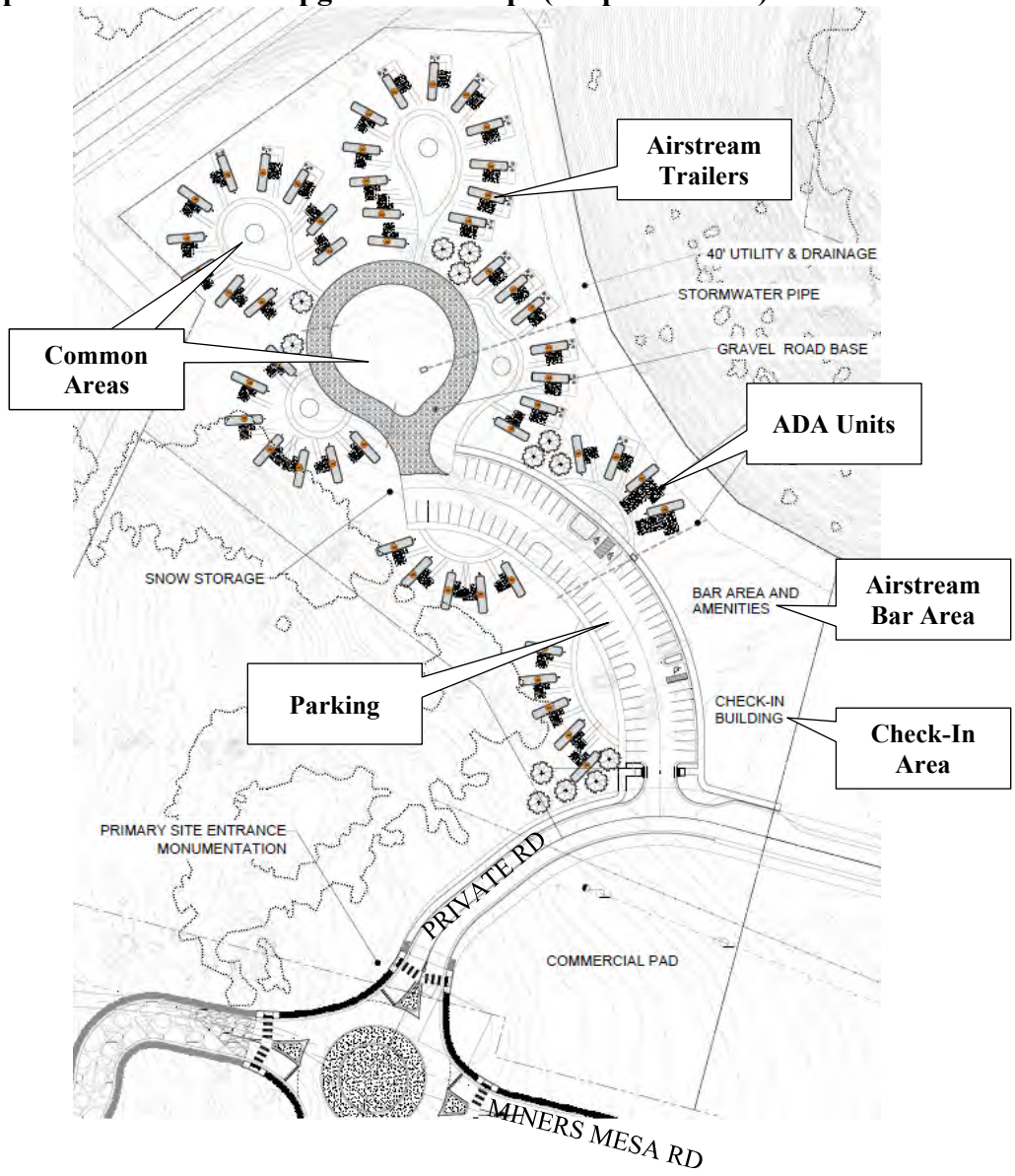
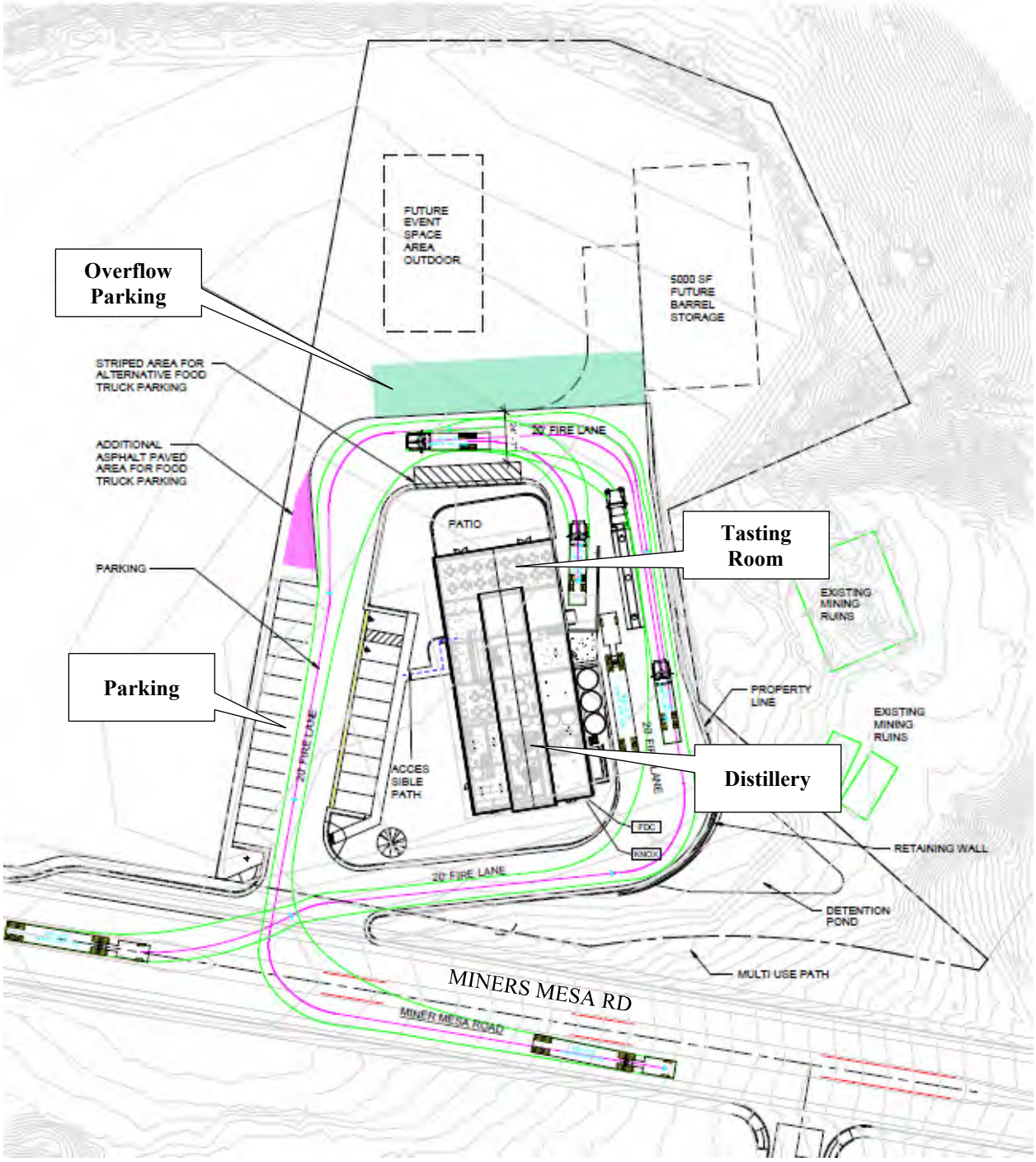


Figure 5: Proposed Distillery Concept (Proposed Lot 7)



Applicable City of Black Hawk Regulations

Excerpts from:

City of Black Hawk
Subdivision Code
Chapter 17 – Subdivisions

Sec. 17-28. - Control over platting.

(a) All plans of streets or highways for public use, and all plans, plats, plots and replats of land laid out in a subdivision or building lots, and the streets, highways, alleys or other portions of the same intended to be dedicated to a public use or the use of purchasers or owners of lots fronting thereon or adjacent thereto, shall be submitted to the Board of Aldermen for approval before they are recorded. All proposed dedications must have received the approval of the Board of Aldermen and the acceptance thereof noted in written form, duly executed by the Mayor.

Sec. 17-61. - Summary procedures.

(a) After the subdivider has reached preliminary conclusions concerning the feasibility and design of his or her proposed subdivision, he or she may prepare and submit a sketch plan as provided below for the approval of the Planning Director as to general layout, density, general location of buildings, parking, snow removal and open space for this proposed subdivision. The purpose of this review is to ensure that the proposed development is in accordance with the City Comprehensive Plan, that adequate utilities and access are available, and to ensure that the property on which the subdivision is proposed is at least apparently suitable for subdivision in the manner contemplated by the subdivider. After the approval, conditional approval or disapproval of the Planning Director, the subdivider or the Planning Director may, at the option of either, refer the sketch plan to the Board of Aldermen.

Staff Comment: The applicants and design team met with the City of Black Hawk Development Review Committee (DRC) to discuss the initial plans for the development on November 2, 2020. Feedback was provided to the applicant prior to the submittal of the preliminary plat.

(b) After the approval of the sketch plan, the subdivider shall prepare a preliminary plat and required supplemental material for presentation to the Board of Aldermen. The purpose of this preliminary review is to check the proposed subdivision against the design standards and improvement requirements and to be sure that the zoning standards have been met. After approval of the preliminary plat, the next step in the process is the final plat.

Staff Comment: The preliminary plat was reviewed by staff, and sent on referral to the DRC team. Referral comments were forwarded to the applicants and were incorporated into the final plat, hence the reason the internal roadway thru the property is configured slightly different than now shows on the final plat requested to be approved. The roadway alignment difference became better and addresses comments and standards necessary to create a safer and more effective street, easement, and lot layout. Referral comments that were not addressed with the latest Final Plat submittal or are related to the preparation of the current concept/layout for the soon-to-be submittal of Site Development Plan(s) have been included as conditions of final plat approval.

(c) *The final plat, together with required supplemental material, shall be a clear representation of the proposed subdivision. Financial guarantees of completion of required improvements will be necessary before the final plat will receive approval by the Board of Aldermen and be recorded with the County Clerk and Recorder.*

Staff Comment: The final plat has been prepared as a clear representation of the proposed subdivision including street, easement, and lot configurations acceptable to staff based on future allowed and currently planned development plans for some portions of the subject property. In addition, the submitted supplemental preliminary engineering documents related to grading, drainage, traffic engineering, and utilities are acceptable and Final Engineering documents shall in the future be submitted with Site Development Plan (SDP) applications and be plans worthy of being Construction Documents for permitting of such work needed to develop a proposed SDP. Financial guarantees of completion of required improvements will be included in a Subdivision Improvement Agreement (SIA) currently in process and evaluation by the City of Black Hawk and Club Vista Properties, LLC. The financial guarantee document is being prepared by the City Attorney and land owners' Attorney and needs to be executed prior to City Council adopting a Resolution of Approval as well as the signing and recordation of the final plat. It is recommended that this item be included as a condition of final plat approval.

(d) *Any persons seeking platting approvals pursuant to the provisions of these subdivision regulations are hereby advised that no preliminary approval is final, and no preliminary approval may be relied upon by a subdivider or anyone claiming thereunder, until a final plat is approved by the Board of Aldermen. Specifically, approval in concept of a sketch plan does not mandate approval of either a preliminary plat or a final plat by the Board of Aldermen. In addition, approval of a preliminary plat does not mandate approval of a final plat by the Board of Aldermen.*

Staff Comment: The applicant has prepared the final plat in accordance with the Municipal Code and seeks approval by the Board of Aldermen.

STAFF SUMMARY:

Staff from Baseline Corporation has evaluated the information provided by Dalton Horan and Jason Krall for this project. The City of Black Hawk Municipal Code allows for subdivision of property in accordance with the City of Black Hawk Municipal Code Chapter 17 – Subdivisions. Staff from Baseline Corporation suggests that the Black Hawk Park Final Plat has been prepared in accordance with the Municipal Code and recommends approval subject to some minor edits to the document that can easily be corrected, and the completion of the Subdivision Improvements Agreement (SIA) that is currently in negotiation including signatures of approval by the land owner.

In anticipation of the opportunity for the City Council to take action on the Final Plat, this project/plat application was scheduled to the City Council agenda, staff report prepared, notice posted on the property, and publication in the newspaper in anticipation that the SIA would be completed and signed by the landowner/applicant. If the SIA is not signed by 3:00 p.m. February 10, 2021, then staff recommends that the City Council 'adopt a motion to CONTINUE' the public hearing to a certain date that is acceptable to the City Attorney as well as the applicant, so that the signature of agreement with the proposed SIA document is complete.

If the SIA is signed before the 3:00 p.m. February 10, 2021 Public Hearing then City Council can open the public hearing and take input and conclude with a decision making the motion noted below after any/all testimony is heard.

In summary, Staff recommends that the Black Hawk Park Final Plat be approved, subject to the following conditions:

1. Final Engineering documents shall in the future be submitted with Site Development Plan (SDP) applications and be plans worthy of being Construction Documents for permitting of such work needed to develop a proposed SDP.
2. The Final Plat shall not be recorded until all redlines and comments by Black Hawk staff are addressed (including the dedication certificate on the Final Plat indicating that Lot 6 is herein dedicated to the City upon signatures added to the plat and recordation in the Gilpin County Clerk & Recorders Office) to the satisfaction of the Director of Public Works and the Community Planning and Development Director;
3. The Final Plat shall not be recorded until financial and written guarantees of completion of required public improvements are fully executed in the form of a Subdivision Improvements Agreement.
4. The plat shall not be effective until it is certified by the appropriate parties and recorded at the Office of the Gilpin County Clerk and Recorder.

FINDINGS:

City Council may *approve, conditionally approve, or deny* a Final Plat. To support this proposal, the following findings can be used:

The proposed Black Hawk Park Final Plat meets the intent of the criteria outlined in Chapter 17 of the Municipal Code as noted and evaluated in the staff report presented to City Council.

RECOMMENDATION:

Staff recommends the following motion to the Mayor and Board of Aldermen:

MOTION TO APPROVE Resolution No. 8-2021, a resolution approving the Black Hawk Park Final Plat with the following conditions:

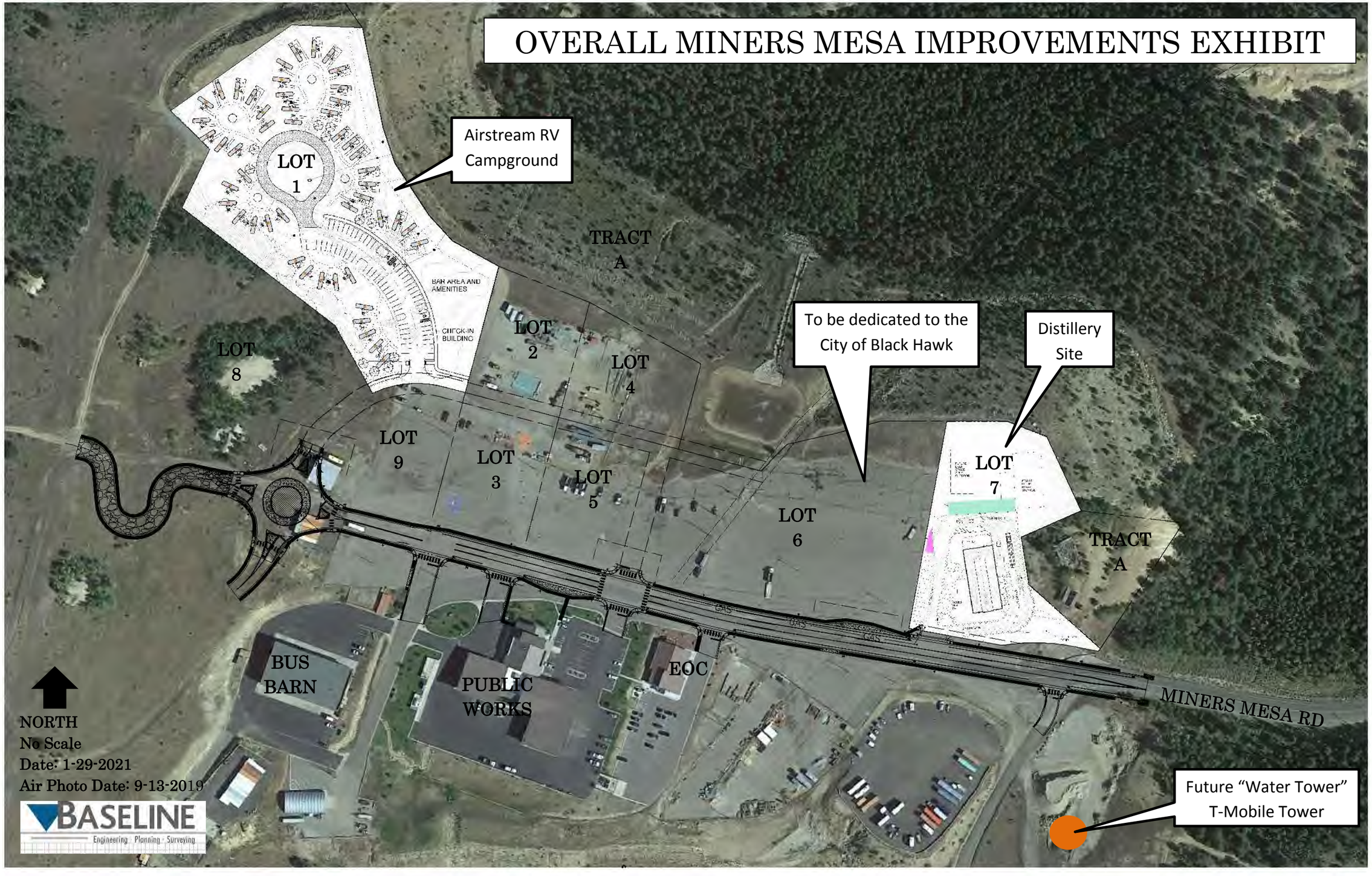
1. Final Engineering documents shall in the future be submitted with Site Development Plan (SDP) applications and be plans worthy of being Construction Documents for permitting of such work needed to develop a proposed SDP.
2. The Final Plat shall not be recorded until all redlines and comments by Black Hawk staff are addressed (including the dedication certificate on the Final Plat indicating that Lot 6 is herein dedicated to the City upon signatures added to the plat and recordation in the Gilpin County Clerk & Recorders Office) to the satisfaction of the Director of Public Works and the Community Planning and Development Director;
3. The Final Plat shall not be recorded until financial and written guarantees of completion of required public improvements are fully executed in the form of a Subdivision Improvements Agreement.
4. The plat shall not be effective until it is certified by the appropriate parties and recorded at the Office of the Gilpin County Clerk and Recorder.

ATTACHMENTS:

1. Overall Miners Mesa Improvements Exhibit
2. Black Hawk Park Preliminary Plat
3. Black Hawk Park Final Plat (noting required corrections)
4. Black Hawk Park Combined Application

Applicant's Submittal

OVERALL MINERS MESA IMPROVEMENTS EXHIBIT



NORTH
No Scale
Date: 1-29-2021
Air Photo Date: 9-13-2019

BASELINE
Engineering · Planning · Surveying

FORMAL LAND USE APPLICATION

City of Black Hawk
Community Planning and Development
211 Church Street, P.O. Box 68, Black Hawk, CO 80422
Phone: 303-582-0615 or www.cityofblackhawk.org

COMPLETE ALL BOXES – Incomplete applications will not be processed

Applicant Name: **Dalton Horan**	Applicant Address & Zip Code: **9801 E. Easter Ave. Centennial, CO 80112**
Applicant Phone: **303-946-8012**	Applicant Email: **dahoran@ventanacap.com**
Property Owner Name: **Club Vista Properties II, LLC**	Property Owner Address & Zip Code: **9801 E. Easter Ave. Centennial, CO 80112**
Property Owner Phone:	Property Owner Email:
Project Name: **Black Hawk Park**	Project Description: **final plat for commercial development**
Project Address or Location: **Miners Mesa Rd, Black Hawk, CO 80422**	Project Parcel Number: **R013116**
Existing Subdivision, Lot & Block: **Miners Mesa Subdivision Filing #4**	Existing Planned Unit Development: **N/A**
Existing Property Size: **49** ☒ Acres ☐ Sq. Ft.	Existing Building Size in square feet: **N/A**
Existing Zoning: **C/BS**	Proposed Zoning: **C/BS**
Existing Use: **vacant land**	Proposed Use: **mixed low density commercial development**

ITEMS REQUIRED WITH FORMAL LAND USE APPLICATION SUBMITTAL:

- This completed & signed Formal Land Use Application form
- All Items indicated/checked on the Formal Land Use Application Checklist that is attached
- Formal Land Use Application Deposit in the amount of $ **5000** .

APPLICATION AND FEE AGREEMENT:

The Black Hawk Adopted Fee Schedule and Section 16-370 of the Black Hawk Municipal Code establishes the requirement for applicants to pay fees to cover the costs the City may incur by having City approved consultants evaluate and process applications.

I, as the applicant, hereby certify that I believe to the best of my knowledge that all information supplied with this application is true and accurate and that consent of the property owner listed above, without which the requested action cannot lawfully be accomplished, has been granted. Permission is also hereby granted to the City of Black Hawk staff and their consultants to physically enter upon and inspect the subject property and take photographs as necessary for preparation of the case. In addition, by signing this application I am agreeing that I am authorized to sign on behalf of the property owner, or business-owner and commit to deposit the sum of $ **5000** to be used to pay the City's expenses to review, evaluate and process the Application ("Deposit"), which funds may be used to pay the cost of third-party consultants plus fifteen percent (15%) of such actual costs for City staff administrative costs and supplies. **I understand that if Formal Land Use Application costs exceed the amount collected, the City will invoice me, as the applicant, for the additional consultant cost plus a 15% administrative fee.** I additionally agree that I am not acquiring any rights by virtue of the payment of the City's expenses.

Submit Pre-Land Use Applications and required submittal items to: cpdinquiry@cityofblackhawk.org

Applicant's Signature Dalton Horan Date 11/23/2020

FOR CITY USE ONLY: Received by: Julie Esterl Date: 12/1/2020

RICK
ENGINEERING COMPANY

November 30, 2020

City of Black Hawk
Community Planning & Development
211 Church Street
Black Hawk, CO 80422

SUBJECT: BLACK HAWK PARK – Plat Narrative

To whom it may concern:

Rick Engineering Company (RICK) is pleased to submit the attached Final Plat package for the Black Hawk Park development on behalf of Ventana Capital, Inc. (the Applicant). We have included the Applicant's and Owner's contact information below for your reference:

Applicant:
Ventana Capital, Inc.
9801 E. Easter Ave.
Centennial, CO 80112

Owner:
Club Vista Properties II, LLC
145 East Warm Springs Road
Las Vegas, NV 89119

The Black Hawk Park property is located within the City of Black Hawk off Miner's Mesa Road. The property is approximately 48 acres in area. The property is currently Zoned Commercial/Business Services (C/BS) and has an approved Special Review Use (SRU) permit to allow for a Recreational Campground and an Indoor Shooting Range. The City of Black Hawk comprehensive plan designates this property as Low Intensity Mixed Use and does not fall within a defined Overlay District.

The majority of the property is a plateau at the top of Miner's Mesa road overlooking the City of Black Hawk. The plateau area generally falls west to east, with a low point near the existing detention pond. The ground falls steeply from the plateau to the north and northeast extending past the property boundary.

This intention of this plat application is to subdivide the property into 8 lots and a tract to allow for further development by the end users. The Black Hawk Park property proposes the following uses for the subdivided land consistent with the requirements of the C/BS zoning and approved SRU uses:

- Lot 1: RV park consisting of a minimum of 50 airstream units, a check-in facility, an airstream bar and containerized indoor shooting lanes.
- Lots 2-5: micro-distillery or micro-brewery end users
- Lot 6: conveyed to the City of Black Hawk for distillery end users
- Lot 7: conveyed to Brian Watts for distillery use
- Lot 8: historical preservation property
- Tract A: open space, drainage and utility uses

Please refer to the Existing Conditions Plan and Rezone Plan for additional information. It is intended that Site Development Plans will be submitted in the future and associated technical documents such as Traffic and Drainage studies will be included in the Site Development process once specific land uses are further defined.

Included with this cover letter and written description our submittal includes the following documents for your review:

- Application Form
- LocationMap
- Title Commitment
- Warranty Deed
- Traffic Impact Analysis (TIA)
- Drainage Study
- Preliminary Civil Plans
- Final Plat and closure report

If you have any questions regarding the documents provided with this application, please contact us at 303-537-8020.

Sincerely,
RICK ENGINEERING COMPANY

Jason Krall, P.E.
Principal Project Engineer

N

1000 500 0 1000

GRAPHIC SCALE: 1"=1000'

PROJECT NO. 1055

RICK ENGINEERING COMPANY
9801 EAST EASTER AVE
CENTENNIAL, CO 80112
303.537.8020

BLACKHAWK PARK
AERIAL AND LOCATION MAP

BLACKHAWK

DATE:	07-26-19
DRAWN BY:	JK
CHECKED BY:	TB
SCALE:	1"=1000'
SHEET	1 OF 1

©2019 Rick Engineering Company

\\cp.rickeng.com\projects\D_CEN_L\1055_Blackhawk\Civil\Exhibits\2019-0710-Site Plan\1055-EXB-Site Plan.dwg 2019-07-26 - 5:32PM - jkrall

Club Vista Properties II, LLC
1201 Page Drive, Suite 200
Fargo, ND 58103

LETTER OF AUTHORIZATION

January, 21, 2020

To Whom It May Concern:

This letter will serve as official notice that Dalton Horan of Ventana Capital Inc. is authorized to represent Club Vista Properties II, LLC, in the processing of all documents and activities related to the submittal and processing of land use entitlements for the Black Hawk Development, which is approximately 49 acres generally located at the top of Miners Mesa Road, Black Hawk, Colorado 80422. This authorization includes, but is not limited to, zoning amendment applications, submittal of a conceptual site plan, civil construction drawings, subdivision plats, developer agreements, development permits, architectural reviews, and building permit applications. This authorization will expire on December 23, 2021, unless otherwise rescinded earlier in writing.

Sincerely,

By:

Darwin Horan
Authorized Signatory.

Club Vista Properties II, LLC.,
a Nevada limited liability company

Written Consent and Resolution of the Sole Member

The undersigned, being the sole member ("Member") of Club Vista Properties II, LLC., a Nevada limited liability company (the "Company"), acting pursuant to the Operating Agreement of the Company, hereby adopts, by this written consent, as of this ___ day of January, 2020, the following preambles and resolutions with the same force and effect as if they had been adopted at a duly convened meeting of the Member of the Company, and directs that this written consent be filed with the minutes of the proceedings of the Company.

WHEREAS, This authorization includes, but is not limited to, zoning amendment applications, submittal of a conceptual site plan, civil construction drawings, subdivision plats, developer agreements, development permits, architectural reviews, and building permit applications within Black Hawk Development which is approximately 49 acres generally located at the top of Miners Mesa Road, Black Hawk, Colorado 80422.

WHEREAS, Company is required to execute certain plats, improvement agreements, development agreements, easements and closing documents related to the Property, including conveyance and settlement documents (collectively referred to herein as the "Documents"); and

WHEREAS, the Member, having reviewed the foregoing and such other information as it deems necessary, and having determined that it is in the best interests of the Company to act upon the foregoing, desires to authorize the Company to take such actions herein specified.

NOW, THEREFORE, BE IT RESOLVED, that the Transaction is hereby authorized and approved in all respects; and

FURTHER RESOLVED, that the execution and delivery of the Documents by Company and the performance by Company under the Documents, are hereby authorized and approved in all respects; and

FURTHER RESOLVED, that Darwin Horan, as an "Authorized Signatory" ("Horan"), be and hereby is authorized and directed to execute and deliver, in the name and on behalf of Company, the Documents, on such forms as Horan shall deem proper, such execution by Horan to be conclusive evidence that Horan and the Company deem all of the terms and provisions of such Documents to be proper; and

FURTHER RESOLVED, that any acts of the Company or Horan, acting on behalf of the Company, which acts would have been authorized by the foregoing resolution are hereby severally ratified, confirmed, approved and adopted as the acts in the name and on behalf of each such entity that was a party to such acts.

This consent may be executed and delivered by facsimile or electronic signature, and a facsimile or electronic signature shall constitute an original signature.

{00074037 2}

IN WITNESS WHEREOF, the undersigned, being the sole Member of the Company, hereby consent to, approves and adopts the foregoing preambles and resolutions to be effective as of the date first set forth above.

SOLE MEMBER:

Club Vista Properties II, LLC

By: _____
Name: Gary Tharaldson
Title: President

State of Nevada)
)ss.
County of Clark)

Subscribed to and sworn before me this 21st day of January 2020 by Gary Tharaldson.

Witness my hand and official seal.

My commission expires on the date shown on my seal affixed hereto.

_____
Notary Public

CURTIS A. BUNCE
Notary Public State of Nevada
No. 09-9030-1
My appt. exp. Dec. 2, 2020

BLACK HAWK PARK

PRELIMINARY PLAT

A REPLAT OF LOT 1, BLOCK 1, MINERS MESA SUBDIVISION FILING NO. 4, BEING LOCATED IN NORTH HALF OF SECTION 18, AND THE SOUTHWEST QUARTER OF SECTION 7 BOTH BEING WITHIN TOWNSHIP 3 SOUTH, RANGE 72 WEST 6TH P.M. CITY OF BLACK HAWK, COUNTY OF GILPIN, STATE OF COLORADO

SHEET 1 OF 2

DEDICATION

KNOW ALL MEN BY THESE PRESENTS: CLUB VISTA PROPERTIES II, LLC, IS THE OWNER OF THAT REAL PROPERTY SITUATED IN THE CITY OF BLACK HAWK, GILPIN COUNTY, AND THAT HAS CAUSED SAID REAL PROPERTY TO BE LAID OUT AND SURVEYED AS BLACK HAWK PARK, AND DOES HEREBY DEDICATE AND SET APART ALL THE STREETS, ALLEYS AND OTHER PUBLIC WAYS AND PLACES SHOWN ON THE ACCOMPANYING PLAT FOR THE USE OF THE PUBLIC FOREVER, AND DOES HEREBY GRANT TO THE CITY OF BLACK HAWK USE OF THOSE PORTIONS OF SAID REAL PROPERTY WHICH ARE INDICATED AS EASEMENTS ON THE ACCOMPANYING PLAT AS PERMANENT PUBLIC EASEMENTS. IN WITNESS WHEREOF, _____ HAS CAUSED HIS NAME TO BE HEREUNTO SUBSCRIBED THIS _____ DAY OF _____, 20___.

_____
OWNER SIGNATURE

NOTARY

STATE OF _____)
)SS
COUNTY OF _____)

THE FOREGOING INSTRUMENT WAS ACKNOWLEDGED BEFORE ME THIS _____ DAY OF _____, 20___,
BY_____ AS_____

WITNESS MY HAND AND SEAL _____

MY COMMISSION EXPIRES _____

LEGAL DESCRIPTION

A REPLAT OF LOT 1, BLOCK 1, MINERS' MESA SUBDIVISION FILING NO. 4, RECORDED AT RECEPTION NUMBER R013116, A PARCEL OF LAND LOCATED IN THE SOUTHWEST QUARTER OF SECTION 7, AND THE NORTH HALF OF SECTION 18, BOTH WITHIN TOWNSHIP 3 SOUTH, RANGE 72 WEST OF THE 6TH PRINCIPAL MERIDIAN, CITY OF BLACK HAWK, COUNTY OF GILPIN, STATE OF COLORADO AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BASIS OF BEARINGS:

BEARINGS ARE BASED ON THE NORTH LINE OF THE NORTHWEST QUARTER OF SECTION 18, BEING ASSUMED TO BEAR NORTH 89°07'38" WEST, A DISTANCE OF 3189.53 FEET BETWEEN THE FOLLOWING DESCRIBED MONUMENTS:

–NORTHWEST CORNER OF SECTION 18, 3.25" ALUMINUM CAP, DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT "1979".

–NORTH QUARTER CORNER OF SECTION 18, 3.25" ALUMINUM CAP, DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT "1979".

BEGINNING AT THE NORTH QUARTER CORNER OF SECTION 18, BEING ALSO THE NORTHEAST CORNER OF SAID LOT 1, BLOCK 1, MINERS' MESA SUBDIVISION FILING NO. 4;

THENCE ALONG THE EASTERLY SIDE OF SAID LOT 1, BLOCK 1 THE FOLLOWING EIGHT (8) COURSES AND DISTANCES:

1. THENCE ALONG THE EAST LINE OF THE NORTHWEST QUARTER OF SECTION 18 BEING ALSO THE EASTERLY LINE OF SAID LOT 1, BLOCK 1 SOUTH 00°43'40" EAST, A DISTANCE OF 627.36 FEET;
2. THENCE DEPARTING SAID EAST LINE SOUTH 21°11'02" EAST, A DISTANCE OF 84.74 FEET;
3. THENCE NORTH 68°30'00" EAST, A DISTANCE OF 348.31 FEET;
4. THENCE SOUTH 21°51'21" EAST, A DISTANCE OF 61.39 FEET;
5. THENCE SOUTH 67°50'00" WEST, A DISTANCE OF 191.40 FEET;
6. THENCE SOUTH 19°13'48" EAST, A DISTANCE OF 101.14 FEET;
7. THENCE SOUTH 64°28'07" WEST, A DISTANCE OF 82.20 FEET;
8. THENCE SOUTH 24°59'36" WEST, A DISTANCE OF 68.43 FEET TO THE NORTHERLY RIGHT–OF–WAY OF MINERS MESA ROAD;

THENCE CONTINUING ALONG THE SOUTHERLY BOUNDARY OF SAID LOT 1, BLOCK 1, THE FOLLOWING SEVEN (7) COURSES AND DISTANCES

1. THENCE ALONG SAID RIGHT–OF–WAY BEING ALONG A NON–TANGENT CURVE TO THE RIGHT, HAVING A RADIUS OF 440.16 FEET, A CENTRAL ANGLE OF 16°54'43", WHOSE CHORD BEARS NORTH 87°21'36" WEST A DISTANCE OF 129.45 FEET, FOR AN ARC DISTANCE OF 129.92 FEET;
2. THENCE CONTINUING ALONG SAID RIGHT–OF–WAY AND RIGHT–OF–WAY LINE EXTENDED NORTH 78°54'15" WEST, A DISTANCE OF 396.59 FEET;
3. THENCE ALONG A NON–TANGENT CURVE TO THE LEFT, HAVING A RADIUS OF 400.00 FEET, A CENTRAL ANGLE OF 31°17'25", WHOSE CHORD BEARS SOUTH 85°27'03" WEST A DISTANCE OF 215.74 FEET, FOR AN ARC DISTANCE OF 218.45 FEET;
4. THENCE ALONG A REVERSE CURVE, HAVING A RADIUS OF 500.00 FEET, A CENTRAL ANGLE OF 52°56'24", WHOSE CHORD BEARS NORTH 83°43'28" WEST A DISTANCE OF 445.73 FEET, FOR AN ARC DISTANCE OF 461.99 FEET;
5. NORTH 57°15'16" WEST, A DISTANCE OF 68.07 FEET;
6. THENCE ALONG A CURVE TO THE LEFT, HAVING A RADIUS OF 275.00 FEET, A CENTRAL ANGLE OF 21°09'31", WHOSE CHORD BEARS NORTH 67°50'01" WEST A DISTANCE OF 100.98 FEET, FOR AN ARC DISTANCE OF 101.55 FEET;
7. NORTH 75°07'40" WEST, A DISTANCE OF 1199.64 FEET TO THE SOUTHWESTERLY CORNER OF SAID LOT 1, BLOCK 1;

THENCE ALONG THE WESTERLY BOUNDARY OF LOT 1, BLOCK 1, THE FOLLOWING SIX (6) COURSES AND DISTANCES;

1. NORTH 10°55'57" EAST, A DISTANCE OF 663.89 FEET;
2. THENCE NORTH 54°39'54" EAST, A DISTANCE OF 719.57 FEET;
3. THENCE NORTH 53°04'00" WEST, A DISTANCE OF 171.33 FEET;
4. THENCE NORTH 71°30'03" EAST, A DISTANCE OF 148.55 FEET;
5. THENCE NORTH 18°30'03" WEST, A DISTANCE OF 40.00 FEET;
6. THENCE NORTH 54°15'00" EAST, A DISTANCE OF 300.00 FEET TO THE MOST NORTHERLY CORNER OF SAID LOT 1, BLOCK 1;

THENCE ALONG THE NORTHERLY BOUNDARY OF SAID LOT THE FOLLOWING THREE (3) COURSES AND DISTANCES:

1. SOUTH 07°42'11" WEST, A DISTANCE OF 838.29 FEET;
2. THENCE SOUTH 67°00'00" EAST, A DISTANCE OF 899.92 FEET;
3. THENCE NORTH 77°14'02" EAST, A DISTANCE OF 702.06 FEET, TO THE POINT OF BEGINNING.

CONTAINING 2,079,423 SQUARE FEET OR 47.737 ACRES, MORE OR LESS.

TRACT/LOT TABLE

LOT/TRACT	SQ. FT.	ACRES±	PURPOSE
LOT 1	560,268	12.862	*
LOT 2	44,272	1.016	*
LOT 3	45,423	1.043	*
LOT 4	46,785	1.074	*
LOT 5	44,579	1.023	*
LOT 6	172,609	3.963	*
LOT 7	99,428	2.283	*
LOT 8	46,626	1.070	*
ROW DEDICATION	101,438	2.329	DEDICATION
TRACT A	917,975	21.074	OPEN SPACE, UTILITIES, DRAINAGE

*USES CONFORMING TO C/BS ZONING INCLUDING SRU OF RV CAMPGROUND AND INDOOR SHOOTING FACILITIES

GENERAL NOTES

1.) THE PURPOSE OF THIS MINOR SUBDIVISION PLAT IS TO RECONFIGURE LOT AND TRACT LINES AS SHOWN HEREON, PURSUANT TO C.R.S. 31–23–201, ET SEQ., AND CHAPTER 17 OF THE CITY OF BLACK HAWK MUNICIPAL CODE. NOTHING IN THE APPROVAL OF THIS PLAT SHALL ALLOW, PERMIT, OR CAUSE TO BE ALLOWED OR PERMITTED ANY DEVELOPMENT OR CONSTRUCTION ON ANY LOT HEREON WITH OUT A SUBSEQUENT LAND DEVELOPMENT APPLICATION AND APPROVAL THAT INCLUDES, AT A MINIMUM, PROVISIONS FOR THE CONSTRUCTION OF NECESSARY PUBLIC IMPROVEMENTS AND OTHER CONDITIONS OF APPROVAL AS DETERMINED BY THE BOARD OF ALDERMAN, INCLUDING AT A MINIMUM THOSE PROVISIONS REQUIRED BY 17–63 AND 17–64 OF THE CITY OF BLACK HAWK MUNICIPAL CODE, AS THE SAME MAY BE AMENDED FROM TIME TO TIME. NO CONSTRUCTION OF ANY TYPE SHALL OCCUR ON THE PROPERTY THAT IS PLATTED HEREON UNTIL A SUBSEQUENT AGREEMENT HAS BEEN REACHED BETWEEN THE SUBDIVIDER, OR ITS SUCCESSOR ON IN INTEREST, AND THE CITY REGARDING, AT A MINIMUM, THE NECESSARY PUBLIC IMPROVEMENTS, AND A FINANCIAL GUARANTEE APPROVED BY THE CITY FOR SAID PUBLIC IMPROVEMENTS.

2.) DISTANCES ON THIS SITE ADJUSTMENT DEDICATION PLAT ARE EXPRESSED IN U.S. SURVEY FEET AND DECIMALS THEREOF. A U.S. SURVEY FOOT IS DEFINED AS EXACTLY 1220/3937 METERS. ALL BEARINGS SHOWN HERE ON ARE IN DEGREE–MINUTES–SECONDS.

3.) ANY PERSON WHO KNOWINGLY REMOVES, ALTERS OR DEFACES ANY PUBLIC LAND SURVEY MONUMENT, LAND SURVEY BOUNDARY MONUMENT OR ACCESSORY COMMITS A CLASS TWO (2) MISDEMEANOR PURSUANT TO STATE STATUE 18–4–508, C.R.S.

4.) NOTICE: ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT MAY ANY ACTION BASED UPON ANY DEFECT IN THIS SURVEY BE COMMENCED MORE THAN TEN YEARS FROM THE DATE OF CERTIFICATION SHOWN HEREON.

5.) COMMONWEALTH LAND TITLE COMPANY COMMITMENT NUMBER 597–H0508532–023CNX, AMENDMENT NO. 1, EFFECTIVE DATE JULY 22, 2020 AT 7:00 A.M., WAS ENTIRELY RELIED UPON FOR RECORDED RIGHTS–OF–WAY, EASEMENTS AND ENCUMBRANCES IN THE PREPARATION OF THIS SURVEY.

6.) RICK ENGINEERING, HAS MADE NO INVESTIGATION OR INDEPENDENT SEARCH FOR RECORDED/UNRECORDED EASEMENTS, ENCUMBRANCES, RESTRICTIVE COVENANTS, OWNERSHIP TITLE EVIDENCE OR ANY OTHER FACTS THAT AN ACCURATE AND CURRENT TITLE SEARCH MAY DISCLOSE.

7.) BASIS OF BEARINGS: BEARINGS ARE BASED ON THE NORTH LINE OF THE NORTHWEST QUARTER OF SECTION 18 BEING ASSUMED TO BEAR N 89°07'38" W BETWEEN MONUMENTS AS SHOWN WITHIN THIS PLAT.

OWNER/DEVELOPER

IN WITNESS WHEREOF, DAVID D. SPELLMAN, AS MAYOR AND MELISSA GREINER AS CITY CLERK OF THE CITY OF BLACK HAWK. HAS CAUSED THEIR NAMES TO BE HEREUNTO SUBSCRIBED THIS _____ DAY OF _____, 2020

CITY OF BLACK HAWK

BY:_____

ATTEST: DAVID D. SPELLMAN, MAYOR

_____
MELISSA GREINER, CITY CLERK

NOTARY PUBLIC

STATE OF _____)
)SS
COUNTY OF _____)

THE FOREGOING INSTRUMENT WAS ACKNOWLEDGED BEFORE ME THIS _____ DAY OF _____, 20___, BY DAVID D. SPELLMAN AS MAYOR AND MELISSA GREINER AS CITY CLERK OF THE CITY OF BLACK HAWK, FOR AND BEHALF OF THE CITY.

WITNESS MY HAND AND SEAL

_____
NOTARY PUBLIC

MY COMMISSION EXPIRES _____

IN WITNESS WHEREOF, _____, AS _____ OF CLUB VISTA PROPERTIES II, LLC, A NEVADA LIMITED LIABILITY COMPANY, HAS CAUSED _____ NAME TO BE HEREUNTO SUBSCRIBED THIS _____ DAY OF _____, 20___.

_____
BY:

NOTARY PUBLIC

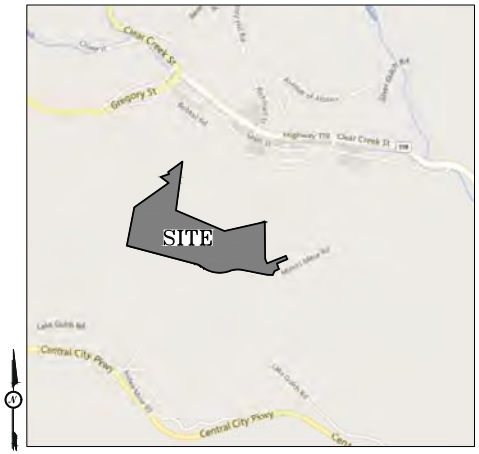
STATE OF _____)
)SS
COUNTY OF _____)

THE FOREGOING INSTRUMENT WAS ACKNOWLEDGED BEFORE ME THIS _____ DAY OF _____, 20___, BY _____, AS _____ OF CLUB VISTA PROPERTIES II, LLC.

WITNESS MY HAND AND SEAL

_____
NOTARY PUBLIC

MY COMMISSION EXPIRES _____



VICINITY MAP
SCALE: 1"=1000'

MAYOR'S CERTIFICATE

APPROVED AND ACCEPTED THIS _____ DAY OF _____, 2020 BY THE BOARD OF ALDERMEN OF THE CITY OF BLACK HAWK, SITUATED IN GILPIN COUNTY, COLORADO. THIS APPROVAL DOES NOT GUARANTEE THAT THE SIZE OR SOIL CONDITION OF ANY LOT SHOW HERE ON ARE SUCH THAT A BUILDING PERMIT CAN BE ISSUED.

CITY OF BLACK HAWK

ATTEST: BY:_____
DAVID D. SPELLMAN, MAYOR

_____
MELISSA GREINER, CITY CLERK

SURVEYOR'S CERTIFICATE

I ROBERT J. HENNESSY, A REGISTERED LAND SURVEYOR IN THE STATE OF COLORADO, DO HEREBY CERTIFY THAT THE SURVEY OF BLACK HAWK PARK, WAS MADE BY ME OR UNDER MY DIRECT SUPERVISION AND THE ACCOMPANYING PLAT COMPLIES WITH THE REQUIREMENTS OF TITLE 38, ARTICLE 51, C.R.S., AND THAT THE MONUMENTS REQUIRED BY SAID STATUTE AND BY THE SUBDIVISION ORDINANCE FOR THE CITY OF BLACK HAWK HAVE BEEN PLACED ON THE GROUND. THAT THE SURVEY ACCURATELY AND PROPERLY WITHIN APPLICABLE STANDARDS OF PRACTICE SHOWS SAID SURVEY BASED UPON MY KNOWLEDGE, INFORMATION AND BELIEF. THIS SURVEY IS NOT A GUARANTY OR WARRANTY, EITHER EXPRESSED OR IMPLIED.

_____
ROBERT J. HENNESSY
REGISTERED COLORADO LAND SURVEYOR NO. 34580
FOR AND ON BEHALF OF RICK ENGINEERING

FOR CLERK AND RECORDER USE ONLY

CLERK AND RECORDER'S CERTIFICATE

_____
RECEPTION NUMBER

ACCEPTING FOR FILING IN THE OFFICE OF THE CLERK AND RECORDER OF GILPIN COUNTY, AT CENTRAL CITY COLORADO ON THIS _____ DAY OF _____, 202__ AT _____ O'CLOCK.

_____
GILPIN COUNTY CLERK AND RECORDER

_____
BY: DEPUTY CLERK

RICK ENGINEERING COMPANY
9801 E EASTER AVE.
CENTENNIAL, CO 80112
PH: (303) 537-6020

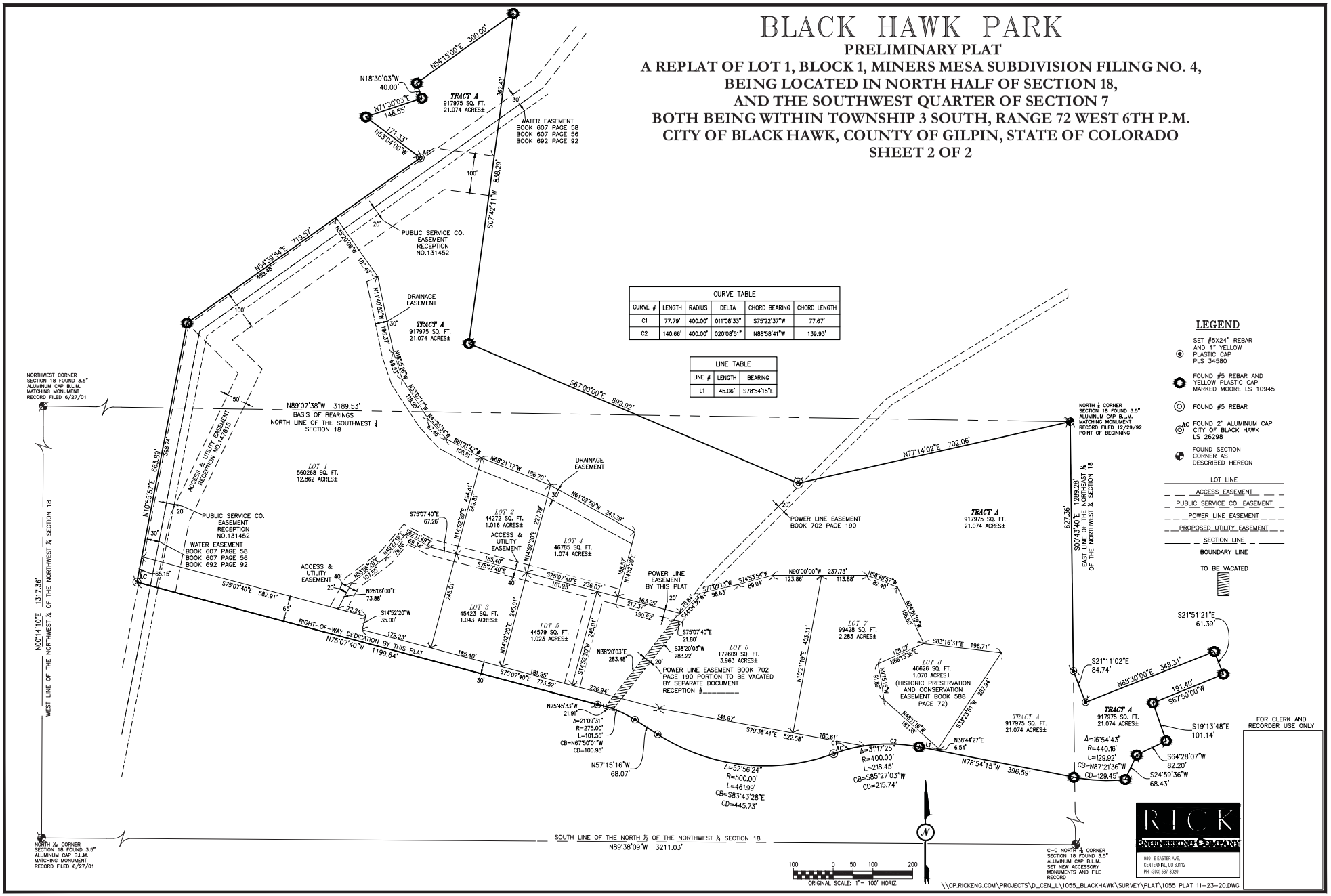
\\CP.RICKENG.COM\PROJECTS\D_CEN_L\1055_BLACKHAWK\SURVEY\PLAT\1055 PLAT 11–23–20.DWG

BLACK HAWK PARK

PRELIMINARY PLAT

A REPLAT OF LOT 1, BLOCK 1, MINERS MESA SUBDIVISION FILING NO. 4, BEING LOCATED IN NORTH HALF OF SECTION 18, AND THE SOUTHWEST QUARTER OF SECTION 7 BOTH BEING WITHIN TOWNSHIP 3 SOUTH, RANGE 72 WEST 6TH P.M. CITY OF BLACK HAWK, COUNTY OF GILPIN, STATE OF COLORADO

SHEET 2 OF 2



DRAINAGE REPORT
FOR
BLACK HAWK PARK
GILPIN COUNTY, COLORADO

Job Number: D-1055

November 30, 2020

RICK ENGINEERING COMPANY
ENGINEERING COMPANY
RICK ENGINEERING CO

DRAINAGE REPORT
FOR
BLACK HAWK PARK
GILPIN COUNTY, COLORADO

Job Number: D-1055

Prepared for:
Ventana Capital
9801 East Easter Avenue
Centennial, Colorado 80112
(303) 346-7006

Prepared by:
RICK ENGINEERING COMPANY
9801 East Easter Avenue
Centennial, Colorado 80112
(303) 537-8020

November 30, 2020

CERTIFICATION

Professional Engineer:

"This report and plan for the drainage design of Black Hawk Park was prepared by me (or under my direct supervision) in accordance with the provisions of the City of Black Hawk criteria and was designed to comply with the provisions thereof. I understand the City of Black Hawk does not and will not assume liability for drainage facilities designed by others."

_____

Robert K. Fitch, P.E.
Registered Professional Engineer State of Colorado #48704

Company: Rick Engineering Company

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- A. Site Information
- B. Calculations
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I. GENERAL LOCATION AND DESCRIPTION

A. Site Location:

The Black Hawk Park property is located within the City of Black Hawk off Miner's Mesa Road. The property is approximately 48 acres in area. The property is located in the North Half of Section 18 and the Southwest Quarter of Section 7 within Township 3 South, Range 72 West of the 6th Principal Meridian, in the City of Black Hawk, County of Gilpin and State of Colorado.

A majority of the Black Hawk Park site flows north towards an unnamed tributary to North Clear Creek. A small southern portion of the project drains south towards Russell Gulch which is also part of the North Clear Creek Watershed.

Vicinity Map
(Not to scale)

B. Description of Property:

Black Hawk Park is approximately 43 acres and is currently zoned as Commercial/Business Services (C/BS). In existing conditions, the property consists of open space with short grass, small shrubs, trees and slopes ranging from minor, around 2%, to steep, around 50% towards the northern edge of the site. There is an existing asphalt parking lot approximately 8.5 acres in size. There are two existing buildings onsite that are due to be demolished, along with three historical structures; there is an existing detention pond with its associated outlet structure, pipe outfall and rip-rap run-down with energy dissipation.

Per the Natural Resources Conservation Service Web Soil Survey, the property contains Hydrologic Group Type "D" soils, predominantly "Resort very gravelly sandy loam" soil type. Type "D" soils are described to having a very slow infiltration rate when thoroughly wet and a very slow rate of water transmission.

According to the FEMA Flood Insurance Rate Map 0800760001B, effective on 10/16/1984, there are no mapped floodplains within the site.

There are no irrigation canals or geological features on the site.

The proposed development consists of eight (8) commercial lots and one (1) tract. Lot 1 will contain 50 permanent airstream trailer pads, with associated check in building, shooting range, and bar. Lots 2-7 will contain development consistent with the C/BS zoning including distillery and micro-brewery facilities. Lot 8 consists of a historical preservation easement containing the existing historical structures. Tract A contains steep hillside slope on the northern portion of the site that will remain in its current condition. Tract A also contains the existing detention pond EDB-1 and outfall infrastructure that will remain in place. An additional detention pond EDB-2 will be located within Lot 7 to serve that lot only. The development will include all necessary infrastructures, inclusive to wet and dry utilities, parking facilities, and storm drainage and drainage control facilities.

II. DRAINAGE BASINS

The Black Hawk Park development is located in the North Clear Creek watershed. In existing conditions, a large majority of the project's runoff drains south to north across the site and is consolidated in channels and unnamed tributaries running down the steep hillside slopes towards North Clear Creek. A small portion of the southeast property drains south Russell Gulch, which is a tributary to North Clear Creek. Offsite areas flowing into the site consist of a portion of Basin B that is undeveloped land to the southwest.

In proposed conditions, the drainage characteristics will remain similar as compared to the pre-project condition. Lots 1-6 on the top of the mesa which comprises most of the developable site will be routed to the improved extended detention basin (EDB-1) and will utilize the existing single barrel 24-inch CMP (Design Point B) location as the outfall. A small portion of the site, Lot 7, will drain to a second extended detention basin (EDB-2) and will outfall to the existing natural drainage draw on the north side of Miners Mesa road. The northern hillside slopes within Tract A will remain pervious as in their current condition and continue to flow north to North Clear Creek.

It is noted that Miners Mesa Road will be improved and extended along the southern boundary of the site at approximately the same time as the initial development of Black Hawk Park. In the post project condition, Miners mesa Road will be a delineation point for the on/off-site basin along the southern boundary. The portion of the property along the southern boundary that is to be dedicated as ROW to the City of Black Hawk will be captured within the ROW and directed to the existing detention pond south of the Public Works building; the design and construction of the road extension shall be completed by others and is not discussed in detail in this report.

Please refer to Appendix C for the Pre-Project and Post-Project Drainage Study Maps for the precise locations of the Design Points.

A. Drainage Basins:

Pre-Project:

Basin A consists of undeveloped and forested mountain hillside and is approximately 53.7 acres that typically drains from south to north. Runoff flows down the steep hillside slope towards Bobtail Rd, and outfalls to North Clear Creek.

Basin B is approximately 24.8 acres and drains from offsite to the southwest of the site and through the site to an existing 18-inch RCP that flows into the existing extended detention basin EDB-1. Basin B contains a large portion of the asphalt parking lot onsite and the majority of the developable land. The outfall from EDB-1 is a 24" RCP (Design Point #3) that discharges to the north into Basin C.

Basin C is approximately 47.2 acres and drains from the top of the mesa onsite and down undeveloped and forested mountain hillside towards Miners Mesa Road, and outfalls to North Clear Creek.

Basin D is approximately 39.6 acres and is located south of the site, including a small southeastern portion of the site. The basin drains to the south and outfalls to Russell Gulch, a tributary of North Clear Creek.

Basin E is approximately 81.5 acres and contains the remainder of the asphalt parking lot onsite and the historical preservation easement in the upper reaches of the basin, and consists largely of undeveloped forested mountain hillside. The basin drains north to Miners Mesa Road and outfalls to North Clear Creek.

Post-Project:

Basin A will remain similar in size at approximately 52.9 acres, with the reduction in size due to shifting a portion of area at the top of the mesa into Basin B to allow for attenuation of developed land and water quality treatment. The remainder of the basin will continue to be undeveloped forested mountain hillside and will continue to drain in the same pattern as pre-project condition.

Basin B will remain similar in size, increasing to 26.7 acres with an increase in area redirected from Basin A and a loss of area along the ROW corridor for Miners Mesa Road to Basin D. The slight increases in area and imperviousness through development will require improvements to the existing extended detention basin (EDB-1) to modify the outfall structure and increase the capacity of the pond.

Basin C will remain similar in size at approximately 45.6 acres, with the with the reduction in size due to shifting a portion of area at the top of the mesa into Basin B to allow for attenuation of developed land and water quality treatment. Basin C will remain undeveloped forested mountain hillside and will continue to drain in the same pattern as pre-project condition.

Basin D will remain similar in size at approximately 40.2 acres, with the increase in size attributed to the Miners Mesa Road ROW corridor and a decrease in contributing area from onsite in Basin B to allow for attenuation of developed land and water quality treatment. Other than the improvement of Miners Mesa Road, Basin D will remain as existing and will continue to drain in the same pattern as pre-project condition.

Basin E will remain similar in size at approximately 81.4 acres. The developed land at the top of the basin, Lot 7, will require an extended detention basin to provide for attenuation and water quality of the developed land. The exact location and geometry of the pond will be determined during the site development phase for Lot 7; however, for the purposes of this report the detention pond has been assumed to have a volume of 0.122 acre-ft with an approximate footprint of 2,500 sf. This attenuation volume may be achieved by one or more ponds depending on site layout, but has been assumed to be a single pond for the purpose of this report. Refer to the calculations in Appendix B for

further detail. The remainder of Basin E will remain as undeveloped forested mountain hillside, and will continue to drain in the same pattern as the pre-project condition.

III. DRAINAGE DESIGN CRITERIA

A. Regulations:

- Urban Storm Drainage Criteria Manual (USDCM) – Urban Drainage and Flood Control District (UDFCD), August 2018.

No deviation in criteria is requested from any criteria listed above. There are no previous drainage studies that influence the drainage design of the Black Hawk Park development.

B. Hydrology:

Rational Method

This drainage study is prepared in accordance with the current UDFCD, Urban Storm Drainage Criteria Manual dated August 2018. In accordance with the USDCM, Rational Method is used to calculate runoff for basins with area less than 90 acres and Colorado Urban Hydrograph Procedure (CUHP) is used to calculate runoff for basins more than 90 acres. All basins in project site are less than 90 acres; therefore, rational method is used to calculate runoff from all the on-site basins. The rational formula is as follows:

$Q = CIA$

Where,
Q = Peak runoff in cubic feet/sec
C = Composite Runoff Coefficient for either 5 year or 100-year storm
I = Intensity of rainfall (inches per hour) at calculated time of concentration
A= Area of basin in acres

Time of Concentration

The time of concentration is calculated by the following equation (equation 6-2 per USDCM, Jan 2016 edition):

$t_c = t_i + t_t$

Where,
t_c – Computed time of concentration (minutes)
t_i – Overland (initial) flow time (minutes)
t_t – Channelized flow time (minutes)

Initial or Overland Flow time is calculated by the following equation (equation 6-3 per USDCM, August 2018 edition):

$$t_i = \frac{0.395(1.1 - C_5)\sqrt{L_i}}{S_0^{0.33}}$$

Where,

t_i – Overland (initial) flow time (minutes)

C_5 – Runoff coefficient for 5-year frequency

L - Length of overland flow (ft)

S_0 - Average slope along the overland path (ft/ft)

Channelized Flow time is calculated by the following equation (equation 6-4 per USDCM, August 2018 edition):

$$t_t = \frac{L_t}{60K\sqrt{S_0}} = \frac{L_t}{60V_t}$$

Where,

t_t– Channelized flow time (travel time, min.)

L_t – Waterway Length (ft)

S_0 – Waterway Slope (ft/ft)

V_t – Travel time velocity (ft/s) = $K\sqrt{S_0}$

K – NRCS Conveyance factor

Time of concentration is also calculated based on the following equation (equation 6-5 per USDCM, August 2018 edition):

$$t_c = (26 - 17i) + \frac{L_t}{60(14i + 9)\sqrt{S_t}}$$

Where,

t_c – Minimum time of concentration for first design point when less than t_c from equation 6-1

L_t – Length of flow path (ft)

i – Imperviousness (expressed as decimal)

S_t – Slope of channelized flow path (ft/ft)

Refer to Appendix B for Time of Concentration Calculations.

Rainfall Intensity

The 5-year and 100-year storms are the minor and major storm events for this property. The rainfall intensities were obtained from the National Oceanic and Atmospheric Administration (NOAA) Atlas 14, Volume 8, Version 2 for point precipitation frequency estimates. Below is a summary table for the 1-Hour point rainfall; refer to Appendix A for further detail.

1-Hour Point Rainfall Values (inches)					
Event	2-Year	5-Year	10-Year	50-Year	100-Year
Zone 1	0.689	0.881	1.25	1.42	1.58

Composite C-Value

RUNOFF COEFFICIENT CALCULATIONS
PRE-PROJECT CONDITION

DESIGNED BY: JP — JOB NO 1055
CHECKED BY: — DATE: 12/1/2020

Design Point	Basin	Total Area		Impervious Cover					Composite		
		sq-ft	acres	sq-ft	acres	% Impervious	C_5	C_{100}	% Impervious	C_5	C_{100}
A	A	2,339,022	53.7	0	0.00	0.0%	0.04	0.48	0.0%	0.04	0.48
B	B	1,078,148	24.8	225,678	5.18	20.9%	0.21	0.57	4.4%	0.21	0.57
C	C	2,056,601	47.2	0	0.00	0.0%	0.04	0.48	0.0%	0.04	0.48
D	D	1,724,067	39.6	636,841	14.62	36.9%	0.34	0.64	13.6%	0.34	0.64
E	E	3,548,450	81.5	59,933	1.38	1.7%	0.05	0.49	0.0%	0.05	0.49

RUNOFF COEFFICIENT CALCULATIONS
POST-PROJECT CONDITION

DESIGNED BY: JP — JOB NO. 1055
CHECKED BY: — DATE: 12/1/2020

Design Point	Basin	Total Area		Impervious Cover					Composite		
		sq-ft	acres	sq-ft	acres	% Impervious	C_5	C_{100}	% Impervious	C_5	C_{100}
A	A	2,302,703	52.9	0	0.00	0.0%	0.04	0.48	0.0%	0.04	0.48
B	B	1,162,300	26.7	262,793	6.03	22.6%	0.22	0.58	22.6%	0.22	0.58
C	C	1,986,575	45.6	0	0.00	0.0%	0.04	0.48	0.0%	0.04	0.48
D	D	1,749,179	40.2	664,088	15.25	38.0%	0.35	0.64	38.0%	0.35	0.64
E	E	3,546,023	81.4	45,316	1.04	1.3%	0.05	0.49	1.3%	0.05	0.49

Runoff Summary Table – Existing and Proposed Peak Flows

5-YR POST-PROJECT RUNOFF $P_{5\ Year}$ = 0.88 inch						
DESIGNED BY: JP					JOB NO.	1055
CHECKED BY:					DATE:	12/1/2020
Design Point	Basin	Area acres	C_5	t_c min	I in/hr	Q_5 cfs
A	A	52.9	0.04	21.84	1.65	3.06
B	B	26.7	0.22	20.43	1.71	10.07
C	C	45.6	0.04	16.06	1.93	3.09
D	D	40.2	0.35	18.39	1.81	25.14
E	E	81.4	0.05	16.03	1.94	7.16

100-YR POST-PROJECT RUNOFF $P_{100\ Year}$ = 1.58 inch						
DESIGNED BY: JP					JOB NO.	1055
CHECKED BY:					DATE:	12/1/2020
Design Point	Basin	Area acres	C_{100}	t_c min	I in/hr	Q_{100} cfs
A	A	52.9	0.48	21.84	2.97	75.9
B	B	26.7	0.58	20.43	3.07	47.3
C	C	45.6	0.48	16.06	3.47	76.6
D	D	40.2	0.64	18.39	3.25	83.4
E	E	81.4	0.49	16.03	3.47	138.4

C. Stormwater Storage Facilities:

The project proposes two (2) detention basins, EDB-1 and EDB- 2. The detention basins are designed at 3:1 side slope and a micropool is provided at the bottom. Per USDCM, freeboard of 1 foot is provided. The emergency spillway for the proposed detention basins have been designed to convey the post-project un-detained 100-year runoff while maintaining the minimum freeboard.

In accordance with the USDCM, the detention basins will provide detention of the Water Quality Capture Volume (WQCV), Excess Urban Runoff Volume (EURV), and the 100-Year storm event. The post-project flow rates for the 100-year storm event will be detained back to the predevelopment peak flow rates.

Detention basins were designed utilizing the UDFCD Detention Basin Design Workbook spreadsheet (MHDF-Detention Version 4.02) for all return periods to mitigate for the additional impervious area in the proposed condition. The design maximum allowable release rate for these detention basins will match the overall pre-project development flow rate for the 100-year storm, as stipulated by USDCM. Please refer to Appendix B for supporting detention calculations.

The detention basins were designed to provide detention for all of their respective tributary areas. EDB-1 and EDB-2 were sized to reduce peak flows prior to discharge offsite.

Emergency overflow structure shall be sized for EDB-1 and EDB-2 to convey the un-detained Q100 safely through the proposed outfall pipes without flooding or impacting the adjacent roads or pads. The un-detained Q100 will be conveyed through a conventional emergency spillway for both basins. Riprap for pipe outlets into the extended detention basin has been designed per Chapter 8 and Chapter 9 of the UDFCD's Urban Storm Drainage Criteria Manual (USDCM). Emergency overflow spillway riprap has been designed per Chapter 12 of the USDCM.

D. Stormwater Conveyance Facilities:

The project site has been designed to convey runoff from the proposed site in accordance with the design criteria. The commercial pads, parking lots, and drive lanes will be graded to reflect existing drainage patterns. Extended detention basins are proposed to reduce peak flows to pre-project conditions and to satisfy water quality treatment. Inlets shall be sized for ultimate conditions and will serve as connection points for future storm drain connections. The storm sewer system shall be designed to ensure the hydraulic grade line of the system is below the ground elevation during the major storm.

Full hydraulic calculations shall be provided within individual lots once the detailed grading and drainage of those lots is well defined, during the Site Development Plan Phase.

Swales have been sized for major conveyance to EDB-1. Refer to the calculations provided in Appendix B for further information.

Street Capacity, Pipes and Inlets

Street capacity and CDOT Type R inlets along the proposed streets shall be designed utilizing the UDFCD Street and Inlet Hydraulics spreadsheet (UD-Inlet Version 4.05). Type C inlets, where required, shall be designed utilizing the weir equation and assuming 50% clogging to account for the grate and debris build up. The inlet calculations shall include the interception rates for both the minor and major storm events.

Standard CDOT Type R curb-opening and Type C grate inlets shall be used for all proposed inlets. Storm sewers are sized to convey the minor design storm in a "just full" condition, generally without surcharging for the most part. The major storm event hydraulic grade lines are allowed to rise above the top of the storm sewer pipe and

surcharge the system. However, a minimum clearance of 1-foot below the manhole lid, inlet grate or inlet curb opening elevation has been maintained.

The minimum pipe size for storm sewers is 18-inch Reinforced Concrete Pipes (RCP) per the standard. Maximum manhole spacing is as follows:

Pipe Diameter	Maximum Distance Between Manholes
18-inch to 36-inch	400 feet
>36-inch	500 feet

Storm sewer sizing, confluence analysis, hydraulic grade lines and energy grade line analyses shall be performed using Hydraflow Storm Sewers Extension for Autodesk Civil 3D. Applicable storm sewer losses will be calculated, and hydraulic grade lines will be computed for the proposed storm sewer per criteria set forth in the USDCM Volume 1, August 2018 condition. Tailwater conditions will also be accounted for when applicable.

Open Channel Design

Open channels and swales shall be designed in accordance with USDCM Volume 2, Chapter 8, Section 6. Swales shall be grass lined and designed to convey the 100-year peak flows with a minimum of 1.0' of freeboard and shall not exceed channel velocities of 7 fps. Swales shall have maximum of 3:1 side slopes and trapezoidal channels shall have a minimum bottom width of 2.0'.

Refer to the preliminary engineering drawings for locations and details of the proposed swales on site and refer to Appendix B for hydraulic calculations for the different swale types on site. A summary of the peak flows for each swale is as follows:

5-YR POST-PROJECT CHANNEL RUNOFF

$P_{5\ Year} = 0.88$ inch

DESIGNED BY: JP JOB NO. 1055

CHECKED BY: DATE: 12/1/2020

Channel	Area	C_5	t_c	I	Q_5
	acres		min	in/hr	cfs
1	1.66	0.09	29.18	1.40	0.20
2	17.3	0.13	21.77	1.65	3.78
3A	3.02	0.28	16.22	1.92	1.63
3B	0.91	0.47	15.26	1.98	0.85

100-YR POST-PROJECT CHANNEL RUNOFF

$P_{100\ Year} = 1.58$ inch

DESIGNED BY: JP JOB NO. 1055

CHECKED BY: DATE: 12/1/2020

Channel	Area	C_{100}	t_c	I	Q_{100}
	acres		min	in/hr	cfs
1	1.7	0.51	29.18	2.52	2.1
2	17.3	0.53	21.77	2.97	27.4
3A	3.0	0.61	16.22	3.45	6.3
3B	0.9	0.70	15.26	3.56	2.3

Riprap

Riprap at pipe outlets and into the pond will be designed per USDCM Volume 2, Chapter 9, Section 3. The detention basin emergency spillways have been designed per UDFCD Volume 2, Chapter 12, Section 5.

E. Floodplain Modifications:

This project does not propose to modify any floodplain. Proposed improvements associated with this project will provide full conveyance of the 100-year storm event. There is no proposed encroachment into any floodplain and there are no Floodplain Development Permit applications associated with this project.

F. Water Quality Enhancement BMPs:

Non-Structural Best Management Practices (BMPs) focus on preserving open space, protecting natural systems and incorporating existing landscape into the site plan to manage stormwater at its source. Non-structural BMPs are incorporated into the site plan by the including grassed trapezoidal swales for treatment and conveyance throughout the development. The development minimizes impervious areas where applicable and incorporates preventative maintenance measures during construction to minimize storm water contamination.

Structural BMPs are incorporated to improve water quality and runoff leaving the site. Structural BMPs include ditches and EDB with low flow channels, micropools, forebays and outlet control systems to control sediment in the stormwater and attenuate the peak flows. Two (2) EDB are proposed as part of the project.

G. Additional Permitting Requirements:

- City of Black Hawk Storm Water Management Plan (SWMP)
- Colorado Department of Public Health & Environment – General Permit for Stormwater Discharges Associated with Construction Activity (NPDES)

IV. CONCLUSIONS

A. Compliance with Standards:

This drainage report meets criteria set forth by the Urban Storm Drainage Criteria Manual (USDCM) – Urban Drainage and Flood Control District (UDFCD), August 2018.

B. Variances:

No variances from design criteria are requested at this time.

C. Drainage Concept:

The Black Hawk Park development will provide full conveyance of stormwater flow from the project site during the minor and major storm events. All stormwater flow from the project site will be treated for water quality and full-spectrum detention will be provided. The improvements associated with this project are not anticipated to have downstream impacts or impacts to any wetlands or floodplains.

V. REFERENCES

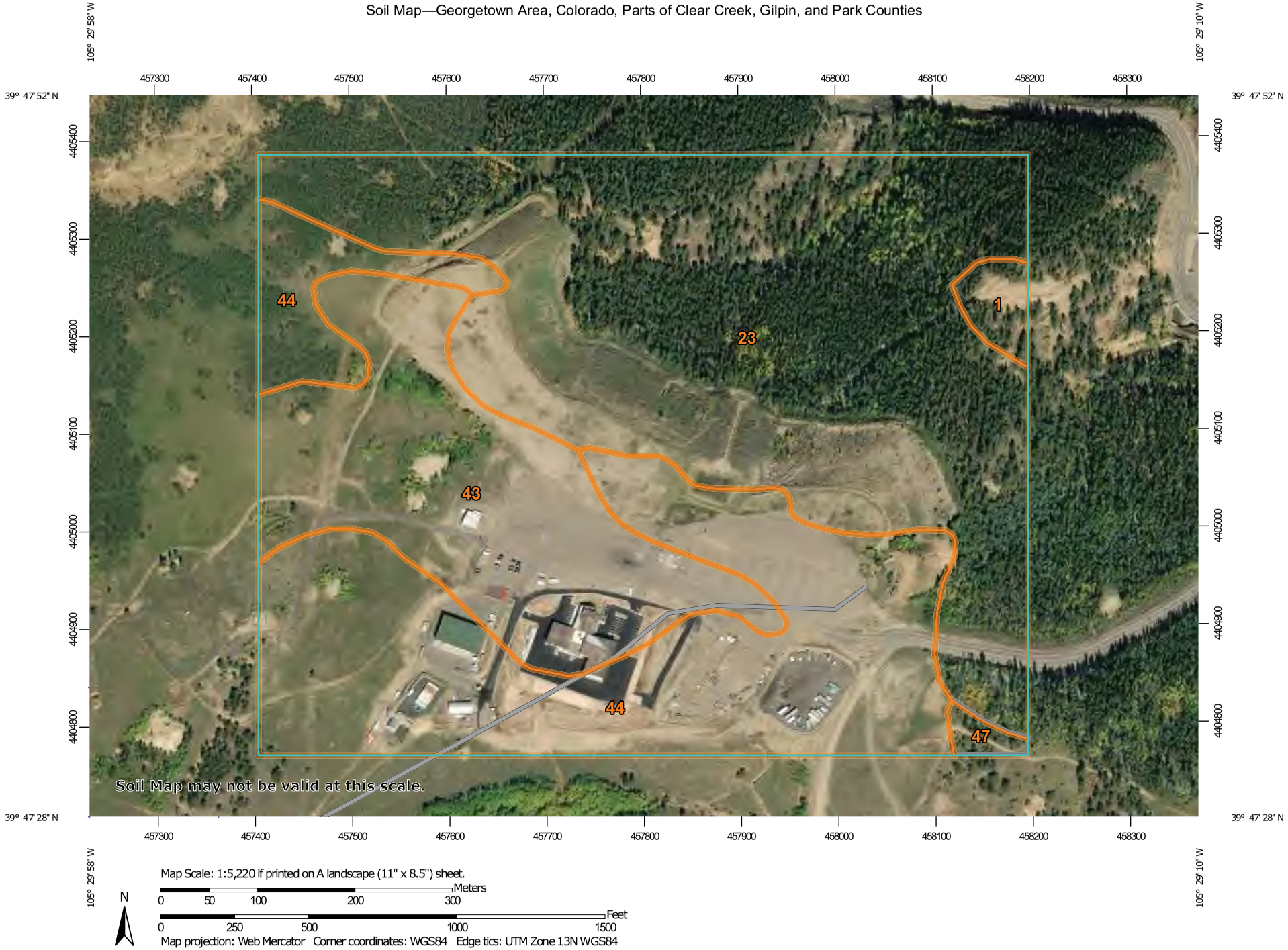
Urban Storm Drainage Criteria Manual (USDCM) – Urban Drainage and Flood Control District (UDFCD), August 2018.

Appendix A

Site Information

NRCS Soil Classification Map
FEMA FIRM Map
NOAA Atlas 14
NOAA Vicinity Map

Soil Map—Georgetown Area, Colorado, Parts of Clear Creek, Gilpin, and Park Counties



Map Scale: 1:5,220 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 50 100 200 300

Feet
0 250 500 1000 1500

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 13N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Georgetown Area, Colorado, Parts of Clear Creek, Gilpin, and Park Counties
Survey Area Data: Version 14, Jun 10, 2020

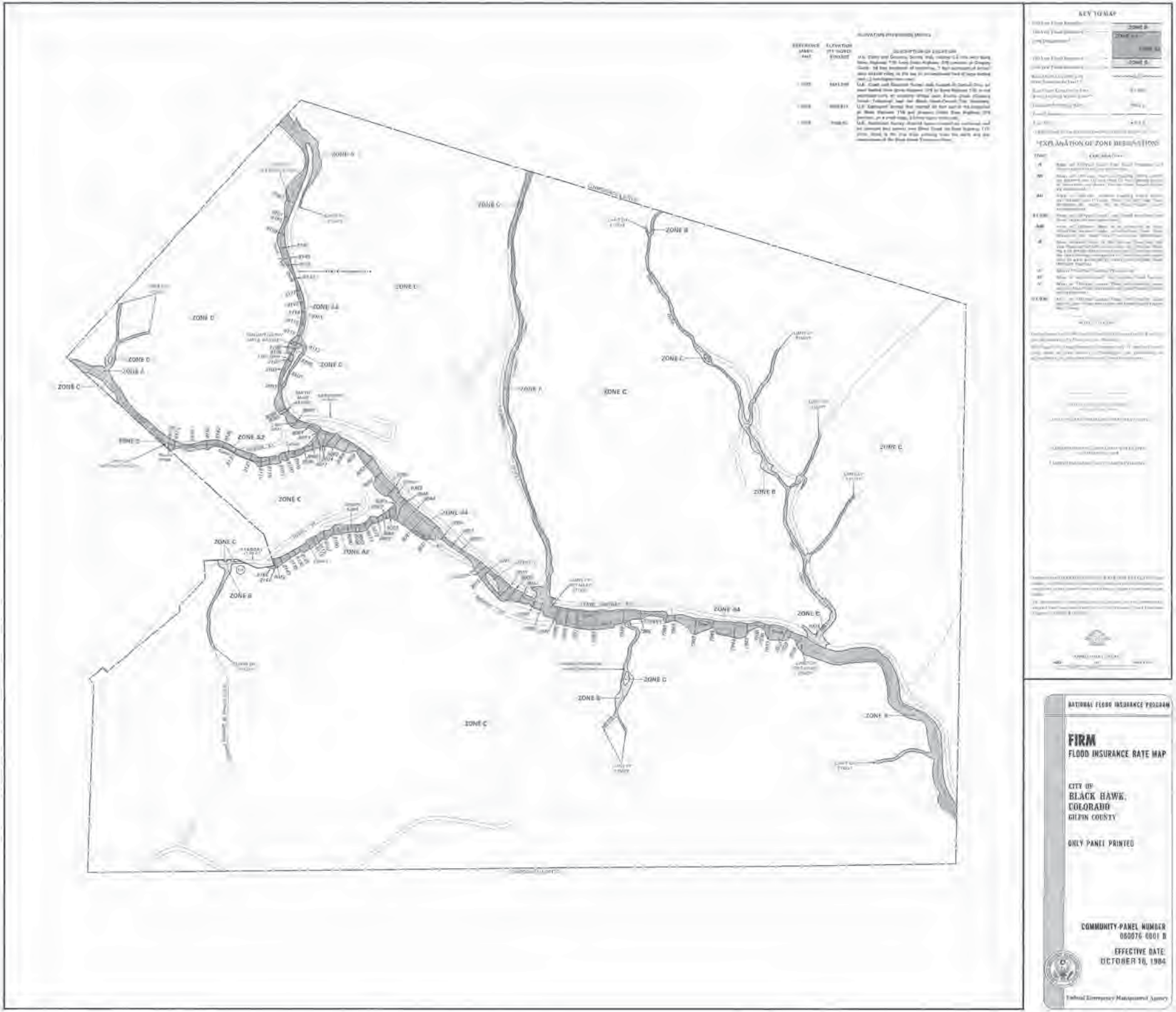
Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 4, 2010—Nov 1, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
1	Arents-Dumps, mine complex, 5 to 80 percent slopes	1.5	1.2%
23	Legault-Rock outcrop complex, 30 to 80 percent slopes	56.0	46.3%
43	Resort very gravelly sandy loam, 3 to 10 percent slopes	23.8	19.7%
44	Resort very gravelly sandy loam, 10 to 30 percent slopes	39.0	32.2%
47	Resort-Cathedral complex, 30 to 60 percent slopes	0.7	0.6%
Totals for Area of Interest		**120.9**	**100.0%**


KEY TO MAP
EXPLANATION OF ZONE DESIGNATIONS
NATIONAL FLOOD INSURANCE PROGRAM
FIRM
FLOOD INSURANCE RATE MAP
CITY OF
BLACK HAWK,
COLORADO
GILPIN COUNTY
ONLY PANEL PRINTED
COMMUNITY-PANEL NUMBER
080076 0001 B
EFFECTIVE DATE:
OCTOBER 16, 1984
Federal Emergency Management Agency

NOAA Atlas 14, Volume 8, Version 2
Location name: Black Hawk, Colorado, USA*
Latitude: 39.7946°, Longitude: -105.4936°
Elevation: 8648.45 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Deborah Martin, Sandra Pavlovic, Ishani Roy, Michael St. Laurent, Carl Trypaluk, Dale Unruh, Michael Yekta, Geoffery Bonnin

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.187 (0.144-0.243)	0.228 (0.175-0.297)	0.296 (0.227-0.386)	0.354 (0.270-0.463)	0.434 (0.321-0.591)	0.497 (0.359-0.687)	0.561 (0.393-0.798)	0.628 (0.422-0.919)	0.716 (0.465-1.08)	0.785 (0.497-1.21)
10-min	0.274 (0.211-0.356)	0.334 (0.257-0.434)	0.434 (0.332-0.566)	0.518 (0.395-0.679)	0.636 (0.469-0.865)	0.728 (0.526-1.01)	0.822 (0.575-1.17)	0.919 (0.618-1.35)	1.05 (0.680-1.59)	1.15 (0.727-1.77)
15-min	0.334 (0.257-0.434)	0.407 (0.313-0.530)	0.529 (0.405-0.690)	0.631 (0.481-0.828)	0.775 (0.573-1.06)	0.888 (0.641-1.23)	1.00 (0.701-1.43)	1.12 (0.754-1.64)	1.28 (0.830-1.93)	1.40 (0.887-2.15)
30-min	0.450 (0.346-0.585)	0.552 (0.424-0.717)	0.718 (0.551-0.937)	0.857 (0.653-1.12)	1.05 (0.773-1.42)	1.20 (0.864-1.65)	1.35 (0.941-1.91)	1.50 (1.01-2.19)	1.70 (1.10-2.56)	1.85 (1.17-2.84)
60-min	0.571 (0.440-0.742)	0.689 (0.530-0.897)	0.881 (0.675-1.15)	1.04 (0.791-1.36)	1.25 (0.922-1.70)	1.42 (1.02-1.95)	1.58 (1.10-2.23)	1.74 (1.17-2.54)	1.95 (1.26-2.94)	2.11 (1.34-3.24)
2-hr	0.693 (0.539-0.892)	0.827 (0.642-1.07)	1.04 (0.807-1.35)	1.22 (0.938-1.58)	1.46 (1.08-1.95)	1.63 (1.19-2.23)	1.81 (1.27-2.53)	1.98 (1.34-2.86)	2.21 (1.44-3.29)	2.37 (1.52-3.61)
3-hr	0.778 (0.608-0.996)	0.918 (0.717-1.18)	1.14 (0.890-1.47)	1.33 (1.03-1.71)	1.57 (1.17-2.09)	1.75 (1.28-2.38)	1.93 (1.37-2.69)	2.11 (1.44-3.03)	2.34 (1.54-3.47)	2.51 (1.61-3.80)
6-hr	0.967 (0.764-1.23)	1.12 (0.884-1.42)	1.38 (1.08-1.75)	1.59 (1.25-2.04)	1.90 (1.44-2.53)	2.15 (1.59-2.90)	2.39 (1.72-3.33)	2.65 (1.83-3.80)	3.00 (2.00-4.44)	3.27 (2.13-4.92)
12-hr	1.22 (0.975-1.54)	1.40 (1.11-1.76)	1.72 (1.37-2.17)	2.02 (1.59-2.56)	2.47 (1.92-3.31)	2.86 (2.16-3.88)	3.28 (2.40-4.58)	3.74 (2.63-5.38)	4.40 (2.98-6.51)	4.94 (3.25-7.38)
24-hr	1.50 (1.21-1.87)	1.72 (1.38-2.14)	2.14 (1.72-2.68)	2.56 (2.04-3.22)	3.22 (2.54-4.31)	3.80 (2.91-5.14)	4.44 (3.29-6.17)	5.15 (3.67-7.37)	6.19 (4.25-9.12)	7.05 (4.68-10.4)
2-day	1.76 (1.44-2.18)	2.04 (1.66-2.52)	2.59 (2.10-3.20)	3.12 (2.52-3.88)	3.97 (3.17-5.29)	4.72 (3.66-6.35)	5.56 (4.17-7.68)	6.50 (4.68-9.24)	7.87 (5.46-11.5)	9.00 (6.04-13.2)
3-day	1.94 (1.59-2.38)	2.23 (1.82-2.74)	2.80 (2.28-3.45)	3.37 (2.73-4.17)	4.29 (3.45-5.70)	5.12 (4.00-6.86)	6.04 (4.56-8.31)	7.08 (5.14-10.0)	8.61 (6.01-12.5)	9.88 (6.67-14.4)
4-day	2.09 (1.72-2.56)	2.37 (1.95-2.91)	2.95 (2.42-3.62)	3.53 (2.88-4.36)	4.49 (3.63-5.94)	5.35 (4.20-7.14)	6.31 (4.79-8.66)	7.40 (5.40-10.5)	9.01 (6.32-13.1)	10.4 (7.02-15.1)
7-day	2.48 (2.06-3.01)	2.76 (2.29-3.36)	3.34 (2.76-4.07)	3.93 (3.23-4.81)	4.90 (3.99-6.43)	5.77 (4.57-7.65)	6.76 (5.18-9.20)	7.88 (5.79-11.0)	9.53 (6.75-13.7)	10.9 (7.47-15.8)
10-day	2.82 (2.35-3.40)	3.11 (2.60-3.76)	3.70 (3.08-4.49)	4.30 (3.55-5.24)	5.26 (4.30-6.83)	6.12 (4.86-8.04)	7.08 (5.45-9.57)	8.17 (6.04-11.4)	9.76 (6.95-14.0)	11.1 (7.63-16.0)
20-day	3.72 (3.14-4.45)	4.11 (3.47-4.92)	4.82 (4.05-5.79)	5.46 (4.57-6.60)	6.44 (5.27-8.16)	7.26 (5.80-9.34)	8.14 (6.30-10.8)	9.10 (6.77-12.4)	10.5 (7.50-14.8)	11.6 (8.05-16.5)
30-day	4.47 (3.80-5.32)	4.98 (4.22-5.93)	5.83 (4.93-6.96)	6.57 (5.53-7.88)	7.62 (6.24-9.52)	8.46 (6.77-10.7)	9.33 (7.23-12.2)	10.2 (7.64-13.8)	11.5 (8.26-16.1)	12.5 (8.73-17.7)
45-day	5.45 (4.66-6.44)	6.11 (5.22-7.24)	7.20 (6.13-8.55)	8.09 (6.86-9.66)	9.31 (7.64-11.5)	10.2 (8.23-12.9)	11.2 (8.70-14.5)	12.1 (9.07-16.2)	13.3 (9.64-18.5)	14.3 (10.1-20.2)
60-day	6.30 (5.41-7.41)	7.11 (6.11-8.39)	8.42 (7.21-9.96)	9.48 (8.07-11.3)	10.9 (8.97-13.4)	12.0 (9.64-15.0)	13.0 (10.2-16.7)	14.0 (10.5-18.7)	15.3 (11.1-21.1)	16.3 (11.6-23.0)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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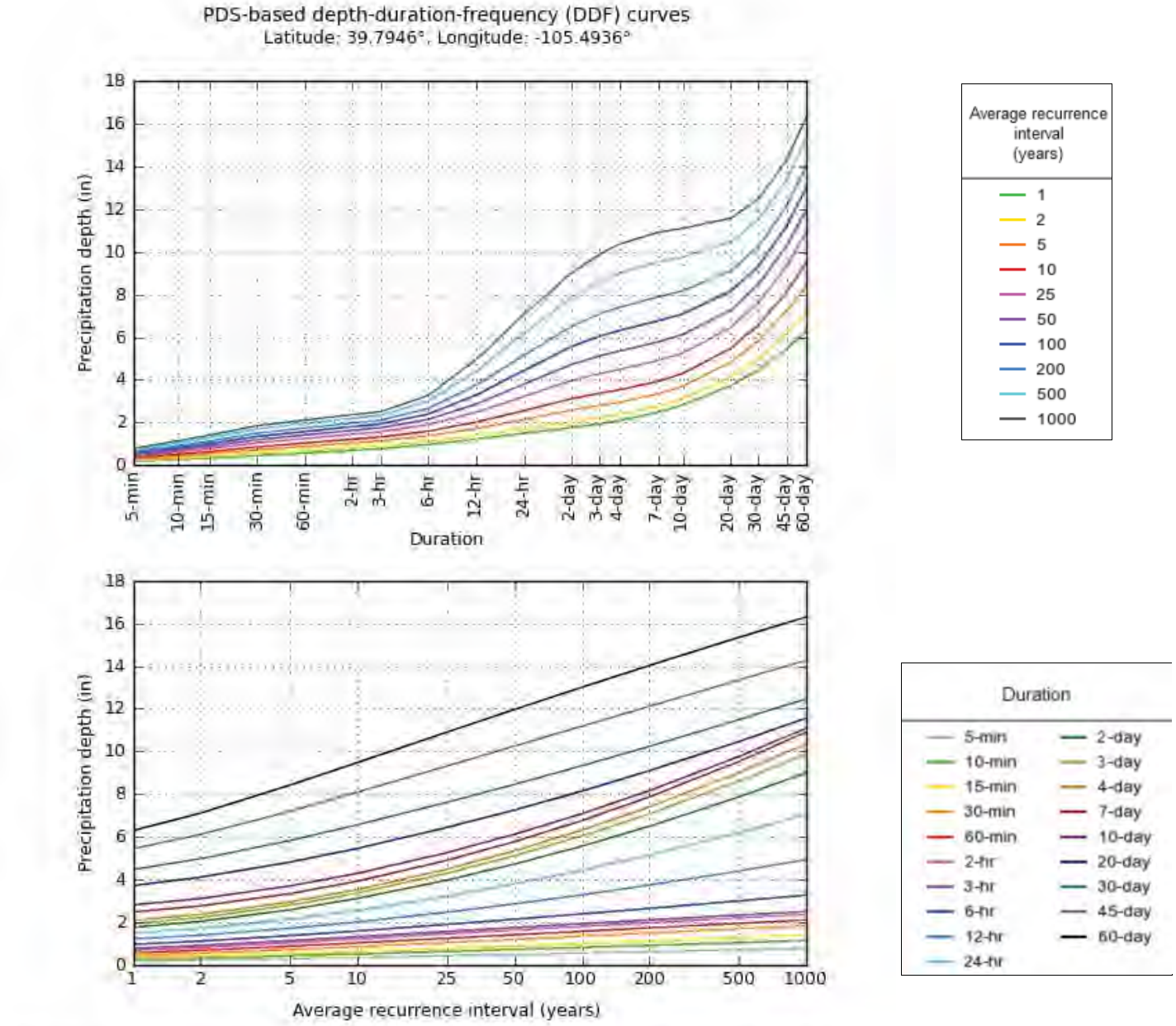
PF graphical



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Maps & aerials

Small scale terrain

Map
Terrain
Golden Gate Canyon State Park
Black Hawk
Central City
Clear Creek St
Dory Hill Rd
Barrett Rd
Eureka St
Lawrence St
Gregory St
Nevadaville Rd
Nevada St
Main St
Miners Mesa Rd
Virginia Canyon Rd
County Road 6
Lake Gulch Rd
Casino Pkwy
119
Missouri Flats Rd
0.6km
0.4mi

Appendix B

Calculations

Time of Concentration Calculations
MHDF-Detention Calculations
Stormwater Channel Conveyance Calculations

TIME OF CONCENTRATION
PRE-PROJECT CONDITION

DESIGNED BY: JP
CHECKED BY:

JOB NO. 1055
DATE: 12/1/2020

Design Point	Basin	Total Area	Imperviousness	C_5[1]	C_{100}[1]	Initial Overland Flow Time (t_i)					Travel/Channelized Time of Flow (t_t)							Time of Concentration (t_c)	t_c check	Final Time of Concentration (t_c)	Comments
						Starting Elevation	Ending Elevation	Length	Slope	t_i[2]	Starting Elevation	Ending Elevation	Length	Slope	K	Channel velocity[3]	t_t[4]	t_c[5] $=t_i+t_t$	t_c[6]	Final t_c[7] (If <5 min., use 5 min.)	
		acres				*ft*	*ft*	*ft*	*ft/ft*	*min*	*ft*	*ft*	*ft*	*ft/ft*		*ft/s*	*min*	*min*	min	*min*	
A	A	53.7	0.00	0.04	0.48	8,733.0	8,686.9	300.0	0.15	13.6	8,686.9	7,993.3	3,369.8	0.21	15	6.8	8.3	21.8	39.8	21.8	
B	B	24.8	0.04	0.21	0.57	8,768.1	8,740.5	300.0	0.09	13.5	8,740.5	8,632.0	2,108.0	0.05	15	3.4	10.3	23.8	41.4	23.8	
C	C	47.2	0.00	0.04	0.48	8,668.9	8,645.0	300.0	0.08	16.9	8,645.0	7,977.7	2,602.6	0.26	15	7.6	5.7	22.6	35.5	22.6	
D	D	39.6	0.14	0.34	0.64	8,768.1	8,728.2	300.0	0.13	10.2	8,728.2	8,519.0	2,268.3	0.09	15	4.6	8.3	18.5	35.1	18.5	
E	E	81.5	0.00	0.05	0.49	8,803.3	8,697.9	300.0	0.35	10.2	8,697.9	7,977.7	2,701.0	0.27	15	7.7	5.8	16.0	35.7	16.0	

TIME OF CONCENTRATION
POST-PROJECT CONDITION

DESIGNED BY: JP
CHECKED BY:

JOB NO. 1055
DATE: 12/1/2020

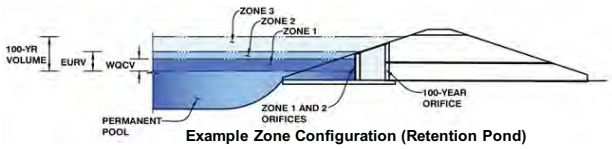
Design Point	Basin	Total Area	Imperviousness	C_5[1]	C_{100}[1]	Initial Overland Flow Time (t_i)					Travel/Channelized Time of Flow (t_t)							Time of Concentration (t_c)	t_c check	Final Time of Concentration (t_c)	Comments
						Starting Elevation	Ending Elevation	Length	Slope	t_i[2]	Starting Elevation	Ending Elevation	Length	Slope	K	Channel velocity[3]	t_t[4]	t_c[5] $=t_i+t_t$	t_c[6]	Final t_c[7] (If <5 min., use 5 min.)	
		acres				*ft*	*ft*	*ft*	*ft/ft*	*min*	*ft*	*ft*	*ft*	*ft/ft*		*ft/s*	*min*	*min*	min	*min*	
A	A	52.9	0.00	0.04	0.48	8,733.0	8,686.9	300.0	0.15	13.59	8,686.9	7,993.3	3,369.8	0.21	15	6.8	8.3	21.84	39.76	21.84	
B	B	26.7	0.23	0.22	0.58	8,768.1	8,740.5	300.00	0.09	13.31	8,740.5	8,632.0	1,992.79	0.05	20	4.7	7.1	20.43	33.86	20.43	
C	C	45.6	0.00	0.04	0.48	8,663.0	8,564.5	300.00	0.33	10.56	8,564.5	7,977.7	2,432.69	0.24	15	7.4	5.5	16.06	35.17	16.06	
D	D	40.2	0.38	0.35	0.64	8,768.1	8,728.2	300.0	0.13	10.09	8,728.2	8,519.0	2,268.3	0.09	15	4.6	8.3	18.39	28.24	18.39	
E	E	81.4	0.01	0.05	0.49	8,803.3	8,697.9	300.0	0.35	10.22	8,697.9	7,977.7	2,701.00	0.27	15	7.7	5.8	16.03	35.28	16.03	

DETENTION BASIN STAGE-STORAGE TABLE BUILDER

MHFD-Detention, Version 4.02 (February 2020)

Project: _____

Basin ID: _____



Example Zone Configuration (Retention Pond)

EDB-1

Watershed Information

Selected BMP Type =	**EDB**	
Watershed Area =	28.71	acres
Watershed Length =	2,293	ft
Watershed Length to Centroid =	949	ft
Watershed Slope =	0.110	ft/ft
Watershed Imperviousness =	21.01%	percent
Percentage Hydrologic Soil Group A =	0.0%	percent
Percentage Hydrologic Soil Group B =	0.0%	percent
Percentage Hydrologic Soil Groups C/D =	100.0%	percent
Target WQCV Drain Time =	40.0	hours
Location for 1-hr Rainfall Depths =	User Input	

Steep Slope > 0.06 ft/ft

After providing required inputs above including 1-hour rainfall depths, click 'Run CUHP' to generate runoff hydrographs using the embedded Colorado Urban Hydrograph Procedure.

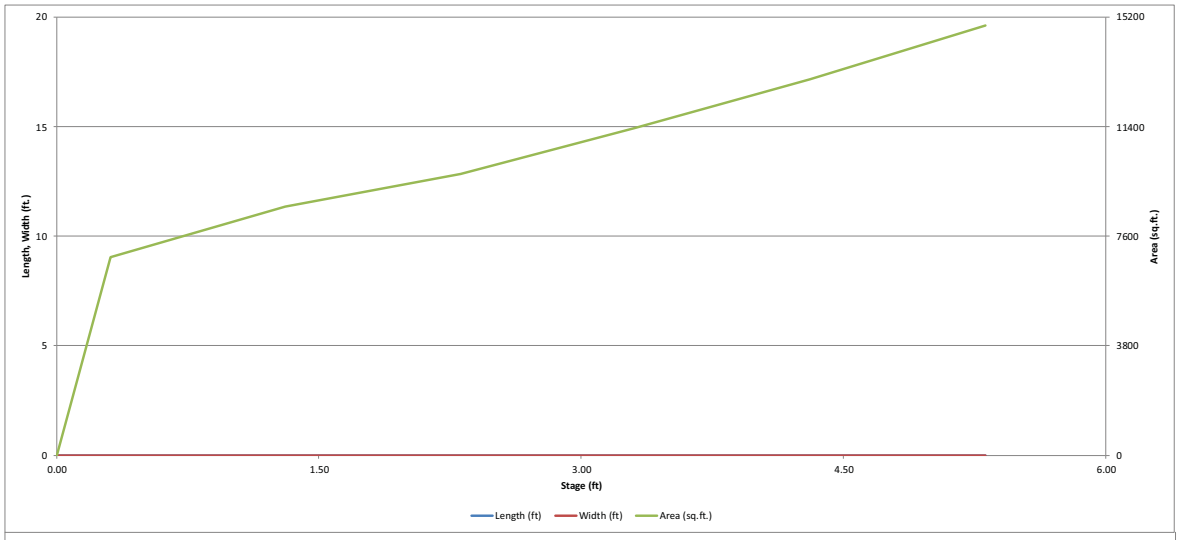
			Optional User Overrides
Water Quality Capture Volume (WQCV) =	0.287	acre-feet	acre-feet
Excess Urban Runoff Volume (EURV) =	0.532	acre-feet	acre-feet
2-yr Runoff Volume (P1 = 0.69 in.) =	0.222	acre-feet	0.69 inches
5-yr Runoff Volume (P1 = 0.88 in.) =	0.348	acre-feet	0.88 inches
10-yr Runoff Volume (P1 = 1.04 in.) =	0.486	acre-feet	1.04 inches
25-yr Runoff Volume (P1 = 1.25 in.) =	1.065	acre-feet	1.25 inches
50-yr Runoff Volume (P1 = 1.42 in.) =	1.427	acre-feet	1.42 inches
100-yr Runoff Volume (P1 = 1.58 in.) =	1.914	acre-feet	1.58 inches
500-yr Runoff Volume (P1 = 1.95 in.) =	2.772	acre-feet	1.95 inches
Approximate 2-yr Detention Volume =	0.260	acre-feet	
Approximate 5-yr Detention Volume =	0.484	acre-feet	
Approximate 10-yr Detention Volume =	0.587	acre-feet	
Approximate 25-yr Detention Volume =	0.714	acre-feet	
Approximate 50-yr Detention Volume =	0.755	acre-feet	
Approximate 100-yr Detention Volume =	0.961	acre-feet	

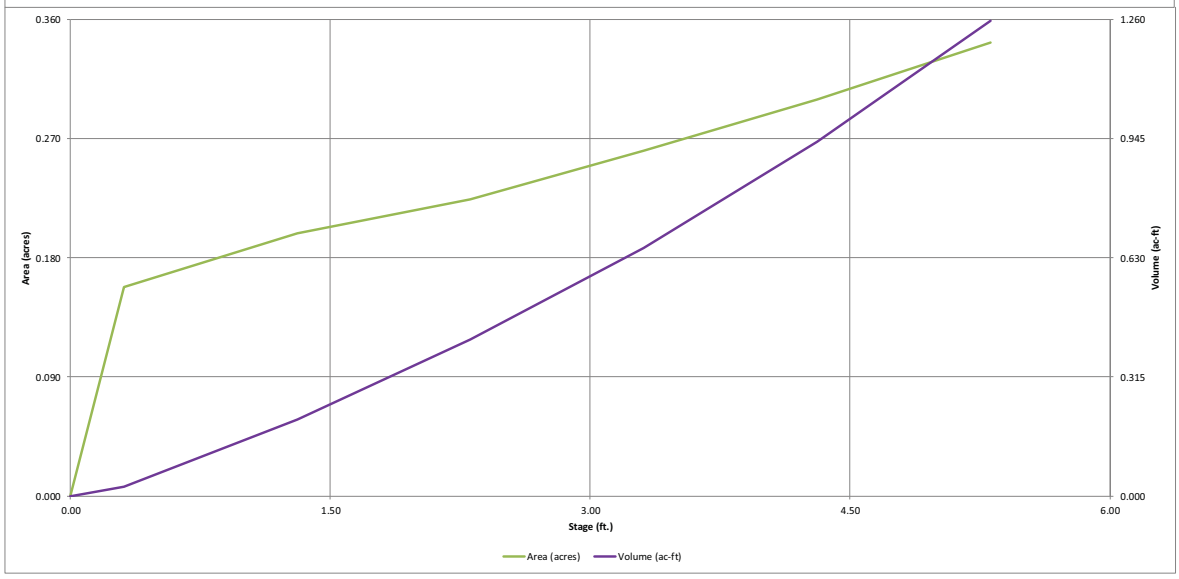
Define Zones and Basin Geometry

Zone 1 Volume (WQCV) =	0.287	acre-feet
Zone 2 Volume (10-year - Zone 1) =	0.300	acre-feet
Zone 3 Volume (100-year - Zones 1 & 2) =	0.375	acre-feet
Total Detention Basin Volume =	0.961	acre-feet
Initial Surcharge Volume (ISV) =	user	ft^3
Initial Surcharge Depth (ISD) =	user	ft
Total Available Detention Depth (H_{total}) =	user	ft
Depth of Trickle Channel (H_{TC}) =	user	ft
Slope of Trickle Channel (S_{TC}) =	user	ft/ft
Slopes of Main Basin Sides (S_{main}) =	user	H:V
Basin Length-to-Width Ratio ($R_{L/W}$) =	user	
Initial Surcharge Area (A_{ISV}) =	user	ft^2
Surcharge Volume Length (L_{ISV}) =	user	ft
Surcharge Volume Width (W_{ISV}) =	user	ft
Depth of Basin Floor (H_{FLOOR}) =	user	ft
Length of Basin Floor (L_{FLOOR}) =	user	ft
Width of Basin Floor (W_{FLOOR}) =	user	ft
Area of Basin Floor (A_{FLOOR}) =	user	ft^2
Volume of Basin Floor (V_{FLOOR}) =	user	ft^3
Depth of Main Basin (H_{MAIN}) =	user	ft
Length of Main Basin (L_{MAIN}) =	user	ft
Width of Main Basin (W_{MAIN}) =	user	ft
Area of Main Basin (A_{MAIN}) =	user	ft^2
Volume of Main Basin (V_{MAIN}) =	user	ft^3
Calculated Total Basin Volume (V_{total}) =	**user**	acre-feet

Depth Increment = 1.00 ft

Stage - Storage Description	Stage (ft)	Optional Override Stage (ft)	Length (ft)	Width (ft)	Area (ft^2)	Optional Override Area (ft^2)	Area (acre)	Volume (ft^3)	Volume (ac-ft)
Top of Micropool	--	0.00	--	--	--	0	0.000		
8632	--	0.31	--	--	--	6,866	0.158	1,063	0.024
8633	--	1.31	--	--	--	8,633	0.198	8,813	0.202
8634	--	2.31	--	--	--	9,760	0.224	18,009	0.413
8635	--	3.31	--	--	--	11,358	0.261	28,568	0.656
8636	--	4.31	--	--	--	13,046	0.299	40,770	0.936
8637	--	5.31	--	--	--	14,919	0.342	54,753	1.257


20
15
10
5
0
Length, Width (ft.)
15200
11400
7600
3800
0
Area (sq.ft.)
0.00
1.50
3.00
4.50
6.00
Stage (ft)
Length (ft)
Width (ft)
Area (sq.ft.)

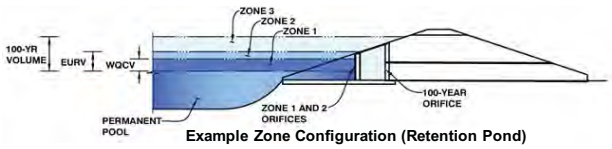

0.360
0.270
0.180
0.090
0.000
Area (acres)
1.260
0.945
0.630
0.315
0.000
Volume (ac-ft)
0.00
1.50
3.00
4.50
6.00
Stage (ft.)
Area (acres)
Volume (ac-ft)

DETENTION BASIN STAGE-STORAGE TABLE BUILDER

MHFD-Detention, Version 4.02 (February 2020)

Project: _____

Basin ID: _____



Example Zone Configuration (Retention Pond)

EDB-2

Watershed Information

Selected BMP Type =	**EDB**	
Watershed Area =	2.28	acres
Watershed Length =	534	ft
Watershed Length to Centroid =	179	ft
Watershed Slope =	0.008	ft/ft
Watershed Imperviousness =	46.00%	percent
Percentage Hydrologic Soil Group A =	0.0%	percent
Percentage Hydrologic Soil Group B =	0.0%	percent
Percentage Hydrologic Soil Groups C/D =	100.0%	percent
Target WQCV Drain Time =	40.0	hours
Location for 1-hr Rainfall Depths =	User Input	

After providing required inputs above including 1-hour rainfall depths, click 'Run CUHP' to generate runoff hydrographs using the embedded Colorado Urban Hydrograph Procedure.

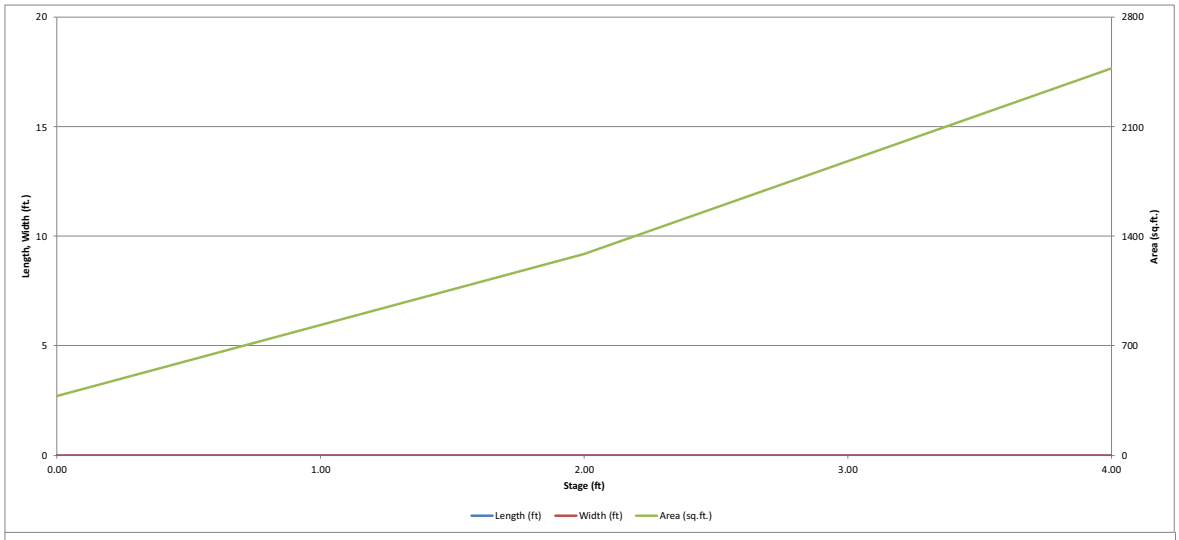
			Optional User Overrides	
Water Quality Capture Volume (WQCV) =	0.037	acre-feet		acre-feet
Excess Urban Runoff Volume (EURV) =	0.099	acre-feet		acre-feet
2-yr Runoff Volume (P1 = 0.69 in.) =	0.049	acre-feet	0.69	inches
5-yr Runoff Volume (P1 = 0.88 in.) =	0.068	acre-feet	0.88	inches
10-yr Runoff Volume (P1 = 1.04 in.) =	0.086	acre-feet	1.04	inches
25-yr Runoff Volume (P1 = 1.25 in.) =	0.130	acre-feet	1.25	inches
50-yr Runoff Volume (P1 = 1.42 in.) =	0.160	acre-feet	1.42	inches
100-yr Runoff Volume (P1 = 1.58 in.) =	0.196	acre-feet	1.58	inches
500-yr Runoff Volume (P1 = 1.95 in.) =	0.264	acre-feet	1.95	inches
Approximate 2-yr Detention Volume =	0.050	acre-feet		
Approximate 5-yr Detention Volume =	0.077	acre-feet		
Approximate 10-yr Detention Volume =	0.089	acre-feet		
Approximate 25-yr Detention Volume =	0.102	acre-feet		
Approximate 50-yr Detention Volume =	0.107	acre-feet		
Approximate 100-yr Detention Volume =	0.122	acre-feet		

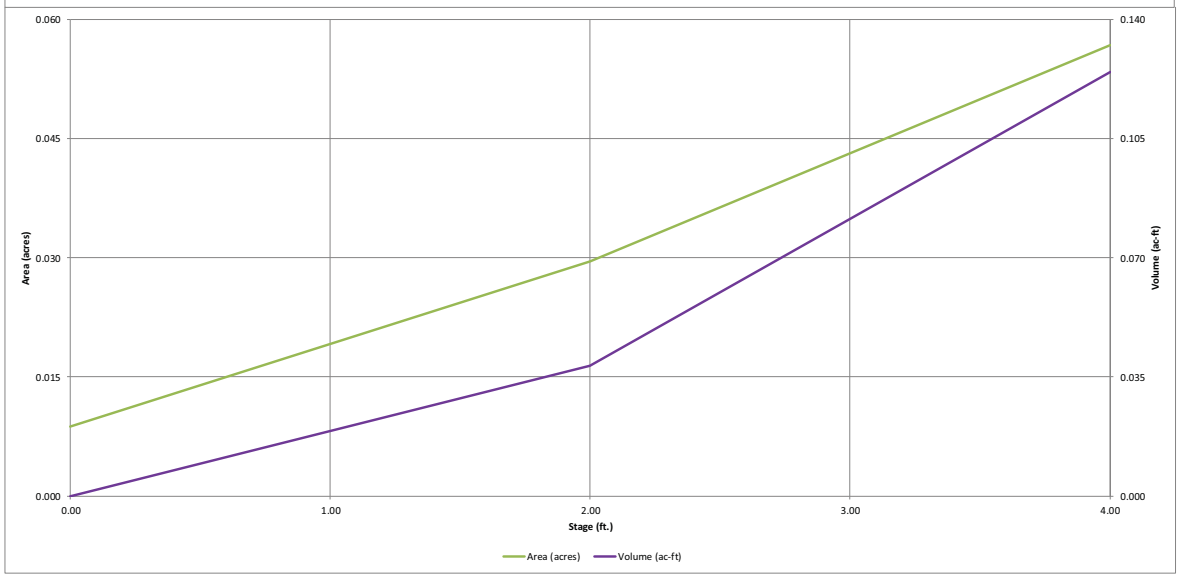
Define Zones and Basin Geometry

Zone 1 Volume (WQCV) =	0.037	acre-feet
Zone 2 Volume (10-year - Zone 1) =	0.052	acre-feet
Zone 3 Volume (100-year - Zones 1 & 2) =	0.033	acre-feet
Total Detention Basin Volume =	0.122	acre-feet
Initial Surcharge Volume (ISV) =	user	ft^3
Initial Surcharge Depth (ISD) =	user	ft
Total Available Detention Depth (H_{total}) =	user	ft
Depth of Trickle Channel (H_{TC}) =	user	ft
Slope of Trickle Channel (S_{TC}) =	user	ft/ft
Slopes of Main Basin Sides (S_{main}) =	user	H:V
Basin Length-to-Width Ratio ($R_{L/W}$) =	user	
Initial Surcharge Area (A_{ISV}) =	user	ft^2
Surcharge Volume Length (L_{ISV}) =	user	ft
Surcharge Volume Width (W_{ISV}) =	user	ft
Depth of Basin Floor (H_{FLOOR}) =	user	ft
Length of Basin Floor (L_{FLOOR}) =	user	ft
Width of Basin Floor (W_{FLOOR}) =	user	ft
Area of Basin Floor (A_{FLOOR}) =	user	ft^2
Volume of Basin Floor (V_{FLOOR}) =	user	ft^3
Depth of Main Basin (H_{MAIN}) =	user	ft
Length of Main Basin (L_{MAIN}) =	user	ft
Width of Main Basin (W_{MAIN}) =	user	ft
Area of Main Basin (A_{MAIN}) =	user	ft^2
Volume of Main Basin (V_{MAIN}) =	user	ft^3
Calculated Total Basin Volume (V_{total}) =	**user**	acre-feet

Depth Increment = 1.00 ft

Stage - Storage Description	Stage (ft)	Optional Override Stage (ft)	Length (ft)	Width (ft)	Area (ft^2)	Optional Override Area (ft^2)	Area (acre)	Volume (ft^3)	Volume (ac-ft)
Top of Micropool	--	0.00	--	--	--	381	0.009		
	--	2.00	--	--	--	1,285	0.029	1,666	0.038
	--	4.00	--	--	--	2,474	0.057	5,425	0.125


20
15
10
5
0
2800
2100
1400
700
0
Length, Width (ft.)
Area (sq.ft.)
0.00
1.00
2.00
3.00
4.00
Stage (ft)
Length (ft)
Width (ft)
Area (sq.ft.)


0.060
0.045
0.030
0.015
0.000
0.140
0.105
0.070
0.035
0.000
Area (acres)
Volume (ac-ft)
0.00
1.00
2.00
3.00
4.00
Stage (ft.)
Area (acres)
Volume (ac-ft)

Channel 1 (Top of Pond channel)

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Roughness Coefficient	0.030
Channel Slope	0.014
Left Side Slope	3.000
Right Side Slope	3.000
Bottom Width	2.00
Discharge	2.10

Results	
Normal Depth	3.8
Flow Area	0.9
Wetted Perimeter	4.0
Hydraulic Radius	2.8
Top Width	3.92
Critical Depth	3.4
Critical Slope	0.023
Velocity	2.21
Velocity Head	0.08
Specific Energy	0.40
Froude Number	0.793
Flow Type	Subcritical

GVF Input Data	
Downstream Depth	0.0
Length	0.0
Number Of Steps	0

GVF Output Data	
Upstream Depth	0.0
Profile Description	N/A
Profile Headloss	0.00
Downstream Velocity	0.00
Upstream Velocity	0.00
Normal Depth	3.8
Critical Depth	3.4
Channel Slope	0.014
Critical Slope	0.023

Channel 2 (Pond Channel After Culvert)

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Roughness Coefficient	0.030
Channel Slope	0.027
Left Side Slope	3.000
Right Side Slope	3.000
Bottom Width	2.00
Discharge	27.40

Results	
Normal Depth	11.7
Flow Area	4.8
Wetted Perimeter	8.2
Hydraulic Radius	7.1
Top Width	7.85
Critical Depth	13.2
Critical Slope	0.016
Velocity	5.70
Velocity Head	0.51
Specific Energy	1.48
Froude Number	1.285
Flow Type	Supercritical

GVF Input Data	
Downstream Depth	0.0
Length	0.0
Number Of Steps	0

GVF Output Data	
Upstream Depth	0.0
Profile Description	N/A
Profile Headloss	0.00
Downstream Velocity	Infinity
Upstream Velocity	Infinity
Normal Depth	11.7
Critical Depth	13.2
Channel Slope	0.027
Critical Slope	0.016

Channel 3A (Central E-W Road)

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Roughness Coefficient	0.030
Channel Slope	0.032
Left Side Slope	3.000
Right Side Slope	3.000
Discharge	6.30

Results	
Normal Depth	8.4
Flow Area	1.5
Wetted Perimeter	4.4
Hydraulic Radius	4.0
Top Width	4.21
Critical Depth	9.3
Critical Slope	0.019
Velocity	4.26
Velocity Head	0.28
Specific Energy	0.98
Froude Number	1.269
Flow Type	Supercritical

GVF Input Data	
Downstream Depth	0.0
Length	0.0
Number Of Steps	0

GVF Output Data	
Upstream Depth	0.0
Profile Description	N/A
Profile Headloss	0.00
Downstream Velocity	Infinity
Upstream Velocity	Infinity
Normal Depth	8.4
Critical Depth	9.3
Channel Slope	0.032
Critical Slope	0.019

Channel 3B (Connection Road N-S)

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Roughness Coefficient	0.030
Channel Slope	0.015
Left Side Slope	3.000
Right Side Slope	3.000
Discharge	2.30

Results	
Normal Depth	6.7
Flow Area	0.9
Wetted Perimeter	3.5
Hydraulic Radius	3.2
Top Width	3.33
Critical Depth	6.2
Critical Slope	0.022
Velocity	2.50
Velocity Head	0.10
Specific Energy	0.65
Froude Number	0.836
Flow Type	Subcritical

GVF Input Data	
Downstream Depth	0.0
Length	0.0
Number Of Steps	0

GVF Output Data	
Upstream Depth	0.0
Profile Description	N/A
Profile Headloss	0.00
Downstream Velocity	0.00
Upstream Velocity	0.00
Normal Depth	6.7
Critical Depth	6.2
Channel Slope	0.015
Critical Slope	0.022

Appendix C

Drainage Maps

Pre-Development Conditions
Post-Development Conditions

LEGEND

- MAJOR BASIN BOUNDARY
- MINOR BASIN BOUNDARY
- SURFACE FLOW PATH
- PROPERTY LINE

BASIN DESIGNATION
5-YEAR RUNOFF COEFFICIENT
100-YEAR RUNOFF COEFFICIENT
BASIN AREA IN ACRES
DESIGN POINT DESIGNATION

200 100 0 200 400 600
GRAPHIC SCALE: 1"=200'

DRAINAGE STUDY MAP
CITY OF BLACKHAWK

PRE-PROJECT

DATE: 11/20/2020
REVISED: –

1055 SHEET 1 OF 1

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DRAINAGE STUDY MAP
CITY OF BLACKHAWK

POST-PROJECT

DATE: 11/20/2020
REVISED: –

1055 SHEET 1 OF 1

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BLACK HAWK PARK
TRAFFIC IMPACT ANALYSIS
NOVEMBER 12, 2020
JOB NUMBER: 19094 (1055)

RICK ENGINEERING COMPANY

RICK
ENGINEERING COMPANY

rickengineering.com

Black Hawk Park

Traffic Impact Analysis

November 12, 2020

Prepared for:

Ventana Capital, Inc.
9801 East Easter Avenue
Centennial, CO 80112

Prepared by:

RICK
ENGINEERING COMPANY

Job Number 19094 (1055)

RICK ENGINEERING COMPANY

EXECUTIVE SUMMARY

Black Hawk Park
Traffic Impact Analysis

November 12, 2020

INTRODUCTION

The following study has been prepared to determine the future intersection improvement needs associated with the proposed Black Hawk Park project located on a 47.67-acre site at the terminus of Miners Mesa Road in the City of Black Hawk, Colorado.

PROJECT DESCRIPTION

The project proposes to construct a campground/RV park and a distillery use on a 47.67-acre site, of which 23.35 acres would be developed on seven (7) lots. The project site is located at the terminus of Miners Mesa Road in the City of Black Hawk, Colorado. The project would be developed in two (2) phases.

The first phase would include a total of 50 RV campsites and an indoor shooting range on Lot 1, and a proposed distillery use on Lot 7. Each of the 50 RV campsites would be provided with a permanent Airstream trailer for campers. The indoor shooting range would include a total of three (3) lanes for shooting. The proposed distillery use on Lot 7 would consist of a 5,611 square-foot main distillery building that includes 3,864 square-feet for manufacturing/operations, a 743 square-feet tasting room, and a 1,004 square-foot outdoor patio. Lot 7 also includes a 5,000 square-foot barrel storage building. According to information provided by the developer, the proposed distillery is estimated to have a total of 6 employees on a typical weekday or weekend day.

The second phase would include development of six (6) additional distilleries on Lots 2 through 6. Lots 2 through 5 would have one (1) distillery on each lot, while Lot 6 is proposed to have two (2) distilleries. Below are the estimated building sizes and number of employees for Lots 2 through 6 based on the lot sizes:

- Lots 2-5: 2,800 sq. ft. distillery building and 2,500 sq. ft. barrel storage building on each lot, with approximately 3 employees per distillery building. Each lot in Lots 2-5 is approximately half the size of Lot 7.
- Lot 6: Two 5,600 sq. ft. distillery buildings and two 5,000 barrel storage buildings, with approximately 6 employees per distillery building. Lot 6 is approximately twice the size of Lot 7.

The project also plans to provide tours of the proposed distilleries in Lots 2 through 7. The tours will initially only be provided for the proposed distillery in Lot 7 in the first development phase, and the proposed distilleries in Lots 2 through 6 will be included in the tours in the second development phase. It is estimated that one tour per hour will be provided, with a total of eight (8) tours per day. A total of 20 patrons per tour is estimated, for a total of 160 tour patrons per day.

Transit shuttle service between the project site and the casinos/hotels in downtown Black Hawk is being considered, which would reduce vehicular trips to and from the project site. However, this study conservatively assumes that shuttle service would not be provided.

Access to the project site will be provided from Miners Mesa Road. An internal road will be constructed in Lot 1 to provide access to the RV campsites and indoor shooting range, and a second internal road will be constructed from Lot 1 to Miners Mesa Road to provide access to the proposed distilleries in Lots 2 through 6.

A separate access driveway and parking lot will be constructed for the distillery use in Lot 7. A one-way internal loop road will be constructed for delivery trucks to access the barrel storage building and grain silo dock on outside of main distillery building.

PROJECT TRAFFIC VOLUMES

The project trip generation for the proposed uses was developed based on the peak Friday afternoon and Saturday afternoon demand, which was determined to be the days of the week and time periods when the highest number of trips would be generated by the project and also when the City of Black Hawk experiences the highest traffic volumes.

Where available, the proposed project trip generation was calculated based on the ITE *Trip Generation Manual* (10th Edition, 2017) trip rates for a Campground/RV Park use (ITE Land Use Code 416) and the trip rates for a Manufacturing use (ITE Land Use Code 140) for the proposed distillery operations.

However, the *ITE Trip Generation Manual* 10th Edition does not have weekend trip generation rates for a Campground/RV Park use (Land Use Code 416). The weekday PM peak hour of generator was used for both the Friday PM and Saturday PM peak hour trip rates (0.41 trips per occupied campsite), which is higher than the weekday PM peak hour of adjacent street traffic trip rate (0.27 trips per occupied campsite).

The *ITE Trip Generation Manual* 10th Edition also does not have daily trip rates for a Campground/RV Park use (ITE Land Use Code 416) for either weekdays or weekends, as only peak hour trips rates are provided. The Friday and Saturday daily trip rates for the Campground/RV Park use were derived from the San Diego Association of Governments (SANDAG) weekday daily trip generation rate for a campground use (4 trips per campsite). The SANDAG weekday daily trip rate of 4 trips per campsite was multiplied by the ratio of the of the ITE Land Use Code 416 weekday PM peak hour of generator trip rate and the weekday PM peak hour of adjacent street traffic trip rate ((4 * 0.41/0.27) to derive the Friday and Saturday daily trip rate for the campground/RV park use.

The trip generation rates for the indoor shooting range were developed based on the Friday and Saturday daily and peak hour trip rates for a Golf Driving Range (Land Use Code 432) from the ITE *Trip Generation Manual* (10th Edition, 2017). It was determined that the individual tee positions at a golf driving range would yield a similar trip generation rate to an indoor shooting range, and such an example is provided in the *Gun Range Development Traffic Impact Analysis*, 2350 Franklin Road, Lawrence, Kansas (CFS Engineers, December 2016).

The ITE Manufacturing trip rate used for the proposed distillery use (ITE Land Use Code 140) is based on the number of employees to be consistent with the trip generation used for the distillery use in the *Lake Gulch Whiskey Resort Traffic Impact Study* (Kimley Horn & Associates, March 2020).

According to information provided by the developer, the proposed distillery in Phase One (Opening Year 2022) was estimated to have a total of 6 employees on a typical weekday or weekend day. Based on estimated sizes of the proposed distilleries in Lots 2 through 6, it was estimated that in Phase Two (Buildout Year 2025), the proposed distilleries in Lots 2 through 7 would have a total of 30 employees.

It was estimated that there would be 2 delivery trucks per day for the Phase One (Opening Year 2022) distillery use, with 4 truck trips per weekday and weekend day, and with 2 truck trips occurring during both the Friday PM peak hour and Saturday PM peak hour. At project buildout in Phase Two (Buildout Year 2025) with the proposed 6 distilleries on Lots 2 through 7, a total of 10 delivery trucks were estimated with 20 truck trips per weekday and weekend day and with 4 truck trips occurring during both the Friday PM peak hour and Saturday PM peak hour.

Based on information from the applicant, it was assumed that tours would be provided for the proposed distilleries in Lots 2 through 7. The tours will initially only be provided for the proposed distillery in Lot 7 in Phase One (Opening Year 2022), and the proposed distilleries in Lots 2 through 6 will be included in the tours in Phase Two (Buildout Year 2025). It was estimated that one tour per hour will be provided, with a total of eight (8) tours per day. A total of 20 patrons per tour was estimated, for a total of 160 tour patrons per day. An occupancy rate of 2 persons per vehicle was estimated for the trip generation of the distillery tours.

Due to the close proximity between the proposed 50 RV campsites and the indoor shooting range and distilleries, it was estimated that at least 10% of the trips generated by the indoor shooting range and distilleries would be internal to the site and would primarily be non-vehicular trips between these uses. A 10% internal trip reduction factor was applied to the indoor shooting range and distilleries (including tours) to reflect the estimated non-vehicular trips between uses within the project site.

Transit shuttle service between the project site and the casinos/hotels in downtown Black Hawk is being considered, which would reduce vehicular trips to and from the project site. However, this study conservatively assumes that shuttle service would not be provided.

The proposed Phase One project was estimated to generate approximately 557 daily trips and 55 PM peak hour trips on a typical Friday. The project was estimated to generate approximately 643 daily trips and 70 PM peak hour trips on a typical Saturday.

The buildout of the proposed project (Phase Two) was estimated to generate approximately 849 daily trips and 98 PM peak hour trips on a typical Friday. The project was estimated to generate approximately 1,233 daily trips and 175 PM peak hour trips on a typical Saturday.

TRAFFIC IMPACT ANALYSIS RESULTS

The following intersections were assessed as part of this analysis:

1. Miners Mesa Road / Bobtail Road (two-way stop-controlled)
2. Miners Mesa Road / Main Street (signalized)
3. Highway 119 / Mill Street-Miners Mesa Road (signalized)

The project area intersections were analyzed for the following analysis scenarios:

- Existing Conditions: This scenario reflects the conditions on the ground today with the traffic volume data from the *Lake Gulch Whiskey Resort Traffic Impact Study,* which were collected in in July 2014 and January 2020, then grown and seasonally adjusted to reflect mid-summer 2020 peak conditions.

- Opening Year (2022) Without Project Conditions: This scenario reflects the short-range future traffic conditions without the project based on a background growth factor of 3.6% applied to the existing traffic volumes to reflect a 1.8% annual growth rate from 2020 to 2022, consistent with the growth rate used in the *Lake Gulch Whiskey Resort Traffic Impact Study*.

- Opening Year (2022) With Phase One Project Conditions: This scenario reflects the short-range future traffic conditions based on a background growth factor of 3.6% applied to the existing traffic volumes, plus the traffic generated by Phase One of the proposed project.

- Buildout Year (2025) Without Project Conditions: This scenario reflects the mid-range future traffic conditions without the project that includes the completion of the adjacent Lake Gulch Whiskey Resort as a background project. In addition, a background growth factor of 9.0% applied to the existing traffic volumes to reflect a 1.8% annual growth rate from 2020 to 2025.

- Buildout Year (2025) With Phase Two Project Conditions: This scenario reflects the mid-range future traffic conditions based on the completion of the Lake Gulch Whiskey Resort background project plus a background growth factor of 9.0% applied to the existing traffic volumes, plus the traffic generated by the buildout of the proposed project.

The Existing (2020) Conditions analysis results showed that the study intersections are currently operating at an acceptable LOS B or better during the Friday PM peak hour and Saturday PM peak hour.

The Opening Year (2022) Conditions analysis results showed that the study intersections are expected to continue operating at an acceptable LOS B or better during the Friday PM and Saturday PM peak hours both without and with the Phase One project.

The Buildout Year (2025) Conditions analysis results showed that the study intersections are expected to continue operating at an acceptable LOS C or better during the Friday PM and Saturday PM peak hours both without and with the Phase Two project.

The queuing analysis results showed that the future queues under the Opening Year (2022) With Phase One Project and Buildout Year (2025) With Phase Two Project scenarios can be accommodated within the existing storage lengths at the study intersections.

Based on the results of the level of service operations and queuing analyses, no project-related traffic or queuing impacts were identified at the study intersections, and no roadway or intersection improvements are recommended based on the analysis findings.

However, it is recommended that the project install a stop sign on the westbound approach to provide all-way stop control at the Miners Mesa Road / Bobtail Road intersection, which would provide improved operations with the forecast increase in traffic at the intersection. All-way stop control was used to analyze the Miners Mesa Road / Bobtail Road intersection in this study due to the atypical existing stop control at two out of the three approaches of the intersection, which was not accepted by the HCM analysis software.

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INTRODUCTION

The following study has been prepared to determine the future intersection improvement needs associated with the proposed Black Hawk Park project located on a 47.67-acre site at the terminus of Miners Mesa Road in the City of Black Hawk, Colorado. **Exhibit 1** shows the project vicinity map.

Project Description

The project proposes to construct a campground/RV park and a distillery use on a 47.67-acre site, of which 23.35 acres would be developed on seven (7) lots. The project site is located at the terminus of Miners Mesa Road in the City of Black Hawk, Colorado. The project would be developed in two (2) phases.

The first phase would include a total of 50 RV campsites and an indoor shooting range on Lot 1, and a proposed distillery use on Lot 7. Each of the 50 RV campsites would be provided with a permanent Airstream trailer for campers. The indoor shooting range would include a total of three (3) lanes for shooting. The proposed distillery use on Lot 7 would consist of a 5,611 square-foot main distillery building that includes 3,864 square-feet for manufacturing/operations, a 743 square-feet tasting room, and a 1,004 square-foot outdoor patio. Lot 7 also includes a 5,000 square-foot barrel storage building. According to information provided by the developer, the proposed distillery is estimated to have a total of 6 employees on a typical weekday or weekend day.

The second phase would include development of six (6) additional distilleries on Lots 2 through 6. Lots 2 through 5 would have one (1) distillery on each lot, while Lot 6 is proposed to have two (2) distilleries. Below are the estimated building sizes and number of employees for Lots 2 through 6 based on the lot sizes:

- Lots 2-5: 2,800 sq. ft. distillery building and 2,500 sq. ft. barrel storage building on each lot, with approximately 3 employees per distillery building. Each lot in Lots 2-5 is approximately half the size of Lot 7.
- Lot 6: Two 5,600 sq. ft. distillery buildings and two 5,000 barrel storage buildings, with approximately 6 employees per distillery building. Lot 6 is approximately twice the size of Lot 7.

The project also plans to provide tours of the proposed distilleries in Lots 2 through 7. The tours will initially only be provided for the proposed distillery in Lot 7 in the first development phase, and the proposed distilleries in Lots 2 through 6 will be included in the tours in the second development phase. It is estimated that one tour per hour will be provided, with a total of eight (8) tours per day. A total of 20 patrons per tour is estimated, for a total of 160 tour patrons per day.

Access to the project site will be provided from Miners Mesa Road. An internal road will be constructed in Lot 1 to provide access to the RV campsites and indoor shooting range, and a second internal road will be constructed from Lot 1 to Miners Mesa Road to provide access to the proposed distilleries in Lots 2 through 6.

A separate access driveway and parking lot will be constructed for the distillery use in Lot 7. A one-way internal loop road will be constructed for delivery trucks to access the barrel storage building and grain silo dock on outside of main distillery building. **Exhibit 2** shows the overall project site plan, and **Exhibit 3** shows the specific site plan for the proposed distillery use on Lot 7.

EXHIBIT 1

VICINITY MAP

BLACK HAWK

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EXHIBIT 2

OVERALL PROJECT SITE PLAN

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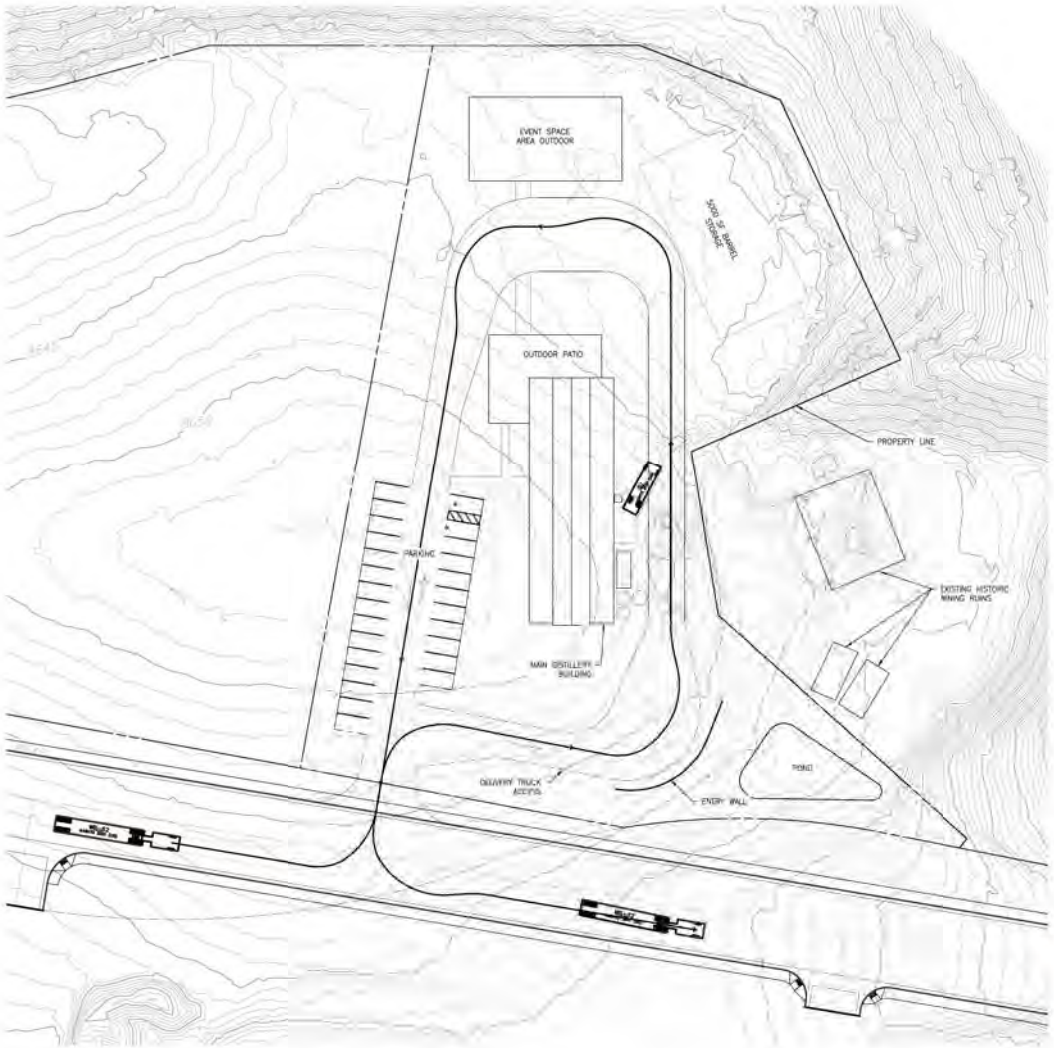

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EXHIBIT 3

LOT 7 DISTILLERY SITE PLAN

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Study Area

The study area was determined based on consultation with City of Black Hawk staff, the existing roadway network that would provide access to the project site, and the proximity of major highways and existing land uses that may attract trips to the project site. The study area consists of the following intersections:

1. Miners Mesa Road / Bobtail Road (two-way stop-controlled)
2. Miners Mesa Road / Main Street (signalized)
3. Highway 119 / Mill Street-Miners Mesa Road (signalized)

Exhibit 4 illustrates the location of the project and the project study area.

ANALYSIS APPROACH AND METHODOLOGY

This section summarizes the analysis approach and methodology used to evaluate the study intersections associated with the proposed project. The analysis approach, methodology and study intersections in this traffic study are consistent with the approved *Lake Gulch Whiskey Resort Traffic Impact Study* (Kimley Horn & Associates, March 2020) at the direction of City of Black Hawk staff.

Analysis Scenarios

The following scenarios are evaluated in this traffic study:

- Existing Conditions: This scenario reflects the conditions on the ground today with the traffic volume data from the *Lake Gulch Whiskey Resort Traffic Impact Study,* which were collected in in July 2014 and January 2020, then grown and seasonally adjusted to reflect mid-summer 2020 peak conditions.

- Opening Year (2022) Without Project Conditions: This scenario reflects the short-range future traffic conditions without the project based on a background growth factor of 3.6% applied to the existing traffic volumes to reflect a 1.8% annual growth rate from 2020 to 2022, consistent with the growth rate used in the *Lake Gulch Whiskey Resort Traffic Impact Study*.

- Opening Year (2022) With Phase One Project Conditions: This scenario reflects the short-range future traffic conditions based on a background growth factor of 3.6% applied to the existing traffic volumes, plus the traffic generated by Phase One of the proposed project.

- Buildout Year (2025) Without Project Conditions: This scenario reflects the mid-range future traffic conditions without the project that includes the completion of the adjacent Lake Gulch Whiskey Resort as a background project. In addition, a background growth factor of 9.0% applied to the existing traffic volumes to reflect a 1.8% annual growth rate from 2020 to 2025.

- Buildout Year (2025) With Phase Two Project Conditions: This scenario reflects the mid-range future traffic conditions based on the completion of the Lake Gulch Whiskey Resort background project plus a background growth factor of 9.0% applied to the existing traffic volumes, plus the traffic generated by the buildout of the proposed project.

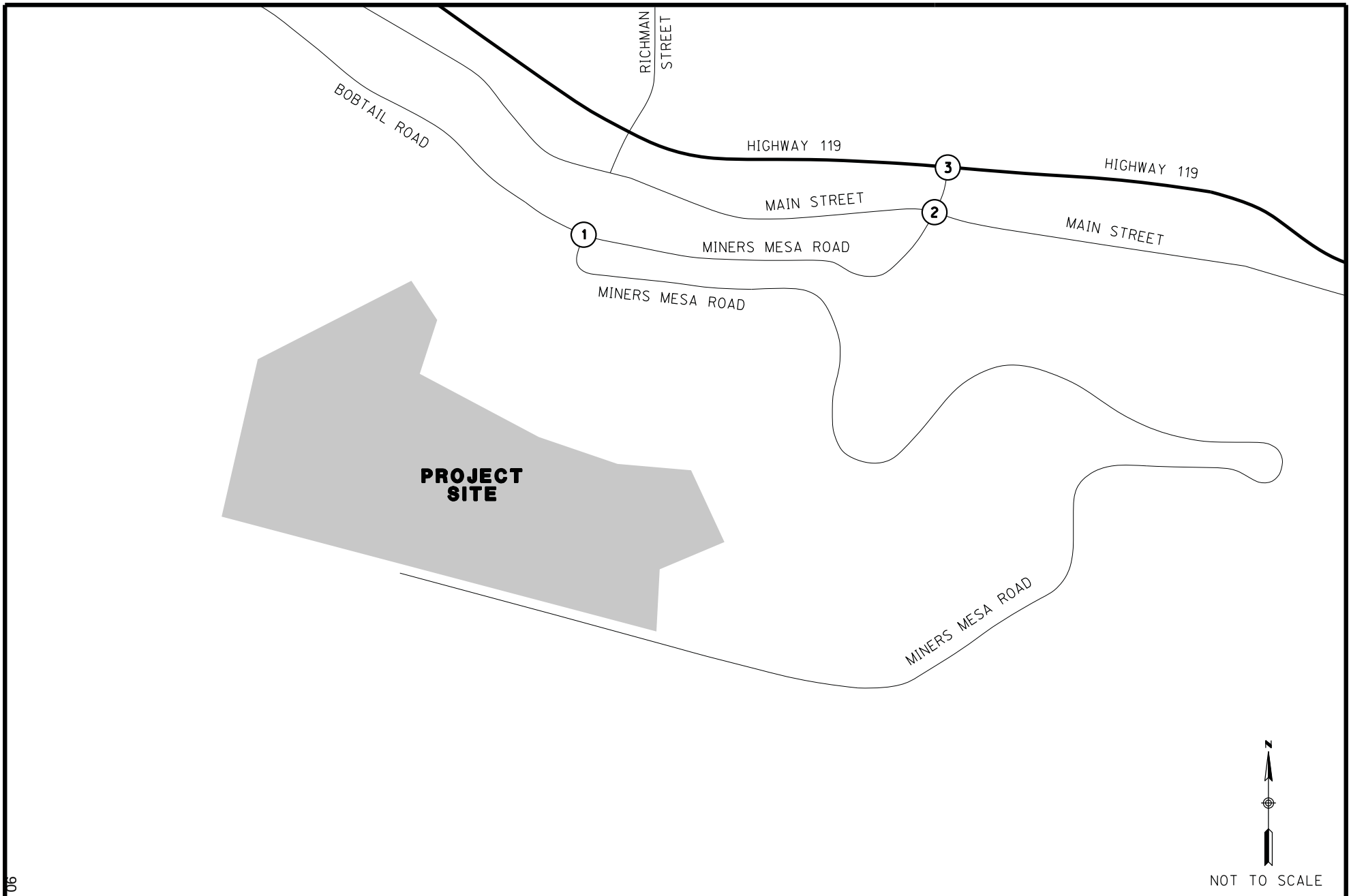

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EXHIBIT 4

PROJECT STUDY AREA

BLACK HAWK

LEGEND (X) =STUDY INTERSECTION

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Analysis Methodology

Intersection LOS Analysis

Levels of service (LOS) were determined at the study area intersections on a peak summer Friday afternoon between 4:00 PM and 6:00 PM, and on a peak summer Saturday afternoon between 4:00 PM and 6:00 PM, consistent with the time periods analyzed in the *Lake Gulch Whiskey Resort Traffic Impact Study*. Intersection operations were analyzed with Synchro 10 software (Trafficware) utilizing the methodologies outlined in the *Highway Capacity Manual 6th Edition (HCM 6)*. Synchro reports delays, which correspond to a particular LOS, to describe the overall operation of an intersection.

LOS provides a quick overview of how well an intersection is performing. The criteria for the LOS grade designations are provided in **Table 1**.

Table 1
LOS Criteria for Intersections

LOS	Control Delay (sec/veh)		Description
	Signalized Intersections	Unsignalized Intersections	
A	≤10	≤10	Operations with very low delay and most vehicles do not stop.
B	>10 and ≤20	>10 and ≤15	Operations with good progression but with some restricted movements.
C	>20 and ≤35	>15 and ≤25	Operations where a significant number of vehicles are stopping with some backup and light congestion.
D	>35 and ≤55	>25 and ≤35	Operations where congestion is noticeable, longer delays occur, and many vehicles stop. The proportion of vehicles not stopping declines.
E	>55 and ≤80	>35 and ≤50	Operations where there is significant delay, extensive queuing, and poor progression.
F	>80	>50	Operations that are unacceptable to most drivers, when the arrival rates exceed the capacity of the intersection.

Source: *Highway Capacity Manual 6th Edition (HCM 6)*.

EXISTING CONDITIONS

This section summarizes the existing roadway network, peak hour and daily traffic volumes, and operations at the study area intersections.

Existing Roadway Network

Highway 119 is currently built as a four-lane highway though the project study area, which narrows to two lanes west of Black Hawk Street. Highway 119 is oriented in a general east-west direction. On-street parking is not permitted and the posted speed limit is 35 miles per hour (mph) within the study area. There are no bicycle or pedestrian facilities along Highway 119.

Main Street is currently built as a two-lane roadway oriented in a general east-west direction and provides access to several hotels and casinos within the City of Black Hawk. On-street parking is not permitted and the posted speed limit is 15 miles per hour (mph) within the study area. Sidewalks are provided along both sides of the street but there are no bicycle facilities along Main Street.

Mill Street/Miners Mesa Road is currently built as a two-lane roadway extending from Highway 119 to its terminus at the proposed project site. The roadway is oriented in a north-south direction near Highway 119 and Main Street and transitions to a general east-west direction south of Main Street. The 100-foot roadway segment between Highway 119 and Main Street is known as Mill Street, and becomes Miners Mesa Road south of Main Street. Miners Mesa Road transitions to a north-south orientation at the intersection with Bobtail Road, and meanders uphill for slightly over one mile to the proposed project site. There is no posted speed limit on Miners Mesa Road between Main Street and Bobtail Road. South of Bobtail Road, the posted speed limit is 25 miles per hour (mph) on Miners Mesa Road. On-street parking is not permitted. Miners Mesa Road is designated as a bike route from Main Street to Bobtail Road. Sidewalks are only provided on Miners Mesa Road along the hotel/casino frontages near Main Street.

Bobtail Road is currently built as a two-lane roadway from Miners Mesa Road to Gregory Street, and is oriented in an east-west direction. On-street parking is not permitted and the posted speed limit is 20 miles per hour (mph) within the study area. A sidewalk is currently provided along the north side of the road, but there are no bicycle or pedestrian facilities along Bobtail Road.

Exhibit 5 illustrates the lane geometrics at the existing study intersections.

Existing Traffic Volumes

Intersection turning movement volumes were obtained from the *Lake Gulch Whiskey Resort Traffic Impact Study,* which were collected in July 2014 and January 2020, and were grown and seasonally adjusted to reflect peak mid-summer 2020 conditions. The existing traffic volumes reflect counts that were collected during the Friday PM peak hour (4:00-5:00 PM) and the Saturday PM peak hour (4:00-5:00 PM). Existing average daily traffic (ADT) counts were also obtained from the *Lake Gulch Whiskey Resort Traffic Impact Study*, which are also based on seasonally adjusted volumes to reflect peak mid-summer 2020 conditions. **Exhibit 6** illustrates the existing study area peak hour and daily traffic volumes. **Appendix A** contains the existing traffic volumes from the *Lake Gulch Whiskey Resort Traffic Impact Study.*

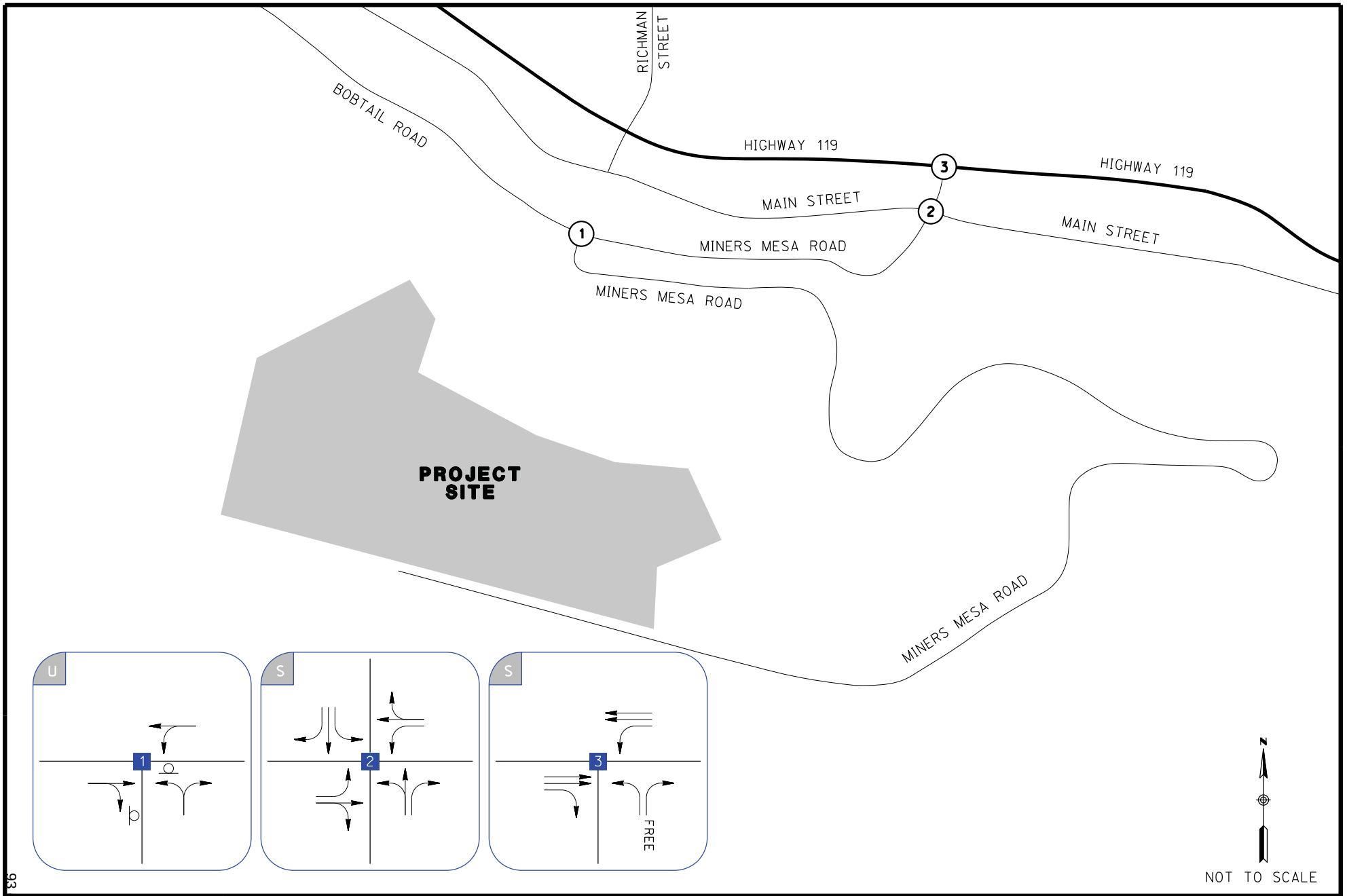

EXHIBIT 5

EXISTING INTERSECTION LANE GEOMETRICS

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LEGEND

U =UNSIGNALIZED FREE =FREE RIGHT TURN

S =SIGNALIZED

=STOP CONTROLLED

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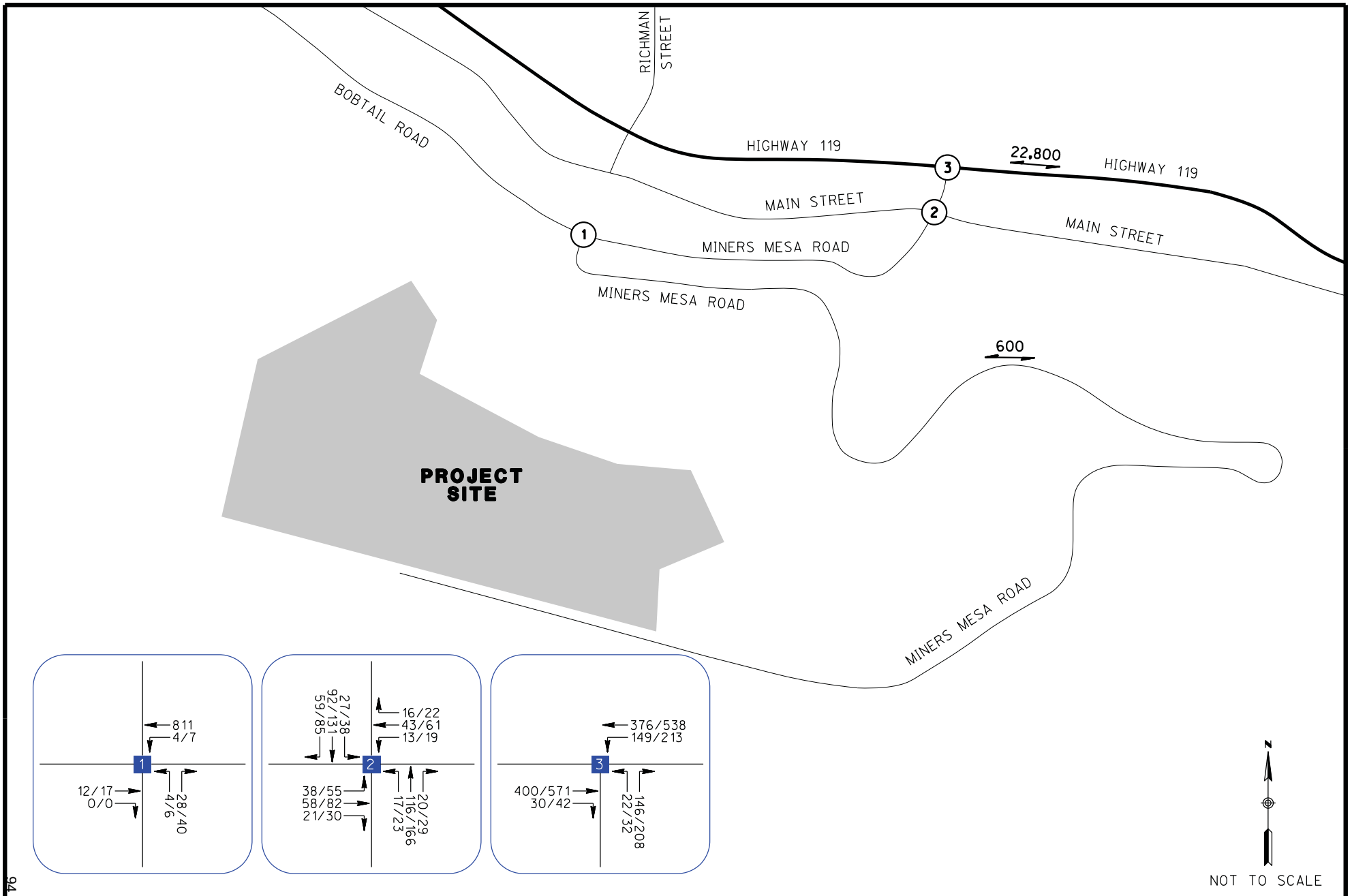

EXHIBIT 6

EXISTING (2020) TRAFFIC VOLUMES

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LEGEND

X,XXX =SATURDAY ADT

XX/XX=FRIDAY/SATURDAY PEAK HOUR VOLUMES

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Existing Intersection Analysis

Table 2 displays the LOS analysis results for the existing study intersection under existing conditions. **Appendix B** contains the intersection LOS worksheets.

As shown in the table, the existing study intersections currently operate at an acceptable LOS B or better during the Friday and Saturday PM peak hours.

Table 2
Existing Peak Hour Intersection LOS Summary

#	Intersection	Traffic Control	Peak Hour	Delay	LOS
1	Miners Mesa Road / Bobtail Road	AWSC [(a)]	Fri. PM	6.8	A
			Sat. PM	6.9	A
2	Miners Mesa Road-Mill Street / Main Street	Signal	Fri. PM	19.1	B
			Sat. PM	19.4	B
3	Mill Street / Highway 119	Signal	Fri. PM	3.6	A
			Sat. PM	16.9	B

Notes:
AWSC = All-Way-Stop Controlled

(a) The *Highway Capacity Manual* 6th Edition (HCM 6) does not report level of service (LOS) for a "T" intersection with stop control at two of the three approaches; therefore, the Miners Mesa Road/Bobtail Road intersection was analyzed with All-Way-Stop Control so that LOS can be reported for the intersection. This analysis methodology was also used in the Lake Gulch Whiskey Resort Traffic Impact Study (Kimley Horn & Associates, March 2020) for the Miners Mesa Road/Bobtail Road intersection.

PROJECT TRAFFIC

This section describes the forecast trip generation, trip distribution, and assignment of trips on the adjacent roadway network.

Project Trip Generation

At the direction of the City of Black Hawk, the project trip generation for the proposed uses was developed based on the Friday PM and Saturday PM peak periods (4:00-6:00 PM both days), which were determined to be the days and time periods when the highest number of trips would be generated by the project and also when the City of Black Hawk experiences the highest traffic volumes.

Where available, the proposed project trip generation was calculated based on the ITE *Trip Generation Manual* (10th Edition, 2017) trip rates for a Campground/RV Park use (ITE Land Use Code 416) and the trip rates for a Manufacturing use (ITE Land Use Code 140) for the proposed distillery operations.

However, the *ITE Trip Generation Manual* 10th Edition does not have weekend trip generation rates for a Campground/RV Park use (Land Use Code 416). The weekday PM peak hour of generator was used for both the Friday PM and Saturday PM peak hour trip rates (0.41 trips per occupied campsite), which is higher than the weekday PM peak hour of adjacent street traffic trip rate (0.27 trips per occupied campsite).

The *ITE Trip Generation Manual* 10th Edition also does not have daily trip rates for a Campground/RV Park use (ITE Land Use Code 416) for either weekdays or weekends, as only peak hour trips rates are provided. The Friday and Saturday daily trip rates for the Campground/RV Park use were derived from the San Diego Association of Governments (SANDAG) weekday daily trip generation rate for a campground use (4 trips per campsite). The SANDAG weekday daily trip rate of 4 trips per campsite was multiplied by the ratio of the of the ITE Land Use Code 416 weekday PM peak hour of generator trip rate and the weekday PM peak hour of adjacent street traffic trip rate ((4 * 0.41/0.27) to derive the Friday and Saturday daily trip rate for the campground/RV park use.

The trip generation rates for the indoor shooting range were developed based on the Friday and Saturday daily and peak hour trip rates for a Golf Driving Range (Land Use Code 432) from the ITE *Trip Generation Manual* (10th Edition, 2017). It was determined that the individual tee positions at a golf driving range would yield a similar trip generation rate to an indoor shooting range, and such an example is provided in the *Gun Range Development Traffic Impact Analysis*, 2350 Franklin Road, Lawrence, Kansas (CFS Engineers, December 2016).

The ITE Manufacturing trip rate used for the proposed distillery use (ITE Land Use Code 140) is based on the number of employees to be consistent with the trip generation used for the distillery use in the *Lake Gulch Whiskey Resort Traffic Impact Study* (Kimley Horn & Associates, March 2020). According to information provided by the developer, the proposed distillery in Phase One (Opening Year 2022) is estimated to have a total of 6 employees on a typical weekday or weekend day. Based on estimated sizes of the proposed distilleries in Lots 2 through 6, it is estimated that in Phase Two (Buildout Year 2025), the proposed distilleries in Lots 2 through 7 would have a total of 30 employees.

It is estimated that there would be 2 delivery trucks per day for the Phase One (Opening Year 2022) distillery use, with 4 truck trips per weekday and weekend day, and with 2 truck trips occurring during both the Friday PM peak hour and Saturday PM peak hour. At project buildout in Phase Two (Buildout Year 2025) with the proposed 6 distilleries on Lots 2 through 7, a total of 10 delivery trucks are estimated with 20 truck trips per weekday and weekend day and with 4 truck trips occurring during both the Friday PM peak hour and Saturday PM peak hour.

Based on information from the applicant, it was assumed that tours would be provided for the proposed distilleries in Lots 2 through 7. The tours will initially only be provided for the proposed distillery in Lot 7 in Phase One (Opening Year 2022), and the proposed distilleries in Lots 2 through 6 will be included in the tours in Phase Two (Buildout Year 2025). It is estimated that one tour per hour will be provided, with a total of eight (8) tours per day. A total of 20 patrons per tour is estimated, for a total of 160 tour patrons per day. An occupancy rate of 2 persons per vehicle was estimated for the trip generation of the distillery tours.

Due to the close proximity between the proposed 50 RV campsites and the indoor shooting range and distilleries, it was estimated that at least 10% of the trips generated by the indoor shooting range and distilleries would be internal to the site and would primarily be non-vehicular trips between these uses. A 10% internal trip reduction factor was applied to the indoor shooting range and distilleries (including tours) to reflect the estimated non-vehicular trips between uses within the project site.

Transit shuttle service between the project site and the casinos/hotels in downtown Black Hawk is being considered, which would reduce vehicular trips to and from the project site. However, this study conservatively assumes that shuttle service would not be provided.

Table 3 summarizes the trip generation for the Phase One project in Opening Year 2022. As shown, the Phase One project is estimated to generate approximately 557 daily trips on a Friday and approximately 643 daily trips on a Saturday. Table 3 also shows that the project is estimated to generate approximately 55 trips during the Friday PM peak hour, and approximately 70 trips during the Saturday PM peak hour.

Table 4 summarizes the trip generation for project buildout (Phase Two) in Buildout Year 2025. As shown, the proposed project at buildout is estimated to generate approximately 849 daily trips and 98 PM peak hour trips on a typical Friday. The project is estimated to generate approximately 1,233 daily trips and 175 PM peak hour trips on a typical Saturday.

The trip generation sources as described above are provided in **Appendix C**.

Project Trip Distribution

The trip distribution for the proposed project is based on the trip distribution used in the *Lake Gulch Whiskey Resort Traffic Impact Study* due to the similar uses and close proximity of the two project sites. However, because the proposed project site is located north of the Lake Gulch Whiskey Resort project site, no project trips are assumed on Lake Gulch Road, which is unpaved. It is assumed that 100% of project trips would use Miners Mesa Road north of the project site to travel to and from the surrounding area. **Exhibit 7** displays the trip distribution for the proposed project.

Project Trip Assignment

Based on the project trip distribution and trip generation, Friday and Saturday daily and peak hour project trips were assigned to the study area intersections. **Exhibit 8** displays the trip assignment for the Phase One project, and the trip assignment for the Phase Two project (project buildout) is shown in **Exhibit 9**.

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Table 3
Phase One Project Trip Generation Summary
Opening Year 2022

Land Use	Quantity		Fri. Daily Rate	Fri. ADT	Friday PM Peak Hour						Sat. Daily Rate	Sat. ADT	Saturday PM Peak Hour						
					Pk Hr Rate	In : Out Split			Volumes					Pk Hr Rate	In : Out Split			Volumes		
									In	Out	Total							In	Out	Total
Lot 1 Campground (ITE LU Code 416) [a]	50	sites	6.07	304	0.41	62%	:	38%	13	8	21	6.07	304	0.41	62%	:	38%	13	8	21
Lot 1 Indoor Shooting Range [b]	3	lanes	13.65	41	1.25	45%	:	55%	1	3	4	17.68	53	1.30	50%	:	50%	2	2	4
Lot 7 Distillery Manufacturing (ITE LU Code 140) [c]	6	employees [d]	2.47	15	0.45	44%	:	56%	1	2	3	1.24	7	0.18	50%	:	50%	1	1	2
Lot 7 Distillery Tasting Room (ITE LU Code 970) [e]	0.743	thousand-square-feet	80.73	60	10.93	30%	:	70%	2	6	8	203.48	151	36.50	47%	:	53%	13	14	27
Lot 7 Delivery Trucks [f]	2	trucks		4					1	1	2		4					1	1	2
Lot 7 Distillery Tours [g]	160	patrons per day		160					10	10	20		160					10	10	20
Subtotal Project Trips				***583***					***28***	***30***	***58***		***679***					***40***	***36***	***76***
Internal Trip Reduction (10%) [h]				-26					-1	-2	-3		-36					-3	-3	-6
NET PROJECT TRIPS				**557**					**27**	**28**	**55**		**643**					**37**	**33**	**70**

Footnotes:

[a] Source: The ITE Trip Generation Manual 10th Edition does not have weekend trip generation rates for a campground/RV park use (Land Use Code 416). The weekday PM peak hour of generator was used for both the Friday PM and Saturday PM peak hour trip rates (0.41 trips per occupied campsite), which is significantly higher than the weeekday PM peak hour of adjacent street traffic trip rate (0.27 trips per occupied campsite). The ITE Trip Generation Manual 10th Edition also does not have daily trip rates for either weekdays or weekends, as only peak hour trips rates are provided. Friday and Saturday daily trip rates in this table were derived from the San Diego Association of Governments (SANDAG) weekday daily trip generation rate for a campground use (4 trips per campsite). This weekday daily trip rate of 4 trips per campsite was multiplied by the ratio of the of the Friday/Saturday PM peak hour trip rate and the weekday PM peak hour of adjacent street traffic trip rate ((4 * 0.41/0.27) to derive the Friday and Saturday daily trip rate for the campground/RV park use.

[b] Source: The Saturday daily and peak hour trip rate for a Golf Driving Range (Land Use 432) from the ITE Trip Generation Manual 10th Edition, 2017 was used to estimate the trip generation for an indoor shooting range. It was determined that the individual tee positions at a golf driving range would yield a similar trip generation rate to an indoor shooting range, and such an example is provided in the Traffic Impact Analysis prepared for the Gun Range Development, 2350 Franklin Road, Lawrence, Kansas (CFS Engineers, December 2016).

[c] Source: ITE Trip Generation Manual 10th Edition, 2017 for a Manufacturing use (ITE Land Use Code 140).

[d] Source: Based on information provided by client.

[e] Source: ITE Trip Generation Manual 10th Edition, 2017 for a Winery Tasting Room use (ITE Land Use Code 970).

[f] Source: Based on information provided by client.

[g] Assumes one tour per hour with 20 patrons per hour, with total of 8 tours per day for a total of 160 patrons per day. Assumes 2 patrons per vehicle and each vehicle would generate 2 trips (arrive and depart).

[h] Conservatively assumes that 10% of trips generated by the indoor shooting range, distillery tasting room, and distillery tours will be internal to the site, specifically from the 50 RV campground sites.

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Table 4
Phase Two (Project Buildout) Trip Generation Summary
Buildout Year 2025

Land Use	Quantity		Fri. Daily Rate	Fri. ADT	Friday PM Peak Hour							Sat. Daily Rate	Sat. ADT	Saturday PM Peak Hour						
					Pk Hr Rate	In : Out Split			Volumes In	Volumes Out	Volumes Total			Pk Hr Rate	In : Out Split			Volumes In	Volumes Out	Volumes Total
Lot 1 Campground (ITE LU Code 416) [a]	50	sites	6.07	304	0.41	62%	:	38%	13	8	21	6.07	304	0.41	62%	:	38%	13	8	21
Lot 1 Indoor Shooting Range [b]	3	lanes	13.65	41	1.25	45%	:	55%	1	3	4	17.68	53	1.30	50%	:	50%	2	2	4
Lot 7 Distillery Manufacturing (ITE LU Code 140) [c]	30	employees [d]	2.47	74	0.45	44%	:	56%	6	8	14	1.24	37	0.18	50%	:	50%	3	3	6
Lot 7 Distillery Tasting Room (ITE LU Code 970) [e]	3.715	thousand-square-feet	80.73	300	10.93	30%	:	70%	12	29	41	203.48	756	36.50	47%	:	53%	64	72	136
Lot 7 Delivery Trucks [f]	10	trucks		20					2	2	4		20					2	2	4
Lot 7 Distillery Tours [g]	160	patrons per day		160					10	10	20		160					10	10	20
Subtotal Project Trips				***899***					***44***	***60***	***104***		***1,330***					***94***	***97***	***191***
Internal Trip Reduction (10%) [h]				-50					-2	-4	-6		-97					-8	-8	-16
NET PROJECT TRIPS				**849**					**42**	**56**	**98**		**1,233**					**86**	**89**	**175**

Footnotes:

[a] Source: The ITE Trip Generation Manual 10th Edition does not have weekend trip generation rates for a campground/RV park use (Land Use Code 416). The weekday PM peak hour of generator was used for both the Friday PM and Saturday PM peak hour trip rates (0.41 trips per occupied campsite), which is significantly higher than the weeekday PM peak hour of adjacent street traffic trip rate (0.27 trips per occupied campsite). The ITE Trip Generation Manual 10th Edition also does not have daily trip rates for either weekdays or weekends, as only peak hour trips rates are provided. Friday and Saturday daily trip rates in this table were derived from the San Diego Association of Governments (SANDAG) weekday daily trip generation rate for a campground use (4 trips per campsite). This weekday daily trip rate of 4 trips per campsite was multiplied by the ratio of the of the Friday/Saturday PM peak hour trip rate and the weekday PM peak hour of adjacent street traffic trip rate ((4 * 0.41/0.27) to derive the Friday and Saturday daily trip rate for the campground/RV park use.

[b] Source: The Saturday daily and peak hour trip rate for a Golf Driving Range (Land Use 432) from the ITE Trip Generation Manual 10th Edition, 2017 was used to estimate the trip generation for an indoor shooting range. It was determined that the individual tee positions at a golf driving range would yield a similar trip generation rate to an indoor shooting range, and such an example is provided in the Traffic Impact Analysis prepared for the Gun Range Development, 2350 Franklin Road, Lawrence, Kansas (CFS Engineers, December 2016).

[c] Source: ITE Trip Generation Manual 10th Edition, 2017 for a Manufacturing use (ITE Land Use Code 140).

[d] Source: Based on information provided by client.

[e] Source: ITE Trip Generation Manual 10th Edition, 2017 for a Winery Tasting Room use (ITE Land Use Code 970).

[f] Source: Based on information provided by client.

[g] Assumes one tour per hour with 20 patrons per hour, with total of 8 tours per day for a total of 160 patrons per day. Assumes 2 patrons per vehicle and each vehicle would generate 2 trips (arrive and depart).

[h] Conservatively assumes that 10% of trips generated by the indoor shooting range, distillery tasting room, and distillery tours will be internal to the site, specifically from the 50 RV campground sites.

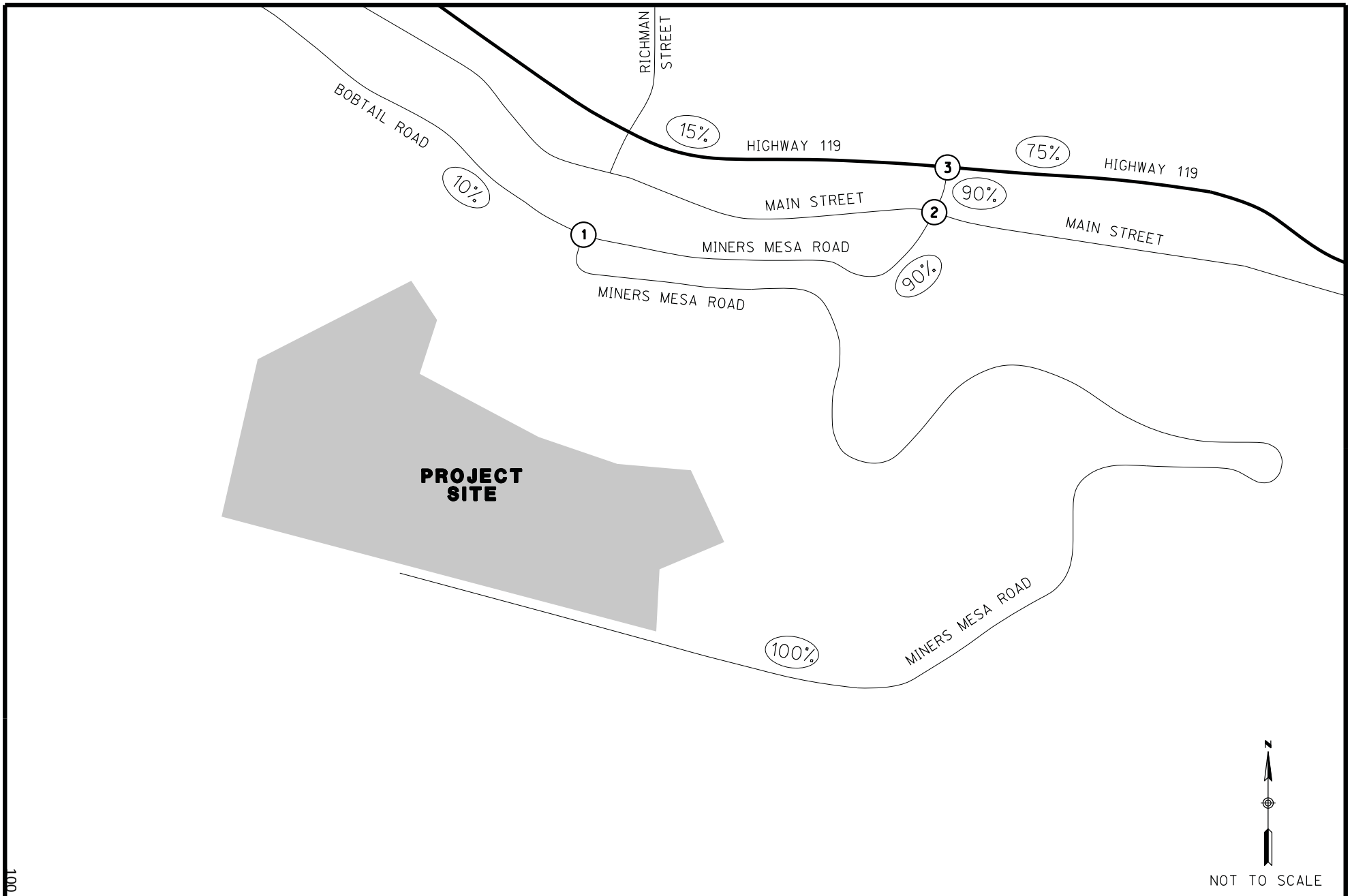

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EXHIBIT 7

PROJECT TRIP DISTRIBUTION PERCENTAGES

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LEGEND XX% =DISTRIBUTION PERCENTAGE

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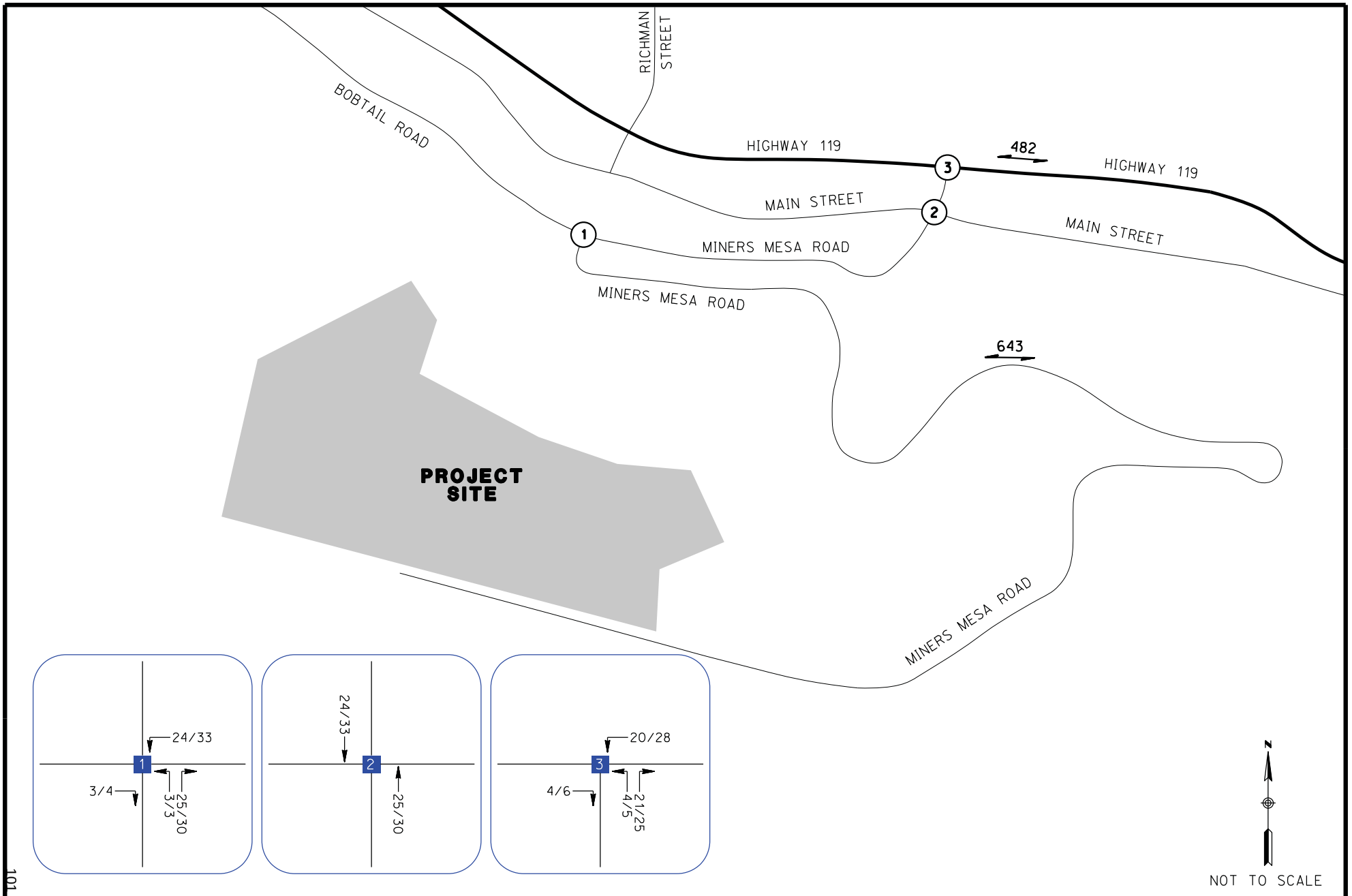

EXHIBIT 8

PHASE ONE PROJECT TRIP ASSIGNMENT

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LEGEND

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XX/XX=FRIDAY/SATURDAY PEAK HOUR VOLUMES

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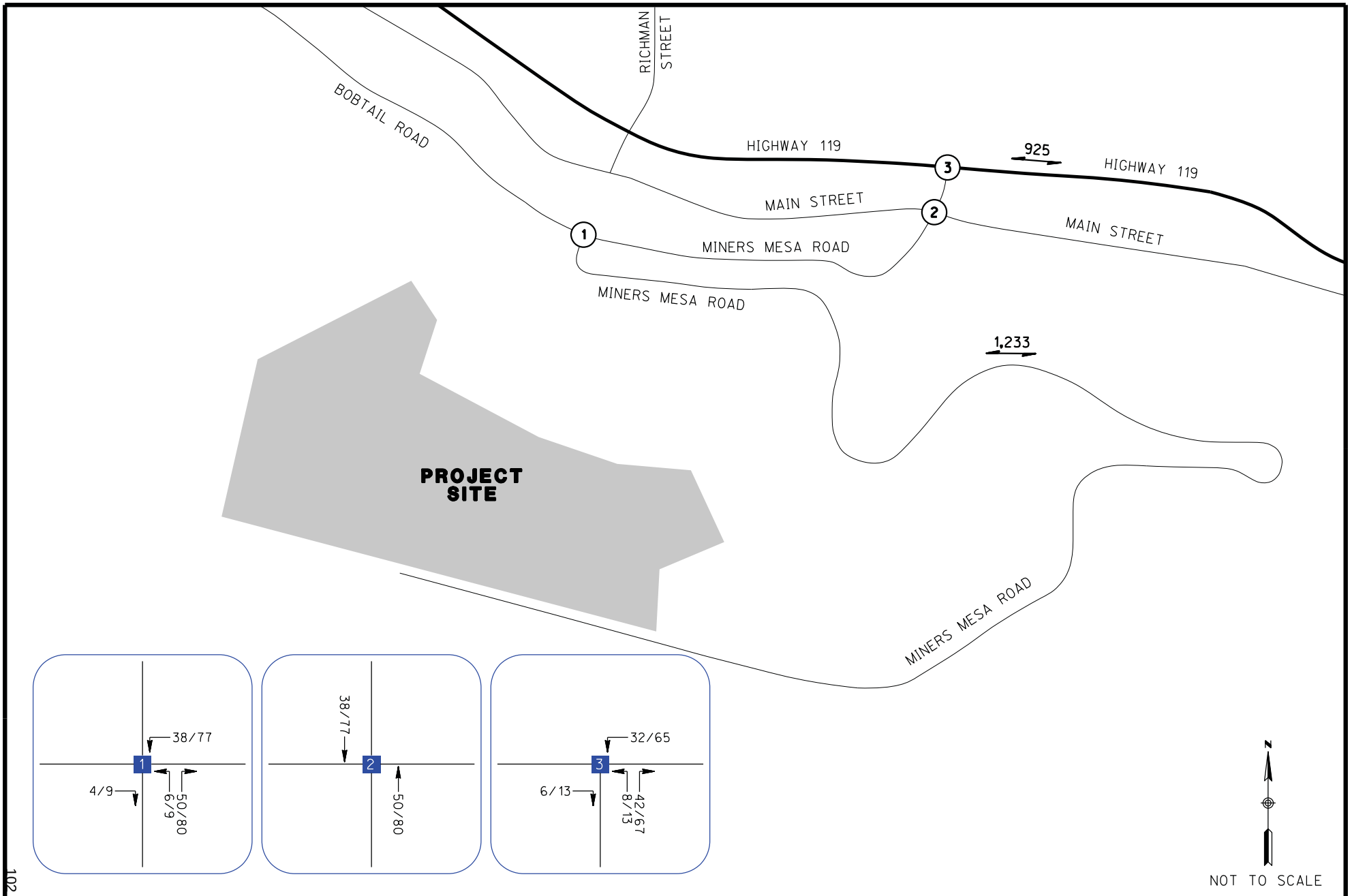

EXHIBIT 9

PHASE TWO PROJECT TRIP ASSIGNMENT

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XX/XX =FRIDAY/SATURDAY PEAK HOUR VOLUMES

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OPENING YEAR (2022) CONDITIONS WITHOUT AND WITH PHASE ONE PROJECT

This section summarizes the development of the Opening Year (2022) traffic volumes and operations of the study intersections without and with the proposed Phase One project. A background growth factor of 3.6% applied to the existing traffic volumes to reflect a 1.8% annual growth rate from 2020 to 2022, which is consistent with the growth rate used in the *Lake Gulch Whiskey Resort Traffic Impact Study*.

Opening Year (2022) Traffic Volumes

The Opening Year (2022) background traffic volumes without the project are illustrated in **Exhibit 10**. The proposed Phase One project trips were added to the year 2022 background traffic volumes to derive the Opening Year (2022) traffic volumes with the Phase One project, which are illustrated in **Exhibit 11**.

Opening Year (2022) Intersection Analysis

Table 5 displays the LOS analysis results for the study intersections under Opening Year (2022) conditions without and with the Phase One project. **Appendix B** contains the intersection LOS worksheets for Opening Year (2022) conditions.

Table 5
Opening Year (2022) Peak Hour Intersection LOS Summary

#	Intersection	Traffic Control	Peak Hour	Without Project		With Project	
				Delay (a)	LOS (b)	Delay (a)	LOS (b)
1	Miners Mesa Road / Bobtail Road	AWSC	Fri. PM	6.8	A	7.0	A
			Sat. PM	6.9	A	7.2	A
2	Miners Mesa Road-Mill Street / Main Street	Signal	Fri. PM	19.1	B	19.3	B
			Sat. PM	19.5	B	19.7	B
3	Mill Street / Highway 119	Signal	Fri. PM	3.6	A	3.9	A
			Sat. PM	16.9	B	16.9	B

Notes:
AWSC = All-Way-Stop Controlled

(a) The *Highway Capacity Manual* 6th Edition (HCM 6) does not report level of service (LOS) for a "T" intersection with stop control at two of the three approaches; therefore, the Miners Mesa Road/Bobtail Road intersection was analyzed with All-Way-Stop Control so that LOS can be reported for the intersection. This analysis methodology was also used in the Lake Gulch Whiskey Resort Traffic Impact Study (Kimley Horn & Associates, March 2020) for the Miners Mesa Road/Bobtail Road intersection.

As shown in the table, the study intersections are forecast to continue operating at an acceptable LOS B or better under Opening Year (2022) conditions both without and with the Phase Two project.

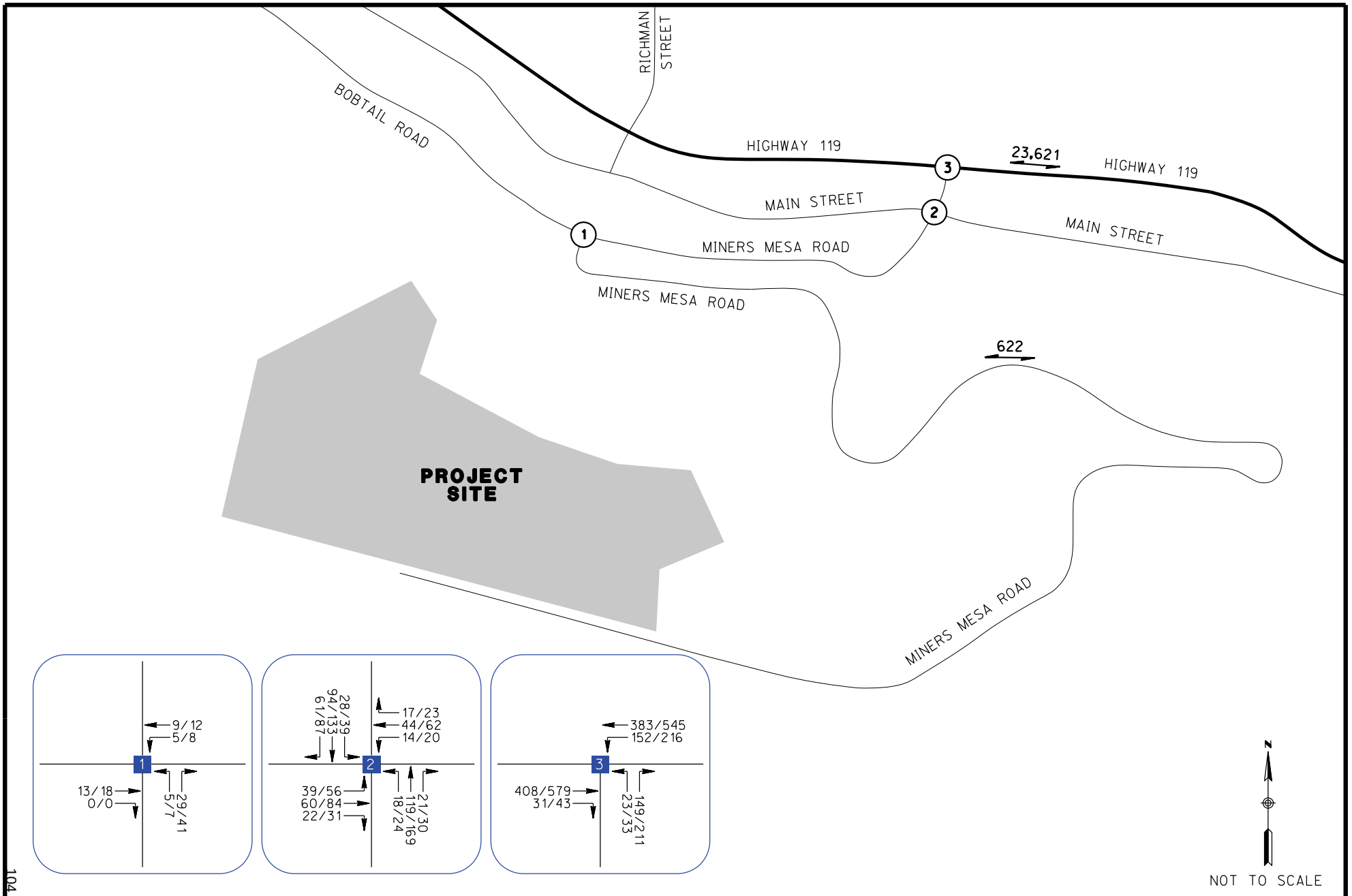

EXHIBIT 10

OPENING YEAR (2022) BACKGROUND TRAFFIC VOLUMES

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LEGEND

X,XXX =SATURDAY ADT

XX/XX =FRIDAY/SATURDAY PEAK HOUR VOLUMES

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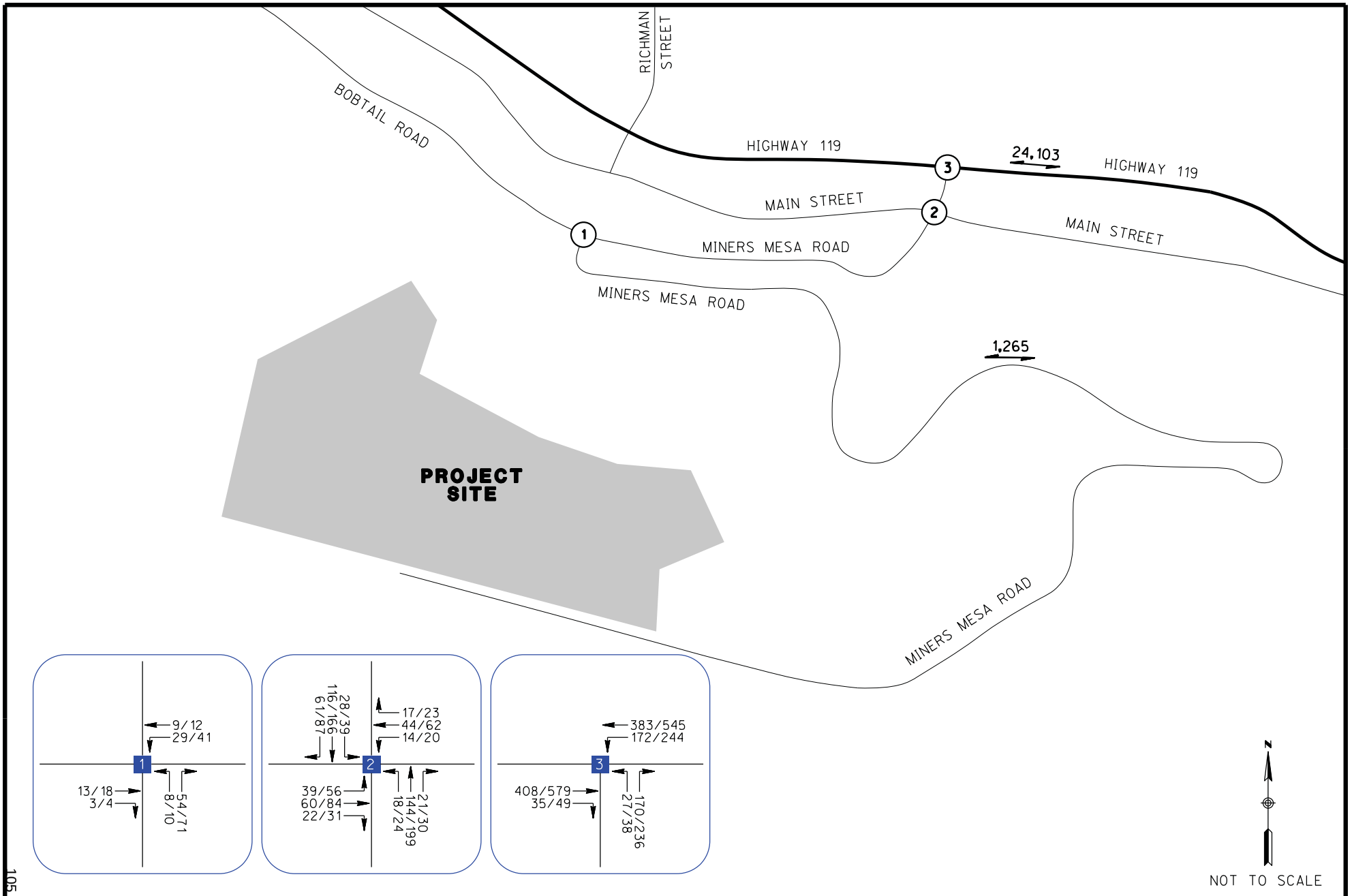

EXHIBIT 11

OPENING YEAR (2022) BACKGROUND PLUS PHASE ONE PROJECT TRAFFIC VOLUMES

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LEGEND

X,XXX =SATURDAY ADT

XX/XX=FRIDAY/SATURDAY PEAK HOUR VOLUMES

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BUILDOUT YEAR (2025) CONDITIONS WITHOUT AND WITH PHASE TWO PROJECT

This section summarizes the development of the Buildout Year (2025) traffic volumes and operations of the study intersections without and with the buildout of the project under Phase Two. Buildout Year (2025) assumes the completion of the Lake Gulch Whiskey Resort Project located south of the project site. The Year 2025 Background Plus Project traffic volumes from the *Lake Gulch Whiskey Resort Traffic Impact Study* were used as the background volumes for Buildout Year (2025). These traffic volumes include the trips generated by the Lake Gulch Whiskey Resort Project, and the 2025 background volumes also include a background growth factor of 9.0% that was applied to the existing traffic volumes to reflect a 1.8% annual growth rate from 2020 to 2025.

Buildout Year (2025) Traffic Volumes

The Buildout Year (2025) traffic volumes without the project are illustrated in **Exhibit 12**. The proposed Phase Two project trips were added to the year 2025 background traffic volumes to derive the Buildout Year (2025) traffic volumes with the Phase Two project, which are illustrated in **Exhibit 13**.

Buildout Year (2025) Intersection Analysis

Table 6 displays the LOS analysis results for the study intersections under Buildout Year (2025) conditions without and with the Phase Two project. **Appendix B** contains the intersection LOS worksheets for Buildout Year (2025) conditions.

Table 6
Buildout Year (2025) Peak Hour Intersection LOS Summary

#	Intersection	Traffic Control	Peak Hour	Without Project		With Project	
				Delay (a)	LOS (b)	Delay (a)	LOS (b)
1	Miners Mesa Road / Bobtail Road	AWSC	Fri. PM	9.9	A	10.9	B
			Sat. PM	10.5	B	13.2	B
2	Miners Mesa Road-Mill Street / Main Street	Signal	Fri. PM	20.1	C	20.8	C
			Sat. PM	20.7	C	22.4	C
3	Mill Street / Highway 119	Signal	Fri. PM	4.6	A	5.2	A
			Sat. PM	15.7	B	16.0	B

Notes:
AWSC = All-Way-Stop Controlled

(a) The *Highway Capacity Manual* 6th Edition (HCM 6) does not report level of service (LOS) for a "T" intersection with stop control at two of the three approaches; therefore, the Miners Mesa Road/Bobtail Road intersection was analyzed with All-Way-Stop Control so that LOS can be reported for the intersection. This analysis methodology was also used in the Lake Gulch Whiskey Resort Traffic Impact Study (Kimley Horn & Associates, March 2020) for the Miners Mesa Road/Bobtail Road intersection.

As shown in the table, the study intersections are forecast to continue operating at an acceptable LOS C or better under Buildout Year (2025) conditions both without and with the Phase Two project.

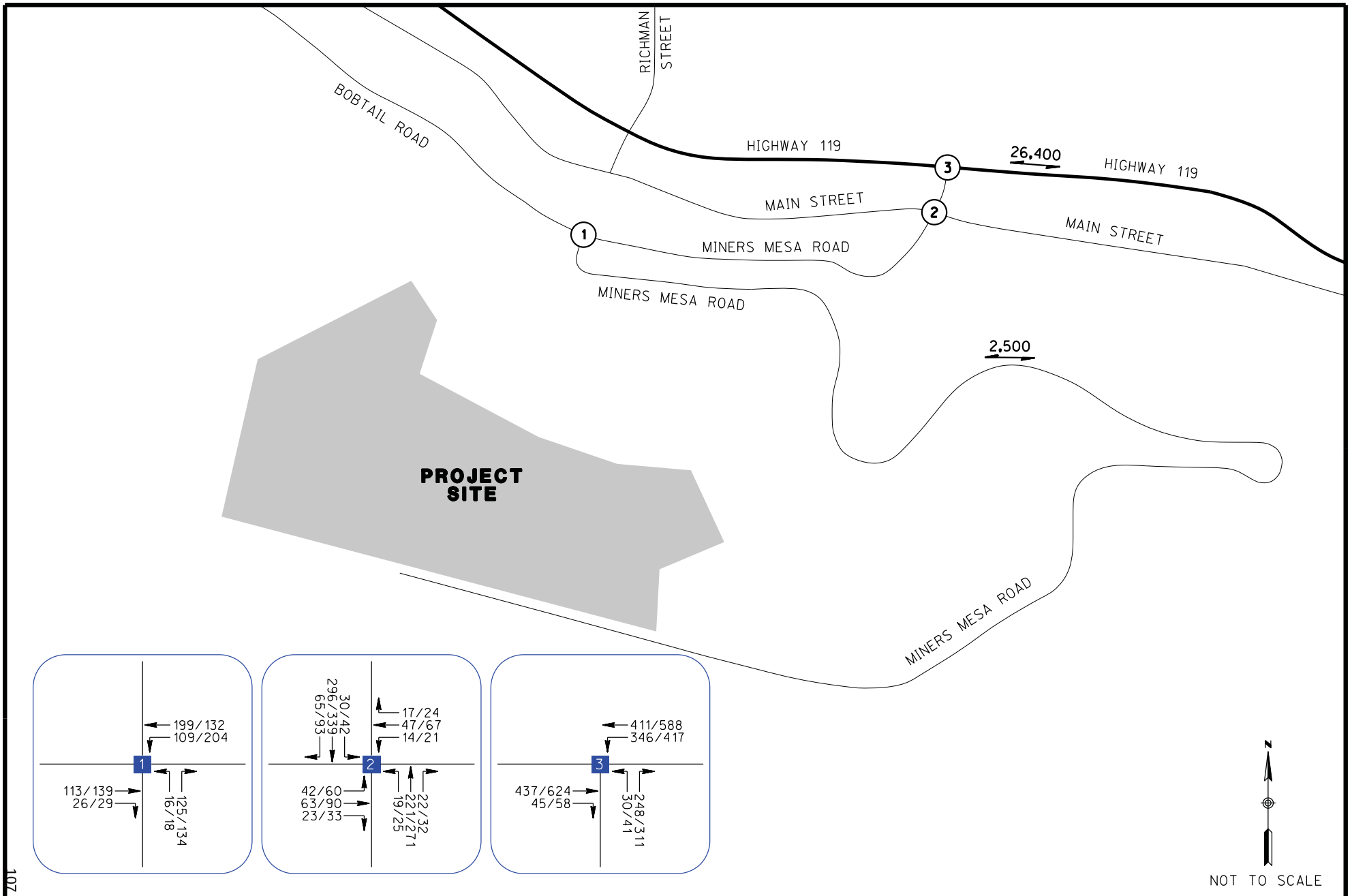

EXHIBIT 12

BUILDOUT YEAR (2025) BACKGROUND TRAFFIC VOLUMES

BLACK HAWK

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LEGEND

X,XXX =SATURDAY ADT

XX/XX =FRIDAY/SATURDAY PEAK HOUR VOLUMES

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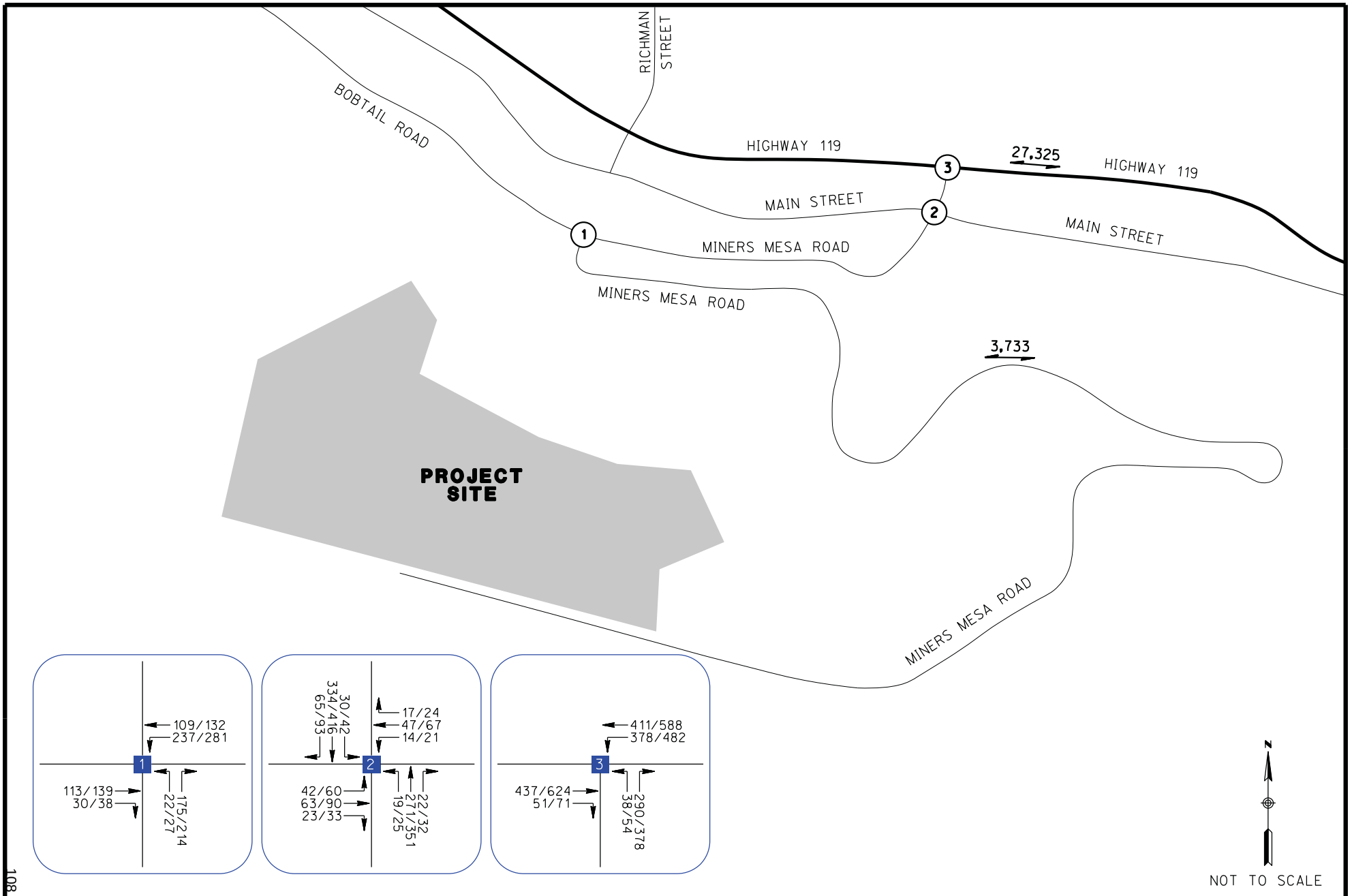

EXHIBIT 13

BUILDOUT YEAR (2025) BACKGROUND PLUS PHASE TWO PROJECT TRAFFIC VOLUMES

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LEGEND

X,XXX =SATURDAY ADT

XX/XX =FRIDAY/SATURDAY PEAK HOUR VOLUMES

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QUEUING ANALYSIS

A queuing analysis was performed for the study intersections during the Friday and Saturday peak hours under all analysis scenarios to determine if existing and future vehicular queues can be accommodated within the existing storage lengths of the turn lanes. The queuing assessment was performed both without and with the proposed project. The Synchro software program was used to perform the queuing analysis at the signalized intersections, and the SimTraffic application within Synchro was used to conduct the queuing analysis for the unsignalized study intersection of Miners Mesa Road / Bobtail Road. The queuing analysis results are based on the 95th percentile queue lengths in feet for each turning movement.

The Friday PM peak hour and Saturday PM peak hour queue lengths at the study intersections under Existing, Opening Year (2022) and Buildout Year (2025) conditions without and with the proposed project are shown in **Table 7** and **Table 8**, respectively.

The Synchro/SimTraffic queuing worksheets are provided in **Appendix D.**

Table 7
Friday PM Peak Hour Queuing Analysis Summary

#	Intersection	Control	Approach/ Movement	Existing Storage Length (feet)	Queue Lengths (feet)				
					EX (2020)	OY (2022)	OY (2022) + P	BY (2025)	BY (2025) + P
1	Miners Mesa Road / Bobtail Road	AWSC	NB	-	47'	35'	53'	51'	64'
			EB	-	35'	26'	42'	52'	59'
			WB	-	34'	40'	43'	95'	150'
2	Miners Mesa Road - Mill Street / Main Street	Signal	NBT/L	-	71'	73'	86'	126'	154'
			NBR	50’	0'	0'	0'	0'	0'
			SBL	100’	8'	8'	6'	5'	5'
			SBT	100’	27'	27'	30'	54'	57'
			SBR	50’	6'	6'	2'	0'	0'
			EBL	75’	44'	44'	44'	48'	48'
			WBL	90’	25'	26'	26'	26'	26'
3	Mill Street / Highway 119	Signal	NBL	100’	34'	35'	40'	46'	54'
			EBR	240’	23'	23'	24'	27'	28'
			WBL	375’	25'	26'	30'	64'	74'

Notes:
AWSC = All-Way Stop Control
EX = Existing
OY = Opening Year
BY = Buildout Year
P = Project

Table 8
Saturday PM Peak Hour Queuing Analysis Summary

#	Intersection	Control	Approach/ Movement	Existing Storage Length (feet)	Queue Lengths (feet)				
					EX (2020)	OY (2022)	OY (2022) + P	BY (2025)	BY (2025) + P
1	Miners Mesa Road / Bobtail Road	AWSC	NB	-	48'	44'	32'	59'	101'
			EB	-	34'	43'	45'	69'	65'
			WB	-	36'	27'	58'	105'	199'
2	Miners Mesa Road - Mill Street / Main Street	Signal	NBT/L	-	104'	107'	123'	169'	222'
			NBR	50’	0'	0'	0'	0'	0'
			SBL	100’	10'	10'	9'	7'	6'
			SBT	100’	24'	25'	28'	35'	39'
			SBR	50’	0'	0'	0'	0'	0'
			EBL	75’	57'	58'	58'	60'	60'
			WBL	90’	32'	33'	33'	34'	34'
3	Mill Street / Highway 119	Signal	NBL	100’	45'	45'	52'	60'	74'
			EBR	240’	24'	23'	25'	26'	29'
			WBL	375’	38'	39'	52'	187'	253'

Notes:
AWSC = All-Way Stop Control
EX = Existing
OY = Opening Year
BY = Buildout Year
P = Project

Based on the findings of the queuing analysis shown in Tables 7 and 8, the existing and future queues during the Friday and Saturday peak hours do not exceed the storage lengths provided for the turning movements at the study intersections.

SIGNAL WARRANT ANALYSIS

A signal warrant analysis was conducted for the unsignalized intersection of Miners Mesa Road / Bobtail Road under all analysis scenarios to determine if existing and/or future traffic volumes would justify installation of a traffic signal. The signal warrant analysis was performed in accordance with the 2014 Manual on Uniform Traffic Devices (MUTCD) published by the Federal Highway Administration (FHWA). The signal warrants, if satisfied, provide justification for the installation of a traffic signal, but would not require the installation of a signal. The following individual signal warrants from Chapter 4C (Traffic Control Signal Needs Studies) of the 2014 MUTCD were performed in this study:

- Warrant 3: Peak Hour (Part A and Part B)

Satisfaction of either Part A or Part B satisfies the Peak Hour Warrant.

The findings of the traffic signal warrant analysis are summarized in **Table 9**. **Appendix E** contains the signal warrant analysis worksheets.

As shown, the Peak Hour Warrant (Warrant 3) was not satisfied at the Miners Mesa Road / Bobtail Road intersection under any of the analysis scenarios without or with the proposed project.

Table 9
Peak Hour Signal Warrant Summary

Intersection	Existing 2020 (YES/NO)	Opening Year 2022 (YES/NO)	Opening Year 2022 + Project (YES/NO)	Buildout Year 2025 (YES/NO)	Buildout Year 2025 + Project (YES/NO)
Miners Mesa Road / Bobtail Road	NO	NO	NO	NO	NO

Source: 2014 *Manual on Uniform Traffic Devices* (MUTCD).

CONCLUSIONS AND RECOMMENDATIONS

The Existing (2020) Conditions analysis results showed that the study intersections are currently operating at an acceptable LOS B or better during the Friday PM peak hour and Saturday PM peak hour.

The Opening Year (2022) Conditions analysis results showed that the study intersections are expected to continue operating at an acceptable LOS B or better during the Friday PM and Saturday PM peak hours both without and with the proposed Phase One project.

The Buildout Year (2025) Conditions analysis results showed that the study intersections are expected to continue operating at an acceptable LOS C or better during the Friday PM and Saturday PM peak hours both without and with the proposed Phase Two project.

The queuing analysis results showed that the future queues under the Opening Year (2022) With Phase One Project and Buildout Year (2025) With Phase Two Project scenarios can be accommodated within the existing storage lengths at the study intersections.

Based on the results of the level of service operations and queuing analyses, no project-related traffic or queuing impacts were identified at the study intersections, and no roadway or intersection improvements are recommended based on the analysis findings.

However, it is recommended that the project install a stop sign on the westbound approach to provide all-way stop control at the Miners Mesa Road / Bobtail Road intersection, which would provide improved operations with the forecast increase in traffic at the intersection. All-way stop control was used to analyze the Miners Mesa Road / Bobtail Road intersection in this study due to the atypical existing stop control at two out of the three approaches of the intersection, which was not accepted by the HCM analysis software.

REFERENCES

1. Institute of Transportation Engineers, Trip Generation, 10th Edition, Washington, D.C., 2017.

2. Trafficware LLC, Synchro, Version 10.3, Build 28, Sugar Land, Texas, 2017.

3. Trafficware LLC, SimTraffic, Version 10.3, Build 28, Sugar Land, Texas, 2017.

4. Transportation Research Board, Highway Capacity Manual 6th Edition, Washington, D.C., 2016.

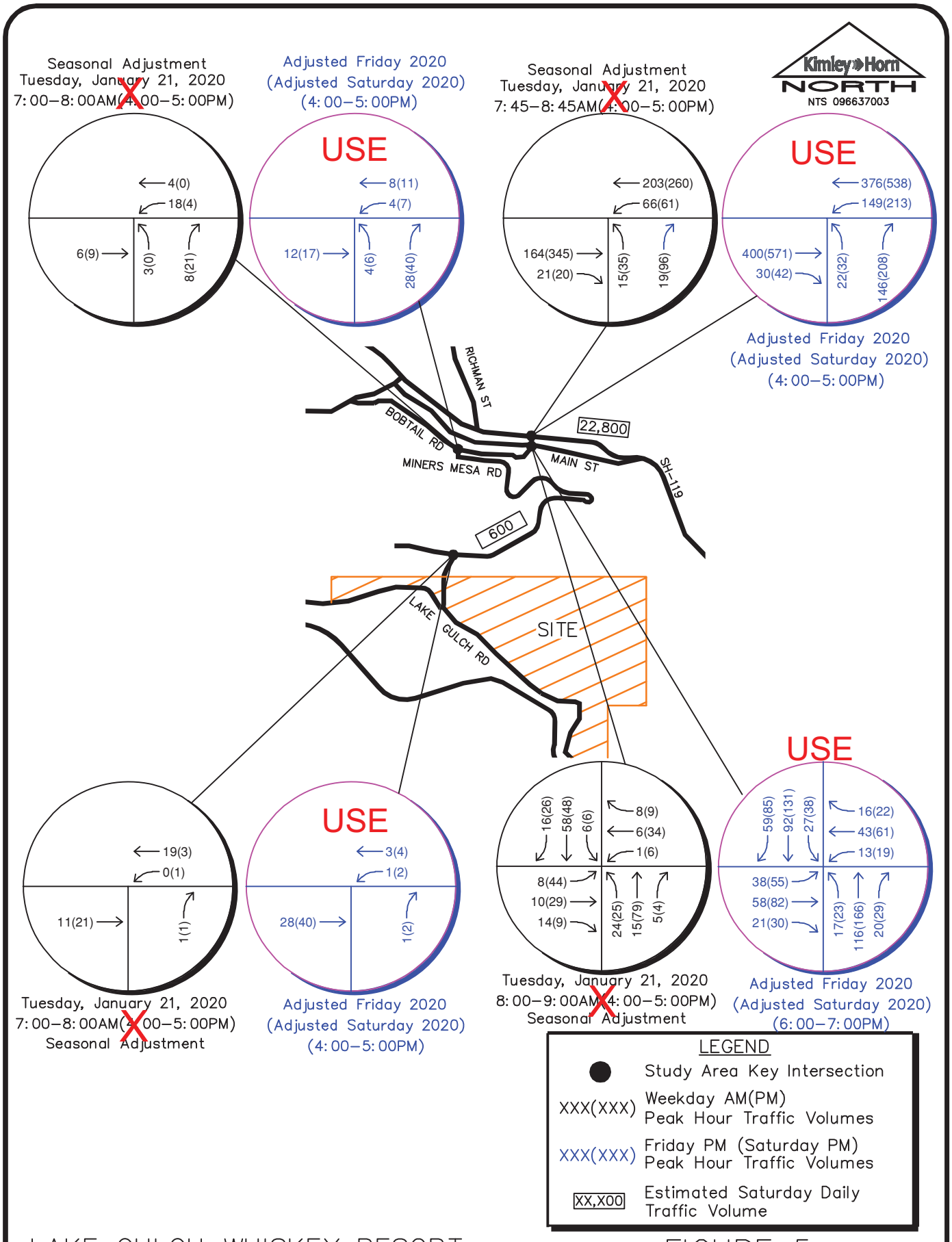
5. Kimley Horn & Associates, Lake Gulch Whiskey Resort Traffic Impact Study, March 2020.

6. CFS Engineers, Gun Range Development Traffic Impact Analysis, Lawrence, Kansas, December 2016.

7. Federal Highway Administration (FHWA), Manual on Uniform Traffic Devices (MUTCD), 2014.

APPENDIX A

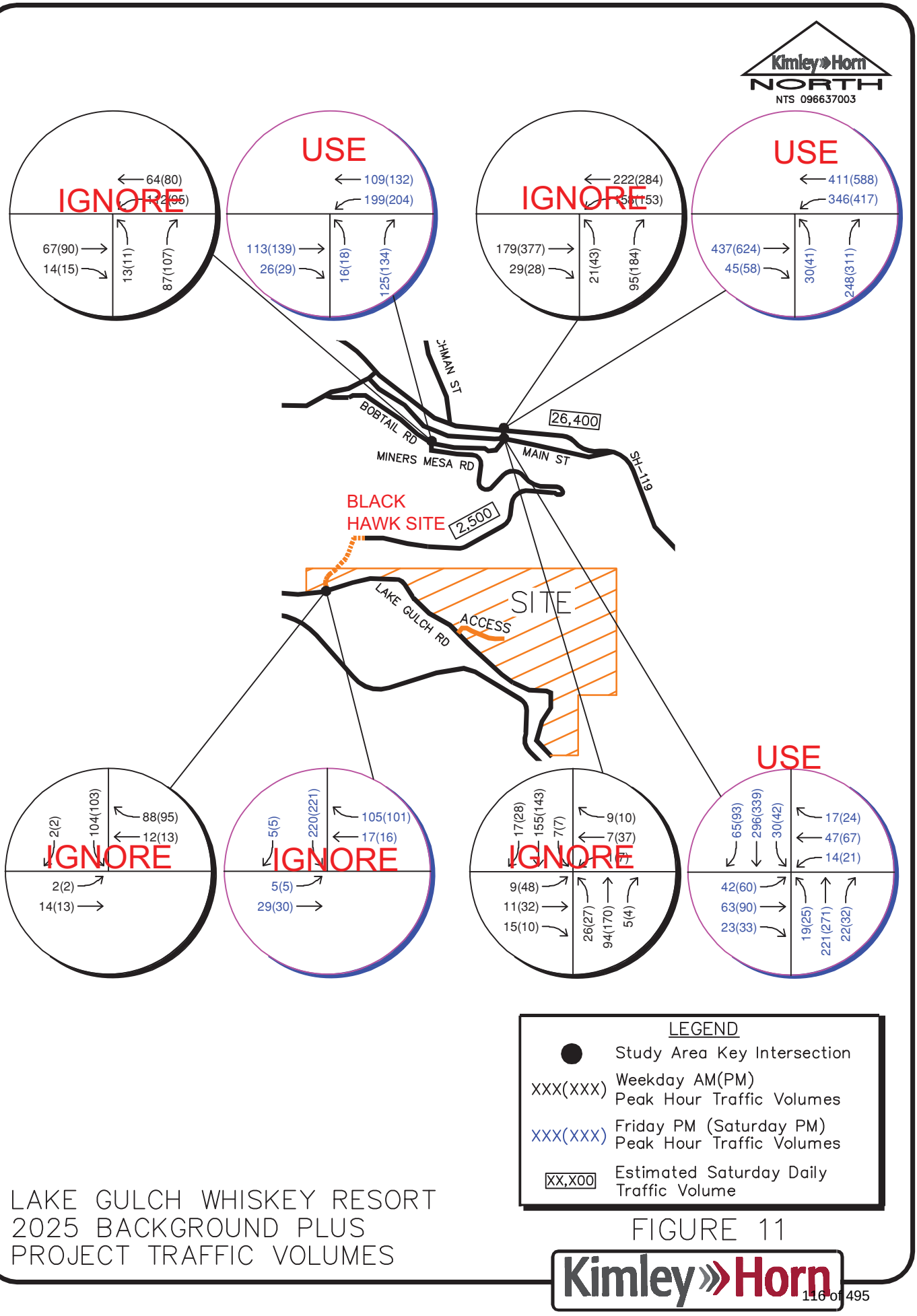
TRAFFIC VOLUME DATA



LAKE GULCH WHISKEY RESORT
EXISTING ADJUSTED TRAFFIC VOLUMES

FIGURE 5

Kimley»Horn



LAKE GULCH WHISKEY RESORT
2025 BACKGROUND PLUS
PROJECT TRAFFIC VOLUMES

FIGURE 11

Kimley»Horn

APPENDIX B

INTERSECTION LOS WORKSHEETS

EXISTING (2020) CONDITIONS

Intersection	
Intersection Delay, s/veh	6.8
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	12	0	4	8	4	28
Future Vol, veh/h	12	0	4	8	4	28
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	0	4	9	4	30
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.1	7.1	6.6
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	12%	0%	33%
Vol Thru, %	0%	100%	67%
Vol Right, %	88%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	32	12	12
LT Vol	4	0	4
Through Vol	0	12	8
RT Vol	28	0	0
Lane Flow Rate	35	13	13
Geometry Grp	1	1	1
Degree of Util (X)	0.034	0.015	0.015
Departure Headway (Hd)	3.481	4.005	4.072
Convergence, Y/N	Yes	Yes	Yes
Cap	1031	897	882
Service Time	1.492	2.014	2.081
HCM Lane V/C Ratio	0.034	0.014	0.015
HCM Control Delay	6.6	7.1	7.1
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.1	0	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	58	21	13	43	16	17	116	20	27	92	59
Future Volume (veh/h)	38	58	21	13	43	16	17	116	20	27	92	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.94		0.91	0.89		0.93	0.91		0.89	0.94		0.92
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	41	63	23	14	47	17	18	126	22	29	100	64
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	466	468	171	412	362	131	88	552	471	503	821	694
Arrive On Green	0.04	0.37	0.37	0.28	0.28	0.28	0.33	0.33	0.33	0.06	0.44	0.44
Sat Flow, veh/h	1781	1269	463	1174	1282	464	129	1655	1412	1781	1870	1453
Grp Volume(v), veh/h	41	0	86	14	0	64	144	0	22	29	100	64
Grp Sat Flow(s),veh/h/ln	1781	0	1732	1174	0	1745	1783	0	1412	1781	1870	1453
Q Serve(g_s), s	1.4	0.0	3.0	0.8	0.0	2.5	0.0	0.0	0.9	0.9	2.9	2.2
Cycle Q Clear(g_c), s	1.4	0.0	3.0	0.8	0.0	2.5	5.0	0.0	0.9	0.9	2.9	2.2
Prop In Lane	1.00		0.27	1.00		0.27	0.12		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	466	0	638	412	0	494	640	0	471	503	821	694
V/C Ratio(X)	0.09	0.00	0.13	0.03	0.00	0.13	0.22	0.00	0.05	0.06	0.12	0.09
Avail Cap(c_a), veh/h	532	0	799	478	0	591	640	0	471	533	821	694
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.1	0.0	18.9	23.4	0.0	24.0	21.6	0.0	20.3	16.1	15.0	13.0
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	1.2	0.2	0.0	1.0	2.2	0.0	0.3	0.4	1.3	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.2	0.0	19.0	23.5	0.0	24.1	21.8	0.0	20.3	16.2	15.3	13.3
LnGrp LOS	C	A	B	C	A	C	C	A	C	B	B	B
Approach Vol, veh/h		127			78			166			193	
Approach Delay, s/veh		19.4			24.0			21.6			14.7	
Approach LOS		B			C			C			B	

Timer - Assigned Phs	1	2		4		6	7	8
Phs Duration (G+Y+Rc), s	9.5	34.5		37.7		44.0	7.7	30.0
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s	6.5	28.5		41.5		39.5	6.5	30.5
Max Q Clear Time (g_c+I1), s	2.9	7.0		5.0		4.9	3.4	4.5
Green Ext Time (p_c), s	0.0	0.9		0.5		0.8	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	19.1
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	400	30	149	376	22	146
Future Volume (veh/h)	400	30	149	376	22	146
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	435	33	162	409	24	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2659	1186	816	3070	45	
Arrive On Green	0.75	0.75	0.05	0.86	0.03	0.00
Sat Flow, veh/h	3647	1585	1781	3647	1781	1585
Grp Volume(v), veh/h	435	33	162	409	24	0
Grp Sat Flow(s),veh/h/ln	1777	1585	1781	1777	1781	1585
Q Serve(g_s), s	3.2	0.5	0.0	1.6	1.2	0.0
Cycle Q Clear(g_c), s	3.2	0.5	0.0	1.6	1.2	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2659	1186	816	3070	45	
V/C Ratio(X)	0.16	0.03	0.20	0.13	0.54	
Avail Cap(c_a), veh/h	2659	1186	1184	3070	287	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	3.3	2.9	3.5	0.9	43.4	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.1	0.0	9.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.1	0.6	0.0	0.6	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	3.3	2.9	3.7	1.0	53.0	0.0
LnGrp LOS	A	A	A	A	D	
Approach Vol, veh/h	468			571	24	A
Approach Delay, s/veh	3.3			1.7	53.0	
Approach LOS	A			A	D	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	10.4	72.8				83.2	6.8
Change Period (Y+Rc), s	5.5	* 5.5				5.5	4.5
Max Green Setting (Gmax), s	23.5	* 38				65.5	14.5
Max Q Clear Time (g_c+I1), s	12.0	5.2				3.6	3.2
Green Ext Time (p_c), s	0.4	2.8				2.7	0.0

Intersection Summary	
HCM 6th Ctrl Delay	3.6
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Intersection Delay, s/veh	6.9
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	17	0	7	11	6	40
Future Vol, veh/h	17	0	7	11	6	40
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	0	8	12	7	43
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.1	7.2	6.7
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	13%	0%	39%
Vol Thru, %	0%	100%	61%
Vol Right, %	87%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	46	17	18
LT Vol	6	0	7
Through Vol	0	17	11
RT Vol	40	0	0
Lane Flow Rate	50	18	20
Geometry Grp	1	1	1
Degree of Util (X)	0.049	0.021	0.022
Departure Headway (Hd)	3.502	4.035	4.112
Convergence, Y/N	Yes	Yes	Yes
Cap	1023	889	873
Service Time	1.522	2.049	2.126
HCM Lane V/C Ratio	0.049	0.02	0.023
HCM Control Delay	6.7	7.1	7.2
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.2	0.1	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	82	30	19	61	22	23	166	29	38	131	85
Future Volume (veh/h)	55	82	30	19	61	22	23	166	29	38	131	85
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.95		0.91	0.90		0.93	0.92		0.89	0.95		0.92
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	60	89	33	21	66	24	25	180	32	41	142	92
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	462	478	177	406	365	133	86	551	471	459	821	706
Arrive On Green	0.04	0.38	0.38	0.29	0.29	0.29	0.33	0.33	0.33	0.06	0.44	0.44
Sat Flow, veh/h	1781	1264	469	1143	1280	465	123	1653	1412	1781	1870	1453
Grp Volume(v), veh/h	60	0	122	21	0	90	205	0	32	41	142	92
Grp Sat Flow(s),veh/h/ln	1781	0	1732	1143	0	1745	1776	0	1412	1781	1870	1453
Q Serve(g_s), s	2.0	0.0	4.2	1.2	0.0	3.5	0.0	0.0	1.4	1.2	4.1	3.2
Cycle Q Clear(g_c), s	2.0	0.0	4.2	1.2	0.0	3.5	7.4	0.0	1.4	1.2	4.1	3.2
Prop In Lane	1.00		0.27	1.00		0.27	0.12		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	462	0	655	406	0	497	637	0	471	459	821	706
V/C Ratio(X)	0.13	0.00	0.19	0.05	0.00	0.18	0.32	0.00	0.07	0.09	0.17	0.13
Avail Cap(c_a), veh/h	514	0	799	467	0	591	637	0	471	489	821	706
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.99	0.99	0.99
Uniform Delay (d), s/veh	19.8	0.0	18.7	23.4	0.0	24.3	22.5	0.0	20.5	16.5	15.3	12.9
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.1	0.0	0.2	0.3	0.0	0.1	0.1	0.5	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	1.7	0.3	0.0	1.5	3.3	0.0	0.5	0.5	1.8	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.9	0.0	18.8	23.5	0.0	24.4	22.7	0.0	20.5	16.6	15.8	13.3
LnGrp LOS	B	A	B	C	A	C	C	A	C	B	B	B
Approach Vol, veh/h		182			111			237			275	
Approach Delay, s/veh		19.2			24.2			22.4			15.1	
Approach LOS		B			C			C			B	

Timer - Assigned Phs	1	2		4		6	7	8				
Phs Duration (G+Y+Rc), s	9.5	34.5		38.5		44.0	8.4	30.2				
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s	6.5	28.5		41.5		39.5	6.5	30.5				
Max Q Clear Time (g_c+I1), s	3.2	9.4		6.2		6.1	4.0	5.5				
Green Ext Time (p_c), s	0.0	1.3		0.8		1.2	0.0	0.5				

Intersection Summary			
HCM 6th Ctrl Delay		19.4	
HCM 6th LOS		B	

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	571	42	213	538	32	208
Future Volume (veh/h)	571	42	213	538	32	208
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	621	46	232	585	35	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	814	363	1159	3044	58	
Arrive On Green	0.23	0.23	0.58	0.86	0.03	0.00
Sat Flow, veh/h	3647	1585	1781	3647	1781	1585
Grp Volume(v), veh/h	621	46	232	585	35	0
Grp Sat Flow(s),veh/h/ln	1777	1585	1781	1777	1781	1585
Q Serve(g_s), s	14.7	2.1	2.3	2.5	1.7	0.0
Cycle Q Clear(g_c), s	14.7	2.1	2.3	2.5	1.7	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	814	363	1159	3044	58	
V/C Ratio(X)	0.76	0.13	0.20	0.19	0.61	
Avail Cap(c_a), veh/h	1481	660	1159	3044	208	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.99	0.00
Uniform Delay (d), s/veh	32.4	27.6	3.7	1.1	43.0	0.0
Incr Delay (d2), s/veh	1.5	0.2	0.1	0.0	9.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	0.8	0.4	0.0	0.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	33.9	27.7	3.8	1.1	52.7	0.0
LnGrp LOS	C	C	A	A	D	
Approach Vol, veh/h	667			817	35	A
Approach Delay, s/veh	33.5			1.9	52.7	
Approach LOS	C			A	D	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	56.5	26.1				82.6	7.4
Change Period (Y+Rc), s	4.5	5.5				5.5	4.5
Max Green Setting (Gmax), s	27.5	37.5				69.5	10.5
Max Q Clear Time (g_c+I1), s	4.3	16.7				4.5	3.7
Green Ext Time (p_c), s	0.6	3.9				4.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	16.9
HCM 6th LOS	B

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

OPENING YEAR (2022) WITHOUT PROJECT

Intersection	
Intersection Delay, s/veh	6.8
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	13	0	5	9	5	29
Future Vol, veh/h	13	0	5	9	5	29
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	0	5	10	5	32
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.1	7.2	6.6
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	15%	0%	36%
Vol Thru, %	0%	100%	64%
Vol Right, %	85%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	34	13	14
LT Vol	5	0	5
Through Vol	0	13	9
RT Vol	29	0	0
Lane Flow Rate	37	14	15
Geometry Grp	1	1	1
Degree of Util (X)	0.036	0.016	0.017
Departure Headway (Hd)	3.504	4.011	4.082
Convergence, Y/N	Yes	Yes	Yes
Cap	1024	896	880
Service Time	1.516	2.019	2.09
HCM Lane V/C Ratio	0.036	0.016	0.017
HCM Control Delay	6.6	7.1	7.2
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.1	0	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	60	22	14	44	17	18	119	21	28	94	61
Future Volume (veh/h)	39	60	22	14	44	17	18	119	21	28	94	61
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.94		0.91	0.90		0.93	0.91		0.89	0.94		0.92
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	42	65	24	15	48	18	20	129	23	30	102	66
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	466	467	172	411	358	134	93	544	471	499	821	695
Arrive On Green	0.04	0.37	0.37	0.28	0.28	0.28	0.33	0.33	0.33	0.06	0.44	0.44
Sat Flow, veh/h	1781	1264	467	1171	1267	475	143	1631	1412	1781	1870	1453
Grp Volume(v), veh/h	42	0	89	15	0	66	149	0	23	30	102	66
Grp Sat Flow(s),veh/h/ln	1781	0	1731	1171	0	1742	1773	0	1412	1781	1870	1453
Q Serve(g_s), s	1.4	0.0	3.1	0.8	0.0	2.5	0.0	0.0	1.0	0.9	2.9	2.2
Cycle Q Clear(g_c), s	1.4	0.0	3.1	0.8	0.0	2.5	5.2	0.0	1.0	0.9	2.9	2.2
Prop In Lane	1.00		0.27	1.00		0.27	0.13		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	466	0	639	411	0	493	637	0	471	499	821	695
V/C Ratio(X)	0.09	0.00	0.14	0.04	0.00	0.13	0.23	0.00	0.05	0.06	0.12	0.09
Avail Cap(c_a), veh/h	530	0	798	477	0	590	637	0	471	530	821	695
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.1	0.0	18.9	23.4	0.0	24.1	21.7	0.0	20.3	16.2	15.0	13.0
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	1.2	0.2	0.0	1.1	2.3	0.0	0.3	0.4	1.3	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.2	0.0	19.0	23.5	0.0	24.2	21.9	0.0	20.3	16.2	15.3	13.3
LnGrp LOS	C	A	B	C	A	C	C	A	C	B	B	B
Approach Vol, veh/h		131			81			172			198	
Approach Delay, s/veh		19.4			24.0			21.7			14.8	
Approach LOS		B			C			C			B	

Timer - Assigned Phs	1	2		4		6	7	8				
Phs Duration (G+Y+Rc), s	9.5	34.5		37.7		44.0	7.8	30.0				
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s	6.5	28.5		41.5		39.5	6.5	30.5				
Max Q Clear Time (g_c+I1), s	2.9	7.2		5.1		4.9	3.4	4.5				
Green Ext Time (p_c), s	0.0	0.9		0.5		0.9	0.0	0.4				

Intersection Summary			
HCM 6th Ctrl Delay		19.1	
HCM 6th LOS		B	

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	408	31	152	383	23	149
Future Volume (veh/h)	408	31	152	383	23	149
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	443	34	165	416	25	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2656	1185	809	3067	46	
Arrive On Green	0.75	0.75	0.05	0.86	0.03	0.00
Sat Flow, veh/h	3647	1585	1781	3647	1781	1585
Grp Volume(v), veh/h	443	34	165	416	25	0
Grp Sat Flow(s),veh/h/ln	1777	1585	1781	1777	1781	1585
Q Serve(g_s), s	3.2	0.5	0.0	1.6	1.2	0.0
Cycle Q Clear(g_c), s	3.2	0.5	0.0	1.6	1.2	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2656	1185	809	3067	46	
V/C Ratio(X)	0.17	0.03	0.20	0.14	0.54	
Avail Cap(c_a), veh/h	2656	1185	1177	3067	287	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	3.3	2.9	3.6	1.0	43.3	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.1	0.0	9.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.1	0.6	0.0	0.7	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	3.3	2.9	3.7	1.0	52.9	0.0
LnGrp LOS	A	A	A	A	D	
Approach Vol, veh/h	477			581	25	A
Approach Delay, s/veh	3.3			1.8	52.9	
Approach LOS	A			A	D	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	10.4	72.8				83.2	6.8
Change Period (Y+Rc), s	5.5	* 5.5				5.5	4.5
Max Green Setting (Gmax), s	23.5	* 38				65.5	14.5
Max Q Clear Time (g_c+I1), s	2.0	5.2				3.6	3.2
Green Ext Time (p_c), s	0.4	2.9				2.7	0.0

Intersection Summary	
HCM 6th Ctrl Delay	3.6
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Intersection Delay, s/veh	6.9
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	18	0	8	12	7	41
Future Vol, veh/h	18	0	8	12	7	41
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	0	9	13	8	45
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.1	7.2	6.7
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	15%	0%	40%
Vol Thru, %	0%	100%	60%
Vol Right, %	85%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	48	18	20
LT Vol	7	0	8
Through Vol	0	18	12
RT Vol	41	0	0
Lane Flow Rate	52	20	22
Geometry Grp	1	1	1
Degree of Util (X)	0.051	0.022	0.025
Departure Headway (Hd)	3.521	4.041	4.119
Convergence, Y/N	Yes	Yes	Yes
Cap	1017	888	871
Service Time	1.542	2.056	2.134
HCM Lane V/C Ratio	0.051	0.023	0.025
HCM Control Delay	6.7	7.1	7.2
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.2	0.1	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	84	31	20	62	23	24	169	30	39	133	87
Future Volume (veh/h)	56	84	31	20	62	23	24	169	30	39	133	87
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.95		0.91	0.90		0.93	0.92		0.89	0.95		0.92
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	61	91	34	22	67	25	26	184	33	42	145	95
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	461	477	178	406	362	135	87	549	471	456	821	707
Arrive On Green	0.04	0.38	0.38	0.29	0.29	0.29	0.33	0.33	0.33	0.06	0.44	0.44
Sat Flow, veh/h	1781	1261	471	1141	1269	474	125	1647	1412	1781	1870	1453
Grp Volume(v), veh/h	61	0	125	22	0	92	210	0	33	42	145	95
Grp Sat Flow(s),veh/h/ln	1781	0	1732	1141	0	1743	1773	0	1412	1781	1870	1453
Q Serve(g_s), s	2.1	0.0	4.3	1.3	0.0	3.6	0.0	0.0	1.4	1.3	4.2	3.3
Cycle Q Clear(g_c), s	2.1	0.0	4.3	1.3	0.0	3.6	7.6	0.0	1.4	1.3	4.2	3.3
Prop In Lane	1.00		0.27	1.00		0.27	0.12		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	461	0	656	406	0	497	636	0	471	456	821	707
V/C Ratio(X)	0.13	0.00	0.19	0.05	0.00	0.19	0.33	0.00	0.07	0.09	0.18	0.13
Avail Cap(c_a), veh/h	512	0	798	467	0	591	636	0	471	485	821	707
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.99	0.99	0.99
Uniform Delay (d), s/veh	19.8	0.0	18.7	23.4	0.0	24.3	22.5	0.0	20.5	16.5	15.4	12.9
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.1	0.0	0.2	0.3	0.0	0.1	0.1	0.5	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	1.8	0.3	0.0	1.5	3.4	0.0	0.5	0.5	1.9	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.9	0.0	18.9	23.5	0.0	24.4	22.8	0.0	20.5	16.6	15.8	13.3
LnGrp LOS	B	A	B	C	A	C	C	A	C	B	B	B
Approach Vol, veh/h		186			114			243			282	
Approach Delay, s/veh		19.2			24.3			22.5			15.1	
Approach LOS		B			C			C			B	

Timer - Assigned Phs	1	2		4		6	7	8
Phs Duration (G+Y+Rc), s	9.5	34.5		38.6		44.0	8.4	30.2
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s	5.5	28.5		41.5		39.5	6.5	30.5
Max Q Clear Time (g_c+I1), s	3.3	9.6		6.3		6.2	4.1	5.6
Green Ext Time (p_c), s	0.0	1.3		0.8		1.3	0.0	0.6

Intersection Summary	
HCM 6th Ctrl Delay	19.5
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	579	43	216	545	33	211
Future Volume (veh/h)	579	43	216	545	33	211
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	629	47	235	592	36	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	823	367	1154	3042	59	
Arrive On Green	0.23	0.23	0.57	0.86	0.03	0.00
Sat Flow, veh/h	3647	1585	1781	3647	1781	1585
Grp Volume(v), veh/h	629	47	235	592	36	0
Grp Sat Flow(s),veh/h/ln	1777	1585	1781	1777	1781	1585
Q Serve(g_s), s	14.9	2.1	2.4	2.6	1.8	0.0
Cycle Q Clear(g_c), s	14.9	2.1	2.4	2.6	1.8	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	823	367	1154	3042	59	
V/C Ratio(X)	0.76	0.13	0.20	0.19	0.61	
Avail Cap(c_a), veh/h	1481	660	1154	3042	208	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.99	0.00
Uniform Delay (d), s/veh	32.3	27.4	3.8	1.1	42.9	0.0
Incr Delay (d2), s/veh	1.5	0.2	0.1	0.0	9.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	0.8	0.4	0.0	1.0	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	33.8	27.5	3.9	1.2	52.8	0.0
LnGrp LOS	C	C	A	A	D	
Approach Vol, veh/h	676			827	36	A
Approach Delay, s/veh	33.4			1.9	52.8	
Approach LOS	C			A	D	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	16.2	26.3				82.5	7.5
Change Period (Y+Rc), s	4.5	5.5				5.5	4.5
Max Green Setting (Gmax), s	27.5	37.5				69.5	10.5
Max Q Clear Time (g_c+I1), s	11.4	16.9				4.6	3.8
Green Ext Time (p_c), s	0.6	4.0				4.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	16.9
HCM 6th LOS	B

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

OPENING YEAR (2022) WITH PROJECT

Intersection	
Intersection Delay, s/veh	7
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	13	3	29	9	8	54
Future Vol, veh/h	13	3	29	9	8	54
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	3	32	10	9	59
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.1	7.4	6.8
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	13%	0%	76%
Vol Thru, %	0%	81%	24%
Vol Right, %	87%	19%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	62	16	38
LT Vol	8	0	29
Through Vol	0	13	9
RT Vol	54	3	0
Lane Flow Rate	67	17	41
Geometry Grp	1	1	1
Degree of Util (X)	0.066	0.019	0.048
Departure Headway (Hd)	3.538	3.971	4.218
Convergence, Y/N	Yes	Yes	Yes
Cap	1010	902	851
Service Time	1.567	1.993	2.233
HCM Lane V/C Ratio	0.066	0.019	0.048
HCM Control Delay	6.8	7.1	7.4
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.2	0.1	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	60	22	14	44	17	18	144	21	28	118	61
Future Volume (veh/h)	39	60	22	14	44	17	18	144	21	28	118	61
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.94		0.91	0.90		0.93	0.92		0.89	0.95		0.92
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	42	65	24	15	48	18	20	157	23	30	128	66
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	466	467	172	411	358	134	81	561	471	480	821	695
Arrive On Green	0.04	0.37	0.37	0.28	0.28	0.28	0.33	0.33	0.33	0.06	0.44	0.44
Sat Flow, veh/h	1781	1264	467	1171	1267	475	110	1681	1412	1781	1870	1453
Grp Volume(v), veh/h	42	0	89	15	0	66	177	0	23	30	128	66
Grp Sat Flow(s),veh/h/ln	1781	0	1731	1171	0	1742	1791	0	1412	1781	1870	1453
Q Serve(g_s), s	1.4	0.0	3.1	0.8	0.0	2.5	0.0	0.0	1.0	0.9	3.7	2.2
Cycle Q Clear(g_c), s	1.4	0.0	3.1	0.8	0.0	2.5	6.3	0.0	1.0	0.9	3.7	2.2
Prop In Lane	1.00		0.27	1.00		0.27	0.11		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	466	0	639	411	0	493	642	0	471	480	821	695
V/C Ratio(X)	0.09	0.00	0.14	0.04	0.00	0.13	0.28	0.00	0.05	0.06	0.16	0.09
Avail Cap(c_a), veh/h	530	0	798	477	0	590	642	0	471	510	821	695
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.1	0.0	18.9	23.4	0.0	24.1	22.1	0.0	20.3	16.3	15.2	13.0
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.0	0.0	0.1	0.2	0.0	0.0	0.1	0.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	1.2	0.2	0.0	1.1	2.8	0.0	0.3	0.4	1.7	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.2	0.0	19.0	23.5	0.0	24.2	22.3	0.0	20.4	16.3	15.6	13.3
LnGrp LOS	C	A	B	C	A	C	C	A	C	B	B	B
Approach Vol, veh/h		131			81			200			224	
Approach Delay, s/veh		19.4			24.0			22.1			15.0	
Approach LOS		B			C			C			B	

Timer - Assigned Phs	1	2		4		6	7	8				
Phs Duration (G+Y+Rc), s	9.5	34.5		37.7		44.0	7.8	30.0				
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s	6.5	28.5		41.5		39.5	6.5	30.5				
Max Q Clear Time (g_c+I1), s	2.9	8.3		5.1		5.7	3.4	4.5				
Green Ext Time (p_c), s	0.0	1.1		0.5		1.0	0.0	0.4				

Intersection Summary			
HCM 6th Ctrl Delay		19.3	
HCM 6th LOS		B	

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	408	35	172	383	27	170
Future Volume (veh/h)	408	35	172	383	27	170
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	443	38	187	416	29	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2644	1179	804	3057	51	
Arrive On Green	0.74	0.74	0.06	0.86	0.03	0.00
Sat Flow, veh/h	3647	1585	1781	3647	1781	1585
Grp Volume(v), veh/h	443	38	187	416	29	0
Grp Sat Flow(s),veh/h/ln	1777	1585	1781	1777	1781	1585
Q Serve(g_s), s	3.3	0.6	0.0	1.7	1.4	0.0
Cycle Q Clear(g_c), s	3.3	0.6	0.0	1.7	1.4	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2644	1179	804	3057	51	
V/C Ratio(X)	0.17	0.03	0.23	0.14	0.57	
Avail Cap(c_a), veh/h	2644	1179	1172	3057	287	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.99	0.00
Uniform Delay (d), s/veh	3.4	3.0	3.8	1.0	43.2	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.1	0.0	9.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.1	0.7	0.0	0.8	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	3.4	3.0	4.0	1.0	52.6	0.0
LnGrp LOS	A	A	A	A	D	
Approach Vol, veh/h	481			603	29	A
Approach Delay, s/veh	3.4			1.9	52.6	
Approach LOS	A			A	D	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	10.5	72.5				82.9	7.1
Change Period (Y+Rc), s	5.5	* 5.5				5.5	4.5
Max Green Setting (Gmax), s	23.5	* 38				65.5	14.5
Max Q Clear Time (g_c+I1), s	2.0	5.3				3.7	3.4
Green Ext Time (p_c), s	0.5	2.9				2.7	0.0

Intersection Summary	
HCM 6th Ctrl Delay	3.9
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Intersection Delay, s/veh	7.2
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	18	4	41	12	10	71
Future Vol, veh/h	18	4	41	12	10	71
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	4	45	13	11	77
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.2	7.6	7
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	12%	0%	77%
Vol Thru, %	0%	82%	23%
Vol Right, %	88%	18%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	81	22	53
LT Vol	10	0	41
Through Vol	0	18	12
RT Vol	71	4	0
Lane Flow Rate	88	24	58
Geometry Grp	1	1	1
Degree of Util (X)	0.087	0.027	0.068
Departure Headway (Hd)	3.572	4.023	4.261
Convergence, Y/N	Yes	Yes	Yes
Cap	997	888	841
Service Time	1.616	2.055	2.284
HCM Lane V/C Ratio	0.088	0.027	0.069
HCM Control Delay	7	7.2	7.6
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.3	0.1	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	84	31	20	62	23	24	199	30	39	166	87
Future Volume (veh/h)	56	84	31	20	62	23	24	199	30	39	166	87
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.95		0.91	0.90		0.93	0.93		0.89	0.96		0.92
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	61	91	34	22	67	25	26	216	33	42	180	95
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	461	477	178	406	362	135	78	562	471	433	821	707
Arrive On Green	0.04	0.38	0.38	0.29	0.29	0.29	0.33	0.33	0.33	0.06	0.44	0.44
Sat Flow, veh/h	1781	1261	471	1141	1269	474	101	1686	1411	1781	1870	1453
Grp Volume(v), veh/h	61	0	125	22	0	92	242	0	33	42	180	95
Grp Sat Flow(s),veh/h/ln	1781	0	1732	1141	0	1743	1787	0	1411	1781	1870	1453
Q Serve(g_s), s	2.1	0.0	4.3	1.3	0.0	3.6	0.0	0.0	1.4	1.3	5.4	3.3
Cycle Q Clear(g_c), s	2.1	0.0	4.3	1.3	0.0	3.6	8.9	0.0	1.4	1.3	5.4	3.3
Prop In Lane	1.00		0.27	1.00		0.27	0.11		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	461	0	656	406	0	497	640	0	471	433	821	707
V/C Ratio(X)	0.13	0.00	0.19	0.05	0.00	0.19	0.38	0.00	0.07	0.10	0.22	0.13
Avail Cap(c_a), veh/h	512	0	798	467	0	591	640	0	471	463	821	707
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.98	0.98	0.98
Uniform Delay (d), s/veh	19.8	0.0	18.7	23.4	0.0	24.3	23.0	0.0	20.5	16.7	15.7	12.9
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.1	0.0	0.2	0.4	0.0	0.1	0.1	0.6	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	1.8	0.3	0.0	1.5	4.0	0.0	0.5	0.5	2.4	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.9	0.0	18.9	23.5	0.0	24.4	23.3	0.0	20.5	16.8	16.3	13.3
LnGrp LOS	B	A	B	C	A	C	C	A	C	B	B	B
Approach Vol, veh/h		186			114			275			317	
Approach Delay, s/veh		19.2			24.3			23.0			15.4	
Approach LOS		B			C			C			B	

Timer - Assigned Phs	1	2		4		6	7	8
Phs Duration (G+Y+Rc), s	9.5	34.5		38.6		44.0	8.4	30.2
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s	5.5	28.5		41.5		39.5	6.5	30.5
Max Q Clear Time (g_c+I1), s	3.3	10.9		6.3		7.4	4.1	5.6
Green Ext Time (p_c), s	0.0	1.5		0.8		1.5	0.0	0.6

Intersection Summary		
HCM 6th Ctrl Delay		19.7
HCM 6th LOS		B

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	579	49	244	545	38	236
Future Volume (veh/h)	579	49	244	545	38	236
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	629	53	265	592	41	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	823	367	1149	3032	63	
Arrive On Green	0.23	0.23	0.57	0.85	0.04	0.00
Sat Flow, veh/h	3647	1585	1781	3647	1781	1585
Grp Volume(v), veh/h	629	53	265	592	41	0
Grp Sat Flow(s),veh/h/ln	1777	1585	1781	1777	1781	1585
Q Serve(g_s), s	14.9	2.4	2.7	2.6	2.0	0.0
Cycle Q Clear(g_c), s	14.9	2.4	2.7	2.6	2.0	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	823	367	1149	3032	63	
V/C Ratio(X)	0.76	0.14	0.23	0.20	0.65	
Avail Cap(c_a), veh/h	1481	660	1149	3032	208	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.98	0.00
Uniform Delay (d), s/veh	32.3	27.5	3.9	1.2	42.8	0.0
Incr Delay (d2), s/veh	1.5	0.2	0.1	0.0	10.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	0.9	0.5	0.1	1.1	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	33.8	27.7	4.0	1.2	53.1	0.0
LnGrp LOS	C	C	A	A	D	
Approach Vol, veh/h	682			857	41	A
Approach Delay, s/veh	33.3			2.1	53.1	
Approach LOS	C			A	D	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	15.9	26.3				82.3	7.7
Change Period (Y+Rc), s	4.5	5.5				5.5	4.5
Max Green Setting (Gmax), s	27.5	37.5				69.5	10.5
Max Q Clear Time (g_c+I1), s	11.7	16.9				4.6	4.0
Green Ext Time (p_c), s	0.7	4.0				4.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	16.9
HCM 6th LOS	B

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

BUILDOUT YEAR (2025) WITHOUT PROJECT

Intersection	
Intersection Delay, s/veh	9.9
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	113	26	199	109	16	125
Future Vol, veh/h	113	26	199	109	16	125
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	123	28	216	118	17	136
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.7	11	8.7
HCM LOS	A	B	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	11%	0%	65%
Vol Thru, %	0%	81%	35%
Vol Right, %	89%	19%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	141	139	308
LT Vol	16	0	199
Through Vol	0	113	109
RT Vol	125	26	0
Lane Flow Rate	153	151	335
Geometry Grp	1	1	1
Degree of Util (X)	0.193	0.191	0.426
Departure Headway (Hd)	4.535	4.553	4.585
Convergence, Y/N	Yes	Yes	Yes
Cap	789	787	783
Service Time	2.57	2.591	2.619
HCM Lane V/C Ratio	0.194	0.192	0.428
HCM Control Delay	8.7	8.7	11
HCM Lane LOS	A	A	B
HCM 95th-tile Q	0.7	0.7	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	63	23	14	47	17	19	221	22	30	296	65
Future Volume (veh/h)	42	63	23	14	47	17	19	221	22	30	296	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.95		0.91	0.90		0.93	0.94		0.89	0.96		0.92
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	46	68	25	15	51	18	21	240	24	33	322	71
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	467	470	173	410	365	129	66	577	470	421	821	698
Arrive On Green	0.04	0.37	0.37	0.28	0.28	0.28	0.33	0.33	0.33	0.06	0.44	0.44
Sat Flow, veh/h	1781	1266	466	1168	1291	456	69	1732	1411	1781	1870	1453
Grp Volume(v), veh/h	46	0	93	15	0	69	261	0	24	33	322	71
Grp Sat Flow(s),veh/h/ln	1781	0	1732	1168	0	1747	1801	0	1411	1781	1870	1453
Q Serve(g_s), s	1.6	0.0	3.2	0.8	0.0	2.7	0.0	0.0	1.0	1.0	10.5	2.4
Cycle Q Clear(g_c), s	1.6	0.0	3.2	0.8	0.0	2.7	9.7	0.0	1.0	1.0	10.5	2.4
Prop In Lane	1.00		0.27	1.00		0.26	0.08		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	467	0	642	410	0	494	644	0	470	421	821	698
V/C Ratio(X)	0.10	0.00	0.14	0.04	0.00	0.14	0.41	0.00	0.05	0.08	0.39	0.10
Avail Cap(c_a), veh/h	528	0	799	476	0	592	644	0	470	451	821	698
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.97	0.97	0.97
Uniform Delay (d), s/veh	20.1	0.0	18.8	23.4	0.0	24.1	23.2	0.0	20.3	16.7	17.1	12.9
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.0	0.0	0.1	0.4	0.0	0.0	0.1	1.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	1.3	0.2	0.0	1.1	4.3	0.0	0.3	0.4	4.7	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.1	0.0	18.9	23.5	0.0	24.2	23.7	0.0	20.4	16.8	18.5	13.2
LnGrp LOS	C	A	B	C	A	C	C	A	C	B	B	B
Approach Vol, veh/h		139			84			285			426	
Approach Delay, s/veh		19.3			24.1			23.4			17.5	
Approach LOS		B			C			C			B	

Timer - Assigned Phs	1	2		4		6	7	8
Phs Duration (G+Y+Rc), s	9.5	34.5		37.9		44.0	7.9	30.0
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s	6.5	28.5		41.5		39.5	6.5	30.5
Max Q Clear Time (g_c+I1), s	3.0	11.7		5.2		12.5	3.6	4.7
Green Ext Time (p_c), s	0.0	1.5		0.6		2.4	0.0	0.4

Intersection Summary		
HCM 6th Ctrl Delay		20.1
HCM 6th LOS		C

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	437	45	346	411	30	248
Future Volume (veh/h)	437	45	346	411	30	248
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	475	49	376	447	33	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2633	1175	775	3048	56	
Arrive On Green	0.74	0.74	0.06	0.86	0.03	0.00
Sat Flow, veh/h	3647	1585	1781	3647	1781	1585
Grp Volume(v), veh/h	475	49	376	447	33	0
Grp Sat Flow(s),veh/h/ln	1777	1585	1781	1777	1781	1585
Q Serve(g_s), s	3.6	0.7	0.0	1.8	1.6	0.0
Cycle Q Clear(g_c), s	3.6	0.7	0.0	1.8	1.6	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2633	1175	775	3048	56	
V/C Ratio(X)	0.18	0.04	0.49	0.15	0.59	
Avail Cap(c_a), veh/h	2633	1175	1141	3048	287	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.98	0.00
Uniform Delay (d), s/veh	3.5	3.1	5.6	1.0	43.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.5	0.0	9.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.2	2.1	0.0	0.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	3.5	3.1	6.0	1.1	52.6	0.0
LnGrp LOS	A	A	A	A	D	
Approach Vol, veh/h	524			823	33	A
Approach Delay, s/veh	3.5			3.3	52.6	
Approach LOS	A			A	D	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	10.5	72.2				82.7	7.3
Change Period (Y+Rc), s	5.5	* 5.5				5.5	4.5
Max Green Setting (Gmax), s	23.5	* 38				65.5	14.5
Max Q Clear Time (g_c+I1), s	2.0	5.6				3.8	3.6
Green Ext Time (p_c), s	1.1	3.2				2.9	0.0

Intersection Summary	
HCM 6th Ctrl Delay	4.6
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Intersection Delay, s/veh	10.5
Intersection LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	139	29	204	132	18	134
Future Vol, veh/h	139	29	204	132	18	134
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	151	32	222	143	20	146
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	9.1	11.8	9
HCM LOS	A	B	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	12%	0%	61%
Vol Thru, %	0%	83%	39%
Vol Right, %	88%	17%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	152	168	336
LT Vol	18	0	204
Through Vol	0	139	132
RT Vol	134	29	0
Lane Flow Rate	165	183	365
Geometry Grp	1	1	1
Degree of Util (X)	0.215	0.235	0.472
Departure Headway (Hd)	4.682	4.641	4.654
Convergence, Y/N	Yes	Yes	Yes
Cap	763	771	771
Service Time	2.729	2.69	2.698
HCM Lane V/C Ratio	0.216	0.237	0.473
HCM Control Delay	9	9.1	11.8
HCM Lane LOS	A	A	B
HCM 95th-tile Q	0.8	0.9	2.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	90	33	21	67	24	25	271	32	42	339	93
Future Volume (veh/h)	60	90	33	21	67	24	25	271	32	42	339	93
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.95		0.91	0.90		0.93	0.95		0.89	0.98		0.92
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	65	98	36	23	73	26	27	295	35	46	368	101
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	458	482	177	404	368	131	70	567	470	378	821	709
Arrive On Green	0.04	0.38	0.38	0.29	0.29	0.29	0.33	0.33	0.33	0.06	0.44	0.44
Sat Flow, veh/h	1781	1268	466	1133	1288	459	79	1701	1411	1781	1870	1453
Grp Volume(v), veh/h	65	0	134	23	0	99	322	0	35	46	368	101
Grp Sat Flow(s),veh/h/ln	1781	0	1733	1133	0	1747	1781	0	1411	1781	1870	1453
Q Serve(g_s), s	2.2	0.0	4.7	1.3	0.0	3.9	0.0	0.0	1.5	1.4	12.4	3.5
Cycle Q Clear(g_c), s	2.2	0.0	4.7	1.3	0.0	3.9	12.5	0.0	1.5	1.4	12.4	3.5
Prop In Lane	1.00		0.27	1.00		0.26	0.08		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	458	0	660	404	0	500	637	0	470	378	821	709
V/C Ratio(X)	0.14	0.00	0.20	0.06	0.00	0.20	0.51	0.00	0.07	0.12	0.45	0.14
Avail Cap(c_a), veh/h	508	0	799	464	0	592	637	0	470	408	821	709
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.93	0.93	0.93
Uniform Delay (d), s/veh	19.8	0.0	18.7	23.4	0.0	24.3	24.2	0.0	20.5	17.2	17.6	12.9
Incr Delay (d2), s/veh	0.1	0.0	0.2	0.1	0.0	0.2	0.6	0.0	0.1	0.1	1.6	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	1.9	0.4	0.0	1.6	5.6	0.0	0.5	0.6	5.6	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.9	0.0	18.9	23.5	0.0	24.5	24.8	0.0	20.6	17.4	19.3	13.3
LnGrp LOS	B	A	B	C	A	C	C	A	C	B	B	B
Approach Vol, veh/h		199			122			357			515	
Approach Delay, s/veh		19.2			24.3			24.4			17.9	
Approach LOS		B			C			C			B	

Timer - Assigned Phs	1	2		4		6	7	8
Phs Duration (G+Y+Rc), s	9.5	34.5		38.8		44.0	8.5	30.2
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s	6.5	28.5		41.5		39.5	6.5	30.5
Max Q Clear Time (g_c+I1), s	3.4	14.5		6.7		14.4	4.2	5.9
Green Ext Time (p_c), s	0.0	1.9		0.8		2.8	0.0	0.6

Intersection Summary	
HCM 6th Ctrl Delay	20.7
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	624	58	417	588	41	311
Future Volume (veh/h)	624	58	417	588	41	311
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	678	63	453	639	45	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	879	392	1117	3025	67	
Arrive On Green	0.25	0.25	0.55	0.85	0.04	0.00
Sat Flow, veh/h	3647	1585	1781	3647	1781	1585
Grp Volume(v), veh/h	678	63	453	639	45	0
Grp Sat Flow(s),veh/h/ln	1777	1585	1781	1777	1781	1585
Q Serve(g_s), s	16.0	2.8	5.4	2.9	2.2	0.0
Cycle Q Clear(g_c), s	16.0	2.8	5.4	2.9	2.2	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	879	392	1117	3025	67	
V/C Ratio(X)	0.77	0.16	0.41	0.21	0.67	
Avail Cap(c_a), veh/h	1481	660	1117	3025	208	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.97	0.00
Uniform Delay (d), s/veh	31.5	26.6	4.8	1.2	42.8	0.0
Incr Delay (d2), s/veh	1.5	0.2	0.2	0.0	10.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	1.0	1.5	0.1	1.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	33.0	26.7	5.0	1.2	53.6	0.0
LnGrp LOS	C	C	A	A	D	
Approach Vol, veh/h	741			1092	45	A
Approach Delay, s/veh	32.4			2.8	53.6	
Approach LOS	C			A	D	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	14.4	27.8				82.1	7.9
Change Period (Y+Rc), s	4.5	5.5				5.5	4.5
Max Green Setting (Gmax), s	27.5	37.5				69.5	10.5
Max Q Clear Time (g_c+I1), s	7.4	18.0				4.9	4.2
Green Ext Time (p_c), s	1.3	4.3				4.5	0.0

Intersection Summary	
HCM 6th Ctrl Delay	15.7
HCM 6th LOS	B

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

BUILDOUT YEAR (2025) WITH PROJECT

Intersection	
Intersection Delay, s/veh	10.9
Intersection LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	113	30	237	109	22	175
Future Vol, veh/h	113	30	237	109	22	175
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	123	33	258	118	24	190
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	9.1	12.5	9.5
HCM LOS	A	B	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	11%	0%	68%
Vol Thru, %	0%	79%	32%
Vol Right, %	89%	21%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	197	143	346
LT Vol	22	0	237
Through Vol	0	113	109
RT Vol	175	30	0
Lane Flow Rate	214	155	376
Geometry Grp	1	1	1
Degree of Util (X)	0.278	0.206	0.497
Departure Headway (Hd)	4.667	4.762	4.76
Convergence, Y/N	Yes	Yes	Yes
Cap	767	748	752
Service Time	2.721	2.828	2.816
HCM Lane V/C Ratio	0.279	0.207	0.5
HCM Control Delay	9.5	9.1	12.5
HCM Lane LOS	A	A	B
HCM 95th-tile Q	1.1	0.8	2.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	63	23	14	47	17	19	271	22	30	334	65
Future Volume (veh/h)	42	63	23	14	47	17	19	271	22	30	334	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.95		0.91	0.90		0.93	0.95		0.89	0.97		0.92
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	46	68	25	15	51	18	21	295	24	33	363	71
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	467	470	173	410	365	129	62	584	470	383	821	698
Arrive On Green	0.04	0.37	0.37	0.28	0.28	0.28	0.33	0.33	0.33	0.06	0.44	0.44
Sat Flow, veh/h	1781	1266	466	1168	1291	456	57	1752	1411	1781	1870	1453
Grp Volume(v), veh/h	46	0	93	15	0	69	316	0	24	33	363	71
Grp Sat Flow(s),veh/h/ln	1781	0	1732	1168	0	1747	1809	0	1411	1781	1870	1453
Q Serve(g_s), s	1.6	0.0	3.2	0.8	0.0	2.7	0.0	0.0	1.0	1.0	12.2	2.4
Cycle Q Clear(g_c), s	1.6	0.0	3.2	0.8	0.0	2.7	12.2	0.0	1.0	1.0	12.2	2.4
Prop In Lane	1.00		0.27	1.00		0.26	0.07		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	467	0	642	410	0	494	646	0	470	383	821	698
V/C Ratio(X)	0.10	0.00	0.14	0.04	0.00	0.14	0.49	0.00	0.05	0.09	0.44	0.10
Avail Cap(c_a), veh/h	528	0	799	476	0	592	646	0	470	413	821	698
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.96	0.96	0.96
Uniform Delay (d), s/veh	20.1	0.0	18.8	23.4	0.0	24.1	24.1	0.0	20.3	17.1	17.6	12.9
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.0	0.0	0.1	0.6	0.0	0.0	0.1	1.7	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	1.3	0.2	0.0	1.1	5.4	0.0	0.3	0.4	5.5	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.1	0.0	18.9	23.5	0.0	24.2	24.6	0.0	20.4	17.1	19.2	13.2
LnGrp LOS	C	A	B	C	A	C	C	A	C	B	B	B
Approach Vol, veh/h		139			84			340			467	
Approach Delay, s/veh		19.3			24.1			24.3			18.2	
Approach LOS		B			C			C			B	

Timer - Assigned Phs	1	2		4		6	7	8
Phs Duration (G+Y+Rc), s	9.5	34.5		37.9		44.0	7.9	30.0
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s	6.5	28.5		41.5		39.5	6.5	30.5
Max Q Clear Time (g_c+I1), s	3.0	14.2		5.2		14.2	3.6	4.7
Green Ext Time (p_c), s	0.0	1.8		0.6		2.7	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	20.8
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	437	51	378	411	38	290
Future Volume (veh/h)	437	51	378	411	38	290
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	475	55	411	447	41	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2618	1168	768	3032	63	
Arrive On Green	0.74	0.74	0.06	0.85	0.04	0.00
Sat Flow, veh/h	3647	1585	1781	3647	1781	1585
Grp Volume(v), veh/h	475	55	411	447	41	0
Grp Sat Flow(s),veh/h/ln	1777	1585	1781	1777	1781	1585
Q Serve(g_s), s	3.7	0.9	0.0	1.9	2.0	0.0
Cycle Q Clear(g_c), s	3.7	0.9	0.0	1.9	2.0	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2618	1168	768	3032	63	
V/C Ratio(X)	0.18	0.05	0.54	0.15	0.65	
Avail Cap(c_a), veh/h	2618	1168	1134	3032	287	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.98	0.00
Uniform Delay (d), s/veh	3.6	3.2	6.2	1.1	42.8	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.6	0.0	10.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.2	2.6	0.0	1.1	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	3.6	3.3	6.8	1.1	53.1	0.0
LnGrp LOS	A	A	A	A	D	
Approach Vol, veh/h	530			858	41	A
Approach Delay, s/veh	3.6			3.9	53.1	
Approach LOS	A			A	D	

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	10.5	71.8			82.3	7.7
Change Period (Y+Rc), s	5.5	* 5.5			5.5	4.5
Max Green Setting (Gmax), s	23.5	* 38			65.5	14.5
Max Q Clear Time (g_c+I1), s	12.0	5.7			3.9	4.0
Green Ext Time (p_c), s	1.2	3.2			2.9	0.0

Intersection Summary	
HCM 6th Ctrl Delay	5.2
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Intersection Delay, s/veh	13.2
Intersection LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	139	38	281	132	27	214
Future Vol, veh/h	139	38	281	132	27	214
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	151	41	305	143	29	233
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	10	15.9	10.9
HCM LOS	A	C	B

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	11%	0%	68%
Vol Thru, %	0%	79%	32%
Vol Right, %	89%	21%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	241	177	413
LT Vol	27	0	281
Through Vol	0	139	132
RT Vol	214	38	0
Lane Flow Rate	262	192	449
Geometry Grp	1	1	1
Degree of Util (X)	0.36	0.274	0.618
Departure Headway (Hd)	4.945	5.123	4.955
Convergence, Y/N	Yes	Yes	Yes
Cap	718	706	718
Service Time	3.043	3.123	3.052
HCM Lane V/C Ratio	0.365	0.272	0.625
HCM Control Delay	10.9	10	15.9
HCM Lane LOS	B	A	C
HCM 95th-tile Q	1.6	1.1	4.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	90	33	21	67	24	25	351	32	42	416	93
Future Volume (veh/h)	60	90	33	21	67	24	25	351	32	42	416	93
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.95		0.91	0.90		0.93	0.96		0.89	0.99		0.92
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	65	98	36	23	73	26	27	382	35	46	452	101
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	458	482	177	404	368	131	64	576	470	316	821	709
Arrive On Green	0.04	0.38	0.38	0.29	0.29	0.29	0.33	0.33	0.33	0.06	0.44	0.44
Sat Flow, veh/h	1781	1268	466	1133	1288	459	63	1727	1411	1781	1870	1453
Grp Volume(v), veh/h	65	0	134	23	0	99	409	0	35	46	452	101
Grp Sat Flow(s),veh/h/ln	1781	0	1733	1133	0	1747	1790	0	1411	1781	1870	1453
Q Serve(g_s), s	2.2	0.0	4.7	1.3	0.0	3.9	3.7	0.0	1.5	1.4	16.1	3.5
Cycle Q Clear(g_c), s	2.2	0.0	4.7	1.3	0.0	3.9	17.2	0.0	1.5	1.4	16.1	3.5
Prop In Lane	1.00		0.27	1.00		0.26	0.07		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	458	0	660	404	0	500	639	0	470	316	821	709
V/C Ratio(X)	0.14	0.00	0.20	0.06	0.00	0.20	0.64	0.00	0.07	0.15	0.55	0.14
Avail Cap(c_a), veh/h	508	0	799	464	0	592	639	0	470	346	821	709
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.87	0.87	0.87
Uniform Delay (d), s/veh	19.8	0.0	18.7	23.4	0.0	24.3	25.6	0.0	20.5	18.2	18.7	12.9
Incr Delay (d2), s/veh	0.1	0.0	0.2	0.1	0.0	0.2	2.1	0.0	0.1	0.2	2.3	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	1.9	0.4	0.0	1.6	7.7	0.0	0.5	0.6	7.3	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.9	0.0	18.9	23.5	0.0	24.5	27.8	0.0	20.6	18.3	21.0	13.3
LnGrp LOS	B	A	B	C	A	C	C	A	C	B	C	B
Approach Vol, veh/h		199			122			444			599	
Approach Delay, s/veh		19.2			24.3			27.2			19.5	
Approach LOS		B			C			C			B	

Timer - Assigned Phs	1	2		4		6	7	8
Phs Duration (G+Y+Rc), s	9.5	34.5		38.8		44.0	8.5	30.2
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s	6.5	28.5		41.5		39.5	6.5	30.5
Max Q Clear Time (g_c+I1), s	3.4	19.2		6.7		18.1	4.2	5.9
Green Ext Time (p_c), s	0.0	2.0		0.8		3.4	0.0	0.6

Intersection Summary	
HCM 6th Ctrl Delay	22.4
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	624	71	482	588	54	378
Future Volume (veh/h)	624	71	482	588	54	378
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	678	77	524	639	59	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	880	393	1107	3007	76	
Arrive On Green	0.25	0.25	0.55	0.85	0.04	0.00
Sat Flow, veh/h	3647	1585	1781	3647	1781	1585
Grp Volume(v), veh/h	678	77	524	639	59	0
Grp Sat Flow(s),veh/h/ln	1777	1585	1781	1777	1781	1585
Q Serve(g_s), s	16.0	3.5	7.6	3.0	3.0	0.0
Cycle Q Clear(g_c), s	16.0	3.5	7.6	3.0	3.0	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	880	393	1107	3007	76	
V/C Ratio(X)	0.77	0.20	0.47	0.21	0.77	
Avail Cap(c_a), veh/h	1481	660	1107	3007	208	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.94	0.00
Uniform Delay (d), s/veh	31.5	26.8	5.6	1.3	42.6	0.0
Incr Delay (d2), s/veh	1.5	0.2	0.3	0.0	14.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	1.3	1.8	0.1	1.6	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	32.9	27.0	5.9	1.3	56.9	0.0
LnGrp LOS	C	C	A	A	E	
Approach Vol, veh/h	755			1163	59	A
Approach Delay, s/veh	32.3			3.4	56.9	
Approach LOS	C			A	E	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	13.8	27.8				81.6	8.4
Change Period (Y+Rc), s	4.5	5.5				5.5	4.5
Max Green Setting (Gmax), s	27.5	37.5				69.5	10.5
Max Q Clear Time (g_c+I1), s	9.6	18.0				5.0	5.0
Green Ext Time (p_c), s	1.5	4.3				4.5	0.0

Intersection Summary		
HCM 6th Ctrl Delay	16.0	
HCM 6th LOS	B	

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

APPENDIX C

TRIP GENERATION SOURCES

Graph Look Up

Query Filter

DATA SOURCE:
Trip Gen Manual, 10th Ed
New data edition is available. Click here to upgrade.

SEARCH BY LAND USE CODE:
416

LAND USE GROUP:
(400-499) Recreational

LAND USE :
416 - Campground/Recreational Vehicle Park

LAND USE SUBCATEGORY:
All Sites

INDEPENDENT VARIABLE (IV):
Occupied Campsites

TIME PERIOD:
Weekday, PM Peak Hour of Generator

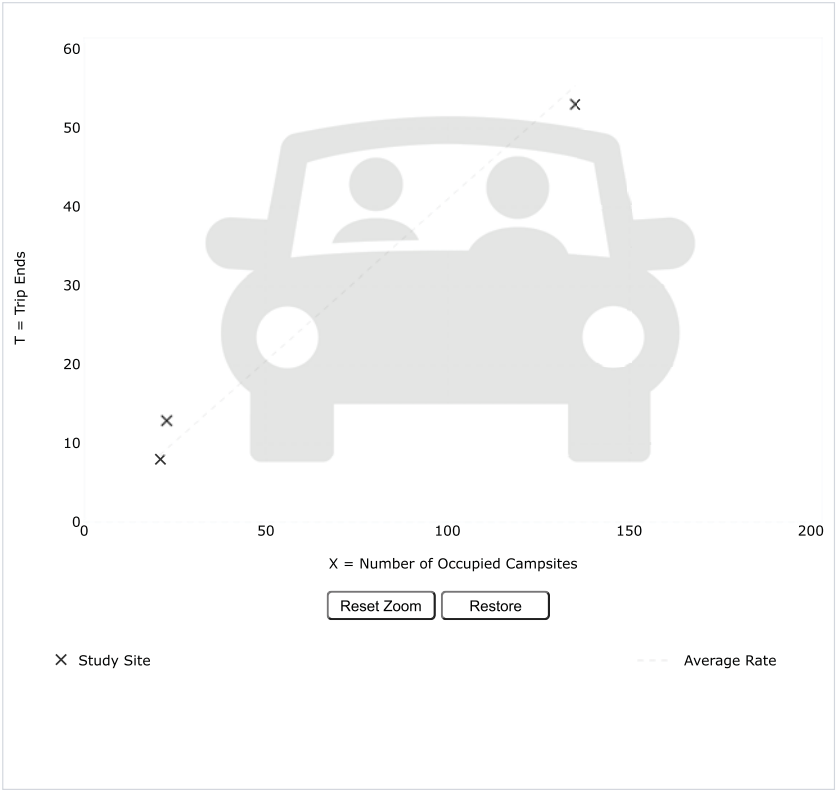
SETTING/LOCATION:
General Urban/Suburban

TRIP TYPE:
Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:
Calculate

Data Plot and Equation

Caution – Small Sample Size



Use the mouse wheel to Zoom Out or Zoom In.
Hover the mouse pointer on data points to view X and T values.

DATA STATISTICS

Land Use:
Campground/Recreational Vehicle Park (416) Click for more details

Independent Variable:
Occupied Campsites

Time Period:
Weekday
PM Peak Hour of Generator

Setting/Location:
General Urban/Suburban

Trip Type:
Vehicle

Number of Studies:
3

Avg. Num. of Occupied Campsites:
60

Average Rate:
0.41

Range of Rates:
0.38 - 0.57

Standard Deviation:
0.07

Fitted Curve Equation:
Not Given

R^2:
****

Directional Distribution:
62% entering, 38% exiting

Add-ons to do more

Try OTISS Pro

VERSION: 5.0 (UPDATES) | DATA: TRIP GEN MANUAL, 10TH EDITION + SUPPLEMENT | TERMS AND CONDITIONS | PRIVACY | ITE MARKETPLACE © COPYRIGHT 2020 | DEVELOPED IN COLLABORATION WITH TRANSOFT SOLUTIONS INC.

(NOT SO)

BRIEF GUIDE OF VEHICULAR TRAFFIC GENERATION RATES FOR THE SAN DIEGO REGION

APRIL 2002

SANDAG
401 B Street, Suite 800
San Diego, California 92101
(619) 699-1900 • Fax (619) 699-1950

NOTE: This listing only represents a ***guide*** of average, or estimated, traffic generation "driveway" rates and some very general trip data for land uses (emphasis on acreage and building square footage) in the San Diego region. These rates (both local and national) are subject to change as future documentation becomes available, or as regional sources are updated. For more specific information regarding traffic data and trip rates, please refer to the San Diego Traffic Generators manual. ***Always check with local jurisdictions for their preferred or applicable rates.***

LAND USE	TRIP CATEGORIES [PRIMARY:DIVERTED:PASS-BY][P]	ESTIMATED WEEKDAY VEHICLE TRIP GENERATION RATE (DRIVEWAY)	HIGHEST PEAK HOUR % (plus IN:OUT ratio) Between 6:00-9:30 A.M.	Between 3:00-6:30 P.M.	TRIP LENGTH (Miles)[L]
AGRICULTURE (Open Space)	[80:18:2]	2/acre**			10.8
AIRPORT	[78:20:2]				12.5
Commercial		60/acre, 100/flight, 70/1000 sq. ft.* **	5% (6:4)	6% (5:5)	
General Aviation		6/acre, 2/flight, 6/based aircraft* **	9% (7:3)	15% (5:5)	
Heliports		100/acre**			
AUTOMOBILE[S]					
Car Wash					
Automatic		900/site, 600/acre**	4% (5:5)	9% (5:5)	
Self-serve		100/wash stall**	4% (5:5)	8% (5:5)	
Gasoline	[21:51:28]				2.8
with/Food Mart		160/vehicle fueling space**	7% (5:5)	8% (5:5)	
with/Food Mart & Car Wash		155/vehicle fueling space**	8% (5:5)	9% (5:5)	
Older Service Station Design		150/vehicle fueling space, 900/station**	7% (5:5)	9% (5:5)	
Sales (Dealer & Repair)		50/1000 sq. ft., 300/acre, 60/service stall* **	5% (7:3)	8% (4:6)	
Auto Repair Center		20/1000 sq. ft., 400/acre, 20/service stall*	8% (7:3)	11% (4:6)	
Auto Parts Sales		60/1000 sq. ft.**	4%	10%	
Quick Lube		40/service stall**	7% (6:4)	10% (5:5)	
Tire Store		25/1000 sq. ft., 30/service stall**	7% (6:4)	11% (5:5)	
CEMETERY		5/acre*			
CHURCH (or Synagogue)	[64:25:11]	9/1000 sq. ft., 30/acre** (quadruple rates for Sunday, or days of assembly)	5% (6:4)	8% (5:5)	5.1
COMMERCIAL/RETAIL[S]					
Super Regional Shopping Center (More than 80 acres, more than 800,000 sq. ft., w/usually 3+ major stores)		35/1000 sq. ft.,[C] 400/acre*	4% (7:3)	10% (5:5)	
Regional Shopping Center (40-80acres, 400,000-800,000 sq. ft., w/usually 2+ major stores)	[54:35:11]	50/1000 sq. ft.,[C] 500/acre*	4% (7:3)	9% (5:5)	5.2
Community Shopping Center (15-40 acres, 125,000-400,000 sq. ft., w/usually 1 major store, detached restaurant(s), grocery and drugstore)	[47:31:22]	80/1000 sq. ft., 700/acre* **	4% (6:4)	10% (5:5)	3.6
Neighborhood Shopping Center (Less than 15 acres, less than 125,000 sq. ft., w/usually grocery & drugstore, cleaners, beauty & barber shop, & fast food services)		120/1000 sq. ft., 1200/acre* **	4% (6:4)	10% (5:5)	
Commercial Shops	[45:40:15]				
Specialty Retail/Strip Commercial		40/1000 sq. ft., 400/acre*	3% (6:4)	9% (5:5)	4.3
Electronics Superstore		50/1000 sq. ft**		10% (5:5)	
Factory Outlet		40/1000 sq. ft.**	3% (7:3)	9% (5:5)	
Supermarket		150/1000 sq. ft., 2000/acre* **	4% (7:3)	10% (5:5)	
Drugstore		90/1000 sq. ft.**	4% (6:4)	10% (5:5)	
Convenience Market (15-16 hours)		500/1000 sq. ft.**	8% (5:5)	8% (5:5)	
Convenience Market (24 hours)		700/1000 sq. ft.**	9% (5:5)	7% (5:5)	
Convenience Market (w/gasoline pumps)		850/1000 sq. ft., 550/vehicle fueling space**	6% (5:5)	7% (5:5)	
Discount Club		60/1000 sq. ft., 600/acre* **	1% (7:3)	9% (5:5)	
Discount Store		60/1000 sq. ft., 600/acre**	3% (6:4)	8% (5:5)	
Furniture Store		6/1000 sq. ft., 100/acre**	4% (7:3)	9% (5:5)	
Lumber Store		30/1000 sq. ft., 150/acre**	7% (6:4)	9% (5:5)	
Home Improvement Superstore		40/1000 sq. ft.**	5% (6:4)	8% (5:5)	
Hardware/Paint Store		60/1000 sq. ft., 600/acre**	2% (6:4)	9% (5:5)	
Garden Nursery		40/1000 sq. ft., 90/acre**	3% (6:4)	10% (5:5)	
Mixed Use: Commercial (w/supermarket)/Residential		110/1000 sq. ft., 2000/acre* (commercial only) 5/dwelling unit, 200/acre* (residential only)	3% (6:4) 9% (3:7)	9% (5:5) 13% (6:4)	
EDUCATION					
University (4 years)	[91:9:0]	2.4/student, 100 acre*	10% (8:2)	9% (3:7)	8.9
Junior College (2 years)	[92:7:1]	1.2/student, 24/1000 sq. ft., 120/acre* **	12% (8:2)	9% (6:4)	9.0
High School	[75:19:6]	1.3/student, 15/1000 sq. ft., 60/acre* **	20% (7:3)	10% (4:6)	4.8
Middle/Junior High	[63:25:12]	1.4/student, 12/1000 sq. ft. 50/acre**	30% (6:4)	9% (4:6)	5.0
Elementary	[57:25:10]	1.6/student, 14/1000 sq. ft., 90/acre* **	32% (6:4)	9% (4:6)	3.4
Day Care	[28:58:14]	5/child, 80/1000 sq. ft.**	17% (5:5)	18% (5:5)	3.7
FINANCIAL[S]	[35:42:23]				3.4
Bank (Walk-In only)		150/1000 sq. ft., 1000/acre* **	4% (7:3)	8% (4:6)	
with Drive-Through		200/1000 sq. ft., 1500/acre*	5% (6:4)	10% (5:5)	
Drive-Through only		250 (125 one-way)/lane*	3% (5:5)	13% (5:5)	
Savings & Loan		60/1000 sq. ft., 600/acre**	2%	9%	
Drive-Through only		100 (50 one-way)/lane**	4%	15%	
HOSPITAL	[73:25:2]				8.3
General		20/bed, 25/1000 sq. ft., 250/acre*	8% (7:3)	10% (4:6)	
Convalescent/Nursing		3/bed**	7% (6:4)	7% (4:6)	
INDUSTRIAL					
Industrial/Business Park (commercial included)	[79:19:2]	16/1000 sq. ft., 200/acre* **	12% (8:2)	12% (2:8)	9.0
Industrial Park (no commercial)		8/1000 sq. ft., 90/acre**	11% (9:1)	12% (2:8)	
Industrial Plant (multiple shifts)	[92:5:3]	10/1000 sq. ft., 120/acre*	14% (8:2)	15% (3:7)	11.7
Manufacturing/Assembly		4/1000 sq. ft., 50/acre**	19% (9:1)	20% (2:8)	
Warehousing		5/1000 sq. ft., 60/acre**	13% (7:3)	15% (4:6)	
Storage		2/1000 sq. ft., 0.2/vault, 30/acre*	6% (5:5)	9% (5:5)	
Science Research & Development		8/1000 sq. ft., 80/acre*	16% (9:1)	14% (1:9)	
Landfill & Recycling Center		6/acre	11% (5:5)	10% (4:6)	

(OVER)

MEMBER AGENCIES: Cities of Carlsbad, Chula Vista, Coronado, Del Mar, El Cajon, Encinitas, Escondido, Imperial Beach, La Mesa, Lemon Grove, National City, Oceanside, Poway, San Diego, San Marcos, Santee, Solana Beach, Vista and County of San Diego.
ADVISORY/LIAISON MEMBERS: California Department of Transportation, County Water Authority, U.S. Department of Defense, S.D. Unified Port District and Tijuana/Baja California.

LAND USE	TRIP CATEGORIES [PRIMARY:DIVERTED:PASS-BY][P]	ESTIMATED WEEKDAY VEHICLE TRIP GENERATION RATE (DRIVEWAY)	HIGHEST PEAK HOUR % (plus IN:OUT ratio) Between 6:00-9:30 A.M.		Between 3:00-6:30 P.M.		TRIP LENGTH (Miles)[L]
LIBRARY	[44:44:12]	50/1000 sq. ft., 400/acre**	2%	(7:3)	10%	(5:5)	3.9
LODGING	[58:38:4]						7.6
Hotel (w/convention facilities/restaurant)		10/occupied room, 300/acre	6%	(6:4)	8%	(6:4)	
Motel		9/occupied room, 200/acre*	8%	(4:6)	9%	(6:4)	
Resort Hotel		8/occupied room, 100/acre*	5%	(6:4)	7%	(4:6)	
Business Hotel		7/occupied room**	8%	(4:6)	9%	(6:4)	
MILITARY	[82:16:2]	2.5/military & civilian personnel*	9%	(9:1)	10%	(2:8)	11.2
OFFICE							
Standard Commercial Office (less than 100,000 sq. ft.)	[77:19:4]	20/1000 sq. ft.,[O] 300/acre*	14%	(9:1)	13%	(2:8)	8.8
Large (High-Rise) Commercial Office (more than 100,000 sq. ft., 6+ stories)	[82:15:3]	17/1000 sq. ft.,[O] 600/acre*	13%	(9:1)	14%	(2:8)	10.0
Office Park (400,000+ sq. ft.)		12/1000 sq.ft., 200/acre* **	13%	(9:1)	13%	(2:8)	
Single Tenant Office		14/1000 sq. ft., 180/acre*	15%	(9:1)	15%	(2:8)	8.8
Corporate Headquarters		7/1000 sq. ft., 110/acre*	17%	(9:1)	16%	(1:9)	
Government (Civic Center)	[50:34:16]	30/1000 sq. ft.**	9%	(9:1)	12%	(3:7)	6.0
Post Office							
Central/Walk-In Only		90/1000 sq. ft.**	5%		7%		
Community (not including mail drop lane)		200/1000 sq. ft., 1300/acre*	6%	(6:4)	9%	(5:5)	
Community (w/mail drop lane)		300/1000 sq. ft., 2000/acre*	7%	(5:5)	10%	(5:5)	
Mail Drop Lane only		1500 (750 one-way)/lane*	7%	(5:5)	12%	(5:5)	
Department of Motor Vehicles		180/1000 sq. ft., 900/acre**	6%	(6:4)	10%	(4:6)	
Medical-Dental	[60:30:10]	50/1000 sq. ft., 500/acre*	6%	(8:2)	11%	(3:7)	6.4
PARKS	[66:28:6]		4%		8%		5.4
City (developed w/meeting rooms and sports facilities)		50/acre*	13%	(5:5)	9%	(5:5)	
Regional (developed)		20/acre*					
Neighborhood/County (undeveloped)		5/acre (add for specific sport uses), 6/picnic site* **					
State (average 1000 acres)		1/acre, 10/picnic site**					
Amusement (Theme)		80/acre, 130/acre (summer only)**			6%	(6:4)	
San Diego Zoo		115/acre*					
Sea World		80/acre*					
RECREATION							
Beach, Ocean or Bay	[52:39:9]	600/1000 ft. shoreline, 60/acre*					6.3
Beach, Lake (fresh water)		50/1000 ft. shoreline, 5/acre*					
Bowling Center		30/1000 sq. ft., 300/acre, 30/lane **	7%	(7:3)	11%	(4:6)	
Campground		4/campsite**	4%		8%		
Golf Course		7/acre, 40/hole, 700/course* **	7%	(8:2)	9%	(3:7)	
Driving Range only		70/acre, 14/tee box*	3%	(7:3)	9%	(5:5)	
Marinas		4/berth, 20/acre* **	3%	(3:7)	7%	(6:4)	
Multi-purpose (miniature golf, video arcade, batting cage, etc.)		90/acre	2%		6%		
Racquetball/Health Club		30/1000 sq. ft., 300/acre, 40/court*	4%	(6:4)	9%	(6:4)	
Tennis Courts		16/acre, 30/court**	5%		11%	(5:5)	
Sports Facilities							
Outdoor Stadium		50/acre, 0.2/seat*					
Indoor Arena		30/acre, 0.1/seat*					
Racetrack		40/acre, 0.6 seat*					
Theaters (multiplex w/matinee)	[66:17:17]	80/1000 sq. ft., 1.8/seat, 360/screen*	1/3%		8%	(6:4)	6.1
RESIDENTIAL	[86:11:3]						7.9
Estate, Urban or Rural (average 1-2 DU/acre)		12/dwelling unit*[R]	8%	(3:7)	10%	(7:3)	
Single Family Detached (average 3-6 DU/acre)		10/dwelling unit*[R]	8%	(3:7)	10%	(7:3)	
Condominium (or any multi-family 6-20 DU/acre)		8/dwelling unit*[R]	8%	(2:8)	10%	(7:3)	
Apartment (or any multi-family units more than 20 DU/acre)		6/dwelling unit*[R]	8%	(2:8)	9%	(7:3)	
Military Housing (off-base, multi-family)							
(less than 6 DU/acre)		8/dwelling unit	7%	(3:7)	9%	(6:4)	
(6-20 DU/acre)		6/dwelling unit	7%	(3:7)	9%	(6:4)	
Mobile Home							
Family		5/dwelling unit, 40/acre*	8%	(3:7)	11%	(6:4)	
Adults Only		3/dwelling unit, 20/acre*	9%	(3:7)	10%	(6:4)	
Retirement Community		4/dwelling unit**	5%	(4:6)	7%	(6:4)	
Congregate Care Facility		2.5/dwelling unit**	4%	(6:4)	8%	(5:5)	
RESTAURANT[S]	[51:37:12]						4.7
Quality		100/1000 sq. ft., 3/seat, 500/acre* **	1%	(6:4)	8%	(7:3)	
Sit-down, high turnover		160/1000 sq. ft., 6/seat, 1000/acre* **	8%	(5:5)	8%	(6:4)	
Fast Food (w/drive-through)		650/1000 sq. ft., 20/seat, 3000/acre* **	7%	(5:5)	7%	(5:5)	
Fast Food (without drive-through)		700/1000 sq. ft.**	5%	(6:4)	7%	(5:5)	
Delicatessen (7am-4pm)		150/1000 sq. ft., 11/seat*	9%	(6:4)	3%	(3:7)	
TRANSPORTATION							
Bus Depot		25/1000 sq. ft.**					
Truck Terminal		10/1000 sq. ft., 7/bay, 80/acre**	9%	(4:6)	8%	(5:5)	
Waterport/Marine Terminal		170/berth, 12/acre**					
Transit Station (Light Rail w/parking)		300/acre, $2^{1/2}$/parking space (4/occupied)**	14%	(7:3)	15%	(3:7)	
Park & Ride Lots		400/acre (600/paved acre), 5/parking space (8/occupied)* **	14%	(7:3)	15%	(3:7)	

* Primary source: *San Diego Traffic Generators.*

* Other sources: *ITE Trip Generation Report [6th Edition]*, Trip Generation Rates (other agencies and publications), various SANDAG & CALTRANS studies, reports and estimates.

[P] Trip category percentage ratios are daily from local household surveys, often cannot be applied to very specific land uses, and do not include non-resident drivers (draft SANDAG *Analysis of Trip Diversion*, revised November, 1990):
PRIMARY - one trip directly between origin and primary destination.
DIVERTED - linked trip (having one or more stops along the way to a primary destination) whose distance compared to direct distance ≥ 1 mile.
PASS-BY - undiverted or diverted < 1 mile.

[L] Trip lengths are average weighted for all trips to and from general land use site. (All trips system-wide average length = 6.9 miles)

[C] Fitted curve equation: Ln(T) = 0.502 Ln(x) + 6.945
[O] Fitted curve equation: Ln(T) = 0.756 Ln(x) + 3.950
} T = total trips, x = 1,000 sq. ft.

[R] Fitted curve equation: t = -2.169 Ln(d) + 12.85 t = trips/DU, d = density (DU/acre), DU = dwelling unit

[S] Suggested PASS-BY [undiverted or diverted < 1 mile] percentages for trip rate reductions only during P.M. peak period (based on combination of local data/review and Other sources**):

COMMERCIAL/RETAIL	
Regional Shopping Center	20%
Community " "	30%
Neighborhood " "	40%
Specialty Retail/Strip Commercial (other)	10%
Supermarket	40%
Convenience Market	50%
Discount Club/Store	30%
FINANCIAL	
Bank	25%
AUTOMOBILE	
Gasoline Station	50%
RESTAURANT	
Quality	10%
Sit-down high turnover	20%
Fast Food	40%

[T] Trip Reductions - In order to help promote regional "smart growth" policies, and acknowledge San Diego's expanding mass transit system, consider vehicle trip rate reductions (with proper documentation and necessary adjustments for peak periods). The following are some examples:

[1] A 5% daily trip reduction for land uses with transit access or near transit stations accessible within 1/4 mile.

[2] Up to 10% daily trip reduction for mixed-use developments where residential and commercial retail are combined (demonstrate mode split of walking trips to replace vehicular trips).

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GUN RANGE DEVELOPMENT
Proposed Building Development and Parking
2350 Franklin Road
Lawrence, Kansas 66046
CFS Project No. 165294

7 Step Traffic Impact Analysis

December 30, 2016

Prepared for:
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access points will not require a left-turn or right-turn auxiliary lane due to the low volume of generated traffic. There are no sight obstructions or sight distance issues at the driveway intersections. A shared parking lot connection to the businesses to the south is not feasible due to the 6 ft high retaining wall between the properties.

STEP 7: Estimate of Trips Generated by Existing and Proposed Development

The existing site has a 409 sq ft building and is vacant, therefore the existing traffic is negligible. For evaluating traffic impacts from new land developments, transportation engineers typically utilize the Trip Generation Manual (9th Edition) published by the Institute of Transportation Engineers (ITE). The 9th Edition is the most current manual and covers a diverse assortment of commercial, residential, industrial and specialty types of land developments. Since ITE data for a shooting range is unavailable, a substitute ITE category and ITE code was used. It was assumed that the 432 (Golf Driving Range) would be a good comparison since there are similar lanes in which a person performs a solo activity. The Gun Range development will provide 10 shooting lanes. Also, the 4,000 sq ft retail area within the building was categorized as ITE Code 826 (Specialty Retail Center). The 10 lanes and 4 thousand sq ft (ksf) of retail was then multiplied by their ITE Average Trip Generation Rates to determine the increased traffic volumes. Volumes were calculated as follows for the daily total and the AM and PM Peak Hours on a typical weekday:

ITE Trip Generation Manual (9th Edition) Generation Rates and Directional Distributions

		Average Trip Generation Rate	Total Traffic	Traffic Entering	Traffic Exiting
ITE Land Use 432 (Golf Driving Range)	**Weekday Total**	13.65 vpd/unit	137		
	AM Peak Hour	0.40 vpd/unit	4	2	2
	PM Peak Hour	1.25 vpd/unit	13	6	7
ITE Land Use 826 (Specialty Retail Center)	**Weekday Total**	44.32 vpd/unit	177		
	AM Peak Hour	6.84 vpd/unit	27	13	14
	PM Peak Hour	2.71 vpd/unit	11	5	6

These volumes are very low and will not significantly change the traffic patterns of the local street network. By-pass traffic will not be generated by these land use categories.

Summary

Analysis of the projected volumes of traffic to be generated by this proposed development are as follows: the AM peak hour yields approximately 31 vehicles per hour (vph) while the PM peak hour yields approximately 24 vph. As the maximum volume is less than 100 vph, this 7 Step Analysis satisfies the City of Lawrence's Development Code and a more detailed Traffic Impact Study will not be required to be performed. The analysis of the proposed development does not indicate that there would be any appreciable change in traffic volumes as a result of this project.

Appendix I - Exhibit Map

On weekends, the facility will continue to accommodate the routine functions but may also have events with a varied attendance. For purposes of this study, an attendance of up to 250 people was considered. These events may include weddings or other celebratory gatherings. The Friday afternoon peak hour of generator is believed to have the facilities highest trip generation during the arrival of a 250-person event. During this timeframe, the facility may generate a total of 361 peak hour trips. On a Saturday, the facility may generate a total of 1,928 daily trips, with 357 of these occurring during the afternoon peak hour of generator. **Table 2** summarizes the estimated trip generation for the proposed development.

Table 2 – Lake Gulch Whiskey Resort Weekend Project Traffic Generation

Land Use	Size	Vehicles Trips						
		Sat. Daily	Friday Peak Hour of Generator			Friday Peak Hour of Generator		
			In	Out	Total	In	Out	Total
Weekend Operations with 250-person Event								
Manufacturing (ITE 140) – Distillery Operations	18 Employees	24	5	7	12	2	2	4
Hotel (ITE 310) – Lodge & Cabins	60 Rooms	492	18	18	36	25	19	44
Sit-Down Restaurant (ITE 932)	4,800 Square Feet	652	52	50	102	28	26	54
Trucks (Client Information)	5 Trucks	10	2	2	4	0	0	0
Distillery Tours (Client Information)	60 Patrons	400	60	60	120	60	60	120
Weekend Events	250 People	350	130	5	135	130	5	135
Weekend Operations Summation		**1,928**	**244**	**117**	**361**	**245**	**112**	**357**

In addition to these typical weekday and weekend operations with standard events, approximately 10 to 15 large events may occur at the facility each year. There is a planned amphitheater which may accommodate 1,000 to 2,000 people. When these events occur, it is believed that arrangements will be made with the hotel/casinos in Black Hawk to partner with their facility for lodging, parking, and shuttle service to and from the event. As these special events aren't expected during typical weekday or weekend operations, they were not specifically evaluated within this traffic study. These events are anticipated to occur on Friday nights and on weekends.

APPENDIX D

QUEUING ANALYSIS WORKSHEETS

EXISTING (2020) CONDITIONS

Intersection: 1: Miners Mesa Road & Bobtail Road

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	31	32	55
Average Queue (ft)	11	10	24
95th Queue (ft)	35	34	47
Link Distance (ft)	336	479	88
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	58	21	13	43	16	17	116	20	27	92	59
Future Volume (vph)	38	58	21	13	43	16	17	116	20	27	92	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75		0	90		0	0		50	0		0
Storage Lanes	1		0	1		0	0		1	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		470			652			364			185	
Travel Time (s)		12.8			17.8			9.9			5.0	
Confl. Peds. (#/hr)	67		46	46		67			73	73		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	41	86	0	14	64	0	0	144	22	29	100	64
v/c Ratio	0.19	0.25		0.13	0.37			0.11	0.02	0.04	0.07	0.05
Control Delay	29.9	23.4		39.1	35.8			8.1	0.1	3.6	3.8	0.9
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.4	0.4
Total Delay	29.9	23.4		39.1	35.8			8.1	0.1	3.6	4.2	1.2
Queue Length 50th (ft)	19	30		8	26			24	0	4	16	2
Queue Length 95th (ft)	44	66		25	62			71	0	8	27	6
Internal Link Dist (ft)		390			572			284			105	
Turn Bay Length (ft)	75			90					50			
Base Capacity (vph)	217	812		407	605			1258	950	805	1388	1344
Starvation Cap Reductn	0	0		0	0			0	0	0	969	1010
Spillback Cap Reductn	0	0		0	0			0	0	0	0	0
Storage Cap Reductn	0	0		0	0			0	0	0	0	0
Reduced v/c Ratio	0.19	0.11		0.03	0.11			0.11	0.02	0.04	0.24	0.19

Intersection Summary	
Area Type:	Other

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	400	30	149	376	22	146
Future Volume (vph)	400	30	149	376	22	146
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		240	375		0	0
Storage Lanes		1	1		1	1
Taper Length (ft)			25		25	
Right Turn on Red		Yes				Yes
Link Speed (mph)	45			45	25	
Link Distance (ft)	570			721	185	
Travel Time (s)	8.6			10.9	5.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	435	33	162	409	24	159
v/c Ratio	0.65	0.10	0.12	0.13	0.18	0.10
Control Delay	38.3	10.6	1.7	1.2	38.8	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.3	10.6	1.7	1.2	38.8	0.1
Queue Length 50th (ft)	122	0	0	0	12	0
Queue Length 95th (ft)	160	23	25	30	34	0
Internal Link Dist (ft)	490			641	105	
Turn Bay Length (ft)		240	375			
Base Capacity (vph)	1474	678	1320	3256	285	1583
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.05	0.12	0.13	0.08	0.10

Intersection Summary	
Area Type:	Other

Intersection: 1: Miners Mesa Road & Bobtail Road

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	31	31	53
Average Queue (ft)	10	11	28
95th Queue (ft)	34	36	48
Link Distance (ft)	336	479	88
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	82	30	19	61	22	23	166	29	38	131	85
Future Volume (vph)	55	82	30	19	61	22	23	166	29	38	131	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75		0	90		0	0		50	0		0
Storage Lanes	1		0	1		0	0		1	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		470			652			364			185	
Travel Time (s)		12.8			17.8			9.9			5.0	
Confl. Peds. (#/hr)	67		46	46		67			73	73		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	60	122	0	21	90	0	0	205	32	41	142	92
v/c Ratio	0.26	0.33		0.18	0.46			0.18	0.04	0.06	0.11	0.07
Control Delay	30.0	24.2		39.1	36.3			10.1	0.1	4.0	4.1	0.4
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.5	0.5
Total Delay	30.0	24.2		39.1	36.3			10.1	0.1	4.0	4.7	0.8
Queue Length 50th (ft)	28	44		11	37			54	0	3	18	0
Queue Length 95th (ft)	57	87		32	80			104	0	10	24	0
Internal Link Dist (ft)		390			572			284			105	
Turn Bay Length (ft)	75			90					50			
Base Capacity (vph)	233	814		396	608			1123	868	743	1306	1320
Starvation Cap Reductn	0	0		0	0			0	0	0	871	952
Spillback Cap Reductn	0	0		0	0			0	0	0	0	0
Storage Cap Reductn	0	0		0	0			0	0	0	0	0
Reduced v/c Ratio	0.26	0.15		0.05	0.15			0.18	0.04	0.06	0.33	0.25

Intersection Summary	
Area Type:	Other

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	571	42	213	538	32	208
Future Volume (vph)	571	42	213	538	32	208
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		240	375		0	0
Storage Lanes		1	1		1	1
Taper Length (ft)			25		25	
Right Turn on Red		Yes				Yes
Link Speed (mph)	45			45	25	
Link Distance (ft)	570			721	185	
Travel Time (s)	8.6			10.9	5.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	621	46	232	585	35	226
v/c Ratio	0.70	0.11	0.21	0.19	0.24	0.14
Control Delay	34.7	7.7	2.0	1.8	40.4	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.7	7.7	2.0	1.8	40.4	0.2
Queue Length 50th (ft)	170	0	19	28	17	0
Queue Length 95th (ft)	205	24	38	47	45	0
Internal Link Dist (ft)	490			641	105	
Turn Bay Length (ft)		240	375			
Base Capacity (vph)	1474	686	1095	3107	206	1583
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.07	0.21	0.19	0.17	0.14

Intersection Summary	
Area Type:	Other

OPENING YEAR (2022) WITHOUT PROJECT

Intersection: 1: Miners Mesa Road & Bobtail Road

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	31	31	31
Average Queue (ft)	6	17	12
95th Queue (ft)	26	40	35
Link Distance (ft)	336	479	88
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	60	22	14	44	17	18	119	21	28	94	61
Future Volume (vph)	39	60	22	14	44	17	18	119	21	28	94	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75		0	90		0	0		50	0		0
Storage Lanes	1		0	1		0	0		1	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		470			652			364			185	
Travel Time (s)		12.8			17.8			9.9			5.0	
Confl. Peds. (#/hr)	67		46	46		67			73	73		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	42	89	0	15	66	0	0	149	23	30	102	66
v/c Ratio	0.20	0.26		0.14	0.38			0.12	0.02	0.04	0.07	0.05
Control Delay	29.9	23.3		39.3	35.6			9.0	0.0	3.6	3.8	0.9
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.4	0.4
Total Delay	29.9	23.3		39.3	35.6			9.0	0.0	3.6	4.2	1.2
Queue Length 50th (ft)	19	31		8	26			36	0	5	16	2
Queue Length 95th (ft)	44	67		26	64			73	0	8	27	6
Internal Link Dist (ft)		390			572			284			105	
Turn Bay Length (ft)	75			90					50			
Base Capacity (vph)	217	813		405	605			1209	921	801	1387	1344
Starvation Cap Reductn	0	0		0	0			0	0	0	965	1006
Spillback Cap Reductn	0	0		0	0			0	0	0	0	0
Storage Cap Reductn	0	0		0	0			0	0	0	0	0
Reduced v/c Ratio	0.19	0.11		0.04	0.11			0.12	0.02	0.04	0.24	0.20

Intersection Summary	
Area Type:	Other

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	408	31	152	383	23	149
Future Volume (vph)	408	31	152	383	23	149
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		240	375		0	0
Storage Lanes		1	1		1	1
Taper Length (ft)			25		25	
Right Turn on Red		Yes				Yes
Link Speed (mph)	45			45	25	
Link Distance (ft)	570			721	185	
Travel Time (s)	8.6			10.9	5.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	443	34	165	416	25	162
v/c Ratio	0.66	0.10	0.13	0.13	0.19	0.10
Control Delay	38.2	10.3	1.7	1.2	38.0	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.2	10.3	1.7	1.2	38.0	0.1
Queue Length 50th (ft)	124	0	0	0	12	0
Queue Length 95th (ft)	162	23	26	31	35	0
Internal Link Dist (ft)	490			641	105	
Turn Bay Length (ft)		240	375			
Base Capacity (vph)	1474	679	1314	3254	285	1583
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.05	0.13	0.13	0.09	0.10

Intersection Summary	
Area Type:	Other

Intersection: 1: Miners Mesa Road & Bobtail Road

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	31	31	31
Average Queue (ft)	18	6	24
95th Queue (ft)	43	27	44
Link Distance (ft)	336	479	88
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	56	84	31	20	62	23	24	169	30	39	133	87
Future Volume (vph)	56	84	31	20	62	23	24	169	30	39	133	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75		0	90		0	0		50	0		0
Storage Lanes	1		0	1		0	0		1	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		470			652			364			185	
Travel Time (s)		12.8			17.8			9.9			5.0	
Confl. Peds. (#/hr)	67		46	46		67			73	73		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	61	125	0	22	92	0	0	210	33	42	145	95
v/c Ratio	0.27	0.34		0.19	0.46			0.19	0.04	0.06	0.11	0.07
Control Delay	29.9	24.4		39.2	36.1			10.2	0.1	4.1	4.2	0.4
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.5	0.5
Total Delay	29.9	24.4		39.2	36.1			10.2	0.1	4.1	4.7	0.8
Queue Length 50th (ft)	28	46		12	37			56	0	3	17	0
Queue Length 95th (ft)	58	89		33	81			107	0	10	25	0
Internal Link Dist (ft)		390			572			284			105	
Turn Bay Length (ft)	75			90					50			
Base Capacity (vph)	234	814		395	608			1120	866	739	1305	1319
Starvation Cap Reductn	0	0		0	0			0	0	0	865	946
Spillback Cap Reductn	0	0		0	0			0	0	0	0	0
Storage Cap Reductn	0	0		0	0			0	0	0	0	0
Reduced v/c Ratio	0.26	0.15		0.06	0.15			0.19	0.04	0.06	0.33	0.25

Intersection Summary	
Area Type:	Other

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	579	43	216	545	33	211
Future Volume (vph)	579	43	216	545	33	211
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		240	375		0	0
Storage Lanes		1	1		1	1
Taper Length (ft)			25		25	
Right Turn on Red		Yes				Yes
Link Speed (mph)	45			45	25	
Link Distance (ft)	570			721	185	
Travel Time (s)	8.6			10.9	5.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	629	47	235	592	36	229
v/c Ratio	0.70	0.11	0.22	0.19	0.25	0.14
Control Delay	34.7	7.6	2.0	1.8	40.4	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.7	7.6	2.0	1.8	40.4	0.2
Queue Length 50th (ft)	172	0	19	28	18	0
Queue Length 95th (ft)	207	23	39	48	45	0
Internal Link Dist (ft)	490			641	105	
Turn Bay Length (ft)		240	375			
Base Capacity (vph)	1474	687	1090	3106	206	1583
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.07	0.22	0.19	0.17	0.14

Intersection Summary	
Area Type:	Other

OPENING YEAR (2022) WITH PROJECT

Intersection: 1: Miners Mesa Road & Bobtail Road

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	31	31	49
Average Queue (ft)	22	18	27
95th Queue (ft)	42	43	53
Link Distance (ft)	336	479	88
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	60	22	14	44	17	18	144	21	28	118	61
Future Volume (vph)	39	60	22	14	44	17	18	144	21	28	118	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75		0	90		0	0		50	0		0
Storage Lanes	1		0	1		0	0		1	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		470			652			364			185	
Travel Time (s)		12.8			17.8			9.9			5.0	
Confl. Peds. (#/hr)	67		46	46		67			73	73		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	42	89	0	15	66	0	0	177	23	30	128	66
v/c Ratio	0.20	0.26		0.14	0.38			0.15	0.02	0.04	0.09	0.05
Control Delay	29.9	23.3		39.3	35.6			9.1	0.0	3.5	3.7	0.7
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.4	0.4
Total Delay	29.9	23.3		39.3	35.6			9.1	0.0	3.5	4.1	1.1
Queue Length 50th (ft)	19	31		8	26			44	0	5	21	2
Queue Length 95th (ft)	44	67		26	64			86	0	6	30	2
Internal Link Dist (ft)		390			572			284			105	
Turn Bay Length (ft)	75			90					50			
Base Capacity (vph)	217	813		405	605			1213	921	789	1387	1344
Starvation Cap Reductn	0	0		0	0			0	0	0	930	1004
Spillback Cap Reductn	0	0		0	0			0	0	0	0	0
Storage Cap Reductn	0	0		0	0			0	0	0	0	0
Reduced v/c Ratio	0.19	0.11		0.04	0.11			0.15	0.02	0.04	0.28	0.19

Intersection Summary	
Area Type:	Other

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	408	35	172	383	27	170
Future Volume (vph)	408	35	172	383	27	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		240	375		0	0
Storage Lanes		1	1		1	1
Taper Length (ft)			25		25	
Right Turn on Red		Yes				Yes
Link Speed (mph)	45			45	25	
Link Distance (ft)	570			721	185	
Travel Time (s)	8.6			10.9	5.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	443	38	187	416	29	185
v/c Ratio	0.66	0.11	0.14	0.13	0.21	0.12
Control Delay	38.2	10.0	1.9	1.2	38.7	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.2	10.0	1.9	1.2	38.7	0.2
Queue Length 50th (ft)	124	0	0	0	15	0
Queue Length 95th (ft)	162	24	30	32	40	0
Internal Link Dist (ft)	490			641	105	
Turn Bay Length (ft)		240	375			
Base Capacity (vph)	1474	681	1311	3249	285	1583
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.06	0.14	0.13	0.10	0.12

Intersection Summary	
Area Type:	Other

Intersection: 1: Miners Mesa Road & Bobtail Road

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	31	54	31
Average Queue (ft)	24	29	29
95th Queue (ft)	45	58	32
Link Distance (ft)	336	479	88
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	56	84	31	20	62	23	24	199	30	39	166	87
Future Volume (vph)	56	84	31	20	62	23	24	199	30	39	166	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75		0	90		0	0		50	0		0
Storage Lanes	1		0	1		0	0		1	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		470			652			364			185	
Travel Time (s)		12.8			17.8			9.9			5.0	
Confl. Peds. (#/hr)	67		46	46		67			73	73		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	61	125	0	22	92	0	0	242	33	42	180	95
v/c Ratio	0.27	0.34		0.19	0.46			0.22	0.04	0.06	0.14	0.07
Control Delay	29.9	24.4		39.2	36.1			10.4	0.1	3.9	4.1	0.3
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.6	0.4
Total Delay	29.9	24.4		39.2	36.1			10.4	0.1	3.9	4.7	0.8
Queue Length 50th (ft)	28	46		12	37			66	0	3	21	0
Queue Length 95th (ft)	58	89		33	81			123	0	9	28	0
Internal Link Dist (ft)		390			572			284			105	
Turn Bay Length (ft)	75			90					50			
Base Capacity (vph)	234	814		395	608			1121	866	716	1305	1319
Starvation Cap Reductn	0	0		0	0			0	0	0	815	943
Spillback Cap Reductn	0	0		0	0			0	0	0	0	0
Storage Cap Reductn	0	0		0	0			0	0	0	0	0
Reduced v/c Ratio	0.26	0.15		0.06	0.15			0.22	0.04	0.06	0.37	0.25

Intersection Summary	
Area Type:	Other

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	579	49	244	545	38	236
Future Volume (vph)	579	49	244	545	38	236
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		240	375		0	0
Storage Lanes		1	1		1	1
Taper Length (ft)			25		25	
Right Turn on Red		Yes				Yes
Link Speed (mph)	45			45	25	
Link Distance (ft)	570			721	185	
Travel Time (s)	8.6			10.9	5.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	629	53	265	592	41	257
v/c Ratio	0.70	0.12	0.24	0.19	0.28	0.16
Control Delay	34.7	7.3	2.5	1.8	40.8	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.7	7.3	2.5	1.8	40.8	0.2
Queue Length 50th (ft)	172	0	23	30	21	0
Queue Length 95th (ft)	207	25	52	49	52	0
Internal Link Dist (ft)	490			641	105	
Turn Bay Length (ft)		240	375			
Base Capacity (vph)	1474	690	1086	3098	206	1583
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.08	0.24	0.19	0.20	0.16

Intersection Summary	
Area Type:	Other

BUILDOUT YEAR (2025) WITHOUT PROJECT

Intersection: 1: Miners Mesa Road & Bobtail Road

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	56	80	54
Average Queue (ft)	36	64	35
95th Queue (ft)	52	95	51
Link Distance (ft)	336	479	88
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	63	23	14	47	17	19	221	22	30	296	65
Future Volume (vph)	42	63	23	14	47	17	19	221	22	30	296	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75		0	90		0	0		50	0		0
Storage Lanes	1		0	1		0	0		1	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		470			652			364			185	
Travel Time (s)		12.8			17.8			9.9			5.0	
Confl. Peds. (#/hr)	67		46	46		67			73	73		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	46	93	0	15	69	0	0	261	24	33	322	71
v/c Ratio	0.21	0.27		0.14	0.39			0.22	0.03	0.04	0.23	0.05
Control Delay	30.0	23.2		39.0	35.9			9.6	0.0	2.9	3.4	0.3
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.4	0.3
Total Delay	30.0	23.2		39.0	35.9			9.6	0.0	2.9	3.8	0.7
Queue Length 50th (ft)	21	32		8	28			69	0	2	22	0
Queue Length 95th (ft)	48	70		26	66			126	0	5	54	0
Internal Link Dist (ft)		390			572			284			105	
Turn Bay Length (ft)	75			90					50			
Base Capacity (vph)	219	813		405	607			1204	919	739	1384	1342
Starvation Cap Reductn	0	0		0	0			0	0	0	622	980
Spillback Cap Reductn	0	0		0	0			0	0	0	0	0
Storage Cap Reductn	0	0		0	0			0	0	0	0	0
Reduced v/c Ratio	0.21	0.11		0.04	0.11			0.22	0.03	0.04	0.42	0.20

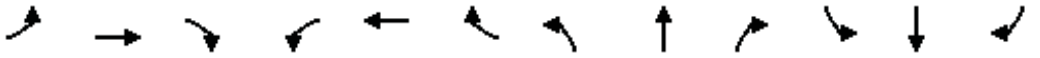
Intersection Summary	
Area Type:	Other

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	437	45	346	411	30	248
Future Volume (vph)	437	45	346	411	30	248
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		240	375		0	0
Storage Lanes		1	1		1	1
Taper Length (ft)			25		25	
Right Turn on Red		Yes				Yes
Link Speed (mph)	45			45	25	
Link Distance (ft)	570			721	185	
Travel Time (s)	8.6			10.9	5.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	475	49	376	447	33	270
v/c Ratio	0.67	0.14	0.30	0.14	0.23	0.17
Control Delay	37.6	9.0	4.4	1.7	39.0	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.6	9.0	4.4	1.7	39.0	0.2
Queue Length 50th (ft)	133	0	34	21	18	1
Queue Length 95th (ft)	168	27	64	35	46	0
Internal Link Dist (ft)	490			641	105	
Turn Bay Length (ft)		240	375			
Base Capacity (vph)	1474	688	1241	3110	285	1583
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.07	0.30	0.14	0.12	0.17

Intersection Summary	
Area Type:	Other

Intersection: 1: Miners Mesa Road & Bobtail Road

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	68	99	54
Average Queue (ft)	43	68	40
95th Queue (ft)	69	105	59
Link Distance (ft)	336	479	88
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	90	33	21	67	24	25	271	32	42	339	93
Future Volume (vph)	60	90	33	21	67	24	25	271	32	42	339	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75		0	90		0	0		50	0		0
Storage Lanes	1		0	1		0	0		1	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		470			652			364			185	
Travel Time (s)		12.8			17.8			9.9			5.0	
Confl. Peds. (#/hr)	67		46	46		67			73	73		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	65	134	0	23	99	0	0	322	35	46	368	101
v/c Ratio	0.28	0.36		0.19	0.48			0.29	0.04	0.07	0.28	0.08
Control Delay	29.8	25.2		38.8	36.8			11.3	0.1	3.0	4.0	0.2
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.5	0.5
Total Delay	29.8	25.2		38.8	36.8			11.3	0.1	3.0	4.6	0.7
Queue Length 50th (ft)	30	50		12	42			93	0	3	28	0
Queue Length 95th (ft)	60	95		34	87			169	0	7	35	0
Internal Link Dist (ft)		390			572			284			105	
Turn Bay Length (ft)	75			90					50			
Base Capacity (vph)	236	815		392	609			1104	860	657	1296	1313
Starvation Cap Reductn	0	0		0	0			0	0	0	550	929
Spillback Cap Reductn	0	0		0	0			0	0	0	0	0
Storage Cap Reductn	0	0		0	0			0	0	0	0	0
Reduced v/c Ratio	0.28	0.16		0.06	0.16			0.29	0.04	0.07	0.49	0.26

Intersection Summary	
Area Type:	Other

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	624	58	417	588	41	311
Future Volume (vph)	624	58	417	588	41	311
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		240	375		0	0
Storage Lanes		1	1		1	1
Taper Length (ft)			25		25	
Right Turn on Red		Yes				Yes
Link Speed (mph)	45			45	25	
Link Distance (ft)	570			721	185	
Travel Time (s)	8.6			10.9	5.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	678	63	453	639	45	338
v/c Ratio	0.72	0.13	0.43	0.21	0.30	0.21
Control Delay	34.2	6.6	7.9	1.9	41.5	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.2	6.6	7.9	1.9	41.5	0.3
Queue Length 50th (ft)	184	0	76	33	24	0
Queue Length 95th (ft)	220	26	187	55	60	0
Internal Link Dist (ft)	490			641	105	
Turn Bay Length (ft)		240	375			
Base Capacity (vph)	1474	696	1055	3093	206	1583
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	11	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.09	0.43	0.21	0.22	0.21

Intersection Summary	
Area Type:	Other

BUILDOUT YEAR (2025) WITH PROJECT

Intersection: 1: Miners Mesa Road & Bobtail Road

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	56	146	54
Average Queue (ft)	41	89	49
95th Queue (ft)	59	150	64
Link Distance (ft)	336	479	88
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	63	23	14	47	17	19	271	22	30	334	65
Future Volume (vph)	42	63	23	14	47	17	19	271	22	30	334	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75		0	90		0	0		50	0		0
Storage Lanes	1		0	1		0	0		1	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		470			652			364			185	
Travel Time (s)		12.8			17.8			9.9			5.0	
Confl. Peds. (#/hr)	67		46	46		67			73	73		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	46	93	0	15	69	0	0	316	24	33	363	71
v/c Ratio	0.21	0.27		0.14	0.39			0.26	0.03	0.05	0.26	0.05
Control Delay	30.0	23.2		39.0	35.9			10.0	0.0	2.8	3.4	0.3
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.4	0.3
Total Delay	30.0	23.2		39.0	35.9			10.0	0.0	2.8	3.8	0.6
Queue Length 50th (ft)	21	32		8	28			87	0	2	25	0
Queue Length 95th (ft)	48	70		26	66			154	0	5	57	0
Internal Link Dist (ft)		390			572			284			105	
Turn Bay Length (ft)	75			90					50			
Base Capacity (vph)	219	813		405	607			1208	919	701	1384	1342
Starvation Cap Reductn	0	0		0	0			0	0	0	560	979
Spillback Cap Reductn	0	0		0	0			0	0	0	0	0
Storage Cap Reductn	0	0		0	0			0	0	0	0	0
Reduced v/c Ratio	0.21	0.11		0.04	0.11			0.26	0.03	0.05	0.44	0.20

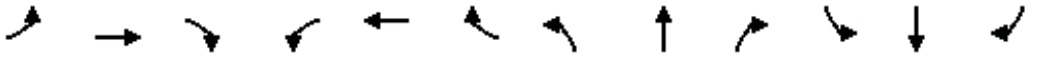
Intersection Summary	
Area Type:	Other

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	437	51	378	411	38	290
Future Volume (vph)	437	51	378	411	38	290
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		240	375		0	0
Storage Lanes		1	1		1	1
Taper Length (ft)			25		25	
Right Turn on Red		Yes				Yes
Link Speed (mph)	45			45	25	
Link Distance (ft)	570			721	185	
Travel Time (s)	8.6			10.9	5.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	475	55	411	447	41	315
v/c Ratio	0.67	0.15	0.33	0.14	0.28	0.20
Control Delay	37.6	8.8	5.1	1.7	39.8	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.6	8.8	5.1	1.7	39.8	0.3
Queue Length 50th (ft)	133	0	39	21	22	1
Queue Length 95th (ft)	168	28	74	36	54	0
Internal Link Dist (ft)	490			641	105	
Turn Bay Length (ft)		240	375			
Base Capacity (vph)	1474	691	1235	3098	285	1583
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.08	0.33	0.14	0.14	0.20

Intersection Summary	
Area Type:	Other

Intersection: 1: Miners Mesa Road & Bobtail Road

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	55	187	93
Average Queue (ft)	50	114	66
95th Queue (ft)	65	199	101
Link Distance (ft)	336	479	88
Upstream Blk Time (%)			1
Queuing Penalty (veh)			0
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	90	33	21	67	24	25	351	32	42	416	93
Future Volume (vph)	60	90	33	21	67	24	25	351	32	42	416	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75		0	90		0	0		50	0		0
Storage Lanes	1		0	1		0	0		1	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		470			652			364			185	
Travel Time (s)		12.8			17.8			9.9			5.0	
Confl. Peds. (#/hr)	67		46	46		67			73	73		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	65	134	0	23	99	0	0	409	35	46	452	101
v/c Ratio	0.28	0.36		0.19	0.48			0.37	0.04	0.08	0.35	0.08
Control Delay	29.8	25.2		38.8	36.8			12.2	0.1	2.6	3.6	0.2
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.6	0.5
Total Delay	29.8	25.2		38.8	36.8			12.2	0.1	2.6	4.3	0.7
Queue Length 50th (ft)	30	50		12	42			126	0	3	26	0
Queue Length 95th (ft)	60	95		34	87			222	0	m6	39	0
Internal Link Dist (ft)		390			572			284			105	
Turn Bay Length (ft)	75			90					50			
Base Capacity (vph)	236	815		392	609			1107	860	598	1296	1313
Starvation Cap Reductn	0	0		0	0			0	0	0	487	942
Spillback Cap Reductn	0	0		0	0			0	0	0	0	0
Storage Cap Reductn	0	0		0	0			0	0	0	0	0
Reduced v/c Ratio	0.28	0.16		0.06	0.16			0.37	0.04	0.08	0.56	0.27

Intersection Summary	
Area Type:	Other

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	624	71	482	588	54	378
Future Volume (vph)	624	71	482	588	54	378
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		240	375		0	0
Storage Lanes		1	1		1	1
Taper Length (ft)			25		25	
Right Turn on Red		Yes				Yes
Link Speed (mph)	45			45	25	
Link Distance (ft)	570			721	185	
Travel Time (s)	8.6			10.9	5.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	678	77	524	639	59	411
v/c Ratio	0.72	0.16	0.53	0.22	0.36	0.26
Control Delay	33.9	6.2	10.9	2.5	42.5	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.3	0.0
Total Delay	33.9	6.2	10.9	2.5	42.8	0.4
Queue Length 50th (ft)	182	0	113	35	33	0
Queue Length 95th (ft)	220	29	253	59	74	0
Internal Link Dist (ft)	490			641	105	
Turn Bay Length (ft)		240	375			
Base Capacity (vph)	1474	704	996	2944	210	1583
Starvation Cap Reductn	0	0	0	0	23	0
Spillback Cap Reductn	0	0	13	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.11	0.53	0.22	0.32	0.26

Intersection Summary	
Area Type:	Other

APPENDIX E

SIGNAL WARRANT WORKSHEETS

RICK ENGINEERING COMPANY

SIGNAL WARRANT ANALYSIS

Minor Street:	Miners Mesa Road	**Number of Lanes on minor street:**	1
Major Street	Bobtail Road	**Number of Lanes on major street:**	1
Scenario:	Existing 2020	**Total Number of Vehicles Entering:**	56
	Friday PM	**Number of Approaches:**	3
		Intersection total delay (seconds):	6.8
		Minor St approach total delay (veh-hr):	0.1

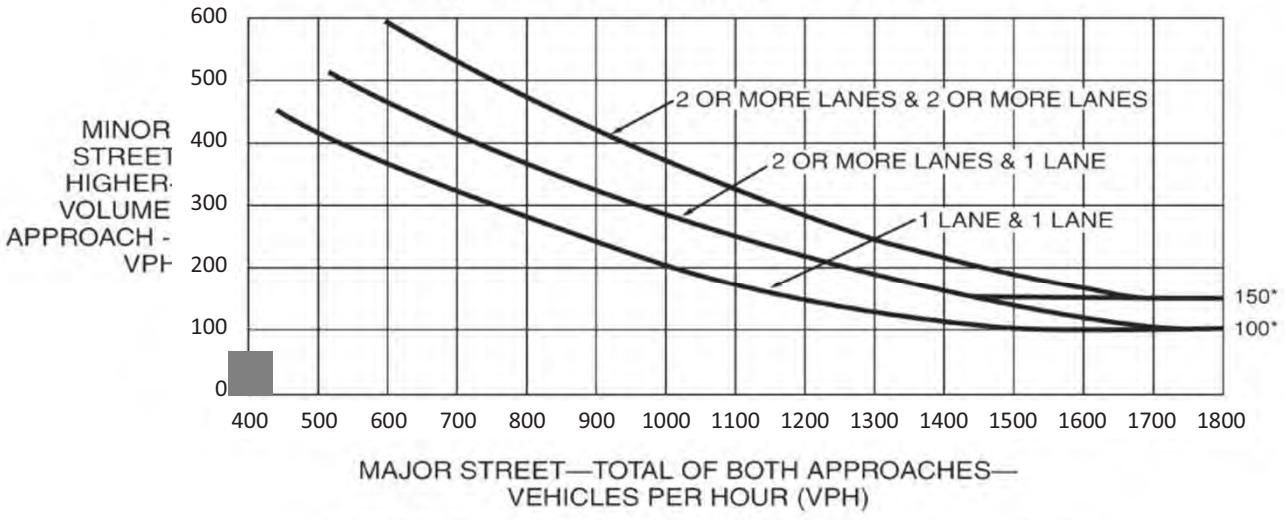
Part A

		Criteria Met?
1	Minor St approach total stopped time delay	NO
2	Volume on the same minor street approach (one directional only)	NO
3	Total volume entering the intersection during the peak hour	NO

Part B

Volume on Major St (Σ of both Approaches)	Volumes on Minor St (higher approach)
24	32

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Does the Intersection Meet Peak Hour Signal Warrants?:	
PART A	**NO**
PART B	**NO**

RICK ENGINEERING COMPANY

SIGNAL WARRANT ANALYSIS

Minor Street:	Miners Mesa Road	**Number of Lanes on minor street:**	1
Major Street	Bobtail Road	**Number of Lanes on major street:**	1
Scenario:	Existing 2020	**Total Number of Vehicles Entering:**	81
	Saturday PM	**Number of Approaches:**	3
		Intersection total delay (seconds):	6.9
		Minor St approach total delay (veh-hr):	0.1

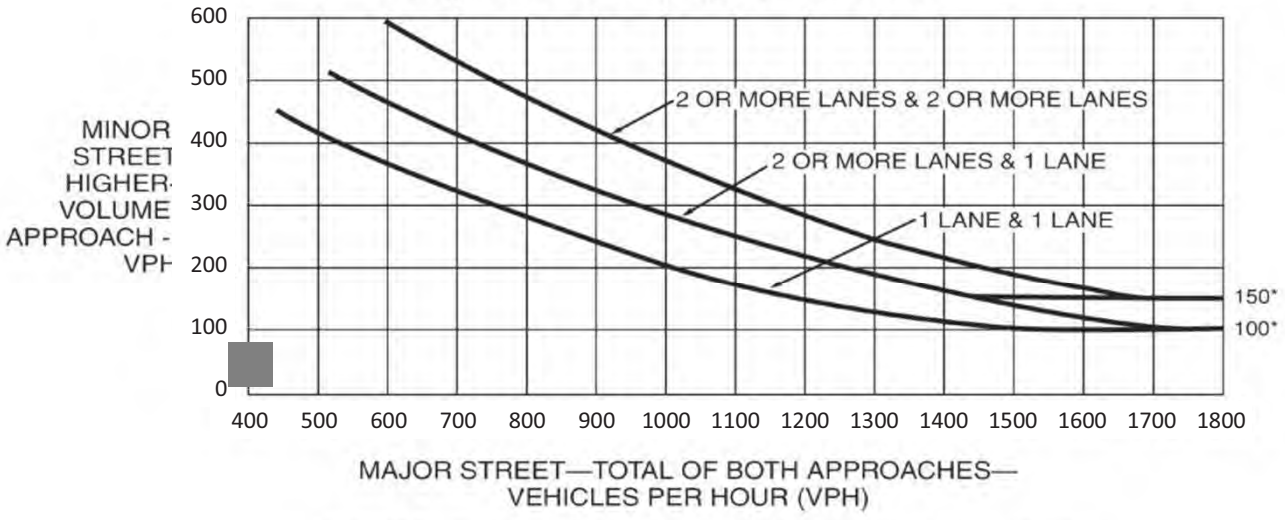
Part A

		Criteria Met?
1	Minor St approach total stopped time delay	NO
2	Volume on the same minor street approach (one directional only)	NO
3	Total volume entering the intersection during the peak hour	NO

Part B

Volume on Major St (Σ of both Approaches)	Volumes on Minor St (higher approach)
35	46

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Does the Intersection Meet Peak Hour Signal Warrants?:	
PART A	**NO**
PART B	**NO**

RICK ENGINEERING COMPANY

SIGNAL WARRANT ANALYSIS

Minor Street:	Miners Mesa Road	**Number of Lanes on minor street:**	1
Major Street	Bobtail Road	**Number of Lanes on major street:**	1
Scenario:	Opening Year 2022	**Total Number of Vehicles Entering:**	61
	Friday PM	**Number of Approaches:**	3
		Intersection total delay (seconds):	6.8
		Minor St approach total delay (veh-hr):	0.1

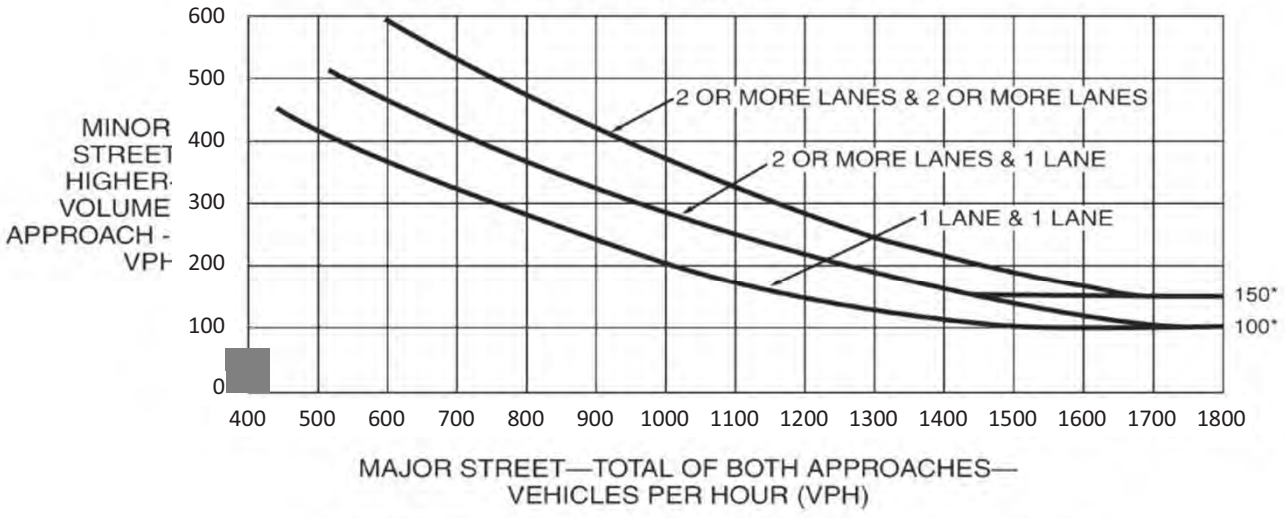
Part A

		Criteria Met?
1	Minor St approach total stopped time delay	NO
2	Volume on the same minor street approach (one directional only)	NO
3	Total volume entering the intersection during the peak hour	NO

Part B

Volume on Major St (Σ of both Approaches)	Volumes on Minor St (higher approach)
27	34

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Does the Intersection Meet Peak Hour Signal Warrants?:	
PART A	**NO**
PART B	**NO**

RICK ENGINEERING COMPANY

SIGNAL WARRANT ANALYSIS

Minor Street:	Miners Mesa Road	**Number of Lanes on minor street:**	1
Major Street	Bobtail Road	**Number of Lanes on major street:**	1
Scenario:	Opening Year 2022 Saturday PM	**Total Number of Vehicles Entering:**	86
		Number of Approaches:	3
		Intersection total delay (seconds):	6.9
		Minor St approach total delay (veh-hr):	0.1

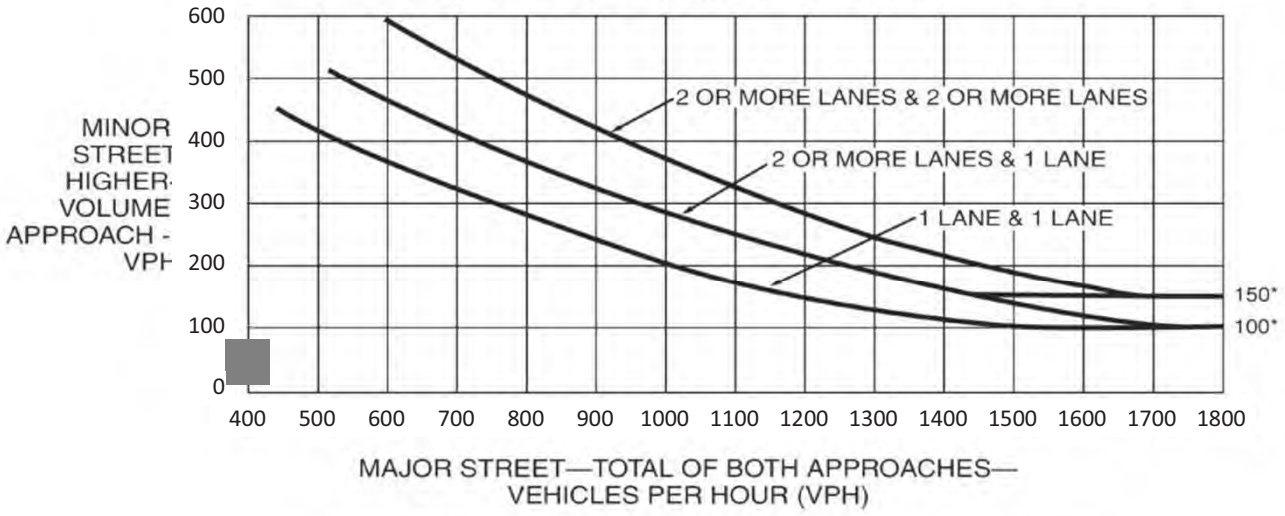
Part A

		Criteria Met?
1	Minor St approach total stopped time delay	NO
2	Volume on the same minor street approach (one directional only)	NO
3	Total volume entering the intersection during the peak hour	NO

Part B

Volume on Major St (Σ of both Approaches)	Volumes on Minor St (higher approach)
38	48

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Does the Intersection Meet Peak Hour Signal Warrants?:	
PART A	**NO**
PART B	**NO**

RICK ENGINEERING COMPANY

SIGNAL WARRANT ANALYSIS

Minor Street:	Miners Mesa Road	**Number of Lanes on minor street:**	1
Major Street	Bobtail Road	**Number of Lanes on major street:**	1
Scenario:	Opening Year 2022 + Project Friday PM	**Total Number of Vehicles Entering:**	116
		Number of Approaches:	3
		Intersection total delay (seconds):	7.0
		Minor St approach total delay (veh-hr):	0.1

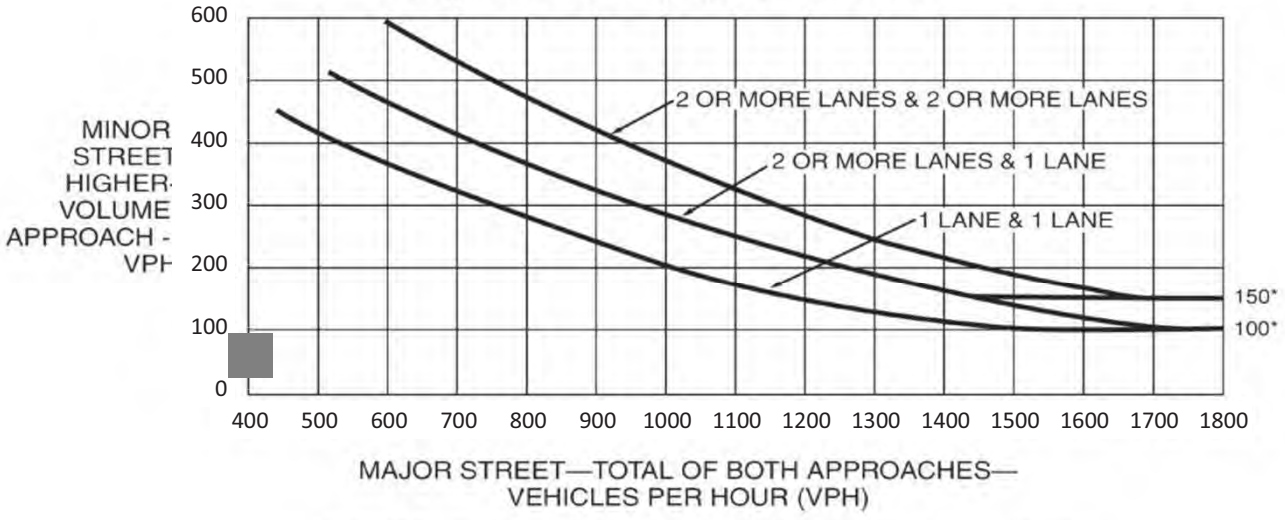
Part A

		Criteria Met?
1	Minor St approach total stopped time delay	NO
2	Volume on the same minor street approach (one directional only)	NO
3	Total volume entering the intersection during the peak hour	NO

Part B

Volume on Major St (Σ of both Approaches)	Volumes on Minor St (higher approach)
54	62

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Does the Intersection Meet Peak Hour Signal Warrants?:	
PART A	**NO**
PART B	**NO**

RICK ENGINEERING COMPANY

SIGNAL WARRANT ANALYSIS

Minor Street:	Miners Mesa Road	**Number of Lanes on minor street:**	1
Major Street	Bobtail Road	**Number of Lanes on major street:**	1
Scenario:	Opening Year 2022 + Project Saturday PM	**Total Number of Vehicles Entering:**	156
		Number of Approaches:	3
		Intersection total delay (seconds):	7.2
		Minor St approach total delay (veh-hr):	0.2

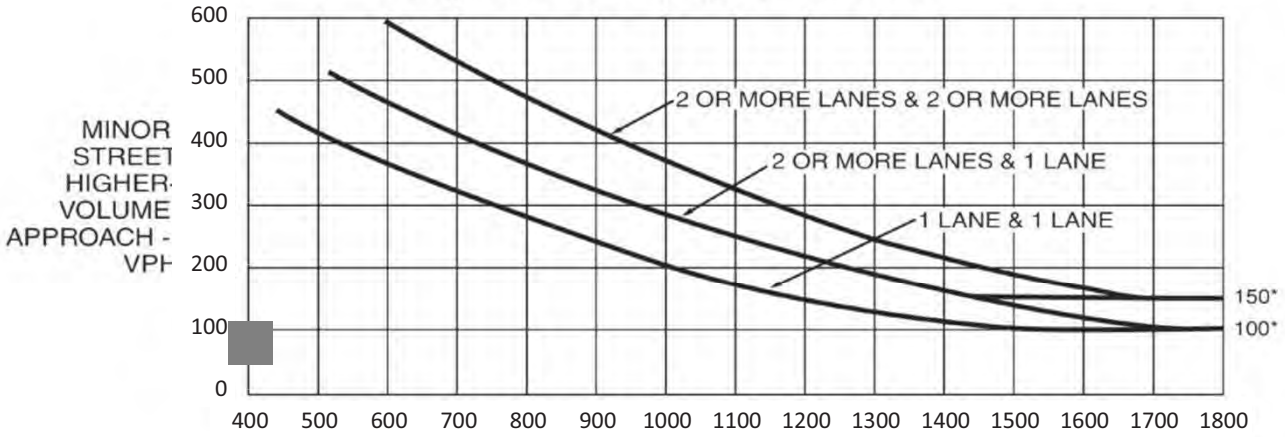
Part A

		Criteria Met?
1	Minor St approach total stopped time delay	NO
2	Volume on the same minor street approach (one directional only)	YES
3	Total volume entering the intersection during the peak hour	NO

Part B

Volume on Major St (Σ of both Approaches)	Volumes on Minor St (higher approach)
75	81

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Does the Intersection Meet Peak Hour Signal Warrants?:	
PART A	**NO**
PART B	**NO**

RICK ENGINEERING COMPANY

SIGNAL WARRANT ANALYSIS

Minor Street:	Miners Mesa Road	**Number of Lanes on minor street:**	1
Major Street	Bobtail Road	**Number of Lanes on major street:**	1
Scenario:	Buildout Year 2025 Friday PM	**Total Number of Vehicles Entering:**	588
		Number of Approaches:	3
		Intersection total delay (seconds):	9.9
		Minor St approach total delay (veh-hr):	0.4

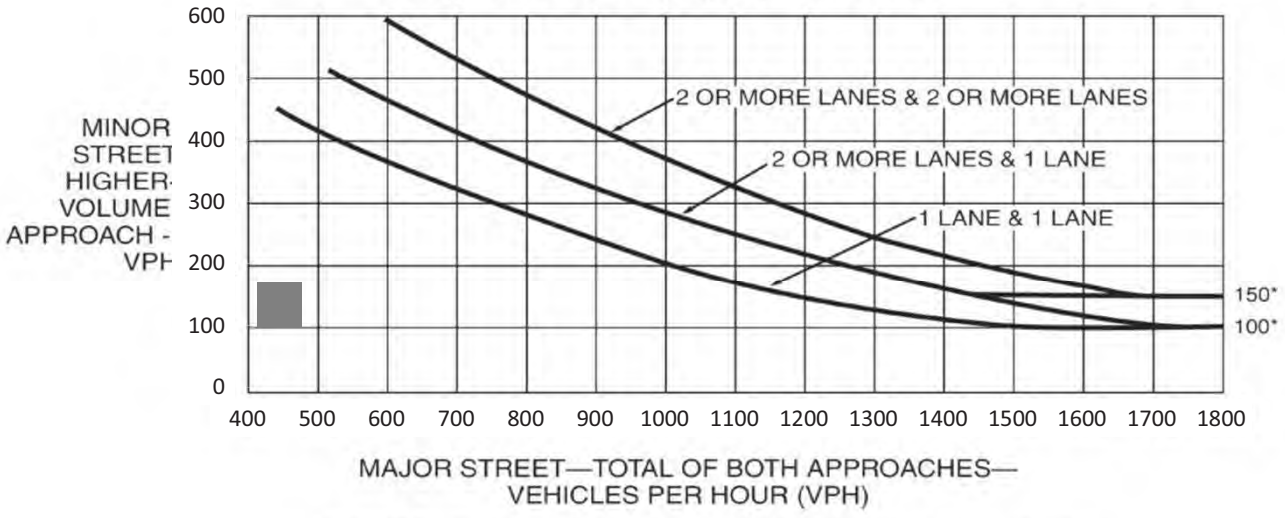
Part A

		Criteria Met?
1	Minor St approach total stopped time delay	NO
2	Volume on the same minor street approach (one directional only)	YES
3	Total volume entering the intersection during the peak hour	NO

Part B

Volume on Major St (Σ of both Approaches)	Volumes on Minor St (higher approach)
447	141

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Does the Intersection Meet Peak Hour Signal Warrants?:	
PART A	**NO**
PART B	**NO**

RICK ENGINEERING COMPANY

SIGNAL WARRANT ANALYSIS

Minor Street:	Miners Mesa Road	**Number of Lanes on minor street:**	1
Major Street	Bobtail Road	**Number of Lanes on major street:**	1
Scenario:	Buildout Year 2025 Saturday PM	**Total Number of Vehicles Entering:**	656
		Number of Approaches:	3
		Intersection total delay (seconds):	10.5
		Minor St approach total delay (veh-hr):	0.4

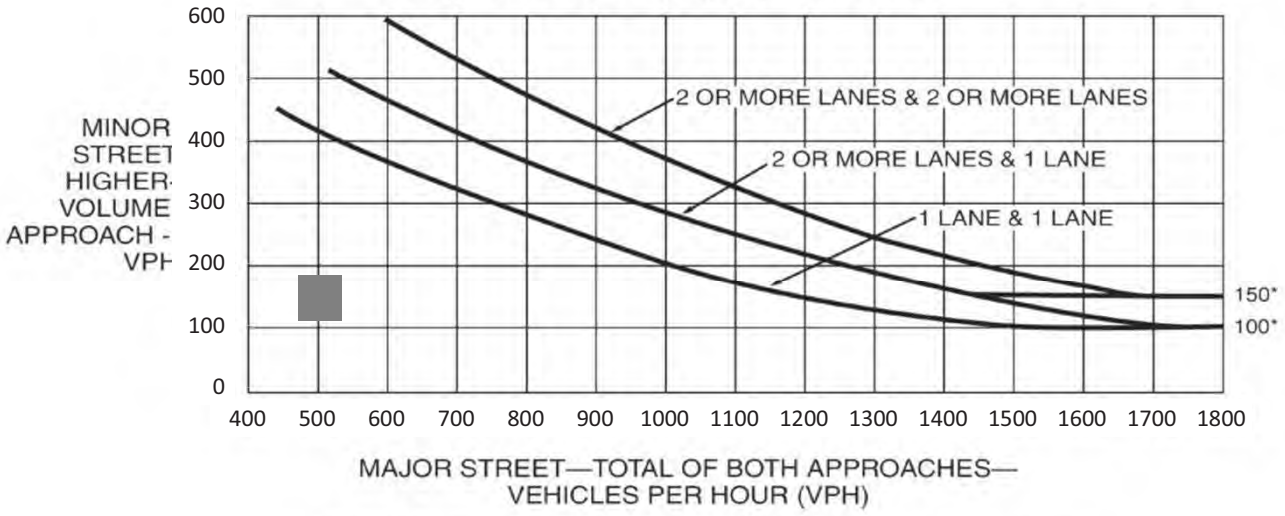
Part A

		Criteria Met?
1	Minor St approach total stopped time delay	NO
2	Volume on the same minor street approach (one directional only)	YES
3	Total volume entering the intersection during the peak hour	YES

Part B

Volume on Major St (Σ of both Approaches)	Volumes on Minor St (higher approach)
504	152

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Does the Intersection Meet Peak Hour Signal Warrants?:	
PART A	**NO**
PART B	**NO**

RICK ENGINEERING COMPANY

SIGNAL WARRANT ANALYSIS

Minor Street:	Miners Mesa Road	**Number of Lanes on minor street:**	1
Major Street	Bobtail Road	**Number of Lanes on major street:**	1
Scenario:	Buildout Year 2025 + Project Friday PM	**Total Number of Vehicles Entering:**	686
		Number of Approaches:	3
		Intersection total delay (seconds):	10.9
		Minor St approach total delay (veh-hr):	0.6

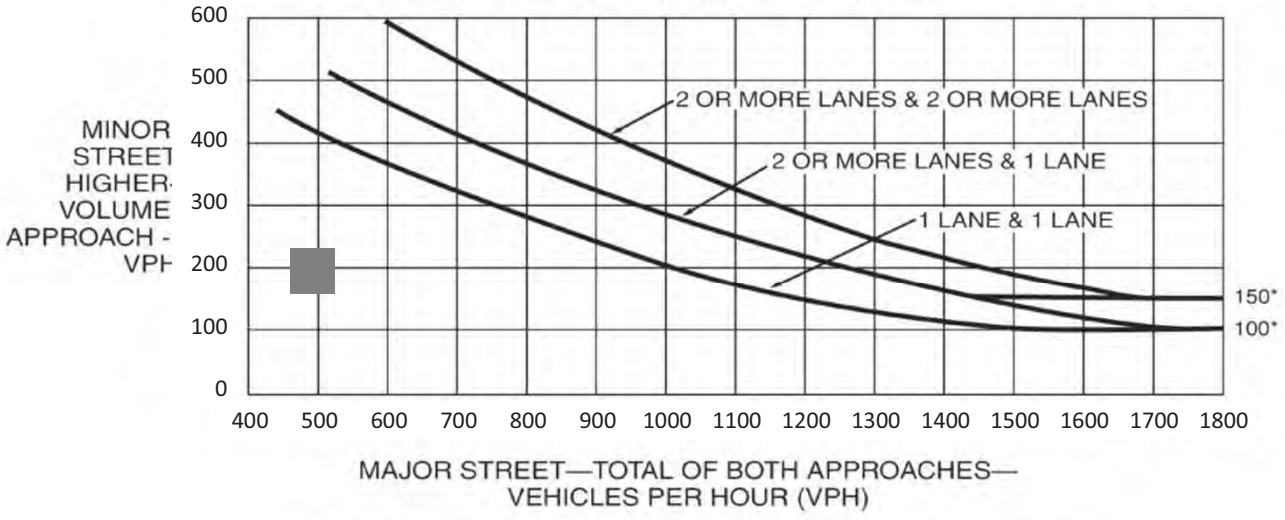
Part A

		Criteria Met?
1	Minor St approach total stopped time delay	NO
2	Volume on the same minor street approach (one directional only)	YES
3	Total volume entering the intersection during the peak hour	YES

Part B

Volume on Major St (Σ of both Approaches)	Volumes on Minor St (higher approach)
489	197

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Does the Intersection Meet Peak Hour Signal Warrants?:	
PART A	**NO**
PART B	**NO**

RICK ENGINEERING COMPANY

SIGNAL WARRANT ANALYSIS

Minor Street:	Miners Mesa Road	**Number of Lanes on minor street:**	1
Major Street	Bobtail Road	**Number of Lanes on major street:**	1
Scenario:	Buildout Year 2025 + Project Saturday PM	**Total Number of Vehicles Entering:**	831
		Number of Approaches:	3
		Intersection total delay (seconds):	13.2
		Minor St approach total delay (veh-hr):	0.9

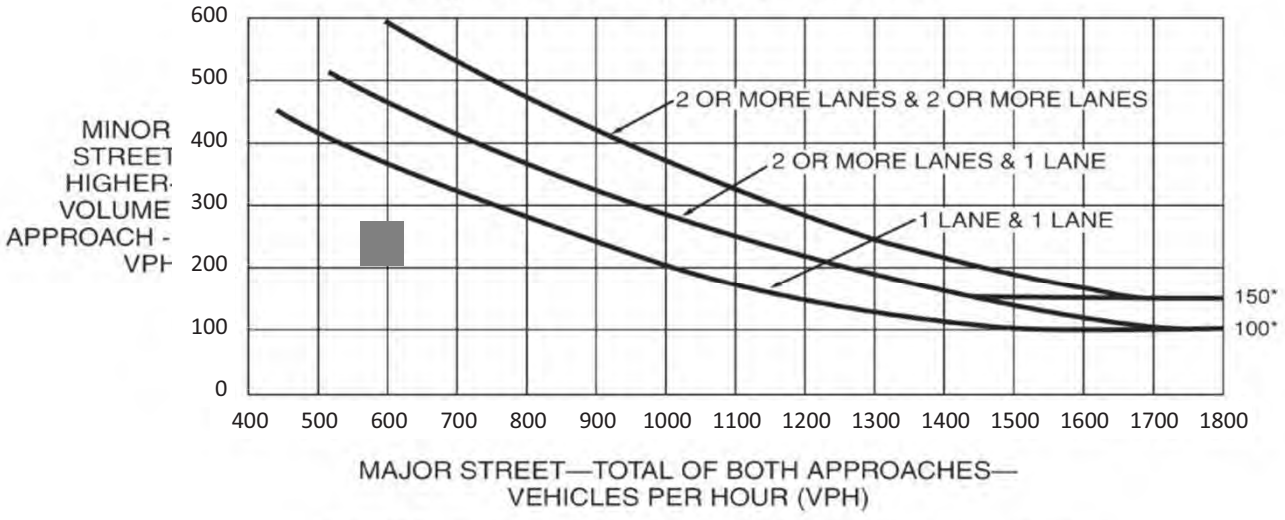
Part A

		Criteria Met?
1	Minor St approach total stopped time delay	NO
2	Volume on the same minor street approach (one directional only)	YES
3	Total volume entering the intersection during the peak hour	YES

Part B

Volume on Major St (Σ of both Approaches)	Volumes on Minor St (higher approach)
590	241

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Does the Intersection Meet Peak Hour Signal Warrants?:	
PART A	**NO**
PART B	**NO**

WILL SERVE LETTER

November 16, 2020

Click here to enter text.

Re: Black Hawk Miners Mesa

Dear Mr. Krall,

This letter is to confirm that Xcel Energy is your utility provider for natural gas and electrical service. In accordance with our tariffs, on file with and approved by the Colorado Public Utilities Commission, gas and electric facilities can be made available to serve the project at Miners Mesa In Black Hawk, CO.

Your utility service(s) will be provided after the following steps are completed:

- ***Application submitted to Public Service's "Builders Call Line (BCL)"*** – once your application is accepted you will be assigned a design department representative who will be your primary point of contact
- ***Utility design is completed*** – you must provide your design representative with the site plan, the one line diagrams, and panel schedules for electric and gas loads if applicable
- ***All documents provided by design representative are signed and returned***
- ***Payment is received***
- ***Required easements are granted*** - you must sign and return applicable easement documents to your Right-of-Way agent
- ***Site is ready for utility construction***

A scheduled in-service date will be provided once these requirements have been met.

It is important to keep in mind that the terms and conditions of utility service, per our tariffs, require that you provide adequate space and an easement on your property for all gas and electric facilities required to serve your project, including but not limited to gas and electrical lines and meters, transformers, and pedestals. General guidelines for these requirements can be found at Site Requirements. https://www.xcelenergy.com/staticfiles/xe-responsive/Admin/Managed Documents & PDFs/Xcel-Energy-Standard-For-Electric-Installation-and-Use.pdfEasement requirements can be found at Utility Design and Layout.

Xcel Energy looks forward to working with you on your project and if I can be of further assistance, please contact me at the phone number or email listed below.

Sincerely,

Kelli Fries
Xcel Energy Designer

Mailing address: Public Service Company of Colorado
PO Box 640
Evergreen, CO 80437

UTILITY REPORT
FOR
BLACK HAWK PARK

Job Number: D01055A
November 30, 2020

CK ENGINEERING COMPANY
ENGINEERING COMPANY
RICK ENGINEERING CO

PRELIMINARY UTILITY REPORT
FOR BLACK HAWK PARK

Prepared for

Ventana Capital
Mr. Bryan Horan
9801 East Easter Avenue
Centennial, Colorado 80112
(303) 340-7006

Prepared by:

Rick Engineering Company
9801 East Easter Avenue
Centennial, CO 80112
(303) 537-8020

Job#: D01055A
Date: November 30, 2020

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- B. Description of Existing System

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- B. Sanitary Sewer

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- B. Offsite Sewer System

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VII. APPENDIX
- A. Water and Sewer Preliminary Utility Layout
- B. Water Distribution Analysis from City of Black Hawk Public Works Department

I. GENERAL LOCATION AND DESCRIPTION

A. Location

The Black Hawk Park property is located within the City of Black Hawk off Miner's Mesa Road. The property is approximately 48 acres in area. The property is located in the North Half of Section 18 and the Southwest Quarter of Section 7 within Township 3 South, Range 72 West of the 6th Principal Meridian, in the City of Black Hawk, County of Gilpin and State of Colorado. The property is currently Zoned Commercial/Business Services (C/BS) and has an approved Special Review Use (SRU) permit to allow for a Recreational Campground and an Indoor Shooting Range. The City of Black Hawk comprehensive plan designates this property as Low Intensity Mixed Use and does not fall within a defined Overlay District.

B. Description of the Property

The majority of the property is a plateau at the top of Miner's Mesa road overlooking the City of Black Hawk. The plateau area generally falls west to east, with a low point near the existing detention pond. The ground falls steeply from the plateau to the north and northeast extending past the property boundary.

The proposed development on the site will consist of 8 Commercial lots and a single Tract. The proposed uses for the site include the following:

- Airstream recreational campground site inclusive of a check-in facility, a bar, and containerized indoor shooting lanes.
- Distillery and micro-brewery uses.

II. DESIGN CRITERIA AND ASSUMPTIONS

The Black Hawk Park development shall be designed in accordance with the current City of Black Hawk Public Works Department (CBHPWD) requirements, as well as the Black Hawk and Central City Water and Sanitation District (BHCCSD) standards.

A. Water Distribution

The Black Hawk Park development shall have the proposed water distribution system analyzed by the CBHPWD to determine water main sizing.

The Waterfront property falls into the service area of the City of Black Hawk Fire Department. In discussions regarding fire hydrant spacing it was determined that fire hydrants shall be spaced no further than 500' apart. Fire hydrants shall be placed within the Public R.O.W. where possible, or within dedicated easements.

The water distribution system shall be modeled with a fire flow scenario in conjunction with the average day demand for the development to achieve 1500 GPM while maintaining a minimum residual pressure of 20 psi.

The following parameters were used to establish the water requirements:

- Average water demand for the Airstream park shall be 150 gpd per airstream unit in line with hotel usage
- Average water demand for the bar at the airstream park will be 3.0 gpd/sf in line with restaurant usage.
- Average water demand for the airstream check in facility shall be 0.2 gpd/sf in line with general commercial usage.
- Average Water Demand for distillery facilities shall be 2350 gpd/acre based upon the actual estimated peak demands of the Watts Distillery (5308 gpd peak) provided by Dalkita Architects.
- Max Day peak factor shall be 2.5, and Peak Hour peak factor shall be 6.

B. Sanitary Sewer

In accordance with the standards referenced above, the proposed sanitary sewer systems are designed to have adequate capacity to carry the peak hourly sewage flow rates and to maintain minimum velocities of greater than two (2) feet-per-second for full flow sewage flow rates.

The following flow parameters from the BHCCSD Design Standards were used to establish the sewer requirements:

- All proposed sewer mains shall be designed to convey peak flows at a maximum of 50% pipe capacity.
- All gravity sewer mains shall be a minimum of 8" diameter with a minimum slope of 0.5% and a maximum slope of 5.0%.

- Minimum velocity shall be 2 fps and maximum velocity shall be 15 fps at design flow rates
- Sewer flows returned to the system shall be 90% of water demand for the Airstream Park, and 80% of water demand for the distillery facilities.

III. WATER DISTRIBUTION SYSTEM AND ANALYSIS

For Black Hawk Park preliminary analysis, the water system has been split into two major segments:

- Lot 1 water system which includes the master meter for Lot 1 and the downstream privately owned and maintained water infrastructure
- Miners Mesa Road water system which includes the City owned extensions along Miners Mesa Road and connections to existing City owned water mains, inclusive of the portion that loops through Lots 1-5 in a utility easement

The sizing and layout of the proposed water system will be based on the assumed end users for the commercial lots. Onsite water main shall serve Lot 1, which consists of an Airstream RV park with 50 airstream units, a check-in facility and a bar. The remaining lots 2-7 will contain up to 8 distillery facilities. Calculations on usage for the assumed end users are shown in the table below.

Commercial Water Demand				
Lot	Use	Average Day (GPD)	Max Day (GPD)	Peak Hour (GPD)
1	Airstream Units	7500	18750	45000
	Check-In	19	47	112
	Bar	840	2100	5040
2	Distillery	2388	5969	14326
3	Distillery	2451	6128	14706
4	Distillery	2524	6310	15143
5	Distillery	2404	6010	14424
6	2x Distillery	9313	23283	55878
7	Distillery	5308	13270	31848
	TOTAL	32746	81866	196478

A. Lot 1 Water System

The water distribution system for Lot 1 will be master metered off the proposed 12” offsite water main. One fire hydrant will be located downstream of the master meter for the site.

B. Miners Mesa Water System

The 12" offsite water system located in Miners Mesa Road and looping through Lots 1-5 shall be designed and built by others. Lots 2-7 will connect directly off the 12" main and the capacity for the development shall be incorporated into the design.

IV. SEWER SYSTEM IMPROVEMENTS AND ANALYSIS

For Black Hawk Park preliminary analysis, the sewer system has been split into two major segments; private sewer infrastructure within the development, and the shared public sewer infrastructure located within Miners Mesa Road. The Miners Mesa Road sewer shall be designed and constructed by others. The extent of this analysis is the private sewer up to the connection point in Miners Mesa Road, which includes contribution from Lots 1-5 only. Lots 1-5 located on the west side of the development will connect to privately owned and maintained sewer located within the property. Lots 6-8 will connect to the proposed public infrastructure located within Miners Mesa Road.

A. On Site Sewer System

The onsite sewer system has been designed based on a 90% return flow from the water usage for Lot 1 and 80% return flow for the distillery uses on Lots 2-5. Preliminary sizing has been based on the total peak flow out of each basin.

Commercial Sewer Demand			
Basin	**Units**	**Average Flow (GPD)**	**Peak Flow (GPD)**
Lot 1	52	6,687	40,122
Lots 2-5	4	8,790	52,740
Total		15,477	92,862

The CBHPWD specifies that sewer pipe must be sized to carry peak discharge when the pipe is at no more than 50% of maximum capacity. The calculated 50% maximum capacity for 8" PVC sewer at the minimum allowable slope of 0.50% is 358,950 GPD. Based on the calculated total peak flow for each basin, the minimum pipe size of 8" shall be utilized throughout the sewer installation. The sewer system has also been designed to keep a minimum two (2) foot-per-second velocity during full flow conditions per the BHCCSD rules and regulations.

Refer to Appendix A for the proposed onsite and offsite sewer system layout.

B. Offsite Sewer System

The offsite sewer system located in Miners Mesa Road shall be designed and built by others. The capacity required for Lots 1-5 of the development will be incorporated into the design of the Miners Mesa Sewer. Lots 6 and 7 will connect directly to the offsite sewer system.

V. CONCLUSIONS

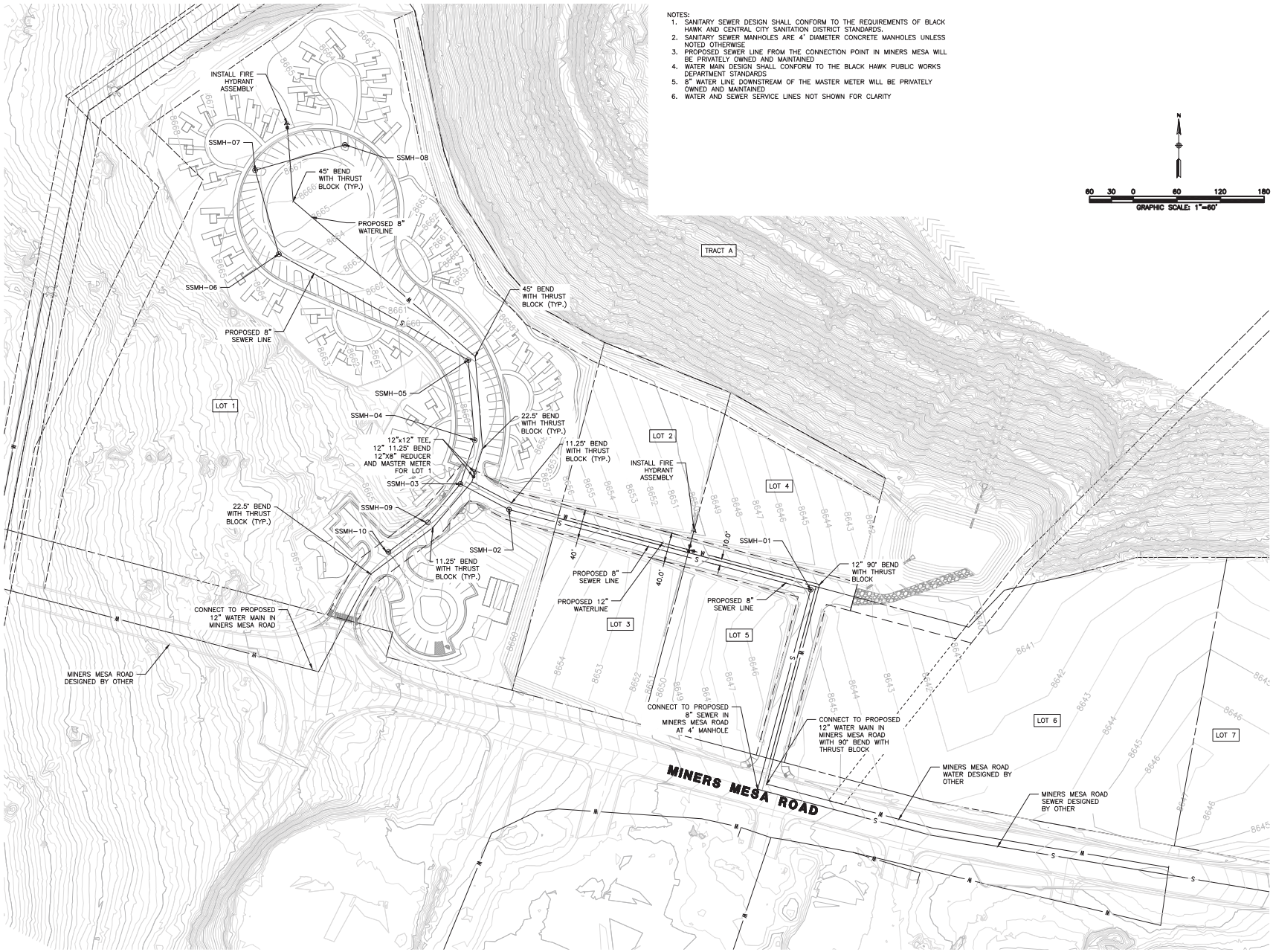
The proposed water system shall meet City of Black Hawk Public Works, City of Black Hawk Fire Rescue and Black Hawk and Central City Water and Sanitation District Standards and Specifications for fire flow and water quality. The offsite improvements in Miners Mesa road designed by others shall be installed as part of the development, and the water distribution system shall be looped to provide redundancy and improved water quality.

The proposed sanitary system shall meet City of Black Hawk Public Works and Black Hawk and Central City Water and Sanitation District standards. The proposed sanitary system shall be sufficient during peak flows and has been sized to have less than 50% capacity.

VI. REFERENCES

- City of Black Hawk Public Works Water Standards and Specifications
- Black Hawk and Central City Sanitation District Standards and Specifications

Appendix A
Water and Sewer Preliminary Utility Layout



BLACK HAWK PARK
OVERALL UTILITY PLAN
GILPIN COUNTY

RICK ENGINEERING COMPANY

REVIEWED FOR COMPLIANCE BY:

SIGNATURE DATE

SIGNATURE DATE

REVISIONS:		
NO.	DESCRIPTION	DATE:
1	-	-

SCALE:
DATE: 6/30/2020
DRAWN BY: JP
CHECKED BY: JK
JOB NO: D01055

PROJECT NO.
D01055

DRAWING NO.
UTIL-01

SHEET NO. 04 OF 05 SHEETS

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Appendix B
Water Distribution Analysis from City of Black Hawk Public Works Department

DOMESTIC FLOWS
Miners Mesa Proposed Water Lines
Model Results 11-16-2020
N
W
E
S
0 60 120 240 360
Feet
1 inch = 120 feet
Aerial Photograph Date: 2014
Date: 11-17-2020
Flow 224.4 gpm
Velocity 0.64 ft/s
Demand 40 gpm
Pressure 47.86 psi
Flow 21.75 gpm
Velocity 0.06 ft/s
Demand 0 gpm
Pressure 26.4 psi
Flow 18.25 gpm
Velocity 0.05 ft/s
Demand 0 gpm
Pressure 52.63 psi
Flow 91.3 gpm
Velocity 0.26 ft/s
Flow 133.1 gpm
Velocity 0.38 ft/s
Demand 0 gpm
Pressure 38.33 psi
Flow 41.35 gpm
Velocity 0.12 ft/s
Demand 5 gpm
Pressure 52.2 psi
Demand 0 gpm
Pressure 51.33 psi
Flow 21.75 gpm
Velocity 0.06 ft/s
Flow 399.43 gpm
Velocity 1.13 ft/s
Flow 109.56 gpm
Velocity 0.31 ft/s
Demand 20 gpm
Pressure 51.33 psi
Bus Barn
EOC
Public Works
Miners Mesa Road
Miners Mesa Tank
Head 8765 ft
Flow 120.12 gpm
Velocity 0.34 ft/s
Flow 10.57 gpm
Velocity 0.03 ft/s
Demand 5 gpm
Pressure 54.13 psi
Flow 41.75 gpm
Velocity 0.12 ft/s
Flow 266.33 gpm
Velocity 0.76 ft/s
Demand 5 gpm
Pressure 43.11 psi
Flow 51.77 gpm
Velocity 0.15 ft/s
Demand 0 gpm
Pressure 30.11 psi
Flow 46.2 gpm
Velocity 0.13 ft/s
Flow 10.42 gpm
Velocity 0.07 ft/s
Flow 100 gpm
Velocity 0.28 ft/s
Flow 100 gpm
Velocity 0.28 ft/s
Lake Gulch Road
Demand 0 gpm
Pressure 43.96 psi
Demand 0 gpm
Pressure 101.56 psi
Flow 100 gpm
Velocity 0.28 ft/s
Demand 100 gpm
Pressure 134.47 psi

Miners Mesa Proposed Water Lines
Model Results 11-20-2020
N
W
E
S
0 60 120 240 360
Feet
1 inch = 120 feet
Aerial Photograph Date: 2014
Date: 11-20-2020
LOT 1 FIRE FLOWS
Flow 224.28 gpm
Velocity 0.64 ft/s
Fire Flow Demand 1500
Static Pressure 52.28 psi
Residual Pressure 44.98
Available Flow 3610.12 gpm
Duration 2 hrs
Demand 40 gpm
Pressure 52.58 psi
Flow 91.80 gpm
Velocity 0.26 ft/s
Demand 0 gpm
Pressure 31.12 psi
Flow 51.79 gpm
Velocity 0.15 ft/s
Flow 51.79 gpm
Velocity 0.15 ft/s
Demand 0 gpm
Pressure 57.35 psi
Flow 172.50 gpm
Velocity 0.49 ft/s
Demand 0 gpm
Pressure 43.04 psi
Flow 96.86 gpm
Velocity 0.27 ft/s
Demand 5 gpm
Pressure 56.95 psi
Demand 0 gpm
Pressure 56.06 psi
Flow 91.8 gpm
Velocity 0.26 ft/s
Flow 399.36 gpm
Velocity 1.13 ft/s
Demand 20 gpm
Pressure 56.50 psi
Miners Mesa Tank
Head 8776 ft
Bus Barn
Public
Works
EOC
Demand 5 gpm
Pressure 58.87 psi
Miners Mesa Road
Flow 111.8 gpm
Velocity 0.32 ft/s
Flow 226.85 gpm
Velocity 0.64 ft/s
Demand 5 gpm
Pressure 47.87 psi
Flow 121.83 gpm
Velocity 0.35 ft/s
Demand 0 gpm
Pressure 34.89 psi
Flow 126.84 gpm
Velocity 0.36 ft/s
Flow 24.97 gpm
Velocity 0.16 ft/s
Flow 100 gpm
Velocity 0.28 ft/s
Flow 100 gpm
Velocity 0.28 ft/s
Lake Guldh Road
Demand 0 gpm
Pressure 48.74 psi
Demand 0 gpm
Pressure 106.34 psi
Flow 100 gpm
Velocity 0.28 ft/s
Demand 100 gpm
Pressure 139.25 psi

LOT 7 FIRE FLOWS
Miners Mesa Proposed Water Lines
Model Results 11-16-2020
N
W
E
S
0 60 120 240 360
Feet
1 inch = 120 feet
Aerial Photograph Date: 2014
Date: 11-17-2020
Flow 224.33 gpm
Velocity 0.64 ft/s
Demand 40 gpm
Pressure 52.61 psi
Flow 99.85 gpm
Velocity 0.28 ft/s
Demand 0 gpm
Pressure 31.14 psi
Flow 59.85 gpm
Velocity 0.17 ft/s
Flow 59.85 gpm
Velocity 0.17 ft/s
Demand 0 gpm
Pressure 57.38 psi
Flow 164.48 gpm
Velocity 0.47 ft/s
Demand 0 gpm
Pressure 43.07 psi
Flow 87.38 gpm
Velocity 0.25 ft/s
Demand 5 gpm
Pressure 56.97 psi
Demand 0 gpm
Pressure 56.08 psi
Flow 99.85 gpm
Velocity 0.28 ft/s
Fire Flow Demand 1500 gpm
Static Pressure 55.81 psi
Residual Pressure 48.51
Available Flow 3780.48 gpm
Duration 2 hrs
Flow 379.36 gpm
Velocity 1.08 ft/s
Miners Mesa Tank
Head 8776 ft
Bus Barn
Public Works
EOC
Demand 5 gpm
Pressure 58.9 psi
Miners Mesa Road
Flow 99.85 gpm
Velocity 0.28 ft/s
Flow 214.88 gpm
Velocity 0.61 ft/s
Demand 0 gpm
Pressure 34.91 psi
Demand 5 gpm
Pressure 47.89 psi
Flow 109.87 gpm
Velocity 0.31 ft/s
Flow 114.88 gpm
Velocity 0.33 ft/s
Flow 22.48 gpm
Velocity 0.14 ft/s
Flow 100 gpm
Velocity 0.28 ft/s
Flow 100 gpm
Velocity 0.28 ft/s
Lake Gulch Road
Demand 0 gpm
Pressure 48.76 psi
Demand 0 gpm
Pressure 106.36 psi
Flow 100 gpm
Velocity 0.28 ft/s
Demand 100 gpm
Pressure 139.27 psi

City of Black Hawk – Community Planning & Development
211 Church Street ● Black Hawk ● CO 80422
(303) 582-0615

LAND USE REVIEW
FINAL PLAT

January 4, 2021

Dalton Horan
9801 E. Easter Ave.
Centennial, CO 80112

Email: dahoran@ventanacap.com

RE: P-20-13b
Black Hawk Park Final Plat

Dear Dalton,

The Black Hawk Park Final Plat was sent out on referral on December 7, 2020. The following referral agencies did not respond:

Black Hawk Fire Dept. – Christopher K. Woolley
Black Hawk Police Dept. – Michelle Moriarty
Black Hawk Public Works Dept. – Thomas Isbester
Black Hawk Public Works Dept. – James R. Ford
Public Works/Floodplain Consultant – Chris Manning
Building Review – SAFEbuilt – Dan Wester
Gilpin County Community Development– Stephen Strohminger
Gilpin County Planning Commission - Tami Archer
Gilpin County Assessor - Anne Schafer
Gilpin County School District RE-1 - David MacKenzie

Below are comments from referral agencies that responded regarding the Black Park Final Plat. Original letters submitted from referral agencies are included as an attachment.

Thank you for your comments; responses have been provided by the applicant in blue text below.

AGENCY NAME	**Black Hawk /Central City Sanitation District** **Lynn Hillary** **District Administrator** lynn@bhccsd.com 303-582-3422
Item 1:	No comments at this time.
AGENCY	**Baseline Corporation** **Survey Consultant**

NAME	**Doug Lancaster** **Project Survey Manager** doug.lancaster@baselinecorp.com 970-353-7600 ext. 304
Item 1:	Corrections to plat document required per attached redline drawing.
Applicant Response:	Corrections to the redlines plat have been addressed; comments to specific redlines are included in the redline comment response document included with resubmittal.
Item 2:	Corrections to parcel map check required per attached redlines.
Applicant Response:	[Applicant – please respond in this box to the specific action item above]
AGENCY NAME	**Baseline Corporation** **Ethan Watel** **Planning Manager** ethan@baselinecorp.com 303-202-5010 ext. 218
Item 1:	Corrections to plat document required per attached redline drawing.
Applicant Response:	Corrections to the redlines plat have been addressed; comments to specific redlines are included in the redline comment response document included with resubmittal.
Item 2:	Corrections to written legal description required per attached redlines.
Applicant Response:	Corrections to legal description have been provided.
AGENCY **NAME**	**Transportation Review** **Stolfus & Associates, Inc.** **Matthew Brown, PE** **Senior Transportation Engineer** Matt@Stolfusandassociates.com 303-221-2330
Item 1:	How was the number of parking spaces determined? The number of spaces seems excessive for the RV land use. A comparable use from Black Hawk Municipal Code is hotel/motels which have a parking requirement of 1.12 spaces per unit. Apartment parking ratios are 1.5 spaces per unit.
Applicant Response:	The number of parking spaces will be detailed during the Site Development Plan (SDP) process for each individual lot based on use. Parking spaces will be calculated based on the following provided by Baseline Engineering: • 1.12 spaces per airstream trailer (per hotel requirements) • 1 space per 250sf for the check-in building (per office space requirements) • 1 space per 75sf of outdoor dining area at the airstream bar A variance request may be sought during the SDP for Lot 1 to combine parking for the various uses.
Item 2:	Provide the planned square footage of check-in office and shooting range and confirm the parking amount at those locations is adequate.
Applicant Response:	These will be confirmed during the SDP process for Lot 1. It is currently assumed that the check-in space will be approximately 850 sf and the shooting lanes have been removed from the site plan.

Item 3:	Parking and access for Lots 2 through 7 are not depicted in the drawings. Shared parking and accesses are encouraged to benefit the overall circulation of the site. Pedestrian connections should be provided to encourage walking between uses rather than driving.
Applicant Response:	Parking, including shared parking, will be determined with the end users of lots 2-7, 9, and 10 during the SDP process. Pedestrian connection will be encouraged at that time, dependent on ultimate use.
Item 4:	Internal road to Lots 2-6 does not seem to have space for a future pedestrian connection when the lots become developed. This should be planned. Consider reducing roadway footprint to make room for a sidewalk. Having the ditch off the edge of the traveled
Applicant Response:	Pedestrian connectivity from the roundabout to the future bus stop has been provided for in the updated site plan. The access and utility easement provides for adequate space to accommodate sidewalk in the future, and it is anticipated that this will be reviewed during the SSDP process for individual sites once end users and site plans have been developed.
Item 5:	Clarify if any of the RV Airstream lots will be ADA accessible. Is it required to provide accessible amenities, like a hotel? If so, we need ADA spaces designated.
Applicant Response:	A minimum of 2 airstream units shall be ADA accessible, as well as the check-in building and airstream bar. ADA accessible parking spaces will be provided.
Item 6:	Commercial Development Guidelines state any building entrances shall be fully ADA accessible. ADA space should be provided for office, with an accessible entrance/approach.
Applicant Response:	The check-in building and bar will be ADA accessible and have appropriate parking accommodations and pathways.
Item 7:	Curb ramps are provided in some locations, should also be provided across drives for shooting range/check in.
Applicant Response:	Please refer to updated site plan for proposed curb ramp locations. These will be finalized and detailed during the SDP process.
Item 8:	DG is not considered a stable surface for ADA accessibility. Should use concrete sidewalk materials for any accessible areas, such as the bus pullout, commercial areas, and potentially accessible RV lots.
Applicant Response:	Concrete sidewalks shall be utilized in ADA accessible pathways.
AGENCY	**Historic Review** **Pinyon Environmental, Inc.**
NAME	**Ashley Bushey** Bushey@pinyon-env.com 303-980-5200
Item 1:	No City of Black Hawk Local Landmarks are located within the subject property or immediate vicinity. The Chemung-Belmont Mine (GL.90) is located within the limits of the subject property and is considered eligible for inclusion on the NRHP. This review recommends avoidance of this site or re-survey to determine the presence of extant resources and to revisit NRHP eligibility.

	A portion of the subject property may be subject to a preservation easement, recorded October 2, 1995, in Book 588, Page 072 (Reception Number 86350). The location appears to roughly correlate to the location of Chemung-Belmont Mine (GL.90) (Figure 2). This location may be subject to preservation in perpetuity of buildings referenced in the easement. This review recommends review of the easement by City of Black Hawk Counsel for confirmation. Review of this site did not include pedestrian survey or field inspection. The subject property is in an area with a high occurrence of historic mining activity and existing survey of the area is largely selective (site-specific); therefore, the area holds potential for additional, unidentified historic or historical archaeology sites. Refer to attached letter for more information.
Applicant Response:	Noted
AGENCY	**Century Link/Lumen**
NAME	**Aaron Keller** Aaron.Keller1@lumen.com 303-319-9302
Item 1:	I have no objections to these site plans as there are no Lumen / CenturyLink conflicts along the North side of Miners Mesa Road where the existing overhead lines and poles are to be removed (referenced from EX-01 Preliminary Civil Plans). All construction crews are to protect in place existing Lumen/CenturyLink facilities along the South side of Miners Mesa Road. It is the intent and understanding of Lumen / CenturyLink that this proposed development shall not reduce our rights to any other existing easement or rights we have on this site or in the area This response is submitted WITH THE STIPULATION that if CenturyLink / Lumen facilities are found and/or damaged within the area as described, the Applicant will bear the cost of relocation and repair of said facilities.
Applicant Response:	Noted
AGENCY	**Xcel Energy**
NAME	**Kelli Fries** Kelli.Fries@Xcelenergy.com 303-445-4540
Item 1:	No comments.
AGENCY	**Silver Dollar Metro District**
NAME	**Lynette Hailey** lhailey@centurylink.net
Item 1:	No comments.
AGENCY	**City of Central**

	Planning Commission
NAME	**Ray Rears** **Community Development Director** rrears@cityofcentral.co 303-582-5251
Item 1:	Upon review of the materials, the City has a shared expectation that the Central City Parkway (CCP) will not be materially impacted by this project at the proposed development will follow the conditions agreed upon in the recent Settlement Agreement and Mutual Release. Refer to attached letter for more information.
Applicant Response:	Noted

Please respond to the action items in the "Applicant Response" boxes provided above, and return this letter in Word format to my email address below. Additional items required for revision and resubmittal include:

Final Plat
Parcel Map Check
Written Legal Description

Upon resubmittal, Baseline will refer the updated submittal to the Development Review Committee and referral agencies that provided comment. Contact information has been provided within this letter so that you may contact the referral agencies directly if you have specific questions.

As you know, we have committed to put this Final Plat application on the February 10, 2021 City Council agenda for a review and decision. In order to adequately prepare notices and staff reports for such, please resubmit these updates by January 15, 2021 to stay on track with that intention.

In addition, the progress meeting on Monday January 4, 2021 included discussion related to the timing of dedication of the easement(s) now shown on the Final Plat to be dedicated to the City via the plat. It was also discussed that all the easements now shown on the plat might be dedicated independently via a separate instrument to expedite XCEL Energy work on the property to relocate and underground powerlines. Please decide (and inform us immediately) which means the easements will be conveyed to the City so we can react and respond to you, coordinate timing with XCEL, and prepare for the acceptance in either case. If they are dedicated via a separate instrument, then, in addition to the redlines included with this letter, the plat should also be adjusted show the means of dedication.

Please let me know if you have any questions regarding this referral response letter or next steps.

Regards,

Julie Esterl, Principal Planner
Baseline Corporation
112 N. Rubey Drive, Suite 210
Golden, Colorado, 80403
303-202-5010 ext. 222
julie.esterl@baselinecorp.com

Attachments: Combined Referral Agency Comments

CC: Jason Krall, Rick Engineering
Vince Harris, AICP Baseline Corporation
Cynthia Linker, City of Black Hawk CP&D
Ashley Wilson, City of Black Hawk CP&D

BLACK HAWK PARK

FINAL PLAT

A REPLAT OF LOT 1, BLOCK 1, MINERS MESA SUBDIVISION FILING NO. 4, BEING LOCATED IN NORTH HALF OF SECTION 18, AND THE SOUTHWEST QUARTER OF SECTION 7 BOTH BEING WITHIN TOWNSHIP 3 SOUTH, RANGE 72 WEST 6TH P.M. CITY OF BLACK HAWK, COUNTY OF GILPIN, STATE OF COLORADO

SHEET 1 OF 2

DEDICATION

KNOW ALL MEN BY THESE PRESENTS: CLUB VISTA PROPERTIES II, LLC, A NEVADA LIMITED LIABILITY COMPANY, IS THE OWNER OF THAT REAL PROPERTY SITUATED IN THE CITY OF BLACK HAWK, GILPIN COUNTY, AND HAS CAUSED SAID REAL PROPERTY TO BE LAID OUT AND SURVEYED AS BLACK HAWK PARK, AND DOES HEREBY DEDICATE AND SET APART ALL THE STREETS, ALLEYS AND OTHER PUBLIC WAYS AND PLACES SHOWN ON THE ACCOMPANYING PLAT FOR THE USE OF THE PUBLIC FOREVER, AND DOES HEREBY GRANT TO THE CITY OF BLACK HAWK USE OF THOSE PORTIONS OF SAID REAL PROPERTY WHICH ARE INDICATED AS EASEMENTS ON THE ACCOMPANYING PLAT AS PERMANENT PUBLIC EASEMENTS.

LEGAL DESCRIPTION

A REPLAT OF LOT 1, BLOCK 1, MINERS' MESA SUBDIVISION FILING NO. 4, RECORDED AT RECEPTION NUMBER R013116, A PARCEL OF LAND LOCATED IN THE SOUTHWEST QUARTER OF SECTION 7, AND THE NORTH HALF OF SECTION 18, BOTH WITHIN TOWNSHIP 3 SOUTH, RANGE 72 WEST OF THE 6TH PRINCIPAL MERIDIAN, CITY OF BLACK HAWK, COUNTY OF GILPIN, STATE OF COLORADO AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BASIS OF BEARINGS:

LOT 1, BLOCK 1, MINER'S MESA SUBDIVISION FILING NO. 4, COUNTY OF GILPIN, STATE OF COLORADO, EXCEPT THAT PORTION CONVEYED IN THE DEED RECORDED AUGUST 7, 2020 AT RECEPTION NO. 166682 AND RE-RECORDED AUGUST 7, 2020 AT RECEPTION NO. 166800.

CONTAINING 1,977,984 SQUARE FEET OR 45.408 ACRES, MORE OR LESS.

TRACT/LOT TABLE

LOT/TRACT	SQ. FT.	ACRES±	PURPOSE
LOT 1	235,073	5.397	*
LOT 2	44,272	1.016	*
LOT 3	45,423	1.043	*
LOT 4	46,785	1.074	*
LOT 5	50,119	1.151	*
LOT 6	171,627	3.940	*
LOT 7	99,429	2.283	*
LOT 8	46,626	1.070	HISTORIC PRESERVATION AND CONSERVATION EASEMENT
LOT 9	142,888	3.280	*
LOT 10	50,102	1.150	*
TRACT A	1,045,643	24.005	OPEN SPACE, UTILITIES, DRAINAGE

*USES CONFORMING TO C/BS ZONING INCLUDING SRU OF RV CAMPGROUND AND INDOOR SHOOTING FACILITIES

GENERAL NOTES

1.) THE PURPOSE OF THIS FINAL SUBDIVISION PLAT IS TO RECONFIGURE LOT AND TRACT LINES AS SHOWN HEREON, PURSUANT TO C.R.S. 31-23-201, ET SEQ., AND CHAPTER 17 OF THE CITY OF BLACK HAWK MUNICIPAL CODE. NOTHING IN THE APPROVAL OF THIS PLAT SHALL ALLOW, PERMIT, OR CAUSE TO BE ALLOWED OR PERMITTED ANY DEVELOPMENT OR CONSTRUCTION ON ANY LOT HEREON WITH OUT A SUBSEQUENT LAND DEVELOPMENT APPLICATION AND APPROVAL THAT INCLUDES, AT A MINIMUM, PROVISIONS FOR THE CONSTRUCTION OF NECESSARY PUBLIC IMPROVEMENTS AND OTHER CONDITIONS OF APPROVAL AS DETERMINED BY THE BOARD OF ALDERMAN, INCLUDING AT A MINIMUM THOSE PROVISIONS REQUIRED BY 17-63 AND 17-64 OF THE CITY OF BLACK HAWK MUNICIPAL CODE, AS THE SAME MAY BE AMENDED FROM TIME TO TIME. NO CONSTRUCTION OF ANY TYPE SHALL OCCUR ON THE PROPERTY THAT IS PLATTED HEREON UNTIL A SUBSEQUENT AGREEMENT HAS BEEN REACHED BETWEEN THE SUBDIVIDER, OR ITS SUCCESSOR ON IN INTEREST, AND THE CITY REGARDING, AT A MINIMUM, THE NECESSARY PUBLIC IMPROVEMENTS, AND A FINANCIAL GUARANTEE APPROVED BY THE CITY FOR SAID PUBLIC IMPROVEMENTS.

2.) DISTANCES ON THIS FINAL PLAT ARE EXPRESSED IN U.S. SURVEY FEET AND DECIMALS THEREOF. A U.S. SURVEY FOOT IS DEFINED AS EXACTLY 1220/3937 METERS. ALL BEARINGS SHOWN HERE ON ARE IN DEGREE-MINUTES-SECONDS.

3.) ANY PERSON WHO KNOWINGLY REMOVES, ALTERS OR DEFACES ANY PUBLIC LAND SURVEY MONUMENT, LAND SURVEY BOUNDARY MONUMENT OR ACCESSORY COMMITS A CLASS TWO (2) MISDEMEANOR PURSUANT TO STATE STATUE 18-4-508, C.R.S.

4.) NOTICE: ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT MAY ANY ACTION BASED UPON ANY DEFECT IN THIS SURVEY BE COMMENCED MORE THAN TEN YEARS FROM THE DATE OF CERTIFICATION SHOWN HEREON.

5.) COMMONWEALTH LAND TITLE COMPANY COMMITMENT NUMBER 597-H0508532-023-CNX, AMENDMENT NO. 4, EFFECTIVE DATE DECEMBER 6, 2020 AT 7:00 A.M., WAS ENTIRELY RELIED UPON FOR RECORDED RIGHTS-OF-WAY, EASEMENTS AND ENCUMBRANCES IN THE PREPARATION OF THIS SURVEY.

6.) RICK ENGINEERING, HAS MADE NO INVESTIGATION OR INDEPENDENT SEARCH FOR RECORDED/UNRECORDED EASEMENTS, ENCUMBRANCES, RESTRICTIVE COVENANTS, OWNERSHIP TITLE EVIDENCE OR ANY OTHER FACTS THAT AN ACCURATE AND CURRENT TITLE SEARCH MAY DISCLOSE.

7.) BASIS OF BEARINGS: BEARINGS ARE BASED ON THE NORTH LINE OF THE NORTHWEST QUARTER OF SECTION 18 BEING ASSUMED TO BEAR N 89°07'38" W BETWEEN MONUMENTS AS SHOWN WITHIN THIS PLAT.

OWNER/DEVELOPER

IN WITNESS WHEREOF, _____, AS _____ OF CLUB VISTA PROPERTIES II, LLC, A NEVADA LIMITED LIABILITY COMPANY, HAS CAUSED _____ NAME TO BE HEREUNTO SUBSCRIBED THIS _____ DAY OF _____, 20__.

_____
BY:

NOTARY PUBLIC

STATE OF _____)
)SS
COUNTY OF _____)

THE FOREGOING INSTRUMENT WAS ACKNOWLEDGED BEFORE ME THIS _____ DAY OF _____, 20__, BY _____, AS _____ OF CLUB VISTA PROPERTIES II, LLC.

WITNESS MY HAND AND SEAL

_____
NOTARY PUBLIC

MY COMMISSION EXPIRES _____

VICINITY MAP
SCALE: 1"=1000'

MAYOR'S CERTIFICATE

APPROVED AND ACCEPTED THIS _____ DAY OF _____, 2021 BY THE BOARD OF ALDERMEN OF THE CITY OF BLACK HAWK, SITUATED IN GILPIN COUNTY, COLORADO. THIS APPROVAL DOES NOT GUARANTEE THAT THE SIZE OR SOIL CONDITION OF ANY LOT SHOW HERE ON ARE SUCH THAT A BUILDING PERMIT CAN BE ISSUED.

CITY OF BLACK HAWK

ATTEST: BY:_____
DAVID D. SPELLMAN, MAYOR

_____
MELISSA A. GREINER, CMC, CITY CLERK

SURVEYOR'S CERTIFICATE

I ROBERT J. HENNESSY, A REGISTERED LAND SURVEYOR IN THE STATE OF COLORADO, DO HEREBY CERTIFY THAT THE SURVEY OF BLACK HAWK PARK, WAS MADE BY ME OR UNDER MY DIRECT SUPERVISION AND THE ACCOMPANYING PLAT COMPLIES WITH THE REQUIREMENTS OF TITLE 38, ARTICLE 51, C.R.S., AND THAT THE MONUMENTS REQUIRED BY SAID STATUTE AND BY THE SUBDIVISION ORDINANCE FOR THE CITY OF BLACK HAWK HAVE BEEN PLACED ON THE GROUND. THAT THE SURVEY ACCURATELY AND PROPERLY WITHIN APPLICABLE STANDARDS OF PRACTICE SHOWS SAID SURVEY BASED UPON MY KNOWLEDGE, INFORMATION AND BELIEF. THIS SURVEY IS NOT A GUARANTY OR WARRANTY, EITHER EXPRESSED OR IMPLIED.

_____
ROBERT J. HENNESSY
REGISTERED COLORADO LAND SURVEYOR NO. 34580
FOR AND ON BEHALF OF RICK ENGINEERING

FOR CLERK AND RECORDER USE ONLY

CLERK AND RECORDER'S CERTIFICATE

_____
RECEPTION NUMBER

ACCEPTING FOR FILING IN THE OFFICE OF THE CLERK AND RECORDER OF GILPIN COUNTY, AT CENTRAL CITY COLORADO ON THIS _____ DAY OF _____, 202__ AT _____ O'CLOCK.

_____
GILPIN COUNTY CLERK AND RECORDER

_____
BY: DEPUTY CLERK

RICK ENGINEERING COMPANY
9801 E EASTER AVE.
CENTENNIAL, CO 80112
PH. (303) 557-8020

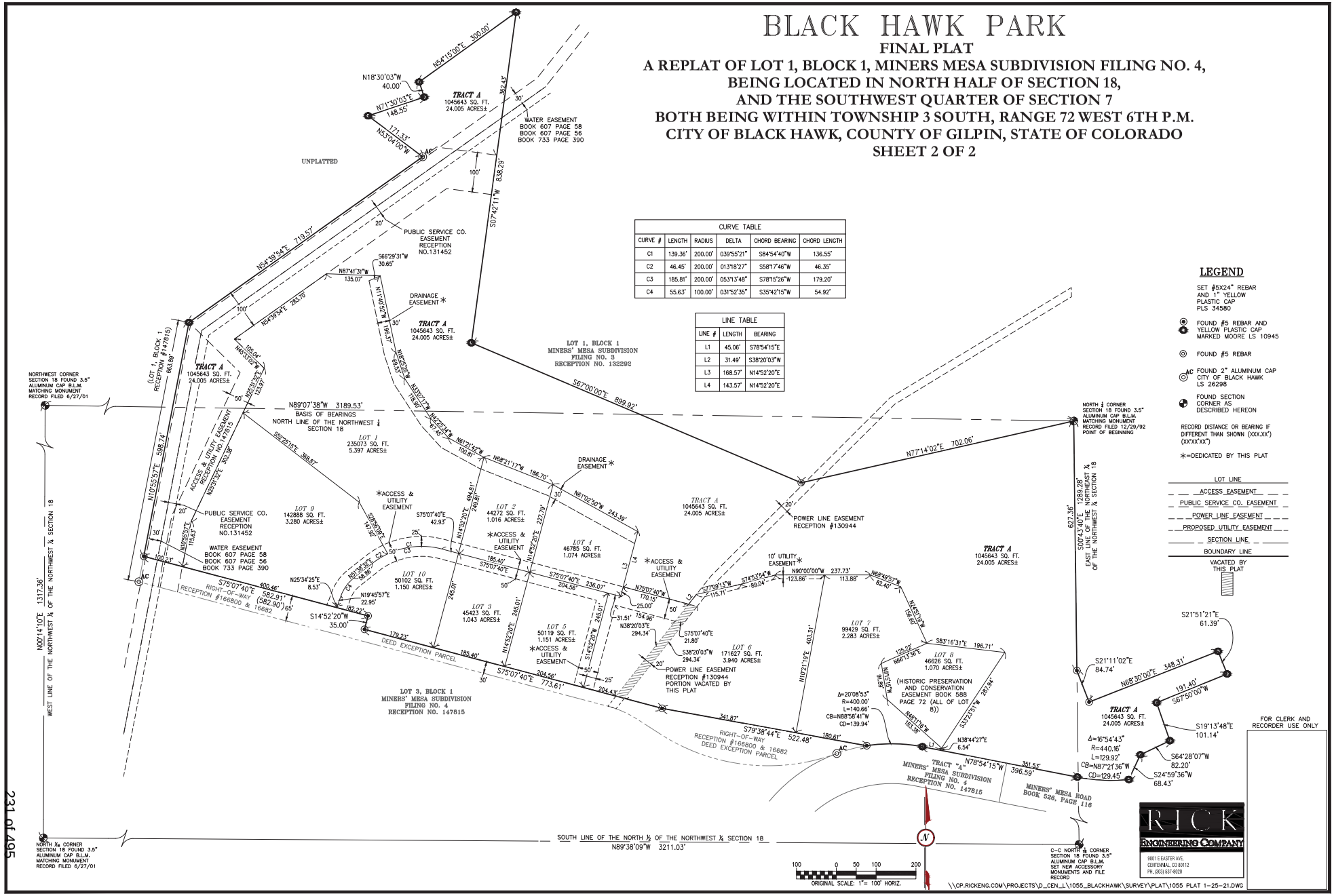
\\CP.RICKENG.COM\PROJECTS\D_CEN_L\1055_BLACKHAWK\SURVEY\PLAT\1055 PLAT 1-25-21.DWG

BLACK HAWK PARK

FINAL PLAT

A REPLAT OF LOT 1, BLOCK 1, MINERS MESA SUBDIVISION FILING NO. 4, BEING LOCATED IN NORTH HALF OF SECTION 18, AND THE SOUTHWEST QUARTER OF SECTION 7 BOTH BEING WITHIN TOWNSHIP 3 SOUTH, RANGE 72 WEST 6TH P.M. CITY OF BLACK HAWK, COUNTY OF GILPIN, STATE OF COLORADO

SHEET 2 OF 2



Parcel Map Check Report

Date: 1/26/2021 8:39:51 AM

Parcel Name: Lots - Lot 1
Description:
Process segment order counterclockwise: False
Enable mapcheck across chord: False

North:1,168,798.7252'	East:3,002,894.4662'

Segment# 1: Line

Course: S42° 25' 33.58"E	Length: 67.452'
North: 1,168,748.9355'	East: 3,002,939.9718'

Segment# 2: Line

Course: S61° 21' 42.44"E	Length: 100.812'
North: 1,168,700.6186'	East: 3,003,028.4509'

Segment# 3: Line

Course: S14° 52' 20.00"W	Length: 249.805'
North: 1,168,459.1819'	East: 3,002,964.3349'

Segment# 4: Line

Course: N75° 07' 40.00"W	Length: 42.931'
North: 1,168,470.2008'	East: 3,002,922.8420'

Segment# 5: Curve

Length: 139.356'	Radius: 200.000'
Delta: 39.9225 (d)	Tangent: 72.641'
Chord: 136.554'	Course: S84° 54' 39.56"W
Course In: S14° 52' 20.00"W	Course Out: N25° 03' 00.87"W
RP North: 1,168,276.9006'	East: 3,002,871.5092'
End North: 1,168,458.0880'	East: 3,002,786.8266'

Segment# 6: Line

Course: N28° 56' 09.10"W	Length: 147.915'
North: 1,168,587.5376'	East: 3,002,715.2608'

Segment# 7: Line

Course: N52° 25' 15.31"W
North: 1,168,812.4933'

Length: 368.867'
East: 3,002,422.9292'

Segment# 8: Line
Course: N25° 31' 32.00"E
North: 1,168,924.3666'

Length: 123.974'
East: 3,002,476.3513'

Segment# 9: Line
Course: N45° 33' 02.00"W
North: 1,168,997.9239'

Length: 105.040'
East: 3,002,401.3665'

Segment# 10: Line
Course: N54° 39' 54.00"E
North: 1,169,162.0059'

Length: 283.704'
East: 3,002,632.8078'

Segment# 11: Line
Course: S87° 41' 30.53"E
North: 1,169,156.5659'

Length: 135.072'
East: 3,002,767.7702'

Segment# 12: Line
Course: S11° 40' 51.86"E
North: 1,168,964.2647'

Length: 196.368'
East: 3,002,807.5276'

Segment# 13: Line
Course: S18° 25' 25.53"E
North: 1,168,898.3023'

Length: 69.526'
East: 3,002,829.5008'

Segment# 14: Line
Course: S33° 07' 17.11"E
North: 1,168,798.7252'

Length: 118.896'
East: 3,002,894.4674'

Perimeter: 2,149.719'
Error Closure: 0.0012
Error North: 0.00001

Area: 235,072.90Sq.Ft.
Course: N89° 24' 39.46"E
East: 0.00118

Precision 1: 1,791,431.667

Parcel Name: Lots - Lot 2
Description:
Process segment order counterclockwise: False
Enable mapcheck across chord: False

North:1,168,459.1819'	East:3,002,964.3346'

Segment# 1: Line

Course: N14° 52' 20.00"E	Length: 249.805'
North: 1,168,700.6185'	East: 3,003,028.4506'

Segment# 2: Line

Course: S68° 21' 17.39"E	Length: 186.699'
North: 1,168,631.7532'	East: 3,003,201.9847'

Segment# 3: Line

Course: S14° 52' 20.00"W	Length: 227.787'
North: 1,168,411.5969'	East: 3,003,143.5199'

Segment# 4: Line

Course: N75° 07' 40.00"W	Length: 185.396'
North: 1,168,459.1815'	East: 3,002,964.3346'

Perimeter: 849.687'	Area: 44,271.83Sq.Ft.
Error Closure: 0.0004	Course: S1° 59' 12.00"W
Error North: -0.00038	East: -0.00001

Precision 1: 2,124,217.500

Parcel Name: Lots - Lot 3
Description:
Process segment order counterclockwise: False
Enable mapcheck across chord: False

North:1,168,174.7975'	East:3,003,080.6353'

Segment# 1: Line

Course: N75° 07' 40.00"W	Length: 185.396'
North: 1,168,222.3820'	East: 3,002,901.4500'

Segment# 2: Line

Course: N14° 52' 20.00"E
North: 1,168,459.1814'

Length: 245.007'
East: 3,002,964.3345'

Segment# 3: Line
Course: S75° 07' 40.00"E
North: 1,168,411.5969'

Length: 185.396'
East: 3,003,143.5199'

Segment# 4: Line
Course: S14° 52' 20.00"W
North: 1,168,174.7975'

Length: 245.007'
East: 3,003,080.6353'

Perimeter: 860.807'
Error Closure: 0.0000
Error North: 0.00000

Area: 45,423.41Sq.Ft.
Course: N0° 00' 00.00"E
East: 0.00000

Precision 1: 860,806,000.000

Parcel Name: Lots - Lot 4
Description:
Process segment order counterclockwise: False
Enable mapcheck across chord: False
North:1,168,631.7534'

East:3,003,201.9847'

Segment# 1: Line
Course: S61° 02' 49.88"E
North: 1,168,513.9329'

Length: 243.386'
East: 3,003,414.9520'

Segment# 2: Line
Course: S14° 52' 20.00"W
North: 1,168,375.1685'

Length: 143.574'
East: 3,003,378.1017'

Segment# 3: Line
Course: S14° 52' 20.00"W
North: 1,168,351.0060'

Length: 25.000'
East: 3,003,371.6851'

Segment# 4: Line
Course: N75° 07' 40.00"W
North: 1,168,359.0937'

Length: 31.511'
East: 3,003,341.2297'

Segment# 5: Line
Course: N75° 07' 40.00"W
Length: 204.562'
North: 1,168,411.5975'
East: 3,003,143.5204'

Segment# 6: Line
Course: N14° 52' 20.00"E
Length: 227.787'
North: 1,168,631.7538'
East: 3,003,201.9852'

Perimeter: 875.820'
Area: 46,785.07Sq.Ft.
Error Closure: 0.0006
Course: N49° 51' 11.12"E
Error North: 0.00039
East: 0.00046

Precision 1: 1,459,700.000

Parcel Name: Lots - Lot 5
Description:
Process segment order counterclockwise: False
Enable mapcheck across chord: False
North:1,168,122.2937'
East:3,003,278.3449'

Segment# 1: Line
Course: N75° 07' 40.00"W
Length: 204.562'
North: 1,168,174.7974'
East: 3,003,080.6356'

Segment# 2: Line
Course: N14° 52' 20.00"E
Length: 245.007'
North: 1,168,411.5969'
East: 3,003,143.5201'

Segment# 3: Line
Course: S75° 07' 40.00"E
Length: 204.562'
North: 1,168,359.0931'
East: 3,003,341.2294'

Segment# 4: Line
Course: S14° 52' 20.00"W
Length: 245.007'
North: 1,168,122.2937'
East: 3,003,278.3449'

Perimeter: 899.139'
Area: 50,119.26Sq.Ft.

Error Closure: 0.0000
Error North: 0.00000

Course: N0° 00' 00.00"E
East: 0.00000

Precision 1: 899,138,000.000

Parcel Name: Lots - Lot 6
Description:
Process segment order counterclockwise: False
Enable mapcheck across chord: False
North:1,168,008.3765'

East:3,003,812.2297'

Segment# 1: Line
Course: N79° 38' 43.68"W
North: 1,168,069.8239'

Length: 341.871'
East: 3,003,475.9263'

Segment# 2: Line
Course: N75° 07' 40.00"W
North: 1,168,122.2935'

Length: 204.429'
East: 3,003,278.3455'

Segment# 3: Line
Course: N14° 52' 20.00"E
North: 1,168,359.0929'

Length: 245.007'
East: 3,003,341.2301'

Segment# 4: Line
Course: S75° 07' 40.00"E
North: 1,168,351.0052'

Length: 31.511'
East: 3,003,371.6855'

Segment# 5: Line
Course: N14° 52' 20.00"E
North: 1,168,375.1677'

Length: 25.000'
East: 3,003,378.1021'

Segment# 6: Line
Course: S75° 07' 40.00"E
North: 1,168,331.4950'

Length: 170.155'
East: 3,003,542.5570'

Segment# 7: Line
Course: N38° 20' 03.25"E
North: 1,168,356.1960'

Length: 31.490'
East: 3,003,562.0886'

Segment# 8: Line
Course: N77° 09' 12.70"E Length: 115.715'
North: 1,168,381.9240' East: 3,003,674.9072'

Segment# 9: Line
Course: N74° 53' 54.21"E Length: 89.037'
North: 1,168,405.1209' East: 3,003,760.8693'

Segment# 10: Line
Course: N90° 00' 00.00"E Length: 123.858'
North: 1,168,405.1209' East: 3,003,884.7273'

Segment# 11: Line
Course: S10° 21' 19.00"W Length: 403.314'
North: 1,168,008.3761' East: 3,003,812.2311'

Perimeter: 1,781.388' Area: 171,626.72Sq.Ft.
Error Closure: 0.0014 Course: S71° 30' 43.55"E
Error North: -0.00045 East: 0.00135

Precision 1: 1,272,419.286

Parcel Name: Lots - Lot 7
Description:
Process segment order counterclockwise: False
Enable mapcheck across chord: False
North:1,167,969.8478' East:3,004,178.1226'

Segment# 1: Line
Course: S38° 44' 27.49"W Length: 6.540'
North: 1,167,964.7467' East: 3,004,174.0299'

Segment# 2: Line
Course: N78° 54' 15.00"W Length: 45.058'
North: 1,167,973.4181' East: 3,004,129.8142'

Segment# 3: Curve

Length: 140.660'
Radius: 400.000'
Delta: 20.1480 (d)
Tangent: 71.064'
Chord: 139.936'
Course: N88° 58' 41.38"W
Course In: S11° 05' 45.01"W
Course Out: N9° 03' 07.76"W
RP North: 1,167,580.8955'
East: 3,004,052.8339'
End North: 1,167,975.9137'
East: 3,003,989.9005'

Segment# 4: Line
Course: N79° 38' 43.68"W
Length: 180.612'
North: 1,168,008.3766'
East: 3,003,812.2299'

Segment# 5: Line
Course: N10° 21' 19.00"E
Length: 403.314'
North: 1,168,405.1215'
East: 3,003,884.7261'

Segment# 6: Line
Course: N90° 00' 00.00"E
Length: 113.877'
North: 1,168,405.1215'
East: 3,003,998.6031'

Segment# 7: Line
Course: S68° 49' 57.41"E
Length: 82.398'
North: 1,168,375.3681'
East: 3,004,075.4417'

Segment# 8: Line
Course: S24° 51' 18.56"E
Length: 156.595'
North: 1,168,233.2780'
East: 3,004,141.2626'

Segment# 9: Line
Course: S66° 13' 36.06"W
Length: 125.221'
North: 1,168,182.7990'
East: 3,004,026.6669'

Segment# 10: Line
Course: S9° 15' 15.13"E
Length: 91.890'
North: 1,168,092.1050'
East: 3,004,041.4442'

Segment# 11: Line
Course: S48° 11' 16.00"E
Length: 183.379'
North: 1,167,969.8477'
East: 3,004,178.1228'

Perimeter: 1,529.544'	Area: 99,428.82Sq.Ft.
Error Closure: 0.0002	Course: S75° 45' 35.10"E
Error North: -0.00004	East: 0.00016

Precision 1: 7,647,720.000

Parcel Name: Lots - Lot 8
Description:
Process segment order counterclockwise: False
Enable mapcheck across chord: False

North:1,168,233.2780'	East:3,004,141.2626'

Segment# 1: Line	
Course: S83° 16' 31.17"E	Length: 196.710'
North: 1,168,210.2435'	East: 3,004,336.6193'

Segment# 2: Line	
Course: S33° 23' 51.16"W	Length: 287.943'
North: 1,167,969.8481'	East: 3,004,178.1225'

Segment# 3: Line	
Course: N48° 11' 16.00"W	Length: 183.379'
North: 1,168,092.1053'	East: 3,004,041.4439'

Segment# 4: Line	
Course: N9° 15' 15.13"W	Length: 91.890'
North: 1,168,182.7994'	East: 3,004,026.6666'

Segment# 5: Line	
Course: N66° 13' 36.06"E	Length: 125.221'
North: 1,168,233.2783'	East: 3,004,141.2623'

Perimeter: 885.144'	Area: 46,625.90Sq.Ft.
Error Closure: 0.0005	Course: N32° 26' 01.18"W
Error North: 0.00039	East: -0.00024

Precision 1: 1,770,286.000

Parcel Name: Lots - Lot 9
Description:
Process segment order counterclockwise: False
Enable mapcheck across chord: False

North:1,168,458.0881'	East:3,002,786.8259'

Segment# 1: Curve

Length: 46.452'	Radius: 200.000'
Delta: 13.3075 (d)	Tangent: 23.331'
Chord: 46.348'	Course: S58° 17' 45.65"W
Course In: S25° 03' 00.87"E	Course Out: N38° 21' 27.83"W
RP North: 1,168,276.9007'	East: 3,002,871.5084'
End North: 1,168,433.7310'	East: 3,002,747.3945'

Segment# 2: Line

Course: S51° 38' 32.17"W	Length: 58.860'
North: 1,168,397.2043'	East: 3,002,701.2394'

Segment# 3: Curve

Length: 55.635'	Radius: 100.000'
Delta: 31.8765 (d)	Tangent: 28.558'
Chord: 54.920'	Course: S35° 42' 14.53"W
Course In: S38° 21' 27.83"E	Course Out: N70° 14' 03.11"W
RP North: 1,168,318.7891'	East: 3,002,763.2963'
End North: 1,168,352.6068'	East: 3,002,669.1880'

Segment# 4: Line

Course: S19° 45' 56.89"W	Length: 22.949'
North: 1,168,331.0099'	East: 3,002,661.4272'

Segment# 5: Line

Course: S25° 34' 25.45"W	Length: 8.532'
North: 1,168,323.3137'	East: 3,002,657.7442'

Segment# 6: Line

Course: N75° 07' 40.00"W	Length: 400.461'
North: 1,168,426.0978'	East: 3,002,270.6984'

Segment# 7: Line
Course: N10° 55' 57.00"E Length: 115.627'
North: 1,168,539.6263' East: 3,002,292.6273'

Segment# 8: Line
Course: N25° 31' 32.00"E Length: 302.382'
North: 1,168,812.4937' East: 3,002,422.9279'

Segment# 9: Line
Course: S52° 25' 15.31"E Length: 368.867'
North: 1,168,587.5380' East: 3,002,715.2595'

Segment# 10: Line
Course: S28° 56' 09.10"E Length: 147.915'
North: 1,168,458.0885' East: 3,002,786.8253'

Perimeter: 1,527.680' Area: 142,888.29Sq.Ft.
Error Closure: 0.0007 Course: N56° 33' 24.07"W
Error North: 0.00039 East: -0.00059

Precision 1: 2,182,400.000

Parcel Name: Lots - Lot 10
Description:
Process segment order counterclockwise: False
Enable mapcheck across chord: False
North:1,168,222.3820' East:3,002,901.4499'

Segment# 1: Line
Course: N75° 07' 40.00"W Length: 179.227'
North: 1,168,268.3832' East: 3,002,728.2269'

Segment# 2: Line
Course: N14° 52' 20.00"E Length: 35.000'
North: 1,168,302.2107' East: 3,002,737.2102'

Segment# 3: Line
Course: N75° 07' 40.00"W Length: 82.221'

North: 1,168,323.3139' East: 3,002,657.7435'

Segment# 4: Line
Course: N25° 34' 25.45"E Length: 8.532'
North: 1,168,331.0100' East: 3,002,661.4266'

Segment# 5: Line
Course: N19° 45' 56.89"E Length: 22.949'
North: 1,168,352.6069' East: 3,002,669.1874'

Segment# 6: Curve
Length: 55.635' Radius: 100.000'
Delta: 31.8765 (d) Tangent: 28.558'
Chord: 54.920' Course: N35° 42' 14.53"E
Course In: S70° 14' 03.11"E Course Out: N38° 21' 27.83"W
RP North: 1,168,318.7893' East: 3,002,763.2956'
End North: 1,168,397.2045' East: 3,002,701.2387'

Segment# 7: Line
Course: N51° 38' 32.17"E Length: 58.860'
North: 1,168,433.7312' East: 3,002,747.3938'

Segment# 8: Curve
Length: 46.452' Radius: 200.000'
Delta: 13.3075 (d) Tangent: 23.331'
Chord: 46.348' Course: N58° 17' 45.65"E
Course In: S38° 21' 27.83"E Course Out: N25° 03' 00.87"W
RP North: 1,168,276.9009' East: 3,002,871.5077'
End North: 1,168,458.0883' East: 3,002,786.8252'

Segment# 9: Curve
Length: 139.356' Radius: 200.000'
Delta: 39.9225 (d) Tangent: 72.641'
Chord: 136.554' Course: N84° 54' 39.56"E
Course In: S25° 03' 00.87"E Course Out: N14° 52' 20.00"E
RP North: 1,168,276.9009' East: 3,002,871.5077'
End North: 1,168,470.2010' East: 3,002,922.8406'

Segment# 10: Line
Course: S75° 07' 40.00"E Length: 42.931'
North: 1,168,459.1822' East: 3,002,964.3334'

Segment# 11: Line
Course: S14° 52' 20.00"W Length: 245.007'
North: 1,168,222.3827' East: 3,002,901.4489'

Perimeter: 916.170' Area: 50,101.60Sq.Ft.
Error Closure: 0.0013 Course: N55° 59' 22.66"W
Error North: 0.00070 East: -0.00104

Precision 1: 704,746.154

TRACT

Parcel Name: Tracts – Tract A
Description:
Process segment order counterclockwise: False
Enable mapcheck across chord: False
North:1,168,988.4283' East:3,002,996.7391'

Segment# 1: Line
Course: S67° 00' 00.00"E Length: 899.915'
North: 1,168,636.8035' East: 3,003,825.1152'

Segment# 2: Line
Course: N77° 14' 02.43"E Length: 702.055'
North: 1,168,791.9363' East: 3,004,509.8159'

Segment# 3: Line
Course: S0° 43' 40.28"E Length: 627.359'
North: 1,168,164.6280' East: 3,004,517.7853'

Segment# 4: Line
Course: S21° 11' 02.00"E Length: 84.740'
North: 1,168,085.6142' East: 3,004,548.4072'

Segment# 5: Line
Course: N68° 30' 00.00"E
Length: 348.310'
North: 1,168,213.2703'
East: 3,004,872.4809'

Segment# 6: Line
Course: S21° 51' 20.81"E
Length: 61.387'
North: 1,168,156.2955'
East: 3,004,895.3336'

Segment# 7: Line
Course: S67° 50' 00.00"W
Length: 191.404'
North: 1,168,084.0784'
East: 3,004,718.0762'

Segment# 8: Line
Course: S19° 13' 48.35"E
Length: 101.141'
North: 1,167,988.5807'
East: 3,004,751.3883'

Segment# 9: Line
Course: S64° 28' 07.43"W
Length: 82.205'
North: 1,167,953.1501'
East: 3,004,677.2106'

Segment# 10: Line
Course: S24° 59' 36.37"W
Length: 68.427'
North: 1,167,891.1308'
East: 3,004,648.2992'

Segment# 11: Curve
Length: 129.920'
Radius: 440.160'
Delta: 16.9118 (d)
Tangent: 65.436'
Chord: 129.449'
Course: N87° 21' 36.21"W
Course In: N5° 48' 57.42"W
Course Out: S11° 05' 45.00"W
RP North: 1,168,329.0251'
East: 3,004,603.6963'
End North: 1,167,897.0932'
East: 3,004,518.9873'

Segment# 12: Line
Course: N78° 54' 15.00"W
Length: 351.529'
North: 1,167,964.7451'
East: 3,004,174.0295'

Segment# 13: Line
Course: N38° 44' 27.49"E
Length: 6.540'

North: 1,167,969.8462' East: 3,004,178.1222'

Segment# 14: Line
Course: N33° 23' 51.16"E Length: 287.943'
North: 1,168,210.2416' East: 3,004,336.6190'

Segment# 15: Line
Course: N83° 16' 31.17"W Length: 196.710'
North: 1,168,233.2761' East: 3,004,141.2623'

Segment# 16: Line
Course: N24° 51' 18.56"W Length: 156.595'
North: 1,168,375.3662' East: 3,004,075.4414'

Segment# 17: Line
Course: N68° 49' 57.41"W Length: 82.398'
North: 1,168,405.1196' East: 3,003,998.6028'

Segment# 18: Line
Course: N90° 00' 00.00"W Length: 113.877'
North: 1,168,405.1196' East: 3,003,884.7258'

Segment# 19: Line
Course: N90° 00' 00.00"W Length: 123.858'
North: 1,168,405.1196' East: 3,003,760.8678'

Segment# 20: Line
Course: S74° 53' 54.21"W Length: 89.037'
North: 1,168,381.9226' East: 3,003,674.9057'

Segment# 21: Line
Course: S77° 09' 12.70"W Length: 115.715'
North: 1,168,356.1946' East: 3,003,562.0871'

Segment# 22: Line
Course: S38° 20' 03.25"W Length: 31.490'
North: 1,168,331.4937' East: 3,003,542.5555'

Segment# 23: Line
Course: N75° 07' 40.00"W Length: 170.155'
North: 1,168,375.1664' East: 3,003,378.1006'

Segment# 24: Line
Course: N14° 52' 20.00"E Length: 143.574'
North: 1,168,513.9308' East: 3,003,414.9509'

Segment# 25: Line
Course: N61° 02' 49.88"W Length: 243.386'
North: 1,168,631.7513' East: 3,003,201.9836'

Segment# 26: Line
Course: N68° 21' 17.39"W Length: 186.699'
North: 1,168,700.6166' East: 3,003,028.4495'

Segment# 27: Line
Course: N61° 21' 42.44"W Length: 100.812'
North: 1,168,748.9335' East: 3,002,939.9705'

Segment# 28: Line
Course: N42° 25' 33.58"W Length: 67.452'
North: 1,168,798.7231' East: 3,002,894.4649'

Segment# 29: Line
Course: N33° 07' 17.11"W Length: 118.896'
North: 1,168,898.3003' East: 3,002,829.4983'

Segment# 30: Line
Course: N18° 25' 25.53"W Length: 69.526'
North: 1,168,964.2627' East: 3,002,807.5251'

Segment# 31: Line
Course: N11° 40' 51.86"W Length: 196.368'
North: 1,169,156.5639' East: 3,002,767.7677'

Segment# 32: Line
Course: N87° 41' 30.53"W Length: 135.072'

North: 1,169,162.0038' East: 3,002,632.8053'

Segment# 33: Line
Course: S54° 39' 54.00"W Length: 283.704'
North: 1,168,997.9219' East: 3,002,401.3640'

Segment# 34: Line
Course: S45° 33' 02.00"E Length: 105.040'
North: 1,168,924.3645' East: 3,002,476.3488'

Segment# 35: Line
Course: S25° 31' 32.00"W Length: 426.356'
North: 1,168,539.6238' East: 3,002,292.6261'

Segment# 36: Line
Course: S10° 55' 57.00"W Length: 115.627'
North: 1,168,426.0953' East: 3,002,270.6972'

Segment# 37: Line
Course: N75° 07' 40.00"W Length: 100.226'
North: 1,168,451.8197' East: 3,002,173.8287'

Segment# 38: Line
Course: N10° 55' 57.00"E Length: 598.741'
North: 1,169,039.6943' East: 3,002,287.3814'

Segment# 39: Line
Course: N54° 39' 54.00"E Length: 719.574'
North: 1,169,455.8643' East: 3,002,874.3987'

Segment# 40: Line
Course: N53° 03' 59.98"W Length: 171.327'
North: 1,169,558.8122' East: 3,002,737.4510'

Segment# 41: Line
Course: N71° 30' 03.00"E Length: 148.550'
North: 1,169,605.9458' East: 3,002,878.3251'

Segment# 42: Line
Course: N18° 30' 03.00"W
Length: 40.000'
North: 1,169,643.8785'
East: 3,002,865.6324'

Segment# 43: Line
Course: N54° 15' 00.00"E
Length: 299.996'
North: 1,169,819.1511'
East: 3,003,109.1013'

Segment# 44: Line
Course: S7° 42' 11.00"W
Length: 838.290'
North: 1,168,988.4258'
East: 3,002,996.7378'

Perimeter: 10,131.926'
Area: 1,045,642.86Sq.Ft.
Error Closure: 0.0028
Course: S28° 08' 15.93"W
Error North: -0.00250
East: -0.00134

Precision 1: 3,618,545.000

PRELIMINARY ENGINEERING PLANS FOR
BLACK HAWK PARK

LOT 1, BLOCK 1, MINERS MESA SUBDIVISION FILING NO. 4, LOCATED IN NORTH HALF OF SECTION 18. AND THE SOUTHWEST QUARTER OF SECTION 7 BOTH BEING WITHIN TOWNSHIP 3 SOUTH, RANGE 72 WEST 6TH P,M. CITY OF BLACK HAWK, COUNTY OF GILPIN, STATE OF COLORADO

OWNER:
CLUB VISTA PROPERTIES II, LLC
CONTACT: DARWIN HORAN

DEVELOPER:
VENTANA CAPITAL, INC.
9801 E. EASTER AVE.
CENTENNIAL, CO 80112
PHONE: 303.340.7006

CONTACT: BRYAN HORAN

ENGINEER:
RICK ENGINEERING COMPANY
9801 E. EASTER AVE.
CENTENNIAL, CO 80112
PHONE: 303.537.8020

CONTACT: ROBERT FITCH

SURVEYOR:
RICK ENGINEERING COMPANY
5690 WEBSTER ST.
ARVADA, CO 80002
PHONE: 303.423.6036

CONTACT: BOB HENNESSY

AGENCY:
CITY OF BLACK HAWK
211 CHURCH STREET,
BLACK HAWK, CO 80422
PHONE: 303.582.0615

CONTACT: CYNTHIA LINKER

PROJECT NARRATIVE:
THE PROJECT CONSISTS OF THE SUBDIVISION OF LOT 1, BLOCK1, OF MINERS MESA SUBDIVISION FILING NO. 4 INTO 8 LOTS AND 1 TRACT. THE SCOPE OF WORK TO BE COMPLETED INCLUDES OVERLOT GRADING FOR THE 8 LOTS, PRIVATE ACCESS ROADWAY IMPROVEMENTS AND DRIVEWAY ACCESS POINTS FROM MINERS MESA ROAD, SHARED PRIVATE DRAINAGE AND SEWER INFRASTRUCTURE IMPROVEMENTS, AND PUBLIC WATER INFRASTRUCTURE.

THE PROPERTY IS ZONED COMMERCIAL/BUSINESS SERVICES (C/BS) AND HAS AN APPROVED SPECIAL REVIEW USE (SRU) FOR RECREATIONAL CAMPGROUND AND INDOOR SHOOTING FACILITIES. THE PROPOSED USES FOR THE SITE WILL BE CONSISTENT WITH THE ZONING REQUIREMENTS AND WILL INCLUDE USES SUCH AS:

- AN AIRSTREAM PARK DEVELOPMENT WITH AMENITIES INCLUDING:
  - –A CARETAKERS CHECK–IN BUILDING
  - –AN INDOOR SHOOTING RANGE FACILITIES
  - –AIRSTREAM BAR
- DISTILLERY FACILITIES INCLUDING TASTING ROOMS

STANDARDS AND SPECIFICATIONS

- BLACK HAWK AND CENTRAL CITY WATER AND SANITATION DISTRICT STANDARDS AND DETAILS
- CITY OF BLACK HAWK AND GIPLIN COUNTY ROADWAY DESIGN AND CONSTRUCTION STANDARDS
- MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (2009)
- URBAN STORM DRAINAGE CRITERIA MANUAL VOLUMES 1, 2, & 3 (2016)
- CITY OF BLACK HAWK ZONING ORDINANCE

THE CONTRACTOR SHALL ALERT THE OWNER AND ENGINEER OF ANY DISCREPANCIES FOUND BETWEEN THESE PLANS AND THE STANDARDS AND SPECIFICATIONS USED ABOVE.

VESTED RIGHTS STATEMENT
THIS PLAN IS SUBMITTED TO CREATE VESTED PROPERTY RIGHTS PURSUANT TO ARTICLE 68 OF TITLE 24, C.R.S. AND PURSUANT TO SECTIONS 361 AND 362 OF ARTICLE XVII OF THE BLACK HAWK MUNICIPAL CODE AS ADOPTED BY THE BOARD OF ALDERMEN AND AVAILABLE AT CITY HALL, 201 SELAK STREET, BLACK HAWK, COLORADO 80422.

SHEET LIST TABLE	
SHEET NUMBER	SHEET TITLE
01	COVER
02	EXISTING CONDITIONS
03	GRADING AND DRAINAGE
04	WATER AND SEWER PLAN
05	ROADWAY PLANS

LOCATION MAP
SCALE 1"=1000'

CERTIFICATIONS
OWNER'S SIGNATURE:
CLUB VISTA PROPERTIES II, LLC

NAME: DARWIN HORAN

TITLE: OWNER

STATE OF COLORADO, COUNTY OF GILPIN

THE FOREGOING INSTRUMENT WAS ACKNOWLEDGED BEFORE ME ON THIS_____DAY OF_____, 20____, BY: DARWIN HORAN, OWNER OF VISTA PROPERTIES II, LLC.

WITNESS MY HAND AND OFFICIAL SEAL:

MY COMMISSION EXPIRES:_____

NOTARY PUBLIC:_____ ADDRESS:_____

CITY OF BLACK HAWK BOARD OF ALDERMEN CERTIFICATION:

THIS SITE DEVELOPMENT PLAN IS APPROVED BY THE BOARD OF ALDERMEN OF THE CITY OF BLACK HAWK, COLORADO, THIS_____DAY OF_____, 20____

BY:_____
MAYOR OF THE CITY OF BLACK HAWK, COLORADO

ATTEST:_____
CITY CLERK

THIS PLAN CONSTITUTES A SITE SPECIFIC DEVELOPMENT AS DEFINED IN 24–69–101. ET SEQ., C.R.S., AND ORDINANCE NO. 98–62 OF THE CITY OF BLACK HAWK.

THE TERM AND CONDITIONS OF SUCH APPROVAL ARE CONTAINED IN RESOLUTION NO._____ ADOPTED BY THE CITY ON_____ AND AVAILABLE AT CITY HALL, 201 SELAK STREET, BLACK HAWK, COLORADO.

LEGEND

	EXISTING	PROPOSED
LOT LINE		
RIGHT–OF–WAY		
CENTERLINE		
CURB		
CURB & GUTTER		
FENCE–GENERAL USE		
DAYLIGHT LINE		
EASEMENT		
FLOWLINE		
RETAINING WALL		
SITE BOUNDARY		
TYPICAL LATERALS	XX	XX
CONTOURS		
SANITARY SEWER MANHOLE		
STORM DRAIN MANHOLE		
WATER VALVE		
FIRE HYDRANT		
TRANSFORMER		
4–WAY SIGN		
2–WAY SIGN		
STREET LIGHT		
POWER POLE		
BENCHMARK		
SET WELL MONUMENT		
ASPHALT		
TYPE R STORM INLET		
TYPE C STORM INLET		
STORM DRAIN		
SEWER LINE	S	S
WATER MAIN	W	W
CONCRETE		
SWALE		
SIGHT TRIANGLE		
TREES		
ROAD BASE		

ABBREVIATION

AIR RELEASE VALVE	ARV
BEGIN CURVE	BC
BLOW OFF VALVE	BOV
BEGIN VERTICAL CURVE STATION	BVCS
BEGINNING OF VERTICAL CURVE ELEVATION	BVCE
CENTERLINE	CL
CLEANOUT	CO
ELECTRIC BOX	EB
END CURVE	EC
END VERTICAL CURVE STATION	EVCS
END VERTICAL CURVE ELEVATION	EVCE
EXISTING GRADE	EG
FINISHED GRADE	FG
FINISHED SURFACE	FS
FINISH FLOOR	FF
FLOW LINE	FL
GARAGE FLOOR FRONT	GFF
GARAGE FLOOR BACK	GFB
GRADE BREAK	GB
HIGH POINT	HP
INVERT	INV
IRRIGATION CONTROL VALVE	ICV
LOW POINT	LP
POINT OF CURB RETURN	PCR
POINT OF VERTICAL CURVE INTERSECTION	PVI
PROPERTY LINE	PL
PUBLIC UTILITY EASEMENT	PUE
PULL BOX	PB
RIGHT–OF–WAY	ROW
THRUST BLOCK	TB
TOP OF CURB	TC
TOP OF FOOTING	TF
TOP OF GRATE	TG
TOP OF WALL	TW
WATER METER	WM

SITE BENCHMARK & BASIS OF BEARING:
CONTROL POINT 1: VERTICAL DATUM IS BASED IPON NAVD88 OPUS/GEOID18, GPS STATIC OBSERVATION.
NORTHING: 1168024.49'
EASTING: 3003217.42'
ELEVATION: 8647.75'
CP 1 IS A 1.5" ALUMINUM CAP STAMPED: "CP A". IT CAN BE FOUND AT THE LANDSCAPING AREA JUST WEST OF THE MAIN ENTRANCE TO THE CITY OF BLACK HAWK MAINTENANCE OFFICE PARKING LOT. IT IS APPROXIMATELY 1.6' TO THE TOP BACK OF CURVE AND 9.4' WESTERLY TO THE POINT OF CURVATURE AND BEING 0.2' BELOW GRADE.

BASIS OF BEARING: BEARINGS ARE BASED ON THE NORTH LINE OF THE NORTHWEST QUARTER OF SECTION 18 BEING ASSUMED TO BEAR N 89°07'38" W, A DISTANCE OF 3180.53 FEET BETWEEN THE FOLLOWING DESCRIBED MONUMENTS.

–THE NORTH QUARTER CORNER OF SECTION 18 BEING FOUND 3.5" ALUMINUM CAP B.L.M. MATCHING MONUMENT RECORD FILED 12/29/92.

–THE NORTHWEST CORNER OF SECTION 18 BEING A FOUND 3.5" ALUMINUM CAP B.L.M. MATCHING MONUMENT RECORD FILED 6/27/01.

RICK ENGINEERING COMPANY
9801 E. EASTER AVE.
CENTENNIAL, CO 80112
Phone: 303.537.8020 Fax: 303.537.8021
Surveying Planning Engineering Project Management

BLACK HAWK PARK
COVER SHEET
GILPIN COUNTY, CO

REVISIONS: NO.	DESCRIPTION	DATE:

REVIEWED FOR COMPLIANCE BY:

SIGNATURE DATE

SIGNATURE DATE

SCALE:
DATE: 01/26/2021
DRAWN BY: JP/BG
CHECKED BY: JK
JOB NO: D01055

PROJECT NO.
D01055
DRAWING NO.
COVER
SHEET NO. 01 OF 05 SHEETS

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RICK
ENGINEERING COMPANY

BLACK HAWK PARK
EXISTING CONDITIONS
GILPIN COUNTY, CO

REVISIONS: NO.	DESCRIPTION	DATE:
1		

REVIEWED FOR COMPLIANCE BY:

SIGNATURE DATE

SIGNATURE DATE

SCALE:	1"=80'
DATE:	01/26/2021
DRAWN BY:	JP/BG
CHECKED BY:	JK
JOB NO:	D01055

PROJECT NO.
D01055

DRAWING NO.
EX-01

SHEET NO. 02 OF 05 SHEETS

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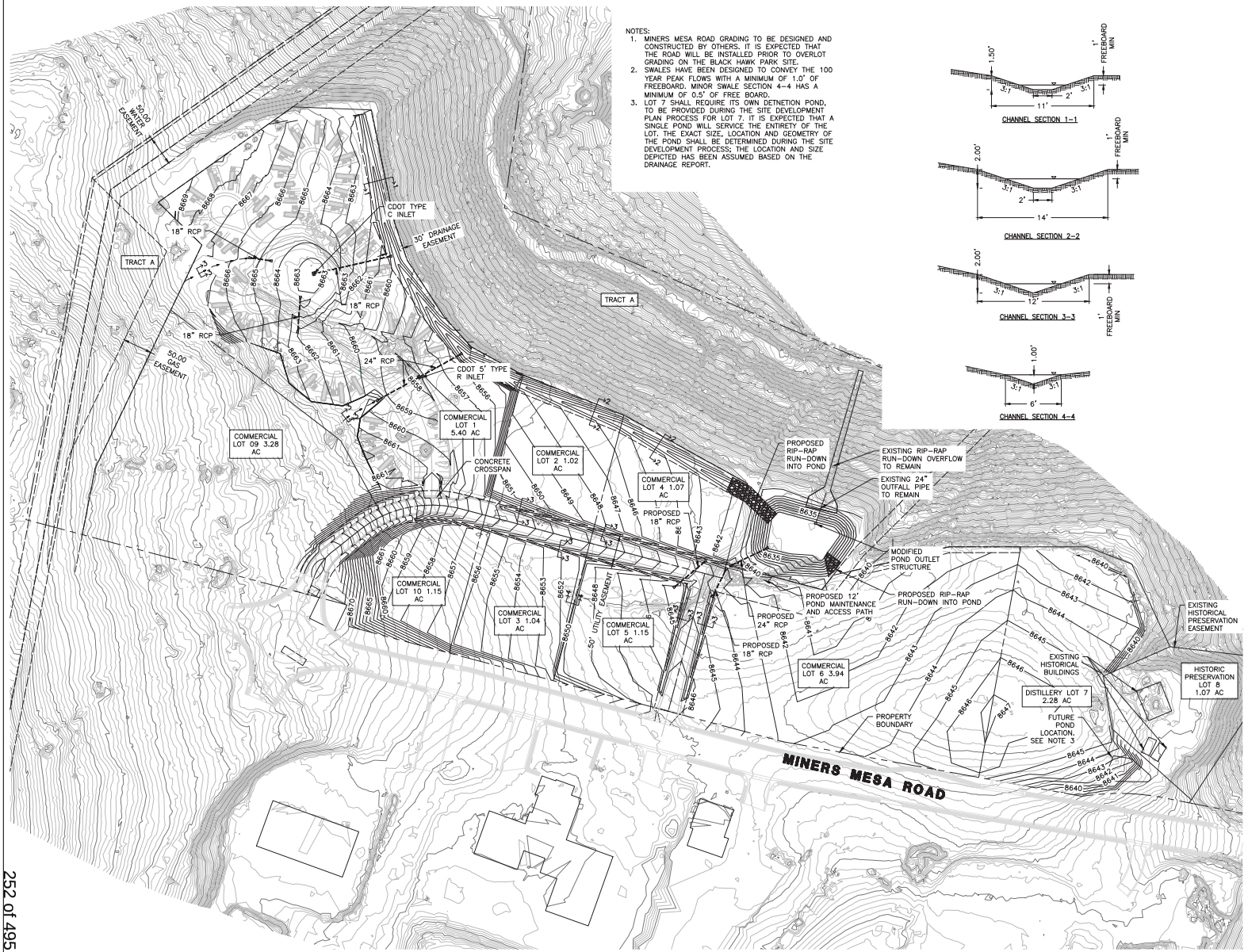

RICK ENGINEERING COMPANY

BLACK HAWK PARK
OVERLOT GRADING PLAN
GILPIN COUNTY, CO

REVISIONS: NO.	DESCRIPTION	DATE:
1		

REVIEWED FOR COMPLIANCE BY:

SIGNATURE DATE

SIGNATURE DATE

SCALE:	1" = 80'
DATE:	01/26/2021
DRAWN BY:	JP/BG
CHECKED BY:	JK
JOB NO:	D01055

PROJECT NO.
D01055

DRAWING NO.
GRD-01

SHEET NO. 03 OF 05 SHEETS

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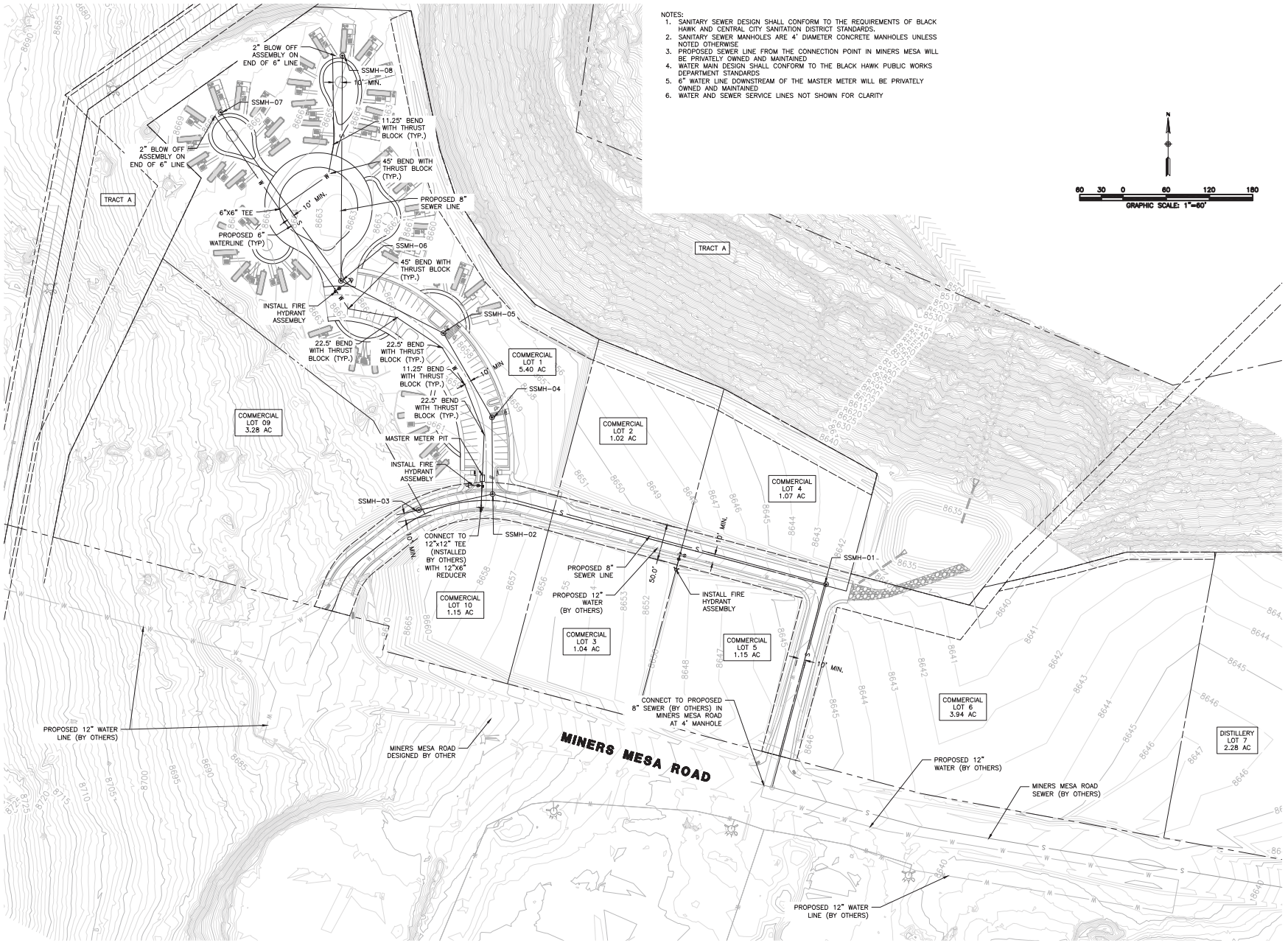

RICK ENGINEERING COMPANY

BLACK HAWK PARK
OVERALL UTILITY PLAN

GILPIN COUNTY, CO

REVISIONS:	NO.	DESCRIPTION	DATE:
	1		

REVIEWED FOR COMPLIANCE BY:

SIGNATURE DATE

SIGNATURE DATE

SCALE:	1" = 50'
DATE:	01/26/2021
DRAWN BY:	JP/BG
CHECKED BY:	JK
JOB NO:	D01055

PROJECT NO.
D01055

DRAWING NO.
UTL-01

SHEET NO. 04 OF 05 SHEETS

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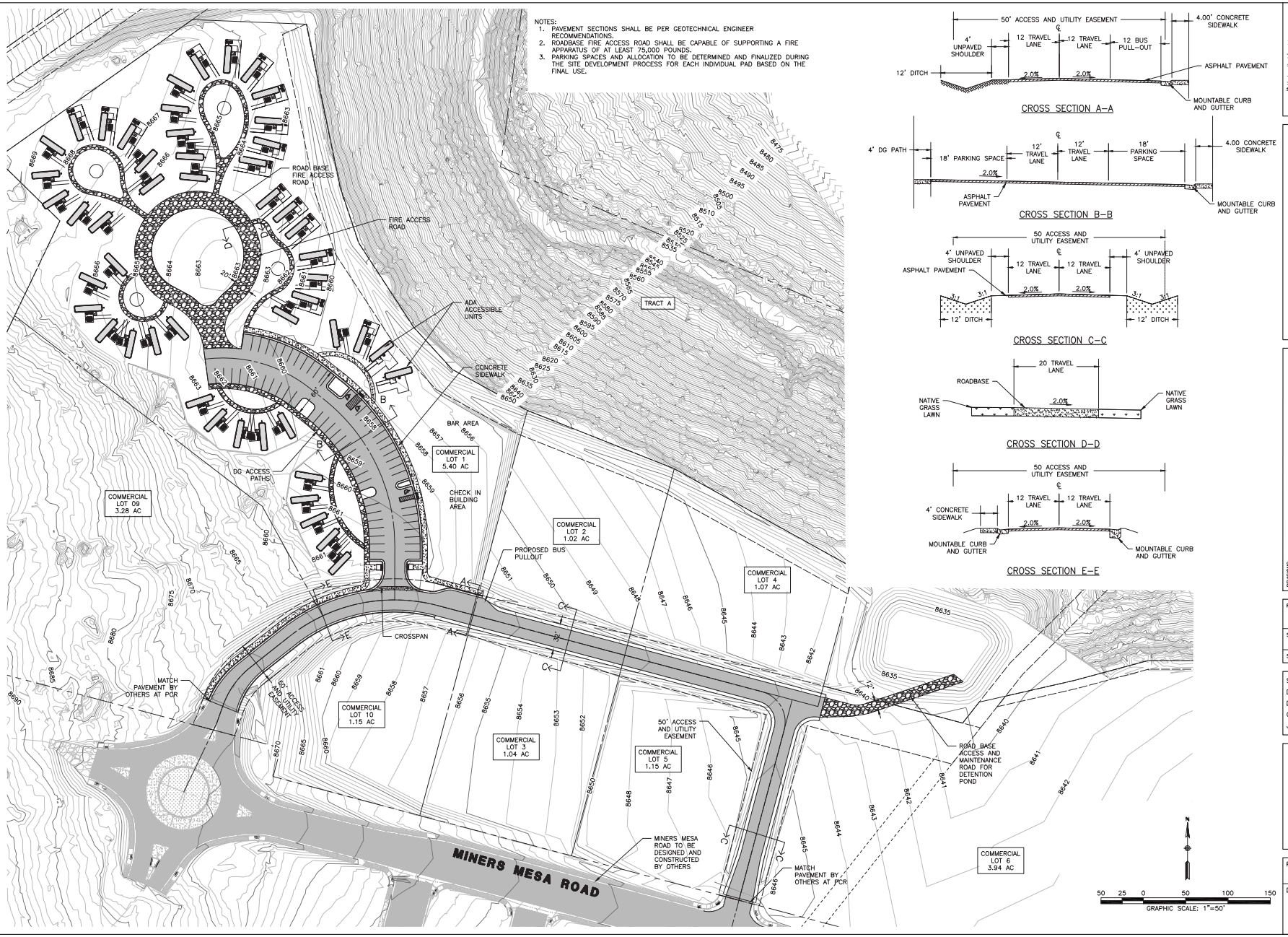

RICK ENGINEERING COMPANY

BLACK HAWK PARK
ROADWAY PLAN

GILPIN COUNTY, CO

REVISIONS: NO.	DESCRIPTION	DATE:
1		

REVIEWED FOR COMPLIANCE BY:

SIGNATURE DATE

SIGNATURE DATE

SCALE:	1" = 50'
DATE:	01/26/2021
DRAWN BY:	JP/BG
CHECKED BY:	JK
JOB NO:	D01055

PROJECT NO. D01055

DRAWING NO. **RD-01**

SHEET NO. 05 OF 05 SHEETS

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EXHIBIT B

BLACK HAWK PARK SUBDIVISION
FINAL PLAT

BLACK HAWK PARK

FINAL PLAT

A REPLAT OF LOT 1, BLOCK 1, MINERS MESA SUBDIVISION FILING NO. 4, BEING LOCATED IN NORTH HALF OF SECTION 18, AND THE SOUTHWEST QUARTER OF SECTION 7 BOTH BEING WITHIN TOWNSHIP 3 SOUTH, RANGE 72 WEST 6TH P.M. CITY OF BLACK HAWK, COUNTY OF GILPIN, STATE OF COLORADO

SHEET 1 OF 2

DEDICATION

KNOW ALL MEN BY THESE PRESENTS: CLUB VISTA PROPERTIES II, LLC, A NEVADA LIMITED LIABILITY COMPANY, IS THE OWNER OF THAT REAL PROPERTY SITUATED IN THE CITY OF BLACK HAWK, GILPIN COUNTY, AND HAS CAUSED SAID REAL PROPERTY TO BE LAID OUT AND SURVEYED AS BLACK HAWK PARK, AND DOES HEREBY DEDICATE AND SET APART ALL THE STREETS, ALLEYS AND OTHER PUBLIC WAYS AND PLACES SHOWN ON THE ACCOMPANYING PLAT FOR THE USE OF THE PUBLIC FOREVER, AND DOES HEREBY GRANT TO THE CITY OF BLACK HAWK USE OF THOSE PORTIONS OF SAID REAL PROPERTY WHICH ARE INDICATED AS EASEMENTS ON THE ACCOMPANYING PLAT AS PERMANENT PUBLIC EASEMENTS, AND DOES HEREBY GRANT AND CONVEY TO THE CITY OF BLACK HAWK, IN FEE SIMPLE, LOT 6.

LEGAL DESCRIPTION

A REPLAT OF LOT 1, BLOCK 1, MINERS' MESA SUBDIVISION FILING NO. 4, RECORDED AT RECEPTION NUMBER 147815, A PARCEL OF LAND LOCATED IN THE SOUTHWEST QUARTER OF SECTION 7, AND THE NORTH HALF OF SECTION 18, BOTH WITHIN TOWNSHIP 3 SOUTH, RANGE 72 WEST OF THE 6TH PRINCIPAL MERIDIAN, CITY OF BLACK HAWK, COUNTY OF GILPIN, STATE OF COLORADO AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

LOT 1, BLOCK 1, MINER'S MESA SUBDIVISION FILING NO. 4, COUNTY OF GILPIN, STATE OF COLORADO, EXCEPT THAT PORTION CONVEYED IN THE DEED RECORDED AUGUST 7, 2020 AT RECEPTION NO. 166682 AND RE-RECORDED AUGUST 7, 2020 AT RECEPTION NO. 166800.

CONTAINING 1,977,984 SQUARE FEET OR 45.408 ACRES, MORE OR LESS.

TRACT/LOT TABLE

LOT/TRACT	SQ. FT.	ACRES±	PURPOSE
LOT 1	235,073	5.397	*
LOT 2	44,272	1.016	*
LOT 3	45,423	1.043	*
LOT 4	46,785	1.074	*
LOT 5	50,119	1.151	*
LOT 6	171,627	3.940	*
LOT 7	99,429	2.283	*
LOT 8	142,888	3.280	*
LOT 9	50,102	1.150	*
TRACT A	1,092,269	24.075	OPEN SPACE, UTILITIES, DRAINAGE HISTORIC PRESERVATION AND CONSERVATION EASEMENT

*USES CONFORMING TO C/BS ZONING INCLUDING SRU OF RV CAMPGROUND AND INDOOR SHOOTING FACILITIES

GENERAL NOTES

1.) THE PURPOSE OF THIS FINAL SUBDIVISION PLAT IS TO RECONFIGURE LOT AND TRACT LINES AS SHOWN HEREON, PURSUANT TO C.R.S. 31-23-201, ET SEQ., AND CHAPTER 17 OF THE CITY OF BLACK HAWK MUNICIPAL CODE. NOTHING IN THE APPROVAL OF THIS PLAT SHALL ALLOW, PERMIT, OR CAUSE TO BE ALLOWED OR PERMITTED ANY DEVELOPMENT OR CONSTRUCTION ON ANY LOT HEREON WITH OUT A SUBSEQUENT LAND DEVELOPMENT APPLICATION AND APPROVAL THAT INCLUDES, AT A MINIMUM, PROVISIONS FOR THE CONSTRUCTION OF NECESSARY PUBLIC IMPROVEMENTS AND OTHER CONDITIONS OF APPROVAL AS DETERMINED BY THE BOARD OF ALDERMAN, INCLUDING AT A MINIMUM THOSE PROVISIONS REQUIRED BY 17-63 AND 17-64 OF THE CITY OF BLACK HAWK MUNICIPAL CODE, AS THE SAME MAY BE AMENDED FROM TIME TO TIME. NO CONSTRUCTION OF ANY TYPE SHALL OCCUR ON THE PROPERTY THAT IS PLATTED HEREON UNTIL A SUBSEQUENT AGREEMENT HAS BEEN REACHED BETWEEN THE SUBDIVIDER, OR ITS SUCCESSOR ON IN INTEREST, AND THE CITY REGARDING, AT A MINIMUM, THE NECESSARY PUBLIC IMPROVEMENTS, AND A FINANCIAL GUARANTEE APPROVED BY THE CITY FOR SAID PUBLIC IMPROVEMENTS.

2.) DISTANCES ON THIS FINAL PLAT ARE EXPRESSED IN U.S. SURVEY FEET AND DECIMALS THEREOF. A U.S. SURVEY FOOT IS DEFINED AS EXACTLY 1220/3937 METERS. ALL BEARINGS SHOWN HERE ON ARE IN DEGREE-MINUTES-SECONDS.

3.) ANY PERSON WHO KNOWINGLY REMOVES, ALTERS OR DEFACES ANY PUBLIC LAND SURVEY MONUMENT, LAND SURVEY BOUNDARY MONUMENT OR ACCESSORY COMMITS A CLASS TWO (2) MISDEMEANOR PURSUANT TO STATE STATUE 18-4-508, C.R.S.

4.) NOTICE: ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT MAY ANY ACTION BASED UPON ANY DEFECT IN THIS SURVEY BE COMMENCED MORE THAN TEN YEARS FROM THE DATE OF CERTIFICATION SHOWN HEREON.

5.) COMMONWEALTH LAND TITLE COMPANY COMMITMENT NUMBER 597-H0508532-023-CNX, AMENDMENT NO. 4, EFFECTIVE DATE DECEMBER 6, 2020 AT 7:00 A.M., WAS ENTIRELY RELIED UPON FOR RECORDED RIGHTS-OF-WAY, EASEMENTS AND ENCUMBRANCES IN THE PREPARATION OF THIS SURVEY.

6.) RICK ENGINEERING, HAS MADE NO INVESTIGATION OR INDEPENDENT SEARCH FOR RECORDED/UNRECORDED EASEMENTS, ENCUMBRANCES, RESTRICTIVE COVENANTS, OWNERSHIP TITLE EVIDENCE OR ANY OTHER FACTS THAT AN ACCURATE AND CURRENT TITLE SEARCH MAY DISCLOSE.

7.) BASIS OF BEARINGS: BEARINGS ARE BASED ON THE NORTH LINE OF THE NORTHWEST QUARTER OF SECTION 18 BEING ASSUMED TO BEAR N 89°07'38" W BETWEEN MONUMENTS AS SHOWN WITHIN THIS PLAT.

8.) LOT 6 IS DEDICATED TO THE CITY OF BLACK HAWK BY THIS PLAT.

9.) THIS FINAL PLAT IS APPROVED TO ALLOW CONVEYANCE OF LOTS ONLY; AND ANY LOT OR TRACT OWNER IS HEREBY PUT ON NOTICE BY THE CITY AS THE APPROVING ENTITY THAT EACH LOT AND TRACT PUBLIC IMPROVEMENT OBLIGATION SHALL BE DETERMINED AT THE TIME OF APPROVAL OF A SITE DEVELOPMENT PLAN, AND THEREFORE NO BUILDING PERMIT SHALL BE ISSUED UNTIL THE PUBLIC IMPROVEMENT INFRASTRUCTURE OBLIGATIONS ASSOCIATED WITH EACH SUCH LOT OR TRACT HAVE BEEN SECURED BY A PERFORMANCE GUARANTEE IN ACCORDANCE WITH THE CITY OF BLACK HAWK MUNICIPAL CODE AND THE REGULATIONS OF THE BLACK HAWK/CENTRAL CITY SANITATION DISTRICT. NOTHING IN THIS PLAT NOTE NO. 9 SHALL BE DEEMED TO PRECLUDE OVERLOT GRADING ON THE PROPERTY PRIOR TO APPROVAL OF A SITE DEVELOPMENT PLAN, WHICH OVERLOT GRADING WOULD BE AT THE SOLE RISK OF ANY PROPERTY OWNER.

VICINITY MAP
SCALE: 1"=1000'

OWNER/DEVELOPER

IN WITNESS WHEREOF, _____, AS _____ OF CLUB VISTA PROPERTIES II, LLC, A NEVADA LIMITED LIABILITY COMPANY, HAS CAUSED _____ NAME TO BE HEREUNTO SUBSCRIBED THIS _____ DAY OF _____, 20__.

_____
BY:

NOTARY PUBLIC

STATE OF _____)
)SS
COUNTY OF _____)

THE FOREGOING INSTRUMENT WAS ACKNOWLEDGED BEFORE ME THIS _____ DAY OF _____, 20__, BY _____, AS _____ OF CLUB VISTA PROPERTIES II, LLC.

WITNESS MY HAND AND SEAL

_____
NOTARY PUBLIC

MY COMMISSION EXPIRES _____

MAYOR'S CERTIFICATE

APPROVED AND ACCEPTED THIS _____ DAY OF _____, 2021 BY THE BOARD OF ALDERMEN OF THE CITY OF BLACK HAWK, SITUATED IN GILPIN COUNTY, COLORADO. THIS APPROVAL DOES NOT GUARANTEE THAT THE SIZE OR SOIL CONDITION OF ANY LOT SHOW HERE ON ARE SUCH THAT A BUILDING PERMIT CAN BE ISSUED.

CITY OF BLACK HAWK

ATTEST: BY:_____
DAVID D. SPELLMAN, MAYOR

_____
MELISSA A. GREINER, CMC, CITY CLERK

SURVEYOR'S CERTIFICATE

I ROBERT J. HENNESSY, A REGISTERED LAND SURVEYOR IN THE STATE OF COLORADO, DO HEREBY CERTIFY THAT THE SURVEY OF BLACK HAWK PARK, WAS MADE BY ME OR UNDER MY DIRECT SUPERVISION AND THE ACCOMPANYING PLAT COMPLIES WITH THE REQUIREMENTS OF TITLE 38, ARTICLE 51, C.R.S., AND THAT THE MONUMENTS REQUIRED BY SAID STATUTE AND BY THE SUBDIVISION ORDINANCE FOR THE CITY OF BLACK HAWK HAVE BEEN PLACED ON THE GROUND. THAT THE SURVEY ACCURATELY AND PROPERLY WITHIN APPLICABLE STANDARDS OF PRACTICE SHOWS SAID SURVEY BASED UPON MY KNOWLEDGE, INFORMATION AND BELIEF. THIS SURVEY IS NOT A GUARANTY OR WARRANTY, EITHER EXPRESSED OR IMPLIED.

_____
ROBERT J. HENNESSY
REGISTERED COLORADO LAND SURVEYOR NO. 34580
FOR AND ON BEHALF OF RICK ENGINEERING

FOR CLERK AND RECORDER USE ONLY

CLERK AND RECORDER'S CERTIFICATE

_____
RECEPTION NUMBER

ACCEPTING FOR FILING IN THE OFFICE OF THE CLERK AND RECORDER OF GILPIN COUNTY, AT CENTRAL CITY COLORADO ON THIS _____ DAY OF _____, 202__ AT _____ O'CLOCK.

_____
GILPIN COUNTY CLERK AND RECORDER

_____
BY: DEPUTY CLERK

RICK ENGINEERING COMPANY
9801 E EASTER AVE.
CENTENNIAL, CO 80112
PH. (303) 537-8020

\\CP.RICKENG.COM\PROJECTS\D_CEN_L\1055_BLACKHAWK\SURVEY\PLAT\1055 PLAT 3-10-21.DWG

BLACK HAWK PARK

FINAL PLAT

A REPLAT OF LOT 1, BLOCK 1, MINERS MESA SUBDIVISION FILING NO. 4, BEING LOCATED IN NORTH HALF OF SECTION 18, AND THE SOUTHWEST QUARTER OF SECTION 7 BOTH BEING WITHIN TOWNSHIP 3 SOUTH, RANGE 72 WEST 6TH P.M. CITY OF BLACK HAWK, COUNTY OF GILPIN, STATE OF COLORADO

SHEET 2 OF 2

CURVE TABLE					
CURVE #	LENGTH	RADIUS	DELTA	CHORD BEARING	CHORD LENGTH
C1	139.36'	200.00'	039°55'21"	S84°54'40"W	136.55'
C2	46.45'	200.00'	013°18'27"	S58°17'46"W	46.35'
C3	185.81'	200.00'	053°13'48"	S78°15'26"W	179.20'
C4	55.63'	100.00'	031°52'35"	S35°42'15"W	54.92'

LINE TABLE		
LINE #	LENGTH	BEARING
L1	45.06'	S78°54'15"E
L2	31.49'	S38°20'03"W
L3	168.57'	N14°52'20"E
L4	143.57'	N14°52'20"E

LINE TABLE		
LINE #	LENGTH	BEARING
L5	25.30'	N56°41'34"W
L6	52.72'	N75°07'40"W
L7	25.30'	S86°26'14"W
L8	102.59'	N75°07'40"W

LEGEND

- SET #5X24" REBAR AND 1" YELLOW PLASTIC CAP PLS 34580
- FOUND #5 REBAR AND YELLOW PLASTIC CAP MARKED MOORE LS 10945
- FOUND #5 REBAR
- AC FOUND 2" ALUMINUM CAP CITY OF BLACK HAWK LS 26298
- FOUND SECTION CORNER AS DESCRIBED HEREON

RECORD DISTANCE OR BEARING IF DIFFERENT THAN SHOWN (XXX.XX') (XX°XX'XX")

⁎=DEDICATED BY THIS PLAT

LOT LINE
ACCESS EASEMENT
PUBLIC SERVICE CO. EASEMENT
POWER LINE EASEMENT
PROPOSED UTILITY EASEMENT
SECTION LINE
BOUNDARY LINE
VACATED BY THIS PLAT

FOR CLERK AND RECORDER USE ONLY

RICK ENGINEERING COMPANY
9801 E EASTER AVE,
CENTENNIAL, CO 80112
PH. (303) 537-8020

\\CP.RICKENG.COM\PROJECTS\D_CEN_L\1055_BLACKHAWK\SURVEY\PLAT\1055 PLAT 3-10-21.DWG

COUNCIL BILL 6
ORDINANCE 2021-6
AN ORDINANCE APPROVING A WATER LEASE AGREEMENT BETWEEN THE CITY OF BLACK HAWK AND THE COUNTY OF CLEAR CREEK

STATE OF COLORADO
COUNTY OF GILPIN
CITY OF BLACK HAWK

COUNCIL BILL NUMBER: CB6

ORDINANCE NUMBER: 2021-6

TITLE: AN ORDINANCE APPROVING A WATER LEASE AGREEMENT BETWEEN THE CITY OF BLACK HAWK AND THE COUNTY OF CLEAR CREEK

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF BLACK HAWK, GILPIN COUNTY:

Section 1. The City of Black Hawk hereby approves the Water Lease Agreement between the City of Black Hawk and the County of Clear Creek, as more particularly described in **Exhibit A**, attached hereto and incorporated herein by this reference, and authorizes the Mayor to execute the same on behalf of the City of Black Hawk.

Section 2. Safety Clause. The City Council hereby finds, determines, and declares that this Ordinance is promulgated under the general police power of the City of Black Hawk, that it is promulgated for the health, safety, and welfare of the public, and that this Ordinance is necessary for the preservation of health and safety and for the protection of public convenience and welfare. The City Council further determines that the Ordinance bears a rational relation to the proper legislative object sought to be attained.

Section 3. Severability. If any clause, sentence, paragraph, or part of this Ordinance or the application thereof to any person or circumstances shall for any reason be adjudged by a court of competent jurisdiction invalid, such judgment shall not affect application to other persons or circumstances.

Section 4. Effective Date. The City Clerk is directed to post the Ordinance as required by the Charter. This Ordinance shall become effective upon posting by the City Clerk.

READ, PASSED AND ORDERED POSTED this 17th day of March, 2021.

_____
David D. Spellman, Mayor

ATTEST:

_____
Melissa A. Greiner, CMC, City Clerk

CITY OF BLACK HAWK
REQUEST FOR COUNCIL ACTION

SUBJECT: Water Lease Agreement with Clear Creek County

RECOMMENDATION: Staff recommends the following motion to the Mayor and Board of Aldermen:

MOTION TO APPROVE *Council Bill No. 6, An Ordinance Approving a Water Lease Agreement Between the City of Black Hawk and the County of Clear Creek.*

SUMMARY AND BACKGROUND OF SUBJECT MATTER: The City of Black Hawk has the opportunity to lease thirty (30) acre feet of fully consumable water to Clear Creek County for one year. The water that will be leased to the County is currently stored in Guanella Reseroir, which would normally be booked over to the City of Golden as a condition of our Storage Agreement with Golden.

AGENDA DATE: 17-Mar-21

WORKSHOP DATE: 17-Mar-21

FUNDING SOURCE: Not Applicable

DEPARTMENT DIRECTOR APPROVAL: [X]Yes [ ]No

STAFF PERSON RESPONSIBLE: James R. Ford, P.E.

DOCUMENTS ATTACHED: Water Lease Agreement

RECORD: [X]Yes [ ]No

CoBH CERTIFICATE OF INSURANCE REQUIRED [ ]Yes[X]No

CITY ATTORNEY REVIEW: [X]Yes [ ]N/A

SUBMITTED BY:

James R. Ford, P.E. Water Manager

REVIEWED BY:

Stephen N. Cole, City Manager

Water Lease Agreement

THIS WATER LEASE AGREEMENT ("Agreement"), dated _____, 2021, is by and between THE CITY OF BLACK HAWK ("**Black Hawk**"), a municipality of the State of Colorado, and THE COUNTY OF CLEAR CREEK, a county of the State of Colorado (the "**County**"). The County and Black Hawk are referred to individually as a Party and collectively as the Parties.

WITNESSETH

WHEREAS, Black Hawk owns several water rights that, from time to time, are available to be leased, including certain water rights that are delivered through the Vidler Tunnel (the "Water Rights");

WHEREAS, should the current drought conditions continue into the spring and summer of 2021, the County seeks a supplemental water supply to be available on an as-needed basis; and

WHEREAS, Black Hawk desires to make available for lease, and the County desires to lease, water available under the Water Rights.

NOW, THEREFORE, for and in consideration of the mutual covenants and agreements contained herein, the receipt and sufficiency of which are hereby acknowledged, and intending to be legally bound, the County and Black Hawk agree as follows:

1. Lease. Black Hawk hereby leases to the County up to 30.0-acre feet of fully consumable water on an as-available and as-needed basis under the Water Rights between June 1 and August 31, 2021, subject to the terms and conditions set forth in this Agreement ("Leased Water").

2. Price; Payment Terms. The County shall pay to Black Hawk up to $75,000, which is based on a water lease rate of $2,500 per acre foot. The County shall pay Black Hawk for any deliveries of the Leased Water in accordance with paragraph 3 of this Agreement.

3. **Delivery**. Black Hawk shall deliver the Leased Water as follows: The County shall notify Black Hawk on or before June 1, 2021 of the amount of Leased Water the County requests be delivered. Black Hawk and the County shall coordinate and agree on the schedule on which the requested delivery will occur. Black Hawk may deliver the Leased Water to any point in the Clear Creek drainage at or upstream of the confluence of Clear Creek and the West Fork of Clear Creek where Black Hawk has water available under its Water Rights ("Places of Delivery"). The Leased Water will be considered delivered upon Black Hawk's release of water to the Places of Delivery. Black Hawk may, in its sole discretion, make deliveries from any source of water it wishes so long as the water delivered is fully consumable. Upon delivery, the County shall have the right to use and reuse any delivered water to extinction. The Parties acknowledge and agree that Black Hawk shall have the sole right and the sole discretion to determine the location that it intends to use for delivery purposes. Such delivery may include booking over of Black Hawk's water stored in Green Lake into the County's account. The Parties expressly acknowledge and agree that Black Hawk has made no representation or warranties regarding the quality of or fitness for any use of the water delivered hereunder. The Parties further acknowledge and agree that the County has no obligation to take delivery of any water under this Agreement, other than water deliveries requested by the County pursuant to this paragraph.

4. **Payment.** Once water is delivered in accordance with the terms of paragraph 3, the County shall pay for that amount of delivered Leased Water at the water lease rate set forth in paragraph 2 of this Agreement, which will be calculated by multiplying the amount (in acre-feet) of Leased Water that Black Hawk actually delivered by $2,500. Black Hawk shall bill the County in September 2021 for water delivered pursuant to this Agreement. Payment shall be made to Black Hawk within 60 days of the date Black Hawk mails, or otherwise delivers, the statement to the County.

5. **Approvals**: The County is responsible for obtaining all approvals required by the State Engineer, Division 1 Engineer, and/or Water Court, as well as all other necessary approvals required for the lease of water contemplated hereunder. Black Hawk will cooperate with the County and the Water Commissioner as necessary to facilitate the administrative approval process.

6. **Assessments of Losses**. The County shall be solely responsible for all conveyance, transport, and use of the Leased Water downstream of the Places of Delivery. The County will pay all transit losses assessed by the Water Commissioner.

The County bears all risk of loss after Leased Water has been released in accordance with paragraph 3 hereof at one or more of the Places of Delivery.

7. Term. This Agreement is effective as of the date set forth above; however, Leased Water will be available for delivery under this Agreement between June 1 and August 31, 2021. Should the Parties desire to deliver Leased Water after August 31, 2021, the term of this Agreement may be extended through a subsequent writing of the Parties.

8. Failure to deliver water. If, for any reason Black Hawk is temporarily unable to satisfy its obligations for delivery of water to the County under this Agreement for any period of time, the Parties agree that any damages resulting to the County therefrom shall be limited to a pro rata refund of any payments made by the County under this Agreement. Black Hawk shall not be liable for any consequential, exemplary or punitive damages for failure to deliver water pursuant to this Agreement, and other than a pro rata refund of the total lease payment, no other damages may be asserted or paid by Black Hawk to the County as a result of the inability to delivery water. The County expressly waives any and all other claims of damages.

9. Assignment. This Agreement may not be assigned by the County without the prior written consent of Black Hawk, which consent may be withheld in Black Hawk's sole discretion. The County shall provide Black Hawk with notice of any intention to assign this Water Lease to any other third party.

10. No Third-Party Beneficiaries. This Agreement is intended for the benefit of the Parties hereto, and is not for the benefit of, nor may any provision hereof be enforced by, any other person.

11. Counterparts. This Agreement may be executed in any number of counterparts, each of which will be an original upon execution and delivery to the other party.

12. Governing Law. This Agreement and its application shall be governed by the laws of the State of Colorado.

IN WITNESS WHEREOF, the Parties have entered into this Agreement as of the date and year first above written.

{Signature page follows.}

CITY OF BLACK HAWK

By: _____
David D. Spellman, Mayor

Date: _____

Attest:

_____
Clerk & Recorder

THE BOARD OF COUNTY COMMISSIONERS
OF THE COUNTY OF CLEAR CREEK

By: _____
Keith Montag, County Manager

Date: _____

Attest:

_____
Clerk & Recorder

RESOLUTION 9-2021

A RESOLUTION CONDITIONALLY APPROVING A SITE DEVELOPMENT PLAN AND A CERTIFICATE OF ARCHITECTURAL COMPATIBILITY FOR HAWK'S LANDING LOCATED AT 990 MINERS MESA ROAD

NOTICE OF PUBLIC HEARING

Notice is hereby given that the City of Black Hawk Board of Aldermen shall hold a public hearing concerning a request for a Site Development Plan and Certificate of Architectural Compatibility on property described in Exhibit A and generally located at 990 Miners Mesa Road, Black Hawk, Colorado, pursuant to the City of Black Hawk zoning ordinance.

The public hearing is to be held before the City of Black Hawk Board of Aldermen on Wednesday, March 17, 2021, at 3:00 p.m. or as soon as possible thereafter. The City of Black Hawk is hosting virtual City Council meetings via Zoom in response to the Coronavirus COVID-19 until further notice. There are no physical meetings at this time. This meeting will accommodate public engagement via a Zoom URL and/or phone number to join. Please go to the City of Black Hawk's website for further instructions prior to the meeting.

ALL INTERESTED PARTIES MAY ATTEND

Melissa A. Greiner, CMC
City Clerk

EXHIBIT A

LOT 1, BLOCK 1, MINERS MESA SUBDIVISION FILING NO. 4

CITY OF BLACK HAWK
REQUEST FOR COUNCIL ACTION

SUBJECT: Site Development Plan and Certificate of Architectural Compatibility for Hawk's Landing Airstream campground.

RECOMMENDATION: Staff recommends the following motion to the Mayor and Board of Aldermen:

MOTION TO APPROVE Resolution No. 9-2021, a Resolution recommending continuation to the March 24, 2021, City Council Meeting.

SUMMARY AND BACKGROUND OF SUBJECT MATTER:
On behalf of the property owner (Club Vista Properties II, LLC), Dalton Horan of Ventana Capital Inc. and Jason Krall of Rick Engineering have applied for the review and approval of a Site Development Plan and Certificate of Architectural Compatibility for the Hawk's Landing Airstream campground proposed at 990 Miners Mesa Road. The proposed development includes 50 permanent Airstream trailers, a check-in building, a storage shed, an Airstream bar, and associated campsite amenities. Refer to the Staff Report included with this Request for Council Action.

AGENDA DATE:	March 17, 2021
WORKSHOP DATE:	N/A
FUNDING SOURCE:	N/A
DEPARTMENT DIRECTOR APPROVAL:	[X]Yes [ ]No
STAFF PERSON RESPONSIBLE:	Cynthia L. Linker CP&D Director
DOCUMENTS ATTACHED:	Public Hearing Notice RFCA Staff Report Attachments 1 thru 4
RECORD:	[ ]Yes [X]No
CoBH CERTIFICATE OF INSURANCE REQUIRED	[ ]Yes [X]No

CITY ATTORNEY REVIEW: [ ]Yes [X]N/A

SUBMITTED BY:

Cynthia L. Linker, CP&D Director

REVIEWED BY:

Stephen N. Cole, City Manager

Vincent Harris, AICP, Baseline Corporation

Staff Report

CITY OF BLACK HAWK
PLANNING / LAND USE

Date prepared: March 3, 2021
Meeting Date: March 17, 2021

STAFF REPORT:	**Site Development Plan & Certificate of Architectural Compatibility: Hawk's Landing Airstream Park**
For:	City Council
Project:	P-20-13c
Property Address:	990 Miners Mesa Road, Black Hawk, CO 80422
Applicants:	Dalton Horan – Ventana Capital, Inc. Jason Krall – Rick Engineering
Zoning:	Commercial/Business Services (C/BS)
Prepared by:	Julie Esterl - Baseline Corporation
Approved by:	Vincent Harris, AICP - Baseline Corporation
Reviewed by:	Cynthia Linker, CP&D Director

BLACK HAWK ®

BASELINE Engineering · Planning · Surveying

BACKGROUND:

On February 7, 2021, the City of Black Hawk received an application request for a Site Development Plan (SDP) and Certificate of Architectural Compatibility (COAC) from Dalton Horan of Ventana Capital, Inc. and Jason Krall of Rick Engineering on behalf of the property owner Club Vista Properties II, LLC. The request involves the development of an Airstream RV campground on Lot 1 Block 1 Miners Mesa Subdivision Filing No. 4 (currently existing subdivision – see Figure 1). The proposed campground includes 50 permanently installed Airstream trailers that will be available for nightly rental. The campground will be located on the western portion of the property that will be known as Lot 1 Black Hawk Park – see Figure 2. The Black Hawk Park subdivision plat was presented to the Black Hawk City Council for review on February 24, 2021. Details of the Subdivision Improvement Agreement for Black Hawk Park are being finalized with the intention that the plat may be approved at the March 17, 2021 Black Hawk City Council meeting with needed completion of the land owners' signature in advance on the Agreement.

ZONING:

The property is zoned Commercial/Business Services (C/BS). A campground is a Special Review Use in the C/BS zone district. The property was issued a Special Review Use permit by the City Council for a campground on October 14, 2020 by Resolution No. 65-2020.

REQUEST:

The applicants are requesting review and approval of a Site Development Plan (SDP) and associated Certificate of Architectural Compatibility (CAOC) in order to develop the property with 50 permanent Airstream trailers, a check-in building, an Airstream bar, lawn games, and campsite amenities including outdoor seating, fire pit, and grill. See Figures 3 – 5.

The proposed uses including the 50 camp sites, office, and outdoor bar require parking for each individual use. The proposed development does not provide the adequate number of required parking spaces based on the existing code; therefore the applicant has requested a parking variance. The variance will be heard at the March 24, 2021 City Council meeting, and resolution of the parking requirement will be condition of SDP approval.

Development of the site will require removal of the existing asphalt, grading, water line extension, sewer line extension, gas and electric installation, as well as construction of the interior drive aisles, parking areas, and construction of the check-in building, storage shed and pad sites for each Airstream trailer. The site plan submittal was reviewed by staff, marked with comments for revisions and returned to the applicant. Resolution of staff comments will be a condition of SDP approval.

Figure 1: Location Map

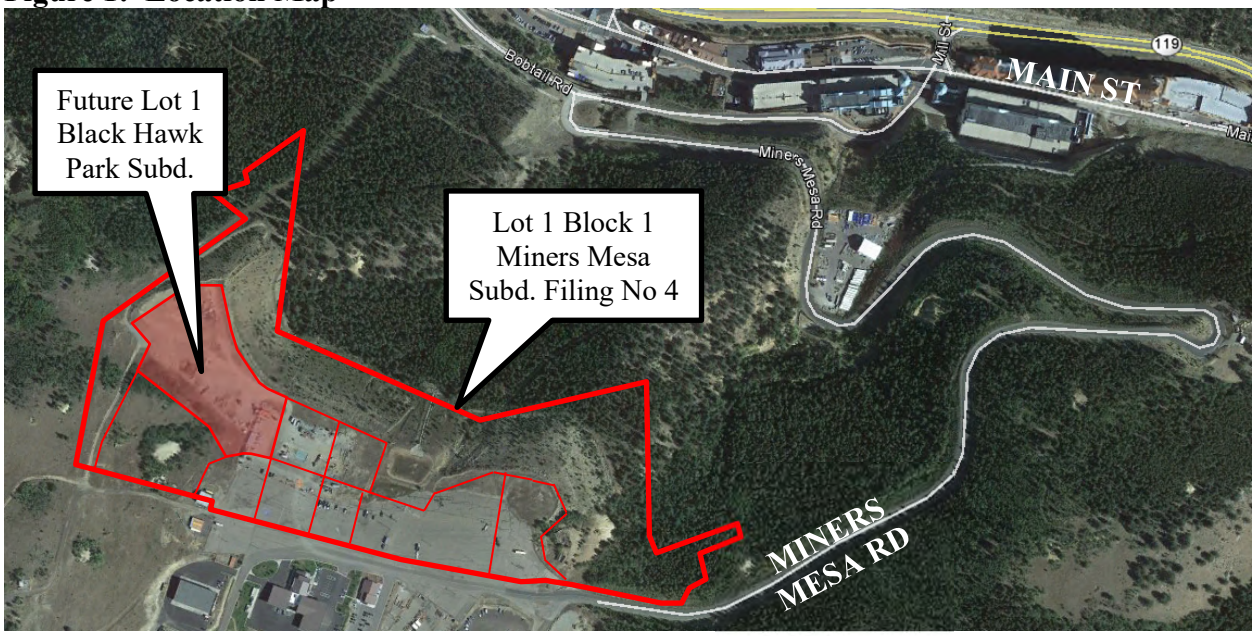


Figure 2: Proposed Black Hawk Park Subdivision

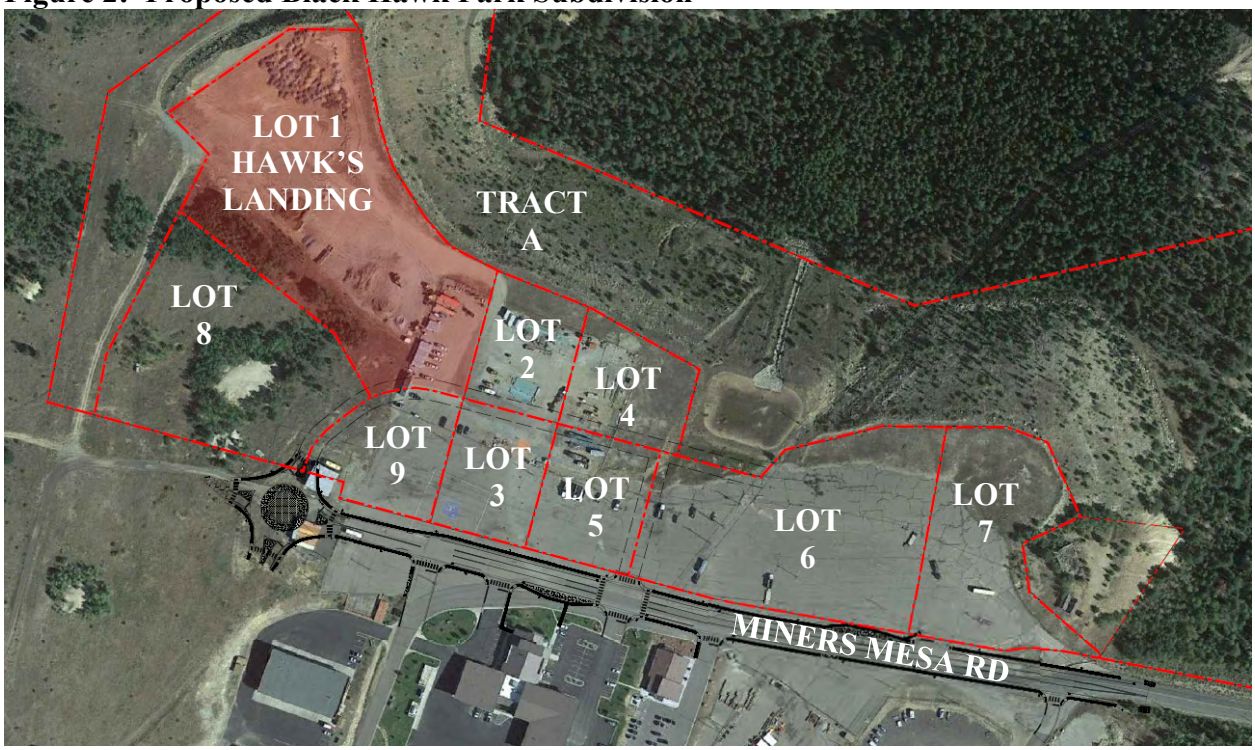


Figure 3: Site Plan

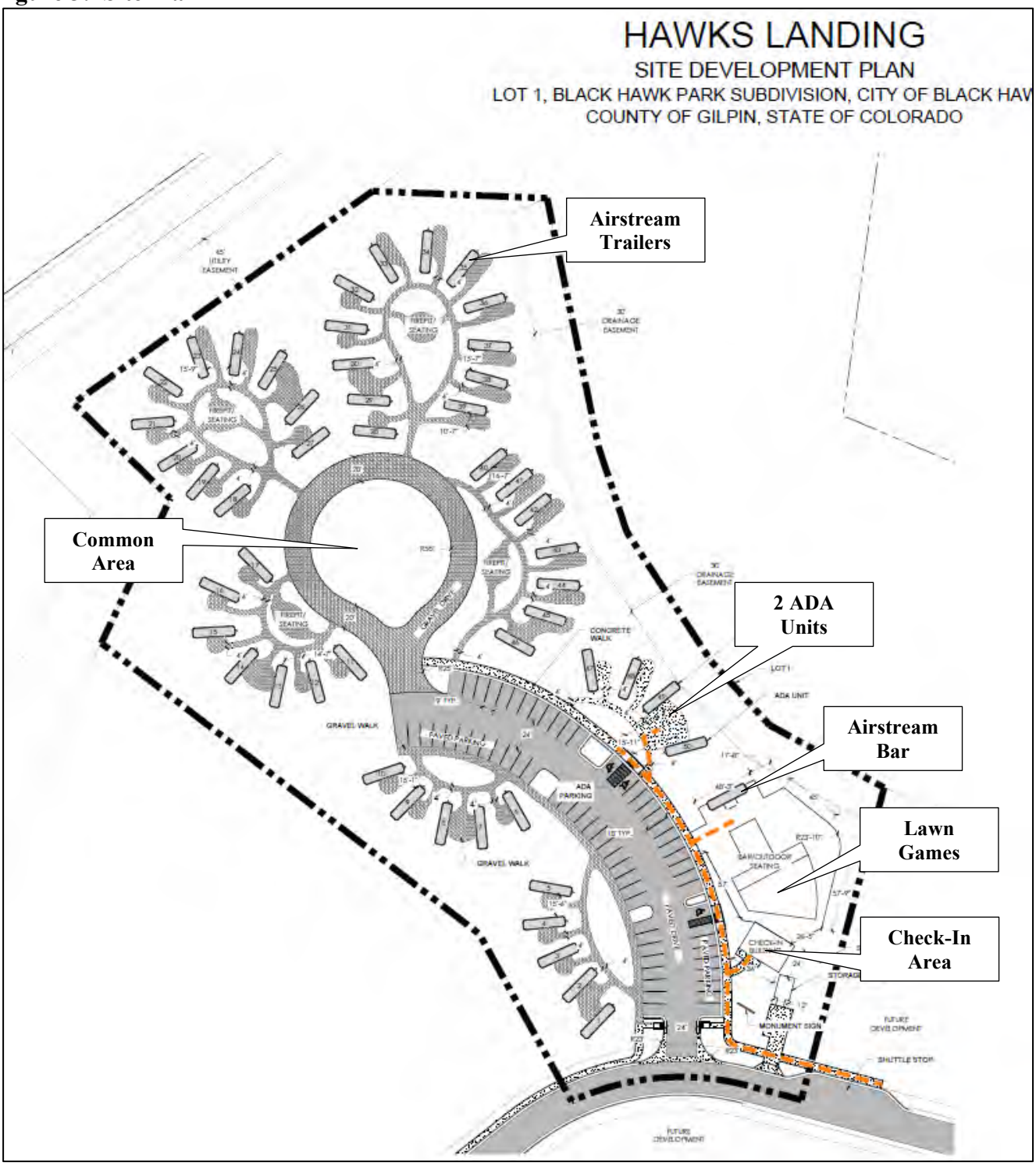


Figure 4: Site Detail

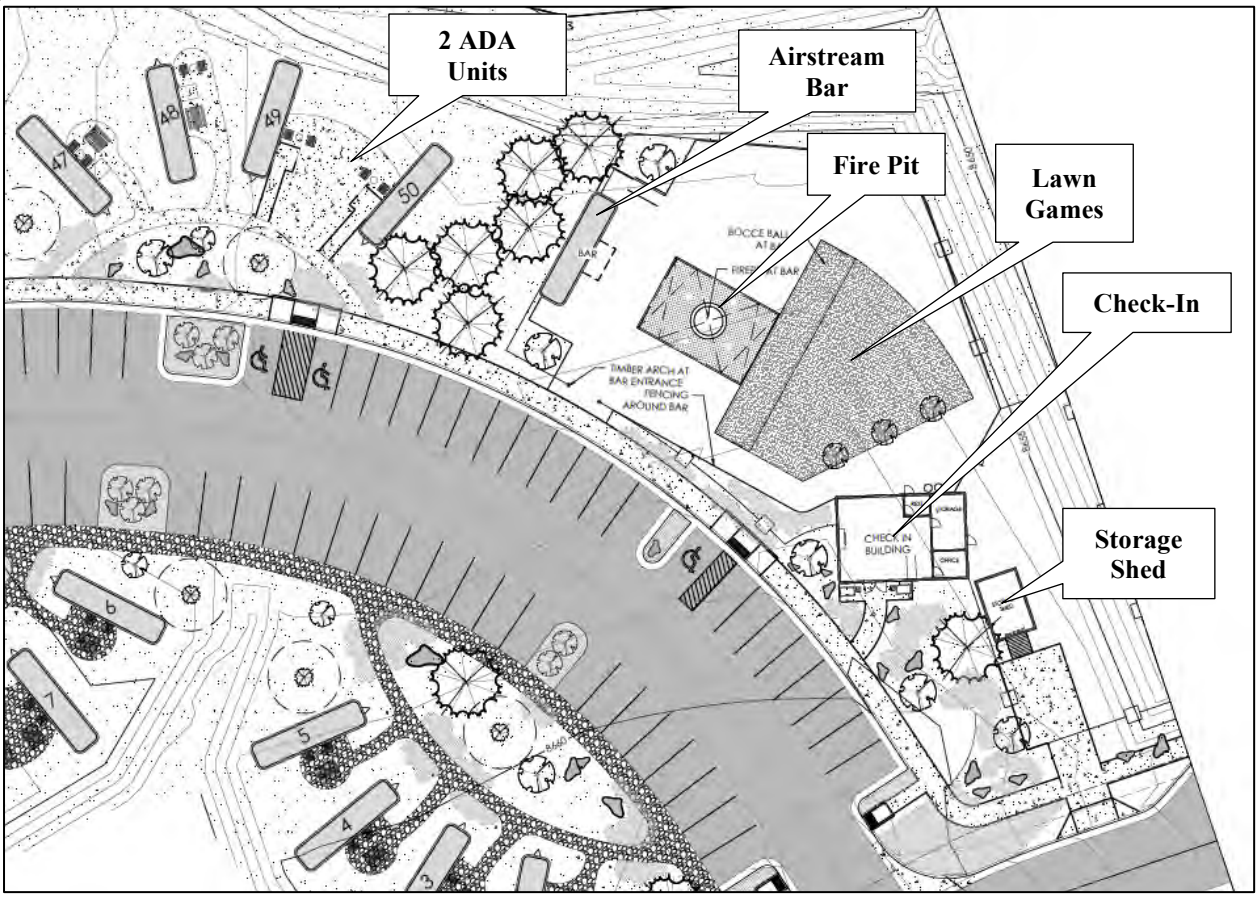


Figure 5: Site Amenity Concepts

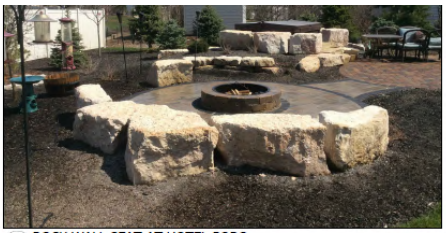
1 BAR AND DECK CONCEPT

2 BAR CONCEPT

3 FIRE PIT AT HOTEL PODS

7 FENCING AROUND BAR

8 FIREPIT AT BAR



9 ROCK WALL SEAT AT HOTEL PODS

Applicable City of Black Hawk Regulations

At the time of initial writing and preparation of this staff report, staff has just sent back to the applicant many comments (on Monday March 1, 2021) related to the first submittal of the Site Development Plan Application materials. The applicant has not been able to read, evaluate and respond to the staff comments and staff expects to get a resubmittal back from the applicant the week of March 8, 2021. Once received, staff will be able to see how many corrections and expectations were appropriately addressed. Staff will need to provide a written and verbal update on the application materials and resubmittal items at the City Council meeting on March 17, 2021. Following is the information we can currently provide for some background.

Excerpts from:

City of Black Hawk
Zoning Code
Chapter 16 – Zoning

OFF STREET PARKING:

Sec. 16-263. *- Number of parking spaces required.*

(a) All uses shall, at a minimum, provide the number of off-street parking spaces listed below. Buildings with more than one (1) use shall provide parking required for each use.
Hotels and motels: 1.12/room, suite/individual exit
General office: 1/250 sf
Dining & drinking: 1/75 sf
Staff comment: When parking is calculated for each individual use, a total of eighty-eight (88) spaces are required for the proposed development. Sixty-six (66) spaces have been provided on the submitted site development plan. A variance for a reduction in parking spaces is required, and the applicant has submitted the request. The variance request will be heard at the March 24, 2021 City Council meeting and a separate staff report will be prepared to evaluate the variance request. Either an approved variance or the addition of the other 22 required parking spaces will be a condition of SDP approval.

SITE DEVELOPMENT PLAN:

Sec. 16-362. *Site development standards and procedures for establishing vested property rights.*

16-362(b). *General Requirements.*

(6) No site development plan will be approved unless all components of the proposed development comply with the Black Hawk Zoning and Subdivision Ordinances and all other applicable ordinances.
Staff comment: The SDP was reviewed against the development standards for the C/BS zone district and other applicable sections of the Zoning Ordinance. Staff made comments for revisions which will be required as a condition of approval.

(8) No vested rights shall be created except by a site specific development plan approved by the Board of Aldermen. If the applicant wishes the approval of the site development plan to create vested property rights pursuant to Article 68 of Title 24, C.R.S., the plan shall include a statement that it is being submitted for designation as a site specific development plan. Failure to include such statement or to

comply with any other condition of this Chapter regarding site specific development plans shall result in no vested property rights being created by the approval of the site development plan. Notwithstanding anything herein to the contrary, vested property rights may be created by a development agreement between the City and the applicant or landowner.
Staff comment: The applicant will include the vested property rights statement on the cover of the site development plan as requested in the review comments provided by staff.

Sec. 16-362(c). *Application and site development plan submittal requirements.*
Staff comment: Section 16-362(c) outlines the required submittal items that must accompany an application for a Site Development Plan. The submitted SDP will contain the necessary submittal materials once corrections and revisions per staff comments are finalized.

CERTIFICATE OF ARCHITECTURAL COMPATIBILITY:

Section 16-368. (a) (3) *Any person seeking to modify the exterior of, add to, or construct a new building shall be subject to the following procedures. Any such renovation, construction or demolition shall be subject to the City's design standards.*

Section 16-368. (a) (5) *The City shall not issue a building permit or site development plan for any of the following activities until a Certificate of Architectural Compatibility ("COAC") has been issued for the project.*

a. *Construction of a new building, structure or improvement;*
b. *Alteration or reconstruction of, or addition to, the exterior of any improvement;*
c. *Demolition of any improvement;*
d. *Construction or erection of or addition to any improvement upon any land located within the City; or*
e. *Excavations requiring an excavation permit.*

Section 16-368. (e) (3) *Except for applications seeking a COAC for demolition of a structure, which review is controlled by the criteria in subsection (4) below, in considering the issuance of a COAC, the City shall consider the following:*

a. *All plans, drawings and photographs as may be submitted by the applicant;*
Staff Comment: The applicant has submitted plans, and staff provided comments containing corrections and revisions that are included with this Staff Report. Resubmittal of the SDP including the revisions requested by staff is a condition of approval.

b. *If a public hearing is required, any information presented at a public hearing held concerning the proposed work;*
Staff Comment: A representative of Ventana Capital Inc. will be available at the City Council meeting to provide additional information if needed.

c. *The purpose of this Chapter;*
Staff Comment: The purpose of this Chapter is to ensure that all development meets the Zoning Regulations of the City of Black Hawk. Once the requested revisions have been finalized and reviewed by staff for compliance, staff believes the SDP will meet all standards of the Zoning Ordinance.

d. *Compliance with this Code and the payment of all fees required by this Code;*
Staff Comment: The applicants have and will continue to pay all necessary fees required by the ordinances of the City.

e. *The effects of the proposed work upon the protection, enhancement, perpetuation and use of the City which cause it to possess a special character or special historical or aesthetic interest or value; and*
Staff Comment: The site design, lighting, and architecture of the development fits in with the historic character of the City and the Goals in the City Comprehensive Plan in the Miner's Mesa District section by including diversified development that compliments gaming within the city. The proposed development will not affect the historic or aesthetic interest of the site or the district.

f. *Compliance with the City's residential or commercial design standards, as appropriate, including, but not limited to, reference to the historical and architectural style, the general design, arrangement, texture, materials and color of the development, building or structure in question or its appurtenance fixtures; the relationship of such features to similar features of the other buildings within the City the position of the building, structure, park or open space in relation to public rights-of-way and to other buildings and structures in the City.*
Staff Comment: The proposed development meets the City's Commercial Design Guidelines. A further review of the Design Guidelines is provided below.

COMPLIANCE WITH COMMERCIAL DESIGN GUIDELINES:

In evaluating the appropriateness of the proposal and compliance with the City of Black Hawk's Commercial Design Guidelines, staff focused on the following sections for the Guidelines:

Section 4 Site Design
- *C. Topography and Grade*
- *G. Parking and Parking Structures*
  - *I. Surface Parking Lots*
- *H. Landscaping*
- *N. Pedestrian Ways*
- *Q. Utility Infrastructure*

Section 5 Building Design
- *C. New Buildings*
  - *II. Building Form, Mass and Proportion*
  - *VI. Exterior Building Design*
  - *XI. Entrances*

Staff Comment: It is Staff's conclusion that the proposal will meet the Commercial Design Guidelines once we see the resubmittal of the plans from the applicant.

STAFF SUMMARY:

Staff from Baseline Corporation has evaluated the information provided by Dalton Horan and Jason Krall for this project. The City of Black Hawk Municipal Code allows for land development and new construction with the approval of a Site Development Plan and Certificate of Architectural Compatibility. Staff from Baseline Corporation recommends that the Site Development Plan and the Certificate of Architectural Compatibility be conditionally approved. The proposed development is consistent with the Zoning Ordinance, and is expected to meet the Commercial Design Guidelines adopted by the City of Black Hawk once staff sees the resubmittal items requested.

In summary, Staff recommends that a Certificate of Architectural Compatibility for Hawks Landing Airstream Park be granted, subject to the following conditions:

1. All required revisions to the SDP/COAC plan set and reports submitted with the application shall be prepared in accordance with staff revisions and all engineering items need to be acceptable to the Black Hawk Public Works Director, and the Planning and Zoning items need to be acceptable to the Community and Development Planning Director. Once all is found acceptable, staff will provide a compliance statement to the applicant and inform the City Council of such; and
2. A parking variance must be approved or the additional 22 parking spaces or the 22 additional parking spaces must be shown on the site plan in accordance with the Zoning Ordinance for off-street parking.

FINDINGS:

City Council may *approve, conditionally approve, or deny* a Site Development Plan and Certificate of Architectural Compatibility. To support this proposal, the following findings can be used:

The proposed Airstream campground Site Development Plan and Certificate of Architectural Compatibility, including revisions required by staff, is expected to meet the intent of the criteria outlined in Section 16-362 (Site development standards) and Section 16-368 (City Council design review and compatibility process) of the Municipal Code and those found in Black Hawk's Commercial Design Guidelines as noted and evaluated in the staff report presented to City Council.

RECOMMENDATION:

Staff recommends the following motion to the Mayor and Board of Aldermen:

MOTION TO APPROVE Resolution No. 9-2021, a Resolution recommending continuation to the March 24, 2021, City Council Meeting.

ATTACHMENTS:

1. Land Development Application
2. Reports Required Revisions
3. SDP/COAC Plans Required Revisions
4. Construction Improvement Plans Required Revisions

Applicant's Submittal

ATTACHMENT 1

LAND DEVELOPMENT APPLICATION

FORMAL LAND USE APPLICATION

City of Black Hawk
Community Planning and Development
211 Church Street, P.O. Box 68, Black Hawk, CO 80422
Phone: 303-582-0615 or www.cityofblackhawk.org

COMPLETE ALL BOXES – Incomplete applications will not be processed

Applicant Name: **Dalton Horan**	Applicant Address & Zip Code: **9801 East Easter Avenue, Centennial, CO 80112**
Applicant Phone: **303-946-8012**	Applicant Email: **dahoran@ventanacap.com**
Property Owner Name: **Club Vista Properties II, LLC**	Property Owner Address & Zip Code: **9801 East Easter Avenue, Centennial, CO 80112**
Property Owner Phone:	Property Owner Email:
Project Name: Hawk's Landing	Project Description: **SDP and COAC for commercial development**
Project Address or Location: **830 Miners Mesa Rd., Black Hawk, CO 80422**	Project Parcel Number: **R013116**
Existing Subdivision, Lot & Block: **Lot 1, Black Hawk Park Subdivision**	Existing Planned Unit Development: **NA**
Existing Property Size: **5.4** ☒ Acres ☐ Sq. Ft.	Existing Building Size in square feet: **NA**
Existing Zoning: **C/BS**	Proposed Zoning: **C/BS**
Existing Use: **vacant land**	Proposed Use: **RV park with check-in and bar**

ITEMS REQUIRED WITH FORMAL LAND USE APPLICATION SUBMITTAL:

- This completed & signed Formal Land Use Application form
- All Items indicated/checked on the Formal Land Use Application Checklist that is attached
- Formal Land Use Application Deposit in the amount of $ **5000.00** .

APPLICATION AND FEE AGREEMENT:

The Black Hawk Adopted Fee Schedule and Section 16-370 of the Black Hawk Municipal Code establishes the requirement for applicants to pay fees to cover the costs the City may incur by having City approved consultants evaluate and process applications.

I, as the applicant, hereby certify that I believe to the best of my knowledge that all information supplied with this application is true and accurate and that consent of the property owner listed above, without which the requested action cannot lawfully be accomplished, has been granted. Permission is also hereby granted to the City of Black Hawk staff and their consultants to physically enter upon and inspect the subject property and take photographs as necessary for preparation of the case. In addition, by signing this application I am agreeing that I am authorized to sign on behalf of the property owner, or business-owner and commit to deposit the sum of $ **5000** to be used to pay the City's expenses to review, evaluate and process the Application ("Deposit"), which funds may be used to pay the cost of third-party consultants plus fifteen percent (15%) of such actual costs for City staff administrative costs and supplies. **I understand that if Formal Land Use Application costs exceed the amount collected, the City will invoice me, as the applicant, for the additional consultant cost plus a 15% administrative fee.** I additionally agree that I am not acquiring any rights by virtue of the payment of the City's expenses.

Submit Pre-Land Use Applications and required submittal items to: cpdinquiry@cityofblackhawk.org

Applicant's Signature Dalton Horan Date 2/5/2021

FOR CITY USE ONLY: Received by: Date:

RICK
ENGINEERING COMPANY

February 9, 2021

City of Black Hawk
Community Planning & Development
211 Church Street
Black Hawk, CO 80422

Subject: Hawk's Landing Airstream Park – Site Development Plan (SDP) and Certificate of Architectural Compliance (COAC) Narrative

To whom it may concern:

Rick Engineering Company (RICK) is pleased to submit the attached SDP and COAC package for the Hawk's Landing Airstream Park the on behalf of Ventana Capital, Inc. (the Applicant).

The Hawk's Landing Airstream Park is located on Lot 1 of the Black Hawk Park property and is located within the City of Black Hawk off Miner's Mesa Road. The property is approximately 48 acres in area. The property is currently Zoned Commercial/Business Services (C/BS) and has an approved Special Review Use (SRU) permit to allow for a Recreational Campground and an Indoor Shooting Range. The City of Black Hawk comprehensive plan designates this property as Low Intensity Mixed Use and does not fall within a defined Overlay District.

The SDP and COAC applications for the Hawk's Landing development on Lot 1 include grading, utility infrastructure, hardstand, landscaping, and buildings. As the Lot 1 development is the first of the Black Hawk Park subdivision to be developed, the SDP application also contains the associated and shared infrastructure for the Black Hawk Park Development, including overlot grading for all 9 lots within the development, the central access road with connections off Miners Mesa Road, shared stormwater infrastructure for the development, and a shared private sewer system.

This intention of this SDP and COAC application is twofold; provide the grading and infrastructure to create developable commercial pads for the 9 lots of the Black Hawk Park subdivision and to provide for the detailed site grading, infrastructure, landscaping and architecture for the development of the Hawk's Landing Airstream Park located on Lot 1. The Hawk's Landing development will consist of the following main elements:

- Fifty Airstream RV units permanently located onsite for rental
    - RV units will have their own designated patio spaces, as well as communal landscaping and gathering with shared seating, gas fire pits and barbeques
- Check-in facility and caretakers office
- Airstream Bar with outdoor beer garden and amenities area

Please refer to the SDP, final Civil Plans, and COAC documents for additional information.

Included with this cover letter and written description, our submittal includes the following documents for your review:

- Application Form
- Location Map
- Title Commitment
- Warranty Deed
- Letter of Authorization
- Site Development Plan (SDP)
- Geotechnical report
- Traffic Addendum Letter
- Drainage Study Addendum
- SWMP/GESC Report
- GESC Plans
- Final Civil Plans
- COAC Plans
- Parking Variance Request

If you have any questions regarding the documents provided with this application, please contact us at 303-537-8020.

Sincerely,
RICK ENGINEERING COMPANY

Jason Krall, P.E.
Principal Project Engineer

ATTACHMENT 2

REPORTS REQUIRED REVISIONS

City of Black Hawk – Community Planning & Development
211 Church Street ● Black Hawk ● CO 80422
(303) 582-0615

LAND USE REVIEW
SITE DEVELOPMENT PLAN &
CERTIFICATE OF ARCHITECTURAL COMPATIBILITY

February 26, 2021

Dalton Horan
Ventana Capital, Inc.
9801 E. Easter Ave.
Centennial, CO 80112
303-946-8012
dahoran@ventanacap.com

RE: P-20-13c
Site Development Plan & Certificate of Architectural Compatibility (SDP/COAC) for Hawks Landing Airstream Park

Dear Dalton,

The City of Black Hawk's Development Review Committee (DRC) agencies, including City staff and consultants, have reviewed the documents submitted with your SDP/COAC application. The review was performed via Bluebeam software and the comments were all made directly on the documents you provided. PDF documents have been prepared for your reference and use in making correction/additions to the plans and reports, and can be found at the following Dropbox link: https://www.dropbox.com/sh/g1qgd0x6r9gyom7/AAC_Yng7tLyqfV9cfvalXXzLa?dl=0

The comments are color coded according to the agency that provided them. The reviewer contact info and comment color are provided in the chart below. Please feel free to reach out directly to any of the reviewers with any questions.

Building Review SAFEbuilt	Dan Wester Building Official for Black Hawk 11701 Community Center Dr Northglenn, CO 80233 bmichalak@safebuilt.com 303-450-8814 Barry Kramer Plan Review Manager for Black Hawk 11409 Business Park Circle Ste 320 Firestone, CO 80504 bkramer@safebuilt.com 303-774-1388 ext. 103

Water City of Black Hawk Water Department 987 Miners Mesa Road Black Hawk, CO 80422	James Ford Senior Civil Engineer/Water Resources jford@cityofblackhawk.org 303-582-2237
Engineering Consultant Baseline Corporation 112 North Rubey Drive Suite 210 Golden, CO 80403	Noah Nemmers, P.E. Civil Engineering Manager noah@baselinecorp.com 303-940-9966 ext. 207 Jordan Piaskowy, P.E. Project Manager jordan.piaskowy@baselinecorp.com 303-940-9966 ext. 209
Planning Consultant Baseline Corporation 112 North Rubey Drive Suite 210 Golden, CO 80403	Vince Harris, AICP Planning Director vince@baselinecorp.com 303-202-5010 ext. 217 Julie Esterl Principal Planner julie.esterl@baselinecorp.com 303-202-5010 ext. 222
Survey Consultant Baseline Corporation 4007 S. Lincoln Ave, Suite 405 Loveland, CO 80537	Aaron Demo, PLS Survey Division Manager aaron@baselinecorp.com 970-353-7600
Public Works City of Black Hawk Public Works Department 987 Miners Mesa Road Black Hawk, CO 80422	Tom Isbester Public Works Director tisbester@cityofblackhawk.org 303-582-1324
Fire City of Black Hawk Fire Department 137 Clear Creek Street, Suite 200 Black Hawk, CO 80422	Christopher Woolley Fire Chief/Emergency Manager CWoolley@cityofblackhawk.org 303-582-2235

Planning and Permitting City of Black Hawk Community Planning and Development 211 Church Street Black Hawk, CO 80422 Phone: (303) 582-0615	Cynthia Linker Community Planning & Development Director clinker@cityofblackhawk.org 303-582-0615 Ashley Wilson Development Services Coordinator awilson@cityofblackhawk.org 303-582-2223
Sanitation Black Hawk /Central City Sanitation District 135 Clear Creek Street, 2nd Floor Black Hawk, CO 80422	Lynn Hillary District Administrator lynn@bhccsd.com 303-582-3422

Please make corrections to the plans and reports as indicated and respond to each comment directly on the marked up PDF documents. Resubmit revised reports and plans with changes clouded. Please also resubmit the marked up reports and plans with your response next to each comment.

Upon resubmittal, Baseline will refer the updated submittal to the Development Review Committee agencies that provided comment. There can be no final approval on this submittal until all comments and action items are addressed and resolved.

Please let me know if you have any questions regarding this referral response letter or next steps. Referral Agency email addresses and phone numbers have been provided within this letter so that you may contact the referral agencies directly if you have questions.

Regards,

Julie Esterl, Principal Planner
Baseline Corporation
112 N. Rubey Drive, Suite 210
Golden, Colorado, 80403
303-202-5010 ext. 222
julie.esterl@baselinecorp.com

Attachments: 05 P-20-13c SDP_1st review
06 P-20-13c COAC_1st review

07 P-20-13c Geotechnical Report_1st review
08 P-20-13c TripGenMemo for Lot 1_1st review
09 P-20-13c Final Improvement Plans_1st review
10 P-20-13c Final Drainage Addendum_1st review
11 P-20-13c Grading-Erosion Control Report_1st review
12 P-20-13c Grading-Erosion Control Plan_1st review
13 P-20-13c Parking Variance Application_1st review
Details 2 to 11 June 2019
Stolfus Plat Comments

CC: Jason Krall, Rick Engineering
Bryan Horan, Ventana Capital, Inc.
Vince Harris, AICP Baseline Corporation
Cynthia Linker, City of Black Hawk CP&D
Ashley Wilson, City of Black Hawk CP&D
Tom Isbester, Public Works Director
Jim Ford, Senior Civil Engineer
Chris Woolley, Fire Chief
Dan Wester, SAFEBUILT
Barry Kramer, SAFEBUILT
Lynn Hillary, BHCC Sanitation District
Noah Nemmers, PE Baseline Corporation
Jordan Piaskowy, PE Baseline Corporation
Aaron Demo, PLS Baseline Corporation
Matt Brown, Stolfus

RICK
ENGINEERING COMPANY

February 7, 2021

City of Black Hawk Public Works
460 Gregory St
Black Hawk, CO 80422

SUBJECT: BLACK HAWK PARK FINAL DRAINAGE REPORT ADDUNDUM ← Addendum
HAWK'S LANDING (LOT 1) OF BLACK HAWK PARK SUBDIVISION

To Whom it May Concern:

The purpose of this addendum is to provide an update to the Black Hawk Park Final Drainage Report prepared by Rick Engineering, date November 30, 2020 (original drainage report). The original drainage report defines the drainage system requirements and provides design calculations to support the proposed development located on Miners Mesa Road, in the City of Black Hawk in Gilpin County, Colorado. This addendum is an update to original drainage Basin B only; all other basins within the original drainage report will remain as stated in the original drainage report.

Hydrology

The overall basin size of the original Basin B is noted in the original report as 26.7 acres. The basin has been updated to accommodate changes to the design of Miners Mesa Road and has been reduced in size to 26.3 acres. Sub-basin delineation has been performed for original Basin B to account for the known development uses and updated design of central infrastructure. Refer to the appendix for the post development condition sub-basin delineation map. Total peak flows have increased from 10.07cfs to 10.45cfs and 47.3cfs to 49.1cfs for the 5-year and 100-year events respectively.

Stormwater Conveyance Facilities

Culverts have been sized to convey minor design storm peak flows in a just full condition, and to convey the major design storm peak flows without overtopping their embankments. Inlets and pipes have been sized to convey minor design storm peak flows without surcharging, and major design storm peak flows with the HGL a minimum of 1' below finished ground surface. Open channels and swales have been designed to convey the major design storm peak flows with a minimum of 1' of freeboard, except where noted for minor channels. Refer to the appendix for culvert, inlet and channel calculations.

Stormwater Storage Facilities

Detention Basin EDB-1 serves the entirety of original Drainage Basin B. EDB-1 and the associated outlet structure design was updated utilizing the UDFCD Detention Basin Design Workbook spreadsheet (MHDF-Detention Version 4.02) for all return periods to mitigate for the additional impervious area in the proposed condition. Please refer to the appendix for supporting detention calculations.

Conclusion

This addendum has been prepared in support of the original drainage design for the Black Hawk Park proposed development and has been provided to show that the project is consistent with what was assumed in the original drainage report for the overall project and provide further detail of the design elements. There will be no adverse impacts to the downstream drainage facilities.

If you have any questions, please contact me directly at 303-537-8020.

Sincerely,

RICK ENGINEERING COMPANY

Robert K. Fitch, P.E.
Associate Principal

dont see any details for the outlet structure that is called out on the plans including orifice plates and sizes.
appears that the detention pond is of adequate size now which is a departure from early comments
knowing the current pond as some form of liner would expect some details on installing the run downs and improvements including the new proposed crusher fine roadway??

Appendix

Drainage Map – Sub-Basin Delineation
Runoff Coefficient Calculations
Time of Concentration Calculations
Peak Flow Calculations (Rational Method)
Inlet Hydraulic Calculations
Culvert Hydraulic Calculations
MHFD Detention Calculations

DRAINAGE STUDY MAP
CITY OF BLACKHAWK

SUB-BASIN MAP

DATE: 2/3/2021
REVISED: –

1055 SHEET 1 OF 1

NOT FOR CONSTRUCTION – EXHIBIT FOR DRAINAGE STUDY REPORT ONLY

RUNOFF COEFFICIENT CALCULATIONS
POST-PROJECT CONDITION

DESIGNED BY: JP — JOB NO. 1055
CHECKED BY: — DATE: 2/3/2021

Design Point	Basin	Total Area		Impervious Cover			Composite				
		sq-ft	acres	sq-ft	acres	% Impervious	C_5	C_{100}	% Impervious	C_5	C_{100}
1	A	84,007	1.9	967	0.02	1.2%	0.04	0.49	1.2%	0.04	0.49
2	B	50,322	1.2	16,964	0.39	33.7%	0.31	0.62	33.7%	0.31	0.62
3	C	70,346	1.6	13,240	0.30	18.8%	0.19	0.56	18.8%	0.19	0.56
4	D	440,818	10.1	20,711	0.48	4.7%	0.07	0.50	4.7%	0.07	0.50
5	E	56,722	1.3	34,992	0.80	61.7%	0.54	0.74	61.7%	0.54	0.74
6	F	105,531	2.4	38,869	0.89	36.8%	0.34	0.61	36.8%	0.34	0.64
7	G	20,659	0.5	15,758	0.36	76.3%	0.66	0.80	76.3%	0.66	0.80
8	H	144,460	3.3	47,324	1.09	32.8%	0.30	0.62	32.8%	0.30	0.62
9	I	6,228	0.1	3,882	0.09	62.3%	0.55	0.74	62.3%	0.55	0.74
10	J	164,761	3.8	49,611	1.14	30.1%	0.28	0.61	30.1%	0.28	0.61
	TOTAL	1,143,853	26	242,317	6	21.2%	0.21	0.57	21.2%	0.21	0.57

TIME OF CONCENTRATION
POST-PROJECT CONDITION

DESIGNED BY: JP — JOB NO. 1055
CHECKED BY: — DATE: 2/3/2021

Design Point	Basin	Total Area	Imperviousness	C_5[1]	C_{100}[1]	Initial Overland Flow Time (t_i)					Travel Channelized Time of Flow (t_t)							Time of Concentration (t_c)	t_c check	Final Time of Concentration (t_c)	Comments
						Starting Elevation	Ending Elevation	Length	Slope	t_i[2]	Starting Elevation	Ending Elevation	Length	Slope	K	Channel velocity[3]	t_t[4]	t_c[1]+t_t		t_c[1] (If <5 min., use 5 min.)	
		acres				ft	ft	ft	ft/ft	min	ft	ft	ft	ft/ft		ft/s	min	min	min	min	
1	A	1.9	0.01	0.04	0.49	5,735.5	5,718.2	500.0	0.03	19.54	5,718.2	5,662.8	428.8	0.13	15	5.4	1.3	20.88	27.97	20.88	
2	B	1.2	0.34	0.31	0.62	5,611.5	5,603.8	100.0	0.08	14.86	5,603.8	5,602.1	27.54	0.06	20	3.5	0.1	15.06	20.42	17.06	
3	C	1.6	0.30	0.19	0.56	5,668.8	5,659.6	300.0	0.03	20.01	5,659.6	5,652.2	288.73	0.02	20	3.1	1.6	21.59	21.59	21.59	
4	D	10.1	0.02	0.07	0.50	5,795.5	5,749.5	500.0	0.09	13.35	5,749.5	5,655.0	1,165.8	0.07	15	4.5	4.8	20.29	32.49	20.29	
5	E	1.3	0.80	0.54	0.74	5,667.8	5,617.2	300.0	0.01	11.94	5,617.2	5,616.5	57.21	0.01	20	1.9	0.5	12.43	18.07	12.43	
6	F	2.4	0.37	0.34	0.64	5,660.5	5,643.8	300.0	0.06	13.87	5,643.8	5,639.7	255.16	0.02	20	2.5	1.7	15.35	22.11	15.35	
7	G	0.5	0.79	0.66	0.80	5,618.2	5,618.5	500.0	0.06	7.84	5,618.5	5,618.0	466.28	0.04	20	4.3	2.0	9.87	15.10	9.87	
8	H	3.3	0.33	0.30	0.62	5,671.8	5,654.6	300.0	0.06	14.20	5,654.6	5,641.5	327.67	0.04	15	3.0	1.8	16.01	22.45	16.01	
9	I	0.1	0.62	0.55	0.74	5,645.6	5,643.6	200.6	0.01	10.24	5,643.6	5,640.6	3.00	0.04	20	4.0	0.2	10.25	13.43	10.25	
10	J	3.8	0.32	0.28	0.61	5,647.3	5,643.7	500.0	0.02	20.64	5,643.7	5,618.2	79.83	0.02	15	2.5	0.6	20.68	27.87	20.68	

5-YR POST-PROJECT RUNOFF

$P_{5\ Year}$ = 0.88 inch

DESIGNED BY: JP — JOB NO. 1055
CHECKED BY: — DATE: 2/3/2021

Basin	Area	C_5	t_c	I	Q_5
	acres		min	in/hr	cfs
A	1.9	0.04	20.86	1.69	0.15
B	1.2	0.31	17.06	1.88	0.68
C	1.6	0.19	21.59	1.66	0.51
D	10.1	0.07	20.29	1.72	1.28
E	1.3	0.54	12.43	2.18	1.53
F	2.4	0.34	15.35	1.98	1.61
G	0.5	0.66	9.87	2.39	0.75
H	3.3	0.30	16.03	1.94	1.95
I	0.1	0.55	10.25	2.36	0.18
J	3.8	0.28	20.68	1.70	1.81
TOTAL					10.45

100-YR POST-PROJECT RUNOFF

$P_{100\ Year}$ = 1.58 inch

DESIGNED BY: JP — JOB NO. 1055
CHECKED BY: — DATE: 2/3/2021

Basin	Area	C_{100}	t_c	I	Q_{100}
	acres		min	in/hr	cfs
A	1.9	0.49	20.86	3.04	2.9
B	1.2	0.62	17.06	3.37	2.4
C	1.6	0.56	21.59	2.98	2.7
D	10.1	0.50	20.29	3.08	15.7
E	1.3	0.74	12.43	3.91	3.7
F	2.4	0.64	15.35	3.55	5.5
G	0.5	0.80	9.87	4.30	1.6
H	3.3	0.62	16.03	3.48	7.1
I	0.1	0.74	10.25	4.25	0.4
J	3.8	0.61	20.68	3.05	7.0
TOTAL					49.1

Version 4.05 Released March 2017

INLET MANAGEMENT

Worksheet Protected

INLET NAME	Inlet 1 (Basin E)	Inlet 2 (Basin B)
Site Type (Urban or Rural)	URBAN	URBAN
Inlet Application (Street or Area)	STREET	STREET
Hydraulic Condition	In Sump	In Sump
Inlet Type	CDOT Type R Curb Opening	CDOT Type C Grate

USER-DEFINED INPUT

User-Defined Design Flows

Minor Q_{Known} (cfs)	1.5	0.7
Major Q_{Known} (cfs)	3.7	2.4

Bypass (Carry-Over) Flow from Upstream

Receive Bypass Flow from:	No Bypass Flow Received	No Bypass Flow Received
Minor Bypass Flow Received, Q_b (cfs)	0.0	0.0
Major Bypass Flow Received, Q_b (cfs)	0.0	0.0

Watershed Characteristics

Subcatchment Area (acres)		
Percent Impervious		
NRCS Soil Type		

Watershed Profile

Overland Slope (ft/ft)		
Overland Length (ft)		
Channel Slope (ft/ft)		
Channel Length (ft)		

Minor Storm Rainfall Input

Design Storm Return Period, T_r (years)		
One-Hour Precipitation, P_1 (inches)		

Major Storm Rainfall Input

Design Storm Return Period, T_r (years)		
One-Hour Precipitation, P_1 (inches)		

CALCULATED OUTPUT

Minor Total Design Peak Flow, Q (cfs)	**1.5**	**0.7**
Major Total Design Peak Flow, Q (cfs)	**3.7**	**2.4**
Minor Flow Bypassed Downstream, Q_b (cfs)	N/A	N/A
Major Flow Bypassed Downstream, Q_b (cfs)	N/A	N/A

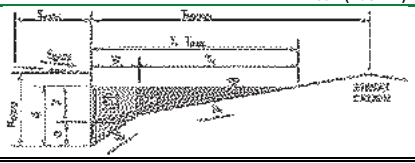
Version 4.05 Released March 2017

ALLOWABLE CAPACITY FOR ONE-HALF OF STREET (Minor & Major Storm)

(Based on Regulated Criteria for Maximum Allowable Flow Depth and Spread)

Black Hawk Park

Inlet 1 (Basin E)



Gutter Geometry (Enter data in the blue cells)

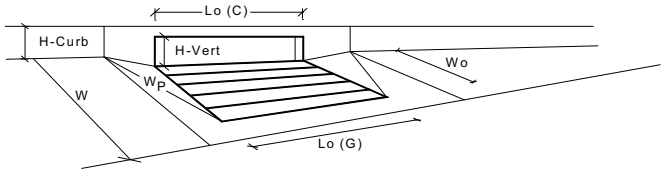
Maximum Allowable Width for Spread Behind Curb	T_{BACK} =	6.0	ft
Side Slope Behind Curb (leave blank for no conveyance credit behind curb)	S_{BACK} =	0.020	ft/ft
Manning's Roughness Behind Curb (typically between 0.012 and 0.020)	n_{BACK} =	0.012	
Height of Curb at Gutter Flow Line	H_{CURB} =	4.00	inches
Distance from Curb Face to Street Crown	T_{CROWN} =	30.0	ft
Gutter Width	W =	2.00	ft
Street Transverse Slope	S_X =	0.020	ft/ft
Gutter Cross Slope (typically 2 inches over 24 inches or 0.083 ft/ft)	S_W =	0.083	ft/ft
Street Longitudinal Slope - Enter 0 for sump condition	S_O =	0.000	ft/ft
Manning's Roughness for Street Section (typically between 0.012 and 0.020)	n_{STREET} =	0.016	

		Minor Storm	Major Storm	
Max. Allowable Spread for Minor & Major Storm	T_{MAX} =	10.0	18.7	ft
Max. Allowable Depth at Gutter Flowline for Minor & Major Storm	d_{MAX} =	4.0	6.0	inches
Check boxes are not applicable in SUMP conditions		☐	☐	

		Minor Storm	Major Storm	
MINOR STORM Allowable Capacity is based on Depth Criterion				
MAJOR STORM Allowable Capacity is based on Depth Criterion	Q_{allow} =	**SUMP**	**SUMP**	**cfs**

INLET IN A SUMP OR SAG LOCATION

Version 4.05 Released March 2017



Design Information (Input)

		MINOR	MAJOR	
Type of Inlet	Type =	CDOT Type R Curb Opening		
Local Depression (additional to continuous gutter depression 'a' from above)	a_{local} =	5.00	5.00	inches
Number of Unit Inlets (Grate or Curb Opening)	No =	1	1	
Water Depth at Flowline (outside of local depression)	Ponding Depth =	3.9	6.0	inches

Grate Information

		MINOR	MAJOR	☐ Override Depths
Length of a Unit Grate	L_o (G) =	N/A	N/A	feet
Width of a Unit Grate	W_o =	N/A	N/A	feet
Area Opening Ratio for a Grate (typical values 0.15-0.90)	A_{ratio} =	N/A	N/A	
Clogging Factor for a Single Grate (typical value 0.50 - 0.70)	C_f (G) =	N/A	N/A	
Grate Weir Coefficient (typical value 2.15 - 3.60)	C_w (G) =	N/A	N/A	
Grate Orifice Coefficient (typical value 0.60 - 0.80)	C_o (G) =	N/A	N/A	

Curb Opening Information

		MINOR	MAJOR	
Length of a Unit Curb Opening	L_o (C) =	10.00	10.00	feet
Height of Vertical Curb Opening in Inches	H_{vert} =	6.00	6.00	inches
Height of Curb Orifice Throat in Inches	H_{throat} =	6.00	6.00	inches
Angle of Throat (see USDCM Figure ST-5)	Theta =	63.40	63.40	degrees
Side Width for Depression Pan (typically the gutter width of 2 feet)	W_p =	2.00	2.00	feet
Clogging Factor for a Single Curb Opening (typical value 0.10)	C_f (C) =	0.10	0.10	
Curb Opening Weir Coefficient (typical value 2.3-3.7)	C_w (C) =	3.60	3.60	
Curb Opening Orifice Coefficient (typical value 0.60 - 0.70)	C_o (C) =	0.67	0.67	

Low Head Performance Reduction (Calculated)

		MINOR	MAJOR	
Depth for Grate Midwidth	d_{Grate} =	N/A	N/A	ft
Depth for Curb Opening Weir Equation	d_{Curb} =	0.16	0.33	ft
Combination Inlet Performance Reduction Factor for Long Inlets	$RF_{Combination}$ =	0.37	0.57	
Curb Opening Performance Reduction Factor for Long Inlets	RF_{Curb} =	0.78	0.93	
Grated Inlet Performance Reduction Factor for Long Inlets	RF_{Grate} =	N/A	N/A	

		MINOR	MAJOR	
Total Inlet Interception Capacity (assumes clogged condition)	**Q_a =**	**2.3**	**8.3**	**cfs**
Inlet Capacity IS GOOD for Minor and Major Storms(>Q PEAK)	$Q_{PEAK\ REQUIRED}$ =	1.5	3.7	cfs

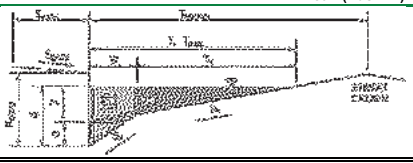
Version 4.05 Released March 2017

ALLOWABLE CAPACITY FOR ONE-HALF OF STREET (Minor & Major Storm)

(Based on Regulated Criteria for Maximum Allowable Flow Depth and Spread)

Black Hawk Park

Inlet 2 (Basin B)



Gutter Geometry (Enter data in the blue cells)

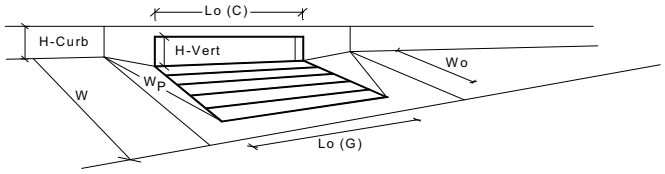
Maximum Allowable Width for Spread Behind Curb	T_{BACK} =	0.0	ft
Side Slope Behind Curb (leave blank for no conveyance credit behind curb)	S_{BACK} =		ft/ft
Manning's Roughness Behind Curb (typically between 0.012 and 0.020)	n_{BACK} =	0.012	
Height of Curb at Gutter Flow Line	H_{CURB} =	4.00	inches
Distance from Curb Face to Street Crown	T_{CROWN} =	20.0	ft
Gutter Width	W =	3.00	ft
Street Transverse Slope	S_X =	0.020	ft/ft
Gutter Cross Slope (typically 2 inches over 24 inches or 0.083 ft/ft)	S_W =	0.083	ft/ft
Street Longitudinal Slope - Enter 0 for sump condition	S_O =	0.000	ft/ft
Manning's Roughness for Street Section (typically between 0.012 and 0.020)	n_{STREET} =	0.012	

		Minor Storm	Major Storm	
Max. Allowable Spread for Minor & Major Storm	T_{MAX} =	6.0	10.0	ft
Max. Allowable Depth at Gutter Flowline for Minor & Major Storm	d_{MAX} =	4.0	6.0	inches
Check boxes are not applicable in SUMP conditions		☐	☐	

		Minor Storm	Major Storm	
MINOR STORM Allowable Capacity is based on Depth Criterion				
MAJOR STORM Allowable Capacity is based on Depth Criterion	Q_{allow} =	**SUMP**	**SUMP**	**cfs**

INLET IN A SUMP OR SAG LOCATION

Version 4.05 Released March 2017



Design Information (Input)

		MINOR	MAJOR	
Type of Inlet	Type =	CDOT Type C Grate		
Local Depression (additional to continuous gutter depression 'a' from above)	a_{local} =	24.00	24.00	inches
Number of Unit Inlets (Grate or Curb Opening)	No =	1	1	
Water Depth at Flowline (outside of local depression)	Ponding Depth =	3.7	4.7	inches

Grate Information

		MINOR	MAJOR	Override Depths
Length of a Unit Grate	L_o (G) =	2.92	2.92	feet
Width of a Unit Grate	W_o =	2.92	2.92	feet
Area Opening Ratio for a Grate (typical values 0.15-0.90)	A_{ratio} =	0.70	0.70	
Clogging Factor for a Single Grate (typical value 0.50 - 0.70)	C_f (G) =	0.50	0.50	
Grate Weir Coefficient (typical value 2.15 - 3.60)	C_w (G) =	2.41	2.41	
Grate Orifice Coefficient (typical value 0.60 - 0.80)	C_o (G) =	0.67	0.67	

Curb Opening Information

		MINOR	MAJOR	
Length of a Unit Curb Opening	L_o (C) =	N/A	N/A	feet
Height of Vertical Curb Opening in Inches	H_{vert} =	N/A	N/A	inches
Height of Curb Orifice Throat in Inches	H_{throat} =	N/A	N/A	inches
Angle of Throat (see USDCM Figure ST-5)	Theta =	N/A	N/A	degrees
Side Width for Depression Pan (typically the gutter width of 2 feet)	W_p =	N/A	N/A	feet
Clogging Factor for a Single Curb Opening (typical value 0.10)	C_f (C) =	N/A	N/A	
Curb Opening Weir Coefficient (typical value 2.3-3.7)	C_w (C) =	N/A	N/A	
Curb Opening Orifice Coefficient (typical value 0.60 - 0.70)	C_o (C) =	N/A	N/A	

Low Head Performance Reduction (Calculated)

		MINOR	MAJOR	
Depth for Grate Midwidth	d_{Grate} =	1.214	1.294	ft
Depth for Curb Opening Weir Equation	d_{Curb} =	N/A	N/A	ft
Combination Inlet Performance Reduction Factor for Long Inlets	$RF_{Combination}$ =	N/A	N/A	
Curb Opening Performance Reduction Factor for Long Inlets	RF_{Curb} =	N/A	N/A	
Grated Inlet Performance Reduction Factor for Long Inlets	RF_{Grate} =	0.58	0.74	

		MINOR	MAJOR	
Total Inlet Interception Capacity (assumes clogged condition)	**Q_a =**	**6.9**	**9.6**	**cfs**
Inlet Capacity IS GOOD for Minor and Major Storms(>Q PEAK)	$Q_{PEAK\ REQUIRED}$ =	0.7	2.4	cfs

Culvert Calculator Report
DP1:STRM-05

Solve For: Headwater Elevation

Culvert Summary					
Allowable HW Elevation	0.00	ft	Headwater Depth/Height	0.76	
Computed Headwater Elevation	8,663.09	ft	Discharge	2.90	cfs
Inlet Control HW Elev.	8,662.99	ft	Tailwater Elevation	8,662.99	ft
Outlet Control HW Elev.	8,663.09	ft	Control Type	Outlet Control	

Grades					
Upstream Invert	8,661.96	ft	Downstream Invert	8,661.49	ft
Length	25.66	ft	Constructed Slope	0.018316	ft/ft

Hydraulic Profile					
Profile	S1		Depth, Downstream	1.50	ft
Slope Type	Steep		Normal Depth	0.46	ft
Flow Regime	Subcritical		Critical Depth	0.65	ft
Velocity Downstream	1.64	ft/s	Critical Slope	0.005113	ft/ft

Section					
Section Shape	Circular		Mannings Coefficient	0.013	
Section Material	Concrete		Span	1.50	ft
Section Size	18 inch		Rise	1.50	ft
Number Sections	1				

Outlet Control Properties					
Outlet Control HW Elev.	8,663.09	ft	Upstream Velocity Head	0.08	ft
Ke	0.50		Entrance Loss	0.04	ft

Inlet Control Properties					
Inlet Control HW Elev.	8,662.99	ft	Flow Control	N/A	
Inlet Type	Square edge w/headwall		Area Full	1.8	ft²
K	0.00980		HDS 5 Chart	1	
M	2.00000		HDS 5 Scale	1	
C	0.03980		Equation Form	1	
Y	0.67000				

Culvert Calculator Report
DP4:STRM-03

Solve For: Headwater Elevation

Culvert Summary					
Allowable HW Elevation	0.00	ft	Headwater Depth/Height	1.21	
Computed Headwater Elevation	8,656.63	ft	Discharge	15.70	cfs
Inlet Control HW Elev.	8,656.53	ft	Tailwater Elevation	8,655.03	ft
Outlet Control HW Elev.	8,656.63	ft	Control Type	Entrance Control	

Grades					
Upstream Invert	8,654.20	ft	Downstream Invert	8,653.03	ft
Length	86.00	ft	Constructed Slope	0.013605	ft/ft

Hydraulic Profile					
Profile	CompositeS1S2		Depth, Downstream	2.00	ft
Slope Type	Steep		Normal Depth	1.11	ft
Flow Regime	N/A		Critical Depth	1.43	ft
Velocity Downstream	5.00	ft/s	Critical Slope	0.006522	ft/ft

Section					
Section Shape	Circular		Mannings Coefficient	0.013	
Section Material	Concrete		Span	2.00	ft
Section Size	24 inch		Rise	2.00	ft
Number Sections	1				

Outlet Control Properties					
Outlet Control HW Elev.	8,656.63	ft	Upstream Velocity Head	0.66	ft
Ke	0.50		Entrance Loss	0.33	ft

Inlet Control Properties					
Inlet Control HW Elev.	8,656.53	ft	Flow Control	N/A	
Inlet Type	Square edge w/headwall		Area Full	3.1	ft²
K	0.00980		HDS 5 Chart	1	
M	2.00000		HDS 5 Scale	1	
C	0.03980		Equation Form	1	
Y	0.67000				

Culvert Calculator Report
DP8:STRM-02

Solve For: Headwater Elevation

Culvert Summary					
Allowable HW Elevation	0.00	ft	Headwater Depth/Height	0.84	
Computed Headwater Elevation	8,642.38	ft	Discharge	7.10	cfs
Inlet Control HW Elev.	8,642.27	ft	Tailwater Elevation	8,642.27	ft
Outlet Control HW Elev.	8,642.38	ft	Control Type	Outlet Control	

Grades					
Upstream Invert	8,641.12	ft	Downstream Invert	8,640.77	ft
Length	48.63	ft	Constructed Slope	0.007197	ft/ft

Hydraulic Profile					
Profile	S1		Depth, Downstream	1.50	ft
Slope Type	Steep		Normal Depth	1.01	ft
Flow Regime	Subcritical		Critical Depth	1.03	ft
Velocity Downstream	4.02	ft/s	Critical Slope	0.006825	ft/ft

Section					
Section Shape	Circular		Mannings Coefficient	0.013	
Section Material	Concrete		Span	1.50	ft
Section Size	18 inch		Rise	1.50	ft
Number Sections	1				

Outlet Control Properties					
Outlet Control HW Elev.	8,642.38	ft	Upstream Velocity Head	0.06	ft
Ke	0.50		Entrance Loss	0.03	ft

Inlet Control Properties					
Inlet Control HW Elev.	8,642.27	ft	Flow Control	N/A	
Inlet Type	Square edge w/headwall		Area Full	1.8	ft²
K	0.00980		HDS 5 Chart	1	
M	2.00000		HDS 5 Scale	1	
C	0.03980		Equation Form	1	
Y	0.67000				

Culvert Calculator Report
DP9:STRM-01

Solve For: Headwater Elevation

Culvert Summary					
Allowable HW Elevation	0.00	ft	Headwater Depth/Height	0.78	
Computed Headwater Elevation	8,640.90	ft	Discharge	0.40	cfs
Inlet Control HW Elev.	8,640.79	ft	Tailwater Elevation	8,640.79	ft
Outlet Control HW Elev.	8,640.90	ft	Control Type	Outlet Control	

Grades					
Upstream Invert	8,639.73	ft	Downstream Invert	8,639.29	ft
Length	42.10	ft	Constructed Slope	0.010451	ft/ft

Hydraulic Profile					
Profile	S1		Depth, Downstream	1.50	ft
Slope Type	Steep		Normal Depth	0.20	ft
Flow Regime	Subcritical		Critical Depth	0.23	ft
Velocity Downstream	0.23	ft/s	Critical Slope	0.005264	ft/ft

Section					
Section Shape	Circular		Mannings Coefficient	0.013	
Section Material	Concrete		Span	1.50	ft
Section Size	18 inch		Rise	1.50	ft
Number Sections	1				

Outlet Control Properties					
Outlet Control HW Elev.	8,640.90	ft	Upstream Velocity Head	0.07	ft
Ke	0.50		Entrance Loss	0.04	ft

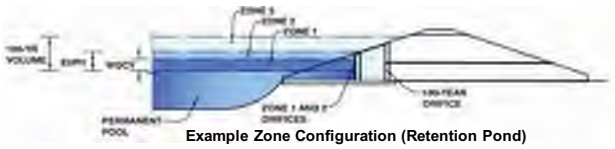
Inlet Control Properties					
Inlet Control HW Elev.	8,640.79	ft	Flow Control	N/A	
Inlet Type	Square edge w/headwall		Area Full	1.8	ft²
K	0.00980		HDS 5 Chart	1	
M	2.00000		HDS 5 Scale	1	
C	0.03980		Equation Form	1	
Y	0.67000				

DETENTION BASIN STAGE-STORAGE TABLE BUILDER

MHFD-Detention, Version 4.02 (February 2020)

Project: Hawk's Landing Airstream Park

Basin ID: EDB-01



Example Zone Configuration (Retention Pond)

Watershed Information

Selected BMP Type =	**EDB**	
Watershed Area =	28.71	acres
Watershed Length =	2,293	ft
Watershed Length to Centroid =	949	ft
Watershed Slope =	0.110	ft/ft
Watershed Imperviousness =	21.01%	percent
Percentage Hydrologic Soil Group A =	0.0%	percent
Percentage Hydrologic Soil Group B =	0.0%	percent
Percentage Hydrologic Soil Groups C/D =	100.0%	percent
Target WQCV Drain Time =	40.0	hours
Location for 1-hr Rainfall Depths =	User Input	

Steep Slope > 0.06 ft/ft

After providing required inputs above including 1-hour rainfall depths, click 'Run CUHP' to generate runoff hydrographs using the embedded Colorado Urban Hydrograph Procedure.

			Optional User Overrides
Water Quality Capture Volume (WQCV) =	0.287	acre-feet	acre-feet
Excess Urban Runoff Volume (EURV) =	0.532	acre-feet	acre-feet
2-yr Runoff Volume (P1 = 0.69 in.) =	0.222	acre-feet	0.69 inches
5-yr Runoff Volume (P1 = 0.88 in.) =	0.348	acre-feet	0.88 inches
10-yr Runoff Volume (P1 = 1.04 in.) =	0.486	acre-feet	1.04 inches
25-yr Runoff Volume (P1 = 1.25 in.) =	1.065	acre-feet	1.25 inches
50-yr Runoff Volume (P1 = 1.42 in.) =	1.427	acre-feet	1.42 inches
100-yr Runoff Volume (P1 = 1.58 in.) =	1.914	acre-feet	1.58 inches
500-yr Runoff Volume (P1 = 1.95 in.) =	2.772	acre-feet	1.95 inches
Approximate 2-yr Detention Volume =	0.260	acre-feet	
Approximate 5-yr Detention Volume =	0.484	acre-feet	
Approximate 10-yr Detention Volume =	0.587	acre-feet	
Approximate 25-yr Detention Volume =	0.714	acre-feet	
Approximate 50-yr Detention Volume =	0.755	acre-feet	
Approximate 100-yr Detention Volume =	0.961	acre-feet	

Define Zones and Basin Geometry

Zone 1 Volume (WQCV) =	0.287	acre-feet
Zone 2 Volume (EURV - Zone 1) =	0.246	acre-feet
Zone 3 Volume (100-year - Zones 1 & 2) =	0.429	acre-feet
Total Detention Basin Volume =	0.961	acre-feet
Initial Surcharge Volume (ISV) =	user	ft^3
Initial Surcharge Depth (ISD) =	user	ft
Total Available Detention Depth (H_{total}) =	user	ft
Depth of Trickle Channel (H_{TC}) =	user	ft
Slope of Trickle Channel (S_{TC}) =	user	ft/ft
Slopes of Main Basin Sides (S_{main}) =	user	H:V
Basin Length-to-Width Ratio ($R_{L/W}$) =	user	
Initial Surcharge Area (A_{ISV}) =	user	ft^2
Surcharge Volume Length (L_{ISV}) =	user	ft
Surcharge Volume Width (W_{ISV}) =	user	ft
Depth of Basin Floor (H_{FLOOR}) =	user	ft
Length of Basin Floor (L_{FLOOR}) =	user	ft
Width of Basin Floor (W_{FLOOR}) =	user	ft
Area of Basin Floor (A_{FLOOR}) =	user	ft^2
Volume of Basin Floor (V_{FLOOR}) =	user	ft^3
Depth of Main Basin (H_{MAIN}) =	user	ft
Length of Main Basin (L_{MAIN}) =	user	ft
Width of Main Basin (W_{MAIN}) =	user	ft
Area of Main Basin (A_{MAIN}) =	user	ft^2
Volume of Main Basin (V_{MAIN}) =	user	ft^3
Calculated Total Basin Volume (V_{total}) =	**user**	acre-feet

Depth Increment = 1.00 ft

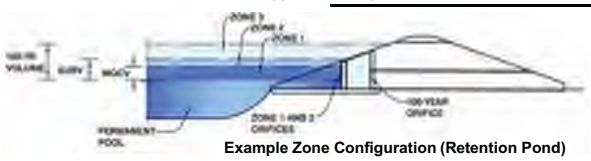
Stage - Storage Description	Stage (ft)	Optional Override Stage (ft)	Length (ft)	Width (ft)	Area (ft^2)	Optional Override Area (ft^2)	Area (acre)	Volume (ft^3)	Volume (ac-ft)
Top of Micropool	--	0.00	--	--	--	0	0.000		
8632	--	0.31	--	--	--	6,839	0.157	1,059	0.024
8633	--	1.31	--	--	--	8,297	0.190	8,627	0.198
8634	--	2.31	--	--	--	9,863	0.226	17,707	0.407
8635	--	3.31	--	--	--	11,528	0.265	28,403	0.652
8636	--	4.31	--	--	--	13,287	0.305	40,810	0.937
8637	--	5.31	--	--	--	15,159	0.348	55,033	1.263
8638	--	6.31	--	--	--	17,145	0.394	71,185	1.634
8639	--	7.31	--	--	--	19,253	0.442	89,384	2.052

DETENTION BASIN OUTLET STRUCTURE DESIGN

MHFD-Detention, Version 4.02 (February 2020)

Project: **Hawk's Landing Airstream Park**

Basin ID: **EDB-01**



Example Zone Configuration (Retention Pond)

	Estimated Stage (ft)	Estimated Volume (ac-ft)	Outlet Type
Zone 1 (WQCV)	1.76	0.287	Orifice Plate
Zone 2 (EURV)	2.85	0.246	Orifice Plate
Zone 3 (100-year)	4.39	0.429	Weir&Pipe (Circular)
Total (all zones)		0.961	

User Input: Orifice at Underdrain Outlet (typically used to drain WQCV in a Filtration BMP)

Underdrain Orifice Invert Depth =	N/A	ft (distance below the filtration media surface)	Underdrain Orifice Area =	N/A	ft^2
Underdrain Orifice Diameter =	N/A	inches	Underdrain Orifice Centroid =	N/A	feet

Calculated Parameters for Underdrain

User Input: Orifice Plate with one or more orifices or Elliptical Slot Weir (typically used to drain WQCV and/or EURV in a sedimentation BMP)

Invert of Lowest Orifice =	0.00	ft (relative to basin bottom at Stage = 0 ft)	WQ Orifice Area per Row =	1.729E-02	ft^2
Depth at top of Zone using Orifice Plate =	2.82	ft (relative to basin bottom at Stage = 0 ft)	Elliptical Half-Width =	N/A	feet
Orifice Plate: Orifice Vertical Spacing =	11.30	inches	Elliptical Slot Centroid =	N/A	feet
Orifice Plate: Orifice Area per Row =	2.49	sq. inches (diameter = 1-3/4 inches)	Elliptical Slot Area =	N/A	ft^2

Calculated Parameters for Plate

User Input: Stage and Total Area of Each Orifice Row (numbered from lowest to highest)

	Row 1 (required)	Row 2 (optional)	Row 3 (optional)	Row 4 (optional)	Row 5 (optional)	Row 6 (optional)	Row 7 (optional)	Row 8 (optional)
Stage of Orifice Centroid (ft)	0.00	0.94	1.88					
Orifice Area (sq. inches)	2.49	2.49	2.49					

	Row 9 (optional)	Row 10 (optional)	Row 11 (optional)	Row 12 (optional)	Row 13 (optional)	Row 14 (optional)	Row 15 (optional)	Row 16 (optional)
Stage of Orifice Centroid (ft)								
Orifice Area (sq. inches)								

User Input: Vertical Orifice (Circular or Rectangular)

	Not Selected	Not Selected			Not Selected	Not Selected	
Invert of Vertical Orifice =	N/A	N/A	ft (relative to basin bottom at Stage = 0 ft)	Vertical Orifice Area =	N/A	N/A	ft^2
Depth at top of Zone using Vertical Orifice =	N/A	N/A	ft (relative to basin bottom at Stage = 0 ft)	Vertical Orifice Centroid =	N/A	N/A	feet
Vertical Orifice Diameter =	N/A	N/A	inches				

Calculated Parameters for Vertical Orifice

User Input: Overflow Weir (Dropbox with Flat or Sloped Grate and Outlet Pipe OR Rectangular/Trapezoidal Weir (and No Outlet Pipe)

	Zone 3 Weir	Not Selected			Zone 3 Weir	Not Selected	
Overflow Weir Front Edge Height, Ho =	2.82	N/A	ft (relative to basin bottom at Stage = 0 ft)	Height of Grate Upper Edge, H_t =	4.08	N/A	feet
Overflow Weir Front Edge Length =	4.00	N/A	feet	Overflow Weir Slope Length =	4.00	N/A	feet
Overflow Weir Grate Slope =	3.00	N/A	H:V	Grate Open Area / 100-yr Orifice Area =	3.56	N/A	
Horiz. Length of Weir Sides =	3.79	N/A	feet	Overflow Grate Open Area w/o Debris =	11.19	N/A	ft^2
Overflow Grate Open Area % =	70%	N/A	%, grate open area/total area	Overflow Grate Open Area w/ Debris =	5.59	N/A	ft^2
Debris Clogging % =	50%	N/A	%				

Calculated Parameters for Overflow Weir

User Input: Outlet Pipe w/ Flow Restriction Plate (Circular Orifice, Restrictor Plate, or Rectangular Orifice)

	Zone 3 Circular	Not Selected			Zone 3 Circular	Not Selected	
Depth to Invert of Outlet Pipe =	2.50	N/A	ft (distance below basin bottom at Stage = 0 ft)	Outlet Orifice Area =	3.14	N/A	ft^2
Circular Orifice Diameter =	24.00	N/A	inches	Outlet Orifice Centroid =	1.00	N/A	feet
				Half-Central Angle of Restrictor Plate on Pipe =	N/A	N/A	radians

Calculated Parameters for Outlet Pipe w/ Flow Restriction Plate

User Input: Emergency Spillway (Rectangular or Trapezoidal)

Spillway Invert Stage=	5.31	ft (relative to basin bottom at Stage = 0 ft)	Spillway Design Flow Depth=	0.52	feet
Spillway Crest Length =	20.00	feet	Stage at Top of Freeboard =	6.83	feet
Spillway End Slopes =	4.00	H:V	Basin Area at Top of Freeboard =	0.42	acres
Freeboard above Max Water Surface =	1.00	feet	Basin Volume at Top of Freeboard =	1.85	acre-ft

Calculated Parameters for Spillway

Routed Hydrograph Results *The user can override the default CUHP hydrographs and runoff volumes by entering new values in the Inflow Hydrographs table (Columns W through AF).*

Design Storm Return Period =	WQCV	EURV	2 Year	5 Year	10 Year	25 Year	50 Year	100 Year	500 Year
One-Hour Rainfall Depth (in) =	N/A	N/A	0.69	0.88	1.04	1.25	1.42	1.58	1.95
CUHP Runoff Volume (acre-ft) =	0.287	0.532	0.222	0.348	0.486	1.065	1.427	1.914	2.772
Inflow Hydrograph Volume (acre-ft) =	N/A	N/A	0.222	0.348	0.486	1.065	1.427	1.914	2.772
CUHP Predevelopment Peak Q (cfs) =	N/A	N/A	0.2	0.3	1.0	9.4	13.8	19.3	29.1
OPTIONAL Override Predevelopment Peak Q (cfs) =	N/A	N/A							
Predevelopment Unit Peak Flow, q (cfs/acre) =	N/A	N/A	0.01	0.01	0.03	0.33	0.48	0.67	1.01
Peak Inflow Q (cfs) =	N/A	N/A	2.8	4.1	5.7	14.4	19.2	24.4	35.2
Peak Outflow Q (cfs) =	0.2	0.3	0.1	0.2	0.3	5.6	10.3	16.9	26.5
Ratio Peak Outflow to Predevelopment Q =	N/A	N/A	N/A	0.6	0.3	0.6	0.7	0.9	0.9
Structure Controlling Flow =	Plate	Overflow Weir 1	Plate	Plate	Plate	Overflow Weir 1	Overflow Weir 1	Overflow Weir 1	Overflow Weir
Max Velocity through Grate 1 (fps) =	N/A	0.00	N/A	N/A	N/A	0.5	0.9	1.5	2.3
Max Velocity through Grate 2 (fps) =	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Time to Drain 97% of Inflow Volume (hours) =	38	47	35	42	47	46	44	41	36
Time to Drain 99% of Inflow Volume (hours) =	**40**	50	37	44	50	52	51	50	48
Maximum Ponding Depth (ft) =	1.76	2.85	1.31	1.89	2.46	3.50	3.78	4.08	4.54
Area at Maximum Ponding Depth (acres) =	0.21	0.25	0.19	0.21	0.23	0.27	0.28	0.30	0.31
Maximum Volume Stored (acre-ft) =	0.287	0.534	0.198	0.315	0.439	0.700	0.778	0.868	1.008

Typically want a pipe and restrictor plate to control the 100yr outflow.

FOREBAY DESIGN - BLACK HAWK PARK

EDB-1

MIN VOLUME = 3% WQCV
= (0.03)(0.287) Ac-Ft
= 0.00861 AC-FT
= 375.1 cu-ft

FOREBAY DIMENSIONS = 16' x 16' x 1.5' ~ 25' x 10' x 1.5

FOREBAY RELEASE RATE = 2% UNDETAINED 100YR Q
= (0.02)(49.1 cfs)
= 0.982 cfs

National Brand

Worksheet for TRICKLE CHANNEL

Project Description	
Friction Method	Manning Formula
Solve For	Discharge

Input Data	
Roughness Coefficient	0.013
Channel Slope	0.005
Normal Depth	6.0 inches
Bottom Width	1.00 feet

Results	
Discharge	1.60 cfs
Flow Area	0.5
Wetted Perimeter	2.0
Hydraulic Radius	3.0
Top Width	1.00
Critical Depth	5.2
Critical Slope	0.007
Velocity	3.21
Velocity Head	0.16
Specific Energy	0.66
Froude Number	0.800
Flow Type	Subcritical

GVF Input Data	
Downstream Depth	0.0
Length	0.0
Number Of Steps	0

GVF Output Data	
Upstream Depth	0.0
Profile Description	N/A
Profile Headloss	0.00
Downstream Velocity	0.00
Upstream Velocity	0.00
Normal Depth	6.0
Critical Depth	5.2
Channel Slope	0.005
Critical Slope	0.007

Grading, Erosion, and Sediment Control Report for Black Hawk Park

Job Number: D01055
February 7, 2021

Prepared under the supervision of:
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Centennial, CO 80112

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Grading, Erosion, and Sediment Control Report
Black Hawk Park

for

Ventana Capital
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303-946-8012

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9801 East Easter Avenue
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303-537-8020

February 7, 2021

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APPENDIX A – USDA NRCS WEB SOIL SURVEY

APPENDIX B – GESC PLAN

I. Introduction

A. Grading, Erosion, and Sediment Control Objective:

The objective of this Grading, Erosion, and Sediment Control report for Black Hawk Park, is to meet the City of Black Hawk GESC permit requirements and to identify the Best Management Practices (BMPs) which, when implemented, will meet the requirements of the Colorado Department of Public Health & Environment, Water Quality Control Division. According to *Colorado Department of Public Health and Environment Stormwater Management Plan Preparation Guidance* (4/2011), the GESC shall "identify all potential sources of pollution which may reasonably be expected to affect the quality of stormwater discharges associated with construction activity from the facility; describe the practices to be used to reduce the pollutants in stormwater discharges associated with construction activity at the facility; and ensure the practices are selected and described in accordance with good engineering practices, including the installation, implementation and maintenance requirements; and be properly prepared, and updated in accordance with Part I.E.5.c, to ensure compliance with the terms and conditions of this permit." The GESC must be completed and implemented at the time the project breaks ground, and revised if necessary, as construction proceeds to accurately reflect the conditions and practices at the site.

The GESC report is a "living" document which should be modified and updated through the course of site construction. Pollutant sources should be continuously evaluated, BMPs selected, documented, implemented, and pollutant sources re-evaluated (and the process continued). A current copy of the GESC report shall be kept onsite at all times. A person familiar with the GESC report and on-site construction activities and clean-up procedures should be designated as the GESC Administrator for the site. The GESC Administrator will be responsible for (but not limited to) inspections and inspection reports, personnel training, regulatory agency contact, GESC plan implementation and revisions, field notebooks, and record keeping of employee activities, contacts, notifications.

B. Location

Black Hawk Park is located in the north half of Section 18 and the southwest quarter of Section 7, Township 3 south, Range 72 west of the 6th Principal Meridian, City of Black Hawk, County of Gilpin, State of Colorado. The site is located off Miners Mesa Road and encompasses approximately 45.4 acres; refer to the GESC Plans in Appendix B.

C. Project Description

Update to include RV info.

This GESC report and associated plans cover the creation of roadway access driveways, graded pads and trunk main infrastructure to facilitate sale of individual lots, as well as the site improvement plan for Lot 1. Individual end users will develop Site Improvements Plans (SIPs) associated with the development of their individual lots, and the lot owners will prepare and submit separate GESC plans and reports at the time of their development. The overall development will include all necessary infrastructure, inclusive of roadways, wet and dry utilities, storm drainage and drainage control facilities.

D. Existing Site Conditions and Surrounding Areas

The property was historically utilized as overflow parking for casinos, is generally undeveloped consisting of an asphalt paved parking lot, a detention pond, and natural terrain. The site contains a number of inactive mining sites, as well as historical mining structures that are located in a historical preservation easement on the property. There are two additional structures that shall be demolished prior to construction. The site has also recently been utilized as construction staging and laydown area for various contractors working in the City. The property is vegetated with grasses, weeds, aspen and pine trees. The topography of the site generally slopes towards the north with small portions of the property sloping to the east and south of the property.

II. Site Description

A. Construction Activity Description

Construction activity includes installation of BMPs, overall grading of entire site including major drainage conveyance (swale) construction, installation of utilities (underground water, sanitary sewer, storm drain and detention facilities), curb and gutter installation, concrete and asphalt paving, and overlot grading associated with residential development. Lot 1 will be developed as an RV camping park with airstream trailers permanently located on site along with a check in building and bar with amenities.

B. Proposed Sequence for Major Activities

The sequence for major construction activities includes the installation of BMPs, overlot grading, construction of shared utility infrastructure and roads, and establishment of permanent BMPs will occur. Following Phase 1, Phase 2 will consist of the development of the lot 1 airstream park including grading, infrastructure installation, building and RV installation, landscaping and establishment of permanent BMPs will occur.

A Geo Tech Professional shall monitor and provide regular testing and inspection reports to the City.

C. Area Estimates

Total area of site is approximately 45 acres. The approximate area of disturbance for the project is 17.3 acres, which includes overlot grading, roadways, and utilities.

wonder who is going to monitor the control of the fill placement and compaction?

Grading of the site will result in an estimated 43,000 CY of cut to fill. The site is anticipated to balance with no import or export being required offsite.

D. Soil Description

According to the *United States Department of Agriculture National Resources Conservation Service Web Soil Survey of Georgetown Area, Colorado,* the site consists of 46.3% Legault-Rock outcrop, 51.9% Resort very gravelly sandy loam, 1.2% Argents-Dumps mine complex, and 0.6% Resort-Cathedral complex.

E. Existing Vegetation

An aerial lidar survey and visual assessment of habitat conditions noted that woody vegetation accounted for approximately 20% of groundcover on the site. The site is characterized by sparsely vegetated fields and hardstand parking and construction laydown areas with aspen and evergreen forest. Based on the visual assessment performed, the site has approximately 95% ground cover.

F. Pollutants Associated With Construction Activities (Other Than Sediment)

Potential pollutants other than sediment associated with construction activity may include solvents, metals, pesticides, (insecticides, fungicides, herbicides, rodenticides, etc.), petrochemicals (oils, gasoline, asphalt degreasers, etc.), plated products, asphalt/concrete, paints, wood, garbage, sanitary wastes, fertilizers, and wash waters associated with many of these products.

Practices must be used to prevent these potential pollutants from leaving the construction site. Pollutants such as oils, waxes, and water-insoluble pesticides form surface films on water and solid particles. Also, oil films serve as a medium for concentrating water-soluble insecticides. Other than by use of very costly water-treatment facilities or extended runoff water detention periods, these pollutants become nearly impossible to control once present in the runoff.

Procedures must be established to protect watercourses from damage by sediment and other pollutants generated during construction activities. The variety of pollutants and the severity of the damage caused depend upon a number of factors, including:

- The nature of the construction activity – some sites may store hazardous liquids and solid non-wastes on site.
- The physical characteristics of the construction site, including

weather, time of year for construction (dry or rainy season), topography, soil conditions, drainage systems, etc.

- The proximity, volume, and quality of the receiving waters (i.e. the amount and purity of the water receiving the contaminated runoff).

The physical characteristics of the construction site have a significant impact on the potential discharge of pollutants from construction activities. As with sediment, the vast majority of all pollutants are carried into the receiving waters via storm runoff. The amount of runoff discharging from a construction site depends upon the several hydrologic factors. These factors include the rainfall intensity and frequency, the infiltration rate of the soil; the surface roughness; and the length and steepness of the longest watercourse. Large areas that have been denuded (stripped of vegetation), have long slopes, steep slopes, compacted soils, and high intensity rainfall are conducive to increased runoff.

The most economical and effective controls for these potential pollutants (other than sediment) generated on the construction site are the exercise of good “housekeeping" practices and an awareness by construction workers, planners, engineers, and developers of the need and purpose of compliance with federal, state, and local regulations. The following general procedures shall be implemented:

- Containers with potential pollutants shall be located in a designated area, as far as possible from any receiving waters
- During the rainy season, the storage areas with potential pollutants shall have a permanent cover and side wind protection, or be covered during non-working days and prior to rain events
- Dumpsters used to store items awaiting transfer to an off-site recycling or disposal facility must have a cover. Dumpsters shall be in good condition without corrosion or leaking seams, and be located as far as possible from any receiving waters
- Garbage dumpsters shall be replaced if they are deteriorating to the point where leakage is occurring and shall be covered to prevent storm water from entering.
- Portalets shall be provided and maintained for use by on-site construction personnel.
- Where material is temporarily stored in drums, a containment system shall be used. The volume of the secondary containment provided shall be at least 110% of the largest stored container.
- Drums stored in an area where unauthorized persons may gain access must be secured in a manner that prevents accidental spillage,

pilferage or any unauthorized use.

- Lids shall be tightly closed
- Use plastic sheeting to line the area.
- Keep a list of products in storage.
- Check containers periodically for leaks or deterioration.
- In case of a leak, put original container into a larger container and label it properly.
- Post information for procedures in case of spills. Persons trained in handling spills shall be on-site or on-call at all times. Materials for cleaning up spills shall be kept on-site and easily available. Spills shall be cleaned up immediately and the contaminated material properly disposed of.
- An employee trained in emergency spill cleanup procedures shall be present when dangerous wastes, liquid chemicals or other wastes are loaded or unloaded.
- Construction activity accumulating dangerous wastes that do not contain "free liquids" shall be protected from storm water run on.

G. Non-Stormwater Components of Discharge

The Manager shall reduce or eliminate discharges of non-stormwater from construction sites to the extent practicable. The following are the only non-stormwater discharges allowed under this permit, provided appropriate control measures are in place to assure.

- Discharges from emergency fire-fighting activities.
- Water used to control dust, provided reclaimed water or other wastewaters are not used.
- Routine external building wash down where detergents are not used.
- Water used to rinse vehicles and equipment, provided that reclaimed water or other wastewater is not used and no soaps, solvents, detergents, oils, grease or fuels are present in the rinse.
- Pavement washing is not allowed unless a vacuum is utilized.
- Uncontaminated air conditioning or compressor condensate.
- Water from fire-fighting system testing and maintenance, including hydrant flushing.
- Water used for compacting soil, provided reclaimed water or other wastewaters are not used.

The anticipated non-storm water discharge expected on this site are dust control, vehicle & equipment wash water, pavement rinse water, air conditioning or compressor condensate & soil compaction.

It is noted that groundwater and/or mixed groundwater and stormwater may only be an allowable discharge if the Contractor follows the CDPHE low risk discharge policy. Non-stormwater discharges shall comply with the allowable uses under the CDPS COR400000 permit.

H. Receiving Waters

A majority of the Black Hawk Park site flows north towards an unnamed tributary to North Clear Creek. A small southern portion of the project drains south towards Russell Gulch which is also part of the North Clear Creek Watershed. The runoff from the site will generally follow historic drainage patterns/directions.

III. BMPs for Stormwater Pollution Prevention

A. Erosion and Sediment Controls

Once construction activity begins, Best Management Practices (BMPs) intended to contain sediment onsite must be constructed, inspected and repaired as necessary. Such controls must be functional before upslope land disturbance takes place. The BMPs will be installed as shown on the Grading and Erosion Control Plans in Appendix B. They must be supplemented as on-site experience proves necessary in order to control sediment, pollutant discharge, and ensure public safety. The following temporary BMPs (some of which act as permanent BMPs) will be installed and maintained to control on-site erosion and prevent sediment from traveling off-site during construction:

- **Sediment Basins** are temporary stormwater detention ponds with a check structure and outlet structures designed to trap and accumulate mobile sediment in stormwater prior to discharge offsite. Sediment basins shall be sized appropriately for the upstream catchment area and shall be inspected and maintained frequently to ensure performance.

- **Silt Fence** is a woven synthetic fabric that filters runoff. Silt fence is a temporary barrier that is installed prior to earthmoving activities and is placed downstream of areas where runoff from construction activities is expected to occur, especially along the site perimeter. Silt fences will be installed per manufacturer's recommendations. Silt fence is not intended to be used in areas of concentrated flow. If concentrated flow is encountered during the

placement of the fence, an alternative BMP shall be used and the GESC should be updated to reflect this change.

- **Reinforced Rock Berms (RRB)** act as a sediment filter and are utilized within swales and around grated inlets. RRBs are temporary BMPs and require proper installation and maintenance to ensure their performance.

- **Inlet Protection** will be used on all existing and relocated storm inlets to help prevent debris from entering the storm sewer system and tributary. Inlet protection is installed prior to construction. Inlet protection generally consists of gravel rock socks/filters around grated and curb inlets.

- **Riprap** will be used downstream of all storm sewer outfalls (as pipe outlet protection) to control erosion of the receiving channels. Riprap is installed prior to construction and also serves as a permanent structural BMP.

- **Preservation of Existing Vegetation** should occur where no construction activity is expected to occur.

B. Erosion Control Sequencing

Before construction commencement, silt fence will be placed downstream of areas where runoff from construction activities is expected to occur.

Vehicle tracking control will also be placed at the stockpile area exit(s). If the soil stockpile area is moved from the location shown on the site plan, the GESC should be updated.

A concrete wash out area, fueling area, and other staging areas will be provided during the construction process at least 100’ from any stormwater conveyance.

All perimeter erosion control devices (silt fence) shall be in place, functional, and maintained during and following the grading and construction operations. Wind borne sediment and dust control measures should be established for all phases of construction.

Wattles will be placed at proposed area inlets and within proposed swales. Gravel filters will be placed at curb inlets.

All erosion control devices will remain in place until final stabilization of soil. Permanent erosion control devices shall be installed at the end of construction. These measures include riprap (installed during construction).

C. Materials Handling and Spill Prevention

Hazardous waste disposal (that is not typical to roadway widening operations) is not included within this GESC. Concrete and asphalt batch plants are not anticipated on this site and thus are not included in this GESC.

SPILL CONTROL PROCEDURES:

Even with careful handling and management of materials, spills still may occur. Spill control procedures shall be implemented in order to minimize or prevent the discharge of spilled material to the drainage system or watercourses.

Control BMPs: The major control mechanism for spills is to properly educate employees and subcontractors on what to do in the case of a spill for each material they use. All containers susceptible to spillage or leakage must be clearly identifiable and labeled to encourage proper handling and facilitate rapid response in the event of a spill or leak. Keep proper storage, clean-up and spill reporting instructions posted on site at all times and verify weekly that spill control clean up materials are located near material storage areas, unloading, and use areas. Preventative measures shall be in place to isolate containers from high traffic areas and contain spills at the site of contamination via secondary containment. Spills need to be immediately and properly contained to prevent contaminating runoff. The magnitude of a spill will determine the level of response required to mitigate it:

- Secondary containment is required for bulk storage (55 gallons or greater) of hazardous materials.
- Minor spills typically involve small quantities of oil, gasoline, paint, etc., which can be controlled by the first responder at the discovery of the spill.
- Semi-significant spills still can be controlled by the first responder along with the aid of other personnel such as laborers and the foreman, etc. This response may require the cessation of all other activities.
- For significant or hazardous spills that cannot be controlled by personnel in the immediate vicinity, notify the local emergency response by dialing 911, in addition to notifying the proper city/county officials.

The responsible party for detecting and responding to spills and leaks is:

Contact Name: _____
Company Name: _____
Company Title: _____
Address: _____
Phone Number: _____

IV. Other Controls

Waste Disposal
Except as authorized by a Section 404 Permit, no solid materials of any kind, including building material, are to be discharged offsite. Waste receptacles are to be provided at convenient locations, with regular collection schedules. All debris and waste shall be properly disposed of according to applicable federal, state and local laws. Receptacles are to be covered and not subjected to storm water run-on or runoff. No material, liquid or otherwise, is to be discharged through the storm drain system.

Dust Control
Dust control measures are to conform to the Air Pollution Control Permit and any measures that may be specified by the Geotechnical Engineer. The geotechnical engineering evaluation shall be reviewed by the contractor and subcontractors as it relates to this GESC. The nature of fill material shall be as described within the above-referenced evaluation.

The tracking of sediment onto public streets is normally attributed to vehicles driving through unpaved areas and onto said streets. For the time-period just prior to the start of earth disturbing activity, to prior to site paving, the construction site entrance shall be protected by a Vehicle Tracking Control. The gravel apron is to be inspected regularly and maintained as necessary. Any public street shall be inspected and cleaned as necessary by means of sweeping by the contractor, shall tracking occur. Street cleaning debris shall be disposed of in the same manner as all other construction waste as herein described.

The gravel apron may be salvaged for use elsewhere or thoroughly mixed into the subgrade immediately prior to paving activities. The contractor shall consult with the Geotechnical Engineer for this project for further recommendations should this option is used.

Concrete Washout Area
Concrete washouts are an allowable non-stormwater discharge under the Construction General Permit. The General Permit allows the discharge of

wastewater resulting from washing concrete from trucks, pumps, and ancillary equipment to an impoundment if the conditions listed in General permit are met.

Dedicated Concrete or asphalt batch plants are not an anticipated use for this project.

Vehicle and Equipment Maintenance and Fueling
Vehicle maintenance and refueling operations should take place in designated areas when possible. Designated areas shall protect potential contaminants from being mobilized by stormwater and should follow the BMP guidelines for petroleum products as stated in this document. Any soils contaminated from spills or leakage during these operations shall be separated and treated as material waste.

Vehicle Tracking of Sediments
Vehicle tracking of sediments shall be minimized by maintaining controlled access points for vehicles that access actively earthworked areas of the site or would otherwise come in contact with significant amounts of sediment, and providing vehicle tracking pads at these locations. General locations for these have been shown indicatively on the Erosion and Sediment Control plans but may be updated to reflect specific contractor staging of works.

Disturbed and Stored Soils
Active stockpiles shall be managed by means of dust control during loading and unloading procedures. All active stockpiles that are to be left for greater than a 24-hour period shall have structural BMPs implemented to prevent the mobilization of sediment from the stockpile. Stockpiles to be left for longer than 14 days shall have interim stabilization as noted in the Erosion and Sediment Control portion of this document.

Management of Contaminated Soils
Contaminated soils shall be separated from uncontaminated soils to the extent possible, stockpiled separately and treated as material waste. Contaminated soils shall be protected from being mobilized by stormwater runoff; this may be achieved utilizing structural BMPs noted in this document, and by covering small stockpiles.

Asbestos and heavy metal contamination, such as arsenic and lead, shall be managed in accordance with the Colorado Department of Public Health and Environment (CDPHE) guidelines.

Loading and Unloading Operations
Loading of disturbed soil into trucks for transport offsite shall take place in designated areas, utilizing the controls described for Disturbed and Stored Soils as well as the Vehicle Tracking of Sediments. Where possible, road vehicles transporting material to or from the site shall remain on stone paved areas, and at a minimum have vehicle tracking pads at access points leaving the site.

V. Final Stabilization and Long-term Stormwater Quality

Final stabilization is reached when all soil disturbing activities at the site have been completed and vegetative cover has been established with a density of at least 70 percent of pre-disturbance levels or when equivalent permanent erosion reduction methods have been utilized. Upon final stabilization, all temporary BMPs may be removed.

VI. Inspection and Maintenance Procedures

During construction, appropriate measures shall be taken to inspect and maintain existing erosion control features and install new erosion control elements as needed.

The temporary BMPs will be inspected and documented at a minimum of once every 14 days and after each precipitation or snowmelt event. The GESC will be kept up-to-date with inspection records, maintenance procedures, and changes. Records should include complete inspection reports for each inspection, maintenance and repair reports as a result of the inspections, and records of maintenance as indicated in the manufacturer's specifications, or other acceptable sources. A record-keeping system is recommended in managing inspection and maintenance reports and should include all maintenance records, spill response, weather conditions, training, correspondence, etc.

Preventative maintenance also involves the regular inspection and testing of equipment, timely maintenance of the equipment, and complete records of the maintenance and inspections of the equipment. The maintenance and inspection records should be kept on site and made available upon request.

Inspections must include the observation of the construction site perimeter, runoff discharge points, disturbed areas, erosion and sediment control measures identified in this GESC, and any other structural BMPs that may require maintenance. The inspection must determine if there is evidence of or potential for pollutants to enter the drainage system and if they should be modified, replaced, or added to.

The following includes some maintenance procedures:

- Erosion and sediment control measures determined, upon inspection, to be in need of repair shall be maintained before the next anticipated storm event or as necessary to

maintain continued effectiveness of erosion and sediment control measures. If it is impractical to maintain erosion and sediment control measures before the next storm event, maintenance should be accomplished as soon as practical.

- Locations where vehicles enter or exit the site shall be inspected for evidence of sediment being tracked off-site by construction traffic. Such sediment shall be removed before it can be conveyed to the receiving storm drains or creeks.

- Rock at inlet protection will be checked regularly for sediment buildup which will prevent drainage. If the rock is clogged with silt, it will be removed and cleaned or replaced.

- Seeded areas will be checked to see that grass coverage is maintained. Areas will be watered, fertilized and reseeded as needed.

- It is the responsibility of the Operator to maintain effective pollutant discharge controls. Actual physical site conditions or contractor practices could make it necessary to install more control than are shown on the Erosion Control Plan. For example, localized concentrations of surface runoff or unusually steep areas could require additional erosion control devices. Assessing the need for and implementing additional controls will be a continuing aspect of the GESC until final stabilization. This plan intends to control water-borne and liquid pollutant discharges by some combination of interception, filtration, and containment. Parties implementing this plan must remain alert to the need to periodically refine and update the plan in order to accomplish the intended goals.

- Sediment that has escaped the construction site must be removed at a frequency sufficient to minimize off-site impacts.

still trying to understand the final product in the areas of cut. some of these are as much as 7-10 feet. this will likely leave nothing but bedrock so no vegetation is likely to grow. is there going to be at least a layer of biomass spread over the area to get something to root?

VII. References

1. Stormwater Management Plan Preparation Guidance, State of Colorado, Colorado Department of Public Health and Environment, April 2011.

4. Urban Storm Drainage Criteria Manual, Volumes 1, 2, and 3, Urban Drainage and Flood Control District, October 2019

APPENDIX A

USDA NRCS Web Soil Survey

Soil Map—Georgetown Area, Colorado, Parts of Clear Creek, Gilpin, and Park Counties

Map Scale: 1:5,220 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 250 500 1000 1500

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 13N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Georgetown Area, Colorado, Parts of Clear Creek, Gilpin, and Park Counties
Survey Area Data: Version 14, Jun 10, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 4, 2010—Nov 1, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
1	Arents-Dumps, mine complex, 5 to 80 percent slopes	1.5	1.2%
23	Legault-Rock outcrop complex, 30 to 80 percent slopes	56.0	46.3%
43	Resort very gravelly sandy loam, 3 to 10 percent slopes	23.8	19.7%
44	Resort very gravelly sandy loam, 10 to 30 percent slopes	39.0	32.2%
47	Resort-Cathedral complex, 30 to 60 percent slopes	0.7	0.6%
Totals for Area of Interest		**120.9**	**100.0%**

APPENDIX B

GESC Plan

Ⓐ NOTE PERMANENT EASEMENT MONUMENTS

Ⓑ DISTANCES BETWEEN UNDERGROUND UTILITIES

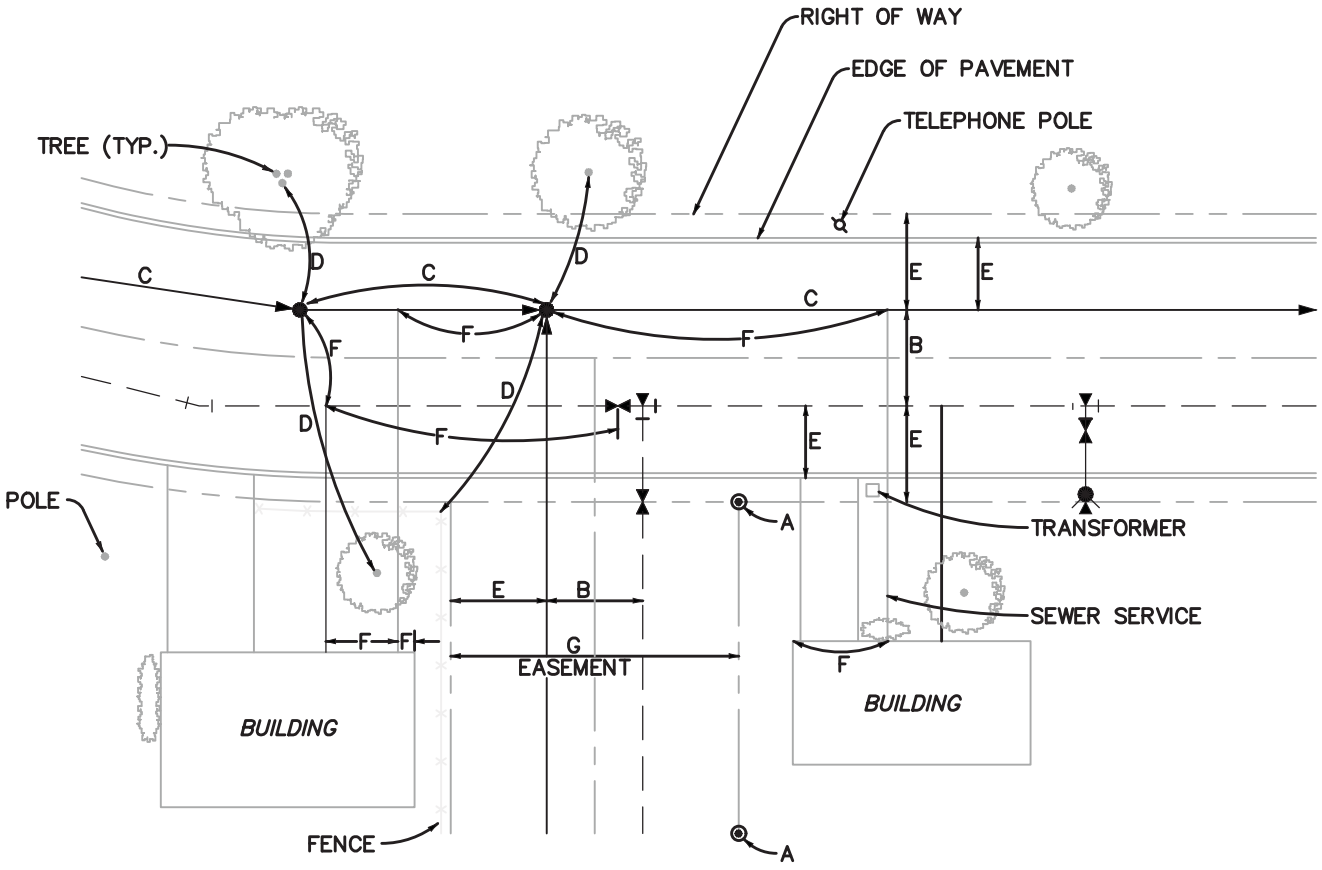
Ⓒ NOTE LENGTH, SIZE, MATERIAL AND SLOPE OF LINE AS INSTALLED

Ⓓ LOCATE SEWER MANHOLES & FINAL INV. ELEVATIONS

Ⓔ NOTE DISTANCES TO EDGE OF PAVEMENT AND TO R.O.W. OR EASEMENTS.

Ⓕ LOCATE ALL SERVICE TAPS AND LINES.

Ⓖ NOTE ANY KNOWN R.O.W. AND EASEMENT INFORMATION.

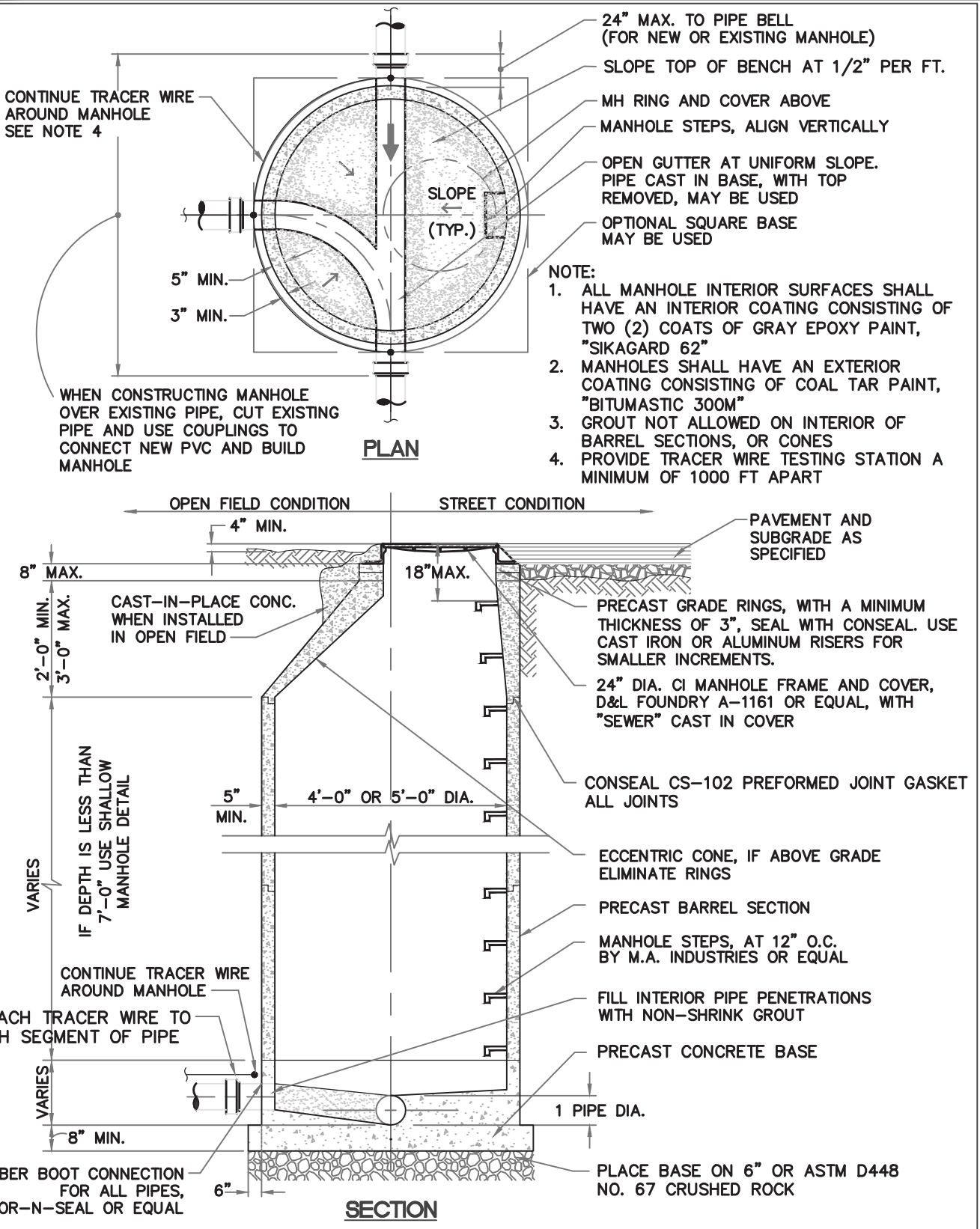


(RECORD DRAWINGS TO BE SEALED BY THE DESIGN ENGINEER)

Typical Record Drawing Information

Dwg. 2

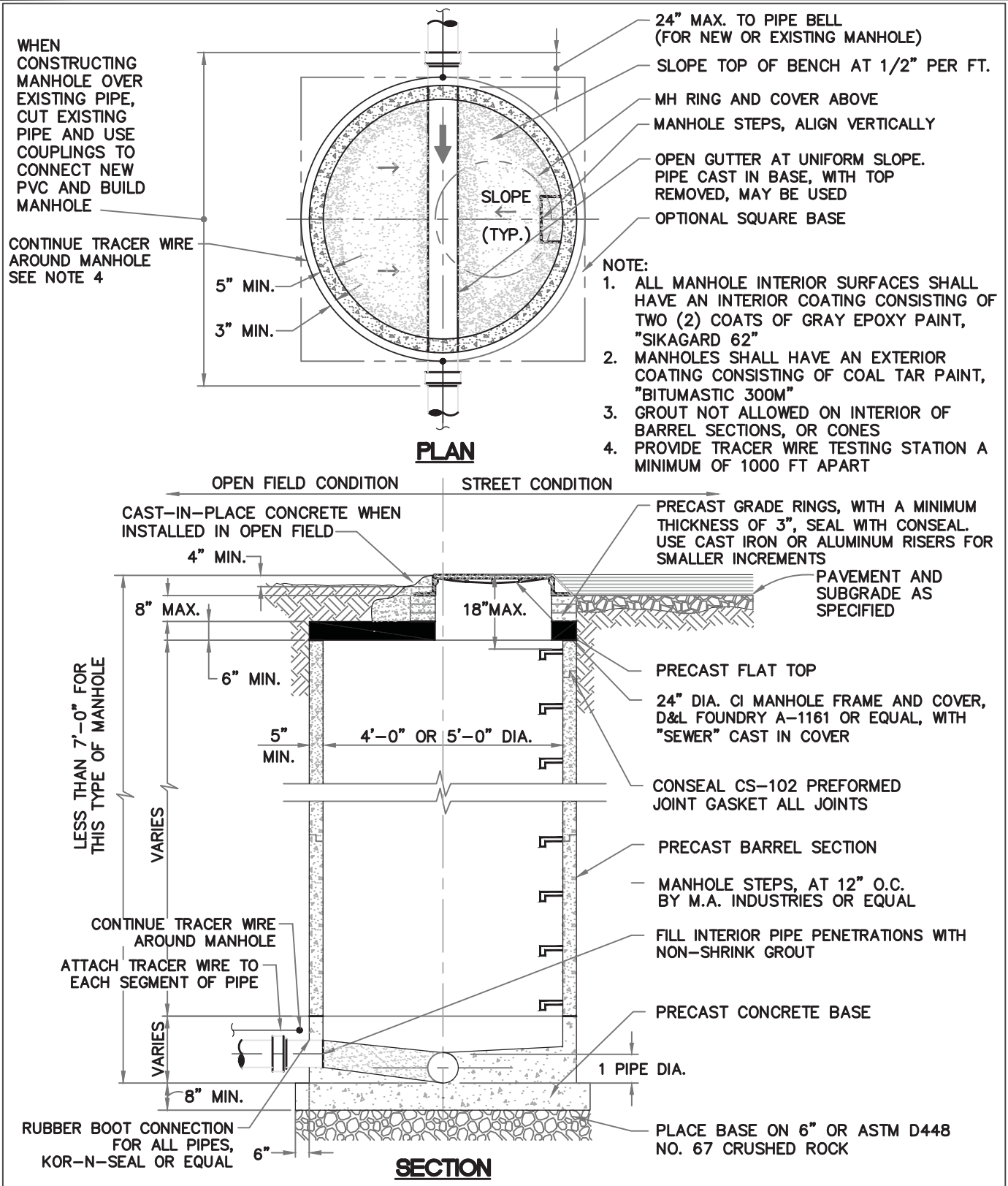
THESE DETAILS ARE PROVIDED FOR STANDARDIZATION PURPOSES ONLY. THIS DETAIL REPRESENTS MINIMUM DESIGN STANDARDS WHICH MAY REQUIRE UPRGRADING FOR SPECIFIC APPLICATIONS.



Standard Precast Concrete Manhole

Dwg. 3

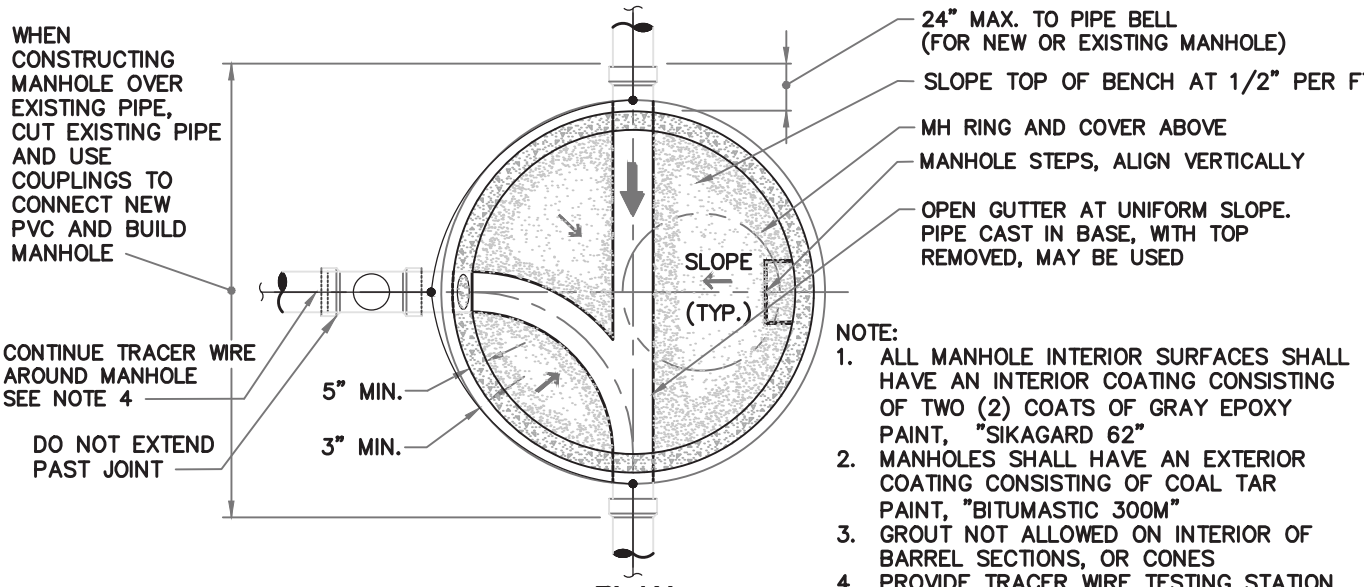
THESE DETAILS ARE PROVIDED FOR STANDARDIZATION PURPOSES ONLY. THIS DETAIL REPRESENTS MINIMUM DESIGN STANDARDS WHICH MAY REQUIRE UPRGRADING FOR SPECIFIC APPLICATIONS.



Shallow Precast Concrete Manhole

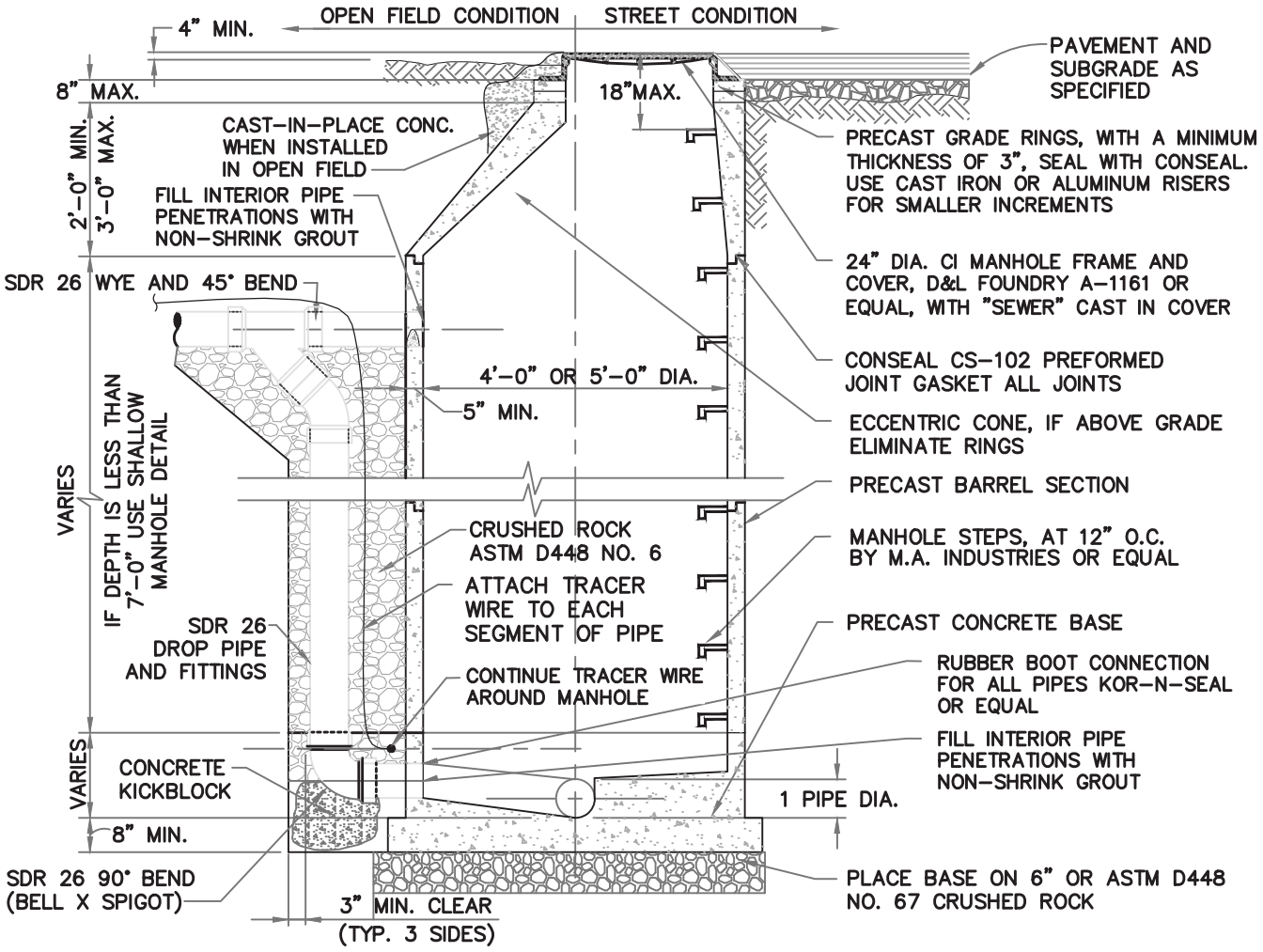
Dwg. 4

THESE DETAILS ARE PROVIDED FOR STANDARDIZATION PURPOSES ONLY. THIS DETAIL REPRESENTS MINIMUM DESIGN STANDARDS WHICH MAY REQUIRE UPRGRADING FOR SPECIFIC APPLICATIONS.



NOTE:
1. ALL MANHOLE INTERIOR SURFACES SHALL HAVE AN INTERIOR COATING CONSISTING OF TWO (2) COATS OF GRAY EPOXY PAINT, "SIKAGARD 62"
2. MANHOLES SHALL HAVE AN EXTERIOR COATING CONSISTING OF COAL TAR PAINT, "BITUMASTIC 300M"
3. GROUT NOT ALLOWED ON INTERIOR OF BARREL SECTIONS, OR CONES
4. PROVIDE TRACER WIRE TESTING STATION A MINIMUM OF 1000 FT APART

PLAN

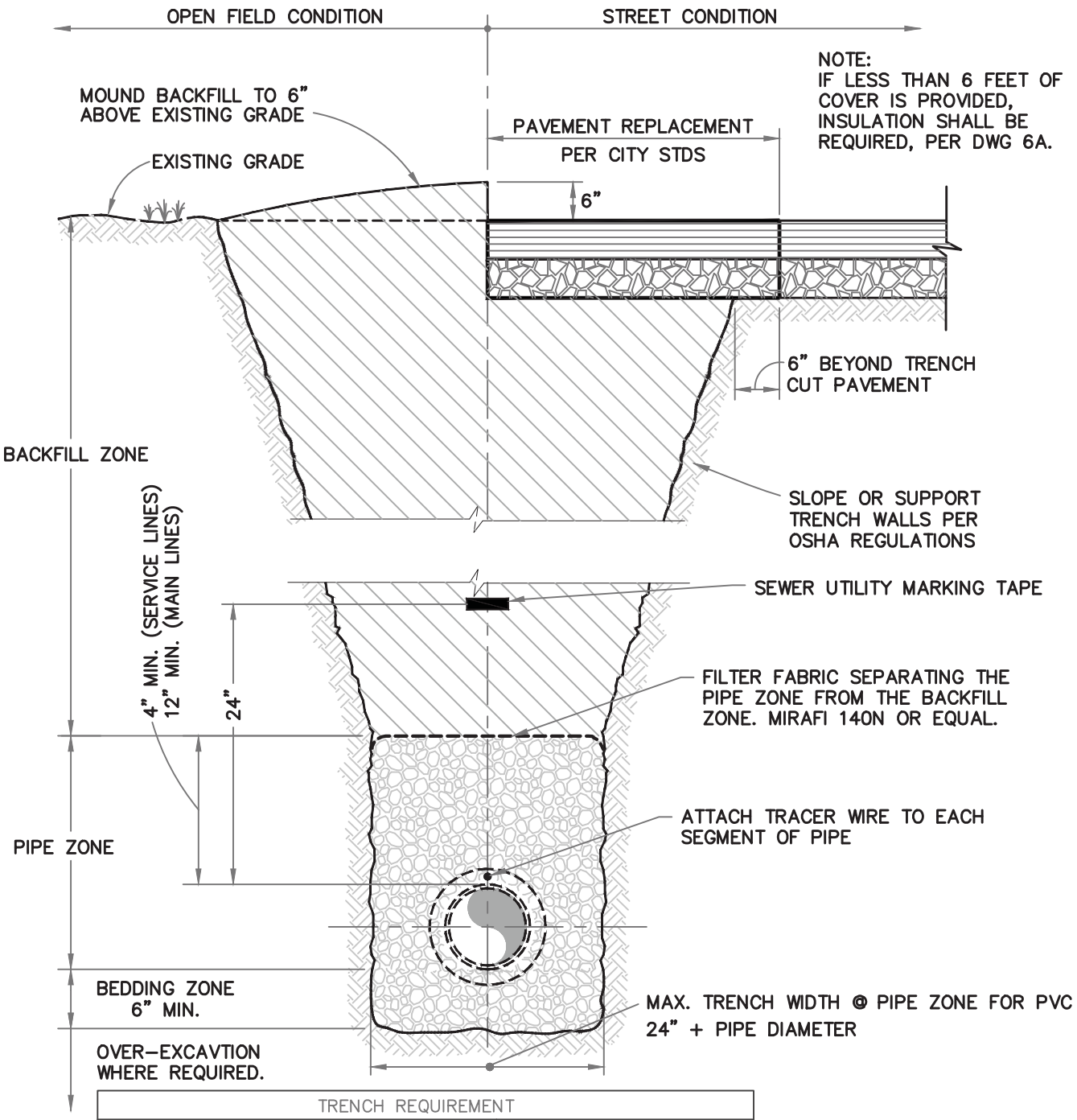


SECTION

Drop Detail for Manhole

Dwg. 5

THESE DETAILS ARE PROVIDED FOR STANDARDIZATION PURPOSES ONLY. THIS DETAIL REPRESENTS MINIMUM DESIGN STANDARDS WHICH MAY REQUIRE UPRGRADING FOR SPECIFIC APPLICATIONS.

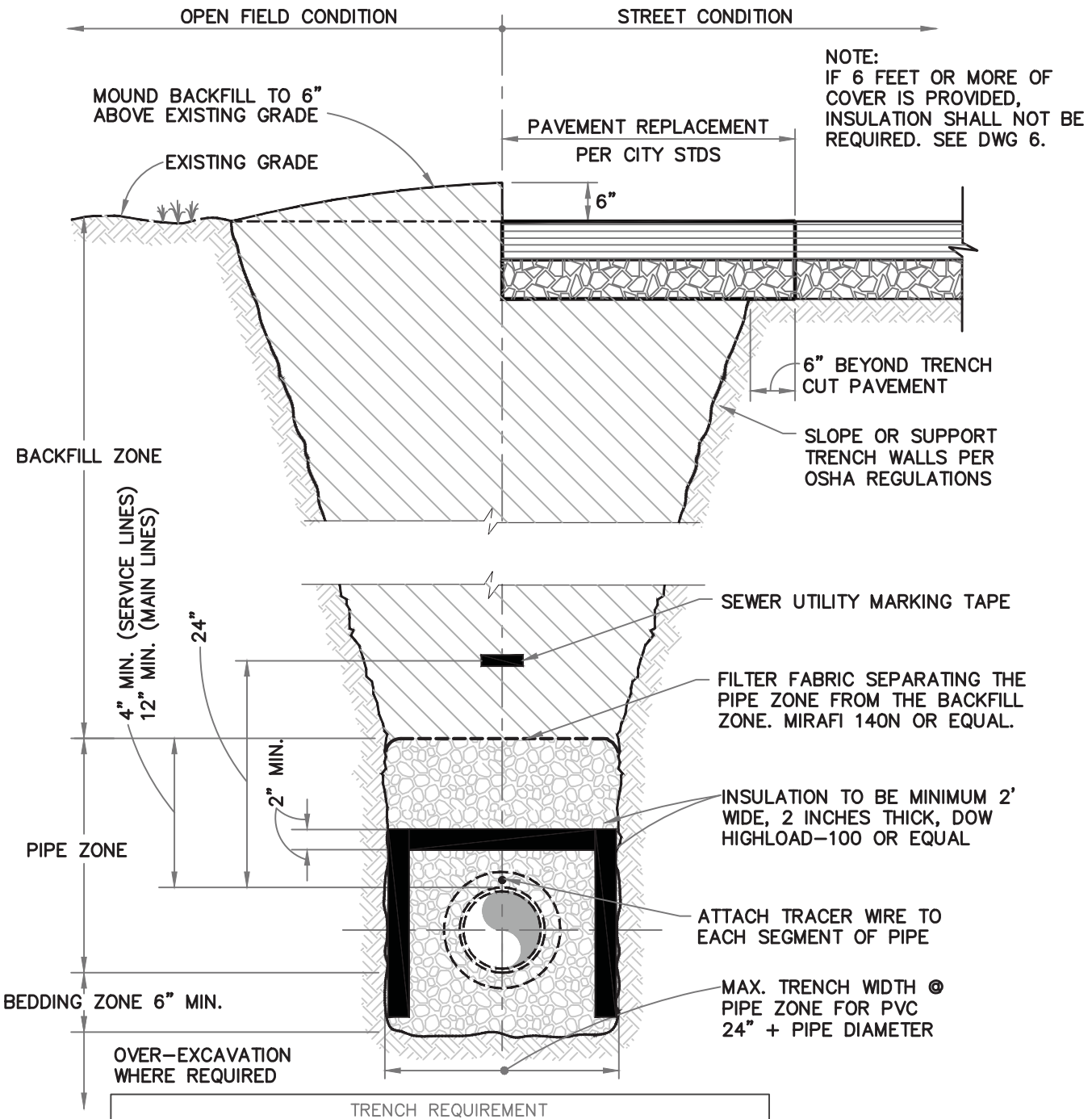


TRENCH REQUIREMENT	
Pipe Material	PVC
Bedding Zone Minimum Depth	6" (12" when in rock)
Backfill Zone Material (compact to 95% maximum dry density, ASTM D698) 8" max. lift or per jurisdiction requirements.	Select native w/ 6" max. diameter rock
Pipe Zone and Bedding Zone Material	Granular (ASTM D448 No. 67)

Sewer Main and Service Trench Detail

Dwg. 6

THESE DETAILS ARE PROVIDED FOR STANDARDIZATION PURPOSES ONLY. THIS DETAIL REPRESENTS MINIMUM DESIGN STANDARDS WHICH MAY REQUIRE UPRGRADING FOR SPECIFIC APPLICATIONS.

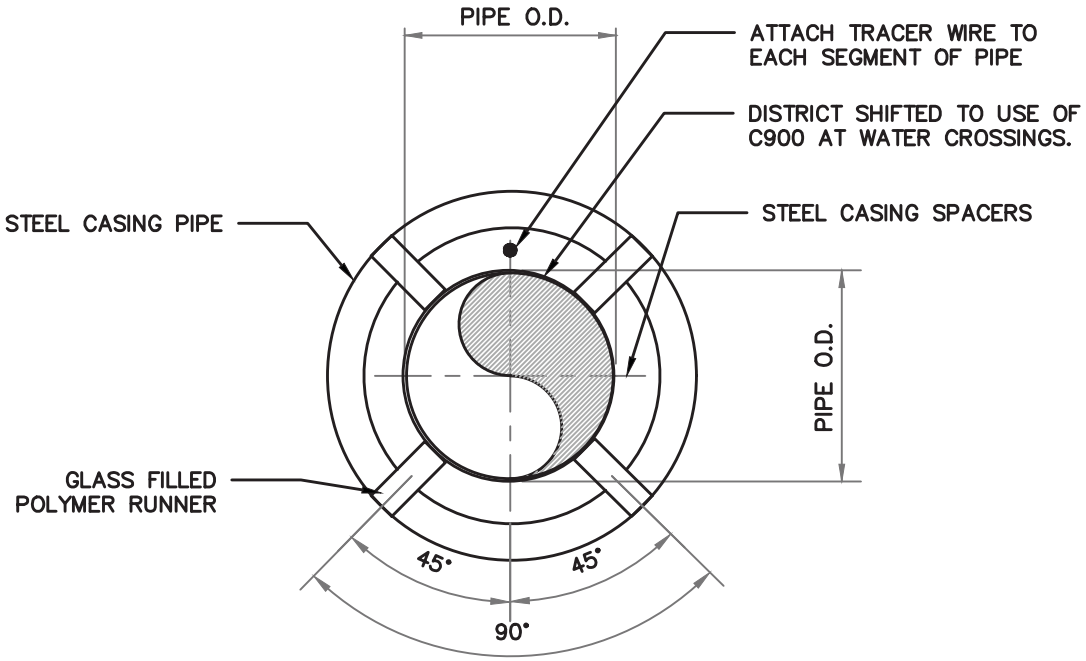


TRENCH REQUIREMENT	
Pipe Material	PVC
Bedding Zone Minimum Depth	6"
Backfill Zone Material (compact to 95% maximum dry density, ASTM D698) 8" max. lift or per jurisdiction requirements.	Select native w/ 6" max. diameter rock
Pipe Zone and Bedding Zone Material	Granular (ASTM D448 No. 67)

Dwg. 6A

Shallow Sewer Main and Service Trench Detail (Less Than 6' of Cover)

THESE DETAILS ARE PROVIDED FOR STANDARDIZATION PURPOSES ONLY. THIS DETAIL REPRESENTS MINIMUM DESIGN STANDARDS WHICH MAY REQUIRE UPRGRADING FOR SPECIFIC APPLICATIONS.



CARRIER PIPE NOMINAL Φ	CASING PIPE	
	MIN O.D.	MIN WALL THICKNESS
4"	12"	0.25"
6"	16"	0.3125"
8"	18"	0.3125"
12"	22"	0.375"
16"	28"	0.500"
20"	32"	0.500"

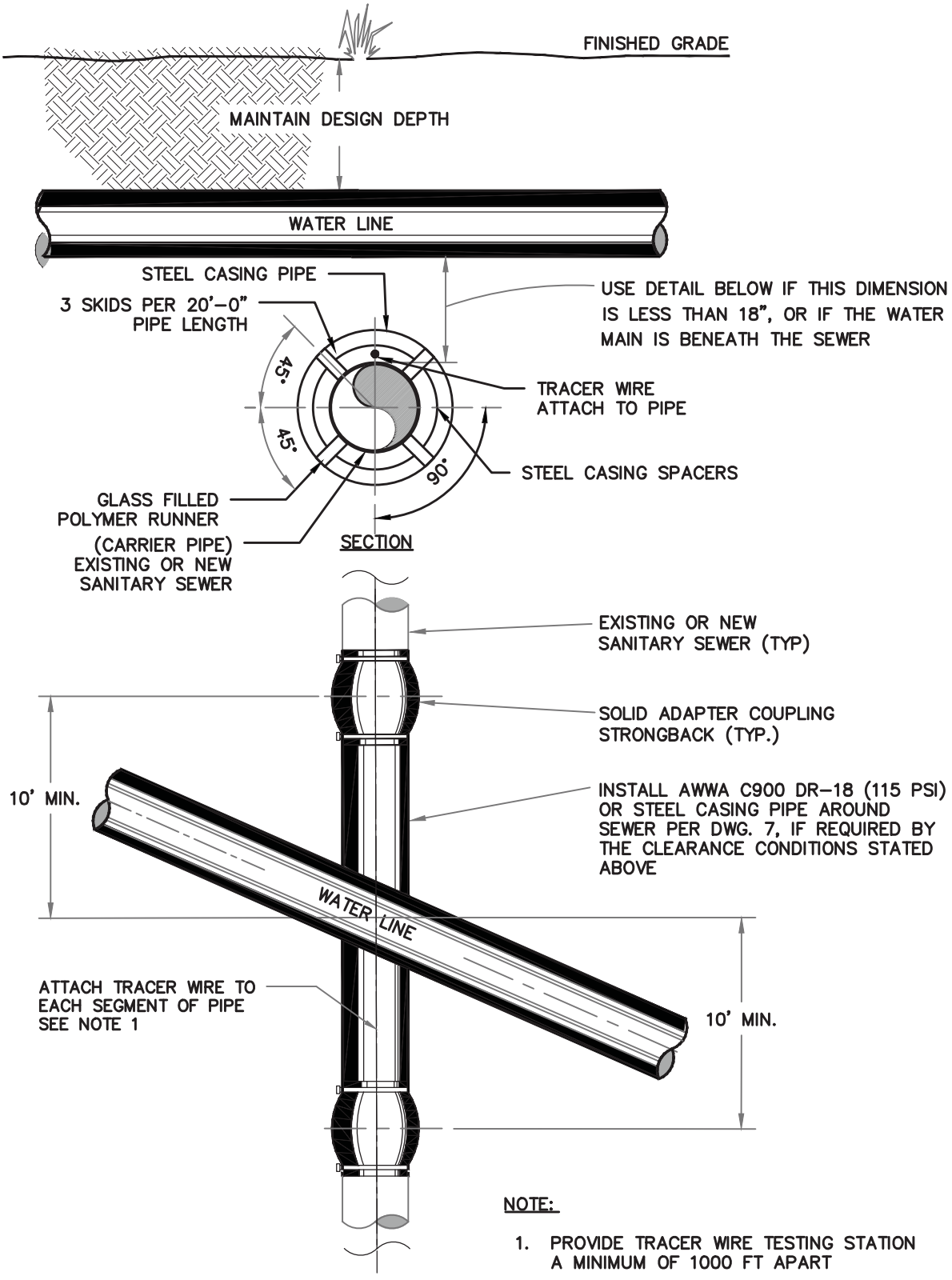
NOTE:
1. THE LENGTH OF ENCASEMENT WILL VARY BASED ON CONSTRUCTION CONDITIONS.

2. STEEL CASING MUST HAVE END SEALS. SEE TABLE FOR SIZE AND WALL THICKNESS.

Pipe Encasement Detail - Sewer

Dwg. 7

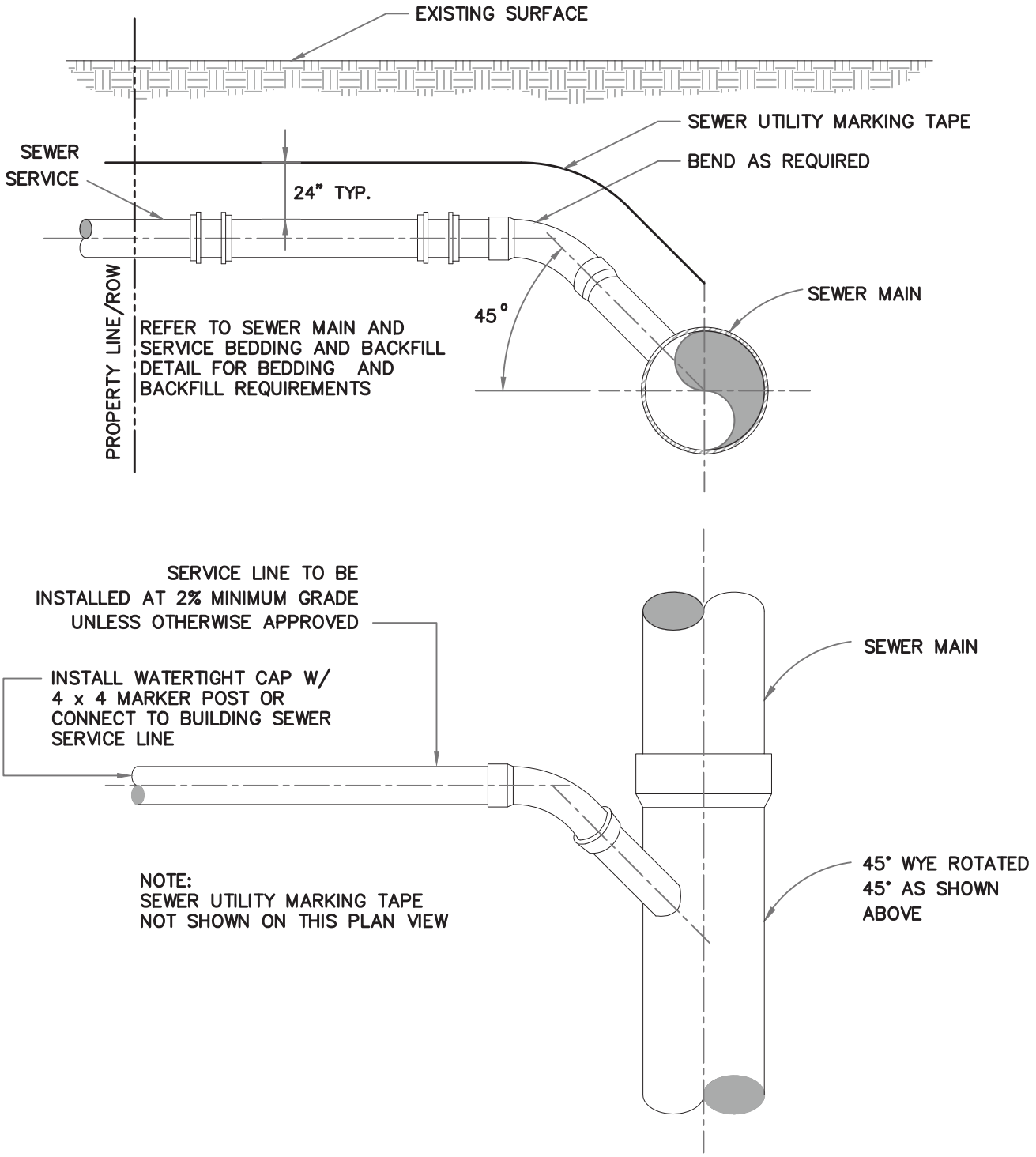
THESE DETAILS ARE PROVIDED FOR STANDARDIZATION PURPOSES ONLY. THIS DETAIL REPRESENTS MINIMUM DESIGN STANDARDS WHICH MAY REQUIRE UPRGRADING FOR SPECIFIC APPLICATIONS.



Sewer Crossing Water Line Detail

Dwg. 8

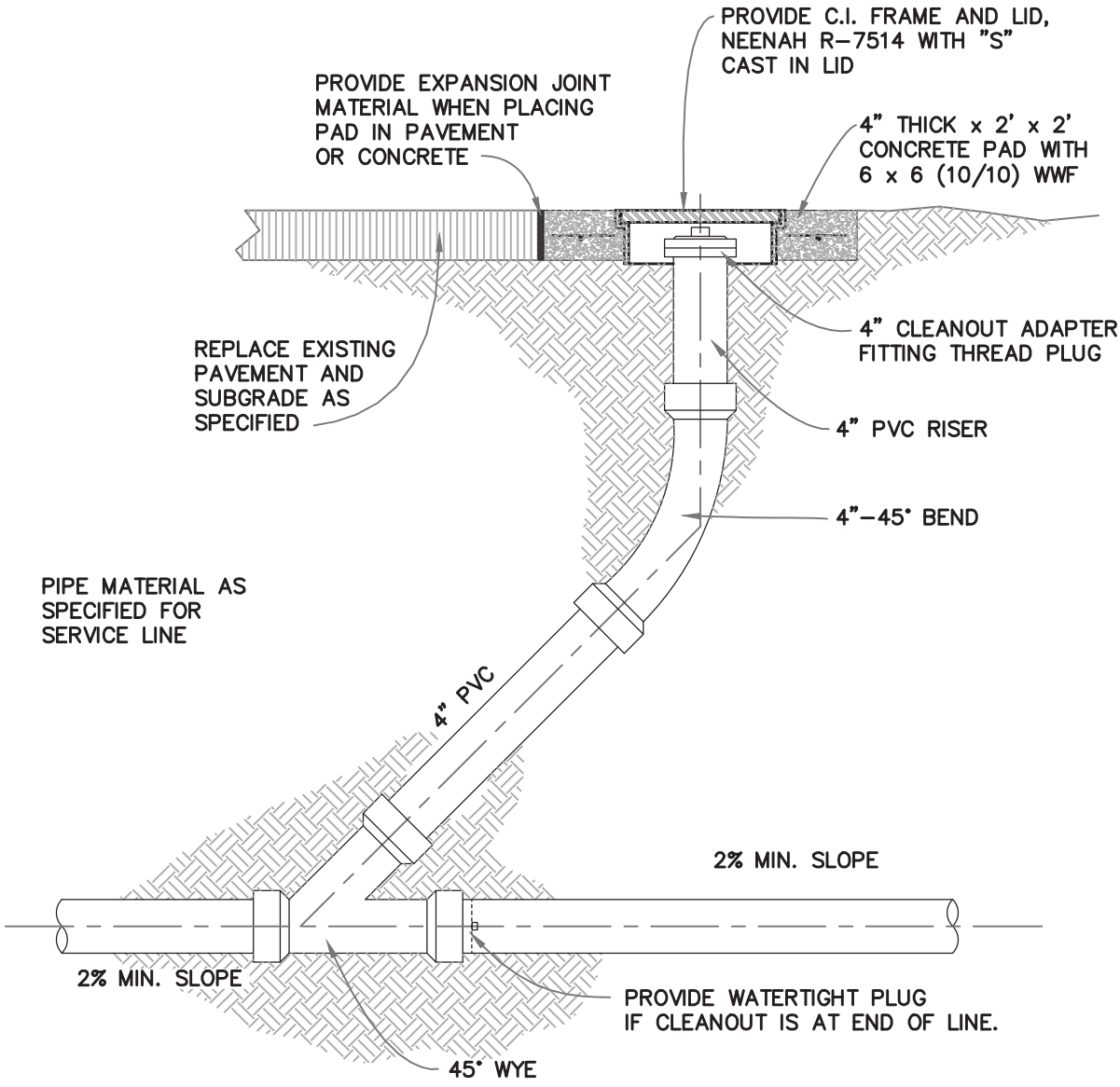
THESE DETAILS ARE PROVIDED FOR STANDARDIZATION PURPOSES ONLY. THIS DETAIL REPRESENTS MINIMUM DESIGN STANDARDS WHICH MAY REQUIRE UPRGRADING FOR SPECIFIC APPLICATIONS.



Sewer Service Connection Detail

Dwg. 9

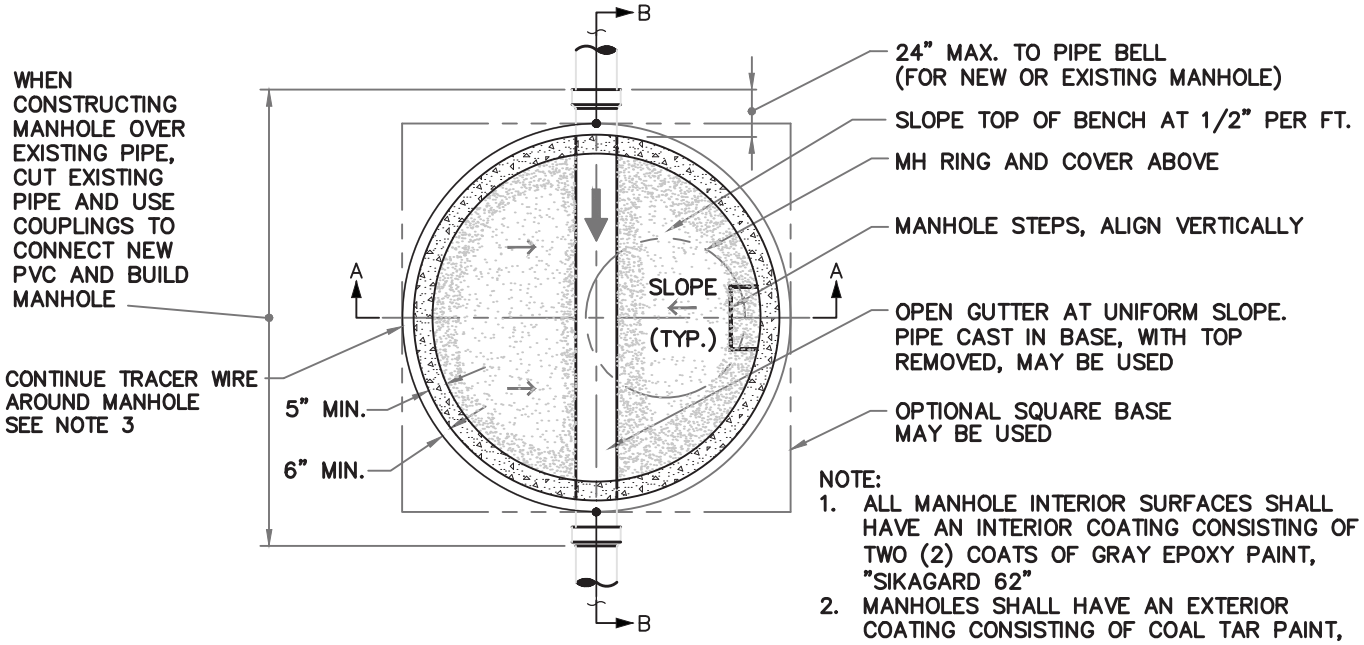
THESE DETAILS ARE PROVIDED FOR STANDARDIZATION PURPOSES ONLY. THIS DETAIL REPRESENTS MINIMUM DESIGN STANDARDS WHICH MAY REQUIRE UPRGRADING FOR SPECIFIC APPLICATIONS.



Service Line Cleanout Detail

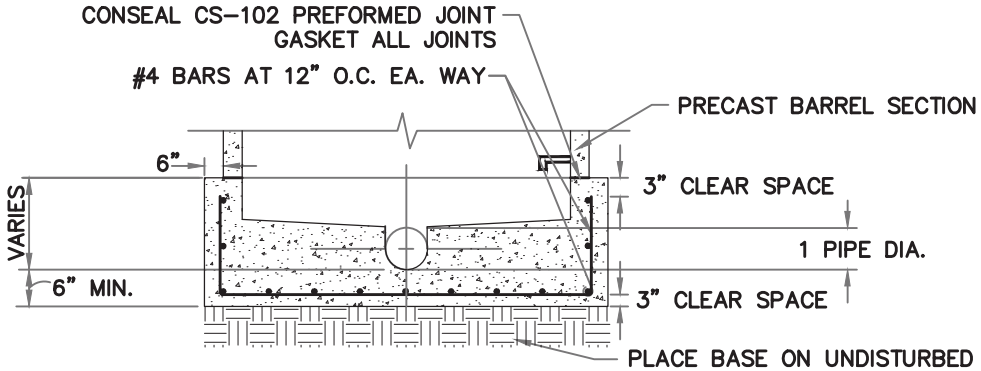
Dwg. 10

THESE DETAILS ARE PROVIDED FOR STANDARDIZATION PURPOSES ONLY. THIS DETAIL REPRESENTS MINIMUM DESIGN STANDARDS WHICH MAY REQUIRE UPRGRADING FOR SPECIFIC APPLICATIONS.

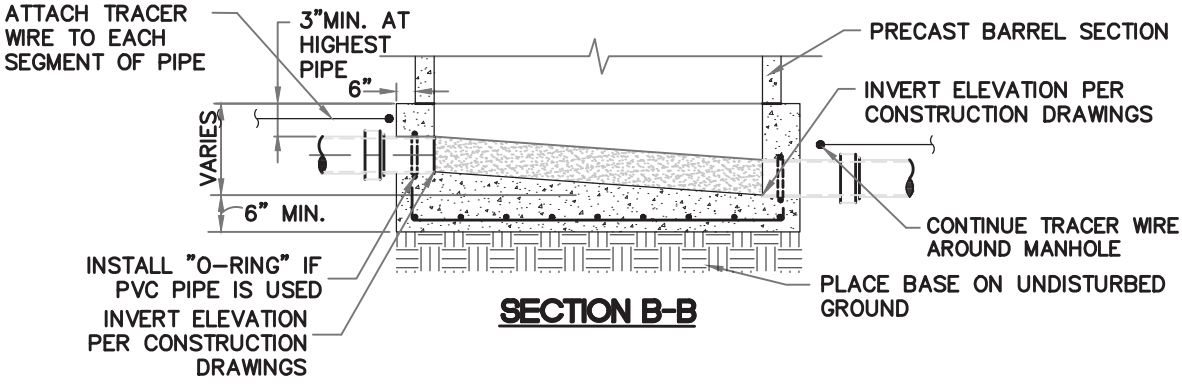


PLAN

NOTE:
1. ALL MANHOLE INTERIOR SURFACES SHALL HAVE AN INTERIOR COATING CONSISTING OF TWO (2) COATS OF GRAY EPOXY PAINT, "SIKAGARD 62"
2. MANHOLES SHALL HAVE AN EXTERIOR COATING CONSISTING OF COAL TAR PAINT, "BITUMASTIC 300M"
3. PROVIDE TRACER WIRE TESTING STATION A MINIMUM OF 1000 FT APART



SECTION A-A



SECTION B-B

Cast In Place Manhole Base (To Be Used Only Upon Written Approval) Dwg. 11

THESE DETAILS ARE PROVIDED FOR STANDARDIZATION PURPOSES ONLY. THIS DETAIL REPRESENTS MINIMUM DESIGN STANDARDS WHICH MAY REQUIRE UPRGRADING FOR SPECIFIC APPLICATIONS.

ATTACHMENT 3

SDP/COAC PLANS REQUIRED REVISIONS

Reviewed by Community Planning & Development

Reviewed by Julie Esterl - Baseline Planning - 2/23/2021

Reviewed by Water

Reviewed by SAFEBuilt

Reviewed by Ethan Watel - Baseline Planning 2/24/2021

Reviewed by FD

Reviewed by Baseline Engineering

Reviewed by Public Works

Reviewed by BHCCSD

HAWKS LANDING

SITE DEVELOPMENT PLAN

this is really a landscape plan not a site development plan

Once all sheets are added, this will be the SDP plan set. OK to leave title as SDP, but also add COAC. Individual sheet titles are listed in the title blocks which is appropriate.

if it is the SDP then it is missing the details for the trailer pads, all utility connections, power, gas, walk dimensions and details

LOT 1, BLACK HAWK PARK SUBDIVISION, CITY OF BLACK HAWK, COUNTY OF GILPIN, STATE OF COLORADO

Add township and range info

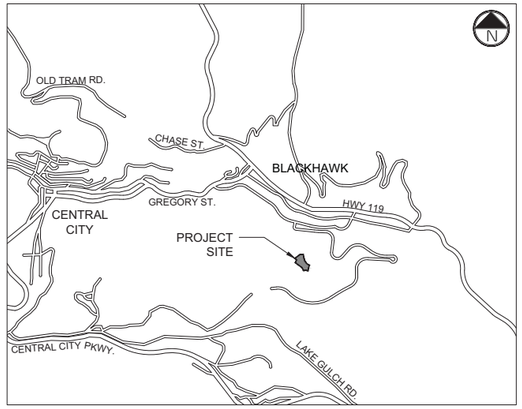
Why using "HOTEL" as use? use AIRSTREAM?

PROJECT NARRATIVE

THE INTENT OF THE LANDSCAPE DESIGN IN THIS PROJECT IS CREATE PLANTING THAT BLENDS NATURALLY WITH THE SURROUNDING VEGETATION AND PROVIDES AMENITIES THAT WILL KEEP GUESTS WANTING TO COME BACK. THE TREES WITHIN THE SITE HAVE BEEN PLACED TO CREATE VISUAL INTEREST, WHILE ALSO PROVIDING PRIVACY AND SCREENING. THE POCKETS OF UNDERSTORY PLANTING HAVE BEEN DESIGNED TO FLOW NATURALLY, WHILE ALSO CREATING A VISUALLY-APPEALING ENTRANCE TO THE HOTEL CHECK-IN AND HOTEL ROOM PODS. COMMUNITY SEATING AND FIREPITS HAVE BEEN PLACED IN THE MIDDLE OF THE HOTEL ROOM PODS TO CREATE A SPACE FOR GUESTS TO GATHER AND RELAX. AN AIRSTREAM BAR HAS BEEN PLACED AT THE ENTRANCE OF THE HOTEL, GIVING GUESTS A PLACE TO DRINK, PLAY LAWN GAMES, AND TAKE IN THE VIEWS.

KEY MAP

1"=3000'



PROJECT TEAM

OWNER
VENTANA CAPITAL
9801 E. EASTER AVENUE
CENTENNIAL, CO 80112
303-346-7006
CONTACT: DALTON HORAN

ENGINEER/SURVEYOR
RICK ENGINEERING
9801 E. EASTER AVENUE
CENTENNIAL, CO 80112
303-537-8020
CONTACT: JASON KRALL

PLANNER/LANDSCAPE ARCHITECT
TERRACINA DESIGN
10200 E. GIRARD AVENUE
BUILDING A, SUITE 314
DENVER, CO 80231
303-632-8867
CONTACT: JEFF MARCK

LEGAL DESCRIPTION

LOT 1, BLACK HAWK PARK SUBDIVISION, CITY OF BLACK HAWK, COUNTY OF GILPIN, STATE OF COLORADO.

VESTED RIGHTS STATEMENT

THIS PLAN IS SUBMITTED TO CREATE VESTED PROPERTY RIGHTS PURSUANT TO ARTICLE 68 OF TITLE 24, C.R.S. AND PURSUANT TO SECTIONS 361 AND 362 OF ARTICLE XVII OF THE BLACK HAWK MUNICIPAL CODE AS ADOPTED BY THE BOARD OF ALDERMEN AND AVAILABLE AT CITY HALL, 201 SELAK STREET, BLACK HAWK, COLORADO 80422.

Add statement for SDPs per BH municipal Code Sec 16-362 (e) (7)

CERTIFICATIONS

OWNER'S SIGNATURE:

VENTANA CAPITAL

_____

NAME: DALTON HORAN

TITLE:

ADD TITLE

STATE OF COLORADO, COUNTY OF GILPIN

THIS LIKELY WON'T BE THE COUNTY DALTON SIGNS THIS IN

THE FOREGOING INSTRUMENT WAS ACKNOWLEDGED BEFORE ME ON THIS _____ DAY OF _____ , 20____ , BY DALTON HORAN, ~~[TITLE]~~ OF VENTANA CAPITAL.

WITNESS MY HAND AND OFFICIAL SEAL:

MY COMMISSION EXPIRES: _____

NOTARY PUBLIC: _____ ADDRESS: _____

CITY OF BLACK HAWK BOARD OF ALDERMEN CERTIFICATION:

THE SITE DEVELOPMENT PLAN IS APPROVED AND ACCEPTED BY THE BOARD OF ALDERMEN OF THE CITY OF BLACK HAWK, COLORADO, THIS _____ DAY OF _____ , 20____ .

BY: _____
MAYOR OF THE CITY OF BLACK HAWK, COLORADO

ATTEST: _____
CITY CLERK

THIS PLAN CONSTITUTES A SITE SPECIFIC DEVELOPMENT PLAN AS DEFINED IN 24-69-101, ET SEQ., C.R.S., AND ORDINANCE NO. 98-62 OF THE CITY OF BLACK HAWK.

THE TERMS AND CONDITIONS OF SUCH APPROVAL ARE CONTAINED IN RESOLUTION NO. _____ ADOPTED BY THE CITY ON _____ AND AVAILABLE AT CITY HALL, 201 SELAK STREET, BLACK HAWK, COLORADO.

DEVELOPMENT STANDARDS

COMMERCIAL BUSINESSS SERVICES (CBS) ZONE DISTRICT AND A SPECIAL REVIEW USE PERMIT WAS APPROVED FOR THIS LOT ALLOWING THE 'CAMPGROUND USE' ON OCTOBER 14, 2020 VIA RESOLUTION 65-2020

ZONING	THIS SITE IS LOCATED WITHIN THE ~~HILLSIDE DEVELOPMENT - MIXED USE (HD) DISTRICT.~~
MINIMUM SETBACKS	FRONT 10 FT. SIDE ~~5 FT.~~ 10 FT REAR 10 FT.
BUILDING STANDARDS	~~N/A~~ 2015 I-CODES, A117.1 ANSSI-2009 and the 2020NEC AND IN ACCORDANCE WITH THE COAC APPROVAL WITH THIS SITE DEVELOPMENT PLAN.
STREETSCAPE, OPEN SPACE, & LANDSCAPING	MINIMUM LANDSCAPED AREA IS 15%. OPEN SPACE EXCLUDES BUILDINGS AND PARKING AREAS BUT INCLUDES WALKWAYS, DRAINAGE, AND LANDSCAPE AREAS. PROPOSED LANDSCAPING SHALL COMPLY WITH ARTICLE XIII OF CHAPTER 16 OF THE CITY OF BLACK HAWK MUNICIPAL CODE.
LIGHTING	PROPOSED SITE LIGHTING SHALL COMPLY WITH SECTIONS 16-264 (b)(5) AND 16-282 (d) OF THE CITY OF BLACK HAWK MUNICIPAL CODE, AS WELL AS ALL OTHER SECTIONS OF THE CITY OF BLACK HAWK MUNICIPAL CODE THAT GOVERN ON-SITE LIGHTING.
FENCES & WALLS	STORAGE AREAS AND TRASH ENCLOSURES ARE TO BE SCREENED BY 72" FENCING.
ARCHITECTURAL TREATMENT	EXTERIOR ARCHITECTURAL TREATMENT SHALL BE IN ACCORDANCE WITH THE CITY OF BLACK HAWK MUNICIPAL CODE AND THE BLACK HAWK DESIGN GUIDELINES.
SIGNS	PROPOSED SIGNAGE SHALL COMPLY WITH ALL PROVISIONS OF CHAPTER 15 OF THE CITY OF BLACK HAWK MUNICIPAL CODE, AND WILL BE APPROVED BY A SEPARATE COMPREHENSIVE SIGN PLAN APPLICATION.

The SDP/COAC plan set needs to include all of the following missing plan sheets:
- Grading, Drainage and Erosion Control Plan
- Utility Plan
- SWMP
- Airstream Bar elevations and treatments
- Check-in Building elevations
- Storage Shed building elevations
- Trash enclosure details and elevations
- Materials Sheets with specifications, materials, colors, etc. for ALL exterior improvements - Conceptual photos are not sufficient for approval. Exterior improvements include surface treatments, exterior walls and windows, exterior lighting, required signage, trash enclosure, camp site amenities, rock wall seating, landscape boulders, fencing, timber arch, bar fire pit, etc.) This information may be provided on the plans they pertain to, or you may prepare separate materials sheets that provide this information. Please reference each detail to the appropriate sheet for reference.

Building Department Notes:
A full code analysis will be required at time of submittal showing all occupant and building details per the 2015 I-Codes, A117.1 ANSI-2009 and the 2020 NEC
Drawings must be "For Construction" when submitted by a licensed registrant.

SHEET INDEX

1	S1.0	COVER
2	S1.1	SITE PLAN
3-4	L1.1-L1.2	LANDSCAPE PLANS
5-7	L1.3-L1.5	LANDSCAPE DETAILS
8	L1.6	LIGHTING PLAN

NOT FOR CONSTRUCTION

terracina design
10200 E. Girard Ave, A-314
Denver, CO 80231
ph: 303.632.8867

RICK ENGINEERING COMPANY

PROJECT NAME

HAWKS LANDING
BLACK HAWK, COLORADO
SITE DEVELOPMENT PLAN

SHEET TITLE

COVER

ISSUE DATE

FEBRUARY 5, 2021

REVISION DATE

SHEET NUMBER

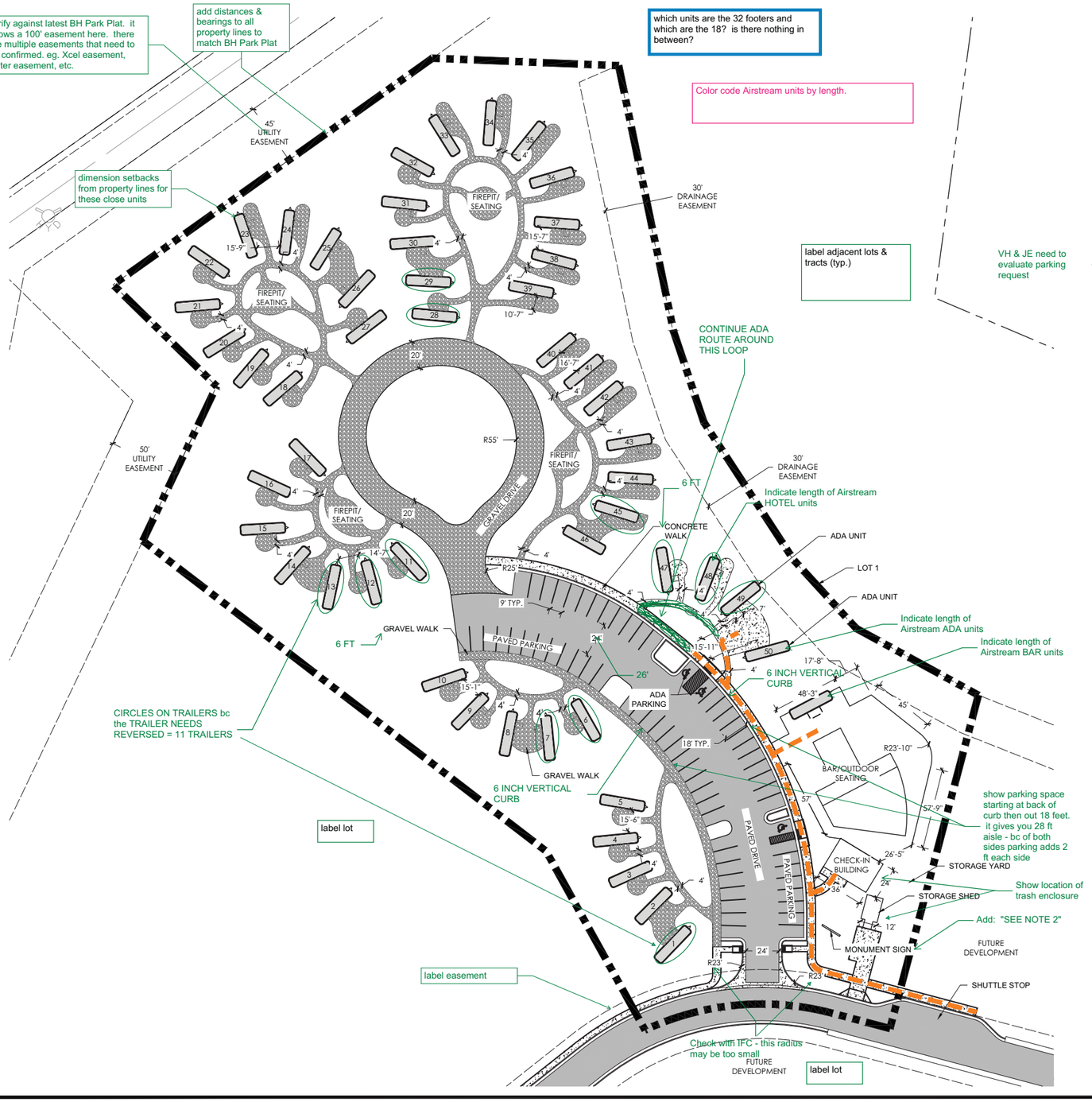
S1.0

HAWKS LANDING

SITE DEVELOPMENT PLAN

"AND CERTIFICATE OF ARCHTECTURAL COMPATIBILITY" (typ. for all sheets)

LOT 1, BLACK HAWK PARK SUBDIVISION, CITY OF BLACK HAWK,
COUNTY OF GILPIN, STATE OF COLORADO



LAND USE TABLE

LAND USE TYPE	AREA (ACRE)	% AREA	# OF UNITS	% UNITS
HOTEL ROOMS/TRAILERS	0.30	5.6%	50	100.0%
HOTEL CHECK-IN/STORAGE	0.02	0.5%		
STORAGE YARD	0.08	1.4%		
OUTDOOR BAR	0.23	4.3%		
DRIVEWAY/PARKING	0.76	14.1%		
WALKS	0.63	11.6%		
OPEN SPACE/LANDSCAPE	3.37	62.5%		
TOTAL	5.40	100.0%	50	100.0%

PARKING CALCULATIONS

VH & JE need to evaluate parking request

LAND USE TYPE	LAND USE CODE	PARKING REQUIRED	ADA PARKING REQUIRED	PARKING PROVIDED	ADA PARKING PROVIDED
HOTEL ROOMS/TRAILERS	1.12 SPACES/ROOM	54	2	63	3
HOTEL CHECK-IN	1 SPACE/250 S.F.	3			
OUTDOOR BAR	1 SPACE/75 S.F.	27			
TOTAL		86		66	

NOTE: A VARIANCE FOR PARKING REQUIREMENTS HAS BEEN SUBMITTED WITH THE SITE DEVELOPMENT PLAN.

Add "Note 2: Signs included in this submittal are for illustrative purposes only. Sign approval is not granted with this SDP/COAC submittal. A Comprehensive Sign Plan (CSP) must be applied for and approved by the Black Hawk City Council prior to the installation of any signs."

50 units x 1.12 = 56 spaces

LEGEND

- ADA ROUTE
- GRAVEL SURFACE
- PAVED SURFACE
- CONCRETE SURFACE

Fire Hydrant location not provided. Provide fire hydrant locations.

Unable to determine if fire access road dimensions are appropriate without hydrant location. 2015 IFC D103.1 Access Road with a Fire Hydrant requires road width of 26 feet.

Fire Apparatus Access Roads shall be constructed in accordance with 2015 IFC Section 503.

Per SRU Condition of Approval Item E. "The campground is required to have on-site restroom facilities, all-weather accessibility and road surfacing, a caretaker's unit, and a source of water contained on-site considered sufficient for fire protection"

Identify on-site restrooms, care takers unit, and water to for fire protection.

N

Scale: 1"= 40'-0"

0 20 40 80

terranda design
10200 E. Girard Ave, A-314
Denver, CO 80231
ph: 303.632.8867

RICK Engineering Company

PROJECT NAME

HAWKS LANDING
BLACK HAWK, COLORADO
SITE DEVELOPMENT PLAN

SHEET TITLE

SITE PLAN

NOT FOR CONSTRUCTION

ISSUE DATE
FEBRUARY 5, 2021

REVISION DATE

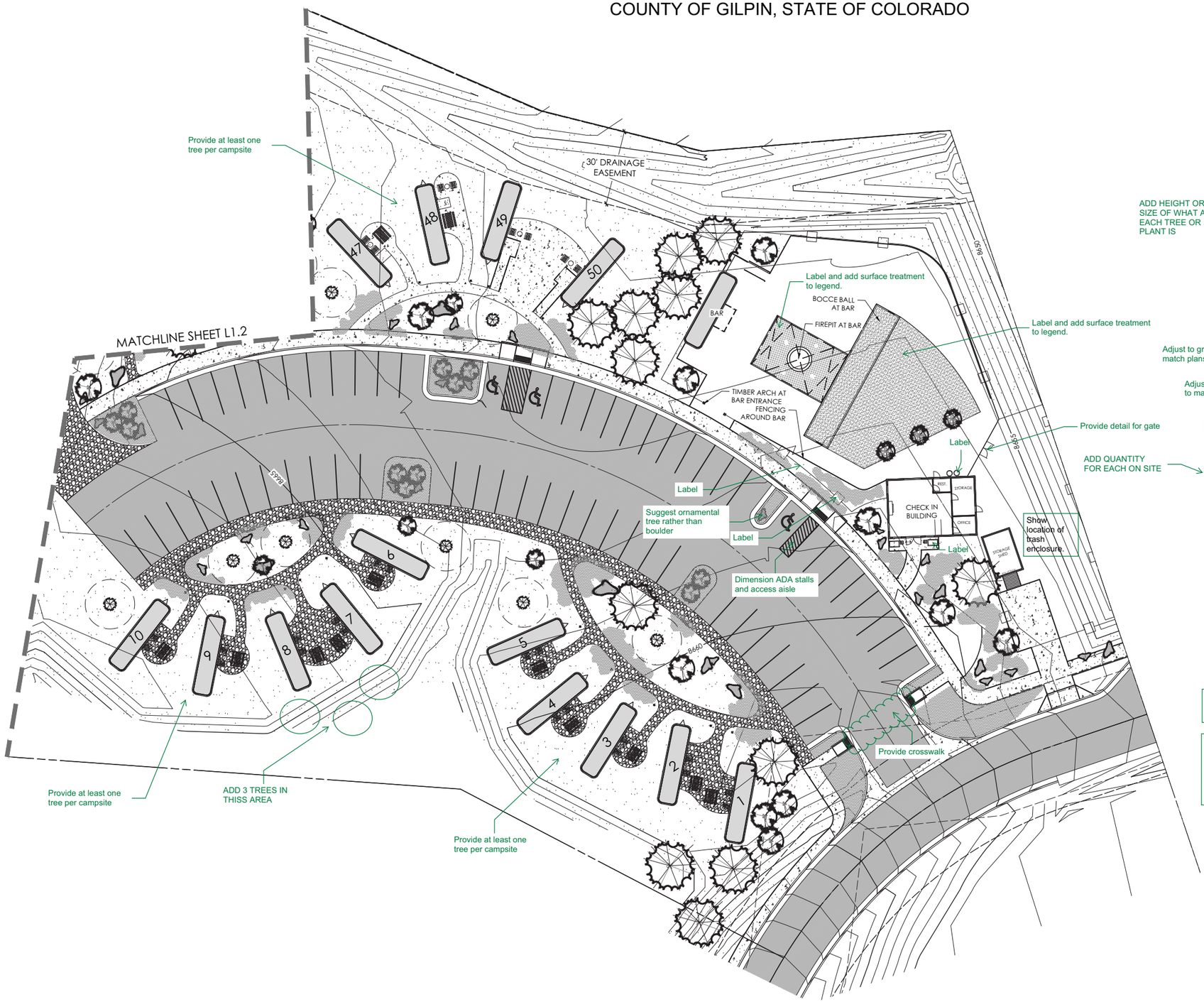
SHEET NUMBER

S1.2

HAWKS LANDING

SITE DEVELOPMENT PLAN

LOT 1, BLACK HAWK PARK SUBDIVISION, CITY OF BLACK HAWK,
COUNTY OF GILPIN, STATE OF COLORADO



KEYMAP

ADD HEIGHT OR SIZE OF WHAT A EACH TREE OR PLANT IS

LEGEND

- ASPEN B&B CLUMP
- ASPEN #5 CONTAINER CLUMP
- FULL SIZE EVERGREEN TREE
- EVERGREEN TREE SAPLING
- MATURE EVERGREEN SIZE
- NATIVE SEED
- GRAVEL/CRUSHER FINES SURFACE (Adjust to gray tone to match plans)
- MULCH WITH SHRUBS & PERENNIALS (Adjust scale of hatch to match plans)
- LANDSCAPE BOULDER

ADD QUANTITY FOR EACH ON SITE

PLANT LEGEND

KEY	BOTANICAL NAME	COMMON NAME
EVERGREEN TREES		
PE	PICEA ENGELMANNI	ENGELMANN SPRUCE
PP	PICEA PUNGENS	BLUE SPRUCE
PA	PINUS ARISTATA	BRISTLECONE PINE
PF	PINUS FLEXILIS	LIMBER PINE
PT	POPULUS TREMULOIDES	QUAKING ASPEN
PM	PSEUDOTSUGA MENZIESII	DOUGLAS FIR
BOTANICAL NAME		**COMMON NAME**
EVERGREEN SHRUB		
JNC	JUNIPERUS COMMUNIS	COMMON JUNIPER
JNS	JUNIPERUS SCOPULORUM	ROCKY MOUNTAIN JUNIPER
DECIDUOUS SHRUB		
RBC	RIBES CEREUM	WAX CURRANT
MAQ	MAHONIA AQUIFOLIUM	OREGON GRAPE HOLLY
RNW	ROSA 'NEARLY WILD'	NEARLY WILD ROSE
AAG	'ASTER ALPINUS 'GOLIATH'	ALPINE ASTER
AKP	ACHILLEA MILLEFOLIUM 'PAPRIKA'	PAPRIKA YARROW
AMY	ACHILLEA 'MOONSHINE'	MOONSHINE YARROW
LSS	LEUCANTHEMUM X SUPERBUM	SHASTA DAISY
THG	THERMOPSIS DIVARICARPA	GOLDEN BANNER

E

Add note regarding method of landscape irrigation and location of water tap.

Per SRU Condition of Approval Item I. "At least one tree per campsite, plus additional landscaping (including trees) throughout the site, and street-scape trees along Miners' Mesa Road are required"

Provide additional trees so that each campsite has at least one tree.

Scale: 1"= 20'-0"

0 10 20 40

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terradina design
10200 E. Girard Ave, A-314
Denver, CO 80231
ph: 303.632.8867

RICK ENGINEERING COMPANY

PROJECT NAME

HAWKS LANDING
BLACK HAWK, COLORADO
SITE DEVELOPMENT PLAN

SHEET TITLE

LANDSCAPE PLAN

ISSUE DATE

FEBRUARY 5, 2021

REVISION DATE

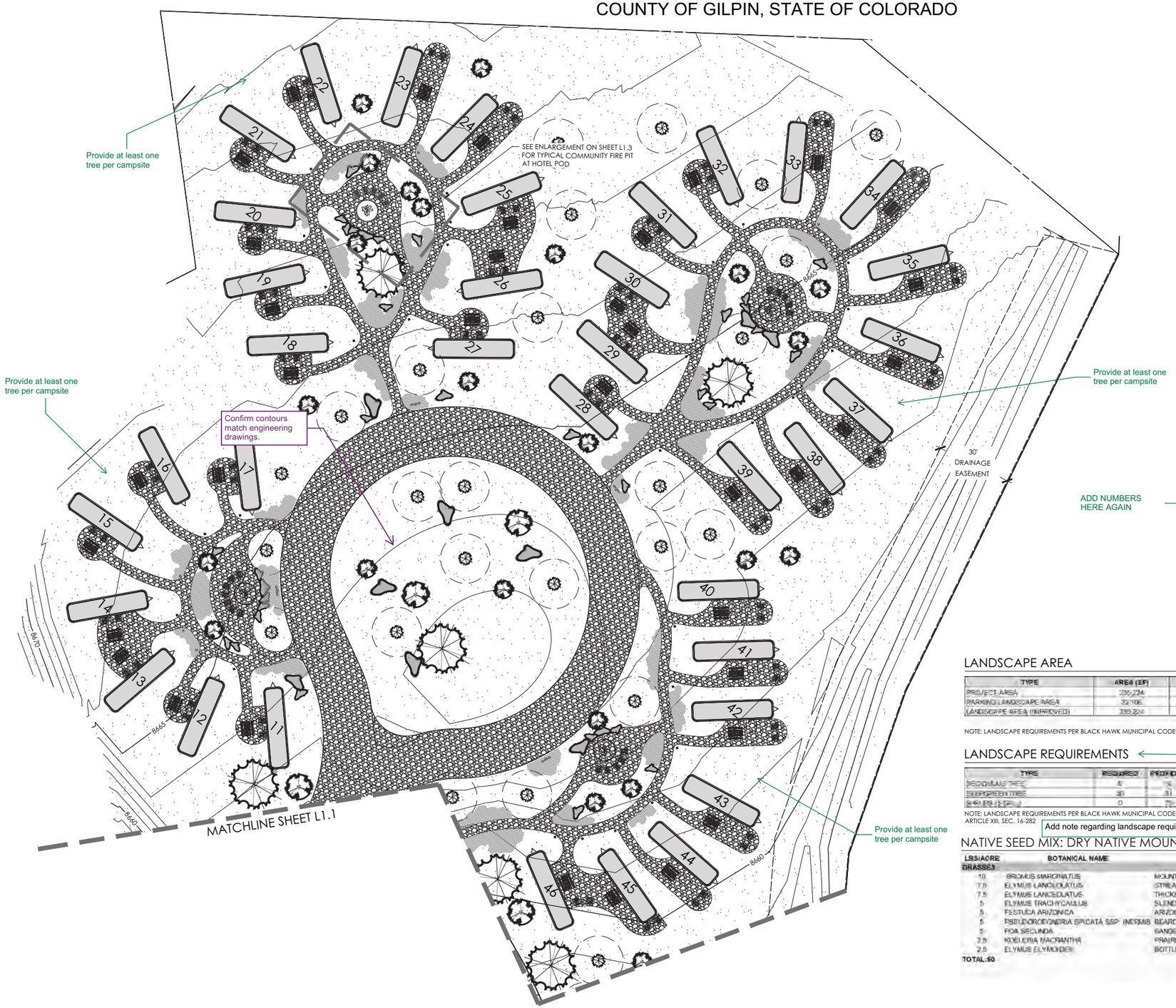
SHEET NUMBER

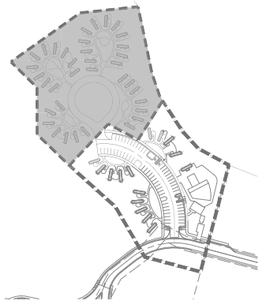
L1.1

HAWKS LANDING

SITE DEVELOPMENT PLAN

LOT 1, BLACK HAWK PARK SUBDIVISION, CITY OF BLACK HAWK,
COUNTY OF GILPIN, STATE OF COLORADO





KEYMAP

LEGEND

- ASPEN B&B CLUMP
- ASPEN #5 CONTAINER CLUMP
- FULL SIZE EVERGREEN TREE
- EVERGREEN TREE SAPLING
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- LANDSCAPE BOULDER

PLANT LEGEND

KEY	BOTANICAL NAME	COMMON NAME
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RBC	RIBES CEREUM	WAX CURRANT
MAO	MAHONIA AQUIFOLIUM	OREGON GRAPE HOLLY
RNW	ROSA NEARLY WILD	NEARLY WILD ROSE
AAG	ASTER ALPINUS 'GOLIATH'	ALPINE ASTER
AMP	ACHILLEA MILLEFOLIUM 'PAPRIKA'	PAPRIKA YARROW
AMY	ACHILLEA 'MOONSHINE'	MOONSHINE YARROW
LSS	LEUCANTHEMUM X SUPERBUM	SHASTA DAISY
THD	THERMOPSIS DIVARICARPA	GOLDEN BANNER

ADD NUMBERS HERE AGAIN

LANDSCAPE AREA

TYPE	AREA (SF)	REQUIREMENT (SF)	PROVIDED (SF)
PROJECT AREA	235,234	N/A	N/A
PARKING LANDSCAPE AREA	33,106	1,655	2,205
LANDSCAPE AREA (IMPROVED)	335,204	94,090	131,281

NOTE: LANDSCAPE REQUIREMENTS PER BLACK HAWK MUNICIPAL CODE- ARTICLE XIII, SEC. 16-282

LANDSCAPE REQUIREMENTS

TYPE	REQUIRED	PROVIDED
DECIDUOUS TREE	8	16
EVERGREEN TREE	30	91
SHRUBS (1 GAL.)	0	75

NOTE: LANDSCAPE REQUIREMENTS PER BLACK HAWK MUNICIPAL CODE- ARTICLE XIII, SEC. 16-282

I DON'T THINK I SEE 107 TREES ON THE PLANS....???? - VH.

Per SRU Condition of Approval Item I.
"At least one tree per campsite, plus additional landscaping (including trees)
throughout the site, and street-scape trees along Miners' Mesa Road are required"

Provide additional trees so that each campsite has at least one tree.

Add note regarding landscape requirements per SRU approval (Resolution 65-2020

NATIVE SEED MIX: DRY NATIVE MOUNTAIN MIX

LBS/ACRE	BOTANICAL NAME	COMMON NAME
GRASSES		
10	BROMUS MARGINATUS	MOUNTAIN BROME GRASS
7.5	ELYMUS LANCEOLATUS	STREAMBANK WHEATGRASS
7.5	ELYMUS LANCEOLATUS	THICKSPIKE WHEATGRASS
5	ELYMUS TRACHYCAULUS	SLENDER WHEATGRASS
5	FESTUCA ARIZONICA	ARIZONA FESCUE
5	PSEUDOROEGNERIA SPICATA SSP. INERMIS	BEARDLESS WHEATGRASS
5	POA SECUNDA	SANDBERG BLUEGRASS
2.5	KOELERIA MACRANTHA	PRAIRIE JUNEGRASS
2.5	ELYMUS ELYMOIDES	BOTTLEBRUSH SQUIRRELTAIL
TOTAL:50		

SEED MIX AVAILABLE THROUGH:

PAWNEE BUTTES SEED, INC.
605 25TH ST.
GREELEY, COLORADO 80631
(970) 356-7002

ARKANSAS VALLEY SEED, INC.
4300 MONACO ST.
DENVER, COLORADO 80216
(303)-320-7500

Scale: 1"= 20'-0"

0 10 20 40

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terradina design
10200 E. Girard Ave, A-314
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RICK ENGINEERING COMPANY

PROJECT NAME

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BLACK HAWK, COLORADO
SITE DEVELOPMENT PLAN

SHEET TITLE

LANDSCAPE PLAN

ISSUE DATE

FEBRUARY 5, 2021

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SHEET NUMBER

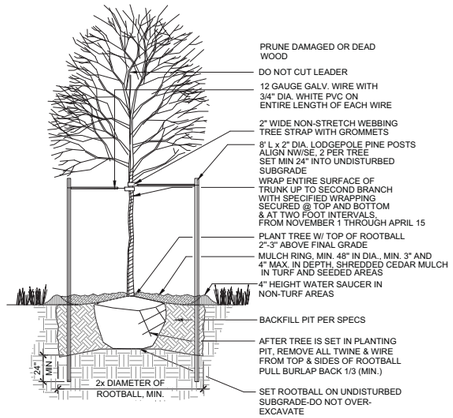
L1.2

SHEET 4 OF 8

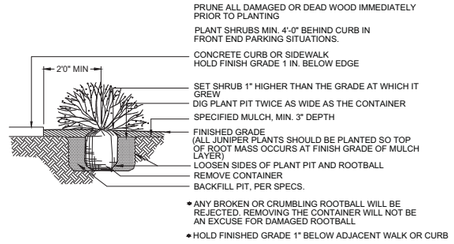
HAWKS LANDING

SITE DEVELOPMENT PLAN

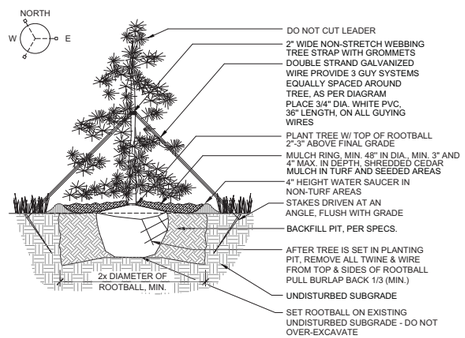
LOT 1, BLACK HAWK PARK SUBDIVISION, CITY OF BLACK HAWK,
COUNTY OF GILPIN, STATE OF COLORADO



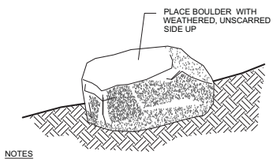
1 DECIDUOUS TREE PLANTING



2 SHRUB PLANTING



3 EVERGREEN TREE PLANTING



NOTES

1. PLACE BOULDERS TO CONFIGURATIONS AND LOCATIONS AS SHOWN ON PLAN.
2. BURY ROCK 1/3 OF TOTAL DEPTH.
3. WASH OFF ROCKS COMPLETELY AFTER PLACEMENT.
4. ROCKS SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO PLACEMENT.
5. DO NOT FRACTURE ROCK DURING PLACEMENT, SUCH ACTION WILL BE CAUSE FOR REJECTION.
6. CHOOSE AND PLACE ROCKS SO THAT A MINIMUM OF EXCAVATION SCARS ARE VISIBLE.
7. BOULDERS SHALL BE COLORADO GRANITE WITH EXPOSED SIDES FREE OF DAMAGE, CHIPS, OR SCARING. SIZES SHALL BE 3'W X 4'L X 3'H (± 6" IN ANY DIMENSION).

4 LANDSCAPE BOULDER

LANDSCAPE NOTES

1. THE CONTRACTOR SHALL CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO PRIOR TO DIGGING, INCLUDING BUT NOT LIMITED TO, TRENCHING AND SHRUB AND TREE PLANTING PITS. IF UTILITIES OCCUR AT LOCATIONS OF PROPOSED SHRUBS, OR WITHIN EIGHT (8) FEET OF PROPOSED TREES, THE CONTRACTOR SHALL REPORT SUCH CONDITIONS TO THE OWNER'S REPRESENTATIVE. DAMAGE TO EXISTING UTILITIES BY THE CONTRACTOR SHALL BE AT NO ADDITIONAL COST TO THE OWNER AND SHALL BE REPAIRED BY THE CONTRACTOR AS HIS OWN EXPENSE.
2. ALL UTILITY EASEMENTS SHALL REMAIN UNOBSTRUCTED AND FULLY ACCESSIBLE ALONG THEIR ENTIRE LENGTH FOR MAINTENANCE EQUIPMENT ENTRY.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR AND/OR REPLACEMENT OF ANY EXISTING MATERIALS AND/OR CONDITIONS DAMAGED DURING LANDSCAPE CONSTRUCTION OPERATIONS. EXISTING CONDITIONS INCLUDE BUT AT NOT LIMITED TO UTILITIES, DRAINAGE FACILITIES, CURB AND GUTTER, WALLS, WALKWAYS AND OTHER SUCH EXISTING STRUCTURES, THE REPAIR OF SUCH DAMAGE WILL BE AT NO ADDITIONAL COST TO THE OWNER BUT SHALL BE AT THE CONTRACTOR'S OWN EXPENSE.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING ALL CONSTRUCTION BARRICADES, SIGNS AND WARRING DEVICES NECESSARY FOR LANDSCAPE CONSTRUCTION OPERATIONS.
5. THE CONTRACTOR SHALL MAINTAIN A QUALIFIED SUPERVISOR ON SITE AT ALL TIMES DURING CONSTRUCTION.
6. THE CONTRACTOR SHALL CONFORM TO ALL APPLICABLE STATE AND LOCAL CODES AND SPECIFICATIONS.
7. A MINIMUM OF THREE-FOOT SIX-INCH CLEAR SPACE SHALL BE MAINTAINED AROUND THE CIRCUMFERENCE OF ALL FIRE HYDRANTS.
8. ALL LANDSCAPE CONSTRUCTION PRACTICES, WORKMANSHIP, AND ETHICS SHALL BE IN ACCORDANCE WITH INDUSTRY STANDARDS SET FORTH IN THE CONSTRUCTION HANDBOOK PUBLISHED BY THE COLORADO LANDSCAPE CONTRACTOR'S ASSOCIATION.
9. THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE AWAY FROM ALL STRUCTURES AND WALKWAYS. HAVE ALL FINE GRADING APPROVED BY THE OWNER'S REPRESENTATIVE PRIOR TO LANDSCAPE INSTALLATION OPERATIONS.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH SUBCONTRACTORS AS REQUIRED TO COMPLETE THE WORK.
11. ORGANIC AMENDMENTS SHALL BE ADDED AT A RATE OF 5 CY PER 1000 SF FOR ALL LANDSCAPED AREAS, AND AT A RATE OF 3 CY PER 1000 SF FOR NATIVE SEED AREAS.
12. ALL SHRUB BEDS SHALL BE CONTAINED WITH BLACK 6" DEPTH, 3/16" THICK, STEEL EDGING. EDGING IS NOT REQUIRED WHERE LANDSCAPE BEDS ARE ADJACENT TO CURBS, WALKS OR WALLS.
13. ALL PLANTINGS AND NATIVE SEED AREAS SHALL BE PROVIDED WITH AUTOMATED UNDERGROUND IRRIGATION. ← Indicate drip, spray or both.
14. ALL ROCK MULCH SHRUB BEDS SHALL CONTAIN WEED BARRIER FABRIC. WEED BARRIER FABRIC SHALL BE TYPAR 3401 4 OUNCE/SQ. YARD GEO-TEXTILE POLYPROPYLENE FABRIC OR APPROVED EQUAL.
15. ALL SHRUB BEDS SHALL BE MULCHED WITH 1-1/2"-3" RIVER ROCK AND 4"-8" WASHED ROUNDED COBBLE W/ 3/4"- 1-1/2" RIVER ROCK TOPPING TO FILL VOIDS & LOCK COBBLE IN PLACE. MULCH AT A MAXIMUM DEPTH OF FIVE INCHES AND A MINIMUM DEPTH OF FOUR INCHES. NO MORE THAN A MAXIMUM OF 50% OF LANDSCAPE SHALL BE ROCK MULCH.
16. ALL SEEDED SLOPES 4:1 OR GREATER SHALL BE PROTECTED WITH EROSION CONTROL MAT. DOUBLE NET EROSION CONTROL BLANKET CONSISTING OF 70% AGRICULTURAL STRAW (0.35 LB/SQ.YD.) AND 30% COCONUT FIBER (0.15 LB/SQ.YD.) AND BIODEGRADABLE NETTING HAVING AN APPROXIMATE 5/8" X 5/8" MESH ON THE TOP AND 2"X2" AS MANUFACTURED BY AMERICAN EXCELSIOR COMPANY OR APPROVED EQUAL.
17. ROUGH GRADE TO ONE TENTH (.1) OF ONE FOOT BY OTHERS. LANDSCAPE CONTRACTOR SHALL PROVIDE FINISH GRADES WHILE MAINTAINING POSITIVE DRAINAGE. CONTRACTOR SHALL NOTIFY OWNER'S REPRESENTATIVE OF ANY POORLY DRAINED OR ERODED AREAS PRIOR TO COMMENCING WORK.
18. THE CONTRACTOR SHALL FINE GRADE ALL AREAS TO BE LANDSCAPED. THE CONTRACTOR SHALL REMOVE REQUIRED DEPTH OF SOIL ALONG EXISTING HARDSCAPE, SUCH AS SIDEWALK AND CURB AND GUTTERS, TO ACCOMMODATE LANDSCAPE INSTALLATION WHILE MAINTAINING FINAL GRADES AND POSITIVE DRAINAGE THROUGHOUT THE PROJECT. THIS WORK SHALL INCLUDE BUT IS NOT LIMITED TO: SEED AND SOD AREAS, SHRUB BEDS, PATHS AND OTHER HARDSCAPE AREAS OTHERWISE NOT INCLUDED WITHIN THE CIVIL PLANS.
19. ALL PLANT MATERIALS SHALL MEET OR EXCEED CURRENT AMERICAN STANDARDS FOR NURSERY STOCK ANSI Z60.1 AND THE COLORADO NURSERY ACT AND ACCOMPANYING RULES AND REGULATIONS.
20. ALL TREES OF THE SAME SPECIE AND SIZE SHALL HAVE MATCHING HEIGHT AND FORM UNLESS OTHERWISE NOTED ON THE PLANS OR TAGGED BY THE OWNER'S REPRESENTATIVE AT THE NURSERY. ← SPECIES
21. ALL PLANT MATERIAL SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
22. THE OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO REJECT ANY AND ALL PLANT MATERIAL BEFORE OR POST PLANTING INSTALLATION.
23. PRIOR TO SODDING, SEEDING OR OTHER PLANTING OPERATIONS; THE CONTRACTOR SHALL APPLY HERBICIDE TO ELIMINATE ALL WEED GROWTH.
24. ALL INSPECTIONS OF LANDSCAPE MATERIALS, HARDSCAPE AND AMENITIES ARE THE RESPONSIBILITY OF THE LANDSCAPE ARCHITECT.

Sheet 5 is out of order and also named L1.3

Terradina Design
10200 E. Girard Ave, A-314
Denver, CO 80231
ph: 303.632.8867

RICK ENGINEERING COMPANY

PROJECT NAME

HAWKS LANDING
BLACK HAWK, COLORADO
SITE DEVELOPMENT PLAN

SHEET TITLE

LANDSCAPE DETAILS

NOT FOR CONSTRUCTION

ISSUE DATE
FEBRUARY 5, 2021

REVISION DATE

SHEET NUMBER

L1.3

HAWKS LANDING

SITE DEVELOPMENT PLAN

LOT 1, BLACK HAWK PARK SUBDIVISION, CITY OF BLACK HAWK,
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NOTE: ALL IMAGERY IS CONCEPTUAL. FINAL DETAILS AND FURNISHINGS MAY VARY FROM THOSE SHOWN.

Conceptual imagery is not sufficient for COAC approval. Material specifications must be provided for all exterior improvements.

DID THE AX-THOWING ELEMENT NOT MAKE IT INTO THE PLANS FOR THE PROJECT? WONDERING? VH

SHOW ANCHOR ATTACHMENT FOR TRAILERS, FOUNDATION PLAN?, AND ANY SKIRTING THAT MAY BE PROPOSED ON A PERMAMNET OR TEMPORARY BASIS.

1 BAR AND DECK CONCEPT

2 BAR CONCEPT

3 FIRE PIT AT HOTEL PODS

4 BOCCE BALL AT BAR

5 TIMBER ARCH AT BAR ENTRANCE

6 BBQ AT HOTEL PODS

7 FENCING AROUND BAR

8 FIREPIT AT BAR

9 ROCK WALL SEAT AT HOTEL PODS

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RICK

PROJECT NAME

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LANDSCAPE DETAILS

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ISSUE DATE
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SHEET NUMBER

L1.4

SHEET 7 OF 8

HAWKS LANDING

SITE DEVELOPMENT PLAN

LOT 1, BLACK HAWK PARK SUBDIVISION, CITY OF BLACK HAWK,
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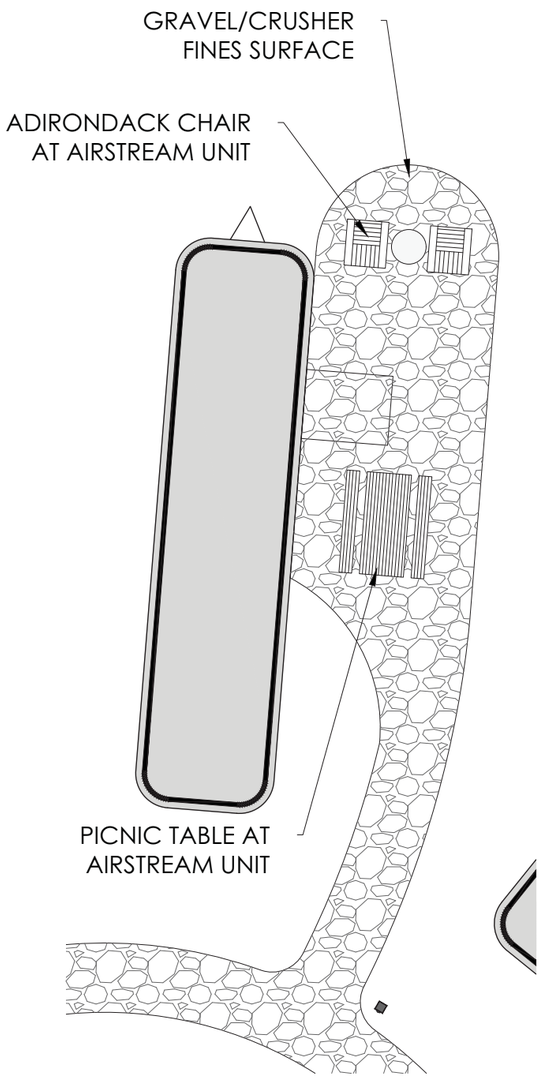
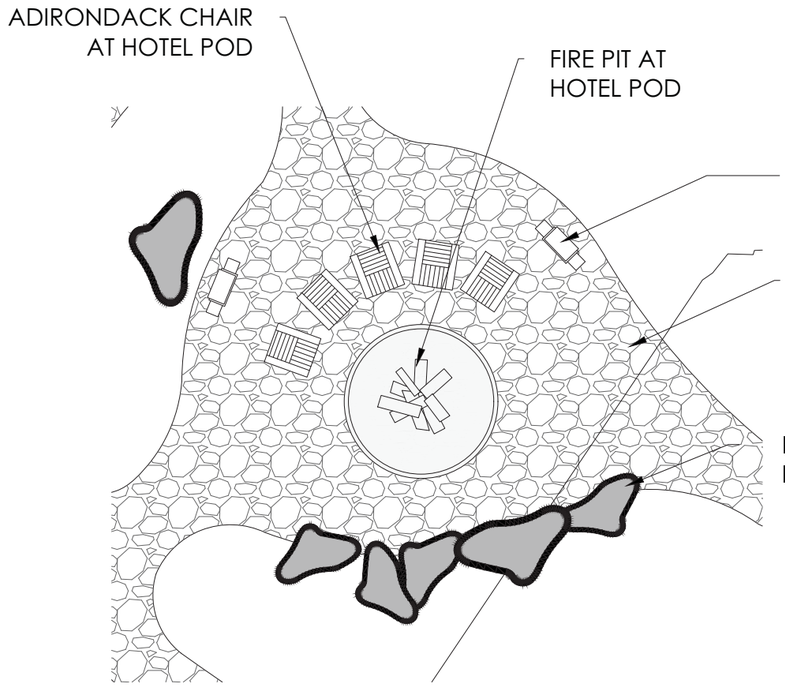


A AIRSTREAM UNIT TYPICAL

Consider mounting a weight on bottom of chair - winds will constantly blow them over.

1 ADIRONDACK CHAIR AT AIRSTREAM UNIT

2 PICNIC TABLE AT AIRSTREAM UNIT



B COMMUNITY FIREPIT AT HOTEL POD TYPICAL

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SHEET TITLE

LANDSCAPE PLAN

ISSUE DATE
FEBRUARY 5, 2021

REVISION DATE

SHEET NUMBER

Sheet 5 is out of order and Sheet 6 is also named L1.3

L1.3

Scale: 1"= 20'-0"

0 10 20 40

HAWKS LANDING

SITE DEVELOPMENT PLAN

LOT 1, BLACK HAWK PARK SUBDIVISION, CITY OF BLACK HAWK,
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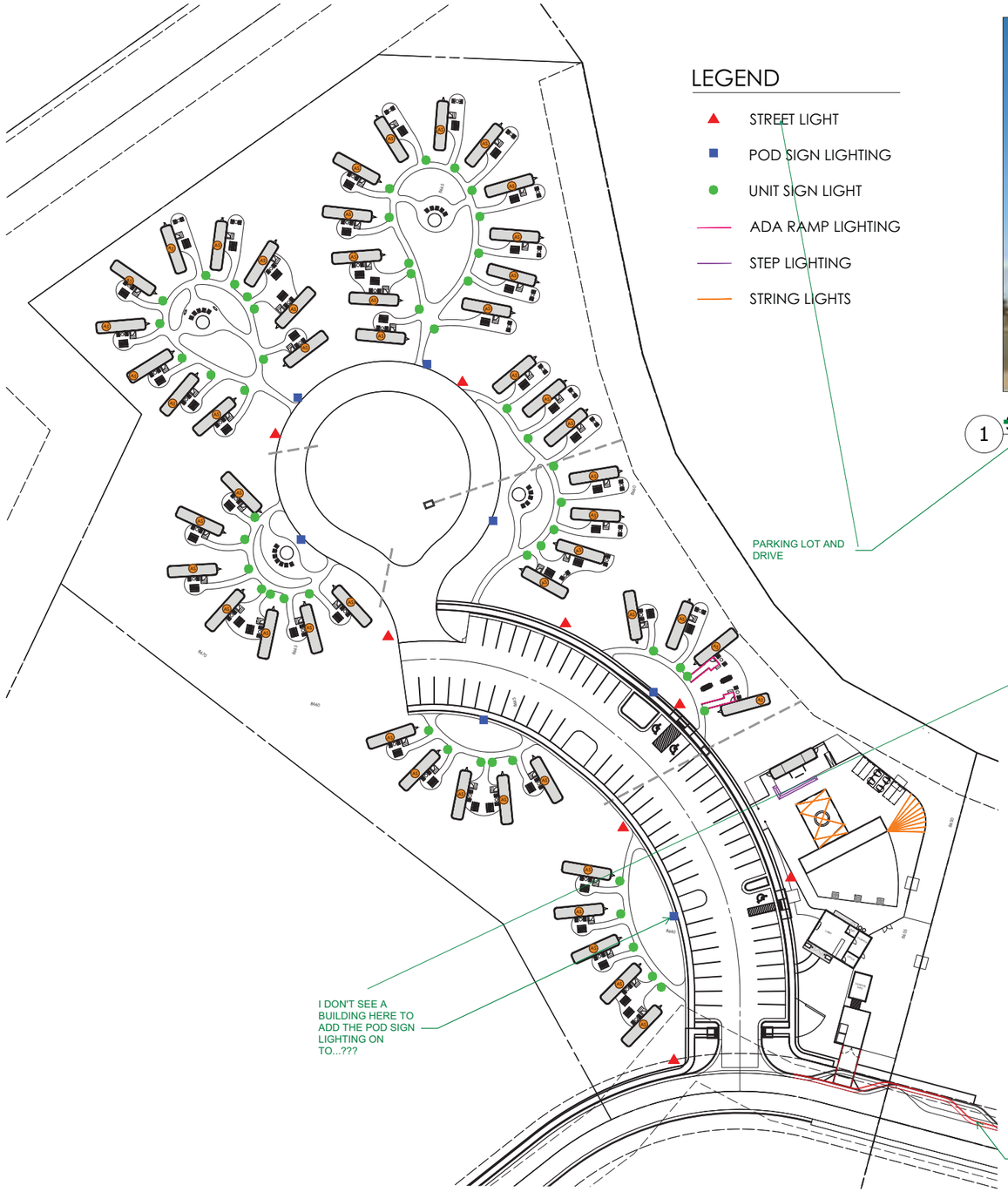


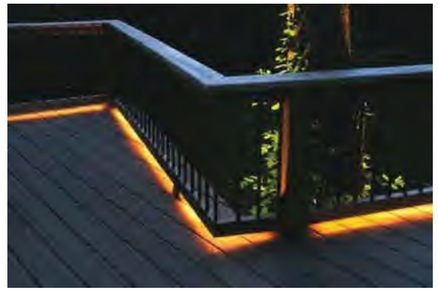
LEGEND

- STREET LIGHT
- POD SIGN LIGHTING
- UNIT SIGN LIGHT
- ADA RAMP LIGHTING
- STEP LIGHTING
- STRING LIGHTS

1 ~~STREET~~ LIGHTS

2 POD SIGN LIGHTING

3 UNIT SIGN LIGHT



4 ADA RAMP LIGHTING

5 STEP LIGHTS

6 STRING LIGHTS

Sheet number does not match Sheet Index on Cover Sheet

N

Scale: 1"= 40'-0"

0 20 40 80

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BLACK HAWK, COLORADO
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SHEET TITLE

LIGHTING PLAN

ISSUE DATE
FEBRUARY 5, 2021

REVISION DATE

SHEET NUMBER

L1.7

SHEET 8 OF 8

Reviewed by Ethan Watel - Baseline Planning 2/24/2021

Reviewed by Community Planning & Development

these sheets should be integrated into the SDP sheetset as a single SDP/COAC plan

Hoping color is more a RUST color than somewhat orange color showing on this plan

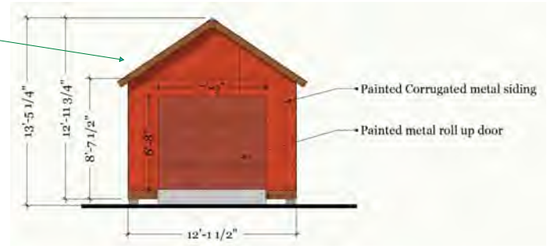
Note color of roof and siding Include a cut sheet of materials. ADD MATERIALS BOARD TO SECOND SUBMITTAL.

HAWKS LANDING

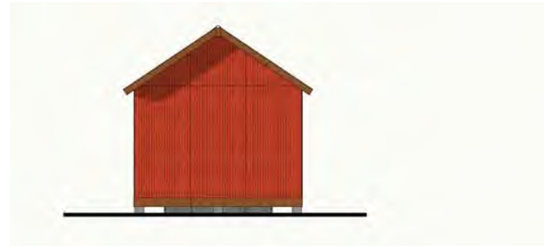
COAC PLANS

LOT 1, BLACK HAWK PARK SUBDIVISION, CITY OF BLACK HAWK,
COUNTY OF GILPIN, STATE OF COLORADO

1 CHECK-IN BUILDING - FRONT ELEVATION
SCALE: NTS

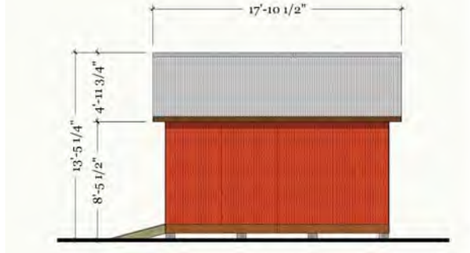


5 STORAGE SHED - FRONT ELEVATION
SCALE: NTS



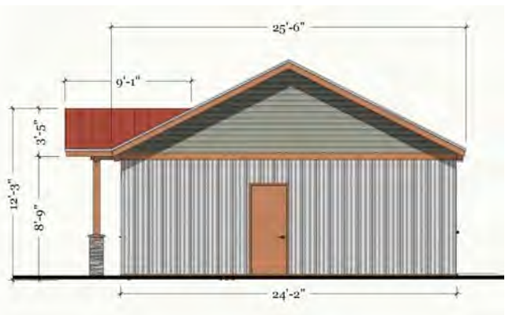
6 STORAGE SHED - FRONT ELEVATION
SCALE: NTS

2 CHECK-IN BUILDING - REAR ELEVATION
SCALE: NTS



7 STORAGE SHED - FRONT ELEVATION
SCALE: NTS

8 STORAGE SHED - FRONT ELEVATION
SCALE: NTS



3 CHECK-IN BUILDING - SIDE ELEVATION
SCALE: NTS

4 CHECK-IN BUILDING - SIDE ELEVATION
SCALE: NTS

The submitted COAC Plans are incomplete and lack the detailed information required for review. Please provide color renderings complete with material cut sheets and color selections for the entire project. Include items such as exposed structural elements, handrails/guardrails, walkways/paths/site walls, lighting, screening/enclosures, sheds, offices, common areas, site furnishings, and signage.

SHEET INDEX

1-2	A1.1-A1.2	ARCHITECTURAL ELEVATIONS

NOT FOR CONSTRUCTION

terracina design
10200 E. Girard Ave, A-314
Denver, CO 80231
ph: 303.632.8867

RICK Engineering Company

PROJECT NAME

HAWKS LANDING
BLACK HAWK, COLORADO
COAC PLANS

SHEET TITLE

ARCHITECTURAL ELEVATIONS

ISSUE DATE
FEBRUARY 5, 2021

REVISION DATE

SHEET NUMBER

A1.1

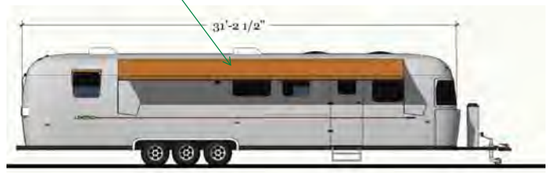
Reviewed by Julie Esterl - Baseline Planning - 2/23/2021

HAWKS LANDING

COAC PLANS

LOT 1, BLACK HAWK PARK SUBDIVISION, CITY OF BLACK HAWK,
COUNTY OF GILPIN, STATE OF COLORADO

WINDS WILL BE SIGNIFICANT. CONSIDER VERY STRONG BRACING SYSTEM FOR FOLDING AWNINGS



1 32 FT. TRAILER - FRONT ELEVATION
SCALE: NTS

2 32 FT. TRAILER - REAR ELEVATION
SCALE: NTS

3 32 FT. TRAILER - SIDE ELEVATION
SCALE: NTS

4 32 FT. TRAILER - SIDE ELEVATION
SCALE: NTS

5 18 FT. TRAILER - FRONT ELEVATION
SCALE: NTS

6 18 FT. TRAILER - REAR ELEVATION
SCALE: NTS

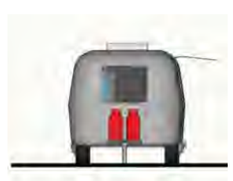
7 18 FT. TRAILER - SIDE ELEVATION
SCALE: NTS

8 18 FT. TRAILER - SIDE ELEVATION
SCALE: NTS

9 BAR TRAILER - FRONT ELEVATION
SCALE: NTS

10 BAR TRAILER - REAR ELEVATION
SCALE: NTS

11 BAR TRAILER - SIDE ELEVATION
SCALE: NTS



12 BAR TRAILER - SIDE ELEVATION
SCALE: NTS

The site plan seems to show only one size of Airstream. Remove reference to models that will not be included in the development.

Incorporate this sheet with the SDP/COAC plan set.

terracina design
10200 E. Girard Ave, A-314
Denver, CO 80231
ph: 303.632.8867

RICK Engineering Company

PROJECT NAME

HAWKS LANDING
BLACK HAWK, COLORADO
COAC PLANS

SHEET TITLE

ARCHITECTURAL ELEVATIONS

NOT FOR CONSTRUCTION

ISSUE DATE
FEBRUARY 5, 2021

REVISION DATE

SHEET NUMBER

A1.2

SHEET 2 OF 2

ATTACHMENT 4

CONSTRUCTION IMPROVEMENT PLANS
REQUIRED REVISIONS

Reviewed by Community Planning & Development

Reviewed by Water

Reviewed by Jenna Siegel and Matt Brown - Stolfus (Transportation) - 2/23/2021

Reviewed by Baseline Planning

Reviewed by Public Works

Reviewed by BHCCSD

REVIEWER LEGEND:

SAFEbuilt = RED
Water = DARK BLUE
Baseline Engineering = DARK MAGENTA
Baseline Planning = DARK GREEN CYAN
Baseline Surveying = GREEN
Public Works = DARK CYAN
Fire Department = RED ORANGE
CP&D = VIOLET MAGENTA
Sanitation = DARK RED ORANGE
Conveyance = 40% GRAY
Police Department = LIGHT MAGENTA

suggest renaming this set to Improvement Plans or Constructions Plans to distinguish from the SDP

SITE DEVELOPMENT PLANS FOR
HAWKS LANDING AIRSTREAM PARK

BLACK HAWK PARK SUBDIVISION, LOCATED IN NORTH HALF OF SECTION 18. AND THE SOUTHWEST QUARTER OF SECTION 7 BOTH BEING WITHIN TOWNSHIP 3 SOUTH, RANGE 72 WEST 6TH P.M. CITY OF BLACK HAWK, COUNTY OF GILPIN, STATE OF COLORADO

OWNER:
CLUB VISTA PROPERTIES II, LLC
CONTACT: DARWIN HORAN

DEVELOPER:
VENTANA CAPITAL, INC.
9801 E. EASTER AVE.
CENTENNIAL, CO 80112
PHONE: 303.340.7006

CONTACT: BRYAN HORAN

Reviewed by SAFEbuilt

Reviewed by FD

Reviewed by Baseline Engineering

ENGINEER:
RICK ENGINEERING COMPANY
9801 E. EASTER AVE.
CENTENNIAL, CO 80112
PHONE: 303.537.8020

CONTACT: ROBERT FITCH

SURVEYOR:
RICK ENGINEERING COMPANY
5690 WEBSTER ST.
ARVADA, CO 80002
PHONE: 303.423.6036

CONTACT: BOB HENNESSY

AGENCY:
CITY OF BLACK HAWK
211 CHURCH STREET,
BLACK HAWK, CO 80422
PHONE: 303.582.0615

CONTACT: CYNTHIA LINKER

Spelling

9?

SHEET LIST TABLE

SHEET NUMBER	SHEET TITLE
01 – 03	TITLE & NOTES
04	EXISTING CONDITIONS
05 – 07	ROADWAY PLANS
08 – 11	GRADING PLANS
12 – 19	UTILITY PLANS
20 – 27	DETAILS

PROJECT NARRATIVE:

THE PROJECT CONSISTS OF THE SHARED INFRASTRUCTURE, OVERLOT GRADING AND UTILITY INFRASTRUCTURE FOR THE BLACK HAWK PARK SUBDIVISION, AND DEVELOPMENT OF LOT 1 INTO AN AIRSTREAM PARK. THE SCOPE OF WORK TO BE COMPLETED INCLUDES OVERLOT GRADING FOR THE 8 LOTS, PRIVATE ACCESS ROADWAY IMPROVEMENTS AND DRIVEWAY ACCESS POINTS FROM MINERS MESA ROAD, SHARED PRIVATE DRAINAGE AND SEWER INFRASTRUCTURE IMPROVEMENTS, AND LOT 1 WATER INFRASTRUCTURE.

THE PROPERTY IS ZONED COMMERCIAL/BUSINESS SERVICES (C/BS) AND HAS AN APPROVED SPECIAL REVIEW USE (SRU) FOR RECREATIONAL CAMPGROUND AND INDOOR SHOOTING FACILITIES. THE PROPOSED USES FOR THE SITE WILL BE CONSISTENT WITH THE ZONING REQUIREMENTS AND WILL INCLUDE USES SUCH AS: AN AIRSTREAM PARK DEVELOPMENT WITH AMENITIES INCLUDING:

- –A CARETAKERS CHECK–IN BUILDING
- –50 AIRSTREAM RENTAL UNITS
- –AIRSTREAM BAR

Add bullet point:
Black Hawk-Central City Sanitation District Standards and details

STANDARDS AND SPECIFICATIONS

- BLACK HAWK ~~AND CENTRAL CITY~~ WATER ~~AND SANITATION DISTRICT~~ STANDARDS AND DETAILS
- CITY OF BLACK HAWK AND GILPIN COUNTY ROADWAY DESIGN AND CONSTRUCTION STANDARDS
- MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (2009)
- URBAN STORM DRAINAGE CRITERIA MANUAL VOLUMES 1, 2, & 3 (2016)
- CITY OF BLACK HAWK ZONING ORDINANCE

THE CONTRACTOR SHALL ALERT THE OWNER AND ENGINEER OF ANY DISCREPANCIES FOUND BETWEEN THESE PLANS AND THE STANDARDS AND SPECIFICATIONS USED ABOVE.

VESTED RIGHTS STATEMENT
THIS PLAN IS SUBMITTED TO CREATE VESTED PROPERTY RIGHTS PURSUANT TO ARTICLE 68 OF TITLE 24, C.R.S. AND PURSUANT TO SECTIONS 361 AND 362 OF ARTICLE XVII OF THE BLACK HAWK MUNICIPAL CODE AS ADOPTED BY THE BOARD OF ALDERMEN AND AVAILABLE AT CITY HALL, 201 SELAK STREET, BLACK HAWK, COLORADO 80422.

LOCATION MAP
SCALE 1"=1000'

CERTIFICATIONS

CREATE SPACE FOR SIGNATURE LINE

OWNER'S SIGNATURE:
CLUB VISTA PROPERTIES II, LLC

NAME: DARWIN HORAN

TITLE: OWNER

CLUB

STATE OF COLORADO, COUNTY OF GILPIN

THE FOREGOING INSTRUMENT WAS ACKNOWLEDGED BEFORE ME ON THIS_____DAY OF_____, 20____, BY: DARWIN HORAN, OWNER OF VISTA PROPERTIES II, LLC.

WITNESS MY HAND AND OFFICIAL SEAL:

MY COMMISSION EXPIRES:_____

NOTARY PUBLIC:_____ ADDRESS:_____

CITY OF BLACK HAWK BOARD OF ALDERMEN CERTIFICATION:

THIS SITE DEVELOPMENT PLAN IS APPROVED BY THE BOARD OF ALDERMEN OF THE CITY OF BLACK HAWK, COLORADO, THIS_____DAY OF_____, 20____

BY:_____
MAYOR OF THE CITY OF BLACK HAWK, COLORADO

ATTEST:_____
CITY CLERK

THIS PLAN CONSTITUTES A SITE SPECIFIC DEVELOPMENT AS DEFINED IN 24–69–101. ET SEQ., C.R.S., AND ORDINANCE NO. 98–62 OF THE CITY OF BLACK HAWK.

THE TERM AND CONDITIONS OF SUCH APPROVAL ARE CONTAINED IN RESOLUTION NO._____ ADOPTED BY THE CITY ON_____ AND AVAILABLE AT CITY HALL, 201 SELAK STREET, BLACK HAWK, COLORADO.

add all utility linetypes to the legend.

LEGEND

	EXISTING	PROPOSED
LOT LINE		
RIGHT–OF–WAY		
CENTERLINE		
CURB		
CURB & GUTTER		
FENCE–GENERAL USE		
DAYLIGHT LINE		
EASEMENT		
FLOWLINE		
RETAINING WALL		
SITE BOUNDARY		
TYPICAL LATERALS	XX	XX
CONTOURS		
SANITARY SEWER MANHOLE	Ⓢ	
STORM DRAIN MANHOLE		
WATER VALVE		
FIRE HYDRANT		
TRANSFORMER		
4–WAY SIGN		
2–WAY SIGN		
STREET LIGHT		
POWER POLE		
BENCHMARK		
SET WELL MONUMENT		
ASPHALT		
TYPE R STORM INLET		
TYPE C STORM INLET		
STORM DRAIN		
SEWER LINE	S	S
WATER MAIN	W	W
CONCRETE		
SWALE		
SIGHT TRIANGLE		
TREES		
ROAD BASE		

ABBREVIATION

AIR RELEASE VALVE	ARV
BEGIN CURVE	BC
BLOW OFF VALVE	BOV
BEGIN VERTICAL CURVE STATION	BVCS
BEGINNING OF VERTICAL CURVE ELEVATION	BVCE
CENTERLINE	CL
CLEANOUT	CO
ELECTRIC BOX	EB
END CURVE	EC
END VERTICAL CURVE STATION	EVCS
END VERTICAL CURVE ELEVATION	EVCE
EXISTING GRADE	EG
FINISHED GRADE	FG
FINISHED SURFACE	FS
FINISH FLOOR	FF
FLOW LINE	FL
GARAGE FLOOR FRONT	GFF
GARAGE FLOOR BACK	GFB
GRADE BREAK	GB
HIGH POINT	HP
INVERT	INV
IRRIGATION CONTROL VALVE	ICV
LOW POINT	LP
POINT OF CURB RETURN	PCR
POINT OF VERTICAL CURVE INTERSECTION	PVI
PROPERTY LINE	PL
PUBLIC UTILITY EASEMENT	PUE
PULL BOX	PB
RIGHT–OF–WAY	ROW
THRUST BLOCK	TB
TOP OF CURB	TC
TOP OF FOOTING	TF
TOP OF GRATE	TG
TOP OF WALL	TW
WATER METER	WM

SITE BENCHMARK & BASIS OF BEARING:

define horizontal datum (grid or ground coordinates).

CONTROL POINT 1: VERTICAL DATUM IS BASED IPON NAVD88 OPUS/GEOID18, GPS STATIC OBSERVATION.
NORTHING: 1168024.49'
EASTING: 3003217.42'
ELEVATION: 8647.75'

upon

CP 1 IS A 1.5" ALUMINUM CAP STAMPED: "CP A". IT CAN BE FOUND AT THE LANDSCAPING AREA JUST WEST OF THE MAIN ENTRANCE TO THE CITY OF BLACK HAWK MAINTENANCE OFFICE PARKING LOT. IT IS APPROXIMATELY 1.6' TO THE TOP BACK OF CURVE AND 9.4' WESTERLY TO THE POINT OF CURVATURE AND BEING 0.2' BELOW GRADE.

BASIS OF BEARING: BEARINGS ARE BASED ON THE NORTH LINE OF THE NORTHWEST QUARTER OF SECTION 18 BEING ASSUMED TO BEAR N 89°07'38" W, A DISTANCE OF 3180.53 FEET BETWEEN THE FOLLOWING DESCRIBED MONUMENTS.

–THE NORTH QUARTER CORNER OF SECTION 18 BEING FOUND 3.5" ALUMINUM CAP B.L.M. MATCHING MONUMENT RECORD FILED 12/29/92.

–THE NORTHWEST CORNER OF SECTION 18 BEING A FOUND 3.5" ALUMINUM CAP B.L.M. MATCHING MONUMENT RECORD FILED 6/27/01.

Benchmark must be on the City of Black Hawk Datum with location of benchmark noted.

RICK ENGINEERING COMPANY
9801 EAST EASTER AVE
CENTENNIAL, CO 80112
303.537.8020
Denver – San Diego – Boulder – Orange Roanoke – Raleigh/Chapel – Phoenix
rickengineering.com

HAWK'S LANDING AIRSTREAM PARK
COVER SHEET
GILPIN COUNTY, CO

REVISIONS: NO.	DESCRIPTION	DATE:

REVIEWED FOR COMPLIANCE BY:

SIGNATURE DATE

SIGNATURE DATE

SCALE:	AS NOTED
DATE:	02/05/2021
DRAWN BY:	JP/BG
CHECKED BY:	JK
JOB NO:	D01055

PROJECT NO.
D01055

DRAWING NO.
COVER

SHEET NO. 01 OF 27 SHEETS

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C:\WDO\Projects\D_CEN_L\1055_Blackhawk\Civil\Plans\Site Development Plan\1055_COL.dwg 2021-02-05 - 7:51PM - jbroll

GENERAL NOTES:

remove NUMBER.

1. ALL MATERIALS AND WORKMANSHIP FOR PUBLIC INFRASTRUCTURE SHALL BE SUBJECT TO INSPECTION BY THE CITY OF BLACK HAWK PUBLIC WORKS DIVISION AS APPLICABLE. THE CITY RESERVES THE RIGHT TO ACCEPT OR REJECT ANY SUCH MATERIALS AND WORKMANSHIP THAT DOES NOT CONFORM TO ITS STANDARDS AND SPECIFICATIONS.
2. CONSTRUCTION WILL NOT BEGIN UNTIL ALL APPLICABLE PERMITS HAVE BEEN ISSUED. IF A CITY ENGINEERING INSPECTOR IS NOT AVAILABLE AFTER PROPER NOTICE OF CONSTRUCTION ACTIVITY HAS BEEN PROVIDED, THE PERMITTEE MAY COMMENCE WORK IN THE INSPECTOR'S ABSENCE. HOWEVER, THE CITY OF BLACK HAWK RESERVES THE RIGHT NOT TO ACCEPT THE IMPROVEMENT IF SUBSEQUENT TESTING REVEALS AN IMPROPER INSTALLATION.
3. THE LOCATION OF EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO ACTUAL CONSTRUCTION. FOR INFORMATION CONTACT: COLORADO 811, AT 1-800-922-1987 (WWW.COLORADO811.ORG).
4. A TRAFFIC CONTROL PLAN, IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, SHALL BE SUBMITTED TO THE CITY OF CASTLE PINES FOR ACCEPTANCE WITH THE RIGHT-OF-WAY USE AND CONSTRUCTION PERMIT APPLICATION. A RIGHT-OF-WAY USE AND CONSTRUCTION PERMIT WILL NOT BE ISSUED WITHOUT AN ACCEPTED TRAFFIC CONTROL PLAN FOR TRAFFIC CONTROL DURING CONSTRUCTION.

wrong City!

Black Hawk

RICK ENGINEERING COMPANY SPECIAL NOTES:

1. ANY QUESTION RAISED RELATIVE TO THE ACCURACY OF IMPROVEMENT INSTALLATION SHALL NOT BE RAISED SUBSEQUENT TO COMPLETION OF THE WORK UNLESS ALL SURVEY STAKES ARE MAINTAINED INTACT. SHOULD SUCH STAKES NOT BE PRESENT AND VERIFIED AS TO THEIR ORIGIN, NO CLAIM FOR ADDITIONAL COMPENSATION FOR CORRECTION SHALL BE PRESENTED TO ANY PARTY AND SUCH WORK SHALL BE CORRECTED BY THE CONTRACTOR AT HIS EXPENSE.
2. CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOBSITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. AND THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE OWNER AND ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.
3. NEITHER THE OWNER, NOR THE ENGINEER OF WORK WILL ENFORCE SAFETY MEASURES OR REGULATIONS. THE CONTRACTOR SHALL DESIGN, CONSTRUCT, AND MAINTAIN ALL SAFETY DEVICES, INCLUDING SHORING, AND SHALL BE SOLELY RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE, AND FEDERAL SAFETY AND HEALTH STANDARDS, LAWS AND REGULATIONS.
4. THE CONTRACTOR SHALL FOLLOW THE GUIDELINES AND REGULATIONS AS SET FORTH BY OSHA.
5. THE CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE THAT ALL UTILITIES ARE BUILT IN ACCORDANCE WITH THESE PLANS. IF THERE ARE ANY QUESTIONS REGARDING THESE PLANS OR FIELD STAKES, THE CONTRACTOR SHALL REQUEST AN INTERPRETATION BEFORE DOING ANY WORK BY CALLING THE ENGINEER OF WORK AT 303-537-8020. THE CONTRACTOR SHALL ALSO TAKE THE NECESSARY STEPS TO PROTECT THE PROJECT AND ADJACENT PROPERTY FROM ANY EROSION AND SILTATION THAT RESULT FROM HIS OPERATIONS BY APPROPRIATE MEANS (SAND BAGS, HAY BALES, TEMPORARY DESILTING BASINS, DIKES, SHORING, ETC.) UNTIL SUCH TIME THAT THE PROJECT IS COMPLETED AND ACCEPTED FOR MAINTENANCE BY WHATEVER OWNER, AGENCY OR ASSOCIATIONS IS TO BE ULTIMATELY RESPONSIBLE FOR MAINTENANCE.
6. THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES OR STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED FROM A SEARCH OF THE AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE THERE ARE NO OTHER EXISTING UTILITIES EXCEPT AS SHOWN ON THESE PLANS. THE CONTRACTOR IS REQUIRED TO TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN HEREON AND ANY OTHER NOT OF RECORD OR NOT SHOWN ON THESE PLANS. ALL DAMAGES THERETO CAUSED BY THE CONTRACTOR SHALL BE REPAIRED TO THE APPROPRIATE SPECIFICATIONS AND AT THE EXPENSE OF THE CONTRACTOR.
7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL UNDERGROUND PIPELINES, TELEPHONE AND ELECTRIC CONDUITS AND STRUCTURES IN ADVANCE OF ANY CONSTRUCTION AND TO OBSERVE ALL POSSIBLE PRECAUTIONS TO AVOID ANY DAMAGE TO SUCH. THE ENGINEER AND/OR OWNER WILL NOT GUARANTEE ANY LOCATIONS AS SHOWN ON THESE PLANS OR THOSE OMITTED FROM SAME.
8. CONTRACTOR SHALL MAKE EXPLORATORY EXCAVATIONS AND LOCATE EXISTING UNDERGROUND FACILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS TO PLANS IF REVISIONS ARE NECESSARY BECAUSE OF ACTUAL LOCATIONS OF EXISTING FACILITIES.
9. BEFORE EXCAVATING FOR THIS CONTRACT, THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES WITH THE APPROPRIATE UTILITY COMPANY.
10. LOCATION AND ELEVATION OF IMPROVEMENTS TO BE MET BY WORK TO BE DONE SHALL BE CONFIRMED BY FIELD MEASUREMENTS PRIOR TO CONSTRUCTION OF NEW WORK.
11. CONTRACTOR SHALL TAKE THE NECESSARY PRECAUTIONS REQUIRED TO PROTECT ADJACENT PROPERTIES DURING THE GRADING OPERATIONS.
12. WHERE TRENCHES ARE WITHIN EASEMENTS OR WITHIN 10' OF ANY BUILDING, A SOILS REPORT SHALL BE SUBMITTED TO THE ENGINEER OF WORK BY A QUALIFIED SOILS ENGINEER WHICH INDICATES THAT TRENCH BACKFILL WAS COMPACTED UNDER THE OBSERVATION OF THE SOILS ENGINEER AND IN ACCORDANCE WITH THE ABOVE-NAMED SPECIFICATIONS.
13. ALL FRAMES, COVERS, VALVE BOXES AND MANHOLES SHALL BE ADJUSTED TO FINISHED GRADE UPON COMPLETION OF PAVING OR RELATED CONSTRUCTION.

seems like a big ask

pathway to stakeholder?

WATER SYSTEM NOTES:

1. CITY OF BLACK HAWK STANDARDS: THE CONSTRUCTION OF THE WATER SERVICE WORK IS SUBJECT TO THE STANDARDS OF THE CITY OF BLACK HAWK. THE CITY STANDARDS SHALL APPLY AS A MINIMUM IN CASE OF CONFLICT BETWEEN THESE SPECIFICATIONS AND THE ENGINEERING STANDARDS OF THE CITY, BUT THE MORE STRINGENT STANDARD SHALL BE FOLLOWED AS LONG AS THE MINIMUM CITY'S STANDARD HAS BEEN MET. MAINTAIN TEN FEET (10') MINIMUM HORIZONTAL SEPARATION BETWEEN THE WATER SERVICE AND SANITARY SEWER SERVICE UNLESS OTHERWISE APPROVED.
2. CONNECTIONS TO EXISTING WATER PIPELINE: ALL CONSTRUCTION INVOLVED IN CONNECTING TO THE EXISTING PIPELINES SHALL BE DONE IN THE PRESENCE OF THE CITY OF BLACK HAWK WATER DEPARTMENT. ALL CONSTRUCTION INVOLVED IN THE CONNECTING TO EXISTING PIPELINES SHALL BE SCHEDULED WITH AND APPROVED BY THE CITY. PROVIDING TEMPORARY THRUST RESTRAINT, AS REQUIRED, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE THE REPLACEMENT OF THE EXISTING SERVICE CONNECTIONS WITH THE CITY. PROVIDE 24-HOUR MINIMUM NOTICE TO THE WATER DEPARTMENT FOR ANY INSPECTIONS AND OBSERVATIONS.
3. VALVE BOX SHALL BE SIMILAR AND EQUAL TO EA2-75-40-36, AS MANUFACTURED BY FORD, AND SHALL BE COMPLETE WITH LID AND STATIONARY ROD.
4. WATER SERVICES MATERIALS: MATERIALS FOR WATER SERVICE CONNECTIONS SHALL BE NEW AND THE BEST AVAILABLE. IN THE ABSENCE OF DETAIL INFORMATION, THE REQUIREMENTS OF AWWA C800 SHALL BE FOLLOWED.
   - 4.a. CORPORATION STOPS: ALL CORPORATION STOPS FOR COPPER PIPE SHALL BE SIMILAR AND EQUAL TO MH 15000, THREADED INLET, COMPRESSION COUPLING OUTLET, AS MANUFACTURED BY MUELLER COMPANY.
   - 4.b. COPPER PIPE: THE COPPER PIPE FOR ALL SERVICE CONNECTIONS SHALL CONFORM TO THE REQUIREMENTS SET FORTH IN ASTM B 88, OR ITS LATEST REVISION, AND SHALL BE TYPE K, SOFT ANNEALED.
   - 4.c. CURB VALVE AND BOX: A MUELLER 300 BALL CURB STOP VALVE SHALL BE USED. THE CURB STOP VALVE BOX SHALL BE SIMILAR AND EQUAL TO EA2-75-40-36, AS MANUFACTURED BY FORD, AND SHALL BE COMPLETE WITH LID AND STATIONARY ROD.
   - 4.d. SERVICE SADDLES: SERVICE SADDLES SHALL BE BRONZE CONSTRUCTION. SADDLES ON DIP SHALL BE DOUBLE-STRAP SIMILAR TO FORD S-90, MUELLER H-13400 SERIES, OR APPROVED EQUAL.
5. INSTALLATION OF WATER SERVICES: WATER SERVICE LINES SHALL BE OF THE SAME TYPE MATERIAL FROM BEGINNING TO END WITHOUT FITTINGS BETWEEN THE CORPORATION STOP AND THE CURB STOP AND BETWEEN THE CURB STOP AND SHUT-OFF VALVE INSIDE THE HOUSE. UNLESS NOTED ELSEWHERE IN THE DRAWINGS, WATER SERVICE INSTALLATIONS SHALL BE CONSTRUCTED AS SHOWN IN THE DRAWINGS. ALL SERVICE LINE TAPS SHALL HAVE DOUBLE STRAP BRONZE SERVICE CLAMPS. WATER SERVICES SHALL BE ONE CONTINUOUS PIPE WITHOUT JOINTS OR SPLICES.
6. WATER PIPELINE DISINFECTING: ALL WATER PIPING INSTALLED UNDER THIS CONTRACT SHALL BE DISINFECTED IN ACCORDANCE WITH AWWA C651 AND THE STANDARDS OF THE CITY OF BLACK HAWK.
7. THE CONTRACTOR IS RESPONSIBLE, AT ITS COST, FOR PROVIDING WATER FOR CONSTRUCTION ACTIVITIES.
8. MINIMUM BURY DEPTH ON WATER MAIN IS 6 FEET.
9. WATER LINES SHALL HAVE AT LEAST TEN (10) FEET OF HORIZONTAL SEPARATION AND EIGHTEE-INCHES (18') OF VERTICAL SEPARATION BETWEEN THE OUTSIDE WALLS OF THE SANITARY SEWER PIPES, SERVICES AND/OR MANHOLES.

SANITARY SEWER SYSTEM NOTES:

1. BLACK HAWK / CENTRAL CITY SANITATION DISTRICT STANDARDS: THE CONSTRUCTION OF THE SANITARY SEWER SERVICE WORK IS SUBJECT TO THE STANDARDS OF THE BLACK HAWK / CENTRAL CITY SANITATION DISTRICT (DISTRICT). THE DISTRICT STANDARDS SHALL APPLY AS A MINIMUM IN CASE OF CONFLICT BETWEEN THESE SPECIFICATIONS AND THE ENGINEERING STANDARDS OF THE DISTRICT, BUT THE MORE STRINGENT STANDARD SHALL BE FOLLOWED AS LONG AS THE MINIMUM DISTRICT'S STANDARD HAS BEEN MET.
2. WATER LINES SHALL HAVE AT LEAST TEN (10) FEET OF HORIZONTAL SEPARATION AND EIGHTEEN-INCHES (18") OF VERTICAL SEPARATION BETWEEN THE OUTSIDE WALLS OF THE SANITARY SEWER PIPES, SERVICES AND/OR MANHOLES.
   - 2.a. WHEN CONDITIONS PREVENT ACHIEVING THIS SEPARATION, THE SANITARY SEWER SHALL BE CONSTRUCTED OF C900 PVC OR OTHER DISTRICT-APPROVED AWWA PRESSURE-RATED PIPE WITH MECHANICAL OR SLIP-ON JOINTS.
3. SANITARY SERVICE CONNECTIONS: THE CONTRACTOR SHALL COORDINATE THE REPLACEMENT OF THE EXISTING SERVICE CONNECTIONS WITH THE CITY. A REPRESENTATIVE OF THE BLACK HAWK / CENTRAL CITY SANITATION DISTRICT MUST BE PRESENT TO WITNESS THE SANITARY SEWER CONNECTION AND/OR THE ABANDONING OF THE EXISTING SERVICE. THE CONTRACTOR SHALL PROVIDE 72-HOUR NOTICE TO THE DISTRICT.
   - 4.a. JOINTS SHALL BE OF THE BELL AND GASKET TYPE WITH INTEGRALLY CAST BELL HAVING AN ELASTOMERIC GASKET IN A FASHION TO MINIMIZE TURBULENT FLOW.
   - 4.b. SEWER SERVICE MATERIALS: MATERIALS FOR SEWER SERVICE CONNECTIONS SHALL BE NEW AND THE BEST AVAILABLE QUALITY.
   - 4.c. ACCORDING TO THE DISTRICT STANDARD, NEW SEWER PIPE AND FITTINGS SHALL BE GREEN POLYVINYL CHLORIDE (PVC), SDR 35 MINIMUM THICKNESS CONFORMING TO ASTM D3034.
   - 4.d. SERVICE LINE CLEAN OUTS, WHERE REQUIRED, SHALL CONFORM TO THE SERVICE LINE CLEAN OUT DETAIL. CLEAN OUTS ARE REQUIRED FOR ANY SIGNIFICANT (GREATER THAN 45° DEFLECTION) CHANGE IN THE SERVICE LINE DIRECTION AND AT INTERVALS NO GREATER THAN 100 FEET OR AS REQUIRED BY THE LOCAL BUILDING AUTHORITY.
   - 4.e. THE SIZE AND SLOPE OF THE SERVICE SEWER SHALL BE SUBJECT TO THE APPROVAL OF THE DISTRICT. SERVICES 4 INCHES IN DIAMETER SHALL HAVE A A MINIMUM GRADE OF 2%, AND SERVICES 6 INCHES IN DIAMET SHALL HAVE A MINIMUM GRADE OF 1%.
   - 4.f. PIPE LAYING SHALL PROCEED UPGRADE WITH THE SPIGOT ENDS OF PIPE POINTING IN THE DIRECTION OF THE FLOW, UNLESS OTHERWISE APPROVED BY THE ENGINEER. EACH PIPE LENGTH SHALL BE LAID TRUE TO LINE AND GRADE IN SUCH MANNER AS TO FORM A CLOSE CONCENTRIC JOINT WITH THE ADJOINING PIPE AND TO PREVENT SUDDENT OFFSETS TO THE FLOW LINE. PIPE SHALL BE LAID IN AN UN-WATERED TRENCH AND SHALL NOT BE USED FOR DRAINING WATER FROM THE TRENCH.
   - 4.g. THE MINIMUM 10 FT HORIZONTAL SEPARATION IS FROM OUTSIDE WALLS OF THE SANITARY SEWER PIPES, SERVICES AND/OR MANHOLES.
   - 4.h. A MINIMUM OF 18 INCH VERTICAL SEPARATION IS REQUIRED FROM WATER AND STORM WATER UTILITIES.
   - 4.i. WHERE SHOWN ON PROJECT DRAWINGS OR USED AT WATERLINE CROSSINGS, PIPE SHALL BE AWWA C900 OR C905 DR-18. COLOR SHALL BE "GREEN" OR PIPE SHALL BE ENCASED IN GREEN POLYETHYLENE WRAP.
   - 4.j. GASKETS SHALL COMPLY WITH ASTM F477.
5. PROTECTION OF POTABLE WATER PIPELINES: THE CONTRACTOR SHALL USE PVC PIPE CONFORMING TO ASTM D2241, WITH A THICKNESS NOT LESS THAN C900 DR-18 AS ENCASEMENT WHEN A SANITARY SEWER PIPELINE CROSSES AN EXISTING WATER OR THE SANITARY SEWER PIPELINE IS FOUND TO BE LESS THAN 10 FEET HORIZONTALLY FROM A WATER PIPELINE WHICH IS PARALLEL OR CONVERGING TO THE SEWER PIPELINE. THE LENGTH OF THE ENCASEMENT SHALL BE SUCH THAT THE PORTION OF THE SEWER PIPELINE THAT IS NOT ENCASED IS 10 FEET OR GREATER APART HORIZONTALLY ON BOTH SIDES OF THE WATER PIPELINE. COSTS SHALL BE INCLUDED IN THE WORK.
6. PIPELINE FLUSHING: THE CONTRACTOR SHALL FLUSH THE PIPELINES, AS THE WORK PROGRESSES, BY MEANS THAT ARE IN ACCORDANCE WITH THE BLACK HAWK / CENTRAL CITY SANITATION DISTRICT STANDARDS, TO ENSURE THAT EARTH, SAND, ROCKS OR OTHER FOREIGN MATERIALS ARE REMOVED FROM THE INTERIOR OF THE PIPELINE. COORDINATE WITH PUBLIC WORKS AND THE SANITATION DISTRICT.
7. LEAKAGE: THE CONTRACTOR SHALL PERFORM A LEAKAGE TEST WITH THE PRESENCE OF THE ENGINEER AND REPRESENTATIVE OF THE CENTRAL CITY / BLACK HAWK SANITATION DISTRICT.

SDR 26

Is this note talking about sanitary? or should it be moved to WATER notes section?

All materials from flushing shall be removed and not allowed to enter the active sanitary sewer system.

Black Hawk-Central City Sanitation District

GRADING NOTES:

1. GRADING 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.
2. ALL SIDEWALK SHALL HAVE A 2% MAXIMUM CROSS SLOPE.
3. GRADING SLOPES SHALL NOT EXCEED 3:1 (H:V) UNLESS SPECIFICALLY NOTED OTHERWISE.
4. ALL RAMPS AND STAIRCASES SHALL BE ADA COMPLIANT.

STORM DRAIN NOTES:

1. EXCEPT WHERE NOTED, ALL STORM SEWER PIPE SHALL BE REINFORCED CONCRETE, CLASS III AND SHALL CONFORM TO REQUIREMENTS OF ASTM C76. ALL RCP SHALL HAVE RUBBER GASKETED JOINTS AND SHALL CONFORM TO REQUIREMENTS OF ASTM C443, AND SHALL PROVIDE WATERTIGHT PERFORMANCE CHARACTERISTICS.
2. TONGUE AND GROOVE JOINTS SHALL NOT BE ALLOWED.
3. THE MINIMUM COVERAGE FOR ALL STORM DRAINAGE PIPES SHALL BE 1.5 FEET FOR CLASS III PIPE AND 1 FOOT FOR CLASS IV PIPE.
4. ALL MANHOLES SHALL BE CONCRETE AND CONFORM TO CDOT STANDARD M-604-20.
5. THE MINIMUM MANHOLE DIAMETER SHALL BE AS SPECIFIED BELOW:

PIPE DIAMETER	MANHOLE SIZE
15" TO 18"	4' DIAMETER
21" TO 42"	5' DIAMETER
48" TO 54"	6' DIAMETER
60" AND LARGER	BOX BASE MANHOLE

6. ALL STREET INLETS SHALL BE CURB OPENING TYPE R, CONFORMING TO CDOT STANDARD M-604-12, EXCEPT WHERE OTHERWISE NOTED.
7. EPOXY COATED REBAR IS REQUIRED ON ALL DRAINAGE STRUCTURES.
8. ALL RCP STORM SEWERS MUST USE ASTM C443 WATERTIGHT GASKETS PER THE CURRENT MILE HIGH FLOOD DISTRICT DESIGN CRITERIA.
9. ALL RCP SHALL BE CLASS III STORM SEWER PIPE UNLESS OTHERWISE SPECIFIED.
10. JOINT RESTRAINTS ARE REQUIRED FOR A MINIMUM OF THE LAST TWO PIPE JOINTS AND FLARED END SECTION OF AN RCP OUTFALL.
11. TOE WALLS ARE REQUIRED ON FLARED END SECTIONS AT THE OUTLET END OF CULVERTS AND STORM SEWER OUTFALLS.
12. FILTER FABRIC IS REQUIRED UNDER ALL RIPRAP PADS.
13. WHERE RIPRAP IS CALLED FOR ON THE PLANS FOR EROSION CONTROL, IT SHALL CONFORM TO THE URBAN STORM DRAINAGE CRITERIA MANUAL SPECIFICATIONS (LATEST REVISION).

EROSION & SEDIMENT CONTROL NOTES:

1. CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL EROSION AND SEDIMENT CONTROL MEASURES TO MITIGATE ANY SEDIMENT LEAVING THE CONSTRUCTION SITE. CONTRACTOR IS RESPONSIBLE TO ACQUIRE ALL APPLICABLE STATE PERMITS.
2. EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO COMMENCEMENT OF GRADING AND SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION. ADDITIONAL MEASURES MAY BE REQUIRED DURING CONSTRUCTION AND SHALL BE INSTALLED AT THE DIRECTION OF THE CITY ENGINEER / PUBLIC WORKS DIRECTOR OR HIS REPRESENTATIVE.
3. AT A MINIMUM, THE CONTRACTOR OR HIS AGENT SHALL INSPECT ALL EROSION AND SEDIMENT CONTROL MEASURES EVERY 7 DAYS AND AFTER EVERY PRECIPITATION EVENT. EROSION AND SEDIMENT CONTROL FORMS SHALL BE COMPLETED WEEKLY AND FAXED / EMAILED TO THE CITY INSPECTOR.
4. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PREVENT SEDIMENT, DEBRIS AND ALL POLLUTANTS FROM ENTERING THE STORM SEWER SYSTEM DURING GRADING AND CONSTRUCTION OPERATIONS. CONTRACTOR SHALL BE RESONSIBLE FOR REMEDIATION OF ANY ADVERSE IMPACTS TO WATERWAYS, WETLANDS, OTHER PROPERTIES AND RIGHTS-OF-WAY RESULTING FROM WORK DONE AS PART OF THIS PROJECT. ALL SEDIMENT, SILT, MUD AND CONSTRUCTION DEBRIS THAT MOVES BEYOND THE PROPERTY LIMITS MUST BE IMMEDIATELY REMOVED.

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HAWK'S LANDING AIRSTREAM PARK
NOTES
GILPIN COUNTY, CO

REVISIONS: NO.	DESCRIPTION	DATE:
1		

REVIEWED FOR COMPLIANCE BY:

SIGNATURE DATE

SIGNATURE DATE

SCALE:	AS INDICATED
DATE:	02/05/2021
DRAWN BY:	JP/BG
CHECKED BY:	JK
JOB NO:	D01055

PROJECT NO.
D01055

DRAWING NO.
NT-01

SHEET NO. 02 OF 27 SHEETS

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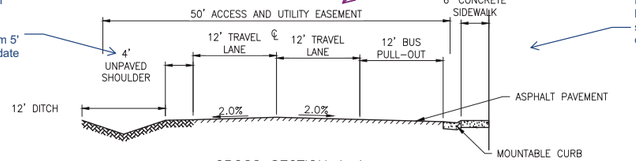
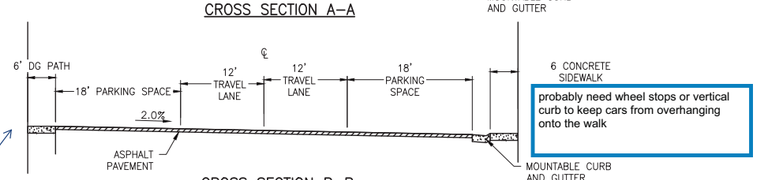
Should easement be extended to include sidewalk?

Assuming this is for future sidewalk per previous referral comments, this should be minimum 5' wide to accommodate a future sidewalk (typ.)

Flip cross-section to be consistent with station direction and other cross-sections



CROSS SECTION A–A

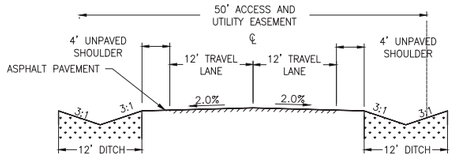


CROSS SECTION B–B

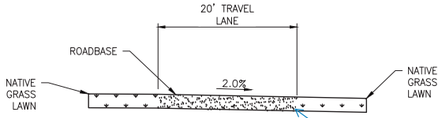
probably need wheel stops or vertical curb to keep cars from overhanging onto the walk

why mountable?

Not seeing section B-B referenced in the plans



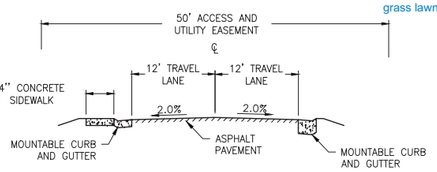
CROSS SECTION C–C



CROSS SECTION D–D

Not seeing section D-D referenced in the plans

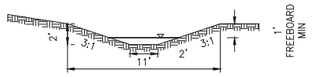
what separates gravel roadbase from native grass lawn?



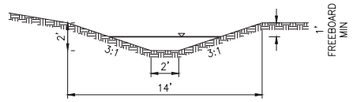
CROSS SECTION E–E

4' sidewalk is not ADA accessible unless you include passing zones. Bump to 5' minimum.

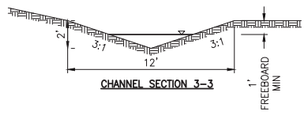
Please add an overall view of where each of these sections are located.



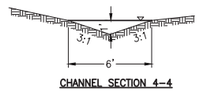
CHANNEL SECTION 1–1



CHANNEL SECTION 2–2



CHANNEL SECTION 3–3



CHANNEL SECTION 4–4

NOTES:

1. PAVEMENT SECTION SHALL BE 5.5' ASPHALT PAVEMENT ON RECONDITIONED SUBGRADE. REFER GEOTECHNICAL ENGINEER FOR FINAL PAVEMENT DESIGN AND SUBGRADE CONDITIONING REQUIREMENTS.
2. ROADBASE FIRE ACCESS ROAD SHALL BE CAPABLE OF SUPPORTING A FIRE APPARATUS OF AT LEAST 75,000 LBS

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HAWK'S LANDING AIRSTREAM PARK
NOTES
GILPIN COUNTY, CO

REVISIONS:

NO.	DESCRIPTION	DATE:
1		

REVIEWED FOR COMPLIANCE BY:

SIGNATURE DATE

SIGNATURE DATE

SCALE:	AS INDICATED
DATE:	02/05/2021
DRAWN BY:	JP/BG
CHECKED BY:	JK
JOB NO:	D01055

PROJECT NO. D01055

DRAWING NO. **NT-02**

SHEET NO. 03 OF 27 SHEETS

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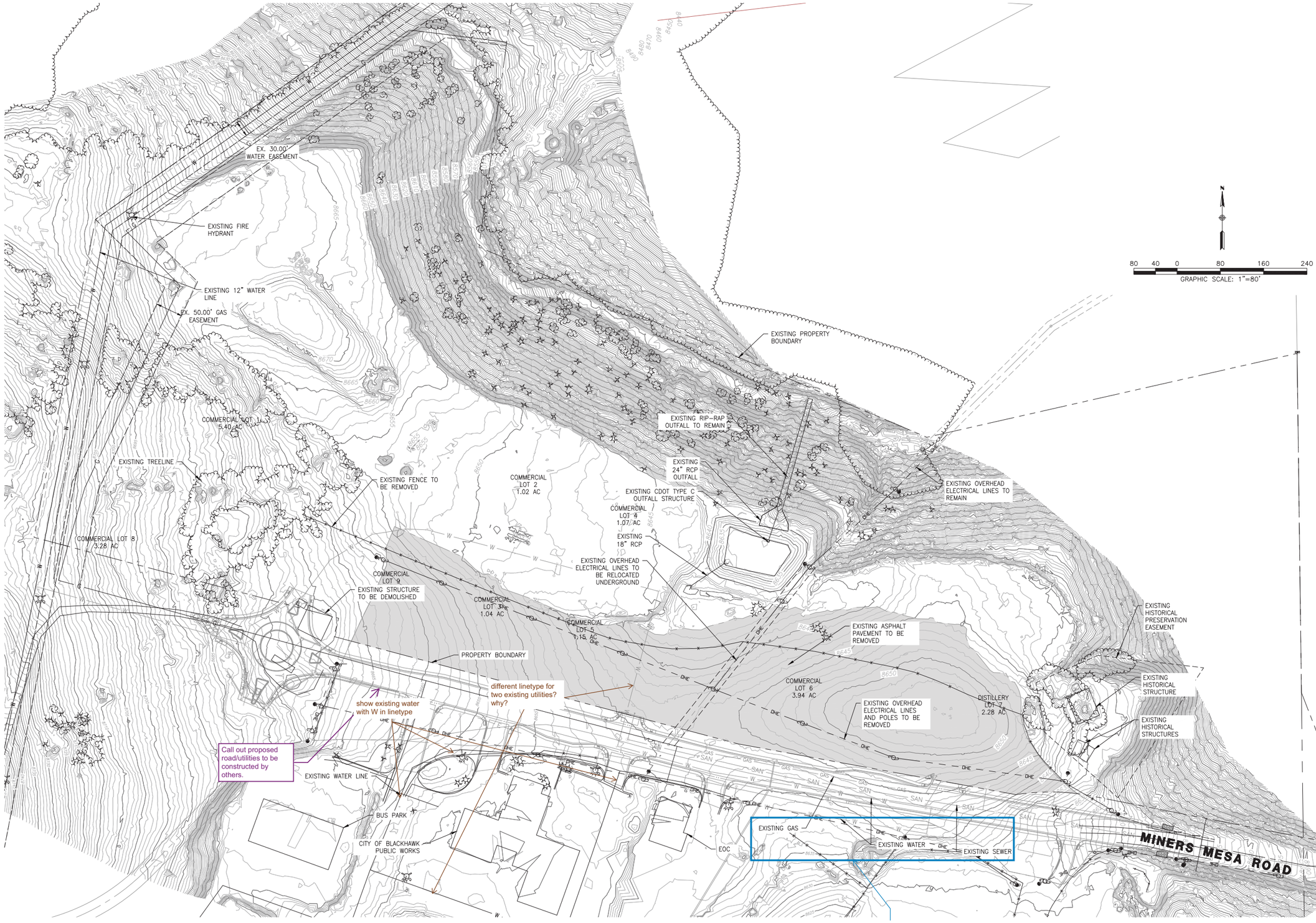

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HAWK'S LANDING AIRSTREAM PARK
EXISTING CONDITIONS
GILPIN COUNTY, CO

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D01055

DRAWING NO.
EX-01

SHEET NO. 05 OF 27 SHEETS

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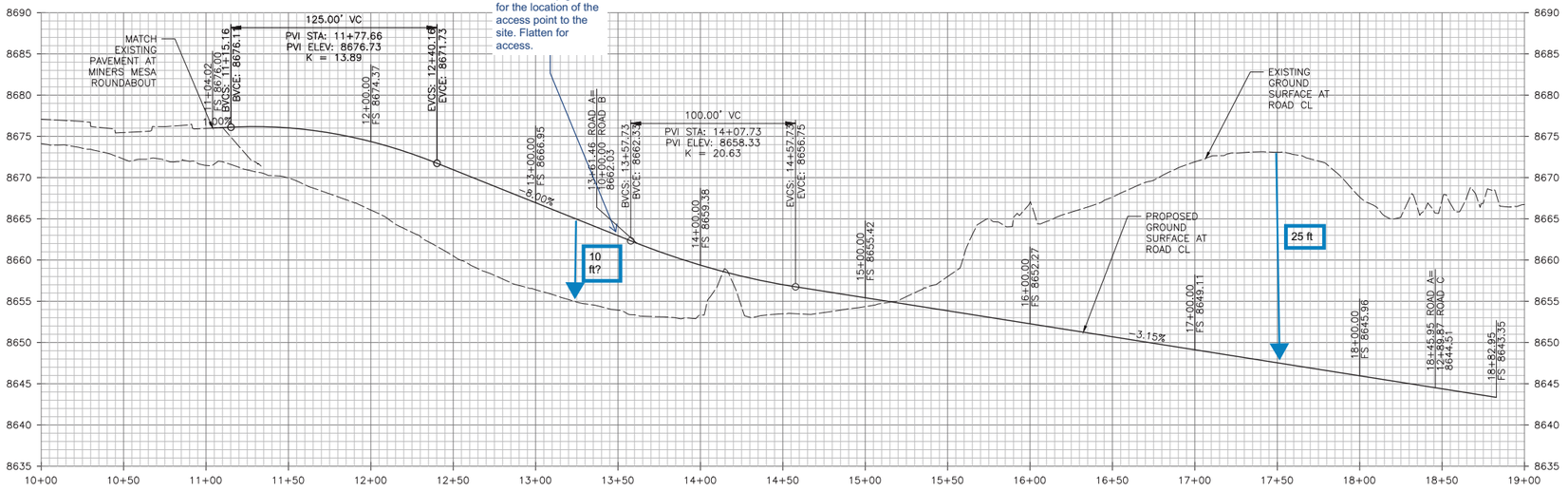
Confirm design speed of internal road. Current design restricts speed to 20mph.

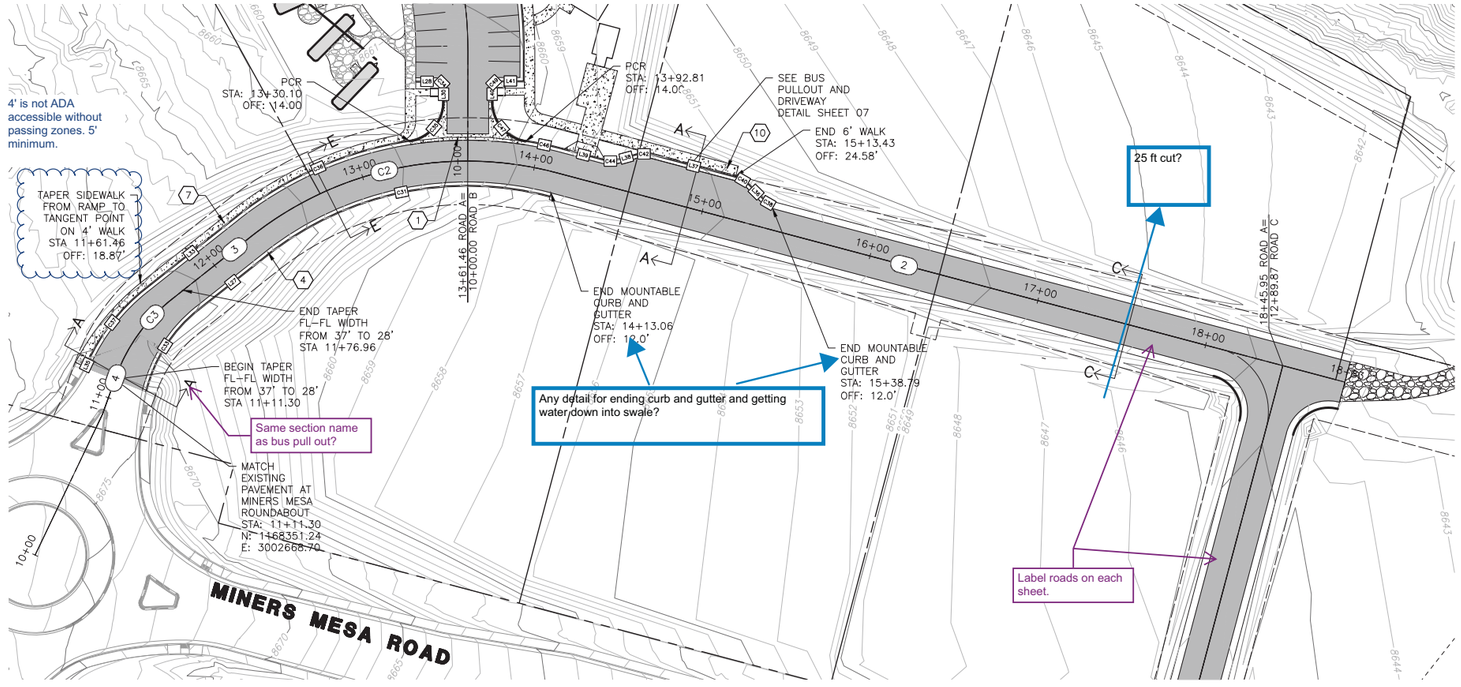
8% is a steep grade for the location of the access point to the site. Flatten for access.



should probably provide cross sections for this roadway as it appears there are 10 foot fills and 25 foot cuts which does not seem right??? also would be helpful to show utilities and separations and depths..

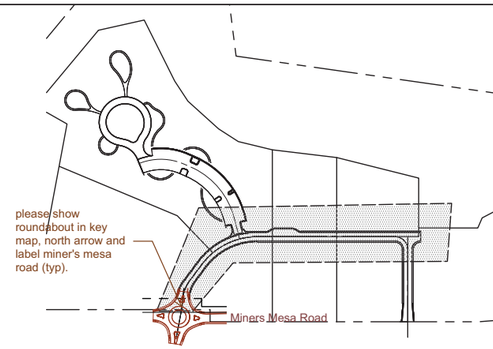
PROFILE – ROAD A

HORIZONTAL: 1"=40' VERTICAL: 1"=4'



PLAN – ROAD A

SCALE 1"=40'



KEY MAP

SCALE: 1"=200'

CONSTRUCTION NOTES

01. 6' CROSSPAN WITH TYPE 2 GUTTER PER CDOT DETAIL M-609-1
02. CURB RAMP TYPE 1 PER CDOT DETAIL M-608-1
03. CURB RAMP TYPE 2 PER CDOT DETAIL M-608-1
04. ROLLOVER CATCH CURB AND GUTTER (TYPE 2 – SECTION IIM) PER CDOT DETAIL M0609-1
05. ROLLOVER SPILL CURB AND GUTTER (TYPE 2 – SECTION IM) PER CDOT DETAIL M-609-1
06. ROLLOVER CURB, GUTTER AND 6' SIDEWALK (TYPE 2-SECTION MS), PER CDOT DETAIL M-609-1
07. ROLLOVER CURB, GUTTER AND 4' SIDEWALK (TYPE 2 – SECTION MS) PER CDOT DETAIL M-609-1
08. 4' CONCRETE SIDEWALK
09. 4' DG ACCESS PATH
10. 6' CONCRETE SIDEWALK
11. 6' DG ACCESS PATH
12. 6" FLUSH CONCRETE EDGE CURB

why rollover curb everywhere vs. vertical?

4' should be avoided for ADA compliance

NOTES

1. FOR TYPICAL ROADWAY SECTIONS SEE SHEET NT-02.
2. REFER LANDSCAPE PLANS FOR ACCESS PATHWAYS AND TYPICAL ARRANGEMENT AT UNITS

CL LINE TABLE

LINE #	LENGTH	BEARING
2	395.89	N75°07'40"W
3	58.86	S51°38'32"W
4	1.45	S19°45'57"W

CL CURVE TABLE

LINE #	LENGTH	RADIUS	DELTA (Δ)
C2	185.81'	200.00	053°13'48"
C3	55.63'	100.00	031°52'35"

Too small, will be difficult to maneuver approaching roundabout. Can you make this larger?

CURB CURVE TABLE

CURVE #	LENGTH	RADIUS	DELTA
C31	172.80'	186.00'	053°13'48"'
C33	57.33'	86.00'	038°11'35"'
C34	4.71'	3.00'	090°00'00"'
C35	32.52'	23.00'	081°01'07"'
C36	110.05'	214.00'	029°27'57"'
C37	54.18'	114.00'	027°13'53"'
C38	6.81'	13.00'	030°00'00"'
C40	8.90'	17.00'	030°00'00"'
C42	8.90'	17.00'	030°00'00"'
C44	6.81'	13.00'	030°00'00"'
C46	21.67'	214.00'	005°48'03"'
C47	32.52'	23.00'	081°01'06"'
C49	4.71'	3.00'	090°00'00"'

CURB LINE TABLE

LINE #	LENGTH	DIRECTION
L27	50.28'	S51° 38' 32.17"W
L28	13.00'	S89° 54' 37.31"E
L30	8.80'	S0° 05' 22.69"W
L33	67.09'	S51° 38' 32.17"W
L35	2.89'	S25° 17' 31.26"W
L36	11.96'	N45° 07' 40.00"W
L37	50.00'	N75° 07' 40.00"W
L38	11.96'	S74° 52' 20.00"W
L39	25.02'	N75° 07' 40.00"W
L40	9.07'	N0° 05' 22.69"E
L41	15.00'	S89° 54' 37.31"E

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HAWK'S LANDING AIRSTREAM PARK
ROAD A PLAN & PROFILE

GILPIN COUNTY, CO

REVISIONS: NO.	DESCRIPTION	DATE:
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PROJECT NO. D01055

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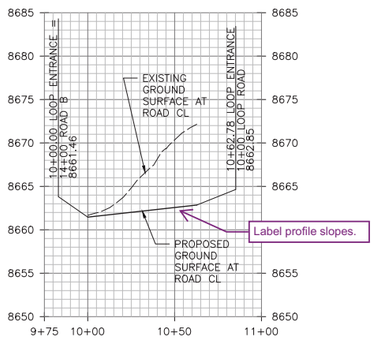
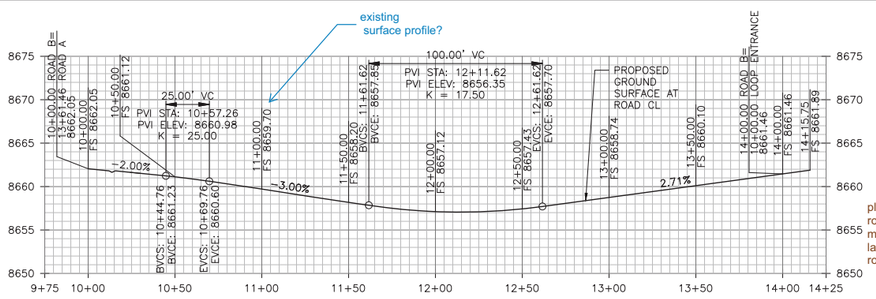


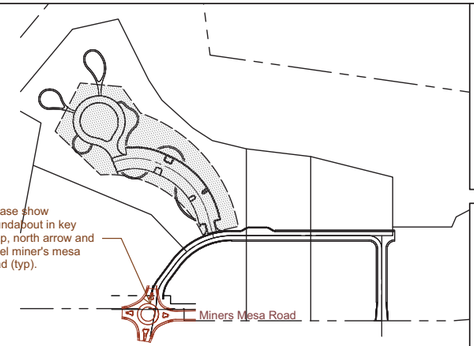
PROFILE – LOOP ENTRANCE

HORIZONTAL: 1"=40' VERTICAL: 1"=4'



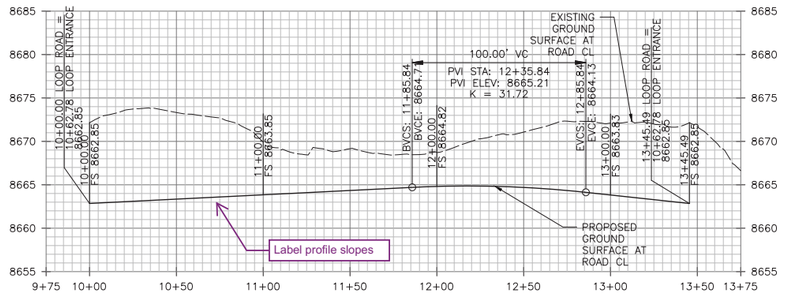
PROFILE – ROAD B

HORIZONTAL: 1"=40' VERTICAL: 1"=4'



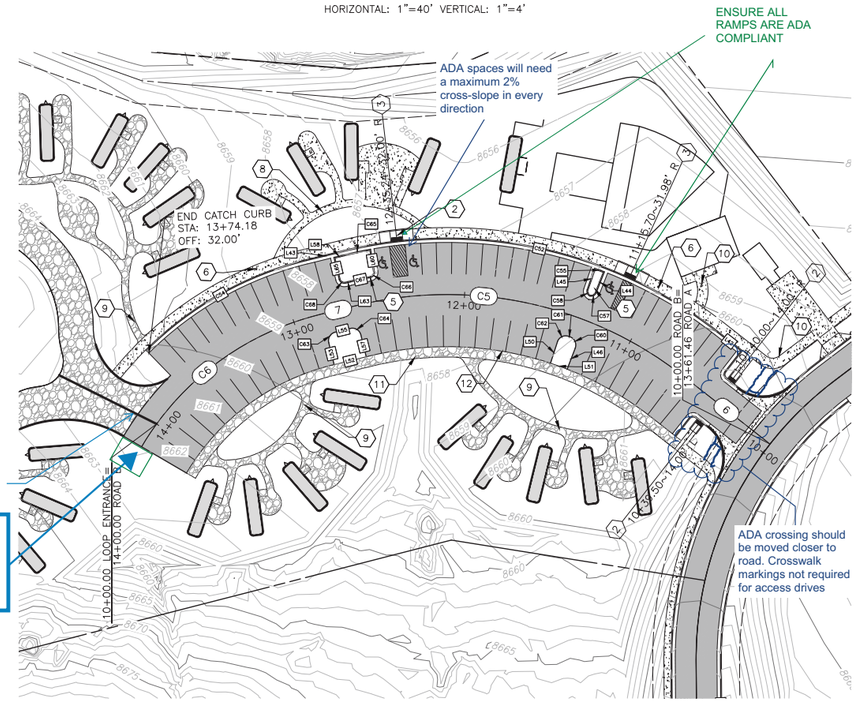
KEY MAP

SCALE: 1"=200'



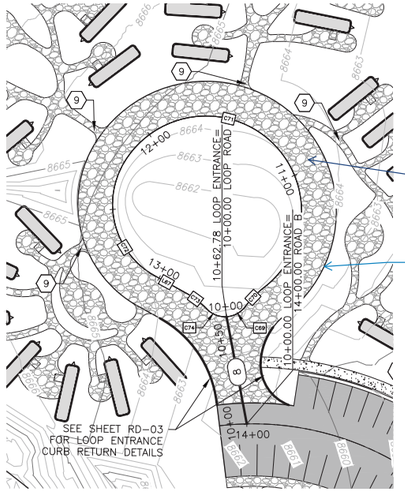
PROFILE – ROAD D

HORIZONTAL: 1"=40' VERTICAL: 1"=4'



PLAN – ROAD B

SCALE 1"=40'



PLAN – ROAD D

SCALE 1"=40'

CONSTRUCTION NOTES

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02. CURB RAMP TYPE 1 PER CDOT DETAIL M-608-1
03. CURB RAMP TYPE 2 PER CDOT DETAIL M-608-1
04. ROLLOVER CATCH CURB AND GUTTER (TYPE 2 – SECTION IIM) PER CDOT DETAIL M0609-1
05. ROLLOVER SPILL CURB AND GUTTER (TYPE 2 – SECTION IM) PER CDOT DETAIL M-609-1
06. ROLLOVER CURB, GUTTER AND 6' SIDEWALK (TYPE 2–SECTION MS) PER CDOT DETAIL M-609-1
07. ROLLOVER CURB, GUTTER AND 4' SIDEWALK (TYPE 2 – SECTION MS) PER CDOT DETAIL M-609-1
08. 4' CONCRETE SIDEWALK
09. 4' DG ACCESS PATH
10. 6' CONCRETE SIDEWALK
11. 6' DG ACCESS PATH
12. 6" FLUSH CONCRETE EDGE CURB

why rollever vs vertical?

need a way to keep the path material contained and from getting contaminated by the adjacent material

need wheel stops or vertical curb to keep overhang of cars from impacting walk width

NOTES

1. FOR TYPICAL ROADWAY SECTIONS SEE SHEET N1-02.
2. REFER LANDSCAPE PLANS FOR ACCESS PATHWAYS AND TYPICAL ARRANGEMENT AT UNITS

CL LINE TABLE		
LINE #	LENGTH	BEARING
L6	63.69	S0°05'23"W
L7	21.67	S51°45'26"E
L8	62.78	N11°24'02"W

CL CURVE TABLE			
LINE #	LENGTH	RADIUS	DELTA (Δ)
C5	199.08'	220.00	051°50'49"
C6	131.31'	165.00	045°35'47"

CURB LINE TABLE		
LINE #	LENGTH	DIRECTION
L42	17.53'	N0° 05' 22.69"E
L43	21.67'	N51° 45' 25.97"W
L44	13.05'	S73° 26' 41.59"W
L45	13.09'	N71° 10' 37.16"E
L46	12.94'	N73° 00' 19.92"E
L50	12.94'	S69° 58' 00.73"W
L51	10.21'	S18° 28' 58.34"E
L52	19.03'	N51° 45' 25.97"W
L53	13.00'	N38° 14' 34.03"E
L55	9.03'	S51° 45' 25.97"E
L57	13.00'	S38° 14' 34.03"W
L58	5.99'	S51° 45' 25.97"E
L60	13.04'	S42° 17' 16.27"W
L63	3.04'	N51° 45' 25.97"W
L65	12.98'	N38° 26' 12.04"E
L67	21.18'	S61° 46' 19.36"E

CURB CURVE TABLE			
CURVE #	LENGTH	RADIUS	DELTA
C52	228.03'	252.00'	051°50'49"'
C54	107.14'	197.00'	031°09'42"'
C55	6.00'	250.00'	001°22'27"'
C57	4.40'	3.01'	083°33'01"'
C58	4.40'	3.01'	083°33'01"'
C60	7.98'	5.00'	091°23'39"'
C61	0.92'	210.51'	000°15'01"'
C62	7.98'	5.00'	091°23'39"'
C63	7.85'	5.00'	090°00'00"'
C64	7.85'	5.00'	090°00'00"'
C65	15.65'	250.00'	003°35'12"'
C66	4.65'	3.00'	088°47'28"'
C67	11.58'	234.00'	002°50'10"'
C68	4.72'	3.00'	090°11'38"'
C69	12.65'	14.50'	049°58'54"'
C70	15.64'	56.50'	015°51'34"'
C71	193.02'	55.00'	201°04'36"'
C72	75.86'	47.00'	092°28'53"'
C73	14.49'	47.00'	017°39'43"'
C74	12.65'	14.50'	049°58'54"'

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HAWK'S LANDING AIRSTREAM PARK

ROAD B&D PLAN & PROFILE

GILPIN COUNTY, CO

REVISIONS:		
NO.	DESCRIPTION	DATE:
1		

REVIEWED FOR COMPLIANCE BY:

SIGNATURE DATE

SIGNATURE DATE

SCALE: AS INDICATED
DATE: 02/05/2021
DRAWN BY: JP/BG
CHECKED BY: JK
JOB NO: D01055

PROJECT NO. D01055

DRAWING NO. **RD-02**

SHEET NO. 06 OF 27 SHEETS

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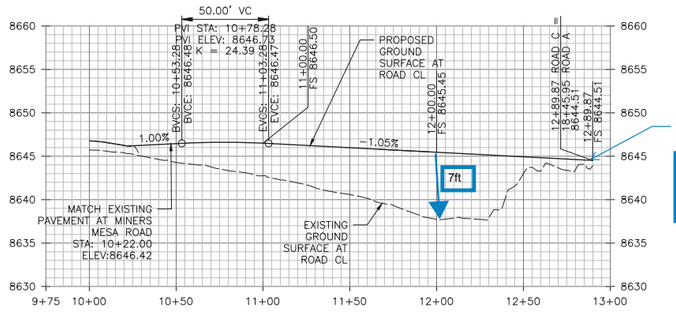
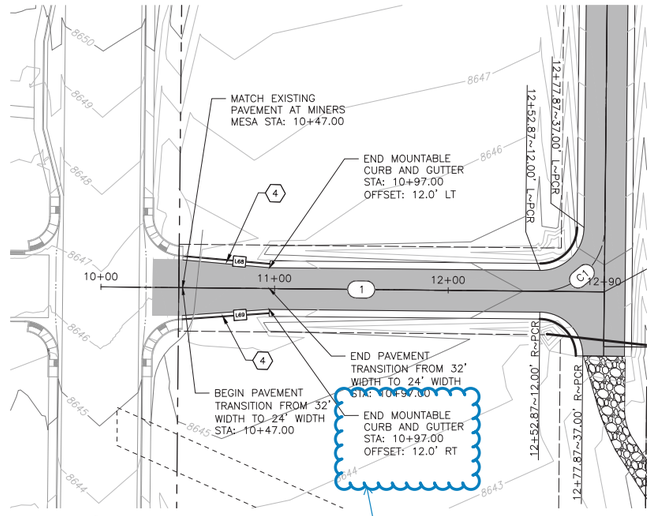


PROFILE – ROAD C

HORIZONTAL: 1"=40' VERTICAL: 1"=4'

need cross sections for this section of roadway showing utility locations etc.



PLAN – ROAD C

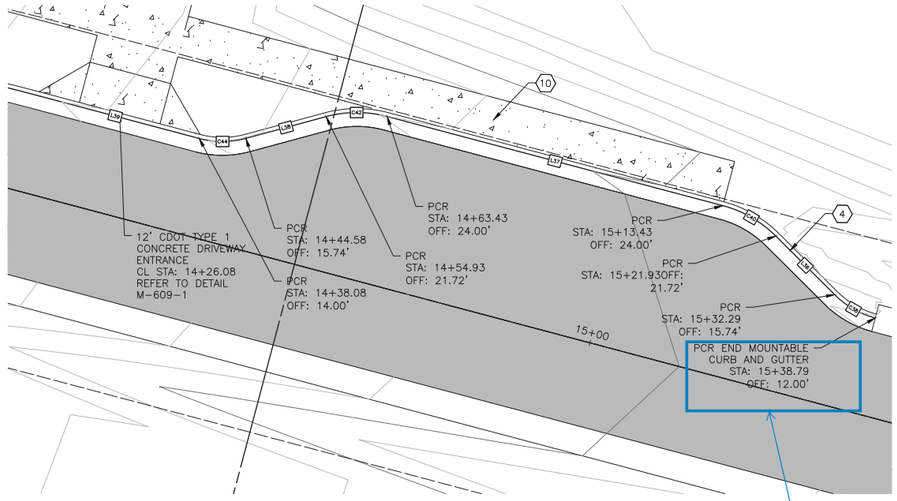
SCALE 1"=40'

need detail as to what happens with water at the end of the curb & gutter and how it gets to swale

CL LINE TABLE		
LINE #	LENGTH	BEARING
1	205.87	N14°52'20"E

CL CURVE TABLE			
LINE #	LENGTH	RADIUS	DELTA (Δ)
C1	58.12'	37.00	090°00'00"

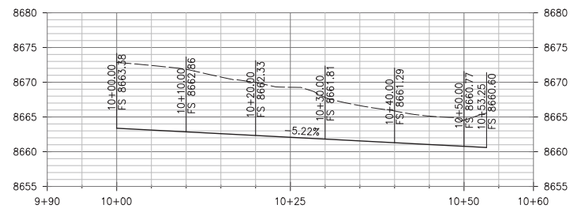
CURB LINE TABLE		
LINE #	LENGTH	DIRECTION
L68	50.24'	N19° 26' 19.97"E
L69	50.16'	N10° 18' 20.08"E



BUS PULLOUT

SCALE 1"=10'

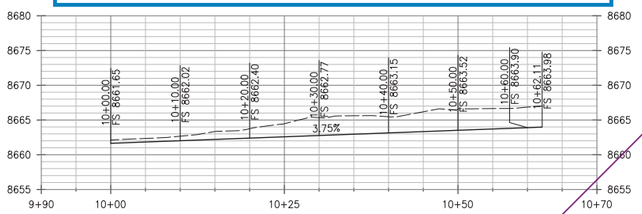
what happens to the water at the end of the curb/gutter?



CURB RETURN LOOP ENTRANCE SE CORNER

HORIZONTAL: 1"=10' VERTICAL: 1"=1'

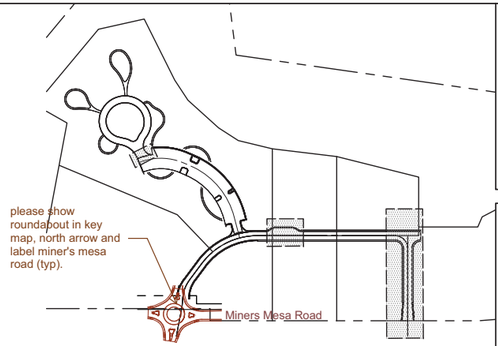
St 10+47 - 10+97? stations don't seem to match



CURB RETURN LOOP ENTRANCE SW CORNER

HORIZONTAL: 1"=10' VERTICAL: 1"=1'

Call out locations in plan view and refer to this page.



please show roundabout in key map, north arrow and label miner's mesa road (typ).

KEY MAP

SCALE: 1"=200'

CONSTRUCTION NOTES

01 6' CROSSPAN WITH TYPE 2 GUTTER PER CDOT DETAIL M-609-1
02 CURB RAMP TYPE 1 PER CDOT DETAIL M-608-1
03 CURB RAMP TYPE 2 PER CDOT DETAIL M-608-1
04 ROLLOVER CATCH CURB AND GUTTER (TYPE 2 – SECTION IIM) PER CDOT DETAIL M0609-1
05 ROLLOVER SPILL CURB AND GUTTER (TYPE 2 – SECTION IM) PER CDOT DETAIL M-609-1
06 ROLLOVER CURB, GUTTER AND 6' SIDEWALK (TYPE 2–SECTION MS) PER CDOT DETAIL M-609-1
07 ROLLOVER CURB, GUTTER AND 4' SIDEWALK (TYPE 2 – SECTION MS) PER CDOT DETAIL M-609-1
08 4' CONCRETE SIDEWALK
09 4' DG ACCESS PATH
10 6' CONCRETE SIDEWALK
11 6' DG ACCESS PATH
12 6" FLUSH CONCRETE EDGE CURB

NOTES

1. FOR TYPICAL ROADWAY SECTIONS SEE SHEET NT-02.
2. REFER LANDSCAPE PLANS FOR ACCESS PATHWAYS AND TYPICAL ARRANGEMENT AT UNITS

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HAWK'S LANDING AIRSTREAM PARK
ROAD C PLAN & PROFILE
GILPIN COUNTY, CO

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PROJECT NO. D01055

DRAWING NO. **RD-03**

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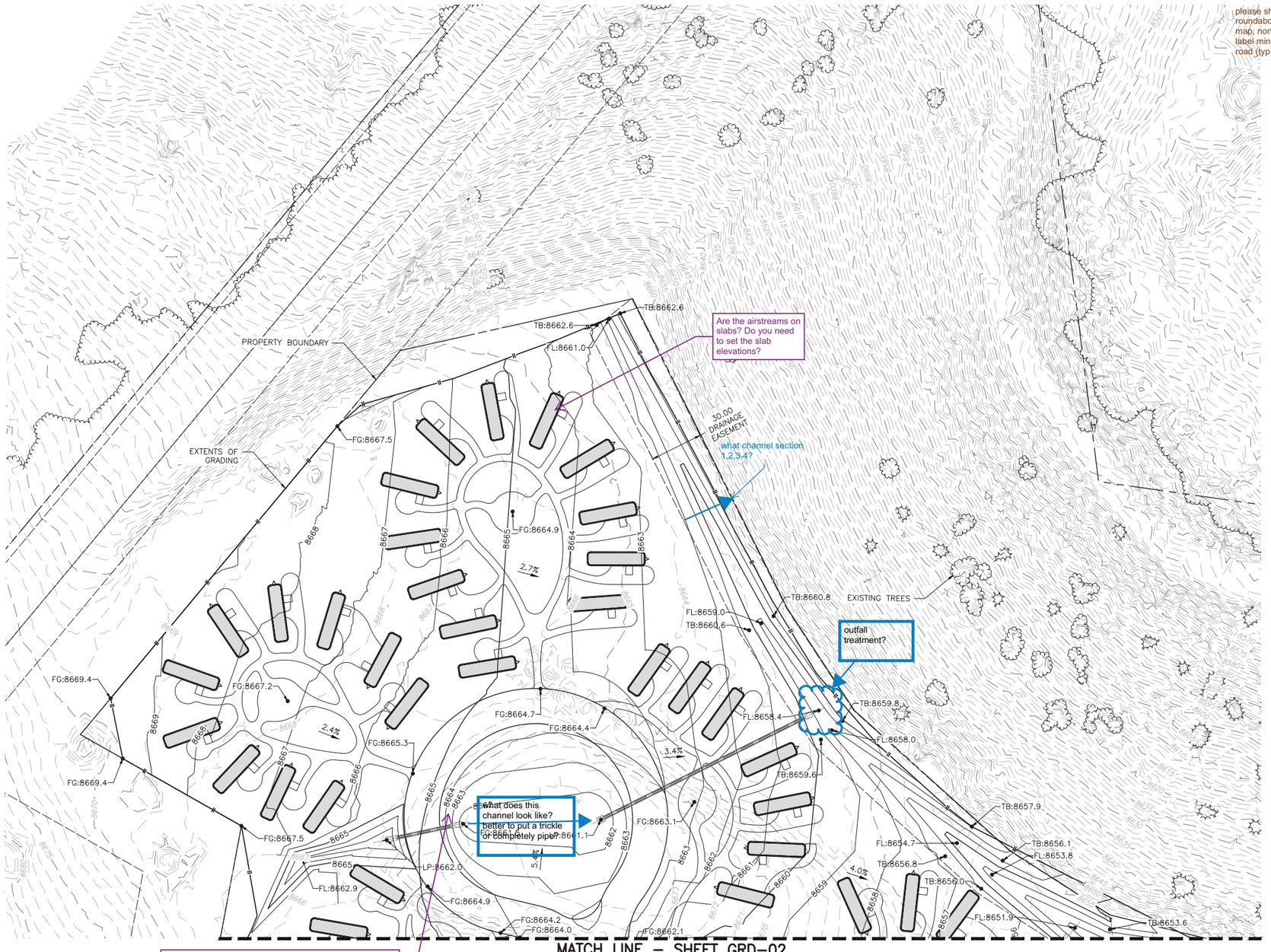

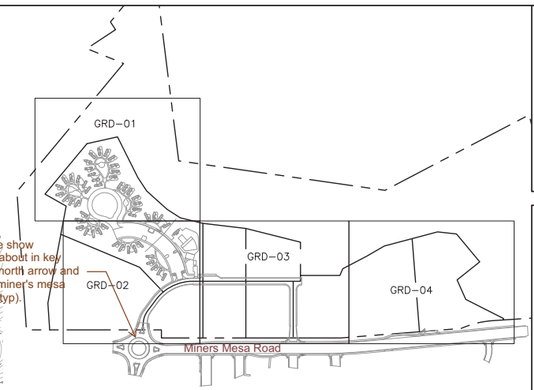

KEY MAP

SCALE: 1"=300'

POINTS LEGEND

FG = FINISHED GRADE

FL = FLOW LINE

HP = HIGH POINT

LP = LOW POINT

TB = TOP OF BANK

30 15 0 30 60 90

GRAPHIC SCALE: 1"=30'

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HAWK'S LANDING AIRSTREAM PARK
OVERLOT GRADING PLAN

GILPIN COUNTY, CO

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PROJECT NO.
D01055

DRAWING NO.
GRD-01

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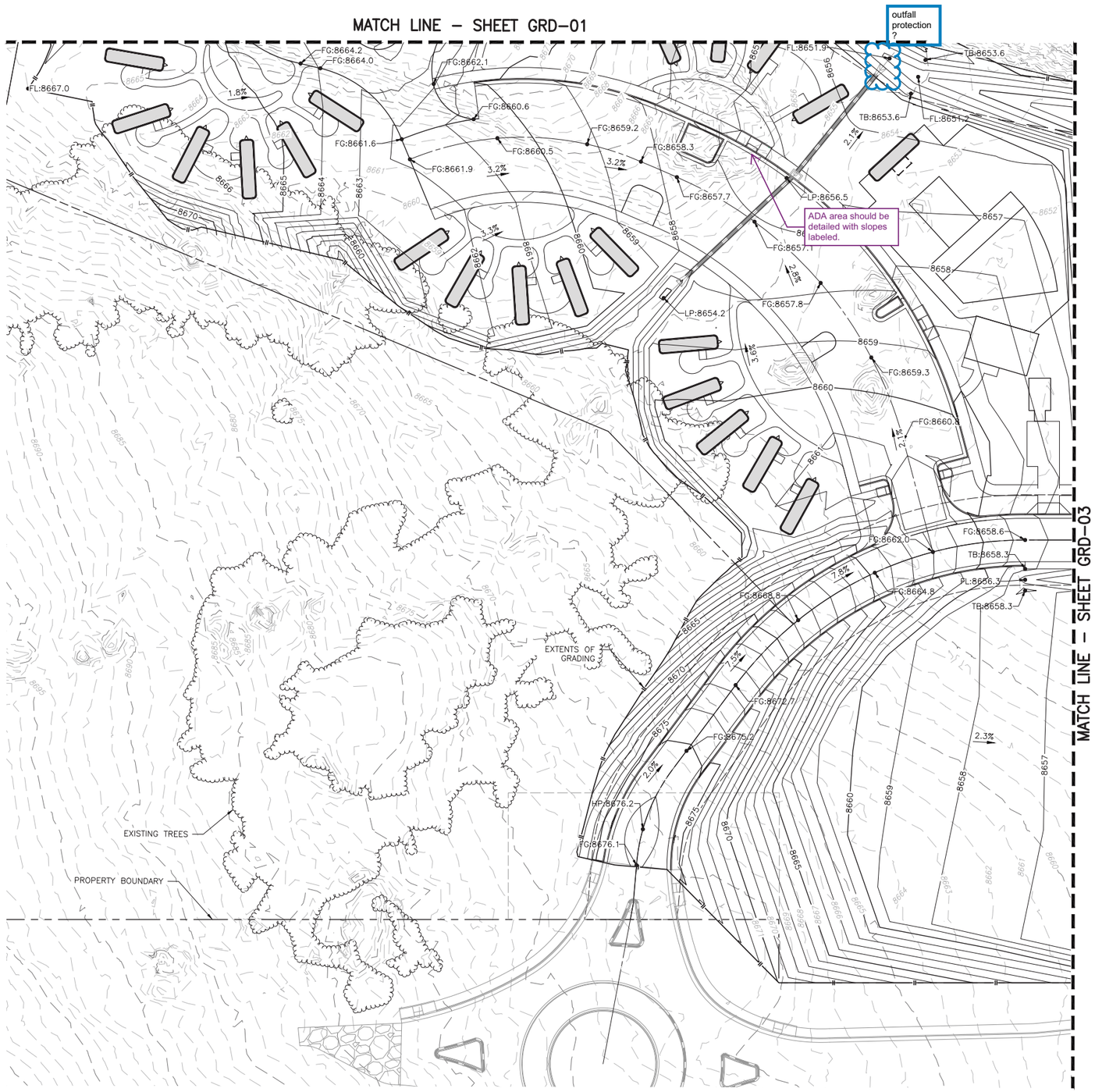

KEY MAP

SCALE: 1"=300'

POINTS LEGEND

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HP = HIGH POINT

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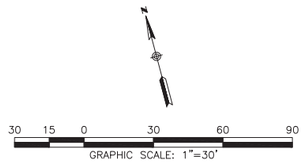
TB = TOP OF BANK



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OVERLOT GRADING PLAN

GILPIN COUNTY, CO

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GRD-02

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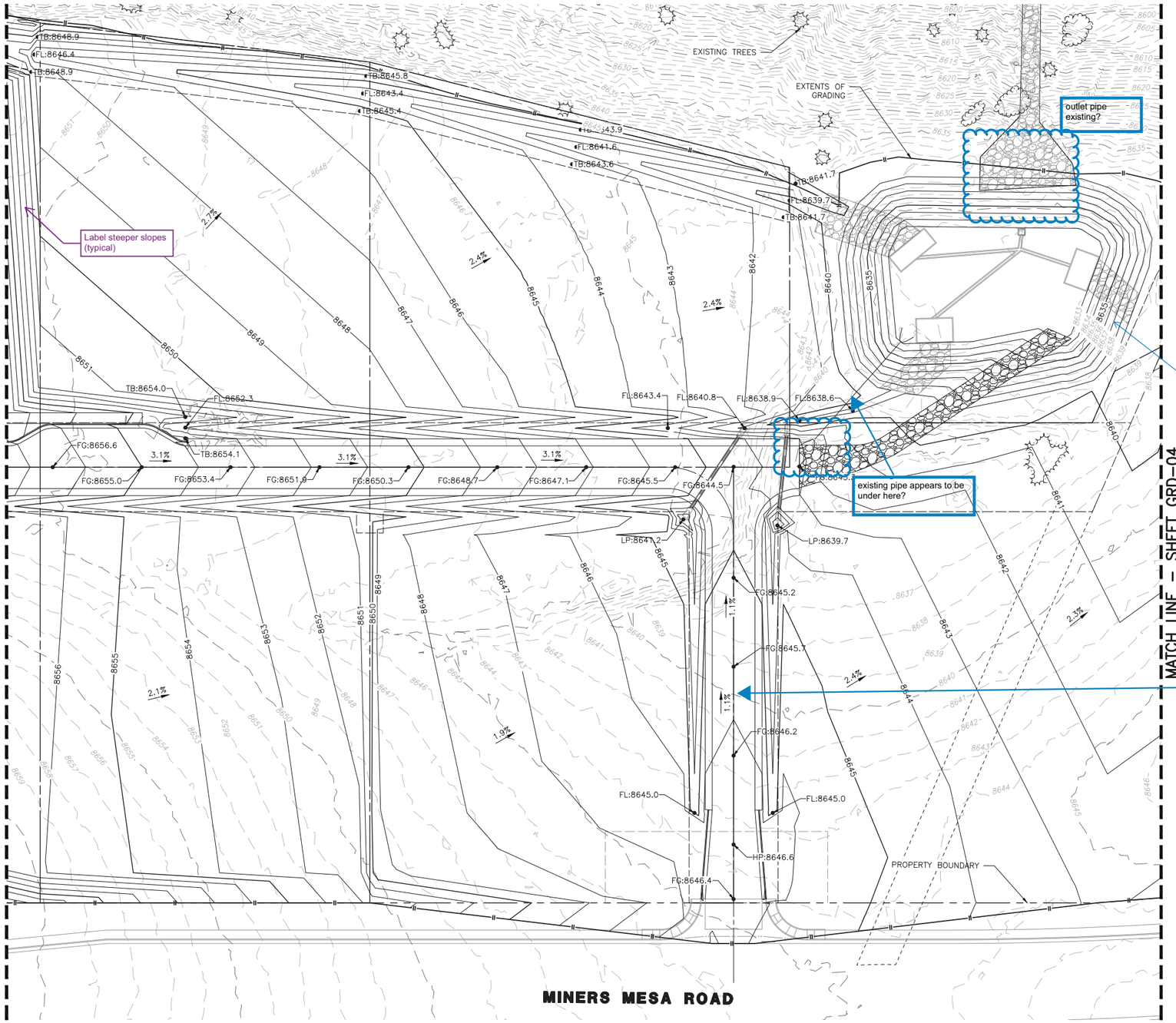

KEY MAP

SCALE: 1"=300'

POINTS LEGEND

FG = FINISHED GRADE

FL = FLOW LINE

HP = HIGH POINT

LP = LOW POINT

TB = TOP OF BANK

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HAWK'S LANDING AIRSTREAM PARK
OVERLOT GRADING PLAN

GILPIN COUNTY, CO

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DRAWING NO.
GRD-03

SHEET NO. 10 OF 27 SHEETS

30 15 0 30 60 90
GRAPHIC SCALE: 1"=30'

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KEY MAP

SCALE: 1"=300'

POINTS LEGEND

FG = FINISHED GRADE

FL = FLOW LINE

HP = HIGH POINT

LP = LOW POINT

TB = TOP OF BANK

30 15 0 30 60 90

GRAPHIC SCALE: 1"=30'

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HAWK'S LANDING AIRSTREAM PARK
OVERLOT GRADING PLAN

GILPIN COUNTY, CO

REVISIONS: NO.	DESCRIPTION	DATE:
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PROJECT NO. D01055

DRAWING NO. **GRD-04**

SHEET NO. 11 OF 27 SHEETS

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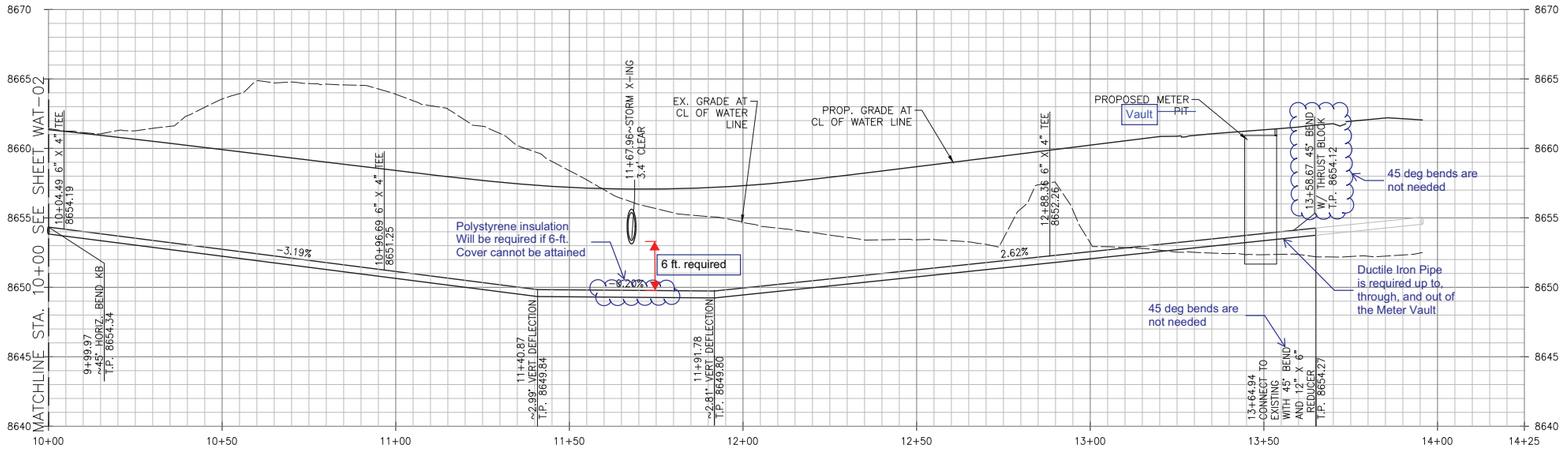
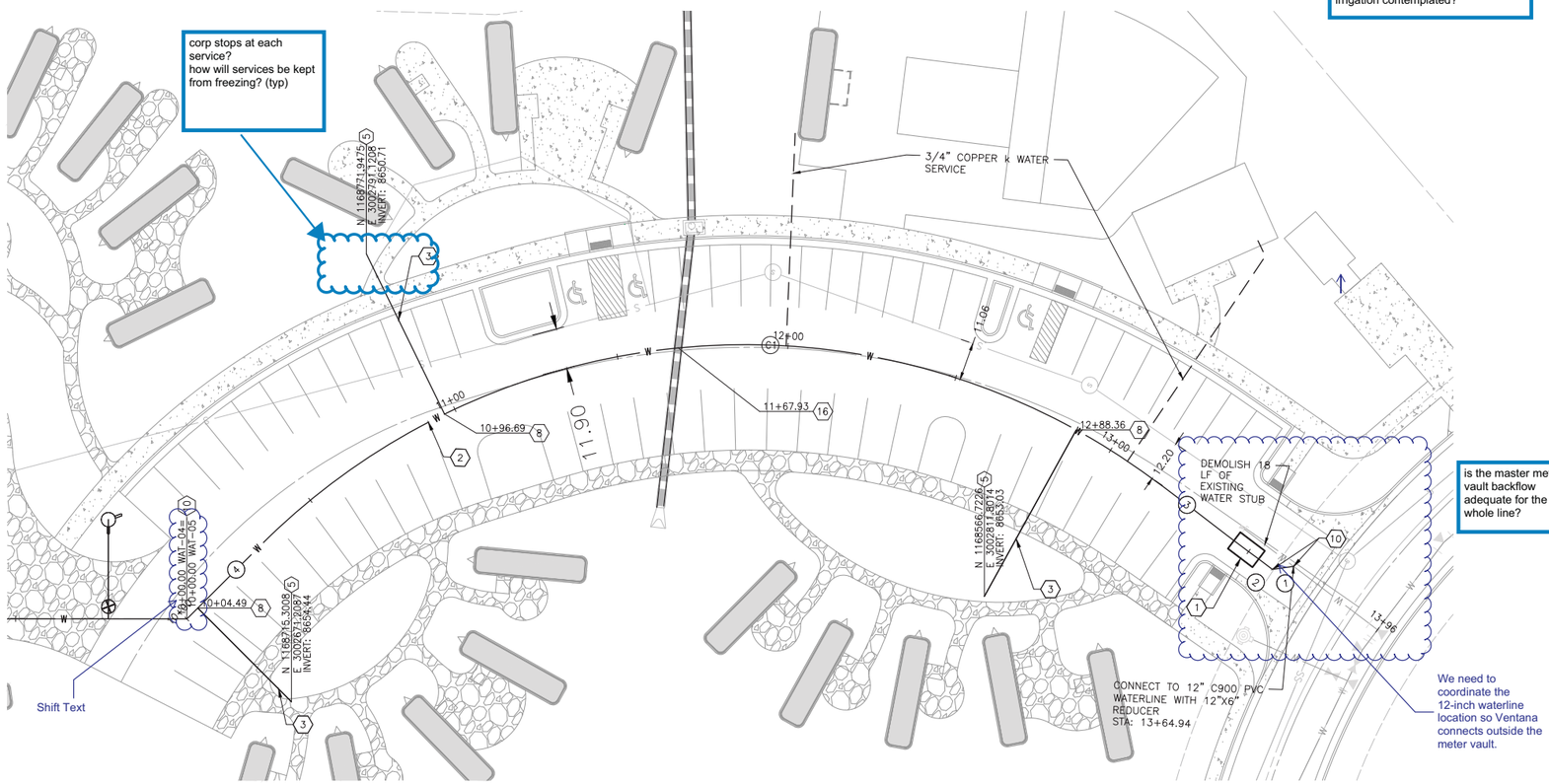


PROFILE – WAT 04

HORIZONTAL: 1"= 20' VERTICAL: 1"= 5'

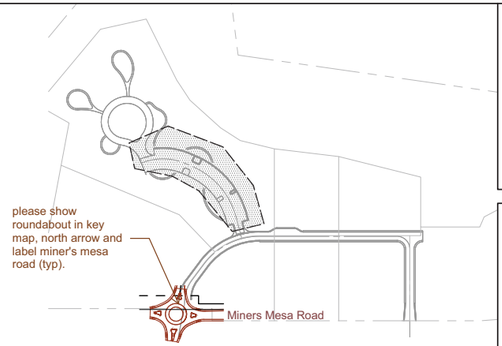
Have you run the hydraulic calcs to confirm the pipe size to supply 1500 gpm to the fire hydrant at Sta 10+22.92

Any outside spigots, yard hydrants or irrigation contemplated?



PLAN – WAT 04

SCALE 1"= 20'



KEY MAP

SCALE: 1"=200'

CONSTRUCTION NOTES

1. WATER METER VAULT. REFER METER VAULT DETAILS ON SHEET DET-03
2. 6" C900 PVC WATER MAIN
3. 4" C900 PVC WATER MAIN
4. 6" GATE VALVE. REFER DETAIL B.H. 3
5. 2" BLOW-OFF VALVE ASSEMBLY. REFER DETAIL B.H. 6
6. FIRE HYDRANT ASSEMBLY. REFER DETAIL B.H. 4
7. 6" X6" TEE WITH THRUSTBLOCK. REFER DETAILS B.H. 8A, B.H. 8B AND B.H. 8C
8. 6" X 4" TEEWITH THRUSTBLOCK. REFER DETAILS B.H. 8A, B.H. 8B, B.H. 8C
9. 6" 90° BEND WITH THRUSTBLOCK. REFER DETAIL B.H. 8A, B.H. 8B, B.H. 8C
10. 6" 45° BEND WITH THRUSTBLOCK. REFER DETAIL B.H. 8A, B.H. 8B, B.H. 8C
11. 6" 22.5° BEND WITH THRUSTBLOCK. REFER DETAIL B.H. 8A, B.H. 8B, B.H. 8C
12. 6" 11.25° BEND WITH THRUSTBLOCK. REFER DETAIL B.H. 8A, B.H. 8B, B.H. 8C
13. 4" 45° BEND WITH THRUSTBLOCK. REFER DETAIL B.H. 8A, B.H. 8B, B.H. 8C
14. 4" 22.5° BEND WITH THRUSTBLOCK. REFER DETAIL B.H. 8A, B.H. 8B, B.H. 8C
15. 4" 11.25° BEND WITH THRUSTBLOCK. REFER DETAIL B.H. 8A, B.H. 8B, B.H. 8C
16. UTILITY CROSSING

WATER TABLE					
LINE #	LENGTH	DIRECTION	SIZE	MATERIAL	
1	6.27'	S42° 40' 29.08"E	6"	C900 PVC	D.I.P.
2	5.00'	S2° 19' 30.31"W	6"	C900 PVC	D.I.P.
3	27.68'	S2° 19' 30.31"W	6"	C900 PVC	
4	30.48'	S79° 45' 14.12"E	6"	C900 PVC	

CURVE TABLE			
CURVE #	LENGTH	RADIUS	DELTA
C1	286.51'	200.00'	082°04'44""

Verify Pipe Size for Fire Flow of 1500 gpm. Residual pressure at 12x12 tee is 44.98 psi

NOTES

1. WATER LINES TO BE CONSTRUCTED IN ACCORDANCE WITH BLACK HAWK PUBLIC WORKS STANDARDS AND SPECIFICATION.
2. WATER SERVICE LINES SHALL BE PROVIDED FOR EACH UNIT INDIVIDUALLY FROM THE 6" OR 4" MAIN LINES AND SHALL BE 3/4" COPPER K WITH CURB STOPS WITHIN 5' OF THE UNIT THAT THE LINE IS SERVCIE

sheet number 12 appears after sheet number 13.

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HAWK'S LANDING AIRSTREAM PARK
WATER PLAN AND PROFILE

GILPIN COUNTY, CO

REVISIONS:									
NO.	DESCRIPTION								
	DATE:								

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JOB NO:	D01055

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D01055

DRAWING NO.
WAT-01

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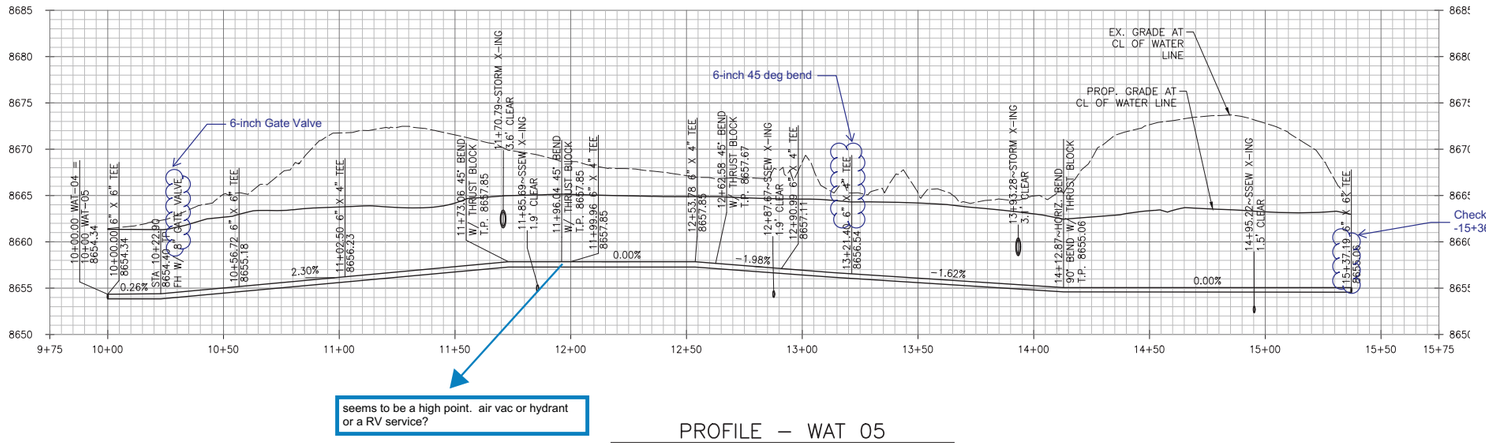
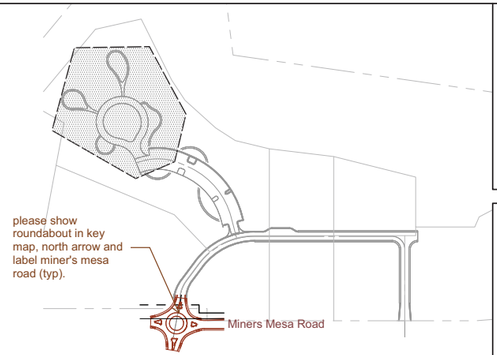


PROFILE – WAT 05

HORIZONTAL: 1"=30' VERTICAL: 1"=8'



KEY MAP

SCALE: 1"=200'

PLAN – WAT 05

SCALE 1"= 30'

CONSTRUCTION NOTES

1. WATER METER VAULT. REFER METER VAULT DETAILS ON SHEET DET-03
2. 6" C900 PVC WATER MAIN
3. 4" C900 PVC WATER MAIN
4. 6" GATE VALVE. REFER DETAIL B.H. 3
5. 2" BLOW-OFF VALVE ASSEMBLY. REFER DETAIL B.H. 6
6. FIRE HYDRANT ASSEMBLY. REFER DETAIL B.H. 4
7. 6" X6" TEE WITH THRUSTBLOCK. REFER DETAILS B.H. 8A, B.H. 8B AND B.H. 8C
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10. 6" 45° BEND WITH THRUSTBLOCK. REFER DETAIL B.H. 8A, B.H. 8B, B.H. 8C
11. 6" 22.5° BEND WITH THRUSTBLOCK. REFER DETAIL B.H. 8A, B.H. 8B, B.H. 8C
12. 6" 11.25° BEND WITH THRUSTBLOCK. REFER DETAIL B.H. 8A, B.H. 8B, B.H. 8C
13. 4" 45° BEND WITH THRUSTBLOCK. REFER DETAIL B.H. 8A, B.H. 8B, B.H. 8C
14. 4" 22.5° BEND WITH THRUSTBLOCK. REFER DETAIL B.H. 8A, B.H. 8B, B.H. 8C
15. 4" 11.25° BEND WITH THRUSTBLOCK. REFER DETAIL B.H. 8A, B.H. 8B, B.H. 8C
16. UTILITY CROSSING

WATER TABLE				
LINE #	LENGTH	DIRECTION	SIZE	MATERIAL
5	173.07'	S34° 45' 14.06"E	6"	C900 PVC
6	22.97'	S8° 41' 14.50"W	6"	C900 PVC
7	66.54'	S55° 14' 45.94"W	6"	C900 PVC
8	58.82'	N79° 45' 14.06"W	6"	C900 PVC
9	91.47'	N34° 45' 14.06"W	6"	C900 PVC
10	123.93'	N55° 15' 43.55"E	6"	C900 PVC

NOTES

1. WATER LINES TO BE CONSTRUCTED IN ACCORDANCE WITH BLACK HAWK PUBLIC WORKS STANDARDS AND SPECIFICATION.
2. WATER SERVICE LINES SHALL BE PROVIDED FOR EACH UNIT INDIVIDUALLY FROM THE 6" OR 4" MAIN LINES AND SHALL BE 3/4" COPPER K WITH CURB STOPS WITHIN 5' OF THE UNIT THAT THE LINE IS SERVCIE

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HAWK'S LANDING AIRSTREAM PARK
UTILITY PLAN

GILPIN COUNTY, CO

REVISIONS:

NO.	DESCRIPTION	DATE:

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SCALE:	AS INDICATED
DATE:	02/05/2021
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DRAWING NO.
WAT-02

SHEET NO. 12 OF 27 SHEETS

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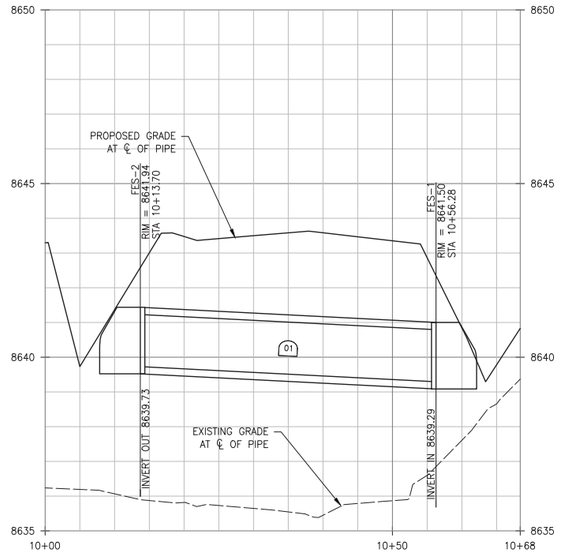
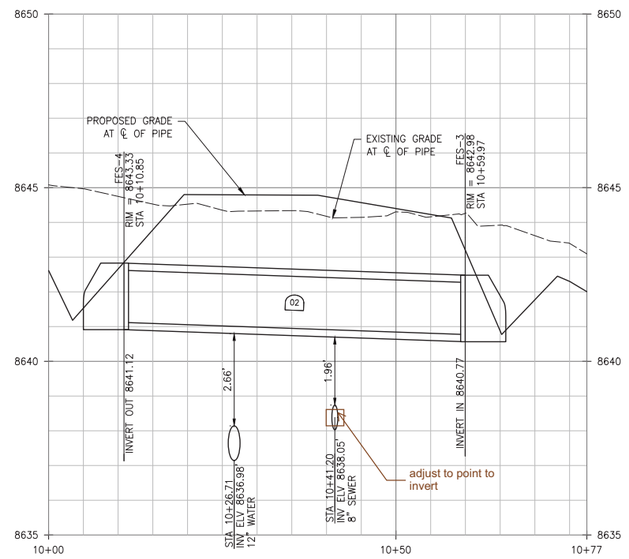


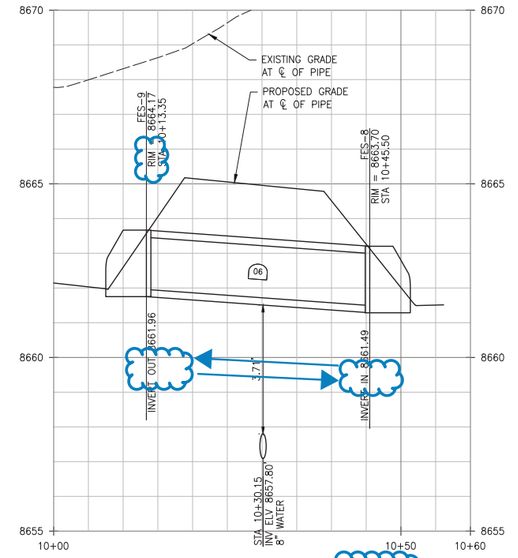
PROFILE – STRM 01

HORIZONTAL: 1"=10' VERTICAL: 1"=2'



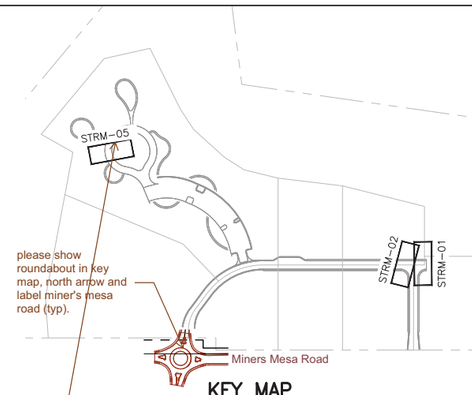
PROFILE – STRM 02

HORIZONTAL: 1"=10' VERTICAL: 1"=2'



PROFILE – STRM 05

HORIZONTAL: 1"=10' VERTICAL: 1"=2'



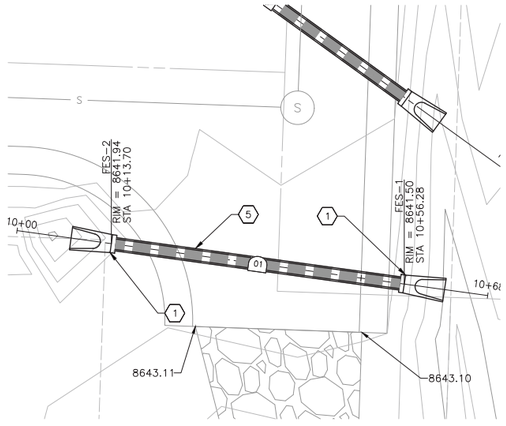
KEY MAP

SCALE: 1"=200'

STORMWATER CONSTRUCTION NOTES

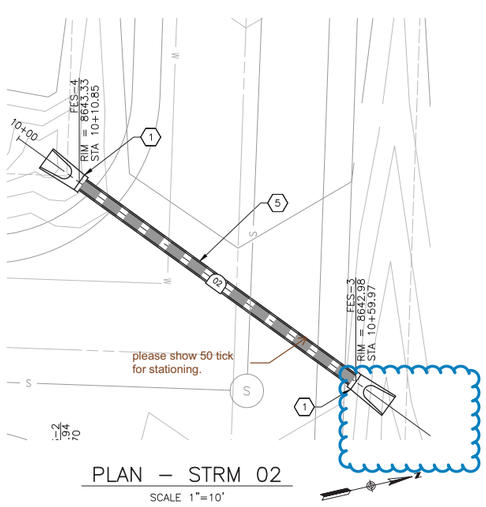
1. PROPOSED FES PER CDOT DETAIL M-603-10.
2. PROPOSED TYPE C INLET PER CDOT DETAIL M-604-10.
3. PROPOSED 5' TYPE R INLET PER CDOT DETAIL M-604-12.
4. CONCRETE TRICKLE CHANNEL PER DETAIL ON SHEET STRM-03.
5. PROPOSED 18" RCP.
6. PROPOSED 24" RCP.
7. REMOVE EXISTING OUTFALL STRUCTURE AND REPLACE WITH MODIFIED CDOT TYPE C INLET
8. CONNECT TO EXISTING OUTFLOW PIPE
9. 12' POND ACCESS PATH 12" DEPTH CRUSHER FINES
10. RIP RAP RUN DOWN PER CROSS SECTION ON SHEET STRM-03.
11. FOREBAY TYPE 1 PER DETAIL ON SHEET STRM-03.
12. FOREBAY TYPE 2 PER DETAIL ON SHEET STRM-03.

joint restraints on all FES and the first couple joints?
invert in and out in profiles seems contrary to convention?
not familiar with the term RIM on a FES- where is this measured from and what does it signify?



PLAN – STRM 01

SCALE 1"=10'



PLAN – STRM 02

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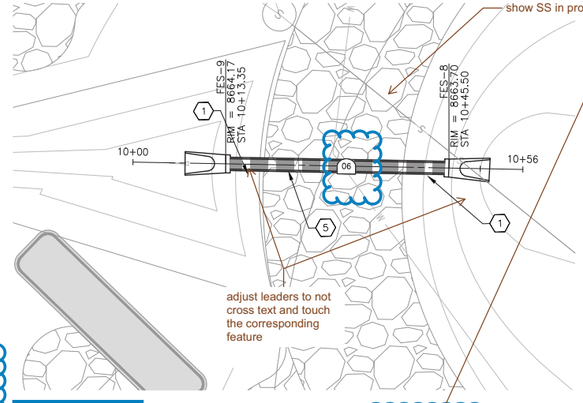

PLAN – STRM 03

SCALE 1"=10'

STORM WATER PIPE TABLE

PIPE NAME	SIZE	LENGTH	SLOPE	BEARING	MATERIAL
01	18"	42.10'	1.03%	S20° 41' 37.29"W	Concrete Pipe (Class III RCP)
02	18"	48.63'	0.71%	N48° 40' 27.04"E	Concrete Pipe (Class III RCP)
06	18"	31.68'	1.44%	S87° 15' 55.03"E	Concrete Pipe (Class III RCP)

STORM WATER STRUCTURE TABLE

STRUCTURE NAME	STRUCTURE STATION	RIM ELEVATION	NORTHING	EASTING	TYPE
FES-4	10+10.85	8643.33	1168342.8839	3003311.9449	18" FES
FES-3	10+59.97	8642.98	1168375.3169	3003348.8291	18" FES
FES-1	10+56.28	8641.50	1168369.0667	3003374.7383	18" FES
FES-2	10+13.70	8641.94	1168329.2383	3003359.6935	18" FES
FES-9	10+13.35	8664.17	1168895.2912	3002559.5316	18" FES
FES-8	10+45.50	8663.70	1168893.7571	3002591.6471	18" FES

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HAWK'S LANDING AIRSTREAM PARK
PROPOSED STORM PLAN

GILPIN COUNTY, CO

REVISIONS: NO. | DESCRIPTION | DATE:

REVIEWED FOR COMPLIANCE BY:

SIGNATURE DATE

SIGNATURE DATE

SCALE: AS INDICATED
DATE: 02/05/2021
DRAWN BY: JP/BG
CHECKED BY: JK
JOB NO: D01055

PROJECT NO. D01055

DRAWING NO. **STRM-01**

SHEET NO. 14 OF 27 SHEETS

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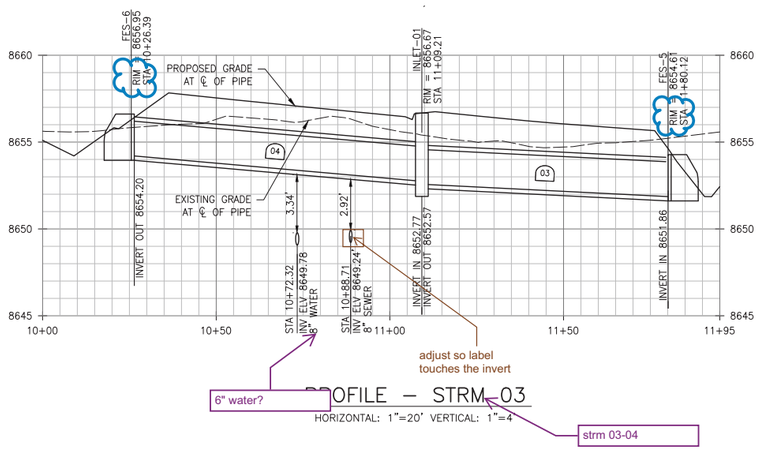
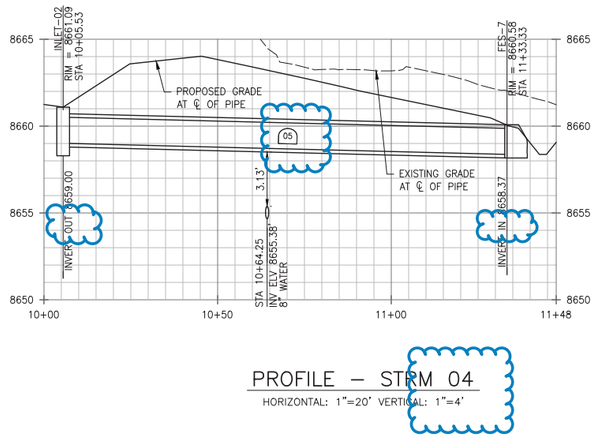


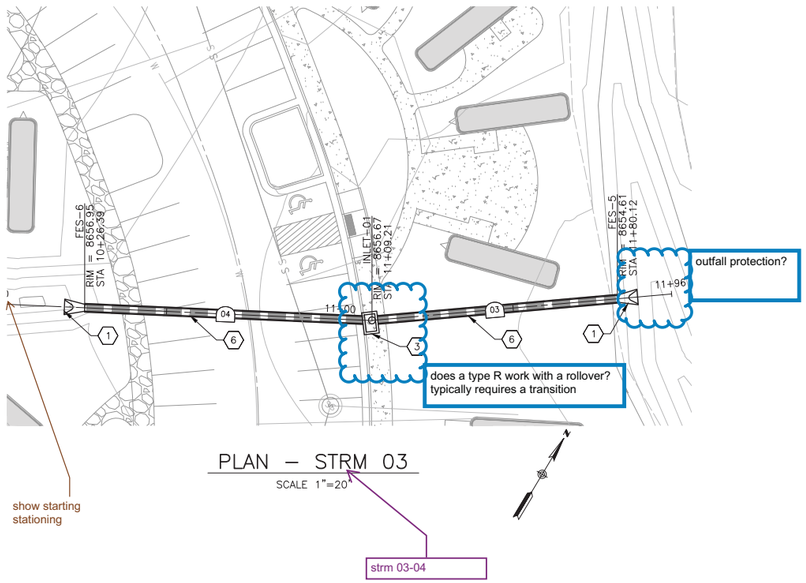
PROFILE – STRM 03

HORIZONTAL: 1"=20' VERTICAL: 1"=4'



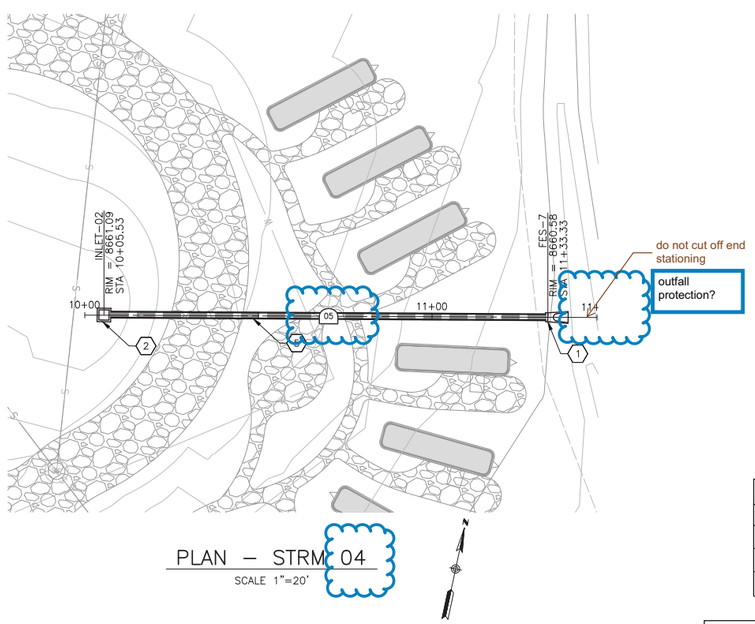
PROFILE – STRM 04

HORIZONTAL: 1"=20' VERTICAL: 1"=4'



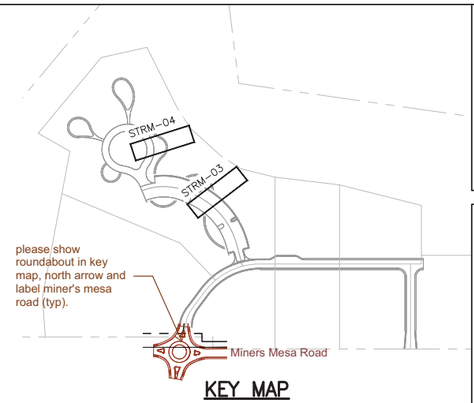
PLAN – STRM 03

SCALE 1"=20'



PLAN – STRM 04

SCALE 1"=20'



KEY MAP

SCALE: 1"=200'

STORMWATER CONSTRUCTION NOTES

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12. FOREBAY TYPE 2 PER DETAIL ON SHEET STRM-03.

STORM WATER PIPE TABLE

PIPE NAME	SIZE	LENGTH	SLOPE	BEARING	MATERIAL
03	24"	68.52'	1.00%	N54° 01' 44.87"E	Concrete Pipe
04	24"	80.08'	1.76%	N61° 35' 40.86"E	Concrete Pipe
05	18"	126.39'	0.50%	N78° 19' 26.33"E	Concrete Pipe (Class III RCP)

STORM WATER STRUCTURE TABLE

STRUCTURE NAME	STRUCTURE STATION	RIM ELEVATION	NORTHING	EASTING	TYPE
INLET-01	11+09.21	8656.67	1168698.5931	3002852.0017	5' CDOT TYPE R
INLET-02	10+05.53	8661.09	1168875.4823	3002674.5775	CDOT TYPE C
FES-7	11+33.33	8660.58	1168901.4655	3002799.7080	18" FES
FES-6	10+26.39	8656.95	1168659.1987	3002779.1611	24" FES
FES-5	11+80.12	8654.61	1168740.2465	3002909.3939	24" FES

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HAWK'S LANDING AIRSTREAM PARK
PROPOSED STORM PLAN

GILPIN COUNTY, CO

REVISIONS: NO.	DESCRIPTION	DATE:
1		

REVIEWED FOR COMPLIANCE BY:

SIGNATURE DATE

SIGNATURE DATE

SCALE: AS INDICATED
DATE: 02/05/2021
DRAWN BY: JP/BG
CHECKED BY: JK
JOB NO: D01055

PROJECT NO. D01055

DRAWING NO. **STRM-02**

SHEET NO. 15 OF 27 SHEETS

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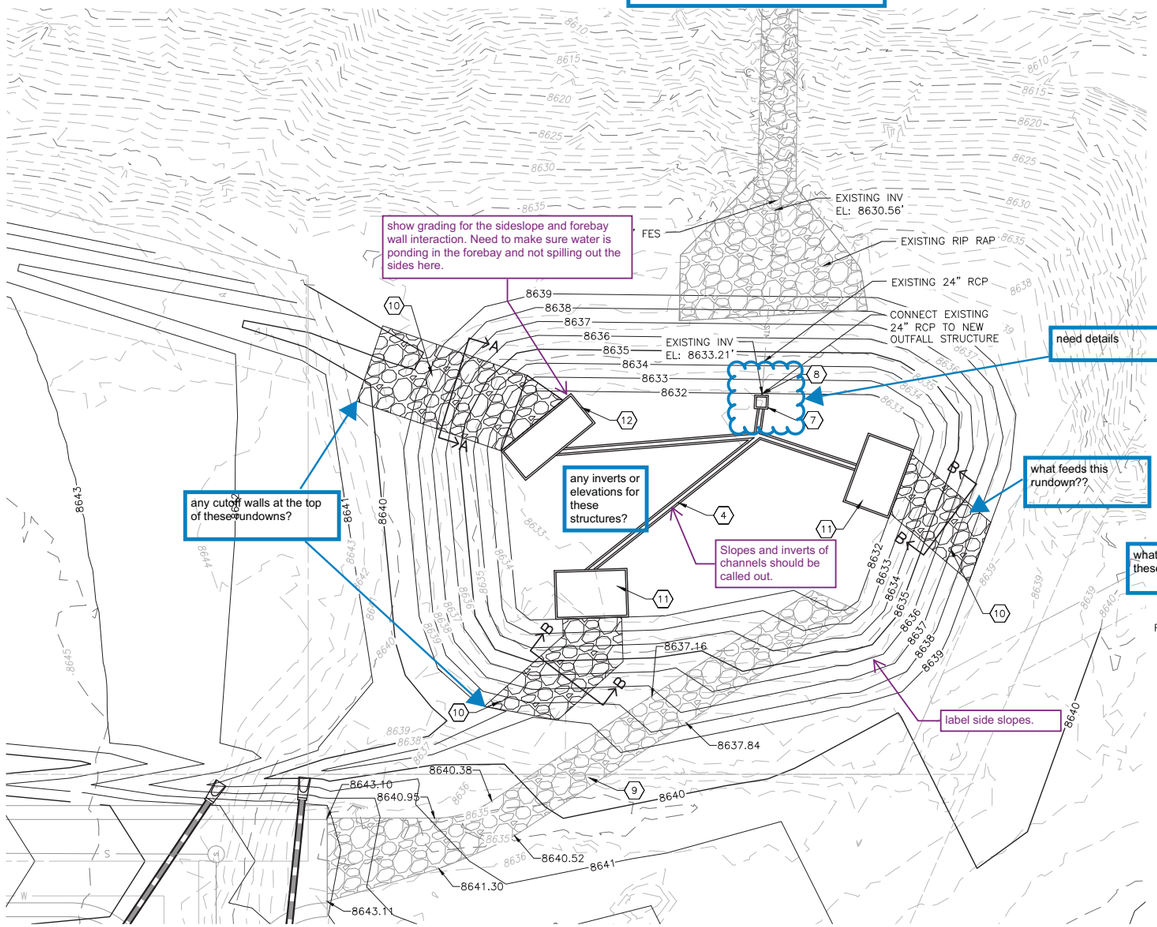
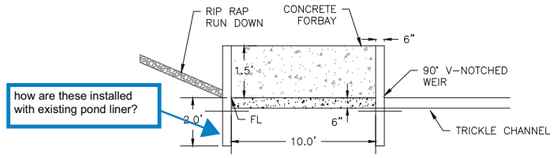
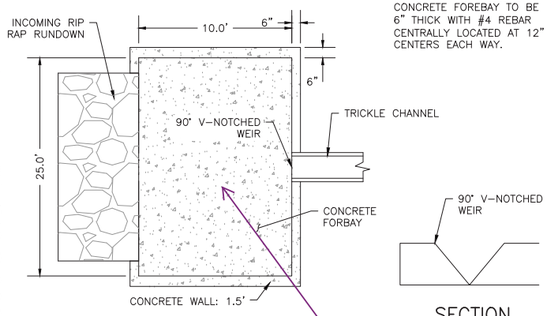


PLAN – EDB–01

SCALE 1"=20'



FOREBAY PROFILE

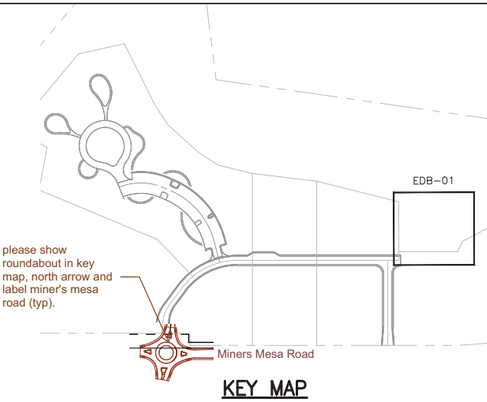


FOREBAY PLAN

CONCRETE FOREBAY 2 (NTS)

FOREBAY NOTES

1. FLOOR AND WALLS OF CONCRETE FOREBAY TO BE 6" THICK WITH #4 REBAR CENTRALLY LOCATED AT 12" CENTERS EACH WAY.



KEY MAP

SCALE: 1"=200'

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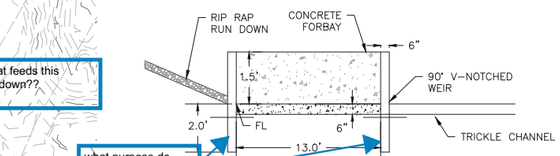
12. FOREBAY TYPE 2 PER DETAIL ON SHEET STRM–03.

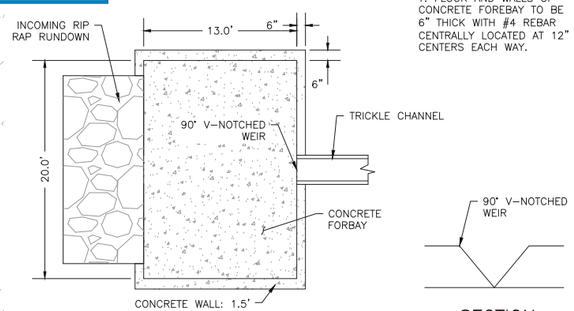
how modified?



FOREBAY PROFILE

FOREBAY NOTES

1. FLOOR AND WALLS OF CONCRETE FOREBAY TO BE 6" THICK WITH #4 REBAR CENTRALLY LOCATED AT 12" CENTERS EACH WAY.

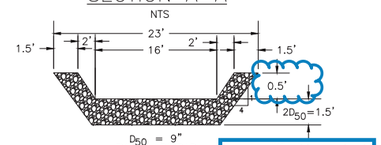


FOREBAY PLAN

CONCRETE FOREBAY 1 (NTS)

chamfer all outside edges?

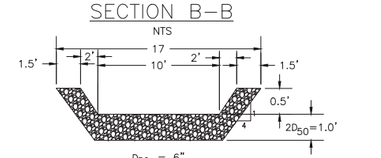
SECTION A–A



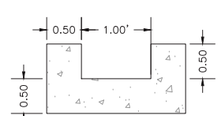
D_{50} = 9"
TYPE L RIPRAP

may be difficult to construct with this size rock, any fabric or liner or 3/4 rock under stone? any topsoils on top? typ both

SECTION B–B



D_{50} = 6"
TYPE VL RIPRAP



MIN SLOPE = 0.5%

TRICKLE CHANNEL DETAIL

N.T.S.

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HAWK'S LANDING AIRSTREAM PARK
PROPOSED STORM PLAN

GILPIN COUNTY, CO

REVISIONS:	NO.	DESCRIPTION	DATE:
	1		

REVIEWED FOR COMPLIANCE BY:

SIGNATURE DATE

SIGNATURE DATE

SCALE:	AS INDICATED
DATE:	02/05/2021
DRAWN BY:	JP/BG
CHECKED BY:	JK
JOB NO:	D01055

PROJECT NO.
D01055

DRAWING NO.
STRM-03

SHEET NO. 16 OF 27 SHEETS

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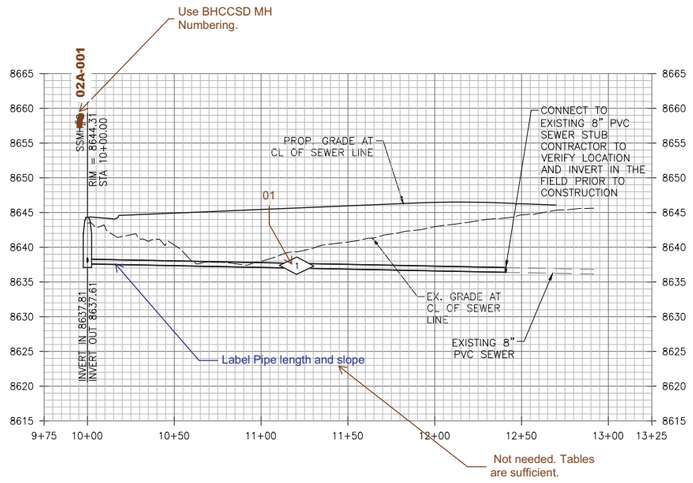
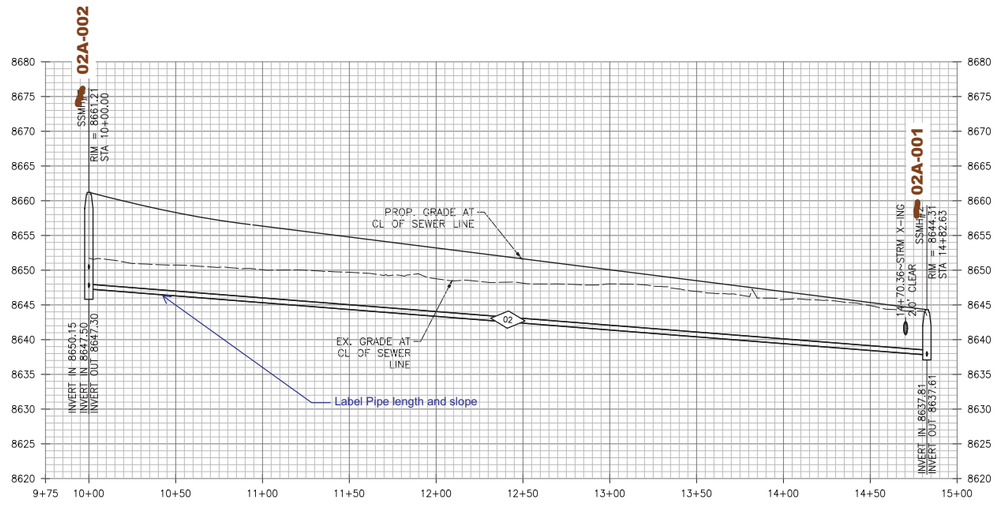


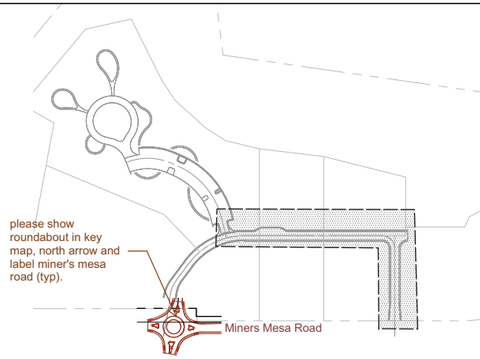
PROFILE – SEW 01

HORIZONTAL: 1"=40' VERTICAL: 1"=10'



PROFILE – SEW 02

HORIZONTAL: 1"=40' VERTICAL: 1"=10'



KEY MAP

SCALE: 1"=200'

CONSTRUCTION NOTES

1. 4' STANDARD SEWER MANHOLE. REFER BHCCSD DETAIL DWG. 3 AND DWG. 4. REFER NOTE 3
2. UTILITY CROSSING
3. 8" X 6" SERVICE TAP CONNECTION. REFER BHCCSD DETAIL DWG. 9
4. 6" 45° BEND WITH CLEANOUT. REFER BHCCSD DETAIL DWG. 10
5. 6" 22.5° BEND WITH CLEANOUT. REFER BHCCSD DETAIL DWG. 10
6. 6" CLEANOUT. REFER BHCCSD DETAIL DWG. 10
7. 5' STANDARD SEWER MANHOLE, REFER BHCCSD DETAIL DWG. 3 AND DWG. 4, REFER NOTE 3.

NOTES

1. INSTALLATION SHALL COMPLY WITH BLACK HAWK/CENTRAL CITY SANITATION DISTRICT (BHCCSD) STANDARDS AND DETAILS. ALL SEWER SHALL BE PRIVATELY OWNED AND MAINTAINED.
2. FOR TYPICAL 4" SEWER SERVICE LATERALS CONTRACTOR TO INSTALL TO BHCCSD DETAIL DWG. 6. FOR ALL 4" SERVICE LATERAL CONNECTIONS WITH LESS THAN 6' OF COVER CONTRACTOR TO INSTALL TO BHCCSD DETAIL DWG. 6A
3. FOR TYPICAL SEWER MANHOLE CONTRACTOR TO INSTALL TO BHCCSD DETAIL DWG. 3. FOR ALL MANHOLE WITH LESS THAN 7' FROM GROUND SURFACE TO PIPE INVERT CONTRACTOR TO INSTALL TO BHCCSD DETAIL DWG. 4.

min pipe slope for an 8" collection sewer according to BHCCSD standards is 0.6%

01

SEWER TABLE

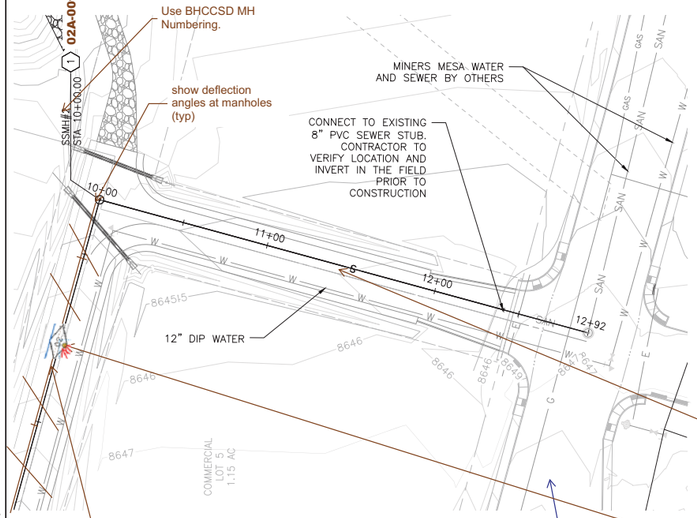
PIPE NAME	MATERIAL	SIZE	LENGTH	SLOPE	BEARING
01	PVC Pipe	8"	238.91'	0.10%	N14° 52' 29.82"E

District standard is min 0.6% for an 8" pipe.

SEWER TABLE

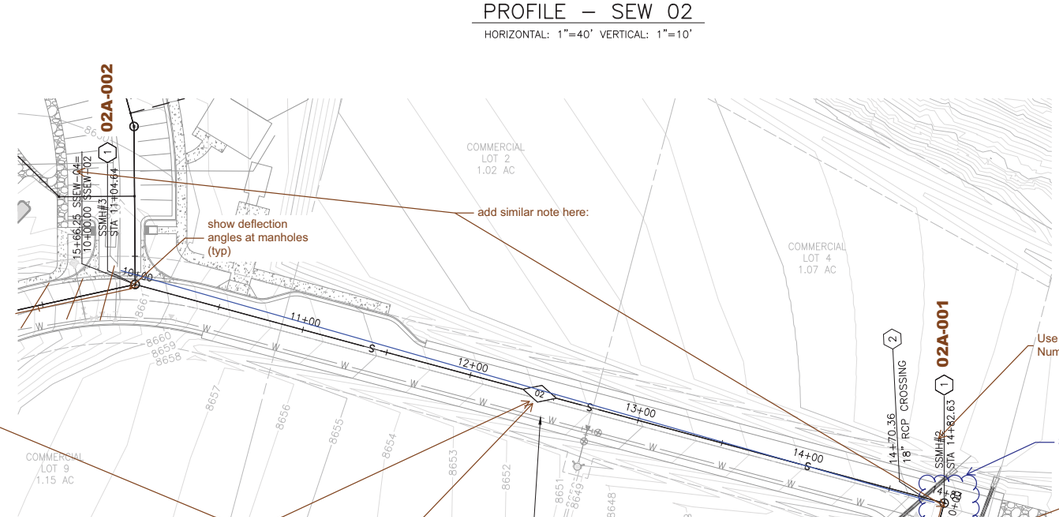
PIPE NAME	MATERIAL	SIZE	LENGTH	SLOPE	BEARING
02	PVC Pipe	8"	478.73'	1.97%	N74° 52' 39.58"W

manholes shall be located at a maximum spacing of 400 feet center to center according to BHCCSD standards is 0.6%



PLAN – SEW 01

SCALE 1"=40'



PLAN – SEW 02

SCALE 1"=40'

REVISIONS: NO.	DESCRIPTION	DATE:
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SIGNATURE DATE

SCALE:	AS INDICATED
DATE:	02/05/2021
DRAWN BY:	JP/BG
CHECKED BY:	JK
JOB NO:	D01055

PROJECT NO. D01055

DRAWING NO. **SSEW-01**

SHEET NO. 17 OF 27 SHEETS

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HAWK'S LANDING AIRSTREAM PARK

PROPOSED SEWER PLAN

GILPIN COUNTY, CO

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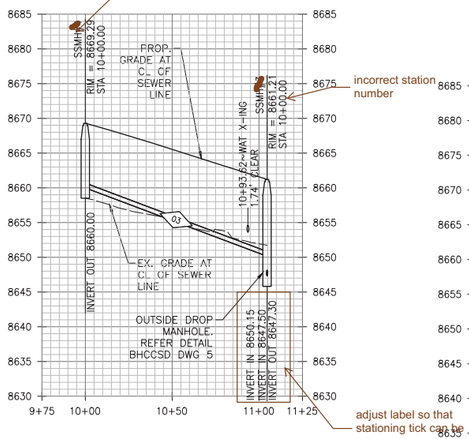
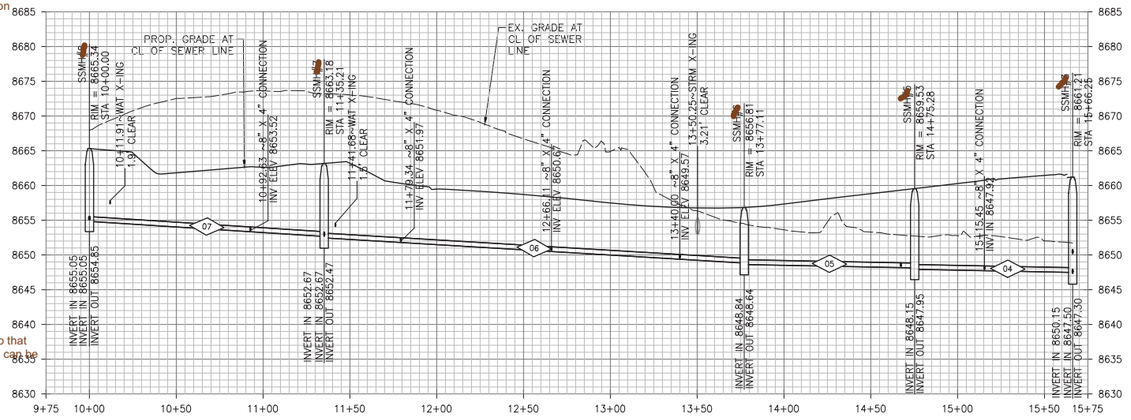


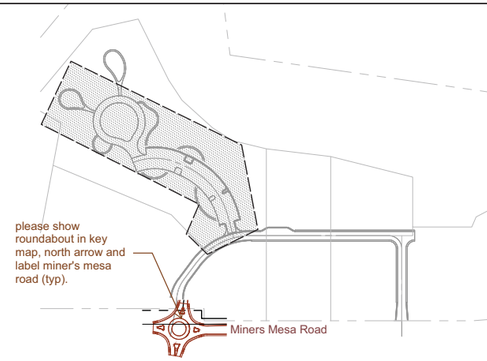
PROFILE – SEW 03

HORIZONTAL: 1"=40' VERTICAL: 1"=10'



PROFILE – SEW 04

HORIZONTAL: 1"=40' VERTICAL: 1"=10'



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7. 5' STANDARD SEWER MANHOLE, REFER BHCCSD DETAIL DWG. 3 AND DWG. 4, REFER NOTE 3.

min pipe slope for an 8" collection sewer according to BHCCSD standards is 0.6%

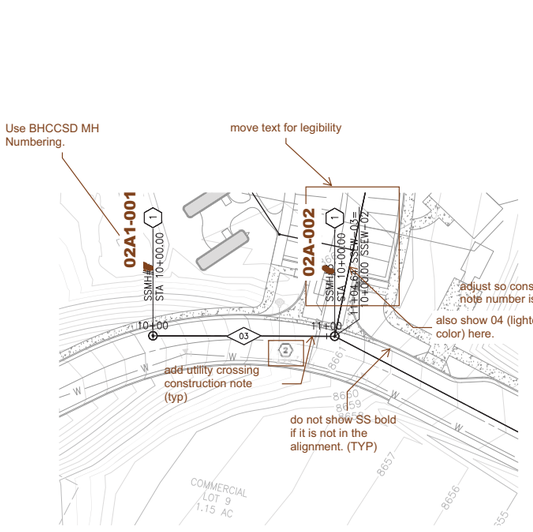
District standard is min 0.6% for an 8" pipe.

SEWER TABLE

PIPE NAME	MATERIAL	SIZE	LENGTH	SLOPE	BEARING
03	PVC Pipe	8"	101.15'	9.41%	S77° 43' 20.56"W
04	PVC Pipe	8"	86.98'	0.50%	N00° 25' 42.50"W
05	PVC Pipe	8"	94.18'	0.50%	N15° 07' 42.29"W
06	PVC Pipe	8"	237.94'	1.50%	N49° 26' 26.21"W
07	PVC Pipe	8"	131.23'	1.61%	N49° 26' 26.21"W

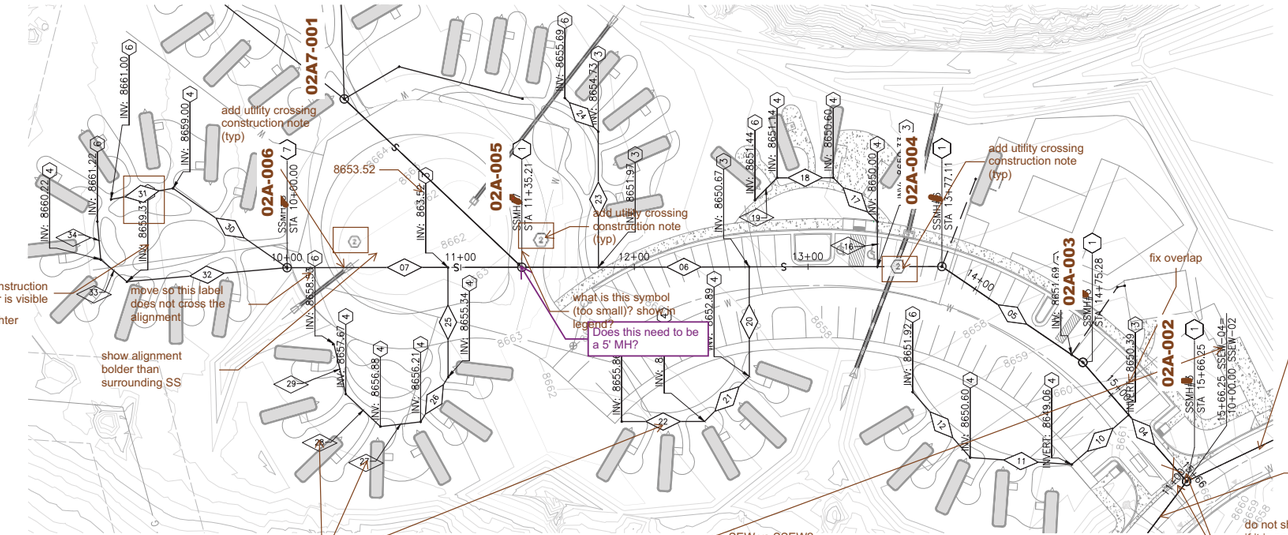
SEWER TABLE

PIPE NAME	MATERIAL	SIZE	LENGTH	SLOPE	BEARING
10	PVC Pipe	6"	43.47'	2.63%	S89° 34' 17.50"W
11	PVC Pipe	6"	58.70'	2.63%	N45° 25' 42.50"W
12	PVC Pipe	6"	50.26'	2.63%	N00° 35' 39.19"W
13	PVC Pipe	6"	47.13'	7.48%	N74° 52' 17.71"E
15	PVC Pipe	6"	54.09'	1.00%	N61° 47' 30.45"E
16	PVC Pipe	6"	25.87'	1.67%	N40° 33' 33.79"E
17	PVC Pipe	6"	35.90'	1.67%	N04° 26' 26.21"W
18	PVC Pipe	6"	32.30'	1.67%	N49° 26' 26.21"W
19	PVC Pipe	6"	18.12'	1.68%	S85° 33' 33.79"W
20	PVC Pipe	6"	63.17'	3.52%	S40° 33' 33.79"W
21	PVC Pipe	6"	36.55'	3.52%	S85° 33' 33.79"W
22	PVC Pipe	6"	47.79'	3.52%	N49° 26' 26.21"W
23	PVC Pipe	6"	78.11'	3.53%	N40° 33' 33.79"E
[illegible]	[illegible]e	6"	27.28'	3.53%	N04° 14' 15.82"W
[illegible]	[illegible]e	6"	63.17'	2.88%	S40° 33' 33.79"W
26	PVC Pipe	6"	30.30'	2.88%	S72° 13' 25.78"W
27	PVC Pipe	6"	23.33'	2.88%	N56° 01' 32.88"W
28	PVC Pipe	6"	27.38'	2.88%	N06° 08' 20.99"W
29	PVC Pipe	6"	29.57'	2.88%	N26° 16' 45.86"E
30	PVC Pipe	6"	80.13'	4.94%	N14° 29' 29.33"W
31	PVC Pipe	6"	36.34'	5.56%	N59° 29' 29.33"W
32	PVC Pipe	6"	92.69'	4.60%	N54° 19' 07.99"W
33	PVC Pipe	6"	19.73'	4.60%	N09° 19' 07.99"W
34	PVC Pipe	6"	22.06'	4.60%	N35° 40' 52.01"E



PLAN – SEW 03

SCALE 1"=40'



PLAN – SEW 04

SCALE 1"=40'

same as sheet 17

NOTES

1. INSTALLATION SHALL COMPLY WITH BLACK HAWK/CENTRAL CITY SANITATION DISTRICT (BHCCSD) STANDARDS AND DETAILS. ALL SEWER SHALL BE PRIVATELY OWNED AND MAINTAINED.
2. FOR TYPICAL 4" SEWER SERVICE LATERALS CONTRACTOR TO INSTALL TO BHCCSD DETAIL DWG. 6. FOR ALL 4" SERVICE LATERAL CONNECTIONS WITH LESS THAN 6' OF COVER CONTRACTOR TO INSTALL TO BHCCSD DETAIL DWG. 6A
3. FOR TYPICAL SEWER MANHOLE CONTRACTOR TO INSTALL TO BHCCSD DETAIL DWG. 3. FOR ALL MANHOLE WITH LESS THAN 7' FROM GROUND SURFACE TO PIPE INVERT CONTRACTOR TO INSTALL TO BHCCSD DETAIL DWG. 4.

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HAWK'S LANDING AIRSTREAM PARK
PROPOSED SEWER PLAN

GILPIN COUNTY, CO

REVISIONS:	NO.	DESCRIPTION	DATE:
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SIGNATURE DATE

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DRAWING NO.
SSEW-02

SHEET NO. 18 OF 27 SHEETS

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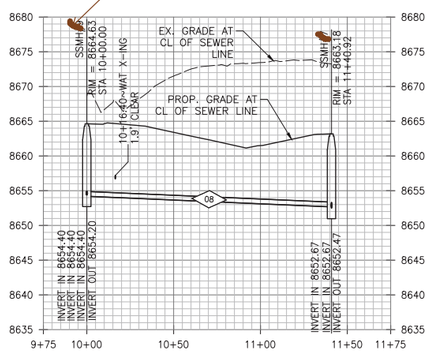
Each unit shall have a separate tap to the "main" line. None are shown on the plans. Clean outs should be provided for each unit.

All sanitary sewer lines and service lines shall have tracer tape, and with a _____ box.

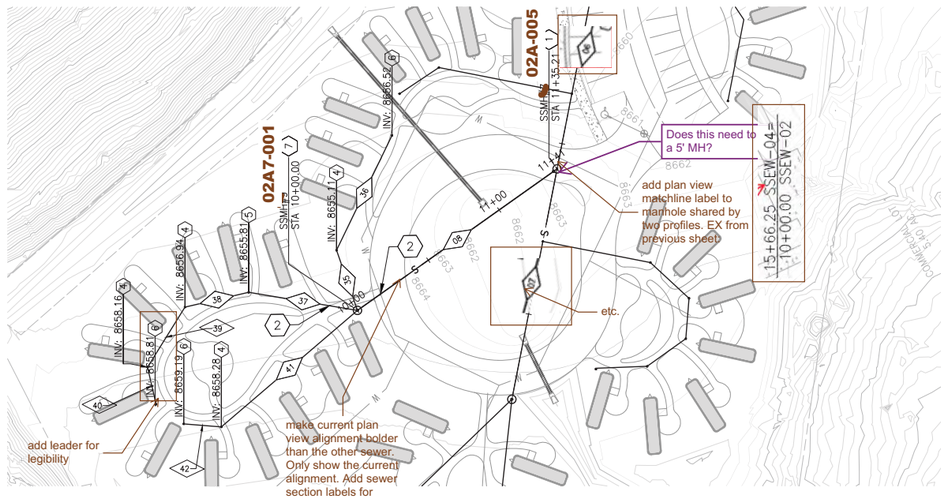
Tracer wire testing station a minimum of 1000ft apart (See BHCCSD Standard Details dated June 2019)

Use BHCCSD MH Numbering (see plan view).



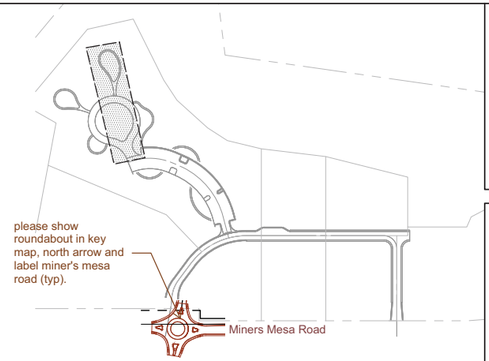
PROFILE – SEW 05

HORIZONTAL: 1"=40' VERTICAL: 1"=10'



PLAN – SEW 05

SCALE 1"=40'



KEY MAP

SCALE: 1"=200'

CONSTRUCTION NOTES

1. 4' STANDARD SEWER MANHOLE. REFER BHCCSD DETAIL DWG. 3 AND DWG. 4. REFER NOTE 3
2. UTILITY CROSSING
3. 8" X 6" SERVICE TAP CONNECTION. REFER BHCCSD DETAIL DWG. 9
4. 6" 45° BEND WITH CLEANOUT. REFER BHCCSD DETAIL DWG. 10
5. 6" 22.5° BEND WITH CLEANOUT. REFER BHCCSD DETAIL DWG. 10
6. 6" CLEANOUT. REFER BHCCSD DETAIL DWG. 10
7. 5' STANDARD SEWER MANHOLE, REFER BHCCSD DETAIL DWG. 3 AND DWG. 4, REFER NOTE 3.

NOTES

1. INSTALLATION SHALL COMPLY WITH BLACK HAWK/CENTRAL CITY SANITATION DISTRICT (BHCCSD) STANDARDS AND DETAILS. ALL SEWER SHALL BE PRIVATELY OWNED AND MAINTAINED.
2. FOR TYPICAL 4" SEWER SERVICE LATERALS CONTRACTOR TO INSTALL TO BHCCSD DETAIL DWG. 6. FOR ALL 4" SERVICE LATERAL CONNECTIONS WITH LESS THAN 6' OF COVER CONTRACTOR TO INSTALL TO BHCCSD DETAIL DWG. 6A
3. FOR TYPICAL SEWER MANHOLE CONTRACTOR TO INSTALL TO BHCCSD DETAIL DWG. 3. FOR ALL MANHOLE WITH LESS THAN 7' FROM GROUND SURFACE TO PIPE INVERT CONTRACTOR TO INSTALL TO BHCCSD DETAIL DWG. 4.

SEWER TABLE

PIPE NAME	MATERIAL	SIZE	LENGTH	SLOPE	BEARING
08	PVC Pipe	8"	136.93'	1.09%	S05° 52' 31.93"E

Check bearings. If using manhole 7 as an origin, the bearing will need to be north and west

SEWER TABLE

PIPE NAME	MATERIAL	SIZE	LENGTH	SLOPE	BEARING
35	PVC Pipe	6"	36.69'	1.93%	S79° 45' 14.06"E
36	PVC Pipe	6"	73.42'	1.92%	S34° 45' 14.06"E
37	PVC Pipe	6"	63.52'	2.21%	N38° 52' 37.47"E
38	PVC Pipe	6"	37.68'	3.00%	N16° 22' 37.47"E
39	PVC Pipe	6"	40.82'	3.00%	N28° 37' 22.53"W
40	PVC Pipe	6"	21.92'	3.00%	N73° 37' 22.53"W
41	PVC Pipe	6"	103.29'	4.11%	N11° 06' 23.25"W
42	PVC Pipe	6"	21.71'	4.24%	N34° 01' 20.42"E

SSEW-03??

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HAWK'S LANDING AIRSTREAM PARK
PROPOSED SEWER PLAN

GILPIN COUNTY, CO

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PROJECT NO. D01055

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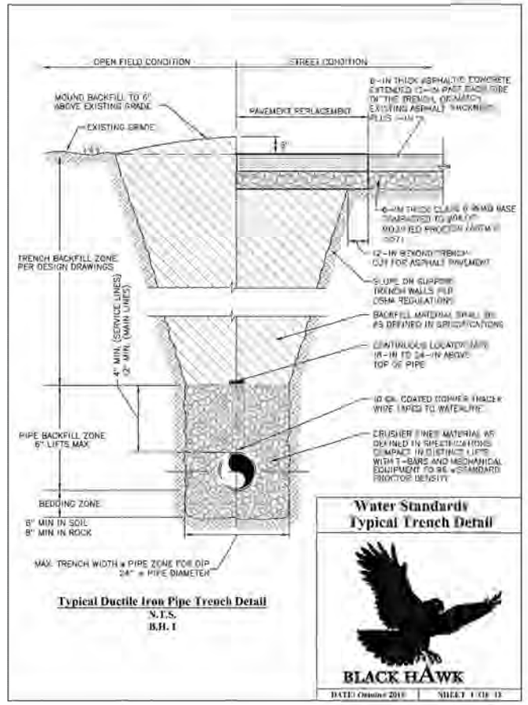
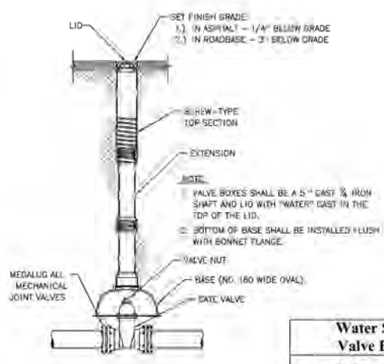


Typical Ductile Iron Pipe Trench Detail
N.T.S.
B.H. 1

Water Standards Typical Trench Detail

BLACK HAWK

DATE: October 2015 | SHEET 1 OF 18

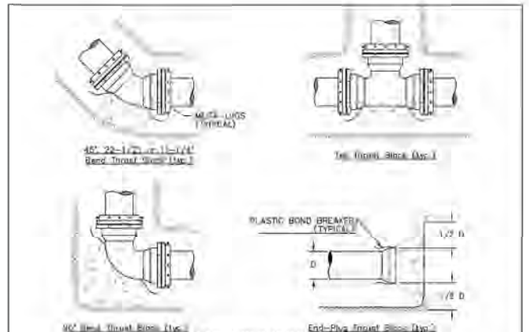


Valve Box Detail
N.T.S.
B.H. 3

Water Standards Valve Box Detail

BLACK HAWK

DATE: October 2015 | SHEET 3 OF 18



Thrust Block Details
N.T.S.
B.H. 8A

NOTES:
1. ALL CONCRETE SHALL BE 2,000 P.S.I. MIX.
2. ALL WATERLINE FITTINGS SHALL BE WRAPPED WITH 8 MIL MINIMUM POLYETHYLENE SHEET TO ENCASEMENT OF CONCRETE THRUST BLOCK (SEE SPECIFICATIONS).
3. CONCRETE THRUST BLOCKS SHALL BEAR ON UNDISTURBED MATERIAL.
4. CONCRETE THRUST BLOCKS SHALL BE FORMED WITH A SUITABLE MATERIAL ACCEPTABLE TO THE ENGINEER.
5. CONCRETE THRUST BLOCKS SHALL EXTEND 1/2 DIAMETER OF PIPE ABOVE AND BELOW THE FITTING.
6. DESIGN BASED ON AN ASSUMED MAXIMUM TEST PRESSURE OF 250 PSI.
7. BASED ON 2,000 PSF SOIL BEARING CAPACITY.

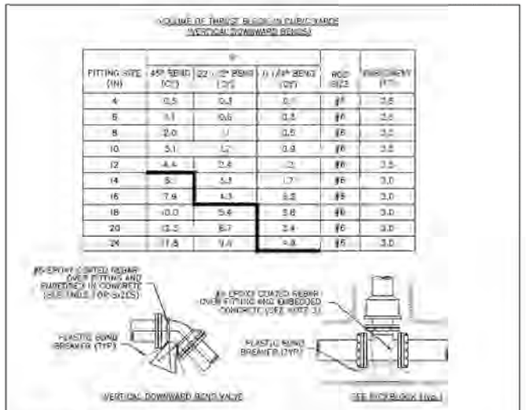
MINIMUM BEARING SURFACE AREA (IN SQUARE FEET)

SIZE OF PIPE	BENDS 11.25°	22.5°	45°	90°	TEE OR DEAD END
4"	1.00	1.00	1.39	2.56	1.81
6"	1.00	1.46	2.86	5.29	3.74
8"	1.26	2.56	4.92	9.10	6.43
10"	1.80	3.76	7.41	13.69	9.68
12"	2.68	5.34	10.47	19.55	13.69
14"	3.60	7.17	14.07	26.00	18.39
16"	4.66	9.28	18.25	33.63	23.78
18"	5.88	11.68	22.86	42.24	29.87
20"	7.18	14.30	28.05	51.82	36.64
24"	10.25	20.40	40.01	73.93	52.28

Water Standards Thrust Block Details

BLACK HAWK

DATE: March 2017 | SHEET 8a OF 18



VERTICAL DOWNWARD BENDS:

1. VERTICAL BENDS THAT REQUIRE A THRUST BLOCK VOLUME EXCEEDING 3 CUBIC YARDS REQUIRE SPECIAL BLOCKING DETAILS. SEE DRAWINGS FOR VOLUMES SHOWN TO LEFT OF AND BELOW HEAVY RED OUTLINE IN TABLE.
2. THRUST BLOCK VOLUMES FOR VERTICAL DOWNWARD BENDS HAVING UPWARD RESULTANT THRUSTS ARE BASED ON TEST PRESSURE OF 150 PSI, THE WEIGHT OF CONCRETE = 4,000 LBS/CUBIC YARD, AND A SAFETY FACTOR OF 1.5. THE COMPUTED VOLUMES FOR DIFFERENT TEST PRESSURES AND DENSITY OF CONCRETE ARE TO BE FOLLOWING EQUATION:

VOLUME = (TEST PRESSURE/150) X (4,000/CONCRETE WEIGHT) X (TABLE VALUE)

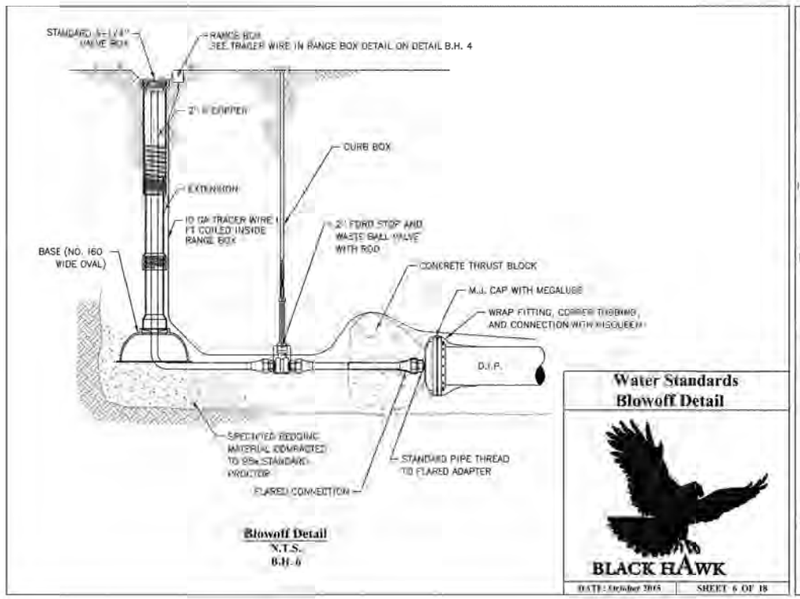
3. VOLUME OF THRUST BLOCK IN CUBIC YARDS FOR VALVES SHALL BE THE SAME VOLUME USED FOR 11 1/4° BENDS.

Vertical Downward Bend / Valve Thrust Block
N.T.S.
B.H. 8B

Water Standards Vertical Thrust Block

BLACK HAWK

DATE: October 2015 | SHEET 8b OF 18

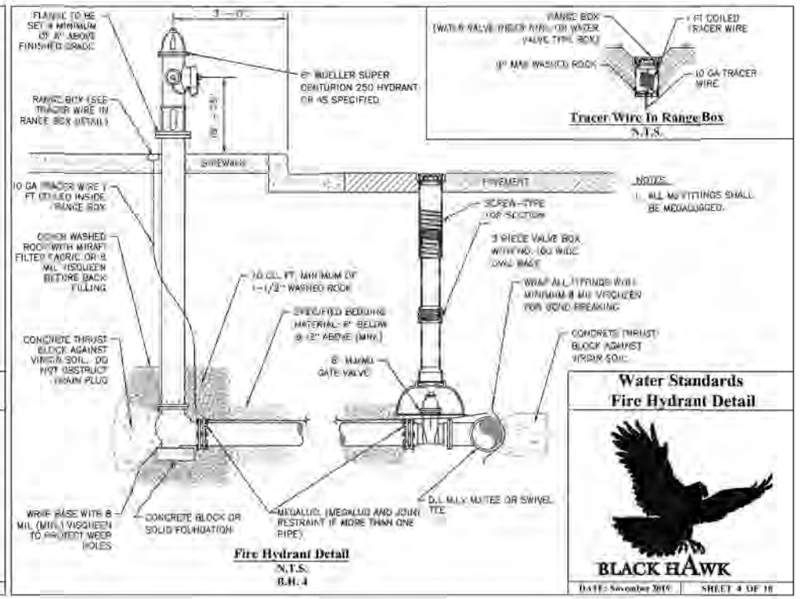


Blowoff Detail
N.T.S.
B.H. 6

Water Standards Blowoff Detail

BLACK HAWK

DATE: October 2015 | SHEET 6 OF 18



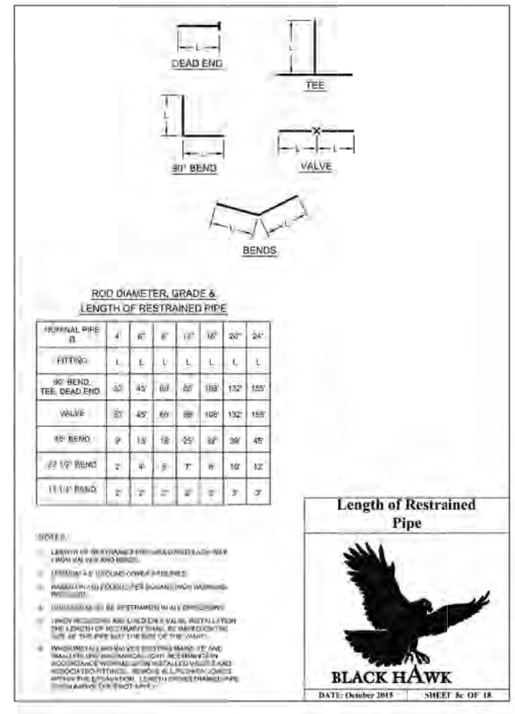
Tracer Wire In Range Box
N.T.S.

Fire Hydrant Detail
N.T.S.
B.H. 4

Water Standards Fire Hydrant Detail

BLACK HAWK

DATE: November 2015 | SHEET 4 OF 18



ROD DIAMETER, GRADE & LENGTH OF RESTRAINED PIPE

NOMINAL PIPE Ø	4"	6"	8"	10"	12"	20"	24"
FITTING	L	L	L	L	L	L	L
90° BEND, TEE, DEAD END	60'	45'	60'	82'	108'	132'	155'
VALVE	27'	45'	60'	88'	108'	132'	155'
45° BEND	9'	13'	18'	25'	34'	39'	45'
22 1/2° BEND	2'	4'	5'	7'	9'	10'	12'
11 1/4° BEND	2'	2'	2'	3'	3'	3'	3'

NOTES:
1. LENGTH OF RESTRAINED PIPE MEASURED EACH WAY FROM VALVE AND BENDS.
2. CROSS = 4 GROUND COVER PIPELINES.
3. HARNESS TO FOLLOW PIPE ALIGNMENT WHERE POSSIBLE.
4. [illegible] TO BE RESTRAINED IN ALL DIRECTIONS.
5. UNDERGROUND VALVES ARE LOCATED AT A VALVE INSTALLATION THE LENGTH OF RESTRAINT SHALL BE IMPROVED TO BE AT THE PIPE BUT THE SIZE OF THE VALVE.
6. WHERE INSTALLATION OF EXISTING MAINS OR VALVES ARE TO BE SAME, USE MECHANICAL JOINT RESTRAINTS IN ACCORDANCE WITH INSTALLATION INSTRUCTIONS AND ASSOCIATED FITTINGS. REMOVE ALL CONCRETE JOINTS WITHIN THE EXCAVATION. LENGTH OF RESTRAINED PIPE SHALL BE AS SHOWN ABOVE.

Length of Restrained Pipe

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HAWK'S LANDING AIRSTREAM PARK
DETAILS
GILPIN COUNTY, CO

REVISIONS: NO.	DESCRIPTION	DATE:
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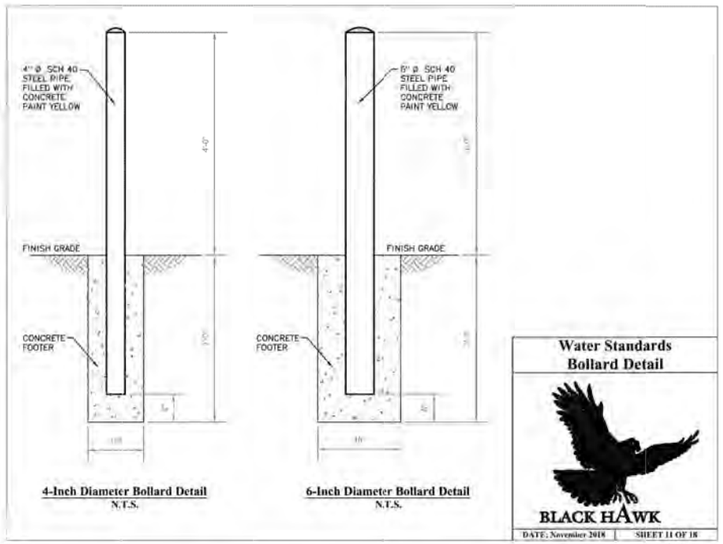


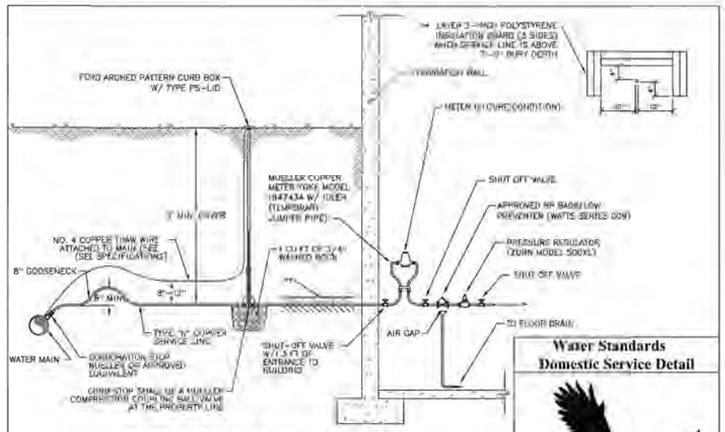
4-Inch Diameter Bollard Detail
N.T.S.

6-Inch Diameter Bollard Detail
N.T.S.

Water Standards
Bollard Detail

BLACK HAWK

DATE: November 2018 | SHEET 11 OF 18

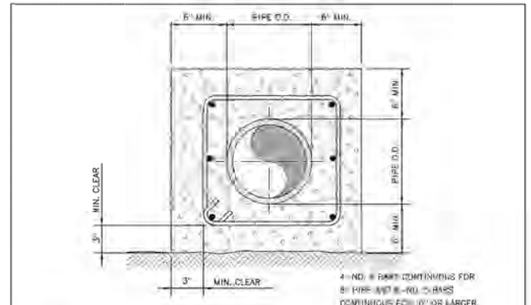


Domestic Service Detail (3/4" to 1")
N.T.S.
B.H. 10a

Water Standards
Domestic Service Detail

BLACK HAWK

DATE: June 2017 | SHEET 10a OF 18



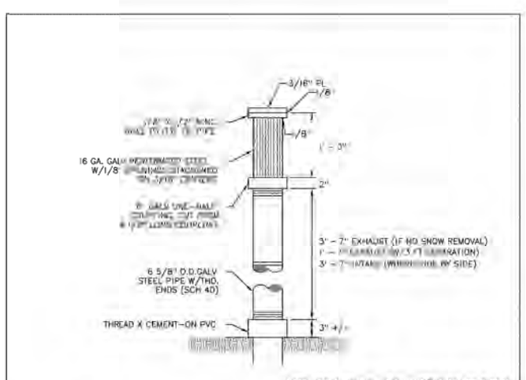
NOTE:
1. CONCRETE SHALL NOT BE LEANER THAN 1 CEMENT; 2-1/2 SAND; 5 STONE AND SHALL NOT HAVE LESS THAN 3,000 PSI COMPRESSIVE STRENGTH AT 28 DAYS.
2. PLACE CONCRETE AGAINST EITHER SOLID FORMWORK OR UNDISTURBED SOIL.
3. USE GR. 40 REINFORCING BARS.

Sewer Pipe Encasement Detail
N.T.S.
B.H. 9B

Water Standards
Sewer Crossing Encasement Detail

BLACK HAWK

DATE: October 2015 | SHEET 9A OF 18



NOTE:
1) BREAK ALL SHARP EDGES
2) PAINT ALL PARTS ABOVE GRADE

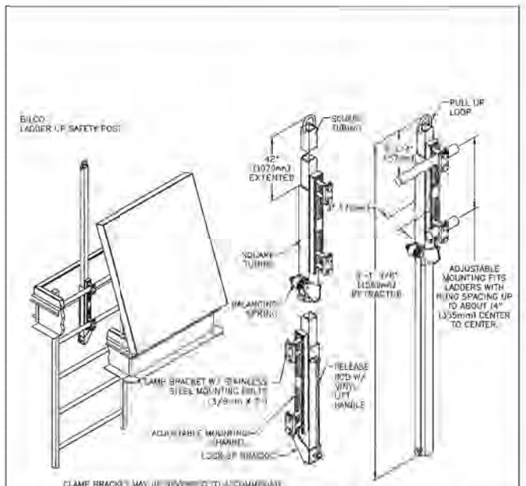
NOTE: IF THE INTAKE AND EXHAUST VENTS ARE CLOSER THAN 3'-11" HORIZONTALLY, THE HEIGHT DIFFERENTIAL SHALL BE AT LEAST 3'-0" VERTICALLY – WITH THE INTAKE VENT BEING HIGHER

Vent Stack Detail
N.T.S.
B.H. 12

Water Standards
Vent Stack Detail

BLACK HAWK

DATE: October 2015 | SHEET 5b OF 18



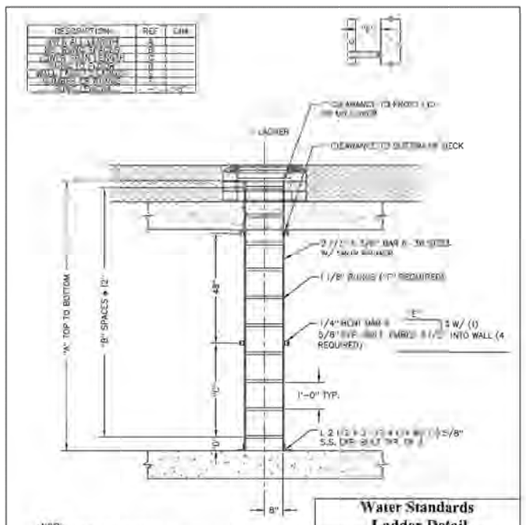
CLAMP BRACKET MAY BE SPACED TO ACCOMMODATE RUNG SIZES OF 3.0" (76mm) TO 7 7/8" (200mm) WITH STANDARD 2" (51mm) RISER. FURNISHED LARGER RUNGS WILL REQUIRE LONGER UNIT.

Ladder-Up Installation Detail
N.T.S.
B.H. 17

Water Standards
Ladder-Up Installation Detail

BLACK HAWK

DATE: October 2015 | SHEET 17 OF 18



NOTE:
1. BREAK ALL SHARP EDGES
2. ADJUSTABLE DISTANCE FROM BOTTOM RUNG TO FLOOR IS NEVER MORE THAN 14" OR LESS THAN 6"
3. 3/16" FILLET WELD ALL MOUNTING BRACKETS TO LADDER RAIL

Ladder Detail
N.T.S.
B.H. 16

Water Standards
Ladder Detail

BLACK HAWK

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HAWK'S LANDING AIRSTREAM PARK
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GILPIN COUNTY, CO

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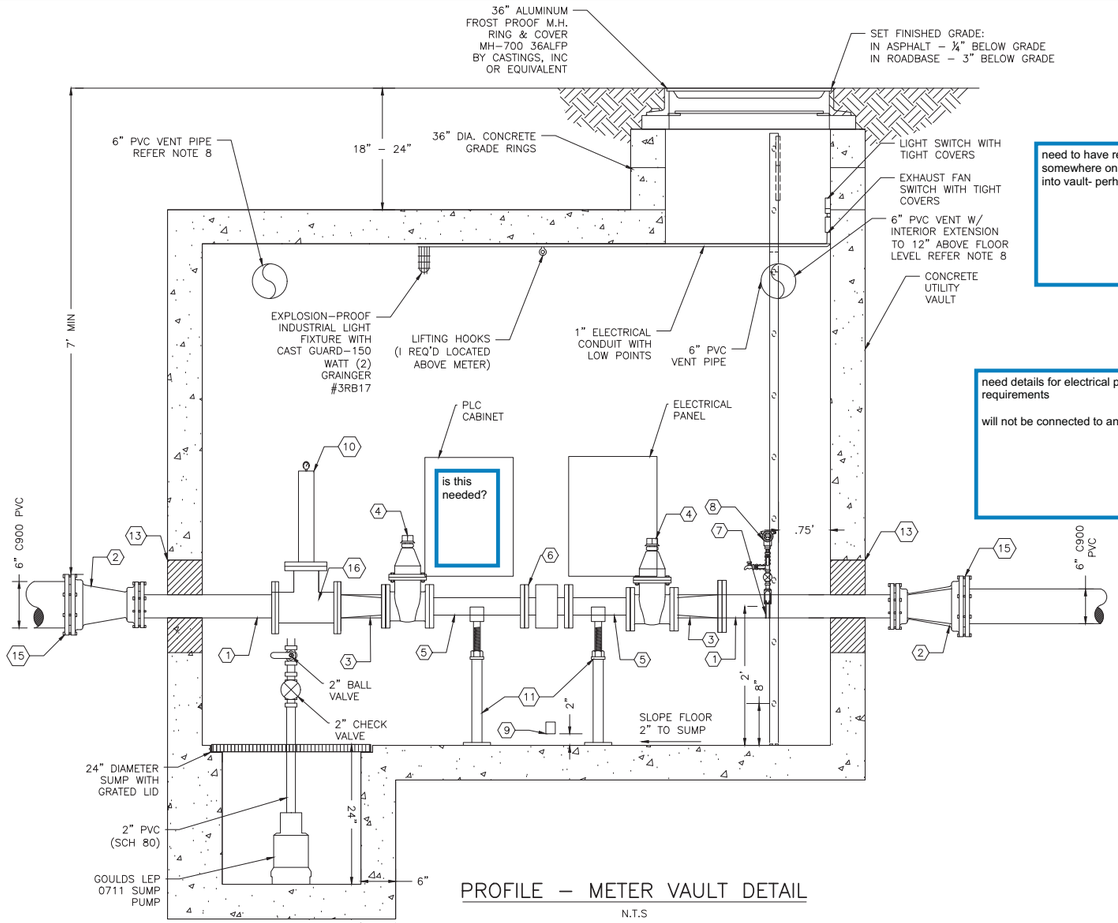


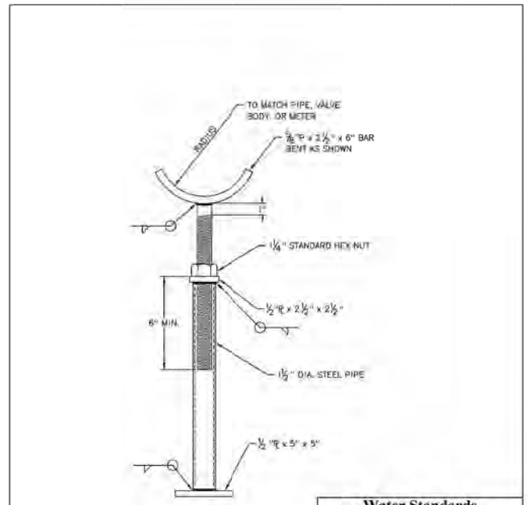
PROFILE – METER VAULT DETAIL

N.T.S

need to have remote meter read puck installed somewhere on surface so staff does not need to go into vault- perhaps on vent?

need details for electrical panel and requirements

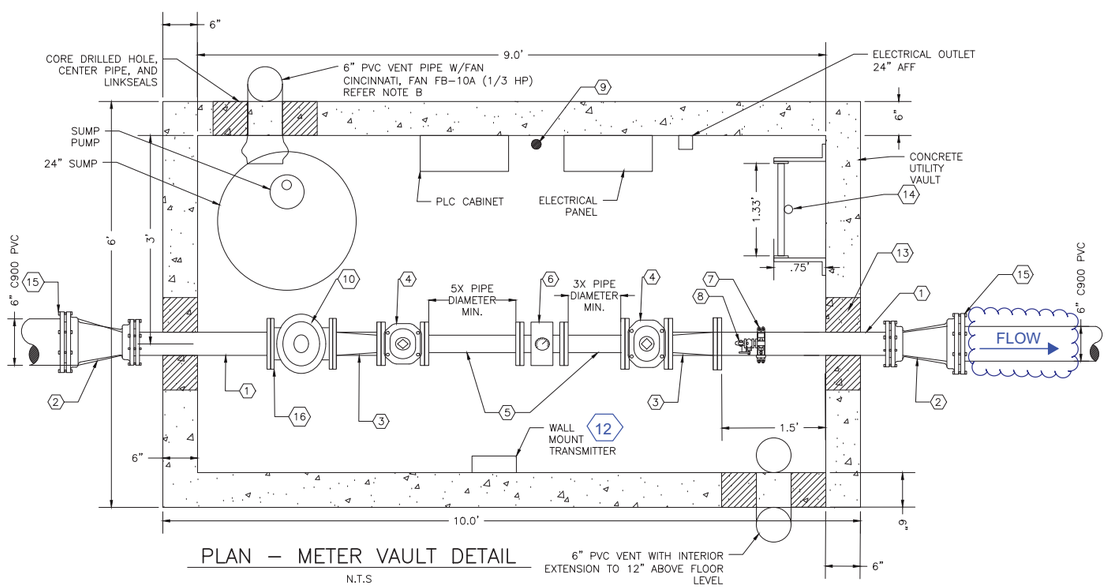
will not be connected to any telemetry



Pipe Support Detail
N.T.S.
B.H. 13

Water Standards
Pipe Support Detail

BLACK HAWK
DATE: October 2015 | SHEET 13 OF 18



PLAN – METER VAULT DETAIL

N.T.S

METER VAULT NOTES:

1. ALL EQUIPMENT, VALVES, AND FITTINGS SHOWN IN THIS DETAIL ARE TO BE INCLUDED IN APPROPRIATE BID ITEM OF THE PROPOSAL.
2. ALL M.J. FITTINGS SHALL BE MEGALUGGED
3. ALL PIPING 3" AND LARGER SHALL BE DUCTILE IRON TO ANSI/AWWA C111/A21/11
4. ALL PIPING SMALLER THAN 3" SHALL BE SCHEDULE 40 STEEL
5. VAULT EXTERIOR SHALL BE COATED WITH COAL TAR EPOXY PAINT.
6. COORDINATE FIBER OPTIC CONNECTION WITH CITY OF BLACK HAWK SCADA INTEGRATOR CONTACT LSI AT 303-215-9950
7. CONNECT DISCHARGE PIPE FROM SUMP PUMP TO NEAREST SEWER MH. MIN. 7'COVER ON DISCHARGE PIPE. CORE PENETRATION THROUGH VAULT WALL AND SEAL WITH TWO LINK SEALS.
8. PVC CENT PIPE SHALL TERMINATE ABOVE GROUND IN ACCORDANCE WITH CITY OF BLACK HAWK DETAIL 5b OUTSIDE OF THE ROADWAY AND PEDESTRIAN PATHS AT THE LOCATIONS SHOWN ON THE PLANS.

STORM

METER VAULT EQUIPMENT SCHEDULE

FLG. X P.E.

NO.	DESCRIPTION	SIZE	REMARKS
1	DIP SPOOL	4"	FLG. X FLG.
2	6" X 4" REDUCER	6" X 4"	MJ W/MEGALUG X MJ
3	4" X 3" REDUCER	4" X 3"	FLG. X FLG.
4	GATE VALVE	Specify Size	FLG. X FLG.
5	DIP SPOOL	3"	FLG. X FLG.
6	MAGNETIC FLOW METER	3"	ROSEMOUNT 8750W
7	2-BAND SADDLE		WITH 1" TAP
8	IN-LINE PRESSURE TRANSMITTER		ROSEMOUNT 3051
9	WATER ON FLOOR ALARM		GEMS LS-270
10	VERTICAL SURGE ARRESTOR	4"	PRECISION PUMBING PRODUCTS
11	PIPE SUPPORT		SEE DETAIL-2 REQUIRED
12	WALL MOUNT TRANSMITTER		ROSEMOUNT 8712
13	LINK SEAL		2 REQUIRED AT EACH CORE
14	LADDER UP – SAFETY POST		BILCO MODEL LU-1
15	MEGALUGS		
16	TEE	4" X 4"	FLG. X FLG.

Verify Pipe Size for Fire Flow of 1500 gpm.
Residual pressure at 12x12 tee is 44.98 psi

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HAWK'S LANDING AIRSTREAM PARK
DETAILS
GILPIN COUNTY, CO

REVISIONS:

NO.	DESCRIPTION	DATE:
1		

REVIEWED FOR COMPLIANCE BY:

SIGNATURE DATE

SIGNATURE DATE

SCALE:	AS INDICATED
DATE:	02/05/2021
DRAWN BY:	JP/BG
CHECKED BY:	JK
JOB NO:	D01055

PROJECT NO.
D01055

DRAWING NO.
DET 03

SHEET NO. 22 OF 27 SHEETS

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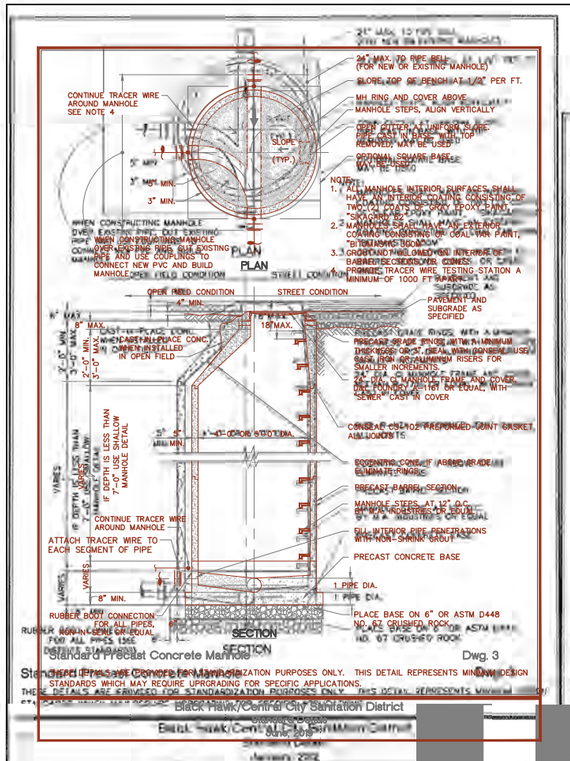
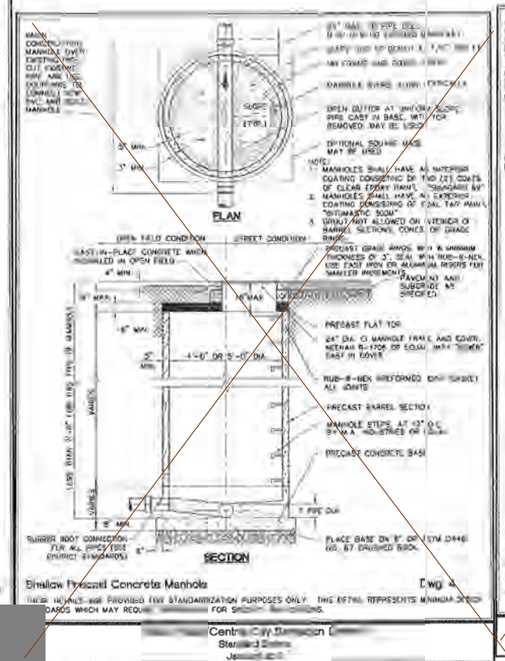
please update all to 2019 standard details



Standard Precast Concrete Manhole Dwg. 3

Standard Details are provided for standardization purposes only. This detail represents minimum design standards which may require uprgrading for specific applications.

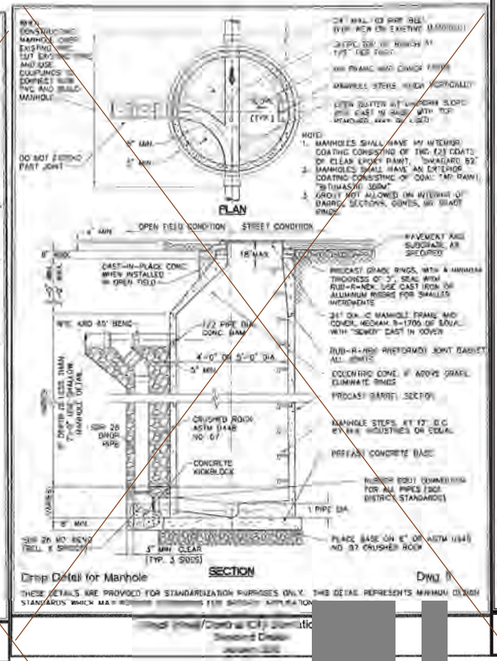
Black Hawk/Central City Sanitation District
Standard Details
January, 2012



Similow Precast Concrete Manhole Dwg. 4

These details are provided for standardization purposes only. This detail represents minimum design standards which may require uprgrading for specific applications.

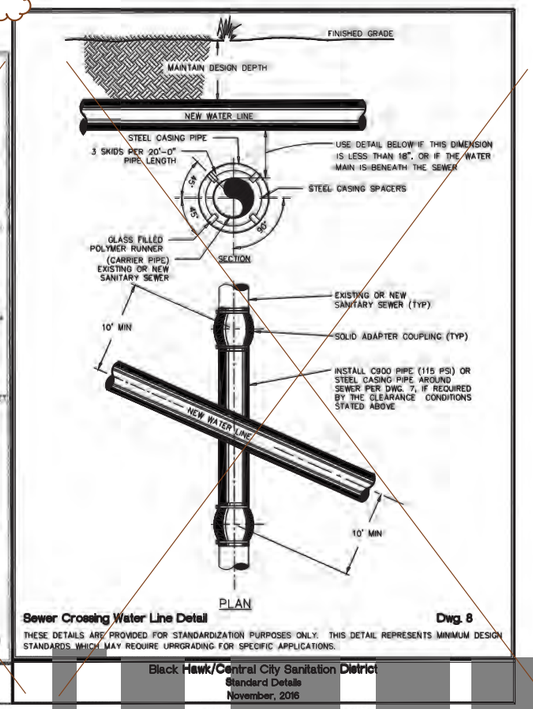
Central City Sanitation District
Standard Details
January 2012



Drop Detail for Manhole Dwg. 5

These details are provided for standardization purposes only. This detail represents minimum design standards which may require uprgrading for specific applications.

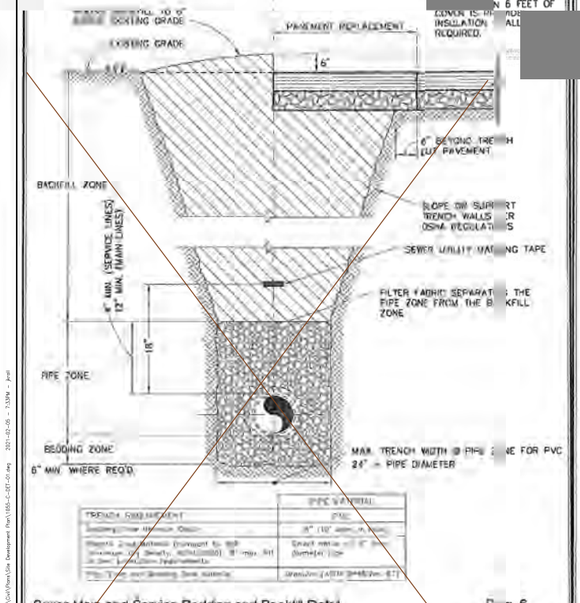
Black Hawk/Central City Sanitation District
Standard Details
January 2012



Sewer Crossing Water Line Detail Dwg. 8

These details are provided for standardization purposes only. This detail represents minimum design standards which may require uprgrading for specific applications.

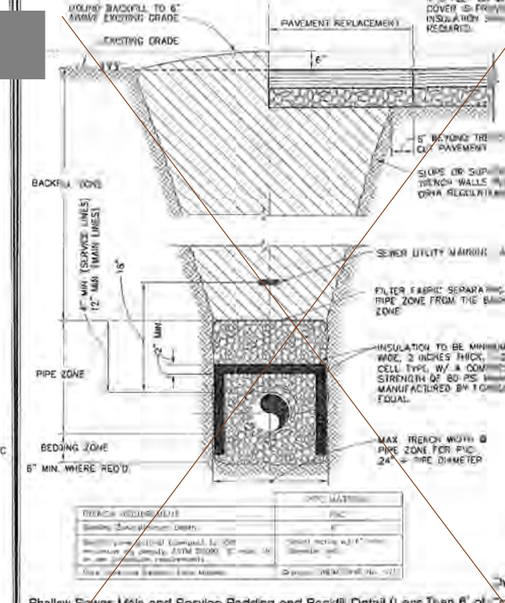
Black Hawk/Central City Sanitation District
Standard Details
November, 2016



Sewer Main and Service Bedding and Backfill Detail Dwg. 6

These details are provided for standardization purposes only. This detail represents minimum design standards which may require uprgrading for specific applications.

Black Hawk/Central City Sanitation District
Standard Details
December, 2011

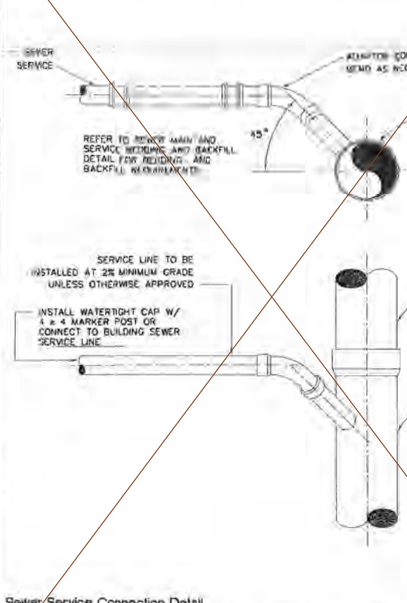


Dwg 6A

Shallow Sewer Main and Service Bedding and Backfill Detail (Less Than 6' of Cover)

These details are provided for standardization purposes only. This detail represents minimum design standards which may require uprgrading for specific applications.

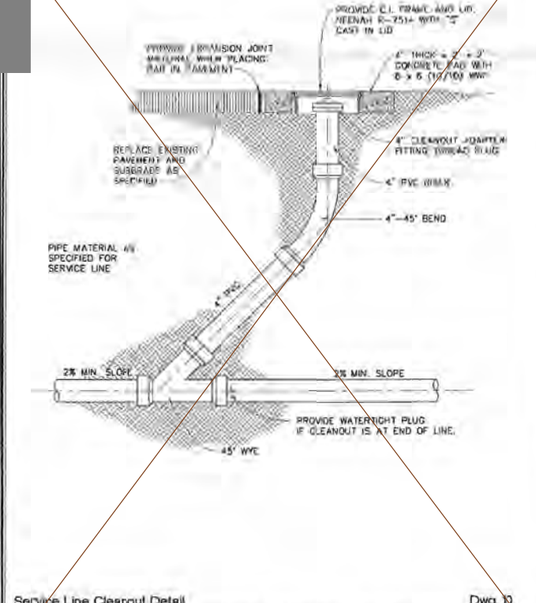
Black Hawk/Central City Sanitation District
Standard Details
December, 2011



Sewer Service Connection Detail Dwg. 9

These details are provided for standardization purposes only. This detail represents minimum design standards which may require uprgrading for specific applications.

Black Hawk/Central City Sanitation District
Standard Details
December, 2011



Service Line Cleanout Detail Dwg. 10

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Black Hawk/Central City Sanitation District
Standard Details
December, 2011

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HAWK'S LANDING AIRSTREAM PARK
DETAILS
GILPIN COUNTY, CO

REVISIONS:	NO.	DESCRIPTION	DATE:
	1		

REVIEWED FOR COMPLIANCE BY:

SIGNATURE DATE

SIGNATURE DATE

SCALE:	AS INDICATED
DATE:	02/05/2021
DRAWN BY:	JP/BG
CHECKED BY:	JK
JOB NO:	D01055

PROJECT NO. D01055

DRAWING NO. **DET 04**

SHEET NO. 23 OF 27 SHEETS

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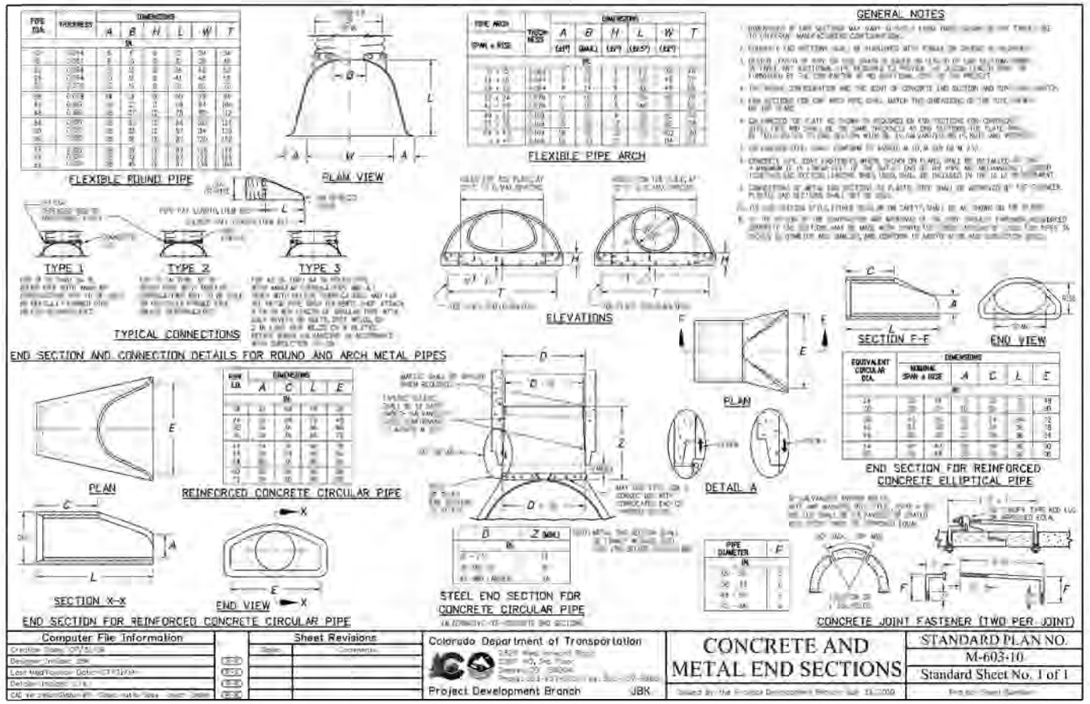

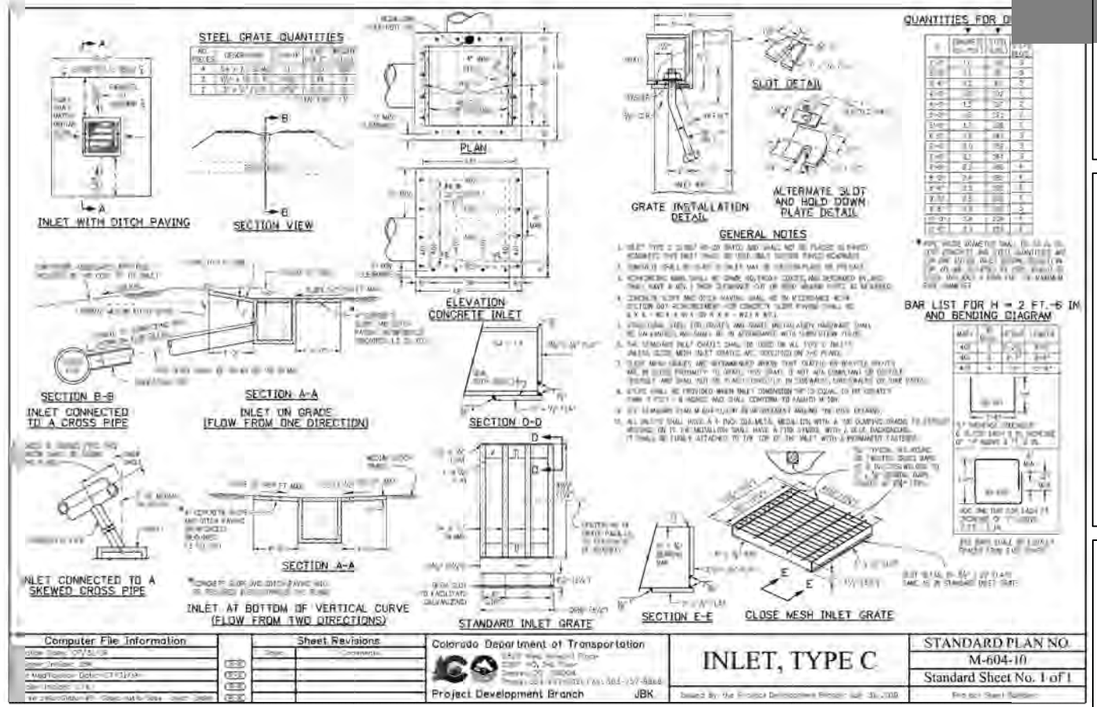

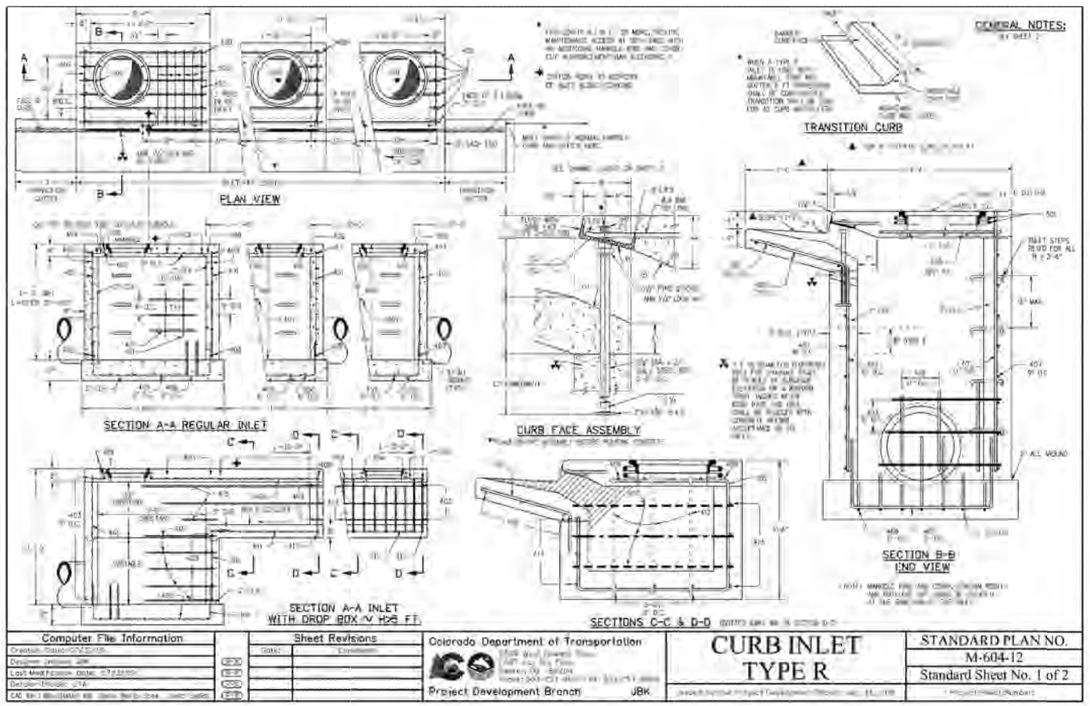

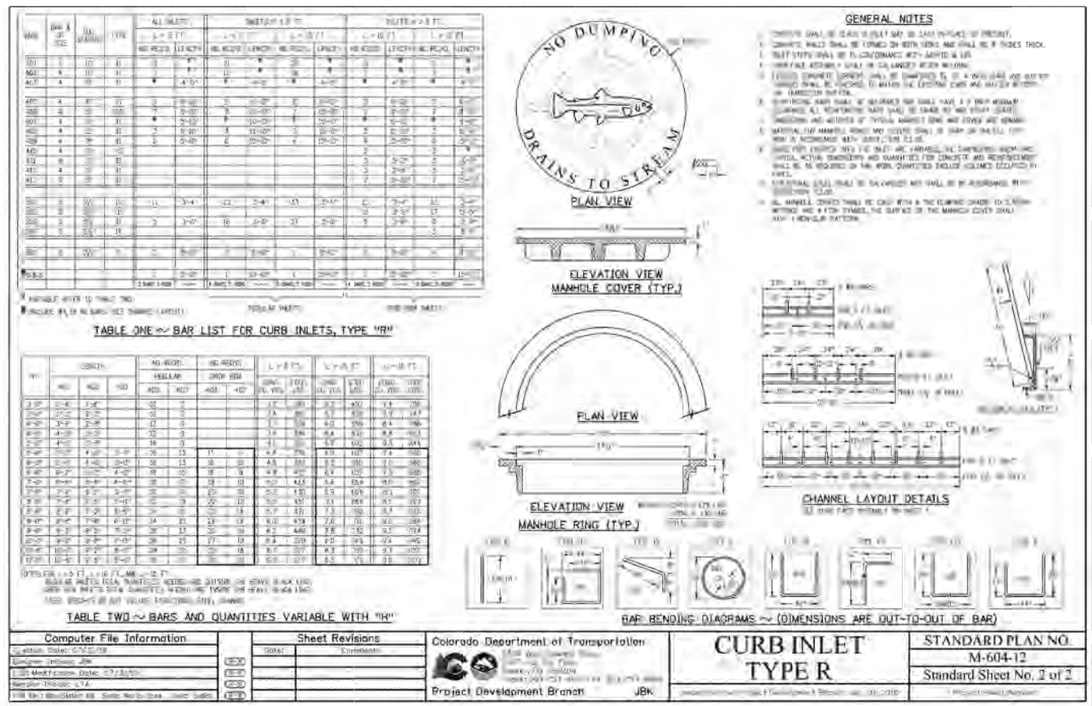

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HAWK'S LANDING
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REVISIONS:
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SIGNATURE DATE

SIGNATURE DATE

SCALE: AS INDICATED
DATE: 02/05/2021
DRAWN BY: JP/BG
CHECKED BY: JK
JOB NO: D01055

PROJECT NO. D01055
DRAWING NO. **DET 05**
SHEET NO. 24 OF 27 SHEETS

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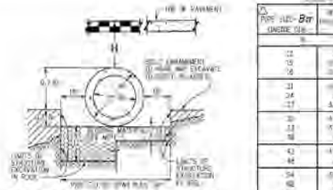


PIPE INSTALLATION

DIMENSIONS FOR REINFORCED CONCRETE PIPE

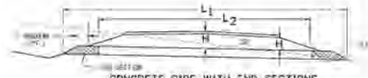
GENERAL NOTES

REINFORCED CONCRETE PIPE

1. ALL REFERENCES CONCRETE PIPE, MEDIUM ALIGNMENT IN THE HEIGHT OF FILL, SHALL BE THIS SHEET, REGARDS SPECIAL DESIGN OF INSTALLATIONS.
2. [illegible] IS BASED ON SAFETY FACTORS OF 1.25 IN ULTIMATE STRENGTH.
3. THE HEIGHTS OF FILL, GIVEN FOR EACH PIPE ARE MEASURED FROM [illegible]
4. [illegible] IS CLASS V, MEETS OR EXCEEDS THE REQUIREMENTS OF [illegible]
5. [illegible] SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
6. [illegible] SHALL BE CLASS A, [illegible]
7. [illegible] SHALL BE CLASS B, [illegible]
8. [illegible] SHALL BE CLASS C, [illegible]
9. WHERE A PIPE IS TO BE EXTENDED, THE SAME TYPE MATERIAL MAY BE USED AS IN THE ORIGINAL PIPE INSTALLATION SHALL BE USED.

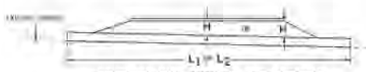
NONREINFORCED CONCRETE PIPE

1. AT THE OPTION OF THE CONTRACTOR, NONREINFORCED CONCRETE PIPE CONFORMING TO [illegible] MAY BE USED IN LIEU OF REINFORCED CONCRETE PIPE FOR ALL SIZES AS SHOWN IN [illegible] FOR PIPE SMALLER THAN [illegible] THE MINIMUM WALL THICKNESS SHALL BE [illegible] THAN SHOWN FOR REINFORCED CONCRETE PIPE OF THE SAME DIAMETER. [illegible] SHALL BE CONSIDERED WITH MORTAR OR THE CONTRACTOR SHALL PROVIDE ANOTHER SATISFACTORY METHOD OF [illegible] THE NONREINFORCED PIPE SHALL BE REMOVED AND REPLACED BY REINFORCED PIPE WHERE, IN THE OPINION OF THE ENGINEER, THE [illegible] HAS BEEN DAMAGED BY [illegible]
2. ALL REINFORCEMENT FOR REINFORCED CONCRETE PIPE SHALL CONFORM TO [illegible] SHALL MEET THE REQUIREMENTS FOR [illegible]



CONCRETE PIPE WITH END SECTIONS

CONSTRUCTION MINIMUM COVER FOR RIGID PIPE



CONCRETE PIPE WITHOUT END SECTIONS

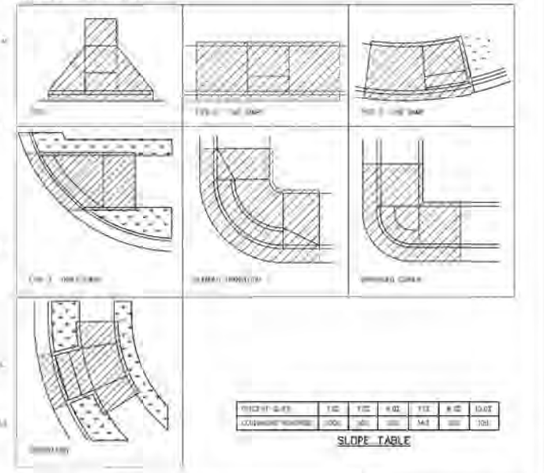
ALLOWABLE RANGE OF HEIGHTS FOR FILL OVER REINFORCED CONCRETE PIPE

Computer File Information		Sheet Revisions		Colorado Department of Transportation	REINFORCED CONCRETE PIPE	STANDARD PLAN NO. M-603-2 Standard Sheet No. 1 of 1
Creation Date: 07/15/09		Date	Comments	Project Development Branch JBK		
Designer Initials: JBK						
Last Modification Date: 07/15/09						
Detailer Initials: CLA						
CAD file / Description: M-603-2 Standard Plan						

CURB RAMP GENERAL NOTES:

1. IN NEW CONSTRUCTION OR RECONSTRUCTION, PROVIDE A DETECTABLE CURB RAMP FOR EACH MARKED OR UNMARKED PEDESTRIAN CROSSING. CURB RAMPS SHALL BE CONTAINED ENTIRELY WITHIN THE WIDTH OF THE PEDESTRIAN STREET CROSSING OR CROSSWALK (NOT INCLUDING THE CONTRACT FLARE).
2. ALTERATIONS ARE DEFINED AS CHANGES TO AN EXISTING ROADWAY THAT AFFECT PEDESTRIAN ACCESS, CIRCULATION, OR USE, & REMOVING BARRIERS, BUT ARE NOT LIMITED TO, RESURFACING, REHABILITATION, RECONSTRUCTION, CURB RAMP INSTALLATIONS, INSTALLATION OR REMOVAL OF CURBING, OR CHANGES TO OR RELOCATION OF STRUCTURAL PARTS OF ELEMENTS OF A PEDESTRIAN FACILITY.
3. A WALKABLE SURFACE IS CONSIDERED AS A PATHS WITH NO ADJACENT TO A CURB RAMP OR TURNING SPACE, WITHOUT RAISED OBSTACLES, AND CLEAR OF MOVEMENT TRANSITIONS BY A SLOPE NOT TO EXCEED 5% GRADE.
4. IN TERRITORIES WHERE AN EXISTING PHYSICAL CONSTRAINT PREVENTS PROVIDING A DETECTABLE CURB RAMP FOR EACH PEDESTRIAN STREET CROSSING, A SINGLE DIAGONAL RAMP ON THE RAMP WILL BE PERMITTED TO SERVE BOTH INTERSECTING STREET CROSSINGS. THE USE OF A SINGLE DIAGONAL RAMP SHALL BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION. DIAGONAL RAMPS ARE NOT ACCEPTABLE IN NEW CONSTRUCTION OR RECONSTRUCTION.
5. DETECTABLE WARNINGS FOR MULTI-USE PATHS ARE INTENDED TO INDICATE THE BOUNDARY BETWEEN A PEDESTRIAN PATH AND MOTOR VEHICLE WAYS. THEY SHALL BE INSTALLED AT ALL PATH-STREET INTERSECTIONS WHERE THERE IS NO CURB OR OTHER PHYSICAL BARRIER (SUCH AS LANDSCAPING OR FENCING) THAT DISCOURAGES PEDESTRIANS FROM WALKING INTO THE STREET. THEY SHALL BE INSTALLED AT ALL PATH-STREET INTERSECTIONS WHERE THE PATH IS NOT PERPENDICULAR TO THE STREET. THEY SHALL NOT BE INSTALLED ALONG THE PATH WHERE THERE IS NO INTERSECTING STREET.
   1. CURB RAMPS, IN RAISED TRANSITIONS, AND DEPRESSED CORNERS, AT PEDESTRIAN STREET CROSSINGS.
   2. PEDESTRIAN REFUGE ISLANDS AND CUT THROUGH MEDIANS.
   3. BORDERING PLANTINGS AT TRANSIT STOPS WHERE THE EDGE OF THE PLANTING IS NOT PROTECTED TO PEDESTRIAN CROSS TRAFFIC, AND
   4. BORDERING AREAS OF CROSSWALKS OR STREET GRADE TRANSIT STOPS WHERE THE AREA IS NOT PROTECTED TO PEDESTRIAN CROSS TRAFFIC.
6. DETECTABLE WARNING SURFACES SHALL CONSIST OF TRUNCATED DOMES WITH A NOMINAL DIAMETER OF 0.9 INCHES, A NOMINAL HEIGHT OF 0.2 INCHES AND A NOMINAL CENTER-TO-CENTER SPACING OF 2.35 INCHES. THE DOMES SHALL BE ARRANGED IN A SQUARE GRID PATTERN. YELLOW COLOR IS PREFERRED, HOWEVER, OTHER COLORS MAY BE USED IF APPROVED BY THE ENGINEER.
7. IN A RESTRICTIVE, NO RAISED CURBING (GRADE TRANSITIONS) OR STEEP GRADIENTS, A CURB RAMPS LENGTH IS NOT REQUIRED TO EXCEED 15 FEET (EXCLUDING THE RETAINING RAMP TRANSITIONS).
8. ALL SLOPES ARE MEASURED WITH RESPECT TO A LEVEL PLANE.
9. DRAINAGE STRUCTURES, GRATES, UTILITY COVERS, OR OTHER OBSTRUCTIONS SHALL NOT BE PLACED ON THE CURB RAMP OR TURNING SPACE AREAS.
10. IN NEW CONSTRUCTION, WELL HOUSES, METER BOXES, MAINTENANCE HOLE COVERS, VAULT LIDS, OR TRENCHES, SHALL NOT BE LOCATED WITHIN ANY PART OF CURB RAMP OR TURNING SPACE. IN ALTERATIONS, WHERE THESE COULD CANNOT BE REASONABLY DIFFICULT OR THE CURB RAMP OR TURNING SPACE, THEY MUST NOT CREATE A VERTICAL DISCONTINUITY GREATER THAN 1/2 INCH AND, ANY VERTICAL DISCONTINUITY BETWEEN 1/4 INCH AND 1/2 INCH SHALL BE BEVELED WITH A SLOPE NOT STEEPER THAN 1:2 (RISE:RUN). ANY OPENINGS SHALL BE WITHIN BETWEEN THE EXPOSED SURFACES ACCESSIBLE.
11. CONSTRUCTION OF ANY ADJACENT PEDESTRIAN CURB RAMP SHALL BE DISCLOSED IN THE NOTICING TO THE CONTRACTOR. CURB RAMP WILL NOT BE USED AS RAMP FOR PEDESTRIAN TRAFFIC.
12. ALL CURB RAMP JOINTS AND GRADE BREAKS SHALL BE FLUSH (0-1/4"). THE JOINT BETWEEN THE ROADWAY SURFACE AND THE GUTTER PAN SHALL BE FLUSH.
13. THE CONTRACTOR SHALL ADJUST REMOVAL LIMITS AS NECESSARY TO PROVIDE POSITIVE DRAINAGE, MAINTAIN EXISTING DRAINAGE PATTERNS, AND AVOID CONFLICTS IN THE FINAL CONFIGURATION.
14. FLARES, CURB SLOPES AND TAPERS SHALL NOT EXCEED 10.0% WHERE THEY ABUT A NON-WALKABLE SURFACE, OR WHERE THE ADJACENT RAMP SURFACE IS GREATER THAN 8.0% PEDESTRIAN STANTED.
15. THE CHANGE IN GRADE AT THE BOTTOM OF THE CURB RAMP SHALL NOT EXCEED AN ALGEBRAIC DIFFERENCE OF 13.0% THE DIAMETER EDGE OF THE GUTTER AT THE JOINT OR A RAMP, TURNING SPACE, OR FLARED TRANSITION SHALL NOT EXCEED 15.0%.
16. GRADE BREAKS AT THE TOP AND BOTTOM OF RAMP RUNS SHALL BE PERPENDICULAR TO THE DIRECTION OF PEDESTRIAN TRAVEL, SHALL NOT BE APPLIED TO FLARE AND TURNING SPACE SURFACES.
17. A MINIMUM LEVEL WITH A RAMP OR TURNING SPACE SHALL BE PROVIDED AT THE TOP OF CURB RAMPS. IT SHALL BE AT LEAST AS WIDE AS THE RAMP OR TURNING SPACE THAT IS APPROACHED. THE MINIMUM CLEAR LENGTH SHALL BE 60 INCHES, MEASURED PARALLEL TO THE GUTTER LINE. THE LANDING SHALL BE POSITIONED SO THAT THE LENGTH OF THE RAMP OR TURNING SPACE IS ENTERED ONTO THE LANDING. THE SLOPE OF LANDINGS SHALL NOT EXCEED 2.0% IN ANY DIRECTION.
18. DESIGN AND CONSTRUCT CURB RAMPS, TURNING SPACES, AND FLARE SLOPES WITH THE FOLLOWING SLOPES PROVIDED THE SLOPES INDICATED ON SPECIFIC DETAILS SHOW THE MAXIMUM SLOPES ALLOWABLE. PREFERRED VALUES TO BE USED DURING DESIGN, LAYOUT, AND CONSTRUCTION ARE:
   - RAMP RUNNING SLOPE: 7.4%
   - RAMP CROSS SLOPE: 1.5%
   - TURNING SPACE RUNNING SLOPE: 1.5%
   - TURNING SPACE CROSS SLOPE: 1.5%
   - FLARE SLOPE: 8.0%-10.0%

CURB RAMP PAY AREAS

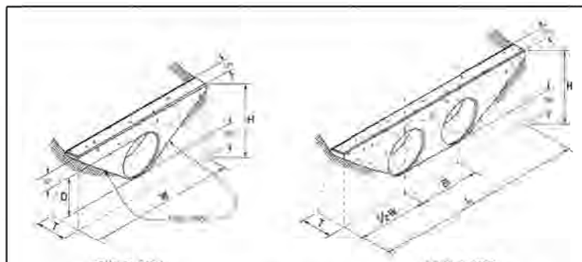


TYPE OF RAMP	T-10	T-12	R-10	T-14	R-12	D-10
LONGITUDINAL RUNNING	10.0%	8.0%	10.0%	14.0%	12.0%	10.0%

SLOPE TABLE

GENERAL NOTES & PAY AREAS

Computer File Information		Sheet Revisions		Colorado Department of Transportation	CURB RAMPS	STANDARD PLAN NO. M-608-1 Standard Sheet No. 1 of 10
Creation Date: 07/15/09		Date	Comments	Project Development Branch JBK		
Designer Initials: JBK						
Last Modification Date: 07/15/09						
Designer Initials: CLA						
CAD file / Description: M-608-1 Standard Plan						

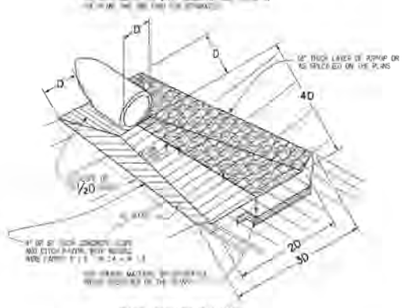


SINGLE PIPE

DOUBLE PIPE

CONCRETE HEADWALL INSTALLATIONS

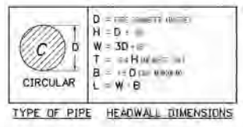
GENERAL NOTES



PIPE OUTLET PAVING

CONCRETE QUANTITIES FOR ONE CONCRETE HEADWALL (CUBIC YARDS)

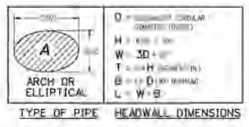
PIPE OUTLET PAVING (CUBIC YARDS)



CIRCULAR

TYPE OF PIPE | HEADWALL DIMENSIONS

D = [illegible]
H = D + [illegible]
W = 3D + [illegible]
T = 0.4 H [illegible]
B = 1.5 D [illegible]
L = W + B



ARCH OR ELLIPTICAL

TYPE OF PIPE | HEADWALL DIMENSIONS

D = [illegible] CIRCULAR DIAMETER
H = [illegible]
W = 3D + [illegible]
T = 0.4 H [illegible]
B = 1.5 D [illegible]
L = W + B

Computer File Information		Sheet Revisions		Colorado Department of Transportation	HEADWALLS AND PIPE OUTLET PAVING	STANDARD PLAN NO. M-601-12 Standard Sheet No. 1 of 1
Creation Date: 07/15/09		Date	Comments	Project Development Branch JBK		
Designer Initials: JBK						
Last Modification Date: 07/15/09						
Detailer Initials: CLA						
CAD file / Description: M-601-12 Standard Plan						

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Sacramento - San Luis Obispo - Phoenix
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HAWK'S LANDING AIRSTREAM PARK
DETAILS
GILPIN COUNTY, CO

REVISIONS: NO.	DESCRIPTION	DATE:
1		

REVIEWED FOR COMPLIANCE BY:

SIGNATURE DATE

SIGNATURE DATE

SCALE:	AS INDICATED
DATE:	02/05/2021
DRAWN BY:	JP/BG
CHECKED BY:	JK
JOB NO:	D01055

PROJECT NO.
D01055

DRAWING NO.
DET 06

SHEET NO. 25 OF 27 SHEETS

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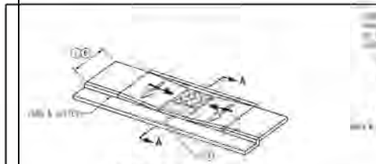
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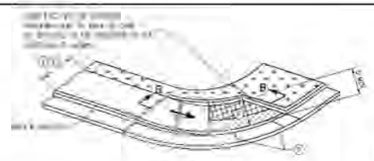
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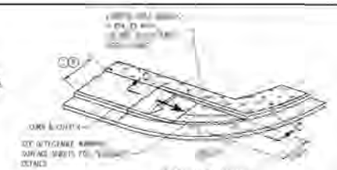

PARALLEL RAMP

SECTION C-C

SIDEWALK TO SHOULDER TRANSITION

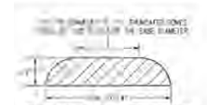
SECTION B-B

SECTION A-A

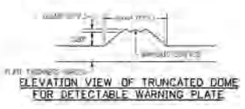
PARALLEL RAMP NOTES

TYPE 2 PARALLEL CURB RAMPS

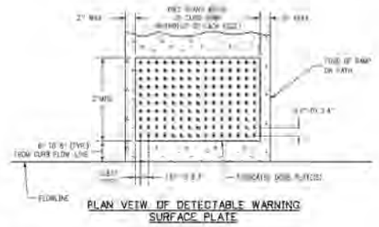
SECTION VIEW OF DETECTABLE WARNING SURFACE PLATE


ELEVATION VIEW OF SINGLE TRUNCATED DOME

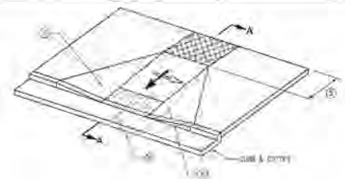
SECTION VIEW FOR PARALLEL CURB RAMP TYPES

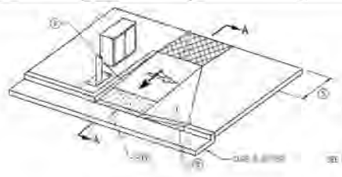

ELEVATION VIEW OF TRUNCATED DOME FOR DETECTABLE WARNING PLATE

SECTION VIEW FOR PERPENDICULAR CURB RAMP TYPES


PLAN VIEW OF DETECTABLE WARNING SURFACE PLATE

DETECTABLE WARNING SURFACE DETAILS


PERPENDICULAR RAMP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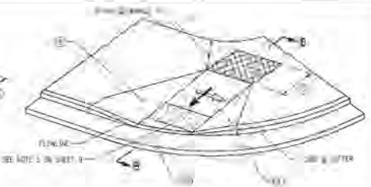
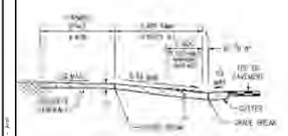

PERPENDICULAR RAMP

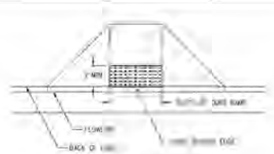
PERPENDICULAR RAMP NOTES

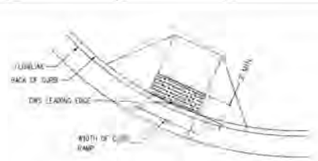

SECTION A-A

DETAIL A - RAMP LENGTH

SECTION B-B

TYPE 1 PERPENDICULAR CURB RAMPS


TYPE 1 CURB RAMP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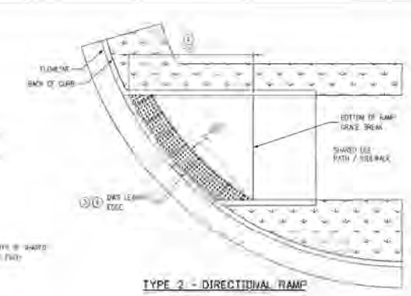
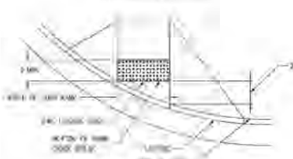
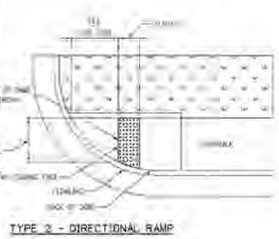

TYPE 2 - DIRECTIONAL RAMP


TYPE 1 CURB RAMP

SHARED USE PATH CROSSING

DETECTABLE WARNING SURFACE NOTES:

TYPE 2 CURB RAMP


TYPE 2 - DIRECTIONAL RAMP

DETECTABLE WARNING SURFACE PLACEMENT

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Denver - San Diego - Riverside - Orange
Sacramento - San Luis Obispo - Phoenix
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HAWK'S LANDING AIRSTREAM PARK

DETAILS

GILPIN COUNTY, CO

REVISIONS: NO.	DESCRIPTION	DATE:

REVIEWED FOR COMPLIANCE BY:

SIGNATURE DATE

SIGNATURE DATE

SCALE:	AS INDICATED
DATE:	02/05/2021
DRAWN BY:	JP/BG
CHECKED BY:	JK
JOB NO:	D01055

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DET 07

SHEET NO. 26 OF 27 SHEETS

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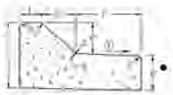
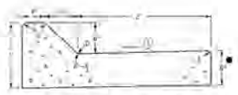
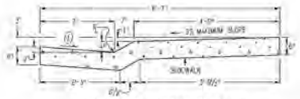
CURB AND GUTTER TYPE 2
(SECTION IB)
(6 IN. BARRIER - 1 FT. GUTTER)

CURB AND GUTTER TYPE 2
(SECTION IIB)
(6 IN. BARRIER - 2 FT. GUTTER)

GUTTER TYPE 2


CURB AND GUTTER TYPE 2
(SECTION IM)
(6 IN. MOUNTABLE - 1 FT. GUTTER)


CURB AND GUTTER TYPE 2
(SECTION IIM)
(6 IN. MOUNTABLE - 2 FT. GUTTER)


CURB AND GUTTER TYPE 2
(SECTION MS)
(4 IN. MOUNTABLE WITH SIDEWALK)

GENERAL NOTES

1. ON ROADWAY CURVES WITH A RADIUS OF 1,000 FT OR LESS, CURVE AND TANGENT SHALL BE PLACED AS ONE UNIT. FOR THE PURPOSE OF THIS NOTE, THE TERM "CURVE" INCLUDES ANY COMPOUND OR REVERSE CURVE. ON THE PLANS, A MAXIMUM CHORD LENGTH OF 25 FT. MAY BE USED WHEN THE RADIUS IS GREATER THAN 1,000 FT.
2. CONCRETE SHALL BE CLASS B.
3. PROFILE GRADE IS FLOWLINE AND GUTTER GRADE IS LOWEST POINT OF THE FLOW LINE.
4. CURB TYPE 4 (KEY-WAY) MAY BE USED IN LIEU OF CURB AND GUTTER TYPE 2 SECTIONS IB AND IIB UNLESS OTHERWISE SPECIFIED ON THE PLANS.
5. GUTTER CROSS SLOPES MAY BE ADJUSTED TO MATCH EXISTING DRAINAGE FOR OVERLAY OR SHOWN ON THE PLANS.
6. THICKNESS OF CURB AND GUTTER SECTIONS AND WATER CONCRETE PAVEMENT THICKNESS SHOWN ON THE PLANS MAY BE SLIPFORMED. THE USE OF CONCRETE PLACED WITHIN FORMS IS PERMITTED.
7. INCREASE GUTTER THICKNESS TO 8 IN. AT CONCRETE CROSS PAN TRANSITIONS.
8. MINIMUM SIDEWALK WIDTH IS 4 FT.

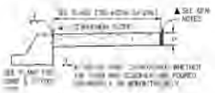
▲ EXPANSION JOINTS SHALL BE INSTALLED WHEN ADJACENT CONCRETE CONSTRUCTION EXPANSION JOINT MATERIAL SHALL BE 1/2 IN. THICK AND SHALL EXTEND THE FULL DEPTH OF CONCRETE SECTION.

(B) GUTTER CROSS SLOPES SHALL BE 2% SLOPE WHEN MEASURED FROM FLOWLINE 1 IN. FROM GUTTER TOWARD CURB WITH REMAINING SLOPE TO FLOWLINE TO MAINTAIN MINIMUM DEPTH TO CURB FACE. SEE STANDARD PLAN M-609-1.

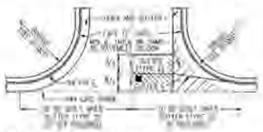
● WHEN THE GUTTER IS ADJACENT TO THE CONCRETE PAN, THE GUTTER SHALL BE CONSTRUCTED TO THE SAME GRADE AS THE CONCRETE PAN. THE ASPHALT OVERLAY SHALL BE TAPERED TO MEET THE GUTTER FLOWLINE.

LEGEND FOR RADII

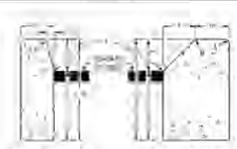
A =	
R =	
C =	
D =	

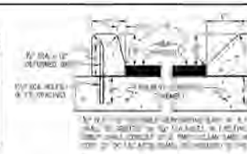

CONCRETE SIDEWALK

SIDEWALK EXPANSION JOINT


CONSTRUCTION OF CONCRETE GUTTERS AT INTERSECTION

Computer File Information		Sheet Revisions		Colorado Department of Transportation	CURB, GUTTERS, AND SIDEWALKS	STANDARD PLAN NO.
Creation Date: 07/04/12		Date:	Comments:	4201 East Arkansas Avenue, Denver, Colorado 80222, Phone: (303) 757-9202, Fax: (303) 757-9820		M-609-1
Last Modification Date: 01/10/13	BCK	07/24/12	Changed to the appropriate date of 01-01-12			
Full Pathname: c:\projects\std_plans\current\drawings\xxxxx.dgn	BCK	05/16/13	Added Note 6 and Reorder to match AASHTO	Project Development Branch DLM/LTA	Issued By: Project Development Branch on July 1, 2012	Sheet No. 1 of 4
Drawing File Named: M609001A.dgn	BCK					
CAD Workstation: V8 Solar Red by Dusk	BCK					


CURB TYPE 2
(SECTION B)
6 IN. BARRIER


CURB TYPE 2
(SECTION M)
6 IN. MOUNTABLE

CURB TYPE 4
(SECTION B)
6 IN. BARRIER

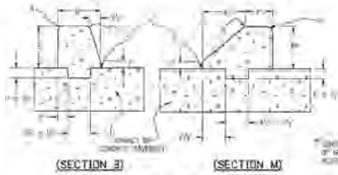
CURB TYPE 4
(SECTION M)
6 IN. MOUNTABLE

CURB TYPE 6
(SECTION M)
4 IN. MOUNTABLE

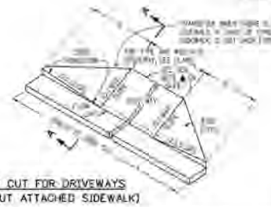
▲ KEY-WAY MAY BE OMITTED WHEN PLACED AGAINST CONCRETE PAVEMENT.

LEGEND FOR RADII

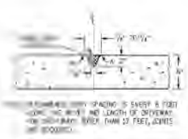
A =	
R =	
C =	
D =	


(SECTION B) (SECTION M)
CURB TYPE 4 (KEY-WAY)*

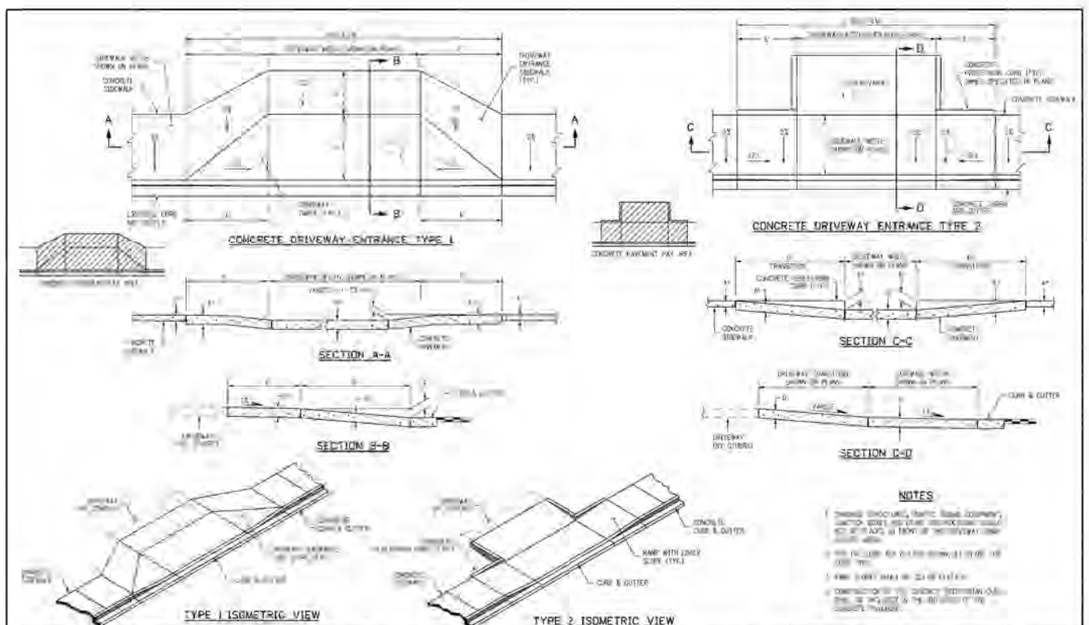
* CURB TO FACE 5 SHALL CONTAIN 1.5 POUNDS PER CUBIC YARD OF APPROVED SYNTHETIC FIBERS AND MAY HAVE A REMOVE ACCELERANT SUCH AS ▲.


CURB CUT FOR DRIVEWAYS
(WITHOUT ATTACHED SIDEWALK)

SECTION A-A
CONCRETE PAVEMENT (DRIVEWAYS)


TRANSVERSE CONTRACTION JOINT
FOR CONCRETE PAVEMENT (DRIVEWAYS)

Computer File Information		Sheet Revisions		Colorado Department of Transportation	CURB, GUTTERS, AND SIDEWALKS	STANDARD PLAN NO.
Creation Date: 07/04/12		Date:	Comments:	4201 East Arkansas Avenue, Denver, Colorado 80222, Phone: (303) 757-9202, Fax: (303) 757-9820		M-609-1
Last Modification Date: 01/10/13	BCK					
Full Pathname: c:\projects\std_plans\current\drawings\xxxxx.dgn	BCK			Project Development Branch DD/LTA	Issued By: Project Development Branch on July 1, 2012	Sheet No. 2 of 4
Drawing File Named: M609002A.dgn	BCK					
CAD Workstation: V8 Solar Red by Dusk	BCK					



NOTES

Computer File Information		Sheet Revisions		Colorado Department of Transportation	CURB, GUTTERS, AND SIDEWALKS	STANDARD PLAN NO.
Creation Date: 07/04/12		Date:	Comments:	4201 East Arkansas Avenue, Denver, Colorado 80222, Phone: (303) 757-9202, Fax: (303) 757-9820		M-609-1
Last Modification Date: 01/10/13	BCK					
Full Pathname: c:\projects\std_plans\current\drawings\xxxxx.dgn	BCK			Project Development Branch DD/LTA	Issued By: Project Development Branch on July 1, 2012	Sheet No. 3 of 4
Drawing File Named: M609003A.dgn	BCK					
CAD Workstation: V8 Solar Red by Dusk	BCK					

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Sacramento - San Luis Obispo - Phoenix
rickeng@rickeng.com

HAWK'S LANDING AIRSTREAM PARK

DETAILS

GILPIN COUNTY, CO

REVISIONS:

NO.	DESCRIPTION	DATE:
1		

REVIEWED FOR COMPLIANCE BY:

SIGNATURE DATE

SIGNATURE DATE

SCALE:	AS INDICATED
DATE:	02/05/2021
DRAWN BY:	JP/BG
CHECKED BY:	JK
JOB NO:	D01055

PROJECT NO.
D01055

DRAWING NO.
DET 08

SHEET NO. 27 OF 27 SHEETS

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GRADING, EROSION, AND SEDIMENT CONTROL PLANS FOR
BLACK HAWK PARK

LOT 1, BLOCK 1, MINERS MESA SUBDIVISION FILING NO. 4, LOCATED IN NORTH HALF OF SECTION 18. AND THE SOUTHWEST QUARTER OF SECTION 7 BOTH BEING WITHIN TOWNSHIP 3 SOUTH, RANGE 72 WEST 6TH P,M. CITY OF BLACK HAWK, COUNTY OF GILPIN, STATE OF COLORADO

OWNER:
CLUB VISTA PROPERTIES II, LLC
CONTACT: DARWIN HORAN

DEVELOPER:
VENTANA CAPITAL, INC.
9801 E. EASTER AVE.
CENTENNIAL, CO 80112
PHONE: 303.340.7006

CONTACT: BRYAN HORAN

ENGINEER:
RICK ENGINEERING COMPANY
9801 E. EASTER AVE.
CENTENNIAL, CO 80112
PHONE: 303.537.8020

CONTACT: ROBERT FITCH

SURVEYOR:
RICK ENGINEERING COMPANY
5690 WEBSTER ST.
ARVADA, CO 80002
PHONE: 303.423.6036

CONTACT: BOB HENNESSY

AGENCY:
CITY OF BLACK HAWK
211 CHURCH STREET,
BLACK HAWK, CO 80422
PHONE: 303.582.0615

CONTACT: CYNTHIA LINKER

SHEET LIST TABLE	
SHEET NUMBER	SHEET TITLE
01	COVER SHEET
02	INITIAL GESC
03	INTERIM GESC
04	FINAL GESC
05	DETAILS 01
06	DETAILS 02

consider updating the plat references to the soon to be approved BH Park Plat

PROJECT NARRATIVE:
THE PROJECT CONSISTS OF THE SUBDIVISION OF LOT 1, BLOCK1, OF MINERS MESA SUBDIVISION FILING NO. 4 INTO 9 LOTS AND 1 TRACT. THE SCOPE OF WORK TO BE COMPLETED INCLUDES OVERLOT GRADING FOR THE 9 LOTS, PRIVATE ACCESS ROADWAY IMPROVEMENTS AND DRIVEWAY ACCESS POINTS FROM MINERS MESA ROAD, SHARED PRIVATE DRAINAGE AND SEWER INFRASTRUCTURE IMPROVEMENTS, AND PUBLIC WATER INFRASTRUCTURE.

THE PROPERTY IS ZONED COMMERCIAL/BUSINESS SERVICES (C/BS) AND HAS AN APPROVED SPECIAL REVIEW USE (SRU) FOR RECREATIONAL CAMPGROUND AND INDOOR SHOOTING FACILITIES. THE PROPOSED USES FOR THE SITE WILL BE CONSISTENT WITH THE ZONING REQUIREMENTS AND WILL INCLUDE USES SUCH AS:

- AN AIRSTREAM PARK DEVELOPMENT WITH AMENITIES INCLUDING:
  - –A CARETAKERS CHECK–IN BUILDING
  - –AIRSTREAM BAR
- DISTILLERY FACILITIES INCLUDING TASTING ROOMS

STANDARDS AND SPECIFICATIONS

- BLACK HAWK AND CENTRAL CITY WATER AND SANITATION DISTRICT STANDARDS AND DETAILS
- CITY OF BLACK HAWK AND GIPLIN COUNTY ROADWAY DESIGN AND CONSTRUCTION STANDARDS
- MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (2009)
- URBAN STORM DRAINAGE CRITERIA MANUAL VOLUMES 1, 2, & 3 (2016)
- CITY OF BLACK HAWK ZONING ORDINANCE

THE CONTRACTOR SHALL ALERT THE OWNER AND ENGINEER OF ANY DISCREPANCIES FOUND BETWEEN THESE PLANS AND THE STANDARDS AND SPECIFICATIONS USED ABOVE.

LOCATION MAP
SCALE 1"=1000'

ABBREVIATION

AIR RELEASE VALVE	ARV
BEGIN CURVE	BC
BLOW OFF VALVE	BOV
BEGIN VERTICAL CURVE STATION	BVCS
BEGINNING OF VERTICAL CURVE ELEVATION	BVCE
CENTERLINE	CL
CLEANOUT	CO
ELECTRIC BOX	EB
END CURVE	EC
END VERTICAL CURVE STATION	EVCS
END VERTICAL CURVE ELEVATION	EVCE
EXISTING GRADE	EG
FINISHED GRADE	FG
FINISHED SURFACE	FS
FINISH FLOOR	FF
FLOW LINE	FL
GARAGE FLOOR FRONT	GFF
GARAGE FLOOR BACK	GFB
GRADE BREAK	GB
HIGH POINT	HP
INVERT	INV
IRRIGATION CONTROL VALVE	ICV
LOW POINT	LP
POINT OF CURB RETURN	PCR
POINT OF VERTICAL CURVE INTERSECTION	PVI
PROPERTY LINE	PL
PUBLIC UTILITY EASEMENT	PUE
PULL BOX	PB
RIGHT–OF–WAY	ROW
THRUST BLOCK	TB
TOP OF CURB	TC
TOP OF FOOTING	TF
TOP OF GRATE	TG
TOP OF WALL	TW
WATER METER	WM

LEGEND

PROPERTY LINE	
SWALE	
EXIST STORM DRAIN	
PROPOSED STORM DRAIN	
EXIST CONTOURS	
PROPOSED CONTOURS	
AREA OUTSIDE OF LIMITS OF CONSTRUCTION	
ASPHALT	
ROCK SOCK	RS
INLET PROTECTION	IP
SILT FENCE	SF
LIMITS OF CONSTRUCTION	LOC
STABILIZED STAGING AREA	SSA
EROSION CONTROL BLANKET	ECB
CONCRETE WASHOUT AREA	CWA
VEHICLE TRACKING CONTROL	VTC
SEDIMENT BASIN	SB
REINFORCED ROCK BERM	RRB
SEEDING AND MULCHING	TS/PS
SURFACE ROUGHENING	SR
CULVERT INLET PROTECTION	CIP

SITE BENCHMARK & BASIS OF BEARING:

CONTROL POINT 1: VERTICAL DATUM IS BASED IPON NAVD88 OPUS/GEOID18, GPS STATIC OBSERVATION.
NORTHING: 1168024.49'
EASTING: 3003217.42'
ELEVATION: 8647.75'
CP 1 IS A 1.5" ALUMINUM CAP STAMPED: "CP A". IT CAN BE FOUND AT THE LANDSCAPING AREA JUST WEST OF THE MAIN ENTRANCE TO THE CITY OF BLACK HAWK MAINTENANCE OFFICE PARKING LOT. IT IS APPROXIMATELY 1.6' TO THE TOP BACK OF CURVE AND 9.4' WESTERLY TO THE POINT OF CURVATURE AND BEING 0.2' BELOW GRADE.

BASIS OF BEARING: BEARINGS ARE BASED ON THE NORTH LINE OF THE NORTHWEST QUARTER OF SECTION 18 BEING ASSUMED TO BEAR N 89°07'38" W, A DISTANCE OF 3180.53 FEET BETWEEN THE FOLLOWING DESCRIBED MONUMENTS.

–THE NORTH QUARTER CORNER OF SECTION 18 BEING FOUND 3.5" ALUMINUM CAP B.L.M. MATCHING MONUMENT RECORD FILED 12/29/92.

–THE NORTHWEST CORNER OF SECTION 18 BEING A FOUND 3.5" ALUMINUM CAP B.L.M. MATCHING MONUMENT RECORD FILED 6/27/01.

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rickengineering.com

BLACK HAWK PARK
GESC COVER SHEET
GILPIN COUNTY, CO

REVISIONS:			DESCRIPTION	DATE:
NO.				
1				

REVIEWED FOR COMPLIANCE BY:

SIGNATURE DATE

SIGNATURE DATE

SCALE:	AS NOTED
DATE:	01/27/2021
DRAWN BY:	RP
CHECKED BY:	JK
JOB NO:	D01055

PROJECT NO.
D01055

DRAWING NO.
CVR-1

SHEET NO. 01 OF 04 SHEETS

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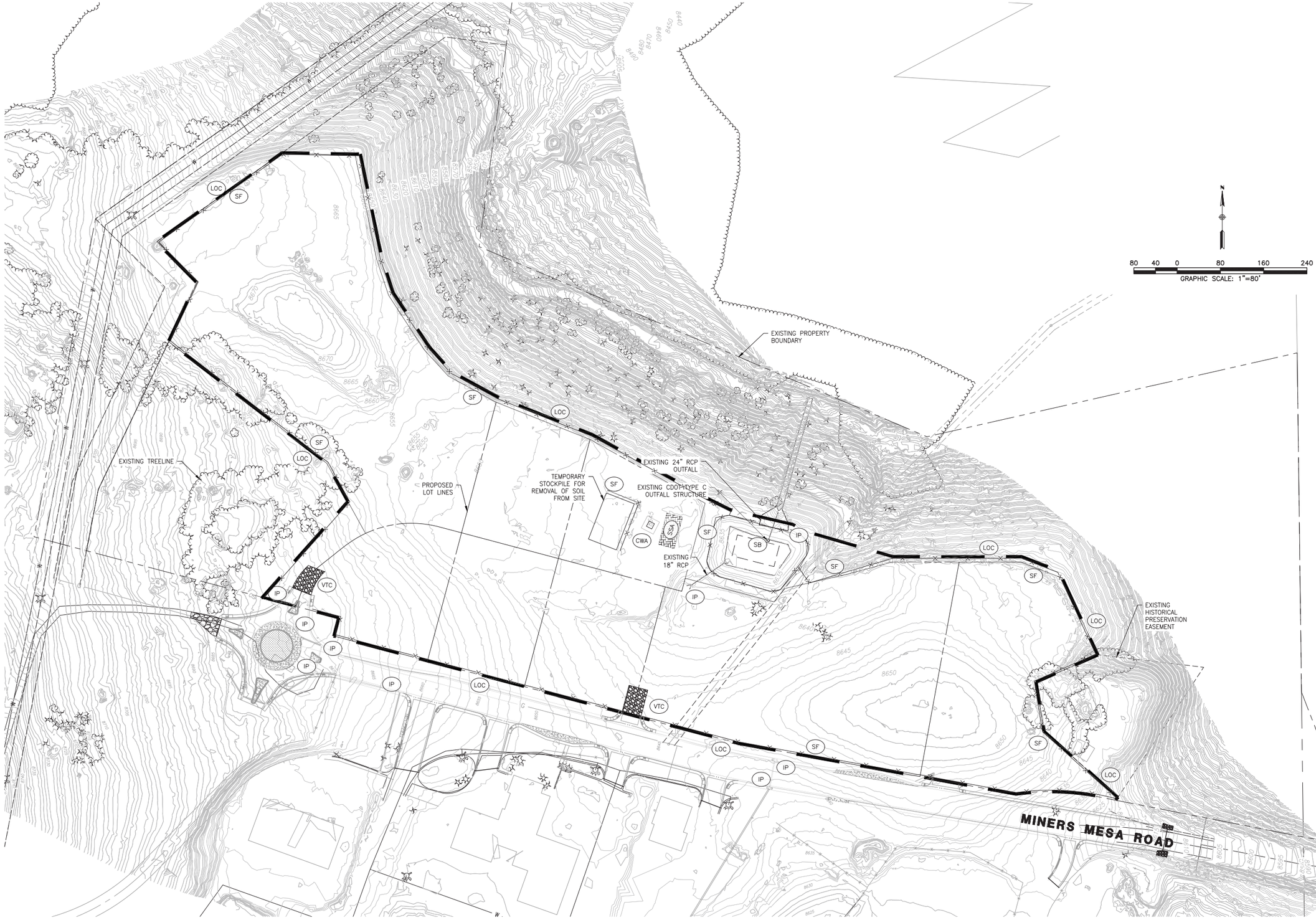

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BLACK HAWK PARK
INITIAL GESC
GILPIN COUNTY, CO

REVISIONS: NO.	DESCRIPTION	DATE:
1		

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SIGNATURE DATE

SCALE:	1"=80'
DATE:	01/27/2021
DRAWN BY:	RP
CHECKED BY:	JK
JOB NO:	D01055

PROJECT NO.
D01055

DRAWING NO.
GESC-02

SHEET NO. 02 OF 04 SHEETS

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BLACK HAWK PARK
INTERIM GESC
GILPIN COUNTY, CO

REVISIONS:		
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SIGNATURE	DATE
SIGNATURE	DATE

SCALE:	1"=80'
DATE:	01/27/2021
DRAWN BY:	RP
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JOB NO:	D01055

PROJECT NO.
D01055

DRAWING NO.
GESC-03

SHEET NO. 03 OF 04 SHEETS

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EX. 30.00' WATER EASEMENT

EX. 50.00' GAS EASEMENT

EXISTING TREELINE

EXISTING PROPERTY BOUNDARY

EXISTING 24" RCP OUTFALL

EXISTING 18" RCP

EXISTING WATER LINE

BUS PARK

CITY OF BLACKHAWK PUBLIC WORKS

EXISTING HISTORICAL PRESERVATION EASEMENT

MINERS MESA ROAD

NEED TS/PS LABEL

SHOULD PROBAB;Y RESEED AND MULCH THE POND AS THERE WILL LIKELY BE MUCH DISTURBANCE BY THE TIME ALL THE IMPROVEMETNS ARE COMPLETED

Additional 6" layer of topsoil may be required in seeding areas if anything is to actually grow up here. Coordinate with city for preferred seed mix.

SHOULD BE 04?

LOC SF ECB IP TS/PS SR VTC TSB

80 40 0 80 160 240

GRAPHIC SCALE: 1"=80'

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BLACK HAWK PARK
FINAL GESC

GILPIN COUNTY, CO

REVISIONS:	NO.	DESCRIPTION	DATE:
	1		

REVIEWED FOR COMPLIANCE BY:

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SIGNATURE DATE

SCALE:	1"=80'
DATE:	01/27/2021
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JOB NO:	D01055

PROJECT NO. D01055

DRAWING NO. **GESC-03**

SHEET NO. 03 OF 04 SHEETS

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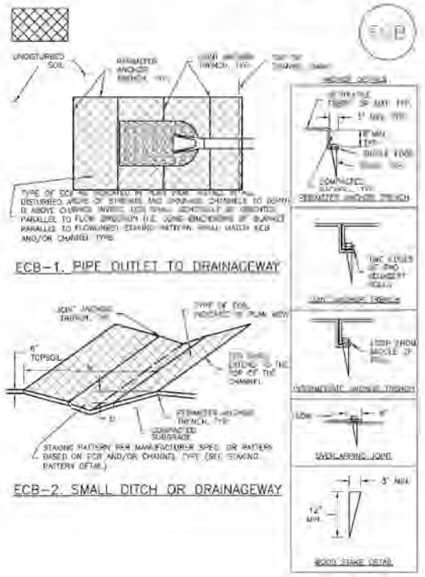
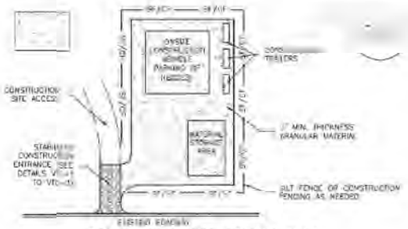
EC-6 Rolled Erosion Control Products (RECP)



Staging Area (SSA) SM-4



STABILIZED STAGING AREA INSTALLATION NOTES:

1. SEE PLAN VIEW FOR:
   –LOCATION OF STAGING AREA(S)
   –DIMENSIONS THAT REFLECT LOCATION AND SIZE OF STAGING AREA WITH APPROVAL FROM THE LOCAL JURISDICTION.
2. STABILIZED STAGING AREA SHOULD BE APPROPRIATE FOR THE NEEDS OF THE SITE. OVERSIZING RESULTS IN A LARGER AREA TO STABILIZE FOLLOWING CONSTRUCTION.
3. STAGING AREA SHALL BE STABILIZED PRIOR TO OTHER OPERATIONS ON THE SITE.
4. THE STABILIZED STAGING AREA SHALL CONSIST OF A MINIMUM 6" THICK GRANULAR MATERIAL.
5. UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. 703.3 AASHTO #3 COARSE AGGREGATE OR 4" (MINIMUM) ROCK.
6. ADDITIONAL PERIMETER BMPS MAY BE REQUIRED (INCLUDING BUT NOT LIMITED TO SILT FENCE AND CONSTRUCTION FENCING).

STABILIZED STAGING AREA MAINTENANCE NOTES:

1. INSPECT BMPS EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPS SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPS AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT INSPECTIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPS IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPS HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY IF RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.

SM-6 Stabilized Staging Area (SSA)

STABILIZED STAGING AREA MAINTENANCE NOTES:

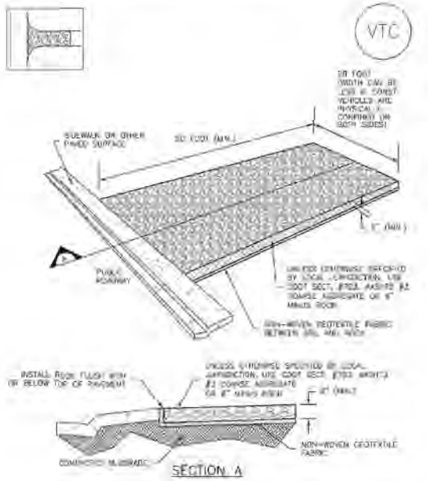
3. STABILIZED STAGING AREA SHALL BE ENLARGED IF ACCESS TO CONSTRUCTION VEHICLES HAS BECOME UNSTABLE.
4. THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE UNDERLYING MATERIAL SHALL BE REMOVED OR, IF APPROVED BY THE LOCAL JURISDICTION, USED ON SITE, AND THE AREA COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY LOCAL JURISDICTION.

NOTE: MANY MUNICIPALITIES PROHIBIT THE USE OF RECYCLED CONCRETE OR ASPHALT AS MATERIAL FOR STABILIZED STAGING AREAS DUE TO CONTAMINANTS OR LEACHING OF REGULATED METALS WHICH RECYCLED CONCRETE HAS BEEN FOUND TO CONTAIN.

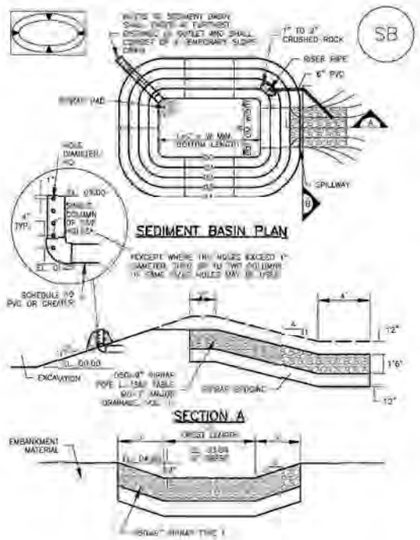
NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT MAY VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

SNEWS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD

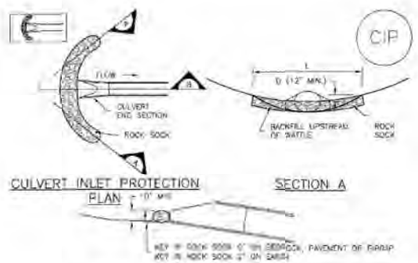
Vehicle Tracking Control (VTC) SM-4



Sediment Basin (SB) SC-7



Inlet Protection (IP) SC-6



CULVERT INLET PROTECTION INSTALLATION NOTES:

1. SEE PLAN VIEW FOR:
   –LOCATION OF CULVERT INLET PROTECTION.
2. SEE UDFCD SOCK DESIGN DETAIL FOR SOCK DIAMETER REQUIREMENTS AND JOINTING DETAIL.

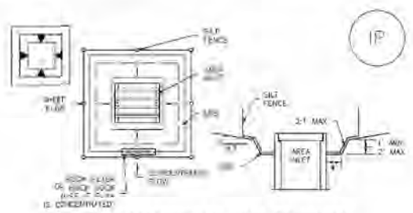
CULVERT INLET PROTECTION MAINTENANCE NOTES:

1. INSPECT BMPS EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPS SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPS AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT INSPECTIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPS IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPS HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. SEDIMENT ACCUMULATED UPSTREAM OF THE CULVERT SHALL BE REMOVED WHEN THE SEDIMENT DEPTH IS 6" THE HEIGHT OF THE ROCK SOCK.
5. CULVERT INLET PROTECTION SHALL REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS PERMANENTLY STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.

SNEWS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD

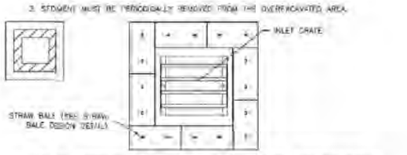
NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT MAY VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

SC-6 Inlet Protection (IP)



OVEREXCAVATION INLET PROTECTION INSTALLATION NOTES:

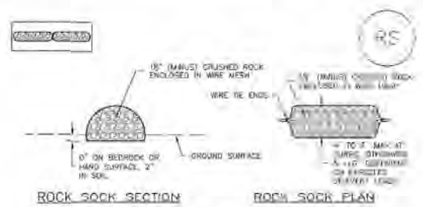
1. THIS TYPE OF INLET PROTECTION IS FEASIBLE AND VIABLE FOR SITES THAT HAVE NOT YET REACHED FINAL GRADE AND SHOULD BE USED ONLY FOR INLETS WITH A RELATIVELY SMALL CONTRIBUTING DRAINAGE AREA.
2. WHEN USING 100 CONCRETE BLOCKS (LAYING SHORT SIDES IN 2:1 RATIO WITH LENGTH) ORIENTED TOWARDS DIRECTION OF FLOW.
3. SEDIMENT MUST BE PERIODICALLY REMOVED FROM THE OVEREXCAVATED AREA.

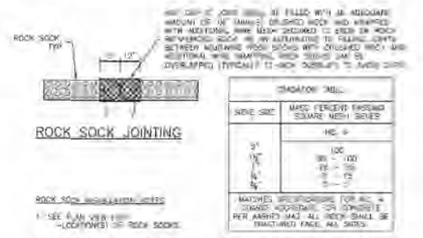


STRAW BALE BARRIER INLET PROTECTION INSTALLATION NOTES:

1. SEE STRAW BALE DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.
2. BALES SHALL BE PLACED IN A SINGLE ROW AROUND THE INLET WITH ENDS OF BALES TIGHTLY ABUTTING ONE ANOTHER.

SC-5 Rock Sock (RS)





GRADATION "AASHTO"	
SIEVE SIZE	MASS PERCENT PASSING SQUARE MESH SIEVES
	NO. 4
3"	100
2"	90 – 100
1"	20 – 55
½"	0 – 15
#4	0 – 5
MATCHES, SPECIFICATIONS FOR NO. 4 COARSE AGGREGATE (2" CONCRETE) PER AASHTO M43. ALL ROCK SHALL BE FRACTURED FACE, ALL SIDES.	

ROCK SOCK INSTALLATION NOTES:

1. SEE PLAN VIEW FOR:
   –LOCATION(S) OF ROCK SOCKS.
2. CRUSHED ROCK SHALL BE (MINUS) IN SIZE WITH A FRACTURED FACE (ALL SIDES) AND SHALL COMPLY WITH GRADATION SHOWN ON THIS SHEET (1½" MINUS).
3. WIRE MESH SHALL BE FABRICATED OF 10 GAGE POULTRY MESH, OR EQUIVALENT, WITH A MAXIMUM OPENING OF ½". RECOMMENDED MINIMUM ROLL WIDTH OF 48".
4. WIRE MESH SHALL BE SECURED USING "HOG RINGS" OR WIRE TIES AT 6" CENTERS ALONG ALL JOINTS AND AT 2' CENTERS ON ENDS OF ROCKS.
5. SOME MUNICIPALITIES MAY ALLOW THE USE OF FILTER FABRIC AS AN ALTERNATIVE TO WIRE MESH FOR THE ROCK ENCLOSURE.

RS–1. ROCK SOCK PERIMETER CONTROL

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BLACK HAWK PARK
GESC DETAILS 01
GILPIN COUNTY, CO

REVISIONS:	NO.	DESCRIPTION	DATE:
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GESC-05
SHEET NO. 05 OF 04 SHEETS

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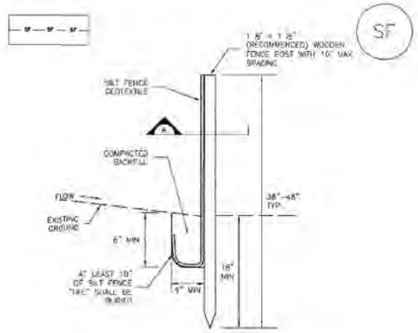
(SF) SC-1

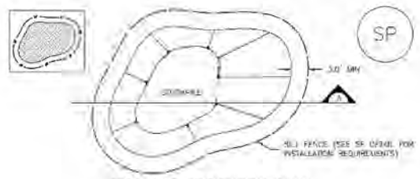


SILT FENCE

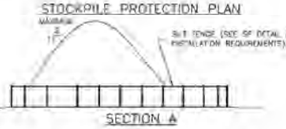
SECTION A

SF-1. SILT FENCE

Management (SP) MM-2



STOCKPILE PROTECTION PLAN



SECTION A

SP-1. STOCKPILE PROTECTION

STOCKPILE PROTECTION INSTALLATION NOTES:

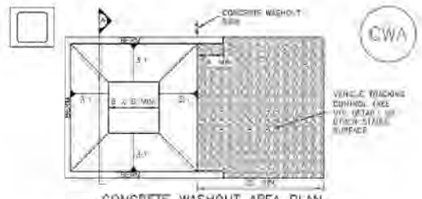
1. SEE PLAN VIEW FOR:
   - LOCATION OF STOCKPILES
   - TYPE OF STOCKPILE PROTECTION

2. INSTALL PERIMETER CONTROLS IN ACCORDANCE WITH SHOP RESPECTIVE DESIGN DETAILS. SILT FENCE IS SHOWN IN THE STOCKPILE PROTECTION DETAILS; HOWEVER, OTHER TYPES OF PERIMETER CONTROLS INCLUDING SEDIMENT CONTROL LOGS OR ROCK SOCKS MAY BE SUITABLE IN SOME CIRCUMSTANCES. CONSIDERATIONS FOR DETERMINING THE APPROPRIATE TYPE OF PERIMETER BARRIER FOR A STOCKPILE INCLUDE WHETHER THE STOCKPILE IS LOCATED ON A PERVIOUS OR IMPERVIOUS SURFACE, THE RELATIVE HEIGHTS OF THE PERIMETER CONTROL AND STOCKPILE, THE ABILITY OF THE PERIMETER CONTROL TO CONTAIN THE STOCKPILE WITHOUT FAILURE IN THE EVENT THAT WATER FLOWS FROM THE STOCKPILE SWIFTLY OR SLUMPS AGAINST THE PERIMETER, AND OTHER FACTORS.

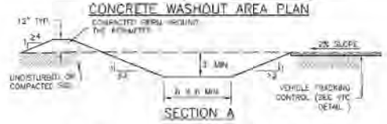
3. STABILIZE THE STOCKPILE SURFACE WITH SURFACE ROUGHENING, TEMPORARY SEEDING AND MULCHING, EROSION CONTROL BLANKETS OR SOIL BINDERS. SHOULD ADDITIONAL TIME BE EXPECTED TO BE REQUIRED FOR AN EXTENDED PERIOD (TYPICALLY MORE THAN 60 DAYS) THEN ALL STOCKPILES SHOULD BE SEEDED AND MULCHED WITH A TEMPORARY GRASS COVER SINCE THE STOCKPILE IS PLACED (TYPICALLY WITHIN 15 DAYS). USE OF MULCH ONLY OR A SOIL BINDER IS ACCEPTABLE IF THE STOCKPILE WILL BE IN PLACE FOR A MORE LIMITED TIME PERIOD (TYPICALLY 30-60 DAYS).

4. FOR TEMPORARY STOCKPILES ON THE INTERIOR PERIOD OF A CONSTRUCTION SITE, WHERE OTHER DOWNGRADIENT CONTROLS, INCLUDING PERIMETER CONTROLS, ARE IN PLACE, STOCKPILE PERIMETER CONTROLS MAY NOT BE REQUIRED.

Washout Area (CWA) MM-1



CONCRETE WASHOUT AREA PLAN



SECTION A

CWA-1. CONCRETE WASHOUT AREA

CWA INSTALLATION NOTES:

1. SEE PLAN VIEW FOR:
   - CWA INSTALLATION LOCATION

2. DO NOT LOCATE OR LINE/ANY CWA WITHIN 400' OF ANY NATURAL DRAINAGE PATHWAY OR WATERBODY. DO NOT LOCATE WITHIN 1,000' OF ANY WELLS OR DRINKING WATER SOURCES. IF SITE CONSTRAINTS MAKE THIS INFEASIBLE, OR IF HIGHLY PERMEABLE SOILS EXIST ON SITE, THE CWA MUST BE INSTALLED WITH AN IMPERMEABLE LINER (10 MIL MIN. THICKNESS) OR SURFACE WITH AT LEAST 4" OF CAST-IN-PLACE CONCRETE. WASHOUT DEVICES OF A LINED WORK OR TEMP. EXCAVATION AND THICKER SHALL BE USED.

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

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

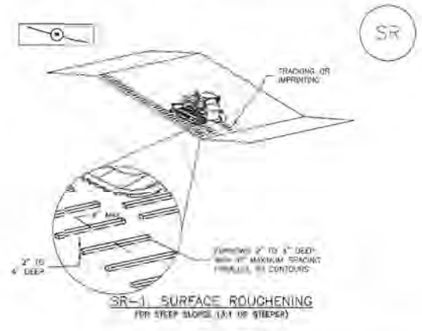
5. BERM SURROUNDING SIDES AND BACK OF THE CWA SHALL HAVE MINIMUM HEIGHT OF 1'.

6. VEHICLE TRACKING PAD SHALL BE INSTALLED DOWNHILL THE CWA.

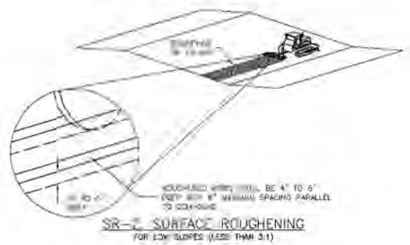
7. SIGN SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CWA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CWA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.

8. USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

Surface Roughening (SR) EC-1



SR-1. SURFACE ROUGHENING
FOR STEEP SLOPES (3:1 OR STEEPER)



SR-2. SURFACE ROUGHENING
FOR LOW SLOPES (LESS THAN 3:1)

Coordinate with the City to get preferred seed mix.

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BLACK HAWK PARK
GESC DETAILS 02
GILPIN COUNTY, CO

REVISIONS:

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JOB NO: D01055

PROJECT NO. D01055
DRAWING NO. GESC-06
SHEET NO. 06 OF 04 SHEETS

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RESOLUTION 10-2021

A RESOLUTION APPROVING THE FIRST ADDENDUM TO PROFESSIONAL SERVICES AGREEMENT WITH SAFEBUILT, LLC

STATE OF COLORADO
COUNTY OF GILPIN
CITY OF BLACK HAWK

Resolution No. 10-2021

TITLE: A RESOLUTION APPROVING THE FIRST ADDENDUM TO PROFESSIONAL SERVICES AGREEMENT WITH SAFEBUILT, LLC

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF BLACK HAWK, COLORADO, THAT:

Section 1. The City Council hereby approves the First Addendum to Professional Services Agreement with SAFEbuilt, LLC, attached hereto as Exhibit A, and authorizes the Mayor to sign the Agreement on behalf of the City.

RESOLVED AND PASSED this 17th day of March, 2021.

_____
David D. Spellman, Mayor

ATTEST:

_____
Melissa A. Greiner, CMC, City Clerk

EXHIBIT A

FIRST ADDENDUM
TO PROFESSIONAL SERVICES AGREEMENT WITH SAFEBUILT, LLC

FIRST ADDENDUM TO PROFESSIONAL SERVICES AGREEMENT

THIS FIRST ADDENDUM TO PROFESSIONAL SERVICES AGREEMENT (the "First Addendum") is made and entered into this **17th day of MARCH, 2021**, by and between the **CITY OF BLACK HAW**K, Colorado (hereinafter referred to as the "City") and **SAFEbuilt LLC** (hereinafter referred to as "Contractor").

RECITALS:

A. On January 1, 2021, the City and Contractor entered into a Professional Services Agreement (the "Agreement") under Resolution 4-2021 dated January 13, 2021.

AGREEMENT

NOW, THEREFORE, it is hereby agreed that for the consideration hereinafter set forth, that Contractor shall provide to the City, the work as needed in the manner provided in this First Addendum.

1. The Schedule of Chargers for the Agreement is hereby amended by this First Addendum to include a City Rate and Land Use Review Rate, from January 1, 2021, through and including January 12, 2022.

2. Contractor shall perform all work as set forth in the Agreement in accordance with Contractor's amended Schedule of Charges attached hereto as **Exhibit A-1**, and incorporated by this reference.

3. The original Agreement is in full force and effect and is hereby ratified by the City and the Contractor. The original Agreement, and this First Addendum constitute all of the agreements between the City and the Contractor.

IN WITNESS WHEREOF, the parties hereto each herewith subscribe the same in duplicate.

CITY OF BLACK HAWK, COLORADO

By: _____
David D. Spellman, Mayor

ATTEST:

_____
Melissa A. Greiner, CMC, City Clerk

APPROVED AS TO FORM:

_____
Corey Y. Hoffmann, City Attorney

SAFEbuilt, LLC

By: _____

Thomas P. Wilkas

Its: CFO

February 22, 2021

Date

ATTEST:

By: Sharon Marquez

Signature

Sharon Marquez

Print Name

Contract Manager

Print Title

February 22,2021

Date

AMENDED
EXHIBIT A-1

SCHEDULE OF CHARGES – 2021
SAFEBUILT LLC

Consultant fees, according to this Agreement, will be as follows:

2021 Service Fee Schedule	
New Permits Issued	
Building Permit Fee	70% of the fee collected by CoBH – Regular Rate 50% of the fee collected by CoBH – City Rate - City Projects Only
Electrical Permit Fee	70% of the fee collected by CoBH – Regular Rate 50% of the fee collected by CoBH – City Rate - City Projects Only
Building Plan Review Fee (Includes initial review with one (1) response comments)	70% of the fee collected by CoBH – Regular Rate 50% of the fee collected by CoBH – City Rate – City Projects Only
Additional Building Plan Reviews and Response Comments (Review of previous approved / changes / additions / revisions)	$150.00 an hour
Land Use Plan Reviews and Response Comments	$150.00 an hour
Structural Engineering Review Fee	Actual Costs
Re-Inspection Fee SAFEbuilt shall charge a re-inspection fee in the following instances: 1. The contractor schedules an inspection and is not ready when SAFEbuilt arrives. 2. The contractor schedules an inspection and provides an incorrect address. 3. The contractor schedules an inspection but is not available to walk with SAFEbuilt. 4. The contractor or homeowner disregards correction items listed from the previous	$150.00 an hour

inspection and schedules a re-inspection without making required corrections.	
Inspections Outside of Normal Business Hours. Regular Business Hours are 8:00 a.m. – 5:00 p.m. – Monday-Friday	$200.00 an hour – four (4) hour minimum
Building Consulting / Miscellaneous Services (Includes all services not listed)	$150.00 an hour
Expert Witness/Court Testimony	Actual Costs
Attend Staff and Development Review Committee (DRC) meetings	No Charge

Miscellaneous:

1. Rates are all-inclusive – no separate billing for mileage or vehicle expenses.
2. SAFEbuilt shall not invoice contractors or homeowners directly. SAFEbuilt shall invoice the CoBH.
3. In the event of termination of this Agreement, SAFEbuilt agrees to complete any plan reviews and inspections paid in advance.
4. Fees from the currently adopted CoBH Fee Schedule may also apply.

CITY OF BLACK HAWK
REQUEST FOR COUNCIL ACTION

SUBJECT: First Addendum to the Professional Services Agreement for SAFEbuilt.

RECOMMENDATION: Staff recommends the following motion to the Mayor and Board of Aldermen:

MOTION TO APPROVE Resolution 10-2021, a Resolution approving the First Addendum to Professional Services Agreement with SAFEbuilt, LLC.

SUMMARY AND BACKGROUND OF SUBJECT MATTER:
On January 13, 2021, the City and SAFEbuilt entered into a Professional Services Agreement under Resolution 4-2021.

The Schedule of Chargers for the Agreement is amended by this First Addendum to include a City Rate and Land Use Review Rate, from January 1, 2021, through and including January 12, 2022.

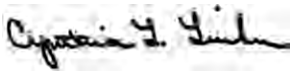
The contractor shall perform all work outlined in the Agreement and per SAFEbuilt's amended Schedule of Charges as Exhibit A-1.

The original Agreement remains in full force and effect. The original Agreement and this First Addendum constitute all of the agreements between the City and SAFEbuilt.

AGENDA DATE:	March 17, 2021
WORKSHOP DATE:	N/A
FUNDING SOURCE:	N/A
DEPARTMENT DIRECTOR APPROVAL:	[X]Yes [ ]No
STAFF PERSON RESPONSIBLE:	Cynthia L. Linker CP&D Director
DOCUMENTS ATTACHED:	Resolution 10-2021 First Addendum & Exhibit A-1
RECORD:	[ ]Yes [X]No
CoBH CERTIFICATE OF INSURANCE REQUIRED	[ ]Yes [X]No

CITY ATTORNEY REVIEW: [ ] Yes [X]N/A

SUBMITTED BY:



Cynthia L. Linker, CP&D Director

REVIEWED BY:

Stephen N. Cole, City Manager

RESOLUTION 11-2021

A RESOLUTION MAKING CERTAIN ADDRESS CHANGES WITHIN THE CITY FOR CERTAIN PROPERTIES ON GREGORY STREET

STATE OF COLORADO
COUNTY OF GILPIN
CITY OF BLACK HAWK

Resolution No. 11-2021

TITLE: A RESOLUTION MAKING CERTAIN ADDRESS CHANGES WITHIN THE CITY FOR CERTAIN PROPERTIES ON GREGORY STREET

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF BLACK HAWK, COLORADO, THAT:

Section 1. The City Council hereby approves the changes of street address for the properties on Gregory Street as more particularly described in **Exhibit A**, attached hereto and incorporated herein by this reference.

Section 2. The City Clerk is further directed to do the following:

A. Provide notice of the address changes to the Gilpin County Assessor's Office;

B. Provide notice of the address changes to all property owners; and

C. Provide notice of the address changes to the United States Post Office located in Black Hawk.

Section 3. The address changes set forth herein shall be effective May 1, 2021.

RESOLVED AND PASSED this 17th day of March, 2021.

_____
David D. Spellman, Mayor

ATTEST:

_____
Melissa A. Greiner, CMC, City Clerk

EXHIBIT A

CERTAIN ADDRESS CHANGES WITHIN THE CITY FOR CERTAIN PROPERTIES ON GREGORY STREET

CITY OF BLACK HAWK
REQUEST FOR COUNCIL ACTION

SUBJECT: Change of numerical addresses within the 300 block of Gregory Street.

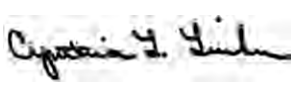
RECOMMENDATION: Staff recommends the following motion to the Mayor and Board of Aldermen:

MOTION TO APPROVE Resolution No. 11-2021, a Resolution making certain address changes within the City for certain properties on Gregory Street.

SUMMARY AND BACKGROUND OF SUBJECT MATTER:
City staff recently discovered the existence of duplicate addresses within the City of Black Hawk and Central City located within the 300 block of Gregory Street. Within the City of Black Hawk, this includes the Gregory Street Plaza currently under construction. Prior to the establishment of retail businesses within the Plaza, City emergency personnel have requested the duplicate addresses be changed in order to avoid confusion for dispatch, emergency responders, and the general public. Refer to the Staff Report included with this Request for Council Action.

AGENDA DATE:	March 17, 2021
WORKSHOP DATE:	N/A
FUNDING SOURCE:	N/A
DEPARTMENT DIRECTOR APPROVAL:	[X]Yes [ ]No
STAFF PERSON RESPONSIBLE:	Cynthia L. Linker CP&D Director
DOCUMENTS ATTACHED:	Resolution 11-2021 Staff Report Attachments
RECORD:	[ ]Yes [X]No
CoBH CERTIFICATE OF INSURANCE REQUIRED	[ ]Yes [X]No
CITY ATTORNEY REVIEW:	[ ]Yes [X]N/A

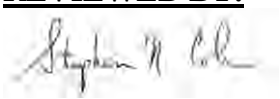
SUBMITTED BY:



Cynthia L. Linker, CP&D Director

Vincent Harris, AICP, Baseline Corporation

REVIEWED BY:



Stephen N. Cole, City Manager

Staff Report

CITY OF BLACK HAWK
PLANNING / LAND USE

Date prepared: March 4, 2021
Meeting Date: March 17, 2021

STAFF REPORT:	**Gregory Street Address Changes**
For:	City Council
Project Number:	P-19-32
Property Address:	300 Block of Gregory Street, Black Hawk
Applicants:	The City of Black Hawk CP&D
Prepared by:	Julie Esterl - Baseline Corporation
Approved by:	Vince Harris, AICP - Baseline Corporation
Reviewed by:	Cynthia Linker, CP&D Director

BACKGROUND:

On September 23, 2020, the City initiated several address changes and additions to accommodate the improvements occurring on Gregory Street, as well as to make some corrections, additions and clarifications of addresses along State Highway 119, Chase Street and Miners Mesa Road. Since that time, the City has become aware of some duplicate addresses along Gregory Street that occur both in Black Hawk and in Central City. Because of the close proximity of the cities and the potential confusion for emergency services that may be dispatched to Gregory Street (in either Black Hawk or in Central City), the City feels changes to certain building addresses is needed and appropriate. Changes are proposed within the 300 block of Gregory Street, and these changes will assist 911 dispatchers, emergency response personnel, as well as the general public in locating these properties more easily. There are currently five (5) duplicative address numbers (321, 331, 341, 351, and 361) assigned in Black Hawk and in Central City on "Gregory Street" with same street name is in both communities. Figure 1 shows an overview of the location of the "300 block" of Gregory Street in Black Hawk, and Figure 2 shows the specific changes proposed. A spreadsheet summarizing the existing and proposed address changes is provided in Figure 3.

Figure 1: Location Map

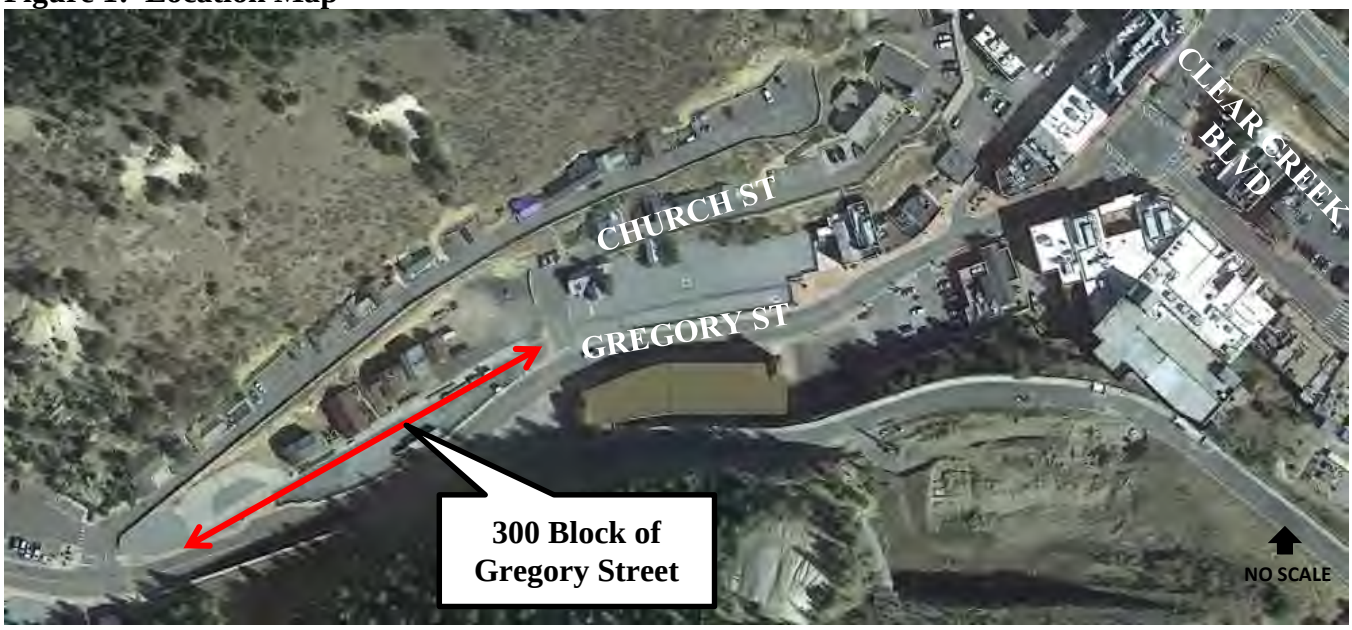


Figure 2: Proposed Address Change Map

Figure 3: Proposed Address Changes

EXHIBIT A **GREGORY STREET ADDRESS CHANGES** **Effective May 1, 2021**			
Gregory Street Properties	**Current Address**	**Proposed Address**	**Comments**
Future Commercial	301 Gregory Street	**307 Gregory Street**	City Owned
McAfee Buildings	311 Gregory Street	**317 Gregory Street**	City Owned
Woodbury House	321 Gregory Street	**327 Gregory Street**	City Owned
Rocky Mountain Evangelical Free Church	331 Gregory Street	**337 Gregory Street**	Privately Owned
Public Restroom	341 Gregory Street	**347 Gregory Street**	City Owned
Norton House	351 Gregory Street	**357 Gregory Street**	City Owned
Fire Display Building	361 Gregory Street	**367 Gregory Street**	City Owned

REQUEST:
City of Black Hawk staff is requesting the approval of proposed address changes within the 300 block of Gregory Street as shown in Figure 3 of this staff report. Essentially all the buildings in Black Hawk along Gregory Street will now end in the number of "7" which is not used in Central City.

REVIEW:
Staff from Baseline Corporation has proposed the Gregory Street address changes to City of Black Hawk staff. The City of Black Hawk controls addressing within its boundaries in order to provide logical order and to facilitate emergency services' response to calls. The proposed address changes will assist emergency dispatchers, personnel responders, and the general public in more quickly and more easily locating properties. The proposed address changes are logical, in order, and will benefit the health, safety and welfare of the community with better accuracy during emergency situations.

NOTIFICATION:
The Gilpin County Assessor's office maintains property records and the official parcel map for the county. Notification of the address changes, if approved, will be forwarded to the Gilpin County Assessor for the purpose of updating Gilpin County property records and the parcel map.

Most of the properties subject to the proposed address changes are owned by the City of Black Hawk; however there is one privately owned property (the Church) that will be notified of the address changes, should these changes be approved.

The United States Post Office located in Black Hawk delivers mail and maintains Post Office boxes for local property owners. The USPS will be notified of the address changes, should they be approved.

The City is requesting that the proposed address changes go in to effect on May 1, 2021. Community Planning and Development staff will work on the City files for all existing building permits and get the new addresses correctly correlated to the appropriate building and its permits.

In summary, Staff recommends approval of the proposed address changes for the 300 block of Gregory Street subject to the following conditions:

1. Notice of the address changes shall be forwarded to the Gilpin County Assessor; and
2. Notice of the address changes shall be forwarded to all privately owned properties; and
3. Notice of the address changes shall be forwarded to the United States Post Office located in Black Hawk; and
4. The address and street name changes will go in to effect on May 1, 2021.

RECOMMENDATION:

Staff recommends the following motion to the Mayor and Board of Aldermen:

MOTION TO APPROVE Resolution No. 11-2021, a Resolution approving the numerical address changes within the 300 block of Gregory Street as outlined in Exhibit A – Gregory Street Address Changes and Gregory Street Address Changes Map dated March 4, 2021 with the following conditions:

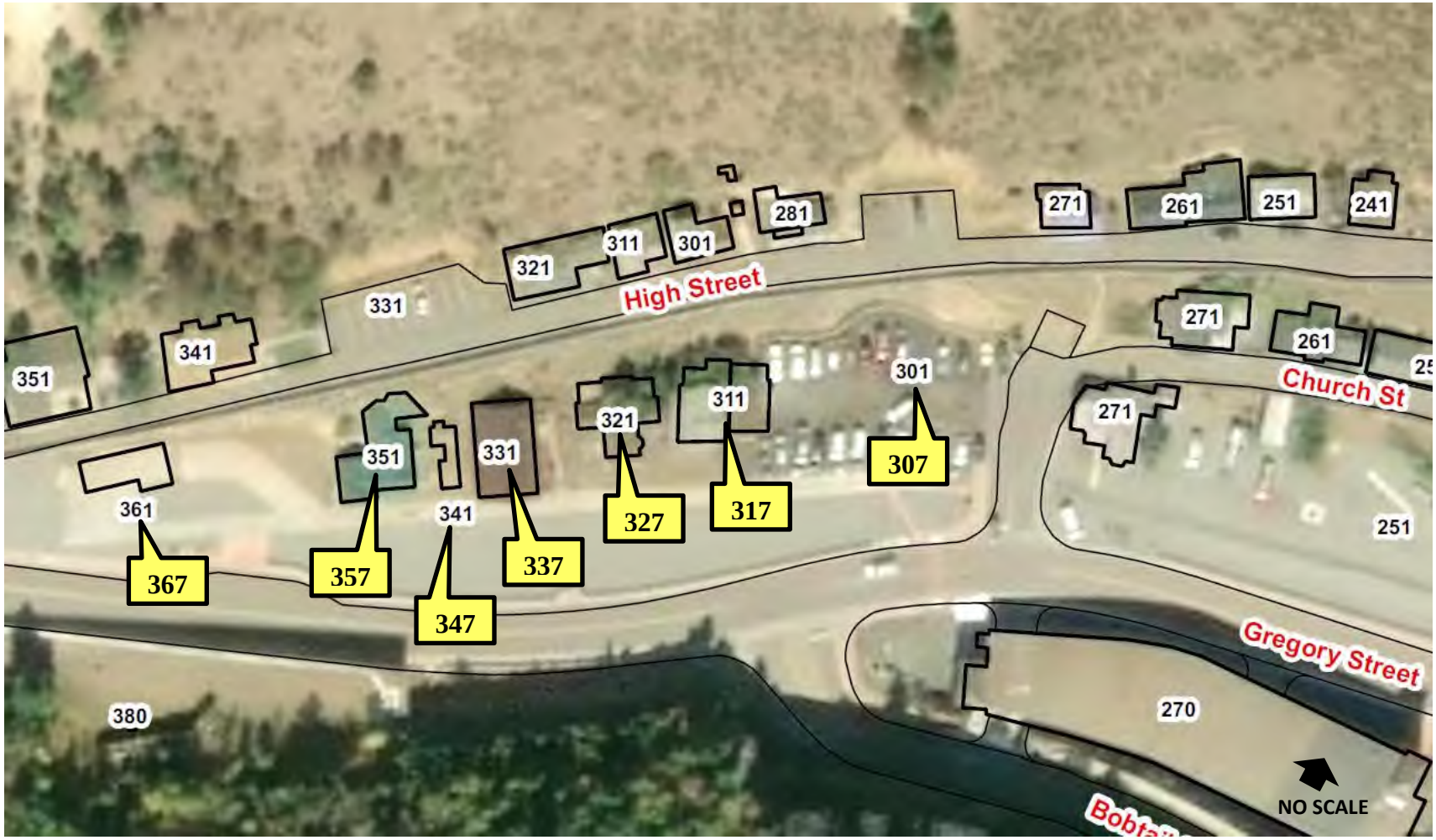
1. **Notice of the address changes shall be forwarded to the Gilpin County Assessor; and**
2. **Notice of the address changes shall be forwarded to all privately owned properties; and**
3. **Notice of the address changes shall be forwarded to the United States Post Office located in Black Hawk; and**
4. **The address and street name changes will go in to effect on May 1, 2021.**

ATTACHMENTS:

1. Exhibit A – City of Black Hawk Address Changes
2. Gregory Street Address Changes Map dated March 4, 2021

EXHIBIT A GREGORY STREET ADDRESS CHANGES Effective May 1, 2021			
Gregory Street Properties	**Current Address**	**Proposed Address**	**Comments**
Future Commercial	301 Gregory Street	**307 Gregory Street**	City Owned
McAfee Buildings	311 Gregory Street	**317 Gregory Street**	City Owned
Woodbury House	321 Gregory Street	**327 Gregory Street**	City Owned
Rocky Mountain Evangelical Free Church	331 Gregory Street	**337 Gregory Street**	Privately Owned
Public Restroom	341 Gregory Street	**347 Gregory Street**	City Owned
Norton House	351 Gregory Street	**357 Gregory Street**	City Owned
Fire Display Building	361 Gregory Street	**367 Gregory Street**	City Owned

GREGORY STREET ADDRESS CHANGES
MARCH 4, 2021



RESOLUTION 12-2021

A RESOLUTION OF THE CITY OF BLACK HAWK, COLORADO, TO FILE WATER COURT APPLICATION, AND RATIFYING PRIOR ACTS, AND AUTHORIZING THE TAKING OF ALL NECESSARY STEPS

STATE OF COLORADO
COUNTY OF GILPIN
CITY OF BLACK HAWK

Resolution No. 12-2021

TITLE: A RESOLUTION OF THE CITY OF BLACK HAWK, COLORADO, TO FILE WATER COURT APPLICATION, RATIFYING PRIOR ACTS, AND AUTHORIZING THE TAKING OF ALL NECESSARY STEPS

WHEREAS, the waters of Clear Creek and its tributaries can be diverted and beneficially used by the City of Black Hawk for its municipal water supply and for provision of water to those users to whom it now provides or may in the future provide water through its municipal system;

WHEREAS, the City Council of the City of Black Hawk finds that it is prudent for the City to increase its water supply for the present and future needs of its residents and of those other users to whom it may provide water, and further finds that it may be economically efficient to do so by the filing of a new Water Court application, including for the appropriation of a new storage water right;

WHEREAS, officials, employees, attorneys, agents and consultants of the City of Black Hawk have conducted investigations and recommended the filing of an additional Water Court application to meet the City's future water needs, including a change of water rights; storage, and

WHEREAS, the City of Black Hawk has participated in construction of a new outlet gate for the Georgetown Lake dam and has participated in the dredging of Georgetown Lake and through those projects has acquired additional storage volume in Georgetown Lake, the City of Black Hawk must file a Water Court application in order to maximize use of the additional storage for Black Hawk's municipal diversions.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF BLACK HAWK, COLORADO, THAT:

Section 1. It is the intent of the City of Black Hawk to appropriate water for beneficial use from Clear Creek and its tributaries.

Section 2. The City of Black Hawk ratifies the acts of its officials, employees, attorneys, agents and consultants in taking steps to accomplish said application(s), and hereby authorizes further such acts as may be required.

Section 3. Specifically, the City hereby authorizes its officials, employees, attorneys, agents, and consultants to prepare such necessary plans and other documents as may be needed for filing of a Water Court application (and amendments thereof) for a new application for an

additional 60.1-acre feet of storage in Georgetown Lake, and for a refill storage right in the amount of 160.1-acre feet.

Section 4. The City's attorneys are specifically directed to prepare and file such pleadings as may be necessary in the courts of the State of Colorado.

Section 5. The City Council of the City of Black Hawk hereby ratifies and confirms the actions of its officials in initiating the appropriations and in directing the City's employees, attorneys, engineers, and consultants to conduct investigations, to perform acts on the ground to initiate the appropriations, and to give notice of the intent of the City to initiate the appropriations described in Section 3, above, and directing the City's attorneys to prepare and file such pleadings in connection with said appropriations as may be necessary in the courts of the State of Colorado

Section 6. This resolution is effective upon its approval by the City Council.

RESOLVED AND PASSED this 17th day of March, 2021.

_____
David D. Spellman, Mayor

ATTEST:

_____
Melissa Greiner, CMC, City Clerk

CITY OF BLACK HAWK
REQUEST FOR COUNCIL ACTION

SUBJECT: Georgetown Lake Additional Storage Water Right

RECOMMENDATION: Staff recommends the following motion to the Mayor and Board of Aldermen:

MOTION TO APPROVE *Resolution No. 12-2021, A Resolution of the City of Black Hawk, Colorado, to File Water Court Application, Ratifying Prior Acts, and Authorizing the Taking of All Necessary Steps.*

SUMMARY AND BACKGROUND OF SUBJECT MATTER: Over the eight years, the City of Black Hawk attained an additional 60.1-acre feet of storage in Georgetown Lake as a result of various Intergovernmental Agreements with the Town of Georgetown. The current storage decree (2007CW327) is for 100-acre feet of storage in the Lake. In order to make use of the City's full amount of storage (160.1-acre feet), the City is required to file a Water Court Application for the additional storage amount.

AGENDA DATE: 17-Mar-21

WORKSHOP DATE: 17-Mar-21

FUNDING SOURCE: 501-3150-4603311 – Water Rights Legal

DEPARTMENT DIRECTOR APPROVAL: [X]Yes [ ]No

STAFF PERSON RESPONSIBLE: James R. Ford, P.E.

DOCUMENTS ATTACHED: None

RECORD: [X]Yes [ ]No

CoBH CERTIFICATE OF INSURANCE REQUIRED [ ]Yes[X]No

CITY ATTORNEY REVIEW: [X]Yes [ ]N/A

SUBMITTED BY:

James R. Ford, P.E. Water Manager

REVIEWED BY:

Stephen N. Cole, City Manager

RESOLUTION 13-2021

A RESOLUTION ADOPTING THE RESIDENTIAL EXTERIOR PAINT PROGRAM GUIDE TO PROGRAMS, DATED MARCH 2021

STATE OF COLORADO
COUNTY OF GILPIN
CITY OF BLACK HAWK

Resolution No. 13-2021

TITLE: A RESOLUTION ADOPTING THE RESIDENTIAL EXTERIOR PAINT PROGRAM GUIDE TO PROGRAMS, DATED MARCH 2021

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF BLACK HAWK, COLORADO, THAT:

Section 1. The Residential Exterior Paint Program Guide to Programs, as revised dated March 2021, attached hereto as **Exhibit A** and incorporated herein by this reference, is hereby approved.

Section 2. The March 2021 Residential Exterior Paint Program Guide to Programs shall apply to projects commencing after the effective date of this Resolution.

RESOLVED AND PASSED this 17th day of March, 2021.

_____
David D. Spellman, Mayor

ATTEST:

_____
Melissa A. Greiner, CMC, City Clerk

EXHIBIT A

ADOPTING THE RESIDENTIAL EXTERIOR PAINT PROGRAM GUIDE TO PROGRAMS, DATED MARCH 2021

CITY OF BLACK HAWK
REQUEST FOR COUNCIL ACTION

SUBJECT: Adoption of the Residential Exterior Paint Program Guide to Programs, dated March 2021.

RECOMMENDATION: Staff recommends the following motion to the Mayor and Board of Aldermen:

MOTION TO APPROVE Resolution 13-2021, a Resolution adopting the Residential Exterior Paint Program – Guide to Programs, dated March 2021.

SUMMARY AND BACKGROUND OF SUBJECT MATTER:
The City requires a paint contractor specializing in comprehensive painting services that provide all supervision, labor, equipment, tools, supplies, and material for residential and municipal projects on an "on-call" basis.

On January 8, 2020, City Council approved by Resolution 2-2020 a Professional Services Agreement between the City of Black Hawk and Gonzales Custom Painting, Inc. City Council recently renewed said Agreement on January 13, 2021, by Resolution 4-2021.

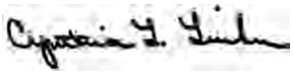
The Residential Exterior Paint Program Guide to Programs was original adopted by City Council by Resolution 56-2014 on August 27, 2014. With the approval of the 2021 annual budget and the renewal of the Professional Services Agreement, the Residential Exterior Paint Program – Guide to Programs and Exhibits required an amendment.

Attached is a "Clean" and Redlined" DRAFT of the Guide to Programs and Exhibits with Staff's recommended changes.

AGENDA DATE:	March 17, 2021
WORKSHOP DATE:	N/A
FUNDING SOURCE:	N/A
DEPARTMENT DIRECTOR APPROVAL:	[X]Yes [ ]No
STAFF PERSON RESPONSIBLE:	Cynthia L. Linker CP&D Director
DOCUMENTS ATTACHED:	Resolution 13-2021 Guide to Programs with Exhibits
RECORD:	[ ]Yes [X]No
CoBH CERTIFICATE OF INSURANCE REQUIRED	[ ]Yes [X]No

CITY ATTORNEY REVIEW: [ ]Yes [X]N/A

SUBMITTED BY:



Cynthia L. Linker, CP&D Director

REVIEWED BY:

Stephen N. Cole, City Manager

CLEAN COPY

BLACK HAWK®

CITY OF BLACK HAWK

RESIDENTIAL EXTERIOR PAINT PROGRAM
GUIDE TO PROGRAMS

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SECTION 2: INCOME TAX LIABILITY..... 4
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APPENDIX 2: PROJECT PROCESSES AND DOCUMENTATION REQUIREMENTS 15

Exhibit A: Residential Exterior Paint Program – Application
Exhibit B: Residential Exterior Paint Program - Agreement

DRAFT

SECTION 1: PROGRAM OVERVIEW

A. PURPOSE

1. The Program preserves the architectural character of the residential properties within the Historic Residential District.

2. The Program provides the Property Owner with the resources and financial assistance needed to maintain the exterior paint on residential buildings.

3. The Program pledges the continuation and enhancement of a functional, sustainable, healthy, and vibrant residential community.

B. DEFINITIONS

1. Board of Aldermen: An elected six-member panel authorized with decision-making powers for the governance of the City of Black Hawk.

2. Building Official: The City official is charged with the responsibility of administering and enforcing the City's building codes.

3. City of Black Hawk Residential Design Guidelines: Guidelines developed to help preserve the City's character with exterior improvements to buildings.

4. City Council: The elected Board of Aldermen, plus the Mayor.

5. City Manager: The City Manager is the chief administrative officer for all departments of the City, is appointed by the City Council, and shall have and exercise all the administrative powers vested in the City.

6. City Staff: An employee of the City of Black Hawk or an entity designated by the City of Black Hawk to act on their behalf in administering the contract documents, coordinating design professionals, overseeing construction progress, and reviewing paperwork required as part of the Program

7. Contractor: The contracting company selected to oversee and manage the painting and construction work.

8. Construction Hard Costs: Costs related to labor, materials, and overhead.

9. Construction Soft Costs: Costs related to fees, permits, insurance, and other costs not directly associated with the physical installation of the Scope of Work.

10. Exterior Paint Program: A funding source from the City of Black Hawk administered via direct contract between the Property Owner and Contractor.

DRAFT

11. Grant Recipient: Property Owner per recorded City documents.

12. Guide to Programs: This policy and procedures document, related to the Exterior Paint Program.

13. Municipal Code: A collection of municipal ordinances and laws enacted and enforced by the City of Black Hawk.

14. Outbuildings: Accessory structures to the original building.

15. Property Owner: Property Owner per recorded City documents, or designated representative as provided with written permission via a signed and notarized "Power-of-Attorney" from the Property Owner. The appointed representative can act on behalf of the Property Owner in specified or all legal and financial matters.

16. Qualified Professional: An individual licensed or appropriately experienced in the discipline within which a recommendation is needed.

17. Residential Properties: Properties within the City Limits of Black Hawk.

18. Substantial Completion: The stage in the work's progress when the job, or designated portion thereof, is sufficiently complete per the contract documents so that the owner can occupy or utilize the work for its intended use.

19. Temporary Construction Easement: A legal document providing the Grantee (City of Black Hawk) with full access to the Property under consideration to complete the Scope of Work. The easement is only valid for the duration of the construction period.

20. Temporary Use Permit: A permit issued by the City of Black Hawk to allow private property to be used for alternate uses (storage, staging, etc.) for a limited amount of time.

DRAFT

SECTION 2: TAX LIABILITY

A. ACKNOWLEDGEMENT

1. Receipt of a Residential Exterior Paint Grant is taxable income to the Property Owner.

2. Under this Residential Exterior Paint Program, funds awarded under the State and Federal income tax laws are considered income.

3. The City reports approved and awarded Grants to State and Federal taxing authorities in the manner provided by applicable law.

4. As the recipient of a Grant, the Property Owner may be required to pay income or other taxes to State and Federal authorities due to receiving a Grant under this Program.

5. The Property Owner should consult with their tax advisor about whether the one-time first-round reimbursement is income and gives rise to additional State and Federal income tax liability.

6. The City has no responsibility or obligation concerning any tax liability to the Property Owner as a recipient of Grant funds or benefits received under the Residential Exterior Paint Program.

7. The City is not responsible for the payment of any tax liability associated with participation in the Residential Exterior Paint Program.

8. The City of Black Hawk provides a one-time first-round reimbursement of a Property Owner's State and Federal income tax liability in association with a Residential Exterior Paint Grant's receipt. The second-round tax liability is the full financial responsibility of the Property Owner.

9. The City encumbers dollars in its accounting system to accommodate a one-time first-round payment of the tax reimbursement. The Property Owner is responsible for completing the necessary paperwork for such amount and delivering it to the City of Black Hawk Finance Department.

10. A Property Owner is required to submit documentation for the one-time first-round tax payment reimbursement during the calendar year(s) following the Grant funds' receipt.

11. Suppose the one-time first-round reimbursement is not requested within the time limits set forth herein. In that case, the encumbered funds will no longer be available to the Property Owner for State and Federal tax payment reimbursement. Such encumbered funds will be reallocated back into the City budget for other purposes.

12. The City of Black Hawk does NOT reimburse the Property Owner for any additional

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State and Federal income tax liability that might arise from the one-time first-round reimbursement.

13. Regardless of the City's agreement to compensate Grant recipients for the one-time first-round State and Federal tax burden of a Grant, the obligation to pay any taxes, including the second-round, remains the Property Owner's responsibility as the Grant recipient.

14. A Residential Exterior Paint Program Agreement sets forth the terms and conditions of participation in the Program – See Exhibit B.

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SECTION 3: RESIDENTIAL EXTERIOR PAINT PROGRAM

A. ELIGIBILITY

1. Participation in the Residential Exterior Paint Program requires an Application – See Exhibit A.

2. Eligible properties are located within the Black Hawk City limits.

3. Each Residential Property is initially considered to participate in the Program under the initial five (5) year cycle. Once a Residential Property has received funding under the initial five (5) year cycle, the Property will revert to an eight (8) year funding cycle.

4. All funding is subject to the availability of grant funds. The City Manager allocates in the exercise of their sole discretion and is further subject to the annual budget and appropriation of the General Fund by the City of Black Hawk City Council.

5. Items covered under the Program include the preparation and painting of exterior siding, soffits, eaves, trim, metalwork, decks, porches, exterior wood doors, wood windows, wood fences, metal fences, previously painted gutters, and downspouts, and vertical concrete. A site walk will identify incidental and major repairs.

6. The Property Owner undertakes the financial responsibility for repairs.

7. The Property Owner promptly undertakes the improvements and other repairs identified by the City. The Property Owner has two (2) months to complete the repairs and painting, which time period shall begin upon the issuance of a building permit by the City to start the Project.

8. The Property Owner assigns a Power-of-Attorney if they cannot physically be present during the entire Project.

9. Both historic and non-historic elements are eligible under the Program.

B. LEGAL REQUIREMENTS

1. Along with the approval of an Application by the City, the Property Owner must enter into legal agreements with the City which describe the terms for participation in the Residential Exterior Paint Program.

2. Participation in the Residential Exterior Paint Program requires at a minimum an Application – See Exhibit A, Residential Exterior Paint Grant Agreement – See Exhibit B, a W-9 Form, a Scope of Work, a Building Permit, a Check and Payment Request Reimbursement form, and a Federal and State Tax Liability Reimbursement.

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3. Additional documents such as a Power-of-Attorney, Temporary Construction Easement, and Temporary Use Permit may also be required.

4. The Property Owner promptly undertakes the construction of improvements and other repairs of the Property identified by the City. The Property Owner has two (2) months to complete the Project, which time period shall begin upon the issuance of a building permit by the City to start the Project.

5. The Property Owner assigns a Power-of-Attorney if they cannot physically be present during the entire Project.

C. RESIDENTIAL EXTERIOR PAINT PROGRAM PROVISIONS

1. The Residential Exterior Paint Program is a private project by the Property Owner reimbursed by the City.

2. Property Owners recommended for funding are notified by telephone, email, and mail when the City makes a final decision.

3. Property Owners not selected by the City will be notified in writing explaining the reason(s) for rejection. Those Property Owners may meet with City Staff to discuss the factors that resulted in the Application's rejection. The City schedules Board of Appeals hearings before the Black Hawk City Council acting as the Board of Appeals.

4. The City recommends the Property Owner consults with a qualified tax advisor on the financial impacts of participating in the Program.

5. If a Full Site and Building Grant under the Historic Restoration and Community Preservation Grant Program is Granted within three (3) years of the City Granting a Residential Exterior Paint Grant, the Property Owner agrees to reimburse the City in full the total amount funded for hard construction costs before the Grant of the Full Site and Building is approved and financed.

6. A Residential Exterior Paint Program Grant is only permitted to a Residential Property once every five (5) years. Once a Residential Property has received funding under the five (5) year cycle, the Property will revert to an eight (8) year funding cycle.

7. Neither a Property Owner nor a relative of the Property Owner can be the Contractor, subcontractor, or material supplier.

8. The Property Owner assigns a Power of Attorney if they cannot physically be present during the Project.

9. If a Property Owner owns multiple Residential Properties, an Application may be made for each Property. Properties are placed on the list in the order in which the Applications are received.

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10. The Property Owner undertakes the construction of improvements and other repairs of the Property approved by the City promptly. The Property Owner has two (2) months to complete the Project, which time period shall begin upon the issuance of a building permit or upon disbursement of the first payment from the Grant by the City to start the Project.

11. The Program is not a substitute for routine maintenance or a Property Owner's property insurance coverage.

12. Failure to sign and enter into the necessary legal agreements will disqualify the Property Owner from participation in the Program.

13. When the City makes certain expenditures to benefit a property in reliance upon a signed Application, the Property Owner agrees to be bound by the terms and conditions in the Residential Exterior Paint Program Guide to Programs and complete the Project outlined in the Scope of Work. The Property Owner further agrees that if they decide not to proceed with the Project, the Property Owner is responsible for reimbursing the City for all hard and soft costs incurred and other expenses.

14. The City does not specify colors for buildings. The Property Owner must first consider historic colors.

15. Approved color palettes are on file with Community Planning and Development.

16. Color schemes consisting of three (3) colors (siding, trim, accent) are reviewed and approved administratively by the City. Any color scheme exceeding three (3) colors is reviewed and approved by City Council.

17. The City may hold a lien against the Property for improper work or to assure the Project is finished as approved. The lien is released when the City inspects and approves the Project as complete.

18. The City pays Grant funds on a "draw" basis; there is no advancement of payments to the Property Owner or Contractor.

19. The Property Owner shall not disburse personal funds to the Contractor for work performed.

20. All work is subject to inspection and review by the City's Building and Planning Departments for compliance with City standards and processes before submitting invoices to the City.

21. The Property Owner is responsible for reviewing, approving, and acknowledging each Contractor invoice by placing their signature or initials on each invoice page (pay

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application) submitted to the City. City Staff assists the Property Owner with this process.

22. Payments are made directly to the Property Owner after the City receives the Contractor's pay application with a detailed and itemized invoice and a signed Check and Payment Reimbursement Request form from the Property Owner for the approved Scope of Work.

23. Upon receipt of payment, the Property Owner promptly signs over the City of Black Hawk's check to the Contractor as outlined in the FBO (For the Benefit Of) payments process.

24. A Property Owner cannot use Grant funds to get reimbursed in support of work or materials for the Project if completed before Grant approval.

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APPENDIX 1: REVIEW PROCEDURE AND CRITERIA FOR THE PROGRAM

A. REVIEW PROCESS

1. APPLICATION EVALUATION AND CRITERION FOR SELECTION

a. Projects are selected and authorized upon completion of an Application and in the order received.

b. The City considers the finished Application quality indicative of the Property Owner's ability to accomplish the proposed Project.

c. On a case-by-case eligibility basis, the review and approval process is discretionary and subject to the Black Hawk City Council's General Fund's annual budget and appropriation.

d. The City reserves the right to reduce the Application amount, require alternative materials due to cost, longevity, appropriateness of materials, and quality, or request additional information to assist in the thorough review of any Application.

e. The City consults the Black Hawk Residential Design Guidelines and Black Hawk Municipal Code when reviewing the Residential Exterior Paint Program Application. The City may use any other criteria deemed necessary and appropriate to evaluate, consider, and analyze the Application.

f. An application is approved, approved with conditions, or denied.

g. The City Staff may recommend denial of an application if:

1) The Project does not meet the intent of the Program and guidelines;
2) There are outstanding debts to the City or unresolved issues associated with City regulations;
3) The City considers the Property Owner's manner of upkeep of the property and may determine that significant deterioration or structural conditions exist on the structure;
4) The Property Owner declines to complete the incidental or major repairs identified on the site walk;
5) Property Owner's past performance in previous projects, including, but not limited to, any prior Grant expenditure and accomplishing the Project;
6) The cost of the work is not commensurate with the projected benefit to be provided to the community.

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2. ORIENTATION MEETING / DOCUMENT REVIEW

a. After Application approval, the Property Owner meets with City staff to discuss the proposed Project.

b. City staff introduces the general features of the Program.

c. City staff prepares and reviews the respective agreements with the Property Owner; Application (Exhibit A) Grant Program Agreement (Exhibit B), Guide to Programs, Scope of Work, Project Timeline, Building Permit, Power-of-Attorney, Temporary Construction Easement, Temporary Use Permit, Check and Payment Reimbursement Request Form, and Federal and State Tax Liability Reimbursement.

3. SCOPE OF WORK

a. The City hires the Contractor.

b. The Contractor has a current business license and carries the required insurance during the entire Project. Evidence of such is verified before any work commences on the Project.

c. City staff schedules a hazardous materials investigation (Lead Paint) to determine what, if any, dangerous materials may be present onsite. The Lead Paint report defines abatement requirements. The Contractor and his personnel are certified to perform the abatement.

d. Lead Paint testing and abatement are included in the Scope of Work.

e. City staff schedules a site visit with the Contractor and Property Owner to identify existing conditions, incidental and major repairs and creates the Scope of Work considering the following elements:

1) Lead paint abatement, incidental and major repairs, preparation, and paint.

2) A low-profile historic color scheme that highlights, not diminishes, the structure's architectural character and coordinates all façade elements—muted colors for the base and brighter colors for accents.

3) Natural masonry finishes remain unpainted.

f. City staff, the Contractor, and Property Owner create and agree to a project timeline. The Contractor updates the project timeline throughout the entire Project until completion.

g. The Contractor provides the Property Owner a minimum of one (1) gallon of each paint color, varnish, and stain for touchup and continued upkeep of the surfaces painted under the Program.

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h. City staff schedules the Temporary Construction Easement public hearing before City Council.

i. City staff requests from Finance the Temporary Construction Easement fee payable to Property Owner(s) following approval. Submit completed W-9 with the request.

j. The contractor and Property Owner complete the building permit application.

k. The Contractor completes the Temporary Use permit.

l. The Property Owner is physically present during the entire project or assigns a Power-of-Attorney to another person.

4. DOCUMENT APPROVAL

a. The Property Owner signs all Program agreements; Residential Exterior Paint Program Application, Residential Exterior Paint Program – Guide to Programs, completes and submits a W-9 Form, knowledge the Federal and State Tax Liability Reimbursement form, agrees to create a Scope of Work and to apply for a Building Permit, agrees to enter into a Temporary Construction Easement and knowledge the Check and Payment Reimbursement Request form.

b. City Council reviews and approves the Temporary Construction Easement. Payment is disbursed to Property Owners.

c. The City issues the building permit.

d. The City issues the Contractor Notice to Proceed.

e. The Property Owner assigns a Power-of-Attorney to another person to act in their best interest if they cannot be physically present for the entire project.

5. PERMITTING

a. Subcontractors register with the City per the Black Hawk Municipal Code, Chapter 6, Article VII.

b. The Contractor supplies a list of all sub-contractors and corresponding City registration numbers for the Grant project.

c. The Contractor maintains the project schedule from the beginning to the end of the Project.

d. All permit fees are waived by the City for residential projects, as outlined in

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Chapter 18, Section 18-5 of the Black Hawk Municipal Code; however, the Property Owner and Contractor apply for a no-charge building permit and secure appropriate inspections during the work.

e. Additional required permits include a Temporary Construction Easement or Temporary Use Permit.

f. Property Owner signs and approves all paint draw-downs for color and sheen.

6. RESIDENTIAL EXTERIOR PAINTING WORK COMMENCES

a. The Property Owner provides the Contractor full access to the site and work area.

b. The Property Owner removes all items on and away from the structure, outbuildings, decks, and porches.

c. The Property Owner keeps all pets out of the Contractors work area.

d. The Property Owner removes daily all pet waste from the Contractors work area for the job's duration.

e. The Contractor brings all necessary materials, supplies, equipment, and accessories to the site or work area.

f. The Contractor is responsible for securing their equipment at all times. No persons are allowed on the site unless they have specific business.

g. The City is not responsible for the theft, loss, or damage to Contractor materials, equipment, tools, or personal belongings on the site.

h. The Contractor is responsible for trash removal and provides refuse collection containers, and keeps the site clean and free of debris, including cigarette butts.

i. The Contractor is not permitted to bring animals on site.

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j. The Contractor performs the work according to the approved Scope of Work, supported by the City, and attached to the building permit.

k. City staff and the Property Owner inspect the work and monitor the Project. The Contractor requests all inspections.

l. Any Change Orders from the approved Scope of Work must be reviewed and approved by the City before implementation.

m. Onsite progress meetings, held as needed, with the Property Owner, Contractor, and City staff.

7. PAYMENTS

a. The Property Owner submits a Check and Payment Reimbursement Request form, with the Contractor's invoice, for each requested payment.

b. With the initial Check and Payment Reimbursement Request form, the Property Owner attaches a completed W-9, if not previously provided.

c. All payments for approved work are by check from the City of Black Hawk payable to the Property Owner in an FBO (For the Benefit Of), format to include the company name of the Contractor for the Project.

d. The Property Owner promptly endorsed over to the Contractor for payment by the Property Owner.

e. By signing the Residential Exterior Paint Guide to Programs, the Property Owner acknowledges and understands the payment process to the Contractor for the contracted work and understands they are not to defraud the City or the Contractor during any part of the process for the Project.

f. The Property Owner is responsible for submitting all payment requests quickly throughout the Project's duration.

8. RESIDENTIAL EXTERIOR PAINTING COMPLETED

a. When the painting and preparation work has been performed according to the approved Scope of Work and passed all inspections, the City staff conducts a final building inspection.

b. The Contractor cleans upon completion of work. All paint chips are captured and disposed of, all areas de-masked, and exterior windows washed.

c. The City will release the final payment due to the Contractor after the final inspection and project closeout with the Property Owner.

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APPENDIX 2: PREPARATION AND PAINTING

1. PREPARATION

a. After lead abatement and before painting, all necessary incidental and major repairs or completed by Property Owner followed by Contractor preparation; washing exterior, sanding, chipping of existing peeling paint, is completed to remove all surface contamination, such as oil, grease, loose paint, dirt, foreign matter, rust, mold, mildew, or mortar efflorescence. All cracks and imperfections are patched or caulked.

b. The Contractor repairs, at their expense, damage to any structure or property caused during preparation.

c. The City Staff inspects the preparation work before painting.

2. PAINTING.

a. The Contractor uses either Benjamin Moore or Sherwin-Williams products, as specified by the City of Black Hawk unless the City approves an alternate product. Following are City recommendations:

1) Sherwin-Williams Exterior Oil-based primer Y24W8020 or Benjamin Moore equal applied per the manufacturer recommendation.

2) All paint by Sherwin-Williams A-100 Exterior Latex A-82 Series of Benjamin Moore equal applied per the manufacturer recommendation.

b. Select a sheen with a light gloss, low reflective finish, good at hiding surface imperfection, stays clean, is easily washed, and stands up to abrasion.

c. Flat paint is not acceptable.

d. Coated Surfaces: exterior siding, soffits, eaves, trim, metalwork, decks, porches, exterior wood doors, wood fences, wood windows, metal fences, previously painted gutters, and downspouts, and vertical concrete.

e. Before starting work, the Contractor checks products, color, and sheen to assure conformity to specified color and finish as described in the Scope of Work.

f. The Contractor masks all areas requiring protection from overspray.

g. The Contractor is responsible for material damaged by paint and should cover surfaces such as brick, concrete, roofing, vehicles, landscaping, etc., to avoid any potential damage.

h. The Contractor is to leave the Property Owner with a minimum of one (1) gallon of each color, varnish, and stain for touch up. The Contractor supplies the paint cans

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and marks each can identifying product.

1) Recommend storing the paint cans in an area protected from damage, freezing, and temperatures above 95°F.

i. <u>PRIMER/PAINT/VARNISH/STAIN APPLICATION:</u>

1) All failing paint, including peeling and bubbling areas, is scraped from the substrate.
2) Caulk all cracks, windows, and patch small holes.
3) Conceal all wood siding nail holes and reset any nails that may be separating from the siding.
4) Prep and prime all exposed wood surfaces following the Manufacture's recommendation and thickness.
5) One (1) coat if using existing color or Manufacture's recommendation and thickness.
6) Two (2) coats if changing color or Manufacture's recommendation and thickness. The Contractor requests an interim inspection between coats.
7) If transitioning from a stain to paint, one (1) coat primer and (2) coats paint is applied per the Manufacture's recommendation and thickness.

j. If surfaces sprayed, Contactor back-rolls all surfaces.

k. All stain is one (1) coat with a clear natural satin finish or Manufacture's recommendation and thickness.

l. The job is free of runs, sags, cracking, and skips with edges cut neatly.

j. The Contractor schedules work to apply paint when weather conditions are per the manufacturer's specifications.

1) Siding is dry from dew and frost before applying paint, and work ceases in time to allow the paint to dry before dew and frost forming.
2) Painting on exteriors is not be conducted below 45°F.
3) The Contractor assumes all responsibility and accountability for painting under adverse conditions.

m. Paint the top and the bottom edge of all doors and windows.

n. Paint the bottom edge of all siding, corner stiles, shutters, and bay windows.

o. Paint all roof vents and flashing black or another specified color. Mechanical vents located within the siding match the siding color.

p. Caulk all joints in exterior trim, including areas where wood joins siding.

q. Use only the best quality materials as approved by the City. The primer coat, if applicable, should visually differ in color from succeeding coats—paint color as

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selected by Property Owner and approved by the City from approved paint colors. The Property Owner must first consider historic colors. All products are applied per the manufacturer's recommendations.

r. Consult with City Staff for appropriate sheen. Include sheen in the Scope of Work.

s. Sealants, if applicable: Consult with City Staff for approved sealant products. Color to match siding or trim.

1) Apply at window and door frames;
2) Bed metal thresholds in sealant;
3) Apply at flashing and jacks;

t. The Contractor warrants their work for one (1) year from substantial completion.

1) All materials incorporated by the Contractor or the manufacturer's brand and quality specified.
2) All work is good quality, free from fault and defects, and in conformity with the Scope of Work and Program documents.
3) All nonconforming work is defective.
4) The warranty provided is in addition to and not limited to any other warranty or remedy required by law or by the Scope of Work and Program documents.
5) The Contractor corrects all warranty items discovered by the Property Owner and reported to City before the one (1) year warranty expiration.

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PROPERTY OWNER ACKNOWLEDGEMENT

I, _____, as the Property Owner of residential property addressed _____ _____Black Hawk, Colorado, 80422, do now certify that I have reviewed and read the Residential Exterior Paint Program Application – Exhibit A, the Residential Exterior Paint Program – Guide to Programs – Exhibit B, the Federal and State Tax Liability Reimbursement form, agree to create a Scope of Work, agree to assign a Power-of-Attorney if physically unable to be present for the entire project, and to apply for a Building Permit, enter into a Temporary Construction Easement, complete and submit Check and Payment Reimbursement forms quickly, and provide a completed W-9 Form. I fully understand the terms and conditions of the Residential Exterior Paint Program documents set forth therein and agree to be bound by the terms and conditions.

By: _____

Date: _____

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EXHIBIT A

EXTERIOR PAINT PROGRAM
APPLICATION

City of Black Hawk
Community Planning and Development
211 Church Street
P.O. Box 68
Black Hawk, CO 80422
Ph: 303-582-0615 / 303-582-2223
CPDinquiry@cityofblackhawk.org

Grant No: _____
Project No: _____

For Office Use Only

RESIDENTIAL EXTERIOR PAINT PROGRAM APPLICATION

GENERAL INFORMATION:

Grant Year: _____ **Today's Date:** _____

Property Street Address: _____

Owner(s): _____

Owner(s) Mailing Address: _____

Owner(s) Telephone No.: (H) _____(W) _____ (Cell)_____

Owner Email Address: _____

Contact Person (if different from owner) _____

Contact Telephone No.: (H) _____(W) _____ (Cell)_____

Contact Email Address: _____

Applications can be made by individuals other than the Property Owner with the Owner's written permission. Written permission must be in the form of a signed and notarized 'Power-of-Attorney' attached to the application.

Completing an application does not guarantee project funding. After the Property Owner applies, the City staff meets with the Owner to introduce the Program. If the Property Owner elects to move forward, a current condition report and work scope are created and provided to the City's Paint Consultant for pricing. Staff submits applications to the City Manager for review with approval, conditional approval, or denial by City Council. The Property Owner is notified by May 27, 2021, if their project received funding. Painting gets underway June 1, 2021, with staggered start dates and ends by September 30, 2021.

The process for determining payment of Federal and State income tax liability is attached hereto as **Exhibit A**.

_____ _____
Property Owner Signature Date

CITY USE ONLY - DO NOT WRITE BELOW THIS LINE.

*Date Received:*_____

*Property Address:*_____

*Grant No.:*_____

*Review Date:*_____

Reviewed By: □*City Manager* □*City Council*

Decision: □*Approved* □*Conditional Approval* □*Denial*

Conditional Approval Comments or Denial Comments:

_____

_____

_____

_____

*Associated Building Permit Number:*_____

*Authorization Staff Signature:*_____

Date: _____

Exhibit A
Income Tax Liability

City of Black Hawk
Attn: Finance Director
P.O. Box 68
Black Hawk, CO 80422

Dear Sir or Madam:

I (We) have completed our Federal and State Tax Returns for tax year 20_____, and I (we) are requesting the City of Black Hawk issue a check to cover our total Federal income tax liability for receipt of the exterior residential property painting grant for my (our) property located at _____ in the amount of $_____.

I (We) certify that for the Federal Income Tax Return filed for tax year 20_____, my (our) tax liability is $_____ and my (our) tax liability would have been $_____ without reporting the grant.

AND

I (We) certify that I (we) will not submit an application for the Colorado Historical Preservation Income Tax Credit and I (We) certify that for the State Income Tax Return filed for tax year 20_____, my (our) tax liability is $_____ and my (our) tax liability would have been $_____ without reporting the grant.

I (We) certify that the above information is true and correct. To the extent the information is not correct, I (we) understand that I (we) may be held personally liable to repay all money received hereunder, and to pay interest, costs, and attorneys' fees incurred by the City of Black Hawk in collecting such amounts, and that I (we) may also be subject to criminal prosecution.

Sincerely,

_____ _____
Signature / Date Signature / Date

City of Black Hawk
Community Planning and Development
211 Church Street
P.O. Box 68
Black Hawk, CO 80422
CPDinquiry@cityofblackhawk.org
Ph: 303-582-0615 or 303-582-2223

Grant # _____
Project # _____

For Office Use Only

RESIDENTIAL EXTERIOR PAINT PROGRAM

CHECK AND PAYMENT REQUEST FORM

FEDERAL AND STATE TAX LIABILITY REIMBURSEMENT

Grant Year: _____ **Today's Date:** _____

Property Street Address: _____

Applicant: _____

(As it appears on the Grant, please print)

Mailing Address: _____

Telephone No.: _____

Check Payable To: _____

Tax Liability Grant Amount: $ _____

Federal Tax Amount Requested: $ _____ ☐ **(010-1101-4115813)**

State Tax Amount Requested: $ _____ ☐ **(010-1101-4115813)**

All requests for payment **must be** supported with a copy of a letter from the Certified Public Accountant specifying the specific tax liability amount for the tax year in question associated with the receipt of a grant pursuant to the General Fund Exterior Paint Grant Program, or a copy of the grant recipient's fully executed Federal **and** State tax return for the tax year in question indicating the specific tax liability associated with the receipt of a grant pursuant to the General Fund Exterior Paint Grant Program and a fully executed document in the form attached hereto as **Exhibit A – Income Tax Liability** and incorporated herein by this reference, signed by the grant recipient(s).

Incomplete or partial submittals will not be considered. The City reserves the right to refuse payment of any request, which does not provide the necessary information, or that is not covered by the grant awarded.

Payments will be issued in accordance with City Procedures, no exceptions.

I hereby acknowledge that all of the information provided in support of this payment request is accurate and correct.

Owner's Signature: _____ _____
Signature / Date Signature / Date

Staff Review Only. Do not write below this line.

Payment Request: *Approved* ☐ *Denied* ☐ *Date:* _____ *By:* _____

Comments or Conditions: _____

_____

Authorization Signature: _____ *Date:* _____

EXHIBIT B

EXTERIOR PAINT PROGRAM AGREEMENT

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RESIDENTIAL EXTERIOR PAINT PROGRAM AGREEMENT

THIS RESIDENTIAL EXTERIOR PAINT PROGRAM AGREEMENT (the ***"Agreement"***) is made as of the _____ day of _____, 20____, (the ***"Effective Date"***) by and between the ***CITY OF BLACK HAWK***, a municipal corporation organized and existing under the laws of the State of Colorado (the ***"City"***) and _____ (**Insert Applicant**) (the ***"Property Owner"***), whose Residential Property address is:

_____.

RECITALS

A. The City has made certain proceeds of the Exterior Paint Fund, available for the purpose of exterior painting of Residential Properties within the City Limits of the City of Black Hawk, when owners agree to use the funds in accordance with agreed upon specifications (the ***"Residential Exterior Paint Program"***).

B. The Property Owner, who is the owner of a structure located at _____ _____**(Insert Property Address), Black Hawk, Colorado 80422**, (the ***"Residential Property"***) submitted an application under the Exterior Paint Program.

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AGREEMENT

NOW, THEREFORE, in consideration of the above Recitals and the mutual covenants contained herein, the City and the Property Owner hereby agree as follows:

1. Exterior Paint Grant.

1.1 Grant. The City hereby agrees to reimburse Property Owner for work performed in compliance with this Agreement, an amount up to **$_____ (Insert Grant Amount)** (the ***"Grant"***) for the exterior paint of a Residential Property.

1.2 Tax Payment. To the extent permitted by law, the City hereby agrees to reimburse Property Owner for personal state and federal income taxes owed by Property Owner that are directly attributable to funds disbursed under the Grant (the "Tax Burden") for the year in which the Grant is received. Property Owner shall provide evidence of the Tax Burden that is satisfactory to the City, in its sole discretion, prior to any payment of the Tax Burden by the City. Regardless of whether the Property Owner requests payment from the City prior to payment of his/her taxes, or Property Owner pays the Tax Burden him/herself and requests a reimbursement from the City, the City shall make such payment directly to the Property Owner.

2. Agreement, Acknowledgement and Representation by Property Owner. The Property Owner hereby agrees with, and acknowledges and represents to the City that:

2.1 Review of Documents. The Property Owner **(a)** has read this Agreement and the applicable "Residential Exterior Paint Program Guide to Programs," **(b)** fully understands the terms and conditions of the Grant as set forth therein, and **(c)** agrees to be bound by those terms and conditions.

2.2 Failure to Comply. Any failure by the Property Owner to comply with the terms and conditions of this Agreement shall terminate the Property Owner's right to any Grant payments.

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2.3 ***No Liability.*** The City shall be in no manner liable to the Property Owner for any monies expended by the Property Owner in connection with the Exterior Paint Program, whether or not the Property Owner is actually paid any funds from the Grant.

3. ***Undertaking.*** The Property Owner will undertake the construction of improvements and other repairs of the Property approved by the City in a timely manner (the ***"Project"***). The Property Owner has two (2) months to complete the Project, which time period shall begin upon the issuance of a building permit or upon disbursement of the first payment from the Grant by the City to begin the Project.

4. ***Conditions Precedent to Disbursement of Funds.*** Subject to Section 4 hereof, funds from the Grant shall be disbursed to the Property Owner upon satisfaction of:

4.1 ***Evidence of Construction Costs.*** The Property Owner shall provide the City, or its designee, all invoices, paid statements, building permits and such other supporting documents or certifications of the Property Owner evidencing the reasonableness and the appropriateness of the cost of the construction amount as the City, or its designee, may reasonably require.

4.2 ***Building Permit.*** If required by the nature of the project of the Residential Property as determined by the City in its sole discretion, the City, or its designee, shall be provided with a copy of the building permit issued by the City's Building Official for the Project, which shall be in such form and with such content as the City, or its designee, may reasonably require.

4.3 ***Other Documents or Requirements.*** The Property Owner shall provide the City, or its designee, such other documents as may be required by the City, or its designee, in its sole discretion to satisfy the requirements of this Agreement.

4.4 ***Completion of Improvements.*** The Project shall have been satisfactorily completed in accordance with the City's Residential Exterior Paint Program guidelines and design standards, as determined by the City or its designee, in its sole discretion, on or before two (2) months after the issuance of the building permit if required by the

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City, or on or before two (2) months after the first disbursal is made to the Property Owner, whichever date comes first.

5. ***Disbursement.***

5.1 Grant Disbursement. The Property Owner is responsible for providing the City invoices for work on the Project. Each invoice shall contain sufficient detail regarding work that has been done, or will be performed, for each aspect of the Project. The invoice shall also relate directly to the items outlined on the original proposal or bid provided to the Property Owner by the Contractor. When the invoice is considered complete and payable, the City will write the check for the invoice amount directly to the Property Owner within two (2) weeks of this determination. The Property Owner is then responsible for the disbursement of these funds directly to the Contractor as outlined in the FBO (For the Benefit Of) payments process.

6. ***Termination of the Grant.*** In the event the Property Owner fails to satisfy the conditions precedent set forth in Section 4 hereof on or before, _____ _____, 20_____ (The ***"Termination Date"***), the Property Owner's right to be paid the Grant or any portion thereof shall automatically terminate.

7. **Sale or Transfer of Property.**

7.1 Reimbursement. In the event the amount of the Grant plus the Tax Burden (the ***"Combined Amount"***) set forth in Section 1 exceeds fifty thousand dollars ($50,000.00) and the Property Owner sells or transfers the Residential Property within five years of the Effective Date, the Property Owner shall reimburse the City the amount of the Combined Amount less an amount equal to one-sixtieth of the amount of the Combined Amount for each full month occurring between the date of this Agreement and the date of the sale or transfer of the Residential Property (the ***"Reimbursement Amount"***).

7.2 Security. In the event that Property Owner seeks to sell or transfer the Residential Property within five years of the Effective Date and Property Owner has not paid the

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City the Reimbursement Amount, prior to any sale or transfer Property Owner shall (1) notify the City of the intended sale or transfer; (2) execute a promissory note in favor of the City for the Reimbursement Amount, which shall be calculated as if the Residential Property will be sold on the date of execution of the deed of trust (***"Estimated Reimbursement Amount"***); and (3) execute a deed of trust for the benefit of the City to secure the Estimated Reimbursement Amount. Should the Estimated Reimbursement Amount exceed the actual Reimbursement Amount, the City shall pay the difference back to the Owner after the transfer or sale and upon the City's receipt of the Estimated Reimbursement Amount.

7.3 Avoidance of Security Requirement. Property Owner need not comply with the requirements of Section 7.2 if prior to the sale or transfer of the Residential Property, Property Owner deposits the Estimated Reimbursement Amount in an escrow account payable to the City upon the sale or transfer of the Residential Property. If upon the sale or transfer of the Residential Property, the Estimated Reimbursement Amount exceeds the actual Reimbursement Amount, the difference shall be returned to the Property Owner.

8. Non-Transferable. The rights granted to the Property Owner herein are non-transferable and may not be transferred or assigned. Any attempted transfer or assignment shall automatically be deemed to be null and void and shall be grounds for termination of this Agreement.

9. Notices. All notices required or permitted under this Agreement shall be deemed given upon personal delivery by hand to the authorized representatives of either the Property Owner or the City or three (3) days after being sent by certified mail, return receipt requested, postage prepaid, addressed to the respective party at its mailing address below:

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If to the City: **City of Black Hawk**
P.O. Box 68
Black Hawk, CO 80422
ATTN: Community Planning & Development

If to the Property Owner: **(Insert Name & Address)**

_____
_____
_____
_____

Each Party may change its or his/her address as set forth herein by written notice to such effect directed to the other party.

10. Miscellaneous:

10.1 Amendments and Supplements: This Agreement may not be amended, modified or supplemented in any manner except by a written agreement executed by both the City and the Property Owner.

10.2 Severability. In the event any provision of this Agreement is deemed to be illegal, invalid or unenforceable by a court of competent jurisdiction, such provisions shall not affect the remainder thereof.

10.3 Standard of Approval. Where within this Agreement, the approval of the City or its designee is required or permitted, the City or its designee may grant or withhold its approval or its consent in its sole, absolute and uncontrolled discretion.

10.4 Waiver. The waiver by the City, or its designee, of any failure by the Property Owner to comply with any of the terms and conditions of this Agreement must be in writing and in any event shall not be deemed to be a waiver of any subsequent failure of the Property Owner to comply with the terms or conditions of this Agreement.

10.5 Time of the Essence. Time is of the essence in the performance of each and every term and condition of this Agreement by the parties hereto.

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10.6 ***Governing Law.*** This Agreement, its construction, validity and effect, shall be governed and construed by and in accordance with the laws of the State of Colorado.

IN WITNESS WHEREOF**,** the Property Owner and the City have executed this Agreement on the date first above written.

CITY OF BLACK HAWK, a municipal corporation organized and existing under the laws of the State of Colorado

CITY OF BLACK HAWK

_____
David D. Spellman, Mayor

ATTEST:

_____
Melissa A. Greiner, CMC, City Clerk

APPROVED AS TO FORM:

_____
Corey Y. Hoffmann, City Attorney

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PROPERTY OWNER

By: _____
Property Owner

STATE OF COLORADO)
)ss.
COUNTY OF _____)

The foregoing instrument was subscribed, sworn to, and acknowledged before me this _____ day of _____, 20_____, by _____.

My commission expires: _____

(S E A L)

_____
Notary Public

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REDLINE COPY

CITY OF BLACK HAWK

RESIDENTIAL EXTERIOR PAINT PROGRAM
GUIDE TO PROGRAMS

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~~SECTION 1: PROGRAM OVERVIEW~~

~~A. PURPOSE~~

~~1. The City has established goals to preserve the City's architectural character with exterior paint improvements to residential buildings. The purpose of the Exterior Paint Program is to provide financial assistance that will promote the exterior appearance of Black Hawk's Residential Properties and to provide for the continuation and enhancement of a functional, sustainable, healthy and vibrant Black Hawk residential community.~~

~~2. This program is intended to enhance Residential Properties of the City by providing a Property Owner with the resources needed to maintain the exterior paint of residential buildings. The use of funds pursuant to the Program is only for the specific property address and work program recommended by City Staff and approved by the City Manager, which is consistent with the City of Black Hawk Residential Design Guidelines and complies with the Black Hawk Municipal Code.~~

~~3. The City does not specify colors for buildings. However, there are certain ranges of colors and methods of combining them that Black Hawk does promote through guidelines that focus on the manner in which color is used, rather than on specific colors themselves. When a Property Owner is in doubt, it is best to assume a low profile color scheme design. The color schemes shall highlight, not diminish, the architectural character of the structure. Using a historic color scheme is highly encouraged and recommended. Develop a color scheme for the entire building that coordinates all the façade elements. Use muted colors for the base and brighter colors for accents. Leave natural masonry finishes unpainted when feasible.~~

~~4. Approved color palettes are on file with Community Planning and Development. The Property Owner must first consider historic colors. If colors are selected from the approved palettes, the City Manager shall approve administratively. Colors not selected from approved color palettes require review and approval by City Council.~~

~~5. A color scheme consisting of three (3) colors (siding, trim, accent) are covered under the Program, reviewed and approved administratively by the City Manager. Any color scheme exceeding three (3) colors, shall be reviewed and approved by City Council.~~

~~B. DEFINITIONS~~

~~1. Bed and Breakfast: A residential dwelling unit that provides sleeping accommodations for hire, for thirty (30) days or less, on a day-to-day basis, with one (1) or more meals per day included, at which an owner, manager or lessee of the property resides on the premises. Such use shall not include residential dwelling units with two (2) or more rental rooms or facilities which include retail or commercial activities of any kind. Commercial properties without a resident owner are not eligible for this Program.~~

~~2. Board of Aldermen: An elected six-member panel authorized with decision-making powers for the governance of the City of Black Hawk.~~

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~~3. Building Official: The City official charged with the responsibility of administering and enforcing the City's building codes.~~

~~4. City of Black Hawk Residential Design Guidelines: Guidelines developed to help achieve the goal of preserving the City's character with exterior improvements to buildings. Please contact City Staff for a copy of these Guidelines.~~

~~5. City Council: The elected Board of Aldermen, plus the Mayor.~~

~~6. City Manager: The City Manager is the chief administrative officer for all departments of the City, is appointed by the City Council and shall have and exercise all the administrative powers vested in the City.~~

~~7. City Staff: An employee of the City of Black Hawk or an entity designated by the City of Black Hawk to act on their behalf in administering the contract documents, coordinating design professionals, overseeing construction progress, and reviewing paperwork required as part of the Program~~

~~8. Contractor: The contracting company selected to oversee and manage the painting and construction work.~~

~~9. Construction Hard Costs: Costs related to labor, materials, and overhead.~~

~~10. Construction Soft Costs: Costs related to fees, permits, insurance, and other costs not directly related to the physical installation of the Scope of Work.~~

~~11. Exterior Paint Program: A funding source from the City of Black Hawk which is administered via direct contract between the Property Owner and Contractor.~~

~~12. Guide to Programs: This policy and procedures document, related to the Exterior Paint Program.~~

~~13. Municipal Code: A collection of municipal ordinances and laws that are enacted and enforced by the City of Black Hawk.~~

~~14. Outbuildings: Accessory structures to the original building.~~

~~15. Property Owner (Owner): Property Owner per recorded City documents, or designated representative as provided with written permission via a signed and notarized "Affidavit of Permission" or "Power-of-Attorney" from the Property Owner.~~

~~16. Qualified Professional: An individual licensed or appropriately experienced in the discipline within which a recommendation is needed.~~

~~17. Residential Properties: Properties within the City Limits of Black Hawk.~~

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18. Substantial Completion: The stage in the progress of the work when the work, or designated portion thereof, is sufficiently complete in accordance with the contract documents so that the owner can occupy or utilize the work for its intended use.

19. Temporary Construction Easement: A legal document providing the Grantee (City of Black Hawk) with full access to the property under consideration for the purpose of completing the Scope of Work. The easement is only valid for the duration of the construction period.

20. Temporary Use Permit: A permit issued by the City of Black Hawk to allow private property to be used for alternate uses (storage, staging, etc.) for a limited amount of time.

21. Property Owner Trade Contract Agreement: An agreement signed by the Property Owner and the successful Contractor detailing the contract terms and alternates for any construction work as part of the Exterior Paint Program.

C. PROGRAM GOALS:

1. The Exterior Paint Grant is provided for Residential Properties to allow painting and preparation.

2. The goal of the Exterior Paint Program is to promote and protect the exterior paint on Residential Properties through proper and regular painting methods. Historically significant exterior finishes are expected to remain on each property. Evaluation, approval and exterior painting of homes will be reviewed on a case-by-case basis in accordance with the applicable standards, laws, and regulations approved by the City, including this Guide to Programs.

3. City Staff will prepare and the City Manager will review and approve the Scope of Work to be included within the application request, and may retain a design professional to assist with this task as needed.

D. GENERAL INFORMATION

The following considerations apply to all activities proposed and/or covered by the Program:

1. Projects will only be selected and authorized upon completion of an application **(Exhibit A)** in accordance with the requirements described in this Guide to Programs.

2. All applications will be reviewed by City Staff based on the City of Black Hawk Residential Design Guidelines, and Black Hawk Municipal Code with a recommendation to the City Manager for approval, approval with conditions or denial.

3. Careful consideration should be given in preparing the application. The quality of the application will be considered as indicative of the Property Owner's ability to accomplish the proposed project. Careful consideration will also be given to a Property Owner's past performance in prior projects including, but not limited to, the use of a Grant and the

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~~accomplishment of a prior project. Additionally, the manner of upkeep performed by the Property Owner at the property will be taken into account by the City Manager.~~

~~4. The City Manager shall have the authority in their sole discretion to deny any application submitted for an Exterior Paint Grant if, in their opinion, the Property Owner has neglected to adequately maintain their property allowing it to become in a state of disrepair.~~

~~5. Failure to sign and enter into the necessary legal agreements will disqualify the Property Owner from participation in the program. All Program Agreements must be signed prior to issuance of the Notice to Proceed to the Contractor.~~

~~6. The City of Black Hawk and the City Manager expressly reserves the right to reject any or all applications, reduce the application amount, and request additional information to assist in the thorough review of any application. Failure of a Property Owner to comply with this Guide to Programs on a prior project, to properly use a Grant for a prior project, to administer a prior project, and to accomplish a prior project may be a basis to reject or deny an application.~~

~~7. Any Exterior Paint Grant to a Residential Property shall only occur once per every five (5) years. Only one request may be made within any five (5) year period, and is subject to the availability of Grant funds, which are allocated by the City Manager in the exercise of their sole discretion, and is further subject to the annual budget and appropriation of the General Fund by the City Council of the City of Black Hawk.~~

~~Once a Residential Property has received funding under the five (5) year cycle, the property will revert to an eight (8) year funding cycle and is subject to the availability of Grant funds, which are allocated by the City Manager in the exercise of their sole discretion, and is further subject to the annual budget and appropriation of the General Fund by the City Council of the City of Black Hawk.~~

~~8. If a Property Owner owns multiple Residential Properties, an application may be made for each individual property. Properties will be placed on the list of potential recipients in the order in which the applications are received. The order of Properties to receive funds, if owned by the same Property Owner and in sequential order on the Grant approval list, may be modified from the order of application. Non sequential properties owned by the same Property Owner may not be modified from the order of application.~~

~~9. Applications can only be made by the Property Owner, as defined in the Definitions section.~~

~~10. This program is not intended for, and should not be used as a substitute for, routine upkeep and care of a house, structure, or prior improvements to the home and/or property. Additionally, all improvements to a Residential Property that are funded by this Exterior Paint Program need to be appropriately and consistently maintained by the Property Owner. All improvement(s) should be maintained in conformance with manufacturers' standards of normal~~

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~~care for such improvement. Furthermore, this program is not to be utilized as a substitute for a Property Owner's property insurance policy.~~

~~11. In the event the City makes certain expenditures to benefit a property in reliance upon a signed application, including but not limited to the creation of any and all Bid Documents and fees for services, the Property Owner agrees to be bound by the terms and conditions contained in the Exterior Paint Program Guide to Programs and to complete the project set forth in the application. Property Owner further agrees that in the event he/she decides not to proceed with painting and preparation of the project, Property Owner shall be responsible for reimbursing the City for all hard and soft costs incurred by the City for items including but not limited to the creation of any and all bid documents, fees for services, and any other costs actually incurred.~~

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SECTION 1: PROGRAM OVERVIEW

A. PURPOSE

1. The Program preserves the architectural character of the residential properties within the Historic Residential District.

2. The Program provides the Property Owner with the resources and financial assistance needed to maintain the exterior paint on residential buildings.

3. The Program pledges the continuation and enhancement of a functional, sustainable, healthy, and vibrant residential community.

B. DEFINITIONS

1. Board of Aldermen: An elected six-member panel authorized with decision-making powers for the governance of the City of Black Hawk.

2. Building Official: The City official is charged with the responsibility of administering and enforcing the City's building codes.

3. City of Black Hawk Residential Design Guidelines: Guidelines developed to help preserve the City's character with exterior improvements to buildings.

4. City Council: The elected Board of Aldermen, plus the Mayor.

5. City Manager: The City Manager is the chief administrative officer for all departments of the City, is appointed by the City Council, and shall have and exercise all the administrative powers vested in the City.

6. City Staff: An employee of the City of Black Hawk or an entity designated by the City of Black Hawk to act on their behalf in administering the contract documents, coordinating

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design professionals, overseeing construction progress, and reviewing paperwork required as part of the Program

7. Contractor: The contracting company selected to oversee and manage the painting and construction work.

8. Construction Hard Costs: Costs related to labor, materials, and overhead.

9. Construction Soft Costs: Costs related to fees, permits, insurance, and other costs not directly associated with the physical installation of the Scope of Work.

10. Exterior Paint Program: A funding source from the City of Black Hawk administered via direct contract between the Property Owner and Contractor.

11. Grant Recipient: Property Owner per recorded City documents.

12. Guide to Programs: This policy and procedures document, related to the Exterior Paint Program.

13. Municipal Code: A collection of municipal ordinances and laws enacted and enforced by the City of Black Hawk.

14. Outbuildings: Accessory structures to the original building.

15. Property Owner: Property Owner per recorded City documents, or designated representative as provided with written permission via a signed and notarized "Power-of-Attorney" from the Property Owner. The appointed representative can act on behalf of the Property Owner in specified or all legal and financial matters.

16. Qualified Professional: An individual licensed or appropriately experienced in the discipline within which a recommendation is needed.

17. Residential Properties: Properties within the City Limits of Black Hawk.

18. Substantial Completion: The stage in the work's progress when the job, or designated portion thereof, is sufficiently complete per the contract documents so that the owner can occupy or utilize the work for its intended use.

19. Temporary Construction Easement: A legal document providing the Grantee (City of Black Hawk) with full access to the Property under consideration to complete the Scope of Work. The easement is only valid for the duration of the construction period.

Temporary Use Permit: A permit issued by the City of Black Hawk to allow private property to be used for alternate uses (storage, staging, etc.) for a limited amount of time.

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~~**SECTION 2: TAX LIABILITY**~~

~~1. The funds Granted under this Exterior Paint Program shall be considered income under the State and Federal income tax laws.~~

~~2. Any Grant approved by the City will be reported to State and Federal taxing authorities in the manner provided by applicable law. As the recipient of a Grant, the receiver may be required to pay income or other taxes to State and Federal authorities as a result of receiving a Grant under this program. As part of the Exterior Paint Program and to the extent permitted by law, the City will reimburse Grant recipients for additional State and Federal taxes paid by the recipients that are directly attributable to the disbursement of Grant funds. Regardless of the City's agreement to reimburse Grant recipients for the initial State and Federal tax burden of a Grant, the obligation to pay any taxes shall remain the responsibility of the Grant recipient.~~

~~3. Property Owner is encouraged to obtain independent tax advice regarding the State and Federal income tax implications of the Exterior Paint Program. The City shall not be responsible for the payment of any tax liability associated with the participation in the Exterior Paint Program.~~

~~4. Notwithstanding anything to the contrary contained herein, the City shall have no responsibility or liability concerning any tax liability of a recipient of Grant funds of benefits received under the Exterior Paint Program.~~

~~5. The City of Black Hawk provides for reimbursement of a Property Owner's State and Federal income tax liability in association with the receipt of an Exterior Paint Grant, if requested by Property Owner **(included in Exhibit A)**. The City encumbers dollars in its accounting system to accommodate payment of the tax reimbursement. The Property Owner is responsible for completing the necessary paperwork for such payment and delivering to the City of Black Hawk Finance Department. A Property Owner shall be required to submit documentation for the tax payment reimbursement during the calendar year(s) following the receipt of the Grant funds. If the reimbursement has not been requested within the time limits set forth herein, the encumbered funds will no longer be available to the Property Owner for State and Federal tax payment reimbursement and such encumbered funds will be reallocated back into the City budget for other purposes.~~

SECTION 2: TAX LIABILITY

A. ACKNOWLEDGEMENT

1. Receipt of a Residential Exterior Paint Grant is taxable income to the Property Owner.

2. Under this Residential Exterior Paint Program, funds awarded under the State and Federal income tax laws are considered income.

3. The City reports approved and awarded Grants to State and Federal taxing authorities in

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the manner provided by applicable law.

4. As the recipient of a Grant, the Property Owner may be required to pay income or other taxes to State and Federal authorities due to receiving a Grant under this Program.

5. The Property Owner should consult with their tax advisor about whether the one-time first-round reimbursement is income and gives rise to additional State and Federal income tax liability.

6. The City has no responsibility or obligation concerning any tax liability to the Property Owner as a recipient of Grant funds or benefits received under the Residential Exterior Paint Program.

7. The City is not responsible for the payment of any tax liability associated with participation in the Residential Exterior Paint Program.

8. The City of Black Hawk provides a one-time first-round reimbursement of a Property Owner's State and Federal income tax liability in association with a Residential Exterior Paint Grant's receipt. The second-round tax liability is the full financial responsibility of the Property Owner.

9. The City encumbers dollars in its accounting system to accommodate a one-time first-round payment of the tax reimbursement. The Property Owner is responsible for completing the necessary paperwork for such amount and delivering it to the City of Black Hawk Finance Department.

10. A Property Owner is required to submit documentation for the one-time first-round tax payment reimbursement during the calendar year(s) following the Grant funds' receipt.

11. Suppose the one-time first-round reimbursement is not requested within the time limits set forth herein. In that case, the encumbered funds will no longer be available to the Property Owner for State and Federal tax payment reimbursement. Such encumbered funds will be reallocated back into the City budget for other purposes.

12. The City of Black Hawk does NOT reimburse the Property Owner for any additional State and Federal income tax liability that might arise from the one-time first-round reimbursement.

13. Regardless of the City's agreement to compensate Grant recipients for the one-time first-round State and Federal tax burden of a Grant, the obligation to pay any taxes, including the second-round, remains the Property Owner's responsibility as the Grant recipient.

14. A Residential Exterior Paint Program Agreement sets forth the terms and conditions of participation in the Program – See Exhibit B.

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~~SECTION 3: EXTERIOR PAINT PROGRAM~~

~~A. ELIGIBILITY~~

~~In order for a Residential Property to be eligible for a Grant under the Exterior Paint Program ("Grant"), the following requirements must be adhered to:~~

~~1. An Applicant should be aware that the provisions of the Exterior Paint Program will be a private project by the Property Owner reimbursed by the City.~~

~~2. Items considered eligible under this program for Residential Properties located within the City Limits include: exterior siding, soffits, eaves, trim, metal work, decks, porches, exterior wood doors, wood fences, metal fences, previously painted gutters and downspouts, and vertical concrete. Both historic and non-historic elements are eligible.~~

~~3. The work must be consistent with the City of Black Hawk Residential Design Guidelines, and Black Hawk Municipal Code. All exterior historically significant finishes and materials and character defining features are to remain or are addressed appropriately in accordance with the standards and guidelines~~

~~4. Funding shall only be made to a defined Property Owner.~~

~~5. An Exterior Paint Grant shall not be made for more than once every five (5) years. Once a Residential Property has received funding under the five (5) year cycle, the property will revert to an eight (8) year funding cycle.~~

~~6. Property Owner is specifically responsible for using the funds from the Grant to pay the Contractor for all work done in accordance with the agreement the Property Owner must have with the Contractor. Lack of payment from a Property Owner to the Contractor, for work covered under the approved Grant, will be grounds to withhold disbursement of any funds to the Property Owner for any additional work on the property or even other properties the Property Owner may own until such time as evidence of payment to the Contractor is provided. Also see Appendix 1 of this document regarding payments to the Property Owner and subsequent payment to the Contractor.~~

~~7. As part of the Exterior Paint Program and to the extent permitted by law, the City will reimburse Grant recipients for additional State and Federal taxes paid by the recipients that are directly attributable to the disbursement of Grant funds. Regardless of the City's agreement to reimburse Grant recipients for the initial State and Federal tax burden of a Grant, the obligation to pay any taxes shall remain the responsibility of the Grant recipient.~~

~~8. Property Owner is encouraged to obtain independent tax advice regarding the income tax implications of the Exterior Paint Program. The City shall not be responsible for the payment of any tax liability associated with the participation in the Exterior Paint Program.~~

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9. Grants will be made to Property Owner within the City of Black Hawk at the sole discretion of the City Manager, and subject to the annual budget and appropriation of the General Fund by the Board of Aldermen of the City of Black Hawk.

B. LEGAL REQUIREMENTS

1. Along with the approval of an application by the City, Property Owner must enter into legal agreements with the City which describe the terms for participation in the Exterior Paint Program. Participation in the Exterior Paint Program requires an Exterior Paint Grant Agreement. A copy of this document is included in **Exhibit B**.

C. GENERAL CONDITIONS OF ASSISTANCE

1. The City of Black Hawk Residential Design Guidelines and Black Hawk Municipal Code shall be consulted and utilized for all Exterior Paint Program projects.

2. Grant funds are paid on a "draw" basis. No advancement of payments will be paid to the Property Owner or Contractor. Payments are made directly to the Property Owner when the City receives a Contractor's pay application with detailed and itemized invoices/schedule of values, and a signed request for payment form for the City Manager approved work program. Property Owner shall not ***disburse cash funds*** to any Contractor for any work done. ***All transactions are expected to be promptly completed via the Property Owner by signing over the check*** from the City of Black Hawk to the Contractor for the project as set forth herein in Appendix 1 regarding FBO (For the Benefit Of) payments. It is recommended the Property Owner obtain a receipt/waiver of lien from the Contractor stating funds have been received with pay application paid in full. All work is subject to inspection and review by the City's Building and Planning Departments for compliance with City standards and processes prior to submittal of any invoices to the City. The Property Owner is responsible for and must review, approve, and acknowledge seeing each invoice by placing a signature or initials on each invoice (pay application) submitted to the City with the paperwork for a request for payment. The Property Owner will work with City Staff to assist with this process.

3. Grant funds cannot be used to reimburse a Property Owner for previous work or materials for a project accomplished prior to the Grant approval.

4. The City Manager may recommend funding at a lower level than that requested by the Property Owner. In addition, the City Manager may exercise their discretion while reviewing applications to require alternative materials due to cost, longevity, appropriateness of materials, and quality. Such decisions will be noted on the approved applications, and acknowledged by the Property Owner in advance of any building permits being issued for such work. Appeals, from the Property Owner, of such decisions/requirements by the City Manager shall be to the City Council.

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~~5. Neither a Property Owner nor a relative of the Property Owner shall be permitted to be the Contractor, subcontractor or material supplier.~~

~~6. The Property Owner shall work with City Staff to create a Scope of Work, and request at least three (3) bids from the City of Black Hawk pre-qualified Contractors list. Such selected Contractor shall submit itemized invoices, and/or itemized receipts through the Property Owner and then to the City for payment of completed work.~~

~~7. The Contractor must be registered with the City and insured during the entire project. Evidence of such is required prior to any work commencing on the project.~~

~~D. CONDITIONS OF AGREEMENT~~

~~The Property Owner shall agree to the following conditions:~~

~~1. The property shall be maintained in a manner that assures its continued upkeep.~~

~~2. The Contractor shall leave for the Property Owner a minimum of one (1) quart of each paint color, varnish and/or stain for touchup and continued upkeep of the surfaces painted under the program.~~

~~3. The City Staff, Property Owner, and the Contractor shall agree on a Scope of Work, and schedule of completion for the project. The Scope of Work and schedule must follow the approved Scope of Work and Guide to Programs procedures as approved by the City Manager.~~

~~4. Scope of Work shall be reviewed by the City Staff to assure that appropriate procedures are followed. Recommendations from City Staff can be made to the City Manager to assist with their approval process. The Property Owner is responsible to ensure that an application for a building permit is submitted for all work associated with the approved project, and that no work on the property takes place until there is an approved building permit for the work and signed contract agreements.~~

~~5. The City may hold a lien against the property for any improper work or to assure that the project is completed as approved. The lien will be released when the City Manager approves the completed project.~~

~~6. An Exterior Paint Program Agreement will be provided that sets forth the terms and conditions of participation in the program **(Exhibit B)**.~~

~~7. A Trade Contractor Agreement, executed between the Property Owner and Contractor, shall set forth the terms and conditions of the project.~~

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~~8. An Exterior Paint Grant may only be considered on a case by case basis by the City Manager. Appeals, from the Property Owner, of such decisions and requirements by the City Manager shall be to the City Council. Any proposed exterior painting on the home must be selected from the approved color palettes in accordance with the City of Black Hawk Residential Guidelines, and the Municipal Code. The Property Owner must first consider historic colors. Reimbursement may only be requested subject to funding availability, and only if the request complies with the standards for exterior paint. Any exterior paint colors not selected from the approved color palettes or exceeding the three (3) color paint scheme shall be reviewed and approved by City Council.~~

~~9. In the event a Full Site and Building grant under the Historic Restoration and Community Preservation Grant Program is Granted within three (3) years of the City Manager Granting a Exterior Paint Grant, the Property Owner agrees to reimburse the City in full the total amount Granted on the Exterior Paint Program Grant for construction hard costs, prior to the Grant of the Full Site and Building grant. An Exterior Paint Program Grant may only be Granted to a Residential Property once every five (5) years. Once a Residential Property has received funding under the five (5) year cycle, the property will revert to an eight (8) year funding cycle. *Preparation and painting must be in compliance with the standards/specifications included in Appendix 2 of the Guide to Programs.* Please consult with City Staff to fully understand how a specific request for this component will be processed.~~

SECTION 3: RESIDENTIAL EXTERIOR PAINT PROGRAM

A. ELIGIBILITY

1. Participation in the Residential Exterior Paint Program requires an Application – See Exhibit A.

2. Eligible properties are located within the Black Hawk City limits.

3. Each Residential Property is initially considered to participate in the Program under the initial five (5) year cycle. Once a Residential Property has received funding under the initial five (5) year cycle, the Property will revert to an eight (8) year funding cycle.

4. All funding is subject to the availability of grant funds. The City Manager allocates in the exercise of their sole discretion and is further subject to the annual budget and appropriation of the General Fund by the City of Black Hawk City Council.

5. Items covered under the Program include the preparation and painting of exterior siding, soffits, eaves, trim, metalwork, decks, porches, exterior wood doors, wood windows, wood fences, metal fences, previously painted gutters, and downspouts, and vertical concrete. A site walk will identify incidental and major repairs.

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6. The Property Owner undertakes the financial responsibility for repairs.

7. The Property Owner promptly undertakes the improvements and other repairs identified by the City. The Property Owner has two (2) months to complete the repairs and painting, which time period shall begin upon the issuance of a building permit by the City to start the Project.

8. The Property Owner assigns a Power-of-Attorney if they cannot physically be present during the entire Project.

9. Both historic and non-historic elements are eligible under the Program.

B. LEGAL REQUIREMENTS

1. Along with the approval of an Application by the City, the Property Owner must enter into legal agreements with the City which describe the terms for participation in the Residential Exterior Paint Program.

2. Participation in the Residential Exterior Paint Program requires at a minimum an Application – See Exhibit A, Residential Exterior Paint Grant Agreement – See Exhibit B, a W-9 Form, a Scope of Work, a Building Permit, a Check and Payment Request Reimbursement form, and a Federal and State Tax Liability Reimbursement.

3. Additional documents such as a Power-of-Attorney, Temporary Construction Easement, and Temporary Use Permit may also be required.

4. The Property Owner promptly undertakes the construction of improvements and other repairs of the Property identified by the City. The Property Owner has two (2) months to complete the Project, which time period shall begin upon the issuance of a building permit by the City to start the Project.

5. The Property Owner assigns a Power-of-Attorney if they cannot physically be present during the entire Project.

C. RESIDENTIAL EXTERIOR PAINT PROGRAM PROVISIONS

1. The Residential Exterior Paint Program is a private project by the Property Owner reimbursed by the City.

2. Property Owners recommended for funding are notified by telephone, email, and mail when the City makes a final decision.

3. Property Owners not selected by the City will be notified in writing explaining the reason(s) for rejection. Those Property Owners may meet with City Staff to discuss the factors that resulted in the Application's rejection. The City schedules Board of Appeals hearings before the Black Hawk City Council acting as the Board of Appeals.

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4. The City recommends the Property Owner consults with a qualified tax advisor on the financial impacts of participating in the Program.

5. If a Full Site and Building Grant under the Historic Restoration and Community Preservation Grant Program is Granted within three (3) years of the City Granting a Residential Exterior Paint Grant, the Property Owner agrees to reimburse the City in full the total amount funded for hard construction costs before the Grant of the Full Site and Building is approved and financed.

6. A Residential Exterior Paint Program Grant is only permitted to a Residential Property once every five (5) years. Once a Residential Property has received funding under the five (5) year cycle, the Property will revert to an eight (8) year funding cycle.

7. Neither a Property Owner nor a relative of the Property Owner can be the Contractor, subcontractor, or material supplier.

8. The Property Owner assigns a Power of Attorney if they cannot physically be present during the Project.

9. If a Property Owner owns multiple Residential Properties, an Application may be made for each Property. Properties are placed on the list in the order in which the Applications are received.

10. The Property Owner undertakes the construction of improvements and other repairs of the Property approved by the City promptly. The Property Owner has two (2) months to complete the Project, which time period shall begin upon the issuance of a building permit or upon disbursement of the first payment from the Grant by the City to start the Project.

11. The Program is not a substitute for routine maintenance or a Property Owner's property insurance coverage.

12. Failure to sign and enter into the necessary legal agreements will disqualify the Property Owner from participation in the Program.

13. When the City makes certain expenditures to benefit a property in reliance upon a signed Application, the Property Owner agrees to be bound by the terms and conditions in the Residential Exterior Paint Program Guide to Programs and complete the Project outlined in the Scope of Work. The Property Owner further agrees that if they decide not to proceed with the Project, the Property Owner is responsible for reimbursing the City for all hard and soft costs incurred and other expenses.

14. The City does not specify colors for buildings. The Property Owner must first consider historic colors.

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15. Approved color palettes are on file with Community Planning and Development.

16. Color schemes consisting of three (3) colors (siding, trim, accent) are reviewed and approved administratively by the City. Any color scheme exceeding three (3) colors is reviewed and approved by City Council.

17. The City may hold a lien against the Property for improper work or to assure the Project is finished as approved. The lien is released when the City inspects and approves the Project as complete.

18. The City pays Grant funds on a "draw" basis; there is no advancement of payments to the Property Owner or Contractor.

19. The Property Owner shall not disburse personal funds to the Contractor for work performed.

20. All work is subject to inspection and review by the City's Building and Planning Departments for compliance with City standards and processes before submitting invoices to the City.

21. The Property Owner is responsible for reviewing, approving, and acknowledging each Contractor invoice by placing their signature or initials on each invoice page (pay application) submitted to the City. City Staff assists the Property Owner with this process.

22. Payments are made directly to the Property Owner after the City receives the Contractor's pay application with a detailed and itemized invoice and a signed Check and Payment Reimbursement Request form from the Property Owner for the approved Scope of Work.

23. Upon receipt of payment, the Property Owner promptly signs over the City of Black Hawk's check to the Contractor as outlined in the FBO (For the Benefit Of) payments process.

24. A Property Owner cannot use Grant funds to get reimbursed in support of work or materials for the Project if completed before Grant approval.

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APPENDIX 1: REVIEW PROCEDURE AND CRITERIA FOR THE PROGRAM

A. REVIEW PROCEDURE

The application **(Exhibit A)** and other program criteria are included as part of this Guide to Programs. Additional copies or further information can be obtained by calling Community Planning and Development at (303) 582-2223 or 303-582-0615. Please read the Guide to Programs and associated contract documents thoroughly before proceeding. Property Owner is required to follow these procedures.

1. Orientation Meeting

a. After submitting an application, the Property Owner is required to meet with the City Staff to discuss their proposed project and potential eligibility. City Staff will introduce the general features of the program.

2. Property Owner / City Staff Document Preparation

a. The Property Owner, with the assistance of City Staff, prepares the respective agreements for the proposed Grant.

b. The Property Owner must work with City Staff, to define the desired Scope of Work. Such information will be used to evaluate desired improvements and to establish the Scope of Work allowed to be included in the Program.

3. City Staff Evaluates Project and Creates Scope of Work

a. City Staff will evaluate the project based on the submitted criteria and shall create a "Scope of Work". This information will be provided to the Property Owner. During this review, City Staff will use its best efforts to identify any omissions or discrepancies in the application, as well as communicate this information to the Property Owner as soon as possible.

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~~4. .....~~ **~~Application / Scope of Work Review and Approval~~**

~~City Staff will review the application submitted, and the City Manager will make a determination to approve, approve with conditions, or deny the application. Property Owners recommended for funding will be notified by telephone and mail as soon as a final decision is made by the City Manager. Those Property Owners not selected by the City Manager will be notified in writing explaining the reason(s) for rejection. Property Owners not selected for program participation, at any level, may meet with City Staff to discuss the factors which resulted in the rejection of the application. Appeals, from the Property Owner, of such decisions/requirements by the City Manager shall be to the City Council.~~

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~~5. ..... E~~
~~valuation Process~~

~~a. ..... B~~
~~id Process~~

~~At least three (3) detailed bids will be required to be requested from pre-qualified Contractors. Bids must be obtained for all proposed work. The bids and associated costs are presented as the "Final Grant Project Proposal" to the City Staff for recommendation, and then to the City Manager for a final decision. The City and the Property Owner must both be in agreement with the selection of the Contractor.~~

~~b. ..... F~~
~~inal Determination of Funding~~

~~The City Manager makes a final determination on funding and may attach special requirements to the project.~~

~~c. ..... F~~
~~inal Agreement with City~~

~~Final agreements are executed as detailed in the respective program sections. The Property Owner shall be responsible for verifying that they have seen and agree with all Scope of Work for the project on their property by placing a signature of acknowledgement and approval on the appropriate documents. The Property Owner will be required to work with City Staff to assist with review and explanation of the project documents. Additionally, it is VERY STRONGLY recommended that the Property Owner consult with a qualified tax advisor on the financial impacts of participating in the program.~~

~~d. ..... P~~
~~ermitting~~

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~~i. Contractor shall supply a list of all sub-contractors and corresponding City registration numbers for the Grant project. The Contractor and all subcontractors shall be registered with the City in accordance with the Black Hawk Municipal Code, Chapter 6, Article VII. Subcontractor information must be submitted at execution of the final construction contract. Information shall be updated per the terms of the Trade Contractor Agreement through the entire project until completion.~~

~~ii. The Contractor shall supply a project schedule from the beginning to end of the project. The schedule shall be updated per the terms of the Trade Contract Agreement throughout the entire project until completion.~~

~~iii. The approval of an application does not mean a building permit will automatically be issued. All permit fees are waived by the City for residential rehabilitation, as outlined in Chapter 18, Section 18-5 of the Black Hawk Municipal Code, however, the Property Owner/Contractor is still required to apply for a no-charge building permit and secure appropriate inspections during the course of the work. Any other permits required with the project are also the responsibility of the Property Owner/Contractor to apply for such in accordance with the City code.~~

~~e. **Exterior Painting Work Commences**~~

~~City Staff will monitor the work. The work shall be performed according to the approved Scope of Work, approved by the City Manager and attached to the building permit issued by the City. Any Change Orders from the approved Scope of Work must be reviewed and approved, by the City Manager, prior to implementation, and in accordance with the process for proposed Change Orders per Appendix 2. Onsite progress meetings shall be held with the Property Owner, Contractor, and City Staff as needed. The Contractor is responsible to have all required inspections called into the City for inspection.~~

~~f. **Payments**~~

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~~Property Owner is required to submit a Check and Payment Request Form, provided by the Contractor, for each requested payment. With the initial Check and Payment Request Form the Property Owner will need to attach a completed W-9, if not previously provided. All payments for approved work shall be made by check from the City of Black Hawk payable to the Property Owner in an FBO (For the Benefit Of), format to include the company name of the Contractor for the project. The City strongly encourages that the provided FBO check be promptly endorsed over to the Contractor for payment by the Property Owner. By signing the Exterior Paint Guide to Programs, the Property Owner acknowledges and understands the process for payment to the Contractor for the contracted work, and understands they are not to defraud the City or the Contractor during any part of the process for the project. The Property Owner is responsible to ensure that all payment requests are done in a timely fashion throughout the life of the project.~~

~~g.~~ **~~E~~**
~~xterior Painting Completed~~

~~Upon completion of the project, final inspections are made by City Staff. Provided that the painting and preparation work have been found to be performed in accordance with the approved Scope of Work, and has passed all inspections, a final building inspection will be issued by City Staff. Final payment amounts due to the Contractor will be released upon completion of the final approval of the work.~~

~~B.~~ **~~S~~**
~~CHEDULE~~

~~Exterior Paint Program requests may be submitted at any time and will be considered throughout the year. Applications are considered and monies Granted on a first come, first served basis. Annual appropriations for this Program are limited. On occasion, the City will exhaust the available funds for the year. In that case, each application will be processed whenever the funds become available.~~

~~C.~~ **~~C~~**
~~RITERIA FOR SELECTION~~

~~The City Manager will review and have final approval of all Exterior Paint Grant applications submitted to the City. The City Manager shall include, utilize, consider, but not be limited to the following criteria while evaluating Grant applications when making decisions and/or~~

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~~recommendations. This process is discretionary and any other criteria as deemed necessary and appropriate to evaluate, consider, and analyze the applicant may be used.~~

~~1. ..... The project will contribute to and enhance the overall character of the City of Black Hawk.~~

~~2. ..... The project aids in the protection of existing properties. The project would repair damaged components, slow any deterioration in progress, and work to assure the continued presence of the structure.~~

~~3. ..... The project produces visible results. Portions of the work will be on highly visible portions of the property. The property is visibly deteriorated and the proposed repairs would noticeably improve the structure's appearance.~~

~~4. ..... Quality of the application. The application is well presented with a detailed Scope of Work and copies of multiple itemized bids for construction, and demonstrates the ability of the Property Owner to satisfactorily complete the project (City Manager decision only).~~

~~**D. ..... NEGATIVE FINDINGS**~~

~~City Staff may recommend denial of an application because it does not meet the intent of the program and guidelines. The final decision made by the City Manager shall include, utilize and consider, but not be limited to, the following criteria while evaluating Grant applications in order to make decisions and/or recommendations:~~

~~1. ..... Other outstanding debts to the City or unresolved issues associated with City regulations.~~

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~~2. ..... The cost of the work is not commensurate with the projected benefit to be provided to the community.~~

~~3. ..... If it is determined by City Staff that significant deterioration or structural conditions exist on the structure.~~

APPENDIX 1: REVIEW PROCEDURE AND CRITERIA FOR THE PROGRAM

A. REVIEW PROCESS

1. APPLICATION EVALUATION AND CRITERION FOR SELECTION

a. Projects are selected and authorized upon completion of an Application and in the order received.

b. The City considers the finished Application quality indicative of the Property Owner's ability to accomplish the proposed Project.

c. On a case-by-case eligibility basis, the review and approval process is discretionary and subject to the Black Hawk City Council's General Fund's annual budget and appropriation.

d. The City reserves the right to reduce the Application amount, require alternative materials due to cost, longevity, appropriateness of materials, and quality, or request additional information to assist in the thorough review of any Application.

e. The City consults the Black Hawk Residential Design Guidelines and Black Hawk Municipal Code when reviewing the Residential Exterior Paint Program Application. The City may use any other criteria deemed necessary and appropriate to evaluate, consider, and analyze the Application.

f. An application is approved, approved with conditions, or denied.

g. The City Staff may recommend denial of an application if:

1) The Project does not meet the intent of the Program and guidelines;

2) There are outstanding debts to the City or unresolved issues associated with City regulations;

3) The City considers the Property Owner's manner of upkeep of the property and may determine that significant deterioration or structural conditions exist on the structure;

4) The Property Owner declines to complete the incidental or major repairs identified on the site walk;

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5) Property Owner's past performance in previous projects, including, but not limited to, any prior Grant expenditure and accomplishing the Project;
6) The cost of the work is not commensurate with the projected benefit to be provided to the community.

2. ORIENTATION MEETING / DOCUMENT REVIEW

a. After Application approval, the Property Owner meets with City staff to discuss the proposed Project.

b. City staff introduces the general features of the Program.

c. City staff prepares and reviews the respective agreements with the Property Owner; Application (Exhibit A) Grant Program Agreement (Exhibit B), Guide to Programs, Scope of Work, Project Timeline, Building Permit, Power-of-Attorney, Temporary Construction Easement, Temporary Use Permit, Check and Payment Reimbursement Request Form, and Federal and State Tax Liability Reimbursement.

3. SCOPE OF WORK

a. The City hires the Contractor.

b. The Contractor has a current business license and carries the required insurance during the entire Project. Evidence of such is verified before any work commences on the Project.

c. City staff schedules a hazardous materials investigation (Lead Paint) to determine what, if any, dangerous materials may be present onsite. The Lead Paint report defines abatement requirements. The Contractor and his personnel are certified to perform the abatement.

d. Lead Paint testing and abatement are included in the Scope of Work.

e. City staff schedules a site visit with the Contractor and Property Owner to identify existing conditions, incidental and major repairs and creates the Scope of Work considering the following elements:
   1) Lead paint abatement, incidental and major repairs, preparation, and paint.
   2) A low-profile historic color scheme that highlights, not diminishes, the structure's architectural character and coordinates all façade elements—muted colors for the base and brighter colors for accents.
   3) Natural masonry finishes remain unpainted.

f. City staff, the Contractor, and Property Owner create and agree to a project timeline. The Contractor updates the project timeline throughout the entire Project until completion.

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g. The Contractor provides the Property Owner a minimum of one (1) gallon of each paint color, varnish, and stain for touchup and continued upkeep of the surfaces painted under the Program.

h. City staff schedules the Temporary Construction Easement public hearing before City Council.

i. City staff requests from Finance the Temporary Construction Easement fee payable to Property Owner(s) following approval. Submit completed W-9 with the request.

j. The contractor and Property Owner complete the building permit application.

k. The Contractor completes the Temporary Use permit.

l. The Property Owner is physically present during the entire project or assigns a Power-of-Attorney to another person.

4. DOCUMENT APPROVAL

a. The Property Owner signs all Program agreements; Residential Exterior Paint Program Application, Residential Exterior Paint Program – Guide to Programs, completes and submits a W-9 Form, knowledge the Federal and State Tax Liability Reimbursement form, agrees to create a Scope of Work and to apply for a Building Permit, agrees to enter into a Temporary Construction Easement and knowledge the Check and Payment Reimbursement Request form.

b. City Council reviews and approves the Temporary Construction Easement. Payment is disbursed to Property Owners.

c. The City issues the building permit.

d. The City issues the Contractor Notice to Proceed.

e. The Property Owner assigns a Power-of-Attorney to another person to act in their best interest if they cannot be physically present for the entire project.

5. PERMITTING

a. Subcontractors register with the City per the Black Hawk Municipal Code, Chapter 6, Article VII.

b. The Contractor supplies a list of all sub-contractors and corresponding City registration numbers for the Grant project.

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c. The Contractor maintains the project schedule from the beginning to the end of the Project.

d. All permit fees are waived by the City for residential projects, as outlined in Chapter 18, Section 18-5 of the Black Hawk Municipal Code; however, the Property Owner and Contractor apply for a no-charge building permit and secure appropriate inspections during the work.

e. Additional required permits include a Temporary Construction Easement or Temporary Use Permit.

f. Property Owner signs and approves all paint draw-downs for color and sheen.

6. RESIDENTIAL EXTERIOR PAINTING WORK COMMENCES

a. The Property Owner provides the Contractor full access to the site and work area.

b. The Property Owner removes all items on and away from the structure, outbuildings, decks, and porches.

c. The Property Owner keeps all pets out of the Contractors work area.

d. The Property Owner removes daily all pet waste from the Contractors work area for the job's duration.

e. The Contractor brings all necessary materials, supplies, equipment, and accessories to the site or work area.

f. The Contractor is responsible for securing their equipment at all times. No persons are allowed on the site unless they have specific business.

g. The City is not responsible for the theft, loss, or damage to Contractor materials, equipment, tools, or personal belongings on the site.

h. The Contractor is responsible for trash removal and provides refuse collection containers, and keeps the site clean and free of debris, including cigarette butts.

i. The Contractor is not permitted to bring animals on site.

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j. The Contractor performs the work according to the approved Scope of Work, supported by the City, and attached to the building permit.

k. City staff and the Property Owner inspect the work and monitor the Project. The Contractor requests all inspections.

l. Any Change Orders from the approved Scope of Work must be reviewed and approved by the City before implementation.

m. Onsite progress meetings, held as needed, with the Property Owner, Contractor, and City staff.

7. PAYMENTS

a. The Property Owner submits a Check and Payment Reimbursement Request form, with the Contractor's invoice, for each requested payment.

b. With the initial Check and Payment Reimbursement Request form, the Property Owner attaches a completed W-9, if not previously provided.

c. All payments for approved work are by check from the City of Black Hawk payable to the Property Owner in an FBO (For the Benefit Of), format to include the company name of the Contractor for the Project.

d. The Property Owner promptly endorsed over to the Contractor for payment by the Property Owner.

e. By signing the Residential Exterior Paint Guide to Programs, the Property Owner acknowledges and understands the payment process to the Contractor for the contracted work and understands they are not to defraud the City or the Contractor during any part of the process for the Project.

f. The Property Owner is responsible for submitting all payment requests quickly throughout the Project's duration.

8. RESIDENTIAL EXTERIOR PAINTING COMPLETED

a. When the painting and preparation work has been performed according to the approved Scope of Work and passed all inspections, the City staff conducts a final building inspection.

b. The Contractor cleans upon completion of work. All paint chips are captured and disposed of, all areas de-masked, and exterior windows washed.

c. The City will release the final payment due to the Contractor after the final inspection and project closeout with the Property Owner.

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APPENDIX 2: PROJECT PROCESSES AND DOCUMENTATION REQUIREMENTS

This appendix is provided to be used as a resource for City Staff, Property Owners and Contractors affiliated with the City of Black Hawk in regards to the requirements for proposing projects, proposing to work on projects, process requirements for work on projects, quality of workmanship, completion and inspection of all improvements.

a. PRE-QUALIFIED CONTRACTOR APPLICATION PROCESS

1. Contractors must submit a Qualifications Packet. A determination will be made by City Staff to approve or disapprove the Contractor to be put on the pre-qualified list.

2. A Qualifications Packet includes the following information:

a. An overview of general information about the company including
b. Previous work experience related to any of the Categories of Assistance
c. Managerial ability

3. Quality control management/procedures
4. Previous construction experience in and/or near the City of Black Hawk
5. Staff resumes

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~~B. SPECIFIC EXTERIOR PAINT PROGRAM ASSISTANCE COMPONENT INFORMATION~~

~~1. Application Process~~

~~This process is for the Exterior Paint Grants approved by the City for Residential Properties in the City.~~

~~a. Property Owner requests application for exterior paint.~~

~~b. City Staff performs site visit and prepares report identifying existing conditions.~~

~~c. Property Owner submits completed application, and works with City Staff to secure no less than three (3) bids detailing the Scope of Work, itemizing materials and labor, and color chip paint samples selected from an approved historic color palette. The Property Owner must first consider historic colors.~~

~~d. Application must be reviewed and approved by the City Manager prior to any work commencing. Any work started prior to Grant approval will not be reimbursed.~~

~~e. Contractor along with any subcontractors shall be licensed by the City of Black Hawk through the City Clerk's office, prior to any work commencing. Contractor and subcontractors to contact the City Clerk to complete this task and provide evidence of registration to Community Planning and Development.~~

~~f. Contractor shall apply for and obtain a building permit from Community Planning and Development, prior to any work commencing, and request periodic inspections to be performed by the City Staff.~~

~~g. The colors used to paint the exterior siding, soffits, eaves, trim, metal work, decks, porches, exterior wood doors, wood fences, metal fences, previously painted gutters and downspouts, and vertical concrete shall be colors in compliance with the approved color palettes. The Property Owner must first consider historic colors. Contractor shall submit paint color samples, selected from the approved color palettes, when applying for the permit. Color samples should be identified as outlined in the Paint Schedule **(included in Exhibit A).**~~

~~h. Any additional contractors performing work on the job not covered under the Contractor building permit shall also apply for and obtain a building permit from Community Planning and Development, prior to any work commencing and request periodic inspections to be performed by the City Staff.~~

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i. Property Owner signs a Program Agreement that sets forth the terms and conditions of the participation in the program. Some of the key Program Agreement terms include project initiation and completion requirements, City approvals and disbursement of funds.

j. Property Owner and Contractor signs a Trade Contractor Agreement that sets forth the terms and conditions of the project and contract requirements.

k. When it comes time to request a payment from the City, the Property Owner must first submit a completed copy of a Check Request Form along with a completed W9 Form. All Check Request Forms must be accompanied by the Contractor's pay application that itemizes invoices and receipts submitted from the Contractor accomplishing the work. Contractor's pay applications should list in detail all labor and materials. All paperwork is submitted to Community Planning and Development for processing with payment made directly to the Property Owner. The Property Owner is then expected to make prompt payment to the Contractor who has submitted invoices by endorsing the check directly to the Contractor. Payment by the Property Owner from personal funds is not allowed.

2. Preparation of Exterior of House Before Painting

a. If necessary, a hazardous materials investigation (Lead Paint) will be conducted by the City's consultants to determine what, if any, hazardous materials may be present onsite and the extents of any required abatement. Hazardous materials abatement must be completed prior to any additional work commencing.

b. Prior to painting, all necessary preparation such as sanding, chipping of existing peeling paint, washing of exterior, must be completed to remove all surface contamination, such as oil, grease, loose paint, dirt, foreign matter, rust, mold, mildew or mortar efflorescence . Make sure cracks and imperfections are patched or caulked.

e. Any treatment that causes damage to the structure shall be repaired at Contractor's expense.

d. The City Staff designated to inspect the preparation work shall inspect the house to determine adequacy of the prep work once completed, and prior to any layers of paint being placed on the house.

3. Painting.

a. Contractor is required to use either Benjamin Moore or Sherwin-Williams products, as specified by the City of Black Hawk. Sherwin-Williams Exterior Oil-based primer Y24W8020 or Benjamin Moore equal, applied per the

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manufacturer recommendation. All paint by Sherwin-Williams A-100 Exterior Latex A-82 Series of Benjamin Moore equal, applied per the manufacturer recommendation.

b. Surfaces to be coated: exterior siding, soffits, eaves, trim, metal work, decks, porches, exterior wood doors, wood fences, metal fences, previously painted gutters and downspouts, and vertical concrete.

c. Prior to starting work, the Contractor shall check color and product to assure conformity to specified color and finish as described on the Scope of Work.

d. The Contractor is responsible for material damaged by paint and should cover material such as brick, concrete, roofing, vehicles, landscaping, etc. to avoid any potential damage.

e. The Contractor is to leave the Property Owner with a minimum of one quart of each color, varnish and/or stain for touch up. Painter will supply cans and clearly mark each can.

- It is recommended the Property Owner to store paint cans in an area that will protect it from damage, freezing and temperatures above 95°F.

f. Primer/Paint/Varnish/Stain (to resemble paint) Application:

- Prep and prime exposed wood surfaces or Manufacture recommendation and thickness.
- One (1) coat if using existing color or Manufacture recommendation and thickness.
- Two (2) coats if changing color or Manufacture recommendation and thickness. An interim inspection between coats must be requested by Contractor and conducted by City Staff.
- If going from a stain to paint, one (1) coat primer and (2) coats paint all applied per the Manufacture recommendation and thickness.

g.If surfaces sprayed, Contactor to bid back-rolling all surfaces as an Alternate on the Bid Form.

h.All stain shall be one (1) coat with a clear natural satin finish or Manufacture recommendation and thickness.

i. The job to be free of runs, sags, cracking and skips with edges cut neatly.

j. Contractor is to schedule work so that paint is applied when weather conditions are in accordance with manufacturer's specifications. Siding must be dry from dew and frost prior to applying paint, and work must cease in time to allow paint to dry prior to dew and frost forming.

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~~Painting on exteriors shall not be conducted below 45°F. The Contractor assumes all responsibility and accountability for painting under adverse conditions.~~

~~k. Paint top and bottom edge of all doors and windows.~~

~~l. Paint bottom edge of all siding, corner stiles, shutters, and bay windows.~~

~~m. Paint all roof vents and flashing black or other specified color. Mechanical vents in siding to match the siding color.~~

~~n. Caulk, as needed, all joints in exterior trim, including areas where wood joins siding.~~

~~o. Use only the best quality materials as approved by the City. The primer coat, if applicable, should visually differ in color from succeeding coats. Paint color as selected by Property Owner and approved by the City Manager from approved paint colors. The Property Owner must first consider historic colors. All products applied per the manufacturer recommendations.~~

~~q. Consult with City Staff for acceptable sheen. Sheen shall be included in Scope of Work.~~

~~r. Sealants, if applicable: Consult with City Staff for approved sealant products. Color to match siding or trim.~~

~~1. Apply at window and door frames~~
~~2. Bed metal thresholds in sealant~~
~~3. Apply at flashing and jacks~~

~~s. The Contractor shall warrant his/her work for one (1) year from substantial completion. All materials incorporated by Contractor in the project shall be the manufacturers brand and quality specified. All work shall be of good quality, free from fault and defects and in conformity with the contract documents. All work not conforming to these standards shall be considered defective. The warranty provided herein shall be in addition to and not in limitation of any other warranty or remedy required by law or by the contract documents. All warranty items discovered by the Property Owner and reported to Contractor shall be corrected prior to the expiration of the one year warranty. Contractor to provide his/her contact information to Property Owner.~~

APPENDIX 2: PREPARATION AND PAINTING

1. PREPARATION

a. After lead abatement and before painting, all necessary incidental and major repairs or completed by Property Owner followed by Contractor preparation; washing exterior, sanding, chipping of existing peeling paint, is completed to remove all surface contamination, such as oil, grease, loose paint, dirt, foreign matter, rust, mold, mildew, or mortar efflorescence. All cracks and imperfections are patched or caulked.

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b. The Contractor repairs, at their expense, damage to any structure or property caused during preparation.

c. The City Staff inspects the preparation work before painting.

2. PAINTING.

a. The Contractor uses either Benjamin Moore or Sherwin-Williams products, as specified by the City of Black Hawk unless the City approves an alternate product. Following are City recommendations:
   1) Sherwin-Williams Exterior Oil-based primer Y24W8020 or Benjamin Moore equal applied per the manufacturer recommendation.
   2) All paint by Sherwin-Williams A-100 Exterior Latex A-82 Series of Benjamin Moore equal applied per the manufacturer recommendation.

b. Select a sheen with a light gloss, low reflective finish, good at hiding surface imperfection, stays clean, is easily washed, and stands up to abrasion.

c. Flat paint is not acceptable.

d. Coated Surfaces: exterior siding, soffits, eaves, trim, metalwork, decks, porches, exterior wood doors, wood fences, wood windows, metal fences, previously painted gutters, and downspouts, and vertical concrete.

e. Before starting work, the Contractor checks products, color, and sheen to assure conformity to specified color and finish as described in the Scope of Work.

f. The Contractor masks all areas requiring protection from overspray.

g. The Contractor is responsible for material damaged by paint and should cover surfaces such as brick, concrete, roofing, vehicles, landscaping, etc., to avoid any potential damage.

h. The Contractor is to leave the Property Owner with a minimum of one (1) gallon of each color, varnish, and stain for touch up. The Contractor supplies the paint cans and marks each can identifying product.
   1) Recommend storing the paint cans in an area protected from damage, freezing, and temperatures above 95°F.

i. PRIMER/PAINT/VARNISH/STAIN APPLICATION:

   1) All failing paint, including peeling and bubbling areas, is scraped from the substrate.
   2) Caulk all cracks, windows, and patch small holes.
   3) Conceal all wood siding nail holes and reset any nails that may be separating from the siding.

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4) Prep and prime all exposed wood surfaces following the Manufacture's recommendation and thickness.
5) One (1) coat if using existing color or Manufacture's recommendation and thickness.
6) Two (2) coats if changing color or Manufacture's recommendation and thickness. The Contractor requests an interim inspection between coats.
7) If transitioning from a stain to paint, one (1) coat primer and (2) coats paint is applied per the Manufacture's recommendation and thickness.

j. If surfaces sprayed, Contactor back-rolls all surfaces.

k. All stain is one (1) coat with a clear natural satin finish or Manufacture's recommendation and thickness.

l. The job is free of runs, sags, cracking, and skips with edges cut neatly.

j. The Contractor schedules work to apply paint when weather conditions are per the manufacturer's specifications.
1) Siding is dry from dew and frost before applying paint, and work ceases in time to allow the paint to dry before dew and frost forming.
2) Painting on exteriors is not be conducted below 45°F.
3) The Contractor assumes all responsibility and accountability for painting under adverse conditions.

m. Paint the top and the bottom edge of all doors and windows.

n. Paint the bottom edge of all siding, corner stiles, shutters, and bay windows.

o. Paint all roof vents and flashing black or another specified color. Mechanical vents located within the siding match the siding color.

p. Caulk all joints in exterior trim, including areas where wood joins siding.

q. Use only the best quality materials as approved by the City. The primer coat, if applicable, should visually differ in color from succeeding coats—paint color as selected by Property Owner and approved by the City from approved paint colors. The Property Owner must first consider historic colors. All products are applied per the manufacturer's recommendations.

r. Consult with City Staff for appropriate sheen. Include sheen in the Scope of Work.

s. Sealants, if applicable: Consult with City Staff for approved sealant products. Color to match siding or trim.
1) Apply at window and door frames;
2) Bed metal thresholds in sealant;
3) Apply at flashing and jacks;

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t. The Contractor warrants their work for one (1) year from substantial completion.

1) All materials incorporated by the Contractor or the manufacturer's brand and quality specified.

2) All work is good quality, free from fault and defects, and in conformity with the Scope of Work and Program documents.

3) All nonconforming work is defective.

4) The warranty provided is in addition to and not limited to any other warranty or remedy required by law or by the Scope of Work and Program documents.

5) The Contractor corrects all warranty items discovered by the Property Owner and reported to City before the one (1) year warranty expiration.

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~~***REVIEW OF DOCUMENTS BY PROPERTY OWNER***~~

~~The Property Owner:~~

~~**(a)** Read this Agreement and the applicable documents associated with "Exterior Paint Guide to Programs,"~~

~~**(b)** Fully understands the terms and conditions of the Grant as set forth therein, and~~

~~**(c)** Agrees to be bound by those terms and conditions.~~

~~**Property Owner**~~

~~By: _____~~

~~Date: _____~~

PROPERTY OWNER ACKNOWLEDGEMENT

I, _____, as the Property Owner of residential property addressed _____ Black Hawk, Colorado, 80422, do now certify that I have reviewed and read the Residential Exterior Paint Program Application – Exhibit A, the Residential Exterior Paint Program – Guide to Programs – Exhibit B, the Federal and State Tax Liability Reimbursement form, agree to create a Scope of Work, agree to assign a Power-of-Attorney if physically unable to be present for the entire project, and to apply for a Building Permit, enter into a Temporary Construction Easement, complete and submit Check and Payment Reimbursement forms quickly, and provide a completed W-9 Form. I fully understand the terms and conditions of the Residential Exterior Paint Program documents set forth therein and agree to be bound by the terms and conditions.

By: _____

Date: _____

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EXHIBIT A

EXTERIOR PAINT PROGRAM
APPLICATION

City of Black Hawk
Community Planning and Development
211 Church Street
P.O. Box 68
Black Hawk, CO 80422
Ph: 303-582-0615 / 303-582-2223
Email: ~~Clinker@cityofblackhawk.org~~ CPDinquiry@cityofblackhawk.org

Grant No: _____
Project No: _____
For Office Use Only

RESIDENTIAL EXTERIOR PAINT PROGRAM
~~2020~~ APPLICATION

GENERAL INFORMATION:

Grant Year: ~~2020~~ **Today's Date:** _____

Property Street Address: _____

Property Owner(s): _____

Owner(s) Mailing Address: _____

Owner(s) Telephone No.: (H) _____(W) _____(Cell)_____

Email Address: _____

Contact Person (if different from owner)

Contact Telephone No.: (H) _____(W) _____(Cell)_____

Email Address: _____

Applications can be made by individuals other than the Property Owner with the Owner's written permission. Written permission must be in the form of a signed and notarized 'Power-of-Attorney' attached to the application.

Completing an application does not guarantee project funding. After the Property Owner applies, the City staff meets with the Owner to introduce the Program. If the Property Owner elects to move forward, a current condition report and work scope are created and provided to the City's Paint Consultant for pricing. Staff submits applications to the City Manager for review with approval, conditional approval, or denial by City Council. The Property Owner is notified by May 27, 2021, if their project received funding. Painting gets underway June 1, 2021, with staggered start dates and ends by September 30, 2021.

The process for determining payment of Federal and State income tax liability is attached hereto as **Exhibit A**.

~~All residential properties within the City Limits of Black Hawk qualify to have their houses repainted as part of the City's Exterior Paint Program, but there are eligibility requirements. Upon receipt of an application, City staff will notify the applicant if they are eligible to~~

~~participate in the 2020 Program. If an applicant is eligible, City staff and Gonzales Custom Painting, Inc. will assist the resident in creating a scope of work and selecting a historic color scheme.~~

~~Applications submitted by individuals other than the property owners must contain the owner's written permission (written permission must be signed and notarized on a form "Affidavit of Permission" or 'Power of Attorney' provided by the applicant).~~

~~Funds issued to a property owner under this Exterior Paint Program are considered income under the State and Federal income tax laws. The City provides for partial reimbursement of this tax if requested by the property owner, but the property owner is responsible for the remaining tax liability.~~

Property Owner Signature _____ Date _____

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CITY USE ONLY - DO NOT WRITE BELOW THIS LINE.

Date Received: _____

Property Address: _____

Grant No.: _____

Review Date: _____

Reviewed By: ☐*City Manager* ☐*City Council*

Decision: ☐*Approved* ☐*Conditional Approval* ☐*Denial*

Conditional Approval Comments or Denial Comments:

_____

_____

_____

_____

Associated Building Permit Number: _____

Authorization Staff Signature: _____

Date: _____

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Exhibit A
Income Tax Liability

City of Black Hawk
Attn: Finance Director
P.O. Box 68
Black Hawk, CO 80422

Dear Sir or Madam:

I (We) have completed our Federal and State Tax Returns for tax year 20_____, and I (we) are requesting the City of Black Hawk issue a check to cover our total Federal income tax liability for receipt of the exterior residential property painting grant for my (our) property located at _____ in the amount of $_____.

I (We) certify that for the Federal Income Tax Return filed for tax year 20_____, my (our) tax liability is $_____ and my (our) tax liability would have been $_____ without reporting the grant.

AND

I (We) certify that I (we) will not submit an application for the Colorado Historical Preservation Income Tax Credit and I (We) certify that for the State Income Tax Return filed for tax year 20_____, my (our) tax liability is $_____ and my (our) tax liability would have been $_____ without reporting the grant.

I (We) certify that the above information is true and correct. To the extent the information is not correct, I (we) understand that I (we) may be held personally liable to repay all money received hereunder, and to pay interest, costs, and attorneys' fees incurred by the City of Black Hawk in collecting such amounts, and that I (we) may also be subject to criminal prosecution.

Sincerely,

_____ _____
Signature / Date Signature / Date

City of Black Hawk
Community Planning and Development
211 Church Street
P.O. Box 68
Black Hawk, CO 80422
CPDinquiry@cityofblackhawk.org
Ph: 303-582-0615 or 303-582-2223

Grant # _____
Project # _____

For Office Use Only

RESIDENTIAL EXTERIOR PAINT PROGRAM

CHECK AND PAYMENT REQUEST FORM

FEDERAL AND STATE TAX LIABILITY REIMBURSEMENT

Grant Year: _____ **Today's Date:** _____

Property Street Address: _____

Applicant: _____

(As it appears on the Grant, please print)

Mailing Address: _____

Telephone No.: _____

Check Payable To: _____

Tax Liability Grant Amount: $ _____

Federal Tax Amount Requested: $ _____ ☐ **(010-1101-4115813)**

State Tax Amount Requested: $ _____ ☐ **(010-1101-4115813)**

All requests for payment **must be** supported with a copy of a letter from the Certified Public Accountant specifying the specific tax liability amount for the tax year in question associated with the receipt of a grant pursuant to the General Fund Exterior Paint Grant Program, or a copy of the grant recipient's fully executed Federal **and** State tax return for the tax year in question indicating the specific tax liability associated with the receipt of a grant pursuant to the General Fund Exterior Paint Grant Program and a fully executed document in the form attached hereto as **Exhibit A – Income Tax Liability** and incorporated herein by this reference, signed by the grant recipient(s).

Incomplete or partial submittals will not be considered. The City reserves the right to refuse payment of any request, which does not provide the necessary information, or that is not covered by the grant awarded.

Payments will be issued in accordance with City Procedures, no exceptions.

I hereby acknowledge that all of the information provided in support of this payment request is accurate and correct.

Owner's Signature: _____ _____
Signature / Date Signature / Date

Staff Review Only. Do not write below this line.

Payment Request: *Approved* ☐ *Denied* ☐ *Date:* _____ *By:* _____

Comments or Conditions: _____

_____

Authorization Signature: _____ *Date:* _____

EXHIBIT B

EXTERIOR PAINT PROGRAM AGREEMENT

DRAFT

RESIDENTIAL EXTERIOR PAINT PROGRAM AGREEMENT

THIS RESIDENTIAL EXTERIOR PAINT PROGRAM AGREEMENT (the ***"Agreement"***) is made as of the _____ day of _____, 20____, (the ***"Effective Date"***) by and between the ***CITY OF BLACK HAWK***, a municipal corporation organized and existing under the laws of the State of Colorado (the ***"City"***) and _____ (**Insert Applicant**) (the ***"Property Owner"***), whose Residential Property address is:

_____.

RECITALS

A. The City has made certain proceeds of the Exterior Paint Fund, available for the purpose of exterior painting of Residential Properties within the City Limits of the City of Black Hawk, when owners agree to use the funds in accordance with agreed upon specifications (the ***"Residential Exterior Paint Program"***).

B. The Property Owner, who is the owner of a structure located at _____ _____**(Insert Property Address), Black Hawk, Colorado 80422**, (the ***"Residential Property"***) submitted an application under the Exterior Paint Program.

AGREEMENT

NOW, THEREFORE, in consideration of the above Recitals and the mutual covenants contained herein, the City and the Property Owner hereby agree as follows:

1. Exterior Paint Grant.

1.1 Grant. The City hereby agrees to reimburse Property Owner for work performed in compliance with this Agreement, an amount up to **$**_____ **(Insert Grant Amount)** (the ***"Grant"***) for the exterior paint of a Residential Property.

1.2 Tax Payment. To the extent permitted by law, the City hereby agrees to reimburse Property Owner for personal state and federal income taxes owed by Property Owner that are directly attributable to funds disbursed under the Grant (the "Tax Burden") for the year in which the Grant is received. Property Owner shall provide evidence of the Tax Burden that is satisfactory to the City, in its sole discretion, prior to any payment of the Tax Burden by the City. Regardless of whether ~~In the event that~~ the Property Owner requests payment from the City prior to payment of his/her taxes, ~~the City shall pay the Property Owner directly. In the event that~~ or Property Owner pays the Tax Burden him/herself and requests a reimbursement from the City, the City shall make such payment directly to the Property Owner.

2. Agreement, Acknowledgement and Representation by Property Owner. The Property Owner hereby agrees with, and acknowledges and represents to the City that:

2.1 Review of Documents. The Property Owner **(a)** has read this Agreement and the applicable "Residential Exterior Paint Program Guide to Programs," **(b)** fully understands the terms and conditions of the Grant as set forth therein, and **(c)** agrees to be bound by those terms and conditions.

2.2 Failure to Comply. Any failure by the Property Owner to comply with the terms and conditions of this Agreement shall terminate the Property Owner's right to any Grant payments.

2.3 No Liability. The City shall be in no manner liable to the Property Owner for any monies expended by the Property Owner in connection with the Exterior Paint Program, whether or not the Property Owner is actually paid any funds from the Grant.

3. Undertaking. The Property Owner will undertake the construction of improvements and other repairs of the Property approved by the City in a timely manner (the ***"Project"***). The Property Owner has two (2) months to complete the Project, which time period shall begin upon the issuance of a building permit or upon disbursement of the first payment from the Grant by the City to begin the Project.

4. Conditions Precedent to Disbursement of Funds. Subject to Section 4 hereof, funds from the Grant shall be disbursed to the Property Owner upon satisfaction of:

4.1 Evidence of Construction Costs. The Property Owner shall provide the City, or its designee, all invoices, paid statements, building permits and such other supporting documents or certifications of the Property Owner evidencing the reasonableness and the appropriateness of the cost of the construction amount as the City, or its designee, may reasonably require.

4.2 Building Permit. If required by the nature of the project of the Residential Property as determined by the City in its sole discretion, the City, or its designee, shall be provided with a copy of the building permit issued by the City's Building Official for the Project, which shall be in such form and with such content as the City, or its designee, may reasonably require.

4.3 Other Documents or Requirements. The Property Owner shall provide the City, or its designee, such other documents as may be required by the City, or its designee, in its sole discretion to satisfy the requirements of this Agreement.

4.4 Completion of Improvements. The Project shall have been satisfactorily completed in accordance with the City's Residential Exterior Paint Program guidelines and design standards, as determined by the City or its designee, in its sole discretion, on or before two (2) months after the issuance of the building permit if required by the

City, or on or before two (2) months after the first disbursal is made to the Property Owner, whichever date comes first.

5. ***Disbursement.***

5.1 Grant Disbursement. The Property Owner is responsible for providing the City invoices for work on the Project. Each invoice shall contain sufficient detail regarding work that has been done, or will be performed, for each aspect of the Project. The invoice shall also relate directly to the items outlined on the original proposal or bid provided to the Property Owner by the Contractor. When the invoice is considered complete and payable, the City will write the check for the invoice amount directly to the Property Owner within two (2) weeks of this determination. The Property Owner is then responsible for the disbursement of these funds directly to the Contractor as outlined in the FBO (For the Benefit Of) payments process.

6. ***Termination of the Grant.*** In the event the Property Owner fails to satisfy the conditions precedent set forth in Section 4 hereof on or before, _____ _____, 20_____ (The ***"Termination Date"***), the Property Owner's right to be paid the Grant or any portion thereof shall automatically terminate.

7. **Sale or Transfer of Property.**

7.1 Reimbursement. In the event the amount of the Grant plus the Tax Burden (the ***"Combined Amount"***) set forth in Section 1 exceeds fifty thousand dollars ($50,000.00) and the Property Owner sells or transfers the Residential Property within five years of the Effective Date, the Property Owner shall reimburse the City the amount of the Combined Amount less an amount equal to one-sixtieth of the amount of the Combined Amount for each full month occurring between the date of this Agreement and the date of the sale or transfer of the Residential Property (the ***"Reimbursement Amount"***).

7.2 Security. In the event that Property Owner seeks to sell or transfer the Residential Property within five years of the Effective Date and Property Owner has not paid the

City the Reimbursement Amount, prior to any sale or transfer Property Owner shall (1) notify the City of the intended sale or transfer; (2) execute a promissory note in favor of the City for the Reimbursement Amount, which shall be calculated as if the Residential Property will be sold on the date of execution of the deed of trust (***"Estimated Reimbursement Amount"***); and (3) execute a deed of trust for the benefit of the City to secure the Estimated Reimbursement Amount. Should the Estimated Reimbursement Amount exceed the actual Reimbursement Amount, the City shall pay the difference back to the Owner after the transfer or sale and upon the City's receipt of the Estimated Reimbursement Amount.

7.3 ***Avoidance of Security Requirement.*** Property Owner need not comply with the requirements of Section 7.2 if prior to the sale or transfer of the Residential Property, Property Owner deposits the Estimated Reimbursement Amount in an escrow account payable to the City upon the sale or transfer of the Residential Property. If upon the sale or transfer of the Residential Property, the Estimated Reimbursement Amount exceeds the actual Reimbursement Amount, the difference shall be returned to the Property Owner.

8. ***Non-Transferable.*** The rights granted to the Property Owner herein are non-transferable and may not be transferred or assigned. Any attempted transfer or assignment shall automatically be deemed to be null and void and shall be grounds for termination of this Agreement.

9. ***Notices.*** All notices required or permitted under this Agreement shall be deemed given upon personal delivery by hand to the authorized representatives of either the Property Owner or the City or three (3) days after being sent by certified mail, return receipt requested, postage prepaid, addressed to the respective party at its mailing address below:

If to the City:	**City of Black Hawk** **P.O. Box 68** **Black Hawk, CO 80422** **ATTN: Community Planning & Development**
If to the Property Owner:	**(Insert Name & Address)**

Each Party may change its or his/her address as set forth herein by written notice to such effect directed to the other party.

10. Miscellaneous:

10.1 Amendments and Supplements: This Agreement may not be amended, modified or supplemented in any manner except by a written agreement executed by both the City and the Property Owner.

10.2 Severability. In the event any provision of this Agreement is deemed to be illegal, invalid or unenforceable by a court of competent jurisdiction, such provisions shall not affect the remainder thereof.

10.3 Standard of Approval. Where within this Agreement, the approval of the City or its designee is required or permitted, the City or its designee may grant or withhold its approval or its consent in its sole, absolute and uncontrolled discretion.

10.4 Waiver. The waiver by the City, or its designee, of any failure by the Property Owner to comply with any of the terms and conditions of this Agreement must be in writing and in any event shall not be deemed to be a waiver of any subsequent failure of the Property Owner to comply with the terms or conditions of this Agreement.

10.5 Time of the Essence. Time is of the essence in the performance of each and every term and condition of this Agreement by the parties hereto.

10.6 ***Governing Law.*** This Agreement, its construction, validity and effect, shall be governed and construed by and in accordance with the laws of the State of Colorado.

IN WITNESS WHEREOF**,** the Property Owner and the City have executed this Agreement on the date first above written.

CITY OF BLACK HAWK, a municipal corporation organized and existing under the laws of the State of Colorado

CITY OF BLACK HAWK

_____
David D. Spellman, Mayor

ATTEST:

_____
Melissa A. Greiner, City Clerk

APPROVED AS TO FORM:

_____
Corey Y. Hoffmann, City Attorney

PROPERTY OWNER

By: _____
Property Owner

STATE OF COLORADO)
)ss.
COUNTY OF _____)

The foregoing instrument was subscribed, sworn to, and acknowledged before me this _____ day of _____, 20_____, by _____.

My commission expires: _____

(S E A L)

_____
Notary Public