

Development Review Staff Report



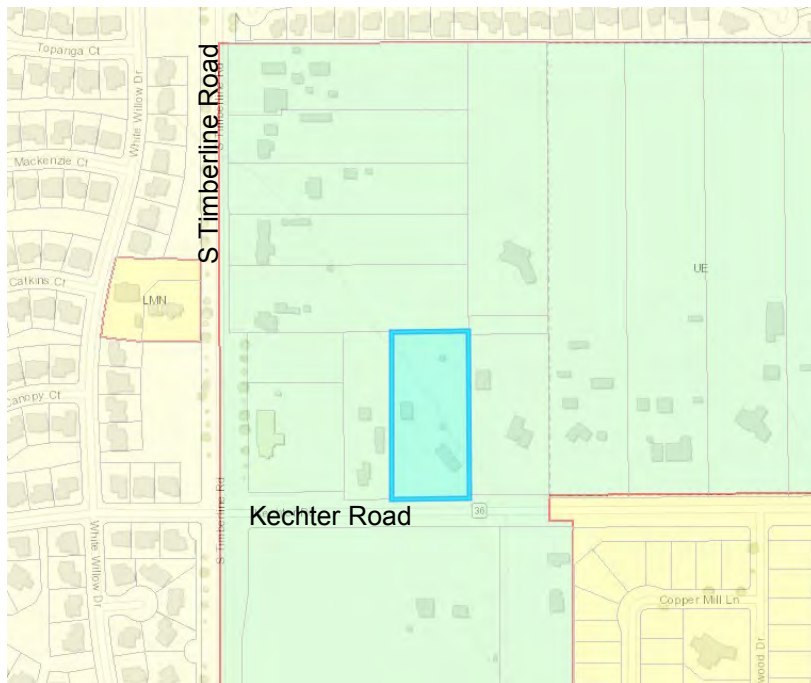
Administrative Hearing: May 8, 2019

Meyer Subdivision – Single-Family Residence, FDP190006

Summary of Request

This is a request to plat an unplatted lot, remove an existing home, and construct a new single-family residence. The plan also intends to establish urban agriculture, farm animals and pole barn as accessory/miscellaneous uses.

Zoning Map



Next Steps

Upon approval from the Administrative Hearing Officer, the applicant will be eligible to apply for a building permit and submit Mylars for recording with Larimer County and the City. Once recorded, the permit application will be released to all reviewing departments.

Site Location

2200 Kechter Road. Located on the north side of Kechter Road approximately 400 feet east of S Timberline Road.

Zoning

Urban Estate (U-E)

Property Owner

Adam Meyer & Leslie Pezzuti
2200 Kechter Road
Fort Collins, CO 80528

Applicant/Representative

Adam Meyer
2200 Kechter Road
Fort Collins, CO 80528
p. (720) 468-2235 e.adamdmeier@gmail.com

Staff

Kai Kleer, Associate Planner
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Staff Recommendation

Approval

1. Project Introduction

A. SUMMARY OF PROJECT & PROCESS

This is a request to plat an existing unplatted lot, remove an existing residence, construct a single-family residence, and establish the accessory/miscellaneous uses of urban agriculture, farm animals and pole barn on a property located at 2200 Kechter Road. The project is located on 2.2 acres of land and contains two existing single-family residences. The applicant proposes the removal of the easternmost residence prior to the construction of the new home.

The project dedicates 10 feet of public Right-of-Way on the north side of the lot for the future east to west connection of Sage Creek Road and 12 feet of public Right-of-Way on the south side of the lot for the future improvement of Kechter Road to meet the City's two-lane arterial standards. The property is currently zoned Urban Estate (U-E).

The request complies with the applicable requirements of the Land Use Code, specifically:

- Procedural requirements located in Division 2.1 General Procedural Requirements;
- Division 2.2 Common Development Review Procedures for Development Applications;
- Division 2.4 Project Development Plan located in Article 2 Administration;
- Standards and requirements located in Section 3.3.1 Plat Standards in Article 3 General Development Standards; and
- Applicable standards located in Section 4.2(D) Land Use Standards and Section 4.2(E) Development Standards in Article 4 Districts, Division 4.2 Urban Estate District.

B. SITE CHARACTERISTICS

1. Current Conditions

Natural Features

The site contains two single-family residences and three accessory buildings (two of which will remain). The property is planted with a combination of 55 evergreen, fruit and deciduous trees which will not be impacted by the development associated with this plan. The site generally slopes from the south to north behind the existing Kechter Road right-of-way.

Historic and Cultural Facilities

There are no historic or cultural features on the site.

Road, Pedestrian and Bike Network

The property has frontage on Kechter Road along the entire southern length. Access will remain on the southwest portion of the site and serve both residential units. Sidewalks do not exist within the immediate vicinity and are expected to be installed through a capital project or larger redevelopment of the area. The improvement/construction of Kechter and Sage Creek Roads have been deferred until time of future development/redevelopment.

Utilities

The existing water service from Kechter Road will be extended to the new residence and continue to be provided by the Fort Collins Loveland Water District. The existing electric service from Poudre Valley Rural Electric Association will remain. The proposed septic system will require permitting prior to the commencement of construction from the Larimer County Department of Health.

2. Surrounding Zoning and Land Use

	North	South	East	West
Zoning	Urban Estate (U-E)	Urban Estate (U-E)	Urban Estate (U-E)	Urban Estate (U-E)
Land Use	Single-family detached residence	Single-family detached residence	Single-family detached (Thorland Subdivision)	Single-family detached residence; Place of Worship (Kingdom Hall of Jehovah's Witnesses)

3. History

- The property contained within 2200 Kechter Road was developed in Larimer County.
- 2200 Kechter Road was part of the Mail Creek Crossing Second Enclave Annexation in 2017 and has not been previously platted.
- There are two existing single-family residences on the site – the primary residence which was constructed in 1972 and a secondary modular residence built in 1999.
- The site contains three accessory buildings, two of which are to remain with this development plan.

2. Article 2 – Applicable Standards

A. BACKGROUND

This section is to provide a summary of procedural action as required by Article 2. This includes background on conceptual reviews, previous approvals, neighborhood meetings, and any other significant procedural events.

B. PROJECT DEVELOPMENT PLAN PROCEDURAL OVERVIEW

1. Conceptual Review (August 30, 2018)

A conceptual review meeting was held on August 30, 2018.

2. Neighborhood Meeting

A neighborhood meeting was not required as part of the procedural requirements for this application.

3. Submittal (March 06, 2019)

The submittal of the project was completed on March 6, 2019 and deemed complete on March 8, 2019. The project was subsequently routed to all reviewing departments.

4. Notice (Posted, Written and Published)

Posted notice: December 4, 2018, Sign # 476

Written notice: April 24, 2019, 1,000-foot notification boundary (800 foot required), 149 letters sent

Published Notice: April 26, 2019, Fort Collins Coloradoan

3. Article 3 - Applicable Standards

A. DIVISION 3.2 - SITE PLANNING AND DESIGN

Applicable Code Standard	Summary of Code Requirement and Analysis	Staff Findings
3.2.1 Landscaping and Tree Protection	Development on existing lots for single-family detached dwellings is exempt from the standards in Section 3.2.1. The applicant has met with the City Forestry Department and is proposing to preserve all existing trees on the site. The combined site and landscape plan indicate the preservation of existing trees.	Complies
3.2.2(K)(1)(c) Residential Parking Requirements	Vehicle parking requirements for single-family detached houses are a minimum of 1 off-street parking space on lots with greater than 40 feet of street frontage. There is no maximum number of parking spaces for a single-family detached house. Six (6) parking spaces are proposed on the site, which exceeds the residential parking standards as outlined in 3.2.2(K).	Complies

B. DIVISION 3.3 - ENGINEERING

Applicable Code Standard	Summary of Code Requirement and Analysis	Staff Findings
3.3.1 Plat Standards	The plat demonstrates proper lot size, access to a public street, dedication of rights-of-way for public streets and utility easements. The applicant has satisfactorily coordinated utility requirements with the relevant outside utility providers, including the Fort Collins-Loveland Water District, Poudre Valley Rural Electric Association. The proposed house will be served by an onsite septic system and will be required to complete necessary steps pursuant to the On-site Wastewater Treatment System Act, 25-10-101 and as described by the Larimer County Health Department.	Complies

C. DIVISION 3.5 - BUILDING

Applicable Code Standard	Summary of Code Requirement and Analysis	Staff Findings
3.5.2(E)(5) Maximum Size of Detached Accessory Buildings	<p>On lots greater than 1-acre in size, any detached accessory building that is incidental to a single-family residence can contain a maximum floor area of six (6) percent of the total lot area. As proposed, the development contains 2.2 acres of land; therefore, the maximum floor area of a detached accessory building is 5,765 feet. The proposed barn is 1,000 square feet, thus meeting the requirement.</p> <p>Though not applicable, if the applicant were to propose a building more than 2,500 square feet in size in the Urban Estate zone district, the development would require review by the Planning and Zoning Board.</p>	Complies

D. DIVISION 3.6 - TRANSPORTATION & CIRCULATION

The proposal meets the relevant street, streetscape, alley and easement standards of the Land Use Code as detailed by the applicable standards.

Applicable Code Standard	Summary of Code Requirement and Analysis	Staff Findings
3.6.2(J) Streets right-of-way	The plat for the proposed development dedicates an additional 12 feet of right-of-way along Kechter Road and 10.01 feet of right away for the future alignment of Sage Creek Road on the north.	Complies
3.6.2(O) Easements	Easements for utilities, water, and emergency access have been provided as required by the City Engineer, outside utility providers, and Poudre Fire Authority.	Complies
3.6.6 Emergency Access	The proposal meets the emergency access standards of the Land Use Code and the requirements of the Poudre Fire Authority. A 16-foot emergency access easement is shown along the driveway to provide access to both existing and future residences. All other requirements have been resolved in regard to fire sprinkler, addressing and wayfinding.	Complies

4. Article 4 – Applicable Standards:

A. SUMMARY

This proposed project complies with all applicable requirements of the Urban Estate (U-E) zone district. More specifically, the property complies with all metrics as it relates to density, dimensions, and connectivity.

B. DIVISION 4.2 – URBAN ESTATE DISTRICT (U-E)

Applicable Code Standard	Summary of Code Requirement and Analysis	Staff Findings
4.1(B)(2)(a) Permitted Uses	Single-family detached dwelling, accessory building, farm animals and urban agriculture are expressly permitted uses in the Urban Estate (U-E) zone district, subject to Administrative (Type 1) Review. The final development plan as proposed meets this standard.	Complies
4.2(D)(1) Density/Intensity	The final development plan meets the density/intensity standards of the Urban Estate District. The proposed project provides the following characteristics, in compliance with the standards: <ul style="list-style-type: none"> Standard: Overall average density cannot exceed 2 dwelling units/gross acre. Proposed: 0.85 dwelling units/gross acre. Standard: Lot size must be one-half (1/2) acre or larger. Proposed: 2.2 acres. 	Complies
4.2(D)(2) Dimensional Standards	The final development plan meets the dimensional standards of the Urban Estate District. The proposed project provides the following characteristics, in compliance with the standards: <ul style="list-style-type: none"> Minimum lot width: 100 feet. Provided: 214 feet. Minimum front yard depth: 30 feet. Provided: 335 feet. Minimum rear yard depth: 25 feet. Provided: 62 feet. Minimum side yard width: 20 feet. Provided: 66 feet (both east and west side yard). Maximum building height: three (3) stories. Proposed: two (2) stories. 	Complies
4.2(E)(1) Street Connectivity and Design	Any development within the Urban Estate District require compliance with the standards contained in Section 3.6.3, Street Pattern and Connectivity Standards. The proposed development dedicates the necessary Right-of-Way for the future extension of Sage Creek Road. Sage Creek Road is an east-west local street that will connect South Timberline Road to the Sage Creek Subdivision.	Complies

5. Public Outreach

A. NEIGHBORHOOD MEETING

A neighborhood meeting is not required for Administrative (Type 1) projects; therefore, a neighborhood meeting was not held for this project.

B. PUBLIC COMMENTS:

No public comment has been received at this time. Any communication received between the public notice period and hearing will be forwarded to the Hearing Office to be considered when making a decision on the project.

6. Findings of Fact/Conclusion

In evaluating the request for the Meyer Subdivision – Single-Family Detached Final Development Plan, FDP190006, staff makes the following findings of fact:

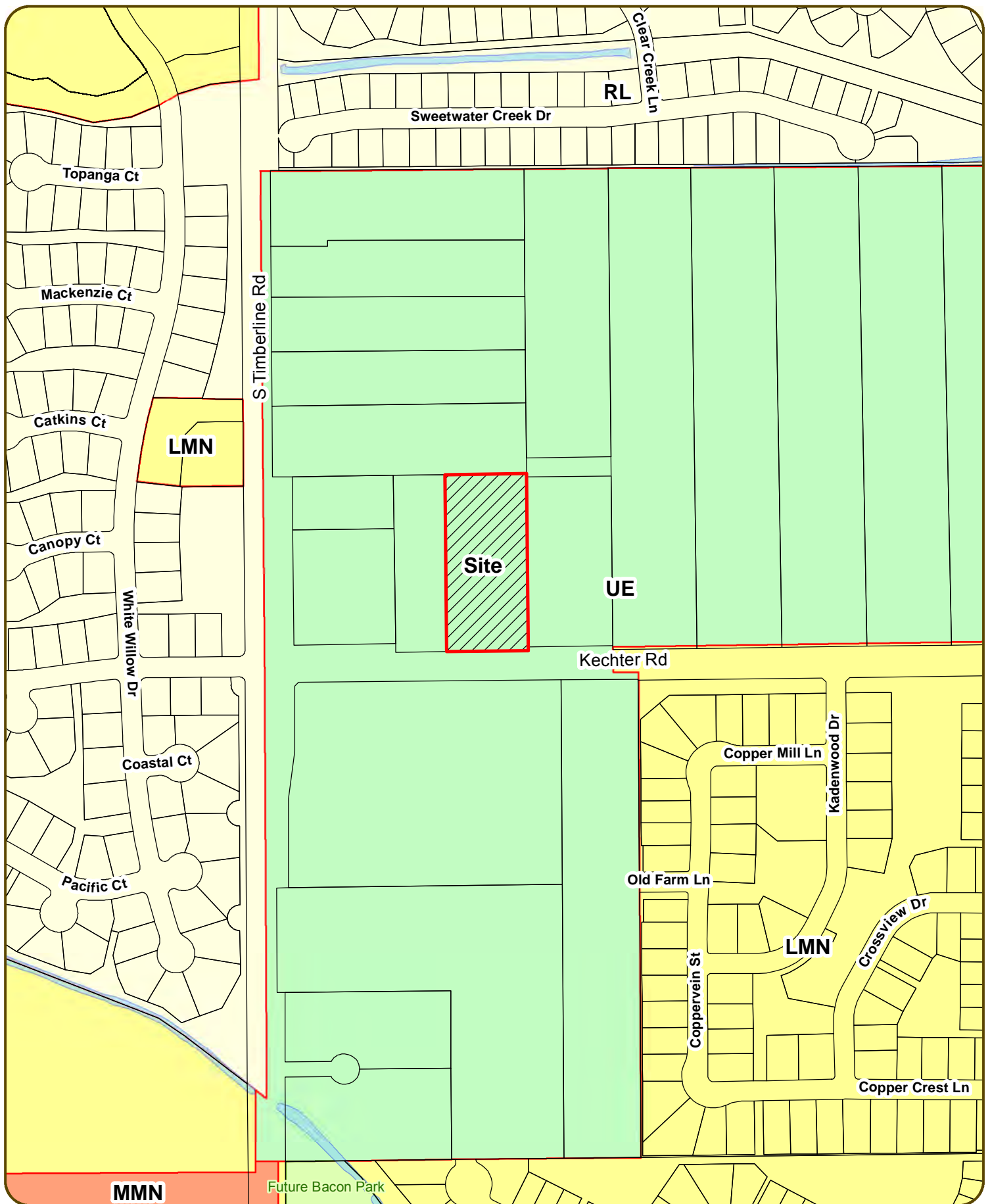
- The Meyer Subdivision Final Development Plan complies with process located in Division 2.2 – Common Development Review Procedures for Development Applications of Article 2 – Administration.
- The Meyer Subdivision Final Development Plan complies with relevant standards located in Article 3 – General Development Standards.
- The Meyer Subdivision Final Development Plan complies with relevant standards located in Division 4.2, Urban Estate District (U-E).

7. Recommendation

Staff recommends approval of the Meyer Subdivision Final Development Plan, FDP190006.

8. Attachments

1. Vicinity & Zoning Map
2. Planning Set (site and landscape)
3. Subdivision Plat
4. Utility Plans
5. Drainage and Erosion Control Report



Meyer Subdivision - Single Family Residence Vicinity & Zoning Map



FINAL DEVELOPMENT PLAN

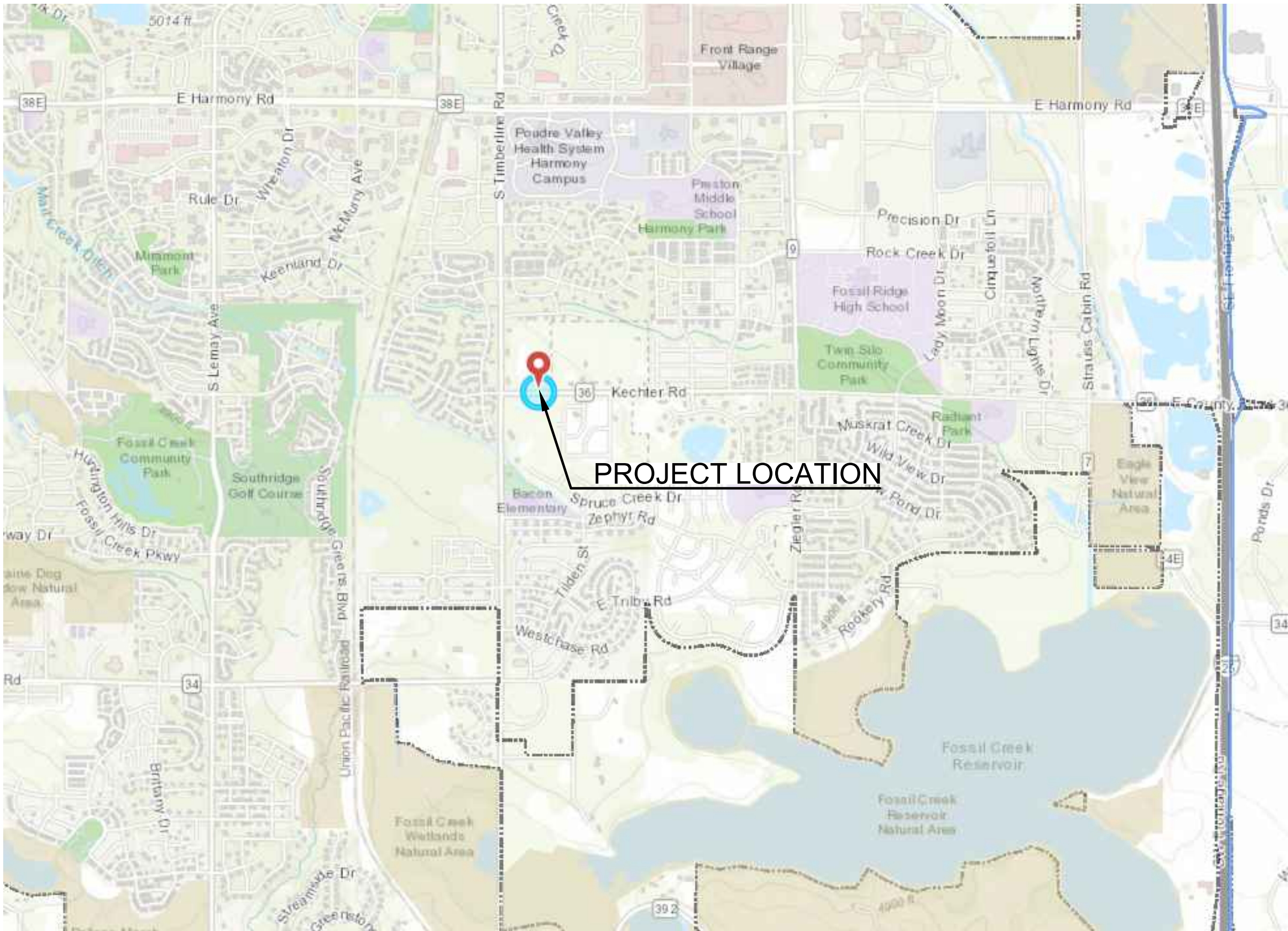
MEYER SUBDIVISION

Situate in the Southwest Quarter of Section 5, Township 6 North, Range 68 West of the 6th P.M.
City of Fort Collins, County of Larimer, State of Colorado

APRIL 2019

SITE PLAN NOTES:

1. REFER TO FINAL UTILITY PLANS FOR EXACT LOCATIONS AND CONSTRUCTION INFORMATION FOR STORM DRAINAGE STRUCTURES, UTILITY MAINS AND SERVICES, PROPOSED TOPOGRAPHY, STREET IMPROVEMENTS.
2. REFER TO THE SUBDIVISION PLAT AND UTILITY PLANS FOR EXACT LOCATIONS, AREAS AND DIMENSIONS OF ALL EASEMENTS, LOTS, TRACTS, STREETS, WALKS AND OTHER SURVEY INFORMATION.
3. THE PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE FINAL PLANS. AMENDMENTS TO THE PLANS MUST BE REVIEWED AND APPROVED BY THE CITY PRIOR TO THE IMPLEMENTATION OF ANY CHANGES TO THE PLANS.
4. ALL ROOFTOP AND GROUND MOUNTED MECHANICAL EQUIPMENT MUST BE SCREENED FROM VIEW FROM ADJACENT PROPERTY AND PUBLIC STREETS. IN CASES WHERE BUILDING PARAPETS DO NOT ACCOMPLISH SUFFICIENT SCREENING, THEN FREE-STANDING SCREEN WALLS MATCHING THE PREDOMINANT COLOR OF THE BUILDING SHALL BE CONSTRUCTED. OTHER MINOR EQUIPMENT SUCH AS CONDUIT, METERS AND PLUMBING VENTS SHALL BE SCREENED OR PAINTED TO MATCH SURROUNDING BUILDING SURFACES.
5. ALL CONSTRUCTION WITH THIS DEVELOPMENT PLAN MUST BE COMPLETED IN ONE PHASE UNLESS A PHASING PLAN IS SHOWN WITH THESE PLANS.
6. ALL SINGLE FAMILY DETACHED HOMES SHALL MEET OR EXCEED THE GARAGE DOOR STANDARDS AS OUTLINED IN 3.5.2(E) OF THE LAND USE CODE.
7. ALL EXTERIOR LIGHTING PROVIDED SHALL COMPLY WITH THE FOOT-CANDLE REQUIREMENTS IN SECTION 3.2.4 OF THE LAND USE CODE AND SHALL USE A CONCEALED, FULLY SHIELDED LIGHT SOURCE WITH SHARP CUT-OFF CAPABILITY SO AS TO MINIMIZE UP-LIGHT, SPILL LIGHT, GLARE AND UNNECESSARY DIFFUSION.
8. SIGNAGE AND ADDRESSING ARE NOT PERMITTED WITH THIS PLANNING DOCUMENT AND MUST BE APPROVED BY SEPARATE CITY PERMIT PRIOR TO CONSTRUCTION. SIGNS MUST COMPLY WITH CITY SIGN CODE UNLESS A SPECIFIC VARIANCE IS GRANTED BY THE CITY.
9. FIRE HYDRANTS MUST MEET OR EXCEED POUDRE FIRE AUTHORITY STANDARDS. ALL BUILDINGS MUST PROVIDE AN APPROVED FIRE EXTINGUISHING SYSTEM.
- 10.DESIGN AND INSTALLATION OF ALL PARKWAY/TREE LAWN AND MEDIAN AREAS IN THE RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH CITY STANDARDS. UNLESS OTHERWISE AGREED TO BY THE CITY WITH THE FINAL PLANS, ALL ONGOING MAINTENANCE OF SUCH AREAS IS THE RESPONSIBILITY OF THE OWNER/DEVELOPER.
- 11.ALL SIDEWALKS AND RAMPS MUST CONFORM TO CITY STANDARDS. ACCESSIBLE RAMPS MUST BE PROVIDED AT ALL STREET AND DRIVE INTERSECTIONS AND AT ALL DESIGNATED ACCESSIBLE PARKING SPACES. ACCESSIBLE PARKING SPACES MUST SLOPE NO MORE THAN 1:48 IN ANY DIRECTION. ALL ACCESSIBLE ROUTES MUST SLOPE NO MORE THAN 1:20 IN DIRECTION OF TRAVEL AND WITH NO MORE THAN 1:48 CROSS SLOPE.
- 12.COMMON OPEN SPACE AREAS AND LANDSCAPING WITHIN RIGHT OF WAYS, STREET MEDIANS, AND TRAFFIC CIRCLES ADJACENT TO COMMON OPEN SPACE AREAS ARE REQUIRED TO BE MAINTAINED BY THE PROPERTY OWNER OF THE COMMON AREA. THE PROPERTY OWNER IS RESPONSIBLE FOR SNOW REMOVAL ON ALL ADJACENT STREET SIDEWALKS AND SIDEWALKS IN COMMON OPEN SPACE AREAS.
- 13.DESIGN AND INSTALLATION OF ALL PARKWAY/TREE LAWN AND MEDIAN AREAS IN THE RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH CITY STANDARDS. UNLESS OTHERWISE AGREED TO BY THE CITY WITH THE FINAL PLANS, ALL ONGOING MAINTENANCE OF SUCH AREAS IS THE RESPONSIBILITY OF THE OWNER/DEVELOPER.
- 14.THE PROPERTY OWNER FOR EACH RESIDENTIAL LOT IS RESPONSIBLE FOR SNOW REMOVAL ON ALL STREET SIDEWALKS ADJACENT TO EACH RESIDENTIAL LOT.
- 15.PRIVATE CONDITIONS, COVENANTS, AND RESTRICTIONS (CC&R'S), OR ANY OTHER PRIVATE RESTRICTIVE COVENANT IMPOSED ON LANDOWNERS WITHIN THE DEVELOPMENT, MAY NOT BE CREATED OR ENFORCED HAVING THE EFFECT OF PROHIBITING OR LIMITING THE INSTALLATION OF XERISCAPE LANDSCAPING, SOLAR/PHOTO-VOLTAIC COLLECTORS (IF MOUNTED FLUSH UPON ANY ESTABLISHED ROOF LINE), CLOTHES LINES (IF LOCATED IN BACK YARDS), ODOR- CONTROLLED COMPOST BINS, OR WHICH HAVE THE EFFECT OF REQUIRING THAT A PORTION OF ANY INDIVIDUAL LOT BE PLANTED IN TURF GRASS.
- 16.ANY DAMAGED CURB, GUTTER AND SIDEWALK EXISTING PRIOR TO CONSTRUCTION, AS WELL AS STREETS, SIDEWALKS, CURBS AND GUTTERS, DESTROYED, DAMAGED OR REMOVED DUE TO CONSTRUCTION OF THIS PROJECT, SHALL BE REPLACED OR RESTORED TO CITY OF FORT COLLINS STANDARDS AT THE DEVELOPER'S EXPENSE PRIOR TO THE ACCEPTANCE OF COMPLETED IMPROVEMENTS AND/OR PRIOR TO THE ISSUANCE OF THE FIRST CERTIFICATE OF OCCUPANCY.
- 17.FIRE LANE MARKING: A FIRE LANE MARKING PLAN MUST BE REVIEWED AND APPROVED BY THE FIRE OFFICIAL PRIOR TO THE ISSUANCE OF ANY CERTIFICATE OF OCCUPANCY. WHERE REQUIRED BY THE FIRE CODE OFFICIAL, APPROVED SIGNS OR OTHER APPROVED NOTICES THAT INCLUDE THE WORDS NO PARKING FIRE LANE SHALL BE PROVIDED FOR FIRE APPARATUS ACCESS ROADS TO IDENTIFY SUCH ROADS OR PROHIBIT THE OBSTRUCTION THEREOF. THE MEANS BY WHICH FIRE LANES ARE DESIGNATED SHALL BE MAINTAINED IN A CLEAN AND LEGIBLE CONDITION AT ALL TIMES AD BE REPLACED OR REPAIRED WHEN NECESSARY TO PROVIDE ADEQUATE VISIBILITY.



OWNER:

ADAM AND LESLIE MEYER
2503 ROCK CREEK DRIVE
FORT COLLINS, COLORADO 80528
(720) 468-2235
ADAMDMEYER@GMAIL.COM

GENERAL CONTRACTOR:

ROSE CUSTOM HOMES, LLC
KIM ROSE
3147 TWIN WASH SQ.
FORT COLLINS, COLORADO 80528
(970) 226-1241
KIM@RCHLLC.NET

CIVIL ENGINEER:

KEEFE CIVIL
MEGAN KEEFE, P.E.
825 UNION STREET
GOLDEN, COLORADO 80401
(970) 215-6808
MEG@KEEFECIVIL.COM

SURVEYOR:

MAJESTIC SURVEYING
STEVEN PARKS, PLS
(970) 443-0882
STEVENP@MAJESTICSURVEYING.COM

GEOTECHNICAL ENGINEER:

NORTHERN COLORADO GEOTECH
DOUG LEAFGREN, P.G.
2956 29TH STREET, UNIT 21
GREELEY, COLORADO 80631
(970) 506-9244

ARCHITECT:

MARKLEY DESIGNS
1019 39TH AVENUE, SUITE L
GREELEY, COLORADO 80634
(970) 673-8248

LEGAL DESCRIPTION:

A TRACT OF LAND LOCATED IN THE SW1/4 OF THE SW1/4 OF SECTION 5, TOWNSHIP 6 NORTH, RANGE 68 WEST OF THE 6TH P.M., MORE PARTICULARLY DESCRIBED AS FOLLOWS:
CONSIDERING THE SOUTH LINE OF THE SW1/4 OF SAID SECTION 5 AS BEARING N89°32'00"E AND WITH ALL BEARINGS CONTAINED HEREIN RELATIVE THERETO:
COMMENCING AT THE SOUTHWEST CORNER OF SAID SECTION 5, THENCE ALONG THE SAID SOUTH LINE N89°32'00"E 482.39 FEET TO THE TRUE POINT OF BEGINNING, THENCE LEAVING SAID SECTION LINE N00°10'00"W 500.00 FEET, THENCE N89°32'00"E 214.57 FEET, THENCE S00°10'00"E 800.00 FEET TO THE SOUTH LINE OF SECTION 5; THENCE S89°32'00"W ALONG THE SAID SECTION LINE 214.57 FEET TO THE POINT OF BEGINNING, LARIMER COUNTY, COLORADO, EXCEPT THE SOUTH 30 FEET AS CONVEYED TO LARIMER COUNTY BY DEED DATED OCTOBER 11, 1911 AND RECORDED IN BOOK 301 PAGE 539

... (WHICH ABOVE DESCRIBED TRACT CONTAINS 2.314 ACRES, MORE OR LESS)

Sheet Title	Sheet Number
COVER SHEET	1
SITE AND LANDSCAPE PLAN	2
GENERAL NOTES	3

LAND USE TABLE

ZONE DISTRICT: URBAN ESTATE (U-E)
EXISTING SINGLE-FAMILY RESIDENCE STORIES: 1
NEW SINGLE-FAMILY RESIDENCE STORIES: 2
ALLOWABLE DENSITY: 2 UNITS / GROSS ACRE
PROPOSED DENSITY: 0.86 UNITS / GROSS ACRE

GROSS LOT SIZE: 2.314 ACRES
DEDICATION OF ROW: 0.108 ACRES
NET LOT SIZE: 2.206 ACRES

EXISTING RESIDENTIAL BUILDING FOOTPRINT: 0.096 ACRES
EXISTING RESIDENTIAL BUILDING FOOTPRINT TO BE REMOVED: -0.058 ACRES
NEW RESIDENTIAL BUILDING FOOTPRINT TO BE ADDED: 0.079 ACRES
EXISTING STORAGE AND ACCESSORY BUILDINGS: 0.017 ACRES
EXISTING STORAGE AND ACCESSORY BUILDINGS TO BE REMOVED: -0.003 ACRES
NEW STORAGE AND ACCESSORY BUILDING(S) TO BE ADDED: 0.023 ACRES
NET BUILDING COVERAGE: 0.154 ACRES

GRAVEL AREAS: 0.034 ACRES
CONCRETE AREAS: 0.019 ACRES
FIRE LANE AREAS: 0.224 ACRES
LANDSCAPING AND OPEN AREAS: 1.775 ACRES
TOTAL: 2.052 ACRES

PARKING SUMMARY
REQUIRED: 1 / SINGLE-FAMILY DETACHED DWELLING (2 TOTAL)
PROVIDED: 6

ONE OF THE TWO EXISTING SINGLE-FAMILY RESIDENCES WILL BE RELOCATED OFFSITE. A NEW POLE BARN WITH ADDITIONAL PARKING SPACES WILL BE PROVIDED IN ADDITION TO THE NEW SINGLE-FAMILY RESIDENCE.

PLANNING CERTIFICATE

APPROVED BY THE DIRECTOR OF COMMUNITY DEVELOPMENT AND NEIGHBORHOOD SERVICES OF THE CITY OF FORT COLLINS, COLORADO ON THIS _____ DAY OF _____, 20____.

Director Signature

OWNER'S CERTIFICATE

THE UNDERSIGNED DOES/DO HEREBY CERTIFY THAT I/WE ARE THE LAWFUL OWNERS OF THE REAL PROPERTY DESCRIBED ON THIS SITE PLAN AND DO HEREBY CERTIFY THAT I/WE ACCEPT THE CONDITIONS AND RESTRICTIONS SET FORTH ON SAID SITE PLAN.

OWNER (SIGNED)

Date

THE FOREGOING INSTRUMENT WAS ACKNOWLEDGED BEFORE ME

THIS _____ DAY OF _____ A.D., 20____. BY

(PRINT NAME)

AS

MY COMMISSION EXPIRES: _____

WITNESS MY HAND AND OFFICIAL SEAL.

NOTARY PUBLIC

ADDRESS

MEYER SUBDIVISION PLANNING SET

COVER SHEET

FORT COLLINS, COLORADO

SHEET

1 OF 3

KEEFE CIVIL, LLC

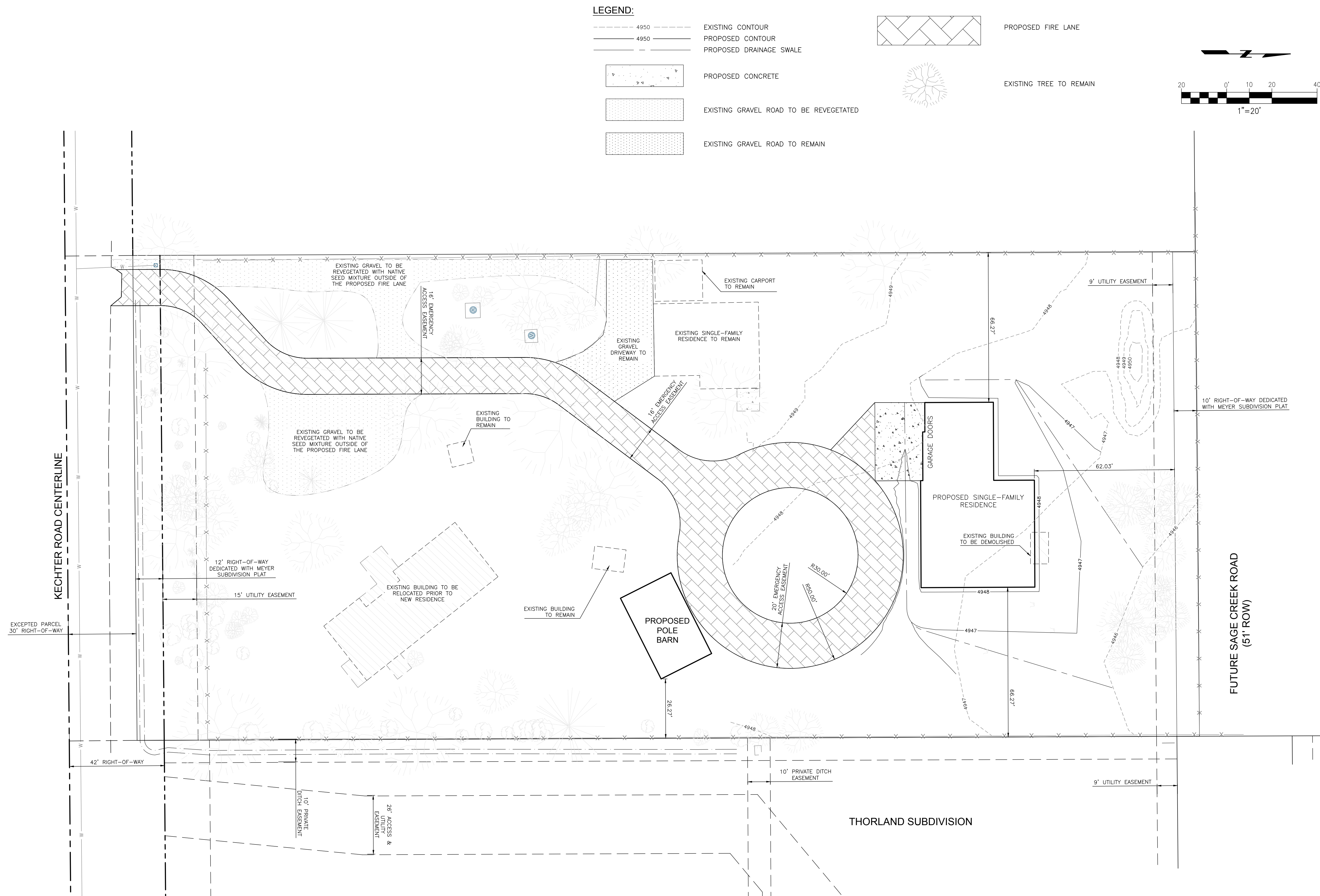
825 UNION STREET

GOLDEN, CO 80401

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MEG@KEEFECIVIL.COM





A PERMIT MUST BE OBTAINED FROM THE CITY FORESTER BEFORE ANY TREES OR SHRUBS AS NOTED ON THIS PLAN ARE PLANTED, PRUNED OR REMOVED IN THE PUBLIC RIGHT-OF-WAY. THIS INCLUDES ZONES BETWEEN THE SIDEWALK AND CURB, MEDIANS AND OTHER CITY PROPERTY. THIS PERMIT SHALL APPROVE THE LOCATION AND SPECIES TO BE PLANTED. FAILURE TO OBTAIN THIS PERMIT IS A VIOLATION OF THE CITY OF FORT COLLINS CODE SUBJECT TO CITATION (SECTION 27-31) AND MAY ALSO RESULT IN REPLACING OR RELOCATING TREES AND A HOLD ON CERTIFICATE OF OCCUPANCY.

NATIVE SEED MIX NOTES

- RECOMMENDED DRYLAND NATIVE SEED MIX: 25% TALL FESCUE, 25% PERENNIAL RYEGRASS, 20% SMOOTH BROME, 10% CRESTED WHEATGRASS, 10% INTERMEDIATE WHEATGRASS, AND 10% ORCHARD GRASS**

STREET TREE NOTES:

1. A PERMIT MUST BE OBTAINED FROM THE CITY FORESTER BEFORE ANY TREES OR SHRUBS AS NOTED ON THIS PLAN ARE PLANTED, PRUNED OR REMOVED IN THE PUBLIC RIGHT-OF-WAY. THIS INCLUDES ZONES BETWEEN THE SIDEWALK AND CURB, MEDIANS AND OTHER CITY PROPERTY. THIS PERMIT SHALL APPROVE THE LOCATION AND SPECIES TO BE PLANTED. FAILURE TO OBTAIN THIS PERMIT IS A VIOLATION OF THE CITY OF FORT COLLINS CODE SUBJECT TO CITATION (SECTION 27-31) AND MAY ALSO RESULT IN REPLACING OR RELOCATING TREES AND A HOLD ON CERTIFICATE OF OCCUPANCY.
2. CONTACT THE CITY FORESTER TO INSPECT ALL STREET TREE PLANTINGS AT THE COMPLETION OF EACH PHASE OF THE DEVELOPMENT. ALL MUST BE INSTALLED AS SHOWN ON THE LANDSCAPE PLAN. APPROVAL OF STREET TREE PLANTING IS REQUIRED BEFORE FINAL APPROVAL OF EACH PHASE.
3. STREET LANDSCAPING, INCLUDING STREET TREES, SHALL BE SELECTED IN ACCORDANCE WITH ALL CITY CODES AND POLICIES. ALL TREE PRUNING AND REMOVAL WORKS SHALL BE PERFORMED BY A CITY OF FORT COLLINS LICENSED ARBORERS WHERE REQUIRED BY CODE. STREET TREES SHALL BE SUPPLIED AND PLANTED BY THE DEVELOPER USING A QUALIFIED LANDSCAPE CONTRACTOR.
4. THE DEVELOPER SHALL REPLACE DEAD OR DYING STREET TREES AFTER PLANTING UNTIL FINAL MAINTENANCE INSPECTION AND ACCEPTANCE BY THE CITY OF FORT COLLINS FORESTRY DIVISION. ALL STREET TREES IN THE PROJECT MUST BE ESTABLISHED, WITH AN APPROVED SPECIES AND OF ACCEPTABLE CONDITION PRIOR TO ACCEPTANCE.
5. SUBJECT TO APPROVAL BY THE CITY FORESTER -- STREET TREE LOCATIONS MAY BE ADJUSTED TO ACCOMMODATE DRIVEWAY LOCATIONS, UTILITY SEPARATIONS BETWEEN TREES, STREET SIGNS AND STREET LIGHTS. STREET TREES TO BE CENTERED IN THE MIDDLE OF THE LOT TO THE EXTENT FEASIBLE. QUANTITIES SHOWN ON PLAN MUST BE INSTALLED UNLESS A REDUCTION IS APPROVED BY THE CITY TO MEET SEPARATION STANDARDS.

TREE PROTECTION NOTES:

- | Tree Diameter-at-Breast-Height (inches) ^a | Auger-Distance-From-Face-of-Tree (feet) ^a |
|--|--|
| 0-2 ^a | 1 ^a |
| 3-4 ^a | 2 ^a |
| 5-9 ^a | 5 ^a |
| 10-14 ^a | 10 ^a |
| 15-19 ^a | 12 ^a |
| Over-19 ^a | 15 ^a |

9. ALL TREE REMOVAL SHOWN SHALL BE COMPLETED OUTSIDE OF THE SONGBIRD NESTING SEASON (FEB 1 - JULY 31) OR CONDUCT A SURVEY OF TREES ENSURING NO ACTIVE NESTS IN THE AREA.

GENERAL LANDSCAPE NOTES:

- 40 FEET BETWEEN CANOPY TREES AND STREET LIGHTS
15 FEET BETWEEN ORNAMENTAL TREES AND STREETLIGHTS
10 FEET BETWEEN TREES AND PUBLIC WATER, SANITARY AND STORM SEWER MAIN LINES
6 FEET BETWEEN TREES AND PUBLIC WATER, SANITARY AND STORM SEWER SERVICE LINES
4 FEET BETWEEN SHRUBS AND PUBLIC WATER AND SANITARY AND STORM SEWER LINES
4 FEET BETWEEN TREES AND GAS LINES

- ALL STREET TREES SHALL BE PLACED A MINIMUM EIGHT (8) FEET AWAY FROM THE EDGES OF DRIVEWAYS AND ALLEYS PER LUC 3.2.1(D)(2)(A).
- 10.PLACEMENT OF ALL LANDSCAPING SHALL BE IN ACCORDANCE WITH THE SIGHT DISTANCE CRITERIA AS SPECIFIED BY THE CITY OF FORT COLLINS. NO STRUCTURES OR LANDSCAPE ELEMENTS GREATER THAN 24" SHALL BE ALLOWED WITHIN THE SIGHT DISTANCE TRIANGLE OR EASEMENTS WITH THE EXCEPTION OF DECIDUOUS TREES PROVIDED THAT THE LOWEST BRANCH IS AT LEAST 6' FROM GRADE. ANY FENCES WITHIN THE SIGHT DISTANCE TRIANGLE OR EASEMENT MUST BE NOT MORE THAN 42" IN HEIGHT AND OF AN OPEN DESIGN.
- 11.THE FINAL LANDSCAPE PLAN SHALL BE COORDINATED WITH ALL OTHER FINAL PLAN ELEMENTS SO THAT THE PROPOSED GRADING, STORM DRAINAGE, AND OTHER DEVELOPMENT IMPROVEMENTS DO NOT CONFLICT WITH NOR PRECLUDE INSTALLATION AND MAINTENANCE OF LANDSCAPE ELEMENTS ON THIS PLAN.
- 12.MINOR CHANGES IN SPECIES AND PLANT LOCATIONS MAY BE MADE DURING CONSTRUCTION – AS REQUIRED BY SITE CONDITIONS OR PLANT AVAILABILITY. OVERALL QUANTITY, QUALITY, AND DESIGN CONCEPT MUST BE CONSISTENT WITH THE APPROVED PLANS. IN THE EVENT OF CONFLICT WITH THE QUANTITIES INCLUDED IN THE PLANT LIST, SPECIES AND QUANTITIES ILLUSTRATED SHALL BE PROVIDED. ALL CHANGES OF PLANT SPECIES AND LOCATION MUST HAVE WRITTEN APPROVAL BY THE CITY PRIOR TO INSTALLATION.
- 13.ALL PLANTING BEDS SHALL BE MULCHED TO A MINIMUM DEPTH OF THREE INCHES.

KEEFE CIVIL, LLC
825 UNION STREET
GOLDEN, CO 80401
(970) 215-6808
MEG@KEEFECIVIL.COM



MEYER SUBDIVISION PLANNING SET

GENERAL NOTES

FORT COLLINS, COLORADO

SHEET

STATEMENT OF OWNERSHIP AND SUBDIVISION:

Know all persons by these presents, that the undersigned, being owner(s) of the following described land:
(From Warranty Deed recorded March 1, 1995 as Reception No. 95012039)
A tract of land located in the SW1/4 of the SW1/4 of Section 5, Township 6 North, Range 68 West of the 6th P.M., more particularly described as follows:
Considering the south line of the SW1/4 of said Section 5 as bearing N89°32'00"E and with all bearings contained herein relative thereto:
Commencing at the southwest corner of said Section 5, thence along the said south line N89°32'00"E 482.39 feet to the True Point of Beginning, thence leaving said section line N00°10'00"W 500.00 feet; thence N89°32'00"E 214.57 feet; thence S00°10'00"E 500.00 feet to the south line of Section 5; thence S89°32'00"W along the said Section line 214.57 feet to the point of beginning, Larimer County, Colorado. EXCEPT the South 30 feet as conveyed to Larimer County by deed dated October 11, 1911 and recorded in Book 301 Page 539

... (which above described tract contains 2.314 acres, more or less)

for themselves and their successors in interest (collectively, "Owner") have caused the above described land to be surveyed and subdivided into lots, tracts and streets as shown on this Plat to be known as MEYER SUBDIVISION (the "Development"), subject to all easements and rights-of-way now of record or existing or indicated on this Plat. The rights and obligations of the Plat shall run with the land.

BY: ADAM MEYER

BY: LESLIE MEYER

NOTARIAL CERTIFICATE

STATE OF COLORADO)
ss
COUNTY OF WELD)
The foregoing instrument was acknowledged before me this ____ day of _____, 20 ____.
Witness my Hand and Official Seal.
My commission expires: _____.

LIENHOLDERS

By: _____ As: _____

Witness my hand and seal this ____ day of _____, 20 ____.

NOTARIAL CERTIFICATE

STATE OF COLORADO)
ss
COUNTY OF WELD)
The foregoing instrument was acknowledged before me this ____ day of _____, 20 ____.
Witness my Hand and Official Seal.
My commission expires: _____.

CERTIFICATE OF DEDICATION:

The Owner does hereby dedicate and convey to the City of Fort Collins, Colorado (hereafter "City"), for public use, forever, a permanent right-of-way for street purposes and the "Easements" as laid out and designated on this Plat; provided, however, that (1) acceptance by the City of this dedication of Easements does not impose upon the City a duty to maintain the Easements so dedicated, and (2) acceptance by the City of this dedication of streets does not impose upon the City a duty to maintain streets so dedicated until such time as the provisions of the Maintenance Guarantee have been fully satisfied. The streets dedicated on this Plat are the fee property of the City as provided in Section 31-23-107 C.R.S. The City's rights under the Easements include the right to install, operate, access, maintain, repair, reconstruct, remove and replace within the Easements public improvements consistent with the intended purpose of the Easements; the right to install, maintain and use gates in any fences that cross the Easements; the right to mark the location of the Easements with suitable markers; and the right to permit other public utilities to exercise these same rights. Owner reserves the right to use the Easements for purposes that do not interfere with the full enjoyment of the rights hereby granted. The City is responsible for maintenance of its own improvements and for repairing any damage caused by its activities in the Easements, but by acceptance of this dedication, the City does not accept the duty of maintenance of the Easements, or of improvements in the Easements that are not owned by the City. Owner will maintain the surface of the Easements in a sanitary condition in compliance with any applicable weed, nuisance or other legal requirements. Except as expressly permitted in an approved plan of development or other written agreement with the City, Owner will not install on the Easements, or permit the installation on the Easements, of any building, structure, improvement, fence, retaining wall, sidewalk, tree or other landscaping (other than usual and customary grasses and other ground cover). In the event such obstacles are installed in the Easements, the City has the right to require the Owner to remove such obstacles from the Easements. If Owner does not remove such obstacles, the City may remove such obstacles without any liability or obligation for repair and replacement thereof, and charge the Owner the City's costs for such removal. If the City chooses not to remove the obstacles, the City will not be liable for any damage to the obstacles or any other property to which they are attached. The rights granted to the City by this Plat inure to the benefit of the City's agents, licensees, permittees and assigns.

MAINTENANCE GUARANTEE:

The Owner hereby warrants and guarantees to the City, for a period of two (2) years from the date of completion and first acceptance by the City of the improvements warranted hereunder, the full and complete maintenance and repair of the improvements to be constructed in connection with the Development which is the subject of this Plat. This warranty and guarantee is made in accordance with the City Land Use Code and/or the Transitional Land Use Regulations, as applicable. This guarantee applies to the streets and all other appurtenant structures and amenities lying within the rights-of-way, Easements and other public properties, including, without limitation, all curbing, sidewalks, bike paths, drainage pipes, culverts, catch basins, drainage ditches and landscaping. Any maintenance and/or repair required on utilities shall be coordinated with the owning utility company or department.
The Owner shall maintain said improvements in a manner that will assure compliance on a consistent basis with all construction standards, safety requirements and environmental protection requirements of the City. The Owner shall also correct and repair, or cause to be corrected and repaired, all damages to said improvements resulting from development-related or building-related activities. In the event the Owner fails to correct any damages within thirty (30) days after written notice thereof, then said damages may be corrected by the City and all costs and charges billed to and paid by the Owner. The City shall also have any other remedies available to it as authorized by law. Any damages which occurred prior to the end of said two (2) year period and which are unrepaired at the termination of said period shall remain the responsibility of the Owner.

REPAIR GUARANTEE:

In consideration of the approval of this final Plat and other valuable consideration, the Owner does hereby agree to hold the City harmless for a five (5) year period, commencing upon the date of completion and first acceptance by the City of the improvements to be constructed in connection with the development which is the subject of this Plat, from any and all claims, damages, or demands arising on account of the design and construction of public improvements of the property shown herein; and the Owner furthermore commits to make necessary repairs to said public improvements, to include, without limitation, the roads, streets, fills, embankments, ditches, cross pans, sub-drains, culverts, walls and bridges within the right-of-way, Easements and other public properties, resulting from failures caused by design and/or construction defects. This agreement to hold the City harmless includes defects in materials and workmanship, as well as defects caused by or consisting of settling trenches, fills or excavations.
Further, the Owner warrants that he/she owns fee simple title to the property shown hereon and agrees that the City shall not be liable to the Owner or his/her successors in interest for any claim of damages resulting from development-related or building-related activities, exercising engineering techniques and due caution in the construction of cross drains, drives, structures or buildings, the changing of courses of streams and rivers, flooding from natural creeks and rivers, and any other matter whatsoever on private property. Any and all monetary liability occurring under this paragraph shall be the liability of the Owner. I further warrant that I have the right to convey said land according to this Plat.

Notice of Other Documents:

All persons take notice that the Owner has executed certain documents pertaining to this Development which create certain rights and obligations of the Development, the Owner and/or subsequent Owners of all or portions of the Development site, many of which obligations constitute promises and covenants that, along with the obligations under this Plat, run with the land. The said documents may also be amended from time to time and may include, without limitation, the Development Agreement, Site And Landscape Covenants, Final Site Plan, Final Landscape Plan, and Architectural Elevations, which documents are on file in the office of the clerk of the City and should be closely examined by all persons interested in purchasing any portion of the Development site.

APPROVED AS TO FORM, CITY ENGINEER

By the City Engineer, City of Fort Collins, Colorado this ____ day of _____, 20 ____.

City Engineer

PLANNING APPROVAL

By the Director of Community Development and Neighborhood Services the City of Fort Collins, Colorado this ____ day of _____, 20 ____.

City Engineer

ATTORNEY'S CERTIFICATION:

I hereby certify that this Subdivision Plat has been duly executed as required pursuant to Section 2.2.3(C)(3)(a) through (e) inclusive of the Land Use Code of the City of Fort Collins and that all persons signing this Subdivision Plat on behalf of a corporation or other entity are duly authorized signatories under the laws of the State of Colorado. This Certification is based upon the records of the Clerk and Recorder of Larimer County, Colorado as of the date of execution of the Plat and other information discovered by me through reasonable inquiry and is limited as authorized by Section 2.2.3(C)(3)(f) of the Land Use Code.

Attorney: _____

Address: _____

Registration No.: _____

BASIS OF BEARINGS AND LINEAL UNIT DEFINITION

Assuming the South line of the Southwest Quarter of Section 5, Township 6 North, Range 68 West of the 6th P.M., monumented as shown on this plat, as bearing North 89°29'33" East, a distance of 2705.28 feet and with all other bearings contained herein relative thereto.

The lineal dimensions as contained herein are based upon the " U.S. Survey Foot."

TITLE COMMITMENT NOTE

For all information regarding easements, rights-of-way and title of records, Majestic Surveying, LLC relied upon Title Commitment Number H0541429-081-NMC, effective date dated March 29, 2019, as prepared by Heritage Title Company to delineate the aforesaid information. This survey does not constitute a title search by Majestic Surveying, LLC to determine ownership or easements of record.

NOTICE

ALL RESPONSIBILITIES AND COSTS OF OPERATION, MAINTENANCE AND RECONSTRUCTION OF THE PRIVATE STREETS AND/OR DRIVES LOCATED ON THE PRIVATE PROPERTY THAT IS THE SUBJECT OF THIS PLAT SHALL BE BORNE BY THE OWNERS OF SAID PROPERTY, EITHER INDIVIDUALLY OR COLLECTIVELY, THROUGH A PROPERTY OWNERS ASSOCIATION, IF APPLICABLE. THE CITY OF FORT COLLINS SHALL HAVE NO OBLIGATION OF OPERATION, MAINTENANCE OR RECONSTRUCTION OF SUCH PRIVATE STREETS AND/OR DRIVES NOR SHALL THE CITY HAVE ANY OBLIGATION TO ACCEPT SUCH STREETS AND/OR DRIVES AS PUBLIC STREETS OR DRIVES.

NOTE

There shall be no private conditions, covenants or restrictions that prohibit or limit the installation of resource conserving equipment or landscaping that are allowed by Sections 12-120 & 12-122 of the City Code.

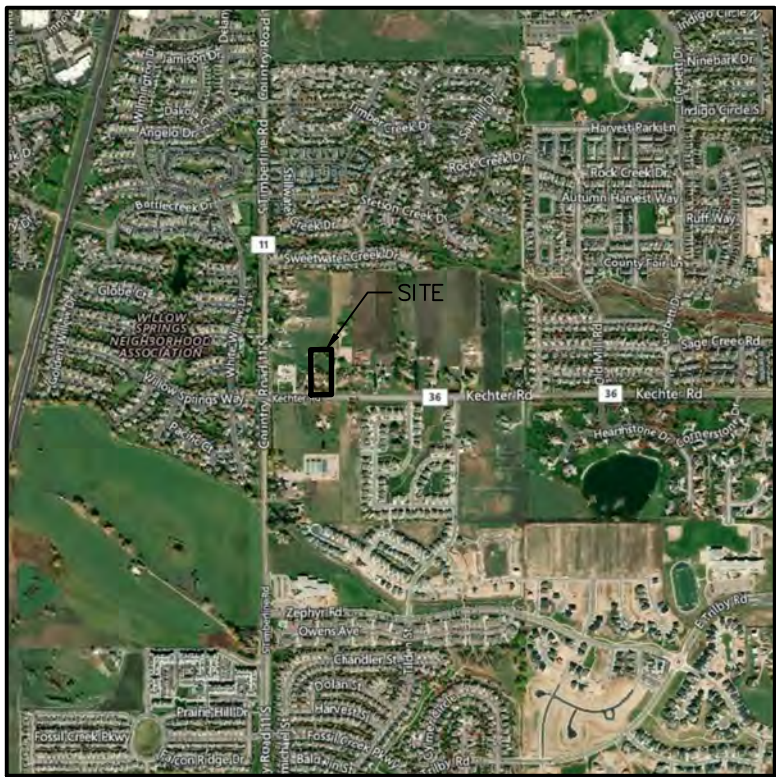
SURVEYOR'S CERTIFICATE

I, Steven Parks, a Colorado Licensed Professional Land Surveyor, do hereby state that this Subdivision Plat was prepared from an actual survey under my personal supervision, that the monumentation as indicated hereon were found or set as shown, and that the foregoing Plat is an accurate representation thereof, all this to the best of my knowledge, information and belief.

PRELIMINARY

Steven Parks - On Behalf of Majestic Surveying, LLC
Colorado Licensed Professional Land Surveyor #38348

CURVE TABLE					
CURVE	LENGTH	RADIUS	DELTA	CHORD	CH BEARING
C1	34.36"	41.00'	48°00'49"	33.36'	N23°47'55"E
C2	20.95'	25.00'	48°00'49"	20.34'	N23°47'55"E
C3	26.48'	41.00'	37°00'04"	26.02'	N18°17'33"E
C4	27.88'	25.00'	63°53'46"	26.46'	N04°50'42"E
C5	268.60'	50.00'	307°47'32"	44.00'	S53°12'25"E
C6	27.88'	25.00'	63°53'46"	26.46'	S68°44'28"W
C7	16.14'	25.00'	37°00'04"	15.87'	S18°17'33"W
C8	34.36'	41.00'	48°00'49"	33.36'	S23°47'55"W
C9	20.95'	25.00'	48°00'49"	20.34'	S23°47'55"W



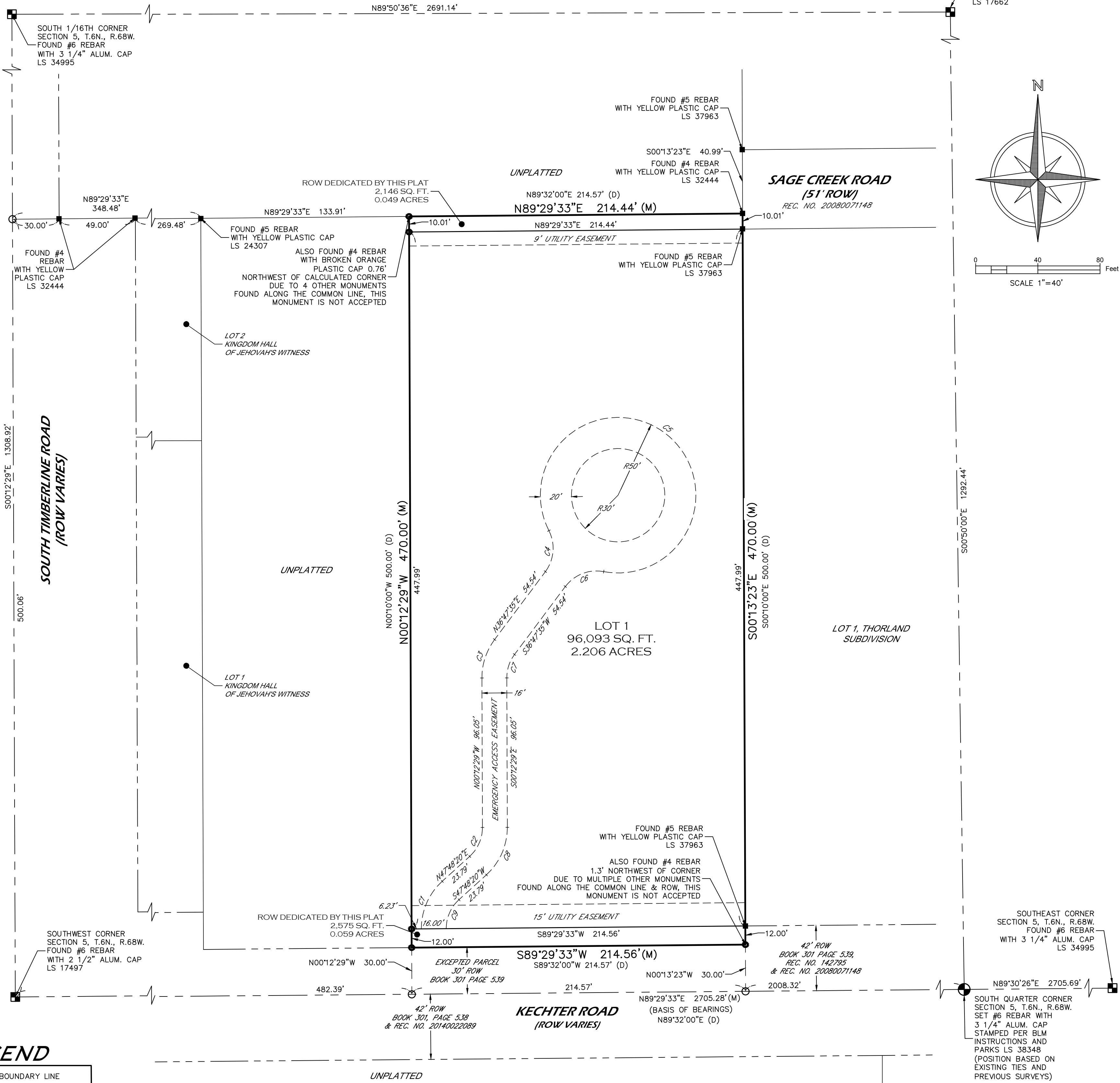
LEGEND

- BOUNDARY LINE
- - - EASEMENT LINE
- - - RIGHT OF WAY LINE
- - - SECTION LINE
- ALIQUOT CORNER AS DESCRIBED
- SET ALIQUOT MONUMENT AS DESCRIBED
- FOUND MONUMENT AS DESCRIBED
- CALCULATED POSITION
- SET #4 REBAR WITH RED PLASTIC CAP LS 38348
- (M) MEASURED
- (D) DEED

MEYER SUBDIVISION

SITUATE IN THE SOUTHWEST QUARTER OF SECTION 5, TOWNSHIP 6 NORTH,
RANGE 68 WEST OF THE 6TH P.M.

CITY OF FORT COLLINS, COUNTY OF LARIMER, STATE OF COLORADO



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 the certification shown hereon. (13-80-105 C.R.S. 2012)



PROJECT NO: 2018107	PROJECT NAME: MEYER SUBDIVISION	REVISIONS:	DATE:
DATE: 4-3-2019	CLIENT: MEYER		
DRAWN BY: SIP	FILE NAME: 2018107SUB		
CHECKED BY: SIP	SCALE: 1" = 40'		

1

SHEET 1 OF 1

UTILITY PLANS

FOR

MEYER SUBDIVISION

Situate in the Southwest Quarter of Section 5, Township 6 North, Range 68 West of the 6th P.M.
City of Fort Collins, County of Larimer, State of Colorado
APRIL 2019

GEOTECHNICAL ENGINEERING REPORT:
NORTHERN COLORADO GEOTECH
PROJECT NO. 259-18
DECEMBER 28, 2018

I HEREBY AFFIRM THAT THESE FINAL CONSTRUCTION PLANS WERE PREPARED UNDER MY DIRECT SUPERVISION, IN ACCORDANCE WITH ALL APPLICABLE CITY OF FORT COLLINS AND STATE OF COLORADO STANDARDS AND STATUTES, RESPECTIVELY; AND THAT I AM FULLY RESPONSIBLE FOR THE ACCURACY OF ALL DESIGN, REVISIONS, AND RECORD CONDITIONS THAT I HAVE NOTED ON THESE PLANS.



GENERAL INDEMNIFICATION STATEMENT:

THESE PLANS HAVE BEEN REVIEWED BY THE LOCAL ENTITY FOR CONCEPT ONLY. THE REVIEW DOES NOT IMPLY RESPONSIBILITY BY THE REVIEWING DEPARTMENT, THE LOCAL ENTITY ENGINEER, OR THE LOCAL ENTITY FOR ACCURACY AND CORRECTNESS OF THE CALCULATIONS. FURTHERMORE, THE REVIEW DOES NOT IMPLY THAT QUANTITIES OF ITEMS ON THE PLANS ARE THE FINAL QUANTITIES REQUIRED. THE REVIEW SHALL NOT BE CONSTRUED IN ANY REASON AS ACCEPTANCE OF FINANCIAL RESPONSIBILITY BY THE LOCAL ENTITY FOR ADDITIONAL QUANTITIES OF ITEMS SHOWN THAT MAY BE REQUIRED DURING THE CONSTRUCTION PHASE.

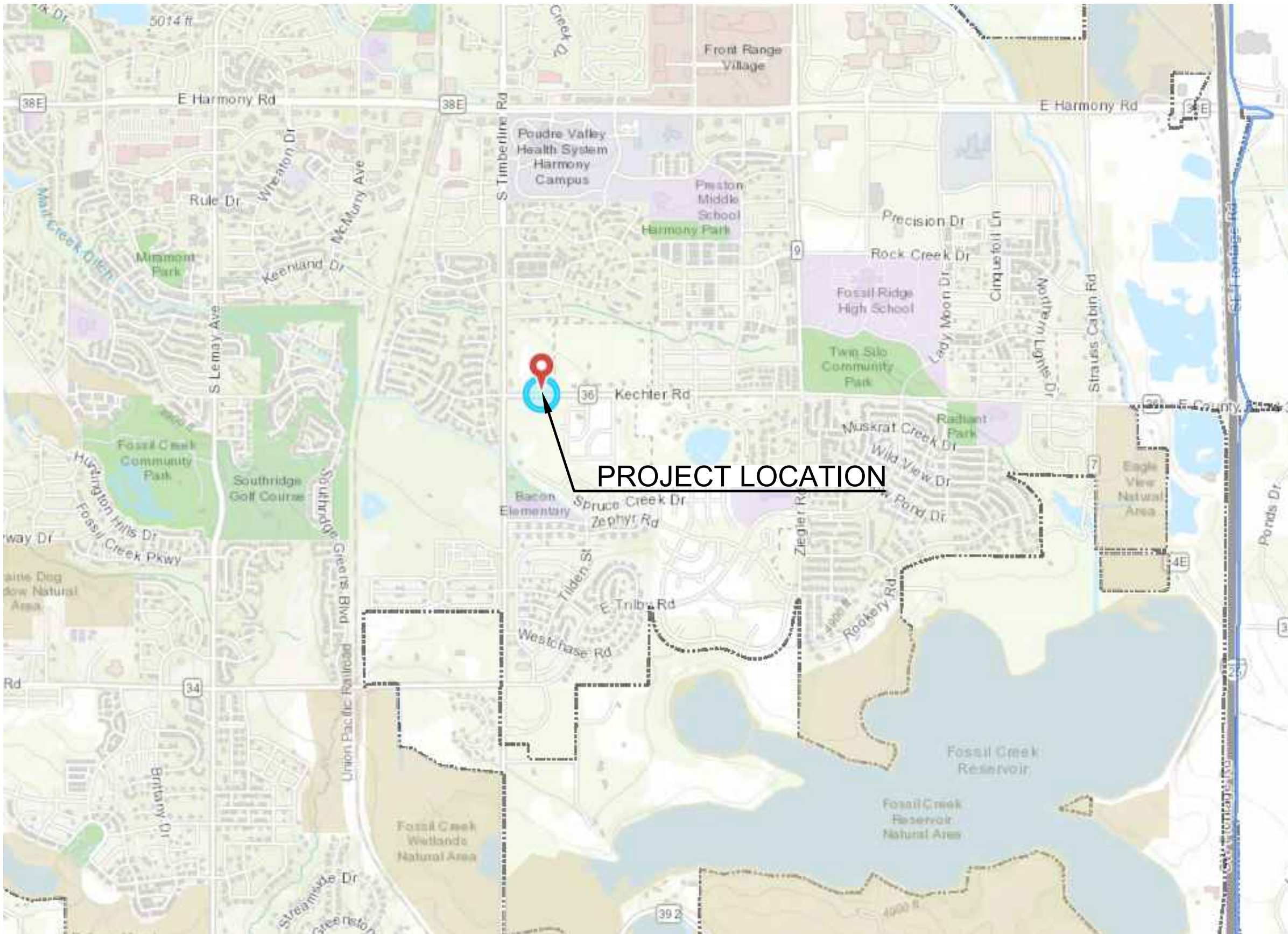
PROJECT BENCHMARK

PROJECT DATUM: NAVD88

BENCHMARK #16-01, SOUTH SIDE OF WILLOW SPRINGS WAY APPROXIMATELY 50 FT WEST OF THE INTERSECTION OF WILLOW SPRINGS WAY AND TIMBERLINE ROAD ON THE SOUTHWEST CORNER OF A STORM INLET.
ELEVATION: 4956.98 FEET

PLEASE NOTE: THIS PLAN SET IS USING NAVD88 FOR A VERTICAL DATUM. SURROUNDING DEVELOPMENTS HAVE USED NGVD29 UNADJUSTED DATUM (PRIOR CITY OF FORT COLLINS DATUM) FOR THEIR VERTICAL DATUMS.

IF NGVD29 UNADJUSTED DATUM (PRIOR CITY OF FORT COLLINS DATUM) IS REQUIRED FOR ANY PURPOSE, THE FOLLOWING EQUATION SHOULD BE USED:
NGVD29 UNADJUSTED DATUM (PRIOR CITY OF FORT COLLINS DATUM) = NAVD88 - 3.19'



OWNER:

ADAM AND LESLIE MEYER
2503 ROCK CREEK DRIVE
FORT COLLINS, COLORADO 80528
(720) 468-2235
ADAMDMEYER@GMAIL.COM

GENERAL CONTRACTOR:

ROSE CUSTOM HOMES, LLC
KIM ROSE
3147 TWIN WASH SQ.
FORT COLLINS, COLORADO 80528
(970) 226-1241
KIM@RCHLLC.NET

CIVIL ENGINEER:

KEEFE CIVIL
MEGAN KEEFE, P.E.
825 UNION STREET
GOLDEN, COLORADO 80401
(970) 215-6808
MEG@KEEFECIVIL.COM

SURVEYOR:

MAJESTIC SURVEYING
STEVEN PARKS, PLS
(970) 443-0882
STEVENP@MAJESTICSURVEYING.COM

GEOTECHNICAL ENGINEER:

NORTHERN COLORADO GEOTECH
DOUG LEAFGREN, P.G.
2956 29TH STREET, UNIT 21
GREELEY, COLORADO 80631
(970) 506-9244

ARCHITECT:

MARKLEY DESIGNS
1019 39TH AVENUE, SUITE L
GREELEY, COLORADO 80634
(970) 673-8248

Sheet Title	Sheet Number
COVER SHEET	1
GENERAL NOTES	2
UTILITY PLAN	3
GRADING, DRAINAGE, AND EROSION CONTROL PLAN	4
EROSION CONTROL NOTES	5
EROSION CONTROL DETAILS	6

FORT COLLINS - LOVELAND
WATER DISTRICT
SOUTH FORT COLLINS
SANITATION DISTRICT

Mr. Chris Matkins, Manager _____ Date _____

Mr. Terry Ferrill, P.E., District Manager _____ Date _____

All changes, addendums, additions, deletions and modifications to these drawings must be approved, in writing, by the Fort Collins-Loveland Water District and the South Fort Collins Sanitation District.

City of Ft. Collins, Colorado
UTILITY PLAN APPROVAL

APPROVED:	City Engineer _____	Date _____
CHECKED BY:	Water & Wastewater Utility _____	Date _____
CHECKED BY:	Stormwater Utility _____	Date _____
CHECKED BY:	Parks & Recreation _____	Date _____
CHECKED BY:	Traffic Engineer _____	Date _____
CHECKED BY:	Natural Resources _____	Date _____



KEEFE CIVIL, LLC
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GOLDEN, CO 80401
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MEYER SUBDIVISION UTILITY PLANS

COVER SHEET

FORT COLLINS, COLORADO

SHEET

1 OF 6

1. ALL MATERIALS, WORKMANSHIP, WORKMANSHIP, AND CONSTRUCTION OF PUBLIC IMPROVEMENTS SHALL MEET OR EXCEED THE STANDARDS AND SPECIFICATIONS SET FORTH IN THE LARIMER COUNTY URBAN AREA STREET STANDARDS AND APPLICABLE STATE AND FEDERAL REGULATIONS. WHERE THERE IS CONFLICT BETWEEN THESE PLANS AND THE SPECIFICATIONS, OR ANY APPLICABLE STANDARDS, THE MOST RESTRICTIVE STANDARD SHALL APPLY. ALL WORK SHALL BE INSPECTED AND APPROVED BY THE LOCAL ENTITY.
2. ALL REFERENCES TO ANY PUBLISHED STANDARDS SHALL REFER TO THE LATEST REVISION OF SAID STANDARD, UNLESS SPECIFICALLY STATED OTHERWISE.
3. THESE PUBLIC IMPROVEMENT CONSTRUCTION PLANS SHALL BE VALID FOR A PERIOD OF THREE YEARS FROM THE DATE OF APPROVAL BY THE LOCAL ENTITY ENGINEER. USE OF THESE PLANS AFTER THE EXPIRATION DATE WILL REQUIRE A NEW REVIEW AND APPROVAL PROCESS BY THE LOCAL ENTITY PRIOR TO COMMENCEMENT OF ANY WORK SHOWN IN THESE PLANS.
4. THE ENGINEER WHO HAS PREPARED THESE PLANS, BY EXECUTION AND/OR SEAL HEREOF, DOES HEREBY AFFIRM RESPONSIBILITY TO THE LOCAL ENTITY, AS BENEFICIARY OF SAID ENGINEER'S WORK, FOR ANY ERRORS AND OMISSIONS CONTAINED IN THESE PLANS, AND APPROVAL OF THESE PLANS BY THE LOCAL ENTITY ENGINEER SHALL NOT RELIEVE THE ENGINEER WHO HAS PREPARED THESE PLANS OF ALL SUCH RESPONSIBILITY. FURTHER, TO THE EXTENT PERMITTED BY LAW, THE ENGINEER HEREBY AGREES TO HOLD HARMLESS AND INDEMNIFY THE LOCAL ENTITY, AND ITS OFFICERS AND EMPLOYEES, FROM AND AGAINST ALL LIABILITIES, CLAIMS, AND DEMANDS WHICH MAY ARISE FROM ANY ERRORS AND OMISSIONS CONTAINED IN THESE PLANS.
5. ALL SANITARY SEWER, STORM SEWER, AND WATER LINE CONSTRUCTION, AS WELL AS POWER AND OTHER "DRY" UTILITY INSTALLATIONS, SHALL CONFORM TO THE LOCAL ENTITY STANDARDS AND SPECIFICATIONS CURRENT AT THE DATE OF APPROVAL OF THE PLANS BY THE LOCAL ENTITY ENGINEER.
6. THE TYPE, SIZE, LOCATION AND NUMBER OF ALL KNOWN UNDERGROUND UTILITIES ARE APPROXIMATE WHEN SHOWN ON THE DRAWINGS. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER TO VERIFY THE EXISTENCE AND LOCATION OF ALL UNDERGROUND UTILITIES ALONG THE ROUTE OF THE WORK BEFORE COMMENCING NEW CONSTRUCTION. THE DEVELOPER SHALL BE RESPONSIBLE FOR UNKNOWN UNDERGROUND UTILITIES.
7. THE ENGINEER SHALL CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO (UNCC) AT 1-800-922-1987, AT LEAST 2 WORKING DAYS PRIOR TO BEGINNING EXCAVATION OR GRADING, TO HAVE ALL REGISTERED UTILITY LOCATIONS MARKED. OTHER UNREGISTERED UTILITY ENTITIES (I.E. DITCH / IRRIGATION COMPANY) ARE TO BE LOCATED BY CONTACTING THE RESPECTIVE REPRESENTATIVE. UTILITY SERVICE LATERALS ARE ALSO TO BE LOCATED PRIOR TO BEGINNING EXCAVATION OR GRADING. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER TO RELOCATE ALL EXISTING UTILITIES THAT CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS.
8. THE DEVELOPER SHALL BE RESPONSIBLE FOR PROTECTING ALL UTILITIES DURING CONSTRUCTION AND FOR COORDINATING WITH THE APPROPRIATE UTILITY COMPANY FOR ANY UTILITY CROSSINGS REQUIRED.
9. IF A CONFLICT EXISTS BETWEEN EXISTING AND PROPOSED UTILITIES AND/OR A DESIGN MODIFICATION IS REQUIRED, THE DEVELOPER SHALL COORDINATE WITH THE ENGINEER TO MODIFY THE DESIGN. DESIGN MODIFICATION(S) MUST BE APPROVED BY THE LOCAL ENTITY PRIOR TO BEGINNING CONSTRUCTION.
10. THE DEVELOPER SHALL COORDINATE AND COOPERATE WITH THE LOCAL ENTITY, AND ALL UTILITY COMPANIES INVOLVED, TO ASSURE THAT THE WORK IS ACCOMPLISHED IN A TIMELY FASHION AND WITH A MINIMUM DISRUPTION OF SERVICE. THE DEVELOPER SHALL BE RESPONSIBLE FOR CONTACTING, IN ADVANCE, ALL PARTIES AFFECTED BY ANY DISRUPTION OF ANY UTILITY SERVICE AS WELL AS THE UTILITY COMPANIES.
11. NO WORK MAY COMMENCE WITHIN ANY PUBLIC STORM WATER, SANITARY SEWER OR POTABLE WATER SYSTEM UNTIL THE DEVELOPER NOTIFIES THE UTILITY PROVIDER. NOTIFICATION SHALL BE A MINIMUM OF 2 WORKING DAYS PRIOR TO COMMENCEMENT OF ANY WORK. AT THE DISCRETION OF THE WATER UTILITY PROVIDER, A PRE-CONSTRUCTION MEETING MAY BE REQUIRED PRIOR TO COMMENCEMENT OF ANY WORK.
12. THE DEVELOPER SHALL SEQUENCE INSTALLATION OF UTILITIES IN SUCH A MANNER AS TO MINIMIZE POTENTIAL UTILITY CONFLICTS. IN GENERAL, STORM SEWER AND SANITARY SEWER SHOULD BE CONSTRUCTED PRIOR TO INSTALLATION OF THE WATER LINES AND DRY UTILITIES.
13. THE MINIMUM COVER OVER WATER LINES IS 4.5 FEET AND THE MAXIMUM COVER IS 5.5 FEET UNLESS OTHERWISE NOTED IN THE PLANS AND APPROVED BY THE WATER UTILITY.
14. A STATE CONSTRUCTION DEWATERING WASTEWATER DISCHARGE PERMIT IS REQUIRED IF DEWATERING IS REQUIRED IN ORDER TO INSTALL UTILITIES OR WATER IS DISCHARGED INTO A STORM SEWER, CHANNEL, IRRIGATION DITCH OR ANY WATERS OF THE UNITED STATES.
15. THE DEVELOPER SHALL COMPLY WITH ALL TERMS AND CONDITIONS OF THE COLORADO PERMIT FOR STORM WATER DISCHARGE (CONTACT COLORADO DEPARTMENT OF HEALTH, WATER QUALITY CONTROL DIVISION, (303) 692-3590), THE STORM WATER MANAGEMENT PLAN, AND THE EROSION CONTROL PLAN.
16. THE LOCAL ENTITY SHALL NOT BE RESPONSIBLE FOR THE MAINTENANCE OF STORM DRAINAGE FACILITIES LOCATED ON PRIVATE PROPERTY. MAINTENANCE OF ONSITE DRAINAGE FACILITIES SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNER(S).
17. PRIOR TO FINAL INSPECTION AND ACCEPTANCE BY THE LOCAL ENTITY, CERTIFICATION OF THE DRAINAGE FACILITIES, BY A REGISTERED ENGINEER, MUST BE SUBMITTED TO AND APPROVED BY THE STORMWATER UTILITY DEPARTMENT. CERTIFICATION SHALL BE SUBMITTED TO THE STORMWATER UTILITY DEPARTMENT AT LEAST TWO WEEKS PRIOR TO THE RELEASE OF A CERTIFICATE OF OCCUPANCY FOR SINGLE FAMILY UNITS. FOR COMMERCIAL PROPERTIES, CERTIFICATION SHALL BE SUBMITTED TO THE STORMWATER UTILITY DEPARTMENT AT LEAST TWO WEEKS PRIOR TO THE RELEASE OF ANY BUILDING PERMITS IN EXCESS OF THOSE ALLOWED PRIOR TO CERTIFICATION PER THE DEVELOPMENT AGREEMENT.
18. THE LOCAL ENTITY SHALL NOT BE RESPONSIBLE FOR ANY DAMAGES OR INJURIES SUSTAINED IN THIS DEVELOPMENT AS A RESULT OF GROUNDWATER SEEPAGE, WHETHER RESULTING FROM GROUNDWATER FLOODING, STRUCTURAL DAMAGE OR OTHER DAMAGE UNLESS SUCH DAMAGE OR INJURIES ARE SUSTAINED AS A RESULT OF THE LOCAL ENTITY FAILURE TO PROPERLY MAINTAIN ITS WATER, WASTEWATER, AND/OR STORM DRAINAGE FACILITIES IN THE DEVELOPMENT.
19. ALL RECOMMENDATIONS OF THE FINAL DRAINAGE AND EROSION CONTROL MEMO DATED APRIL 4, 2019 BY KEEFE CIVIL SHALL BE FOLLOWED AND IMPLEMENTED.
20. TEMPORARY EROSION CONTROL DURING CONSTRUCTION SHALL BE PROVIDED AS SHOWN ON THE EROSION CONTROL PLAN. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED IN GOOD REPAIR BY THE DEVELOPER, UNTIL SUCH TIME AS THE ENTIRE DISTURBED AREAS IS STABILIZED WITH HARD SURFACE OR LANDSCAPING.
21. THE DEVELOPER SHALL BE RESPONSIBLE FOR INSURING THAT NO MUD OR DEBRIS SHALL BE TRACKED ONTO THE EXISTING PUBLIC STREET SYSTEM. MUD AND DEBRIS MUST BE REMOVED WITHIN 24 HOURS BY AN APPROPRIATE MECHANICAL METHOD (I.E. MACHINE BROOM SWEEP, LIGHT DUTY FRONT-END LOADER, ETC.) OR AS APPROVED BY THE LOCAL ENTITY STREET INSPECTOR.
22. NO WORK MAY COMMENCE WITHIN ANY IMPROVED OR UNIMPROVED PUBLIC RIGHT-OF-WAY UNTIL A RIGHT-OF-WAY PERMIT OR DEVELOPMENT CONSTRUCTION PERMIT IS OBTAINED, IF APPLICABLE.
23. THE DEVELOPER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FOR ALL APPLICABLE AGENCIES PRIOR TO COMMENCEMENT OF CONSTRUCTION. THE DEVELOPER SHALL NOTIFY THE LOCAL ENTITY ENGINEERING INSPECTOR (FORT COLLINS - 221-6605) AND THE LOCAL ENTITY EROSION CONTROL INSPECTOR (FORT COLLINS - 221-6700) AT LEAST 2 WORKING DAYS PRIOR TO THE START OF ANY EARTH DISTURBING ACTIVITY, OR CONSTRUCTION ON ANY AND ALL PUBLIC IMPROVEMENTS. IF THE LOCAL ENTITY ENGINEER IS NOT AVAILABLE AFTER PROPER NOTICE OF CONSTRUCTION ACTIVITY HAS BEEN PROVIDED, THE DEVELOPER MAY COMMENCE WORK IN THE ENGINEER ABSENCE. HOWEVER, THE LOCAL ENTITY RESERVES THE RIGHT NOT TO ACCEPT THE IMPROVEMENT IF SUBSEQUENT TESTING REVEALS AN IMPROPER INSTALLATION.
24. THE DEVELOPER SHALL BE RESPONSIBLE FOR OBTAINING SOILS TESTS WITHIN THE PUBLIC RIGHT-OF-WAY AFTER RIGHT-OF-WAY GRADING AND ALL UTILITY TRENCH WORK IS COMPLETE AND PRIOR TO THE PLACEMENT OF CURB, GUTTER, SIDEWALK AND PAVEMENT. IF THE FINAL SOILS/PAVEMENT DESIGN REPORT DOES NOT CORRESPOND WITH THE RESULTS OF THE ORIGINAL GEOTECHNICAL REPORT, THE DEVELOPER SHALL BE RESPONSIBLE FOR A RE-DESIGN OF THE SUBJECT PAVEMENT SECTION OR, THE DEVELOPER MAY USE THE LOCAL ENTITY'S DEFAULT PAVEMENT THICKNESS SECTION(S). REGARDLESS OF THE OPTION USED, ALL FINAL SOILS/PAVEMENT DESIGN REPORTS SHALL BE PREPARED BY A LICENSED PROFESSIONAL ENGINEER. THE FINAL REPORT SHALL BE SUBMITTED TO THE INSPECTOR A MINIMUM OF 10 WORKING DAYS PRIOR TO PLACEMENT OF BASE AND ASPHALT. PLACEMENT OF CURB, GUTTER, SIDEWALK, BASE AND ASPHALT SHALL NOT OCCUR UNTIL THE LOCAL ENTITY ENGINEER APPROVES THE FINAL REPORT.
25. THE CONTRACTOR SHALL HIRE A LICENSED ENGINEER OR LAND SURVEYOR TO SURVEY THE CONSTRUCTED ELEVATIONS OF THE STREET SUBGRADE AND THE GUTTER FLOWLINE AT ALL INTERSECTIONS, INLETS, AND OTHER LOCATIONS REQUESTED BY THE LOCAL ENTITY INSPECTOR. THE ENGINEER OR SURVEYOR MUST CERTIFY IN A LETTER TO THE LOCAL ENTITY THAT THESE ELEVATIONS CONFORM TO THE APPROVED PLANS AND SPECIFICATIONS. ANY DEVIATIONS SHALL BE NOTED IN THE LETTER AND THEN RESOLVED WITH THE LOCAL ENTITY BEFORE INSTALLATION OF BASE COURSE OR ASPHALT WILL BE ALLOWED ON THE STREETS.
26. ALL UTILITY INSTALLATIONS WITHIN OR ACROSS THE ROADBED OF NEW RESIDENTIAL ROADS MUST BE COMPLETED PRIOR TO THE FINAL STAGES OF ROAD CONSTRUCTION. FOR THE PURPOSES OF THESE STANDARDS, ANY WORK EXCEPT C/G ABOVE THE SUBGRADE IS CONSIDERED FINAL STAGE WORK. ALL SERVICE LINES MUST BE STUBBED TO THE PROPERTY LINES AND MARKED SO AS TO REDUCE THE EXCAVATION NECESSARY FOR BUILDING CONNECTIONS.
27. PORTIONS OF LARIMER COUNTY ARE WITHIN OVERLAY DISTRICTS. THE LARIMER COUNTY FLOODPLAIN RESOLUTION SHOULD BE REFERRED TO FOR ADDITIONAL CRITERIA FOR ROADS WITHIN THESE DISTRICTS.
28. ALL ROAD CONSTRUCTION IN AREAS DESIGNATED AS WILD FIRE HAZARD AREAS SHALL BE DONE IN ACCORDANCE WITH THE CONSTRUCTION CRITERIA AS ESTABLISHED IN THE WILD FIRE HAZARD AREA MITIGATION REGULATIONS IN FORCE AT THE TIME OF FINAL PLAT APPROVAL.
29. PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION, THE CONTRACTOR SHALL CONTACT THE LOCAL ENTITY FORESTER TO SCHEDULE A SITE INSPECTION FOR ANY TREE REMOVAL REQUIRING A PERMIT.
30. THE DEVELOPER SHALL BE RESPONSIBLE FOR ALL ASPECTS OF SAFETY INCLUDING, BUT NOT LIMITED TO, EXCAVATION, TRENCHING, SHORING, TRAFFIC CONTROL, AND SECURITY. REFER TO OSHA PUBLICATION 2226, EXCAVATING AND TRENCHING.
31. THE DEVELOPER SHALL SUBMIT A CONSTRUCTION TRAFFIC CONTROL PLAN, IN ACCORDANCE WITH MUTCD, TO THE APPROPRIATE RIGHT-OF-WAY AUTHORITY.

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

	FORT COLLINS - LOVELAND WATER DISTRICT SOUTH FORT COLLINS SANITATION DISTRICT
Mr. Chris Matkins, Manager	Date _____
Mr. Terry Ferrill, P.E., District Manager	Date _____
All changes, addendums, additions, deletions and modifications to these drawings must be approved, in writing, by the Fort Collins-Loveland Water District and the South Fort Collins Sanitation District.	

City of Ft. Collins, Colorado

UTILITY PLAN APPROVAL

APPROVED:	_____	Date _____
CHECKED BY:	_____	_____
	Water & Wastewater Utility	Date _____
CHECKED BY:	_____	_____
	Stormwater Utility	Date _____
CHECKED BY:	_____	_____
	Parks & Recreation	Date _____
CHECKED BY:	_____	_____
	Traffic Engineer	Date _____
CHECKED BY:	_____	_____
	Natural Resources	Date _____

[illegible]

LEGEND:

- 4950 ----- EXISTING MAJOR CONTOUR
----- 4948 ----- EXISTING MINOR CONTOUR
----- 4950 ----- PROPOSED MAJOR CONTOUR
----- 4948 ----- PROPOSED MINOR CONTOUR

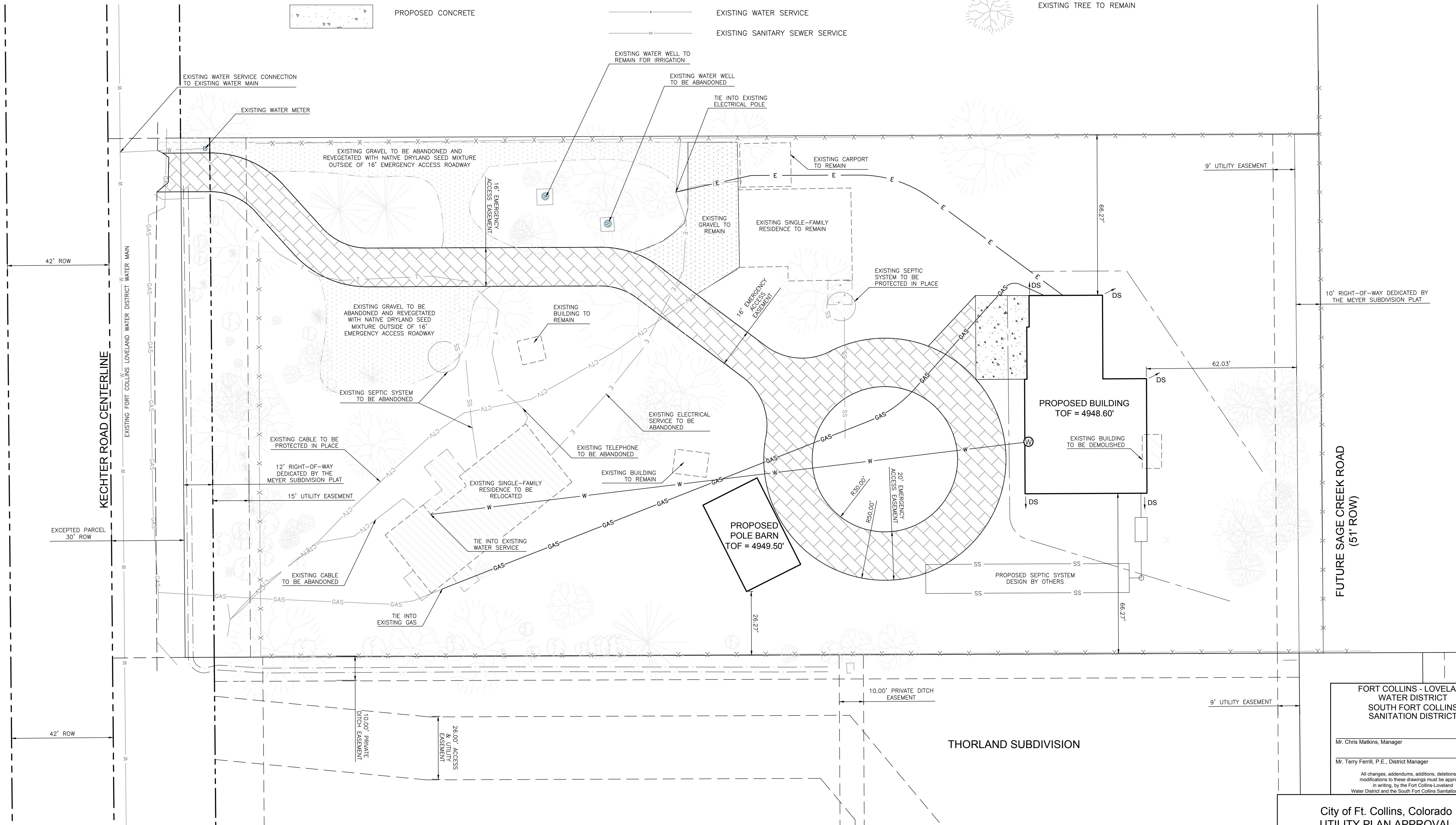
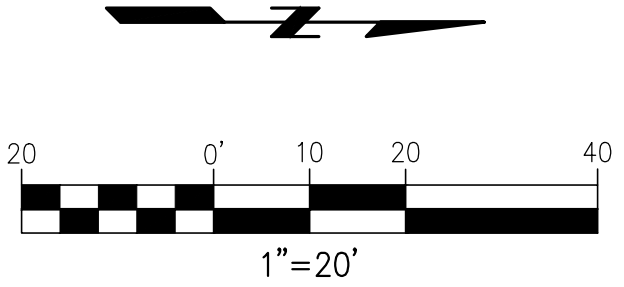
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+4961.88)

PROPOSED SPOT ELEVATION
PROPOSED SLOPE
EXISTING SPOT ELEVATION

PROPOSED CONCRETE

- EXISTING GRAVEL ROAD TO BE PERMANENTLY SEEDED
EXISTING GRAVEL ROAD TO REMAIN
PROPOSED COMPACTED ROAD BASE
PROPOSED DRAINAGE SWALE
EXISTING WATER SERVICE
EXISTING SANITARY SEWER SERVICE

- PROPOSED 3" WATER SERVICE
EXISTING UG GAS SERVICE
PROPOSED UG GAS SERVICE
EXISTING UG ELECTRICAL SERVICE
PROPOSED UG ELECTRICAL SERVICE
EXISTING TREE TO REMAIN



- ABBREVIATION LEGEND:
- | | |
|-----|-----------------------|
| EG | EXISTING GROUND |
| DS | DOWNSPOUT |
| FF | FINISHED FLOOR |
| FG | FINISHED GRADE |
| PFA | POUDRE FIRE AUTHORITY |
| TOF | TOP OF FOUNDATION |
| TOW | TOP OF WALL |
| UG | UNDERGROUND |



FORT COLLINS - LOVELAND
WATER DISTRICT
SOUTH FORT COLLINS
SANITATION DISTRICT

Mr. Chris Matkins, Manager _____ Date _____

Mr. Terry Ferrill, P.E., District Manager _____ Date _____

All changes, addendums, additions, deletions and modifications to these drawings must be approved, in writing, by the Fort Collins-Loveland Water District and the South Fort Collins Sanitation District.

City of Ft. Collins, Colorado
UTILITY PLAN APPROVAL

APPROVED:	City Engineer _____	Date _____
CHECKED BY:	Water & Wastewater Utility _____	Date _____
CHECKED BY:	Stormwater Utility _____	Date _____
CHECKED BY:	Parks & Recreation _____	Date _____
CHECKED BY:	Traffic Engineer _____	Date _____
CHECKED BY:	Natural Resources _____	Date _____

MEYER SUBDIVISION UTILITY PLANS

UTILITY PLAN

FORT COLLINS, COLORADO

KEEFE CIVIL, LLC
825 UNION STREET
GOLDEN, CO 80401
(970) 215-6808
MEG@KEEFECIVIL.COM

04/23/19 2 UPDATED EASEMENT LABELS TO MATCH SUBDIVISION PLAT. MLK
04/24/19 1 UPDATED PLANS PER ROUND NUMBER 1 QTY COMMENTS. MLK
DATE NO. REVISIONS
DATE 03/06/19 BY

JOB NO. 2018-025

GENERAL EROSION CONTROL NOTES:

- 1) THE PROPERTY OWNER, OWNER'S REPRESENTATIVE, DEVELOPER, DESIGN ENGINEER, GENERAL CONTRACTOR, SUB-CONTRACTORS, OR SIMILAR TITLE FOR THE DEVELOPING ENTITY (HERE AFTER REFERRED TO AS THE DEVELOPER) HAS PROVIDED THESE EROSION CONTROL MATERIALS IN ACCORDANCE WITH EROSION CONTROL CRITERIA SET FORTH IN THE MANUAL AS AN ATTEMPT TO IDENTIFY EROSION, SEDIMENT, AND OTHER POTENTIAL POLLUTANT SOURCES ASSOCIATED WITH THESE CONSTRUCTION ACTIVITIES AND PREVENTING THOSE POLLUTANTS FROM LEAVING THE PROJECT SITE AS AN ILLICIT DISCHARGE. FULL CITY REQUIREMENTS AND ARE OUTLINED AND CLARIFIED IN THE MANUAL UNDER CHAPTER 4: CONSTRUCTION CONTROL MEASURES AND SHOULD BE USED TO IDENTIFY AND DEFINE WHAT IS NEEDED ON A PROJECT.
- 2) THE DEVELOPER SHALL MAKE THEMSELVES THOROUGHLY FAMILIAR WITH THE PROVISIONS AND THE CONTENT OF THE SPECIFICATIONS LAID OUT IN THE MANUAL, THE DEVELOPMENT AGREEMENT, THE EROSION CONTROL MATERIALS COMPILED FOR THIS PROJECT, AND THE FOLLOWING NOTES AS ALL THESE MATERIALS ARE APPLICABLE TO THIS PROJECT.
- 3) THE DEVELOPER SHALL IMPLEMENT AND MAINTAIN CONTROL MEASURES FOR ALL POTENTIAL POLLUTANTS FROM THE START OF LAND DISTURBING ACTIVITIES UNTIL FINAL STABILIZATION OF THE CONSTRUCTION SITE.
- 4) THE CITY EROSION CONTROL INSPECTOR SHALL BE NOTIFIED AT LEAST TWENTY-FOUR (24) HOURS PRIOR TO THE DESIRED START OF ANY CONSTRUCTION ACTIVITIES ON THIS SITE TO ALLOW ADEQUATE TIME FOR ON-SITE CONFIRMATION (INITIAL INSPECTION WHICH CAN TAKE UP TO TWO BUSINESS DAYS AFTER RECEIVING THE REQUEST) THAT THE SITE IS IN FACT PROTECTED FROM SEDIMENT AND POLLUTANTS DISCHARGES OFF SITE. PLEASE CONTACT EROSION@FCGOV.COM EARLY TO SCHEDULE THOSE INITIAL EROSION CONTROL INSPECTIONS WELL IN ADVANCE SO THAT DEMOLITION, CLEARING, GRUBBING, TREE REMOVAL, AND SCRAPING MAY BEGIN WITHOUT DELAY. FAILURE TO RECEIVE AN ON-SITE CONFIRMATION BEFORE CONSTRUCTION ACTIVITIES COMMENCE IS AN AUTOMATIC "NOTICE OF VIOLATION" AND CAN RESULT IN FURTHER ENFORCEMENT ACTIONS.
- 5) THE DEVELOPER SHALL PROACTIVELY PROVIDE ALL APPROPRIATE CONTROL MEASURES TO PREVENT DAMAGE TO ADJACENT DOWNSTREAM AND LEeward PROPERTIES. THIS INCLUDES BUT IS NOT LIMITED TO: TREES, SHRUBS, LAWNS, WALKS, PAVEMENTS, ROADWAYS, STRUCTURES, CREEKS, WETLANDS, STREAMS, RIVERS, AND UTILITIES THAT ARE NOT DESIGNED FOR REMOVAL, RELOCATION, OR REPLACEMENT IN THE COURSE OF CONSTRUCTION.
- 6) AT ALL TIMES THE DEVELOPER SHALL BE RESPONSIBLE TO ENSURE ADEQUATE CONTROL MEASURES ARE DESIGNED, SELECTED, INSTALLED, MAINTAIN, REPAIRED, REPLACED, AND ULTIMATELY REMOVED IN ORDER TO PREVENT AND CONTROL EROSION SUSPENSION, SEDIMENT TRANSPORTATION, AND POLLUTANT DISCHARGE AS A RESULT OF CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS PROJECT.
- 7) ALL APPLICABLE CONTROL MEASURES BASED UPON THE SEQUENCING AND/OR PHASING OF THE PROJECT SHALL BE INSTALLED PRIOR TO THOSE CONSTRUCTION ACTIVITIES COMMENCING.
- 8) AS DYNAMIC CONDITIONS (DUE TO THE NATURE, TIMING, SEQUENCE, AND PHASING OF CONSTRUCTION) IN THE FIELD MAY WARRANT CONTROL MEASURES IN ADDITION, OR DIFFERENT, TO WHAT IS SHOWN ON THESE PLANS, THE DEVELOPER SHALL AT ALL TIMES BE RESPONSIBLE TO IMPLEMENT THE CONTROL MEASURES THAT ARE MOST EFFECTIVE WITH THE CURRENT STATE AND PROGRESS OF CONSTRUCTION. THE DEVELOPER SHALL IMPLEMENT WHATEVER MEASURES ARE DETERMINED NECESSARY, AND/OR AS DIRECTED BY THE CITY EROSION CONTROL INSPECTOR. THE DEVELOPER SHALL INSURE THAT ALL EROSION CONTROL PLANS (MAPS) OR SWMP DOCUMENTS ARE UPDATED TO REFLECT THE CURRENT SITE CONDITIONS, WITH UPDATES BEING INITIALED AND DATED. THESE SITE INSPECTIONS AND SITE CONDITION UPDATES SHALL BE MADE AVAILABLE UPON REQUEST BY THE CITY.
- 9) ALL LISTINGS, PROVISIONS, MATERIALS, PROCEDURES, ACTIVITIES, SITE WORK AND THE LIKE ARTICULATED IN THIS OR OTHER WRITTEN SITE-SPECIFIC DOCUMENTS (INCLUDING BUT NOT LIMITED TO THE EROSION CONTROL REPORTS, DEVELOPMENT AGREEMENTS, LANDSCAPE, AND DRAINAGE MATERIALS) SHALL MEET OR EXCEED THE MOST RESTRICTIVE LANGUAGE FOR CITY, COUNTY, STATE, AND FEDERAL REGULATIONS WITH REGARDS TO EROSION, SEDIMENT, POLLUTANT, AND OTHER POLLUTION SOURCE CONTROL MEASURES. THE DEVELOPER SHALL BE RESPONSIBLE TO COMPLY WITH ALL OF THESE AFOREMENTIONED LAWS AND REGULATIONS.
- 10) THE DEVELOPER SHALL ENSURE THAT ALL APPROPRIATE PERMITS (CDPS GENERAL PERMIT, STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY, DEWATERING, CLEAN WATER ACT, ARMY CORPS OF ENGINEERS' 404 WETLANDS MITIGATION PERMIT, ETC.) HAVE BEEN ATTAINED PRIOR TO THE RELEVANT ACTIVITY HAS BEGUN. THESE PERMITS OR COPIES SHALL BE MADE AVAILABLE UPON REQUEST BY THE CITY.
- 11) THE DEVELOPER SHALL FURNISH ALL CONVENIENCES AND ASSISTANCE TO AID THE EROSION CONTROL INSPECTORS OF MATERIALS, WORKMANSHIP, RECORDS, AND SELF-INSPECTIONS, ETC. OF THE CONTROL MEASURES INVOLVED IN THE CONSTRUCTION ACTIVITIES.
- 12) THE DEVELOPER SHALL REQUEST CLARIFICATION OF ALL APPARENT SITE CONSTRUCTION ISSUES THAT MAY ARISE DUE TO INCONSISTENCIES IN CONSTRUCTION PLANS FOR THE SITE OR SITE CONDITIONS AROUND THE SELECTED CONTROL MEASURES BY CONTACTING THE EROSION CONTROL INSPECTOR. THE EROSION CONTROL INSPECTOR WILL NOT BE RESPONSIBLE FOR ANY EXPLANATIONS, INTERPRETATIONS, OR SUPPLEMENTARY DATA PROVIDED BY OTHERS.
- 13) ALL CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUAL.
- 14) THE CITY RESERVES THE RIGHT TO REQUIRE ADDITIONAL CONTROL MEASURES AS SITE CONDITIONS WARRANT, TO THE EXTENT AUTHORIZED BY RELEVANT LEGAL AUTHORITY.
- 15) AS WITH ANY CONSTRUCTION STANDARDS, OCCASIONS MAY ARISE WHERE THE MINIMUM EROSION CONTROL STANDARDS ARE EITHER INAPPROPRIATE OR CANNOT BE JUSTIFIED. IN THESE CASES, A VARIANCE TO THESE STANDARDS MAY BE APPLIED FOR PURSUANT TO THE TERMS, CONDITIONS, AND PROCEDURES OF THE MANUAL.
- 16) INSPECTION. THE CONTRACTOR SHALL INSPECT SITE POLLUTANT SOURCES AND IMPLEMENT CONTROL MEASURES AT A MINIMUM OF ONCE EVERY TWO WEEKS DURING CONSTRUCTION AND WITHIN 24 HOURS FOLLOWING A PRECIPITATION EVENT. DOCUMENTATION OF EACH INSPECTION SHALL BE RECORDED AND RETAINED BY THE CONTRACTOR.
- 17) ALL TEMPORARY CONTROL MEASURES SHALL BE CLEANED, REPAIRED, OR RECONSTRUCTED AS NECESSARY IN ORDER TO ASSURE CONTINUAL PERFORMANCE OF THEIR INTENDED FUNCTION. ALL RETAINED SEDIMENTS, PARTICULARLY THOSE ON PAVED ROADWAY SURFACES, SHALL BE REMOVED AND DISPOSED OF IN A MANNER AND LOCATION SO AS NOT TO CAUSE THEIR RELEASE INTO ANY DRAINAGE WAY.
- 18) ANY CONTROL MEASURE MAY BE SUBSTITUTED FOR ANOTHER STANDARD CONTROL MEASURE SO LONG AS THAT CONTROL MEASURE IS EQUAL TO, OR OF GREATER PROTECTION THAN THE ORIGINAL CONTROL MEASURE THAT WAS TO BE USED IN THAT LOCATION. (EX. SILT FENCE, FOR WATTLES, OR FOR COMPACT BERMS) WATTLE ALONE ON COMMERCIAL CONSTRUCTION SITES HAVE SHOWN TO BE AN INEFFECTIVE SUBSTITUTE FOR SILT FENCE OR COMPACT BERMS UNLESS IT IS ACCOMPANIED BY A CONSTRUCTION FENCE TO PREVENT VEHICLE TRAFFIC.
- 19) ANY IMPLEMENTATION OR REPLACEMENT OF EXISTING CONTROL MEASURES FOR A NON-STANDARD CONTROL, OR ALTERNATIVE CONTROL MEASURE, SHALL REQUIRE THE REVIEW AND ACCEPTANCE BY THE CITY EROSION CONTROL STAFF BEFORE THE MEASURE WILL BE ALLOWED TO BE USED ON THIS PROJECT. THESE CONTROL MEASURES' DETAILS SHALL BE SUBMITTED, REVIEWED AND ACCEPTED TO BE IN ACCORDANCE WITH THE EROSION CONTROL CRITERIA BASED UPON THE FUNCTIONALITY AND EFFECTIVENESS IN ACCORDANCE WITH SOUND ENGINEERING AND HYDROLOGICAL PRACTICES.

LAND DISTURBANCE, STOCKPILES, AND STORAGE OF SOILS

- 20) THERE SHALL BE NO EARTH-DISTURBING ACTIVITY OUTSIDE THE LIMITS DESIGNATED ON THE ACCEPTED PLANS. OFF ROAD STAGING AREAS OR STOCKPILES MUST BE PREAPPROVED BY THE CITY. DISTURBANCES BEYOND THESE LIMITS WILL BE RESTORED TO ORIGINAL CONDITION.
- 21) PRE-DISTURBANCE VEGETATION SHALL BE IDENTIFIED, PROTECTED, AND RETAINED WHEREVER POSSIBLE. REMOVAL OR DISTURBANCE OF EXISTING VEGETATION SHALL BE LIMITED TO THE AREA REQUIRED FOR IMMEDIATE CONSTRUCTION OPERATIONS, AND FOR THE SHORTEST PRACTICAL PERIOD OF TIME. THIS SHOULD INCLUDE SEQUENCING AND PHASING CONSTRUCTION ACTIVITIES IN A WAY SO THAT THE SOIL IS NOT EXPOSED FOR LONG PERIODS OF TIME. GRADING BY SCHEDULE OR LIMIT GRADING TO SMALL AREAS THIS SHOULD ALSO INCLUDE WHEN PRACTICAL, ADVANCING THE SCHEDULE ON STABILIZATION ACTIVITIES SUCH THAT LANDSCAPING TAKES PLACE SHORTLY IF NOT IMMEDIATELY AFTER GRADING HAS OCCURRED. VEGETATION EFFORTS SHALL START AS SOON AS POSSIBLE TO RETURN THE SITE TO A STABILIZED CONDITION. SENSITIVE AREAS SHOULD AVOID CLEARING AND GRADING ACTIVITIES AS MUCH POSSIBLE.
- 22) ALL EXPOSED SOILS OR DISTURBED AREAS ARE CONSIDERED A POTENTIAL POLLUTANT AND SHALL HAVE CONTROL MEASURES IMPLEMENTED ON THE SITE TO PREVENT MATERIALS FROM LEAVING THE SITE.
- 23) ALL SOILS EXPOSED DURING LAND DISTURBING ACTIVITY (STRIPPING, GRADING, UTILITY INSTALLATIONS, STOCKPILING, FILLING, ETC.) SHALL BE KEPT IN A ROUGHENED CONDITION AT ALL TIMES BY EQUIPMENT TRACKING, SCARIFYING OR DISKING THE SURFACE ON A CONTOUR WITH A 2 TO 4 INCH MINIMUM VARIATION IN SOIL SURFACE UNTIL MULCH, VEGETATION, AND/OR OTHER PERMANENT EROSION CONTROL IS INSTALLED.
- 24) NO SOIL STOCKPILE SHALL EXCEED TEN (10) FEET IN HEIGHT. ALL SOIL STOCKPILES SHALL BE PROTECTED FROM SEDIMENT TRANSPORT THROUGH THE USE OF SURFACE ROUGHENING, WATERING, AND DOWN GRADIENT PERIMETER CONTROLS. ALL SOIL STOCKPILES SHALL BE PROTECTED FROM SEDIMENT TRANSPORT BY WIND IN ACCORDANCE WITH MUNICIPAL CODE §12-150. ALL STOCKPILES SHALL BE FLATTENED TO MEET GRADE OR REMOVED FROM SITE AS SOON AS PRACTICAL, AND NO LATER THAN THE COMPLETION OF CONSTRUCTION ACTIVITIES OR ABANDONMENT OF THE PROJECT. ALL OFF-SITE STOCKPILE STORAGE LOCATIONS IN CITY LIMITS SHALL HAVE A STOCKPILE PERMIT FROM THE CITY ENGINEERING DEPARTMENT PRIOR TO USING THE AREA TO STORE MATERIAL. IF FREQUENT ACCESS FROM HARDSCAPE TO THE STOCKPILE IS NEEDED A STRUCTURAL TRACKING CONTROL MEASURE SHALL BE IMPLEMENTED.
- 25) ALL REQUIRED CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITY (STOCKPILING, STRIPPING, GRADING, ETC.). ALL OF THE REQUIRED EROSION CONTROL MEASURES MUST BE INSTALLED AT THE

APPROPRIATE TIME IN THE CONSTRUCTION SEQUENCE AS INDICATED IN THE APPROVED PROJECT SCHEDULE, CONSTRUCTION PLANS, AND EROSION CONTROL REPORT.

- 26) ALL INLETS, CURB-CUTS, CULVERTS, AND OTHER STORM SEWER INFRASTRUCTURE WHICH COULD BE POTENTIALLY IMPACTED BY CONSTRUCTION ACTIVITIES SHALL BE PROTECTED WITH CONTROL MEASURES. MATERIAL ACCUMULATED FROM THIS CONTROL MEASURE SHALL BE PROMPTLY REMOVED AND IN CASES WHERE THE PROTECTION HAS FAILED, THE PIPES SHALL BE THOROUGHLY CLEANED OUT.
- 27) ALL STREAMS, STREAM CORRIDORS, BUFFERS, WOODLANDS, WETLANDS, OR OTHER SENSITIVE AREAS SHALL BE PROTECTED FROM IMPACT BY ANY CONSTRUCTION ACTIVITY THROUGH THE USE OF CONTROL MEASURES.
- 28) ALL EXPOSED DIRT SHALL HAVE PERIMETER CONTROL. ANY PERIMETER CONTROLS THAT DRAIN OFF OR HAS THE ABILITY TO BE TRACKED ONTO THE NEARBY HARDSCAPE SHALL HAVE SOME FORM OF EFFECTIVE SEDIMENT CONTROL AS THE, OR AS PART OF THE, PERIMETER CONTROL.
- 29) ALL EXPOSED SLOPES SHOULD BE PROTECTED. ALL EXPOSED STEEP SLOPES (STEEPER THAN 3:1 H:V) SHALL BE PROTECTED FROM EROSION AND SEDIMENT TRANSPORT THROUGH USE OF CONTROL MEASURES.
- 30) NO SOILS SHALL REMAIN EXPOSED BY LAND DISTURBING ACTIVITY FOR MORE THAN THIRTY (30) DAYS AFTER ACTIVITY HAS CEASED BEFORE REQUIRED TEMPORARY SEEDING OR PERMANENT EROSION CONTROL (E.G. SEED/MULCH, LANDSCAPING, ETC.) IS INSTALLED. THIS IS NOT JUST LIMITED TO PROJECTS THAT ARE ABANDONED; THIS INCLUDES ANY PROJECT THAT IS TEMPORARILY HALTED AND NO IMMEDIATE ACTIVITY IS TO RESUME WITHIN THE NEXT THIRTY (30) DAYS, UNLESS OTHERWISE APPROVED BY THE CITY EROSION CONTROL INSPECTOR. DURING A SEASON WHEN SEEDING DOES NOT PRODUCE VEGETATIVE COVER, ANOTHER TEMPORARY EROSION CONTROL SHALL BE IMPLEMENTED WITH OR UNTIL TEMPORARY SEEDING OR PERMANENT EROSION CONTROL CAN BE PERFORMED.
- 31) ALL INDIVIDUAL LOTS SHALL HAVE EFFECTIVE SEDIMENT CONTROLS LOCATED ON THE STREET SIDE AND ANY DOWN GRADIENT SIDE. TYPICALLY MOST LOTS DRAIN TO THE FRONT YET ON THOSE CASES WHERE HOUSES ARE ALONG A POND OR DRAINAGE SWALE HAVE THE LOT DRAIN IN A DIFFERENT DIRECTION THAN THE STREET, THOSE INDIVIDUAL LOTS WILL NEED PROTECTION ON THAT DOWN GRADIENT SIDE TO PREVENT SEDIMENT FROM LEAVING THE LOT. SEE THE INDIVIDUAL LOT DETAILS FOR FURTHER CLARIFICATION.

VEHICLE TRACKING

- 32) AT ALL POINTS WHERE VEHICLES EXIT OR LEAVE THE EXPOSED DIRT AREA ON TO A HARDSCAPE OR SEMI HARDSCAPE (CONCRETE, ASPHALT, ROAD BASE, ETC.) SHALL HAVE INSTALLED AT LEAST ONE STRUCTURAL TRACKING CONTROL MEASURE TO PREVENT VEHICLE TRACKING. ALL AREAS NOT PROTECTED BY AN ADEQUATE PERIMETER CONTROL SHALL BE CONSIDERED A POINT WHERE VEHICLES EXIT THE SITE. ACCESS POINTS SHOULD BE LIMITED TO AS FEW ENTRANCES AS POSSIBLE (ALL PERIMETER AREAS SHALL BE PROTECTED FROM TRACKING ACTIVITIES).
- 33) IN ALL AREAS THAT THE STRUCTURAL TRACKING CONTROL MEASURES FAIL TO PREVENT VEHICLE TRACKING, COLLECTION AND PROPER DISPOSAL OF THAT MATERIAL IS REQUIRED. ALL INLETS LOCATED NEAR ACCESS POINTS AND AFFECTED BY TRACKING ACTIVITIES SHALL BE PREVENTED FROM THE INTRODUCTION OF SEDIMENT INTO THE DRAINAGE SYSTEM.
- 34) CITY MUNICIPAL CODE §20-62, AMONG OTHER THINGS, PROHIBITS THE TRACKING, DROPPING, OR DEPOSITING OF SOILS OR ANY OTHER MATERIAL ONTO CITY STREETS BY OR FROM ANY SOURCE. CITY MUNICIPAL CODE, §26-498, AMONG OTHER THINGS, PROHIBITS THE DISCHARGE OF POLLUTANTS ON PUBLIC OR PRIVATE PROPERTY IF THERE IS A SIGNIFICANT POTENTIAL FOR MIGRATION OF SUCH POLLUTANT. THEREFORE, ALL TRACKED OR DEPOSITED MATERIALS (INTENTIONAL OR INADVERTENT) ARE NOT PERMITTED TO REMAIN ON THE STREET OR GUTTER AND SHALL BE REMOVED AND LEGALLY DISPOSED OF BY THE DEVELOPER IN A TIMELY AND IMMEDIATE MANNER. DIRT RAMPS INSTALLED IN THE CURB-LINES ARE NOT EXEMPT TO THESE SECTIONS OF CODE AND SHALL NOT BE PERMITTED IN THE STREET RIGHT OF WAY (PUBLIC OR PRIVATE).
- 35) IF REPEATED DEPOSIT OF MATERIAL OCCURS ON A SITE, ADDITIONAL STRUCTURAL TRACKING CONTROLS MAY BE REQUIRED OF THE DEVELOPER BY THE CITY EROSION CONTROL INSPECTOR.

LOADING AND UNLOADING OPERATIONS

- 36) THE DEVELOPER SHALL APPLY CONTROL MEASURE TO LIMIT TRAFFIC (SITE WORKER OR PUBLIC) IMPACTS AND PROACTIVELY LOCATE MATERIAL DELIVERED TO THE SITE IN CLOSE PROXIMITY TO THE WORK AREA OR IMMEDIATELY INCORPORATED IN THE CONSTRUCTION TO LIMIT OPERATIONAL IMPACTS TO DISTURBED AREAS, VEHICLE TRACKING, AND SEDIMENT DEPOSITION THAT COULD IMPACT WATER QUALITY.

OUTDOOR STORAGE OR CONSTRUCTION SITE MATERIALS, BUILDING MATERIALS, FERTILIZERS, AND CHEMICALS

- 37) ANY MATERIALS OF A NON-POLLUTING NATURE (STEEL, ROCK, BRICK, LUMBER, ETC.) SHALL BE INSPECTED FOR ANY RESIDUE COMING OFF THE MATERIAL DURING ROUTINE INSPECTION AND WILL GENERALLY BE LOCATED WHERE PRACTICAL AT LEAST FIFTY (50) FEET FROM ANY PERMANENT OR INTERIM DRAINAGE WAYS.
- 38) ANY HIGH ENVIRONMENTAL IMPACT POLLUTANT MATERIALS THAT HAVE A HIGH LIKELIHOOD TO RESULT IN DISCHARGE WHEN IN CONTACT WITH STORMWATER (LUBRICANTS, FUELS, PAINTS, SOLVENTS, DETERGENTS, FERTILIZERS, CHEMICAL SPRAYS, BAGS OF CEMENT MIX, ETC.) SHOULD NOT BE KEPT ON SITE WHERE PRACTICAL. WHEN NOT PRACTICAL, THEY SHOULD BE STORED INSIDE (VEHICLE, TRAILER, CONNEX, BUILDING, ETC.) AND OUT OF CONTACT WITH STORMWATER OR STORMWATER RUNOFF. WHERE NOT AVAILABLE, THEY SHALL BE STORED OUTSIDE IN A RAISED (HIGH SPOTS OR ON PALLETS), COVERED (PLASTIC OR TARPED), AND SEALED (LEAK PROOF CONTAINER) IN SECONDARY CONTAINMENT LOCATION. THE SECONDARY CONTAINMENT OR OTHER CONTROL MEASURE SHALL BE ADEQUATELY SIZED, LOCATED, WHERE PRACTICAL, AT LEAST FIFTY (50) FEET FROM ANY PERMANENT OR INTERIM STORMWATER STRUCTURES OR DRAINAGE WAYS AND SHALL BE MONITORED AS PART OF THE ROUTINE INSPECTIONS.

VEHICLE AND EQUIPMENT MAINTENANCE AND FUELING

- 39) PARKING, REFUELING, AND MAINTENANCE OF VEHICLES AND EQUIPMENT SHOULD BE LIMITED IN ONE AREA OF THE SITE TO MINIMIZE POSSIBLE SPILLS AND FUEL STORAGE AREAS. THIS AREA SHALL BE LOCATED, WHERE PRACTICAL, AT LEAST FIFTY (50) FEET FROM ANY PERMANENT OR INTERIM STORMWATER STRUCTURES OR DRAINAGE WAYS AND SHALL BE MONITORED AS PART OF THE ROUTINE INSPECTIONS. ALL AREAS SHALL KEEP SPILL KITS AND SUPPLIES CLOSE.

SIGNIFICANT DUST OR PARTICULATE GENERATING PROCESS

- 40) THE PROPERTY MUST BE ACTIVELY PREVENTING THE EMISSION OF FUGITIVE DUST AT ALL TIMES DURING CONSTRUCTION AND VEGETATION ACTIVITIES. ALL LAND DISTURBING ACTIVITIES THAT RESULT IN FUGITIVE DUST SHALL BE IN ACCORDANCE WITH MUNICIPAL CODE §12-150 TO REDUCE THE IMPACTS TO ADJACENT PROPERTIES AND COMMUNITY HEALTH. ALL REQUIRED PRACTICES SHALL BE IMPLEMENTED AND ADDITIONAL ONES SHALL BE FOLLOWED. THESE PRACTICES INCLUDE WATERING THE SITES AND DISCONTINUING CONSTRUCTION ACTIVITIES UNTIL THE WIND SUBSIDES AS DETERMINED BY ANY CITY INSPECTORS.

CONCRETE TRUCK / EQUIPMENT WASHING, INCLUDING THE CONCRETE TRUCK CHUTE AND ASSOCIATED FIXTURES AND EQUIPMENT

- 41) ALL CONCRETE AND EQUIPMENT WASHING SHALL USE STRUCTURAL CONTROL MEASURES APPROPRIATE TO THE VOLUME OF WASH AND FREQUENCY OF USE. THESE CONTROL MEASURES SHALL BE LOCATED, WHERE PRACTICAL, AT LEAST FIFTY (50) FEET FROM ANY PERMANENT OR INTERIM STORMWATER STRUCTURES OR DRAINAGE WAYS AND SHALL BE MONITORED AS PART OF THE ROUTINE INSPECTIONS. THESE AREAS SHALL BE CLEARLY IDENTIFIED AND PROTECTED FROM ANY WASH FROM LEAVING THE CONTROL MEASURE. IF FREQUENT ACCESS FROM HARDSCAPE TO THE CONTROL MEASURE IS TO OCCUR, A STRUCTURAL TRACKING CONTROL MEASURE SHALL BE IMPLEMENTED. THESE CONTROL MEASURES SHALL BE FREQUENTLY CLEANED OUT.
- 42) THE DEVELOPER IS RESPONSIBLE FOR ENSURING WASHING ACTIVITY IS TAKING PLACE AT THE APPROPRIATE CONTROL MEASURE AND SITE WORKERS ARE NOT WASHING OR DUMPING WASH WATER ON TO THE DIRT OR OTHER UNCONTROLLED LOCATIONS.

DEDICATED ASPHALT AND CONCRETE BATCH PLANTS

- 43) DEDICATED ASPHALT AND CONCRETE BATCH PLANTS ARE NOT ACCEPTABLE ON CONSTRUCTION SITES WITHIN THE CITY OF FORT COLLINS WITHOUT AN EXPRESSED WRITTEN REQUEST AND PLAN TO REDUCE POLLUTANTS ASSOCIATED WITH THAT TYPE OF ACTIVITY AND APPROVAL BY THE CITY OF FORT COLLINS SPECIFICALLY THE EROSION CONTROL INSPECTOR. THE DEVELOPER SHALL INFORM THE EROSION CONTROL INSPECTION STAFF OF ANY DEDICATED ASPHALT, OR CONCRETE BATCH PLANTS THAT IS TO BE USED ON SITE.

CONCRETE SAW CUTTING MATERIALS

- 44) SAW CUTTING MATERIAL SHALL BE IN ACCORDANCE WITH MUNICIPAL CODE §12-150 FOR AIR EMISSIONS AND ALL WATER APPLICATIONS TO THE SAW CUTTING SHALL PREVENT MATERIAL FROM LEAVING THE IMMEDIATE SITE AND COLLECTED. THESE CUTTING LOCATIONS, ONCE DRIED, SHALL BE SWEEP AND SCRAPED OF ALL MATERIAL AND

SHALL HAVE PROPER AND LEGAL DISPOSAL.

WASTE MATERIALS STORAGE AND SANITARY FACILITIES

- 45) TRASH, DEBRIS, MATERIAL SALVAGE, AND/OR RECYCLING AREAS SHALL BE, WHERE PRACTICAL, AT LEAST FIFTY (50) FEET FROM ANY PERMANENT OR INTERIM STORMWATER STRUCTURES OR DRAINAGE WAYS AND SHALL BE MONITORED AS PART OF THE ROUTINE INSPECTIONS. THESE FACILITIES SHOULD BE LOCATED OUT OF THE WIND AND COVERED AS ABLE. WHERE NOT ABLE TO COVER, LOCATING SAID AREAS ON THE SIDE OF OTHER STRUCTURES TO REDUCE EXPOSURE TO WINDS, AND FOLLOW MAXIMUM LOADING GUIDELINES AS MARKED ON THE CONTAINER. THE DEVELOPER IS REQUIRED TO PRACTICE GOOD HOUSEKEEPING TO KEEP THE CONSTRUCTION SITE FREE OF LITTER, CONSTRUCTION DEBRIS, AND LEAKING CONTAINERS.
- 46) SANITARY FACILITIES SHALL BE PREVENTED FROM TIPPING THROUGH THE USE OF ANCHORING TO THE GROUND OR LASHING TO A STABILIZED STRUCTURE. THESE FACILITIES SHALL ALSO BE LOCATED AS FAR AS PRACTICAL FROM AN INLET, CURB CUT, DRAINAGE SWALE OR OTHER DRAINAGE CONVEYANCES TO PREVENT MATERIAL TRANSPORT FROM LEAVING THE LOCAL AREA. THIS CONSISTS OF THE FACILITY BEING LOCATED, WHERE PRACTICAL, AT LEAST FIFTY (50) FEET FROM ANY PERMANENT OR INTERIM DRAINAGE WAYS.

OTHER SITE OPERATIONS AND POTENTIAL SPILL AREAS

- 47) SPILLS: FOR THOSE MINOR SPILLS THAT; ARE LESS THAN THE STATE'S REPORTABLE QUANTITY FOR SPILLS, STAY WITHIN THE PERMITTED AREA, AND IN NO WAY THREATEN ANY STORMWATER CONVEYANCE, NOTIFY THE CITY OF FORT COLLINS UTILITIES BY EMAIL AT EROSION@FCGOV.COM OR PHONE (970) 817-4770. FOR ANY SIGNIFICANT, MAJOR, OR HAZARDOUS SPILLS, NOTIFY THE CITY OF FORT COLLINS UTILITIES BY PHONE ONLY AFTER EMERGENCY RESPONSE (911) HAS BEEN NOTIFIED AND IS ON ROUTE. COUNTY HEALTH DEPARTMENT (LCHHE) HAS BEEN NOTIFIED THROUGH LARIMER COUNTY SHERIFF DISPATCH (970) 416-1985, AND THE STATE SPILL HOTLINE INCIDENT REPORTING HAVE BEEN CONTACTED 1-877-518-5608. WRITTEN DOCUMENTATION SHALL BE PROVIDED TO THE CITY WITHIN 5 DAYS OF THE EVENT. ALL SPILLS SHALL BE CLEANED UP IMMEDIATELY.
- 48) SELECTION OF "PLASTIC WELDED" EROSION CONTROL BLANKETS SHALL NOT BE USED IN AREAS THAT WILDLIFE, SUCH AS SNAKES, ARE LIKELY TO BE LOCATED AS THESE HAVE PROVEN TO CAUSE ENTRAPMENT ISSUES.

FINAL STABILIZATION AND PROJECT COMPLETION

- 49) ANY STORMWATER FACILITIES USED AS A TEMPORARY CONTROL MEASURE WILL BE RESTORED AND STORM SEWER LINES WILL BE CLEANED UPON COMPLETION OF THE PROJECT AND BEFORE TURNING THE MAINTENANCE OVER TO THE OWNER, HOMEOWNERS ASSOCIATION (HOA), OR OTHER PARTY RESPONSIBLE FOR LONG TERM MAINTENANCE OF THOSE FACILITY.
- 50) ALL FINAL STABILIZATION SPECIFICATIONS SHALL BE DONE IN ACCORDANCE WITH THE MANUAL, CHAPTER 4: CONSTRUCTION CONTROL MEASURES.
- 51) ALL DISTURBED AREAS DESIGNED TO BE VEGETATED SHALL BE AMENDED, SEEDED & MULCHED, OR LANDSCAPED AS SPECIFIED IN THE LANDSCAPE PLANS WITHIN 14 WORKING DAYS OF FINAL GRADING.
- 52) SOIL IN ALL VEGETATED (LANDSCAPED OR SEEDED) AREAS, INCLUDING PARKWAYS AND MEDIANS SHALL COMPLY WITH ALL REQUIREMENTS SET FORTH IN SECTIONS 12-130 THROUGH 12-132 OF THE CITY MUNICIPAL CODE, AS WELL AS SECTION 3.8.21 FOR THE CITY LAND USE CODE.
- 53) ALL SEEDING SHALL REFER TO LANDSCAPING PLANS FOR SPECIES MIXTURE AND APPLICATION RATES AND DEPTHS REQUIREMENTS.
- 54) ALL SEED SHALL BE DRILLED WHERE PRACTICAL TO A DEPTH BASED UPON THE SEED TYPE. BROADCAST SEEDING SHALL BE APPLIED AT DOUBLE THE RATE AS PRESCRIBED FOR DRILL SEEDING AND SHALL BE LIGHTLY HAND RAKED AFTER APPLICATION. HYDROSEEDING MAY BE SUBSTITUTED FOR DRILL SEEDING ON SLOPES STEEPER THAN 3(H):1(V) OR ON OTHER AREAS NOT PRACTICAL TO DRILL SEED AND CRIMP AND MULCH. ALL HYDROSEEDING MUST BE CONDUCTED AS TWO SEPARATE PROCESSES OF SEEDING AND TACKIFICATION.
- 55) ALL SEEDED AREAS MUST BE MULCHED WITHIN TWENTY-FOUR (24) AFTER PLANTING. ALL MULCH SHALL BE MECHANICALLY CRIMPED AND OR ADEQUATELY APPLIED TACKIFIER. THE USE OF CRIMPED MULCH OR TACKIFIER MAY REQUIRE MULTIPLE RE-APPLICATIONS IF NOT PROPERLY INSTALLED OR HAVE WEATHERED OR DEGRADED BEFORE VEGETATION HAS BEEN ESTABLISHED. AREAS OF EMBANKMENTS HAVING SLOPES GREATER THAN OR EQUAL TO 3H:1V SHALL BE STABILIZED WITH AN EROSION MAT OR APPROVED EQUAL TO ENSURE SEED WILL BE ABLE TO GERMINATE ON THE STEEP SLOPES. DURING A SEASON WHEN SEEDING DOES NOT PRODUCE VEGETATIVE COVER, ANOTHER TEMPORARY EROSION CONTROL SHALL BE IMPLEMENTED ALONG WITH, OR UNTIL, TEMPORARY SEEDING OR PERMANENT EROSION CONTROL CAN BE PERFORMED.
- 56) THE DEVELOPER SHALL WARRANTY AND MAINTAIN ALL VEGETATIVE MEASURES FOR TWO GROWING SEASONS AFTER INSTALLATION OR UNTIL SEVENTY PERCENT (70%) VEGETATIVE COVER HAS BEEN ESTABLISHED, WHICHEVER IS LONGER AND MEETS ALL THE CRITERIA OUTLINED IN THE FORT COLLINS STORMWATER CRITERIA MANUAL CHAPTER 4: CONSTRUCTION CONTROL MEASURES.
- 57) THE DEVELOPER SHALL MAINTAIN, MONITOR, REPAIR, AND REPLACE ANY AND ALL APPLICABLE CONTROL MEASURES UNTIL FINAL STABILIZATION HAS BEEN OBTAINED. ALL CONTROL MEASURES MUST REMAIN UNTIL SUCH TIME AS ALL UPSTREAM CONTRIBUTING POLLUTANT SOURCES HAVE BEEN VEGETATED OR REMOVED FROM THE SITE. WHEN ANY CONTROL MEASURE IS REMOVED, THE DEVELOPER SHALL BE RESPONSIBLE FOR THE CLEANUP AND REMOVAL OF ALL SEDIMENT AND DEBRIS FROM THAT CONTROL MEASURE. AT THE POINT AT WHICH THE SITE HAS BEEN DEEMED STABILIZED AND VERIFIED BY CITY EROSION CONTROL INSPECTOR, ALL TEMPORARY CONTROL MEASURES CAN THEN BE FULLY REMOVED. ALL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL STABILIZATION IS ACHIEVED.
- 58) THE RESPONSIBLE PARTY SHALL MAINTAIN AND KEEP CURRENT ALL PAYMENTS OR RELATED FORMS OF SECURITY FOR THE EROSION CONTROL ESCROW UNTIL 1) STABILIZATION HAS BEEN REACHED AND 2) ALL CONTROL MEASURES AND/OR BMPs HAVE SEDIMENT MATERIALS COLLECTED AND THE CONTROL MEASURE REMOVED FROM THE SITE. AT THAT TIME THE SITE WILL BE CONSIDERED COMPLETED AND ANY REMAINING EROSION CONTROL ESCROW SHALL BE RETURNED TO THE APPROPRIATE PARTIES.

FORT COLLINS - LOVELAND
WATER DISTRICT
SOUTH FORT COLLINS
SANITATION DISTRICT

Mr. Chris Matkins, Manager Date

Mr. Terry Ferrill, P.E., District Manager Date

All changes, addendums, additions, deletions and modifications to these drawings must be approved, in writing, by the Fort Collins-Loveland Water District and the South Fort Collins Sanitation District.

City of Ft. Collins, Colorado
UTILITY PLAN APPROVAL

APPROVED: _____ Date _____
CITY ENGINEER
CHECKED BY: _____ Date _____
WATER & WASTEWATER UTILITY
CHECKED BY: _____ Date _____
STORMWATER UTILITY
CHECKED BY: _____ Date _____
PARKS & RECREATION
CHECKED BY: _____ Date _____
TRAFFIC ENGINEER
CHECKED BY: _____ Date _____
NATURAL RESOURCES



MEYER SUBDIVISION UTILITY PLANS

EROSION CONTROL NOTES

FORT COLLINS, COLORADO

39378

04/23/19 2

04/04/19 1

DATE

NO

DATE

03/06/19

REVISIONS

1

CITY COMMENTS

MLK

MLK

BY

JOB NO. 2018-025

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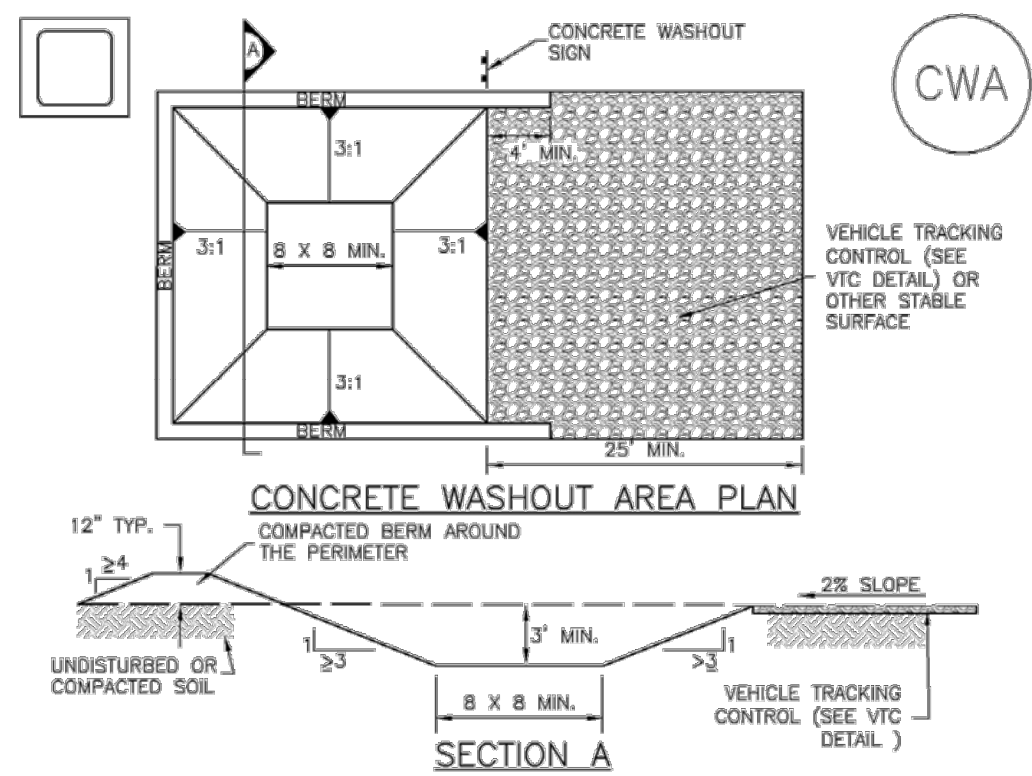
811

Know what's Below.

Call before you dig.

5 OF 6

Concrete Washout Area (CWA) MM-1



CWA-1. CONCRETE WASHOUT AREA

CWA INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
-CWA INSTALLATION LOCATION.
2. DO NOT LOCATE AN UNLINED CWA WITHIN 400' OF ANY NATURAL DRAINAGE PATHWAY OR WATERBODY. DO NOT LOCATE WITHIN 1,000' OF ANY WELLS OR DRINKING WATER SOURCES. IF SITE CONSTRAINTS MAKE THIS INFEASIBLE, OR IF HIGHLY PERMEABLE SOILS EXIST ON SITE, THE CWA MUST BE INSTALLED WITH AN IMPERMEABLE LINER (16 MIL MIN. THICKNESS) OR SURFACE STORAGE ALTERNATIVES USING PREPARED CONCRETE WASHOUT DEVICES OR A LINED ABOVE GROUND STORAGE ARE SHOULD BE USED.
3. THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
4. CWA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 8" BY 8" SLOPES LEADING OUT OF THE SUBSURFACE PIT SHALL BE 3:1 OR FLATTER. THE PIT SHALL BE AT LEAST 3' DEEP.
5. DCRM SURROUNDING SIDES AND BACK OF THE CWA SHALL HAVE MINIMUM HEIGHT OF 1'.
6. VEHICLE TRACKING PAD SHALL BE SLOPED 2% TOWARDS THE CWA.
7. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CWA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CWA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
8. USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

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Concrete Washout Area (CWA) MM-1

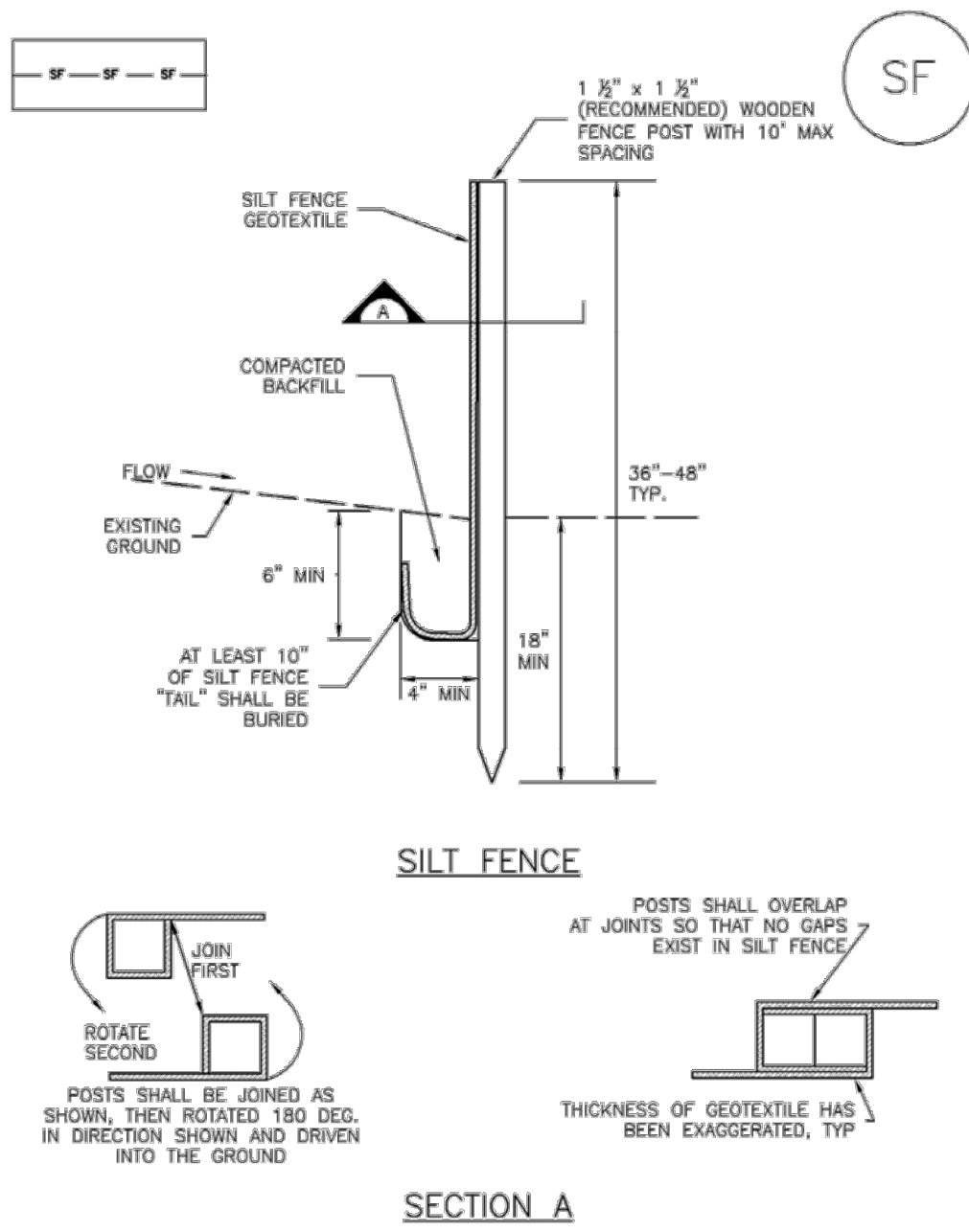
CWA MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. THE CWA SHALL BE REPAIRED, CLEANED, OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE. CONCRETE MATERIALS, ACCUMULATED IN PIT, SHALL BE REMOVED ONCE THE MATERIALS HAVE REACHED A DEPTH OF 2'.
5. CONCRETE WASHOUT WASTE, WASTED PIECES OF CONCRETE AND ALL OTHER DEBRIS IN THE SUBSURFACE PIT SHALL BE TRANSPORTED FROM THE JOB SITE IN A WATER-TIGHT CONTAINER AND DISPOSED OF PROPERLY.
6. THE CWA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED.
7. WHEN THE CWA IS REMOVED, COVER THE DISTURBED AREA WITH TOP SOIL, SEED AND MULCH OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

(DETAIL ADAPTED FROM DOUGLAS COUNTY, COLORADO AND THE CITY OF PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD)
NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

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

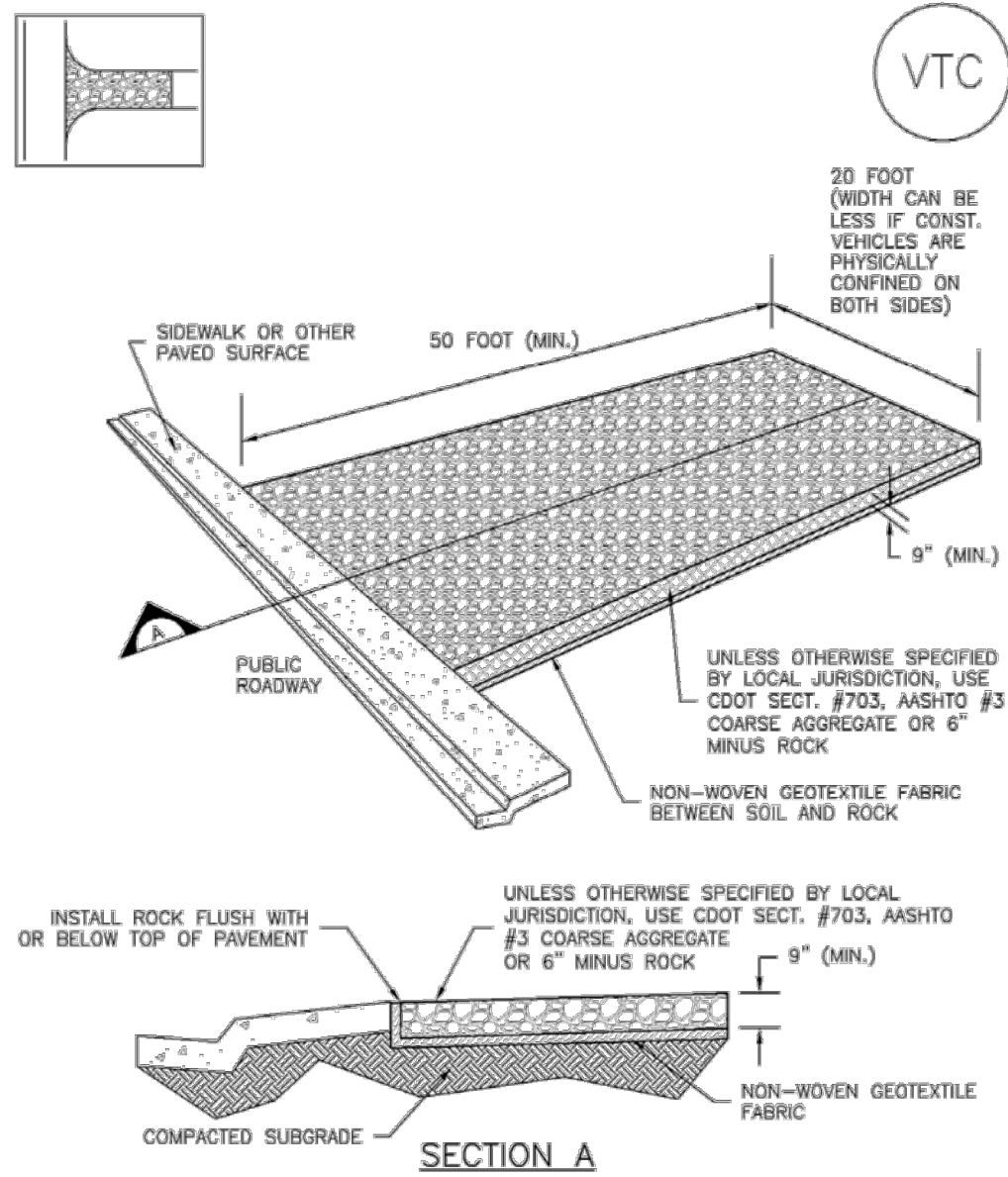
Silt Fence (SF) SC-1



SF-1. SILT FENCE

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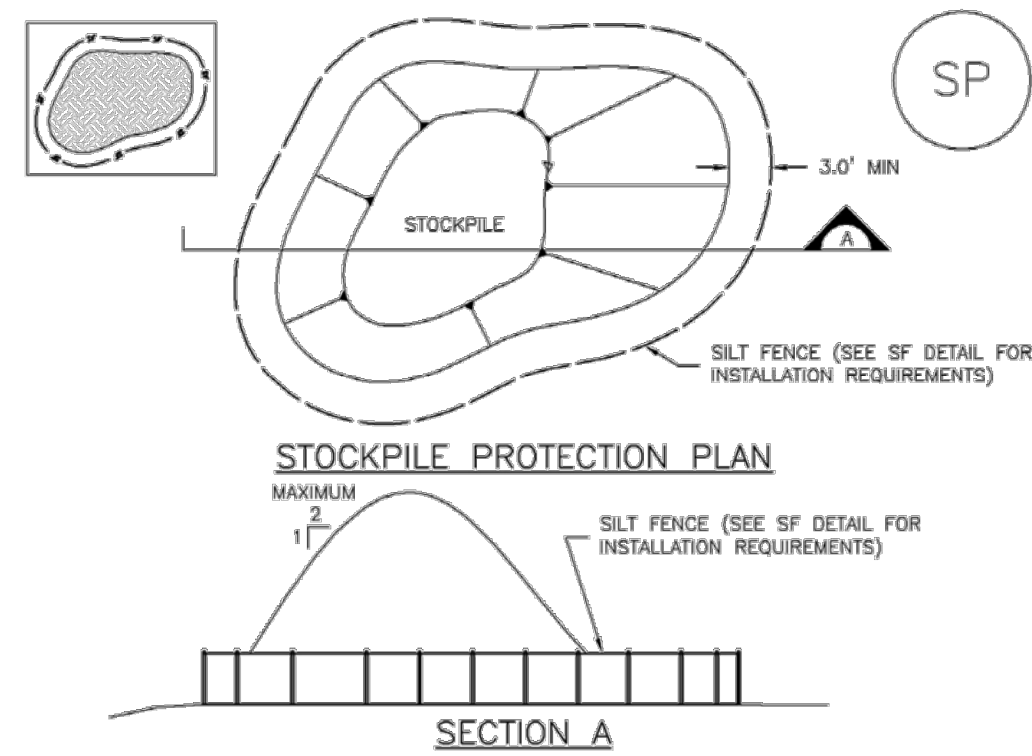
Vehicle Tracking Control (VTC) SM-4



VTC-1. AGGREGATE VEHICLE TRACKING CONTROL

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

Stockpile Management (SP) MM-2



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

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Stockpile Management (SM) MM-2

STOCKPILE PROTECTION MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

STOCKPILE PROTECTION MAINTENANCE NOTES

4. IF PERIMETER PROTECTION MUST BE MOVED TO ACCESS SOIL STOCKPILE, REPLACE PERIMETER CONTROLS BY THE END OF THE WORKDAY.
5. STOCKPILE PERIMETER CONTROLS CAN BE REMOVED ONCE ALL THE MATERIAL FROM THE STOCKPILE HAS BEEN USED.

(DETAILS ADAPTED FROM PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD)
NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

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Silt Fence (SF) SC-1

SILT FENCE INSTALLATION NOTES

1. SILT FENCE MUST BE PLACED AWAY FROM THE TOE OF THE SLOPE TO ALLOW FOR WATER PONDING. SILT FENCE AT THE TOE OF A SLOPE SHOULD BE INSTALLED IN A FLAT LOCATION AT LEAST SEVERAL FEET (2-5 FT) FROM THE TOE OF THE SLOPE TO ALLOW ROOM FOR PONDING AND DEPOSITION.
2. A UNIFORM 6" X 4" ANCHOR TRENCH SHALL BE EXCAVATED USING TRENCHER OR SILT FENCE INSTALLATION DEVICE. NO ROAD GRADERS, BACKHOES, OR SIMILAR EQUIPMENT SHALL BE USED.
3. COMPACT ANCHOR TRENCH BY HAND WITH A "JUMPING JACK" OR BY WHEEL ROLLING. COMPACTION SHALL BE SUCH THAT SILT FENCE RESISTS BEING PULLED OUT OF ANCHOR TRENCH BY HAND.
4. SILT FENCE SHALL BE PULLED TIGHT AS IT IS ANCHORED TO THE STAKES. THERE SHOULD BE NO NOTICEABLE SAG BETWEEN STAKES AFTER IT HAS BEEN ANCHORED TO THE STAKES.
5. SILT FENCE FABRIC SHALL BE ANCHORED TO THE STAKES USING 1" HEAVY DUTY STAPLES OR NAILS WITH 1" HEADS. STAPLES AND NAILS SHOULD BE PLACED 3" ALONG THE FABRIC DOWN THE STAKE.
6. AT THE END OF A RUN OF SILT FENCE ALONG A CONTOUR, THE SILT FENCE SHOULD BE TURNED PERPENDICULAR TO THE CONTOUR TO CREATE A "J-HOOK." THE "J-HOOK" EXTENDING PERPENDICULAR TO THE CONTOUR SHOULD BE OF SUFFICIENT LENGTH TO KEEP RUNOFF FROM FLOWING AROUND THE END OF THE SILT FENCE (TYPICALLY 10' - 20').
7. SILT FENCE SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.

SILT FENCE MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. SEDIMENT ACCUMULATED UPSTREAM OF THE SILT FENCE SHALL BE REMOVED AS NEEDED TO MAINTAIN THE FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 6".
5. REPAIR OR REPLACE SILT FENCE WHEN THERE ARE SIGNS OF WEAR, SUCH AS SAGGING, TEARING, OR COLLAPSE.
6. SILT FENCE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION, OR IS REPLACED BY AN EQUIVALENT PERIMETER SEDIMENT CONTROL BMP.
7. WHEN SILT FENCE IS REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDING AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

(DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO AND CITY OF AURORA, NOT AVAILABLE IN AUTOCAD)
NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

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Vehicle Tracking Control (VTC) SM-4

STABILIZED CONSTRUCTION ENTRANCE/EXIT INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
-LOCATION OF CONSTRUCTION ENTRANCE(S)/EXIT(S).
-TYPE OF CONSTRUCTION ENTRANCE(S)/EXIT(S) (WITH/WITHOUT WHEEL WASH, CONSTRUCTION MAT OR TRM).
2. CONSTRUCTION MAT OR TRM STABILIZED CONSTRUCTION ENTRANCES ARE ONLY TO BE USED ON SHORT DURATION PROJECTS (TYPICALLY RANGING FROM A WEEK TO A MONTH) WHERE THERE WILL BE LIMITED VEHICULAR ACCESS.
3. A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE LOCATED AT ALL ACCESS POINTS WHERE VEHICLES ACCESS THE CONSTRUCTION SITE FROM PAVED RIGHT-OF-WAYS.
4. STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
5. A NON-WOVEN GEOTEXTILE FABRIC SHALL BE PLACED UNDER THE STABILIZED CONSTRUCTION ENTRANCE/EXIT PRIOR TO THE PLACEMENT OF ROCK.
6. UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.

STABILIZED CONSTRUCTION ENTRANCE/EXIT MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY TO THE STABILIZED ENTRANCE/EXIT TO MAINTAIN A CONSISTENT DEPTH.
5. SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED THROUGHOUT THE DAY AND AT THE END OF THE DAY BY SHOVELING OR SWEEPING. SEDIMENT MAY NOT BE WASHED DOWN STORM SEWER DRAINS.

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

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

VTC-6 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3

FORT COLLINS - LOVELAND
WATER DISTRICT
SOUTH FORT COLLINS
SANITATION DISTRICT

Mr. Chris Watkins, Manager Date
Mr. Terry Ferrill, P.E., District Manager Date

All changes, addendums, additions, deletions and modifications to these drawings must be approved, in writing, by the Fort Collins-Loveland Water District and the South Fort Collins Sanitation District.

City of Ft. Collins, Colorado
UTILITY PLAN APPROVAL

APPROVED: _____ Date
CHECKED BY: City Engineer
CHECKED BY: Water & Wastewater Utility
CHECKED BY: Stormwater Utility
CHECKED BY: Parks & Recreation
CHECKED BY: Traffic Engineer
CHECKED BY: Natural Resources



MEYER SUBDIVISION UTILITY PLANS

EROSION CONTROL DETAILS

FORT COLLINS, COLORADO

SHEET

6 OF 6

KEEFE CIVIL, LLC

825 UNION STREET

GOLDEN, CO 80401

(970) 215-6808

MEG@KEEFECIVIL.COM



DATE	NO.	REVISIONS	BY
04/23/19	2	UPDATED EASEMENT LABELS TO MATCH SUBDIVISION PLAT.	MLK
04/04/19	1	UPDATED PLANS PER ROUND NUMBER 1 QTY COMMENTS.	MLK
03/06/19	1		

JOB NO. 2018-025



KEEFE CIVIL, LLC
825 Union Street
Golden, Colorado 80401
(970) 215-6808

April 23, 2019

Keefe Civil Project Number: 2018-025

Shane Boyle
Development Review Engineer
Stormwater Engineering & Development Review Division
City of Fort Collins Utilities
700 Wood Street
Fort Collins, Colorado 80522

RE: Meyer Subdivision, FDP190006 Drainage and Erosion Control Memo

Dear Shane:

The purpose of this letter is to address the drainage impacts to the existing 2.21 acre residential lot at 2200 Kechter Road due to the proposed site improvements (Appendix A). The site is located 0.1 mile east of South Timberline Road, on the north side of Kechter road, and is bound by urban estate residential properties to the west, north, and east.

The existing site is a developed urban estate residential lot with two residential homes, a gravel driveway, two existing water wells, and several outbuildings. The vegetation is sparse and the soil consists of Fort Collins loam and Nunn clay loam per the NRCS Soil Survey of Larimer County (Appendix B).

Per the flood insurance rate map (Appendix C), the lot is located within Zone X. Zone X is defined as an area of minimal flood hazard and does not have a base flood elevation associated with it. The local topography generally slopes from the south to north behind the existing right-of-way fence. The total existing impervious area is 14,577 square feet (sf) or 18%.

The proposed grading and drainage design for the site (Appendix A) follows the existing drainage patterns and does not result in concentrated flow leaving the property. One of the single-family residences and an outbuilding will be relocated offsite. The total impervious area will increase slightly to 18,791 sf or 20%.

Hardscape or Hard Surface	Historic Area (sf)	Developed Area (sf)	Change in Impervious Area (sf)
Asphalt, Concrete	100	843	
Rooftop	4,917	6,717	
Fire Lane	0	9,746	
Gravel	9,560	1,485	
Total Impervious Area	14,577	18,791	4,214

The composite C values and basin flow calculations for the historic and developed site are included in the enclosed tables (Appendix D). Using the Fort Collins Stormwater Criteria Manual, the estimated site runoff increases will be negligible with the 2-year, 10-year, and 100-year flows.

	2-year	10-year	100-year
Historic runoff	0.79 cfs	1.36 cfs	3.63 cfs
Developed runoff	0.93 cfs	1.59 cfs	4.28 cfs

In my professional opinion, the additional runoff generated by this development will not cause adverse impacts to downstream private properties. Therefore, Keefe Civil respectfully requests no detention and water quality requirements be imposed on this development.

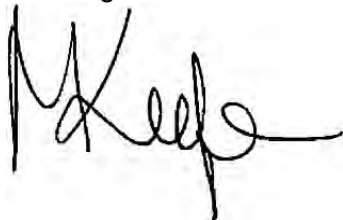
Erosion Control Measures

The structural practices for the site will consist mainly of silt fence, vehicle tracking control pad, and concrete washout area. The locations of these structural practices are shown in Appendix A. The corresponding construction control measures fact sheets are included in Appendix E.

After construction has been completed at the site, all disturbed areas shall be seeded with dryland native seed mix per approved plans or landscaped. The anticipated disturbed area is estimated at 0.54 acre. The City of Fort Collins erosion and sediment control escrow calculations for the site are included in Appendix F.

Thank you for the opportunity to submit this drainage and erosion control memo. Please do not hesitate to reach out to me if you have any questions or comments regarding the above items.
(970) 215-6808

Best regards,



Megan L. Keefe, PE / Manager
Keefe Civil, LLC



Enclosures

Cc: Adam Meyer, Owner
Kim Rose, Rose Custom Homes

APPENDIX A

APPENDIX B

Soil Map—Larimer County Area, Colorado (Meyer Subdivision)



**Natural Resources
Conservation Service**


Web Soil Survey
National Cooperative Soil Survey

2/18/2019
Page 1 of 3

Soil Map—Larimer County Area, Colorado
(Meyer Subdivision)

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: Larimer County Area, Colorado
Survey Area Data: Version 13, Sep 10, 2018

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

Date(s) aerial images were photographed: Sep 20, 2015—Oct 21, 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
36	Fort Collins loam, 3 to 5 percent slopes	0.9	37.9%
73	Nunn clay loam, 0 to 1 percent slopes	1.5	59.1%
74	Nunn clay loam, 1 to 3 percent slopes	0.1	3.0%
Totals for Area of Interest		2.5	100.0%

APPENDIX C

National Flood Hazard Layer FIRMette



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

Without Base Flood Elevation (BFE)
Zone A, V, A99

With BFE or Depth
Zone AE, AO, AH, VE, AR

Regulatory Floodway

0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile
Zone X

Future Conditions 1% Annual Chance Flood Hazard
Zone X

Area with Reduced Flood Risk due to Levee. See Notes.
Zone X

Area with Flood Risk due to Levee
Zone D

NO SCREEN

Effective LOMRs

Area of Minimal Flood Hazard
Zone X

Area of Undetermined Flood Hazard
Zone D

Channel, Culvert, or Storm Sewer

Levee, Dike, or Floodwall

Cross Sections with 1% Annual Chance Water Surface Elevation

Coastal Transect

Base Flood Elevation Line (BFE)

Limit of Study

Jurisdiction Boundary

Coastal Transect Baseline

Profile Baseline

Hydrographic Feature

Digital Data Available

No Digital Data Available

Unmapped

SPECIAL FLOOD HAZARD AREAS

OTHER AREAS OF FLOOD HAZARD

OTHER AREAS

GENERAL STRUCTURES

OTHER FEATURES

MAP PANELS

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **2/19/2019 at 1:56:49 AM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

40°30'46.53"N 105°2'32.52"W

105°1'55.06"W 40°30'19.17"N

0 250 500 1,000 1,500 2,000 Feet 1:6,000

USGS The National Map: Orthoimagery. Data refreshed October, 2017.

080101 08069CL000F 12/19/2006 Not Printed

AREA OF MINIMAL FLOOD HAZARD Zone X

CITY OF FORT COLLINS 080102

LARIMER COUNTY 080101

T6N R68W S6

T6N R68W S7

T6N R68W S8

T6N R68W S9

APPENDIX D

Composite C Values
Meyer Subdivision

Surface Type	Runoff Coefficients ¹	Historic Area (sf)	Minor (2-yr) Historic Composite C ²	Major (100-yr) Historic Composite C ²	Developed Area (sf)	Minor (2-yr) Developed Composite C ²	Major (100-yr) Developed Composite C ²
Hardscape or Hard Surface							
Asphalt, Concrete	0.95	100			843		
Rooftop	0.95	4,917			6,717		
Fire Lane	0.80	0			9,746		
Gravel	0.50	9,560			1,485		
Total Impervious Area		14,577			18,791		
Landscape or Pervious Surface							
Lawns, Clayey Soil, Avg Slope 2-7%	0.25	0			8,815		
Undeveloped							
Greenbelts, Agriculture	0.20	78,890			65,861		
Total Drainage Basin Area		93,467	0.27	0.34	93,467	0.31	0.39

Notes:

1. Runoff Coefficients per Fort Collins Stormwater Criteria Manual Table 3.2-2.
2. Frequency adjustment factor per Fort Collins Stormwater Criteria Manual Table 3.2-3.

Basin Flow Calculations Meyer Subdivision

Design Point	Basin	Area (acres)	Minor Composite C	Major Composite C	Initial/Overland Time ¹				Travel Time ²					Final T _c ³		Intensity (in/hr) ⁴			Basin Flow (cfs) ⁵		
					Length (ft)	Slope (%)	Minor t _o (min)	Major t _o (min)	Length (ft)	Slope (%)	Channel Type	Velocity (fps)	t _t (min)	Minor Tc (min)	Major Tc (min)	2-yr	10-yr	100-yr	2-yr	10-yr	100-yr
Historical																					
1	A	2.146	0.27	0.34	485	2	27.1	24.9			NA			27.1	24.9	1.37	2.34	5.00	0.79	1.36	3.63
Developed																					
1	A	2.146	0.31	0.39	485	2	25.9	23.3			NA			25.9	23.3	1.41	2.40	5.17	0.93	1.59	4.28

Notes:

1. Per Fort Collins Stormwater Criteria Manual Section 3.3.2.

$$T_i = \frac{1.87(1.1 - C_x C_f) \sqrt{L}}{\sqrt[3]{S}}$$

Where: C = Runoff Coefficient, dimensionless

C_f = Frequency Adjustment Factor, dimensionless

L = Length of Overland Flow, feet

S = Slope, percent

2. Per Fort Collins Stormwater Criteria Manual Section 3.3.3.

$$V = \frac{1.49}{n} R^{2/3} S^{1/2}$$

Where: V = Velocity, feet/second

n = Roughness Coefficient, dimensionless

R = Hydraulic Radius, feet (Hydraulic Radius = area / wetted perimeter, feet)

S = Longitudinal Slope, feet/feet

And:

$$T_t = \frac{L}{V \times 60}$$

3. Per Fort Collins Stormwater Criteria Manual Section 3.3.4.

$$T_c = \frac{L}{180} + 10$$

4. Per IDF Table for Rational Method, Table 3.4-1 Fort Collins Stormwater

5. Per Fort Collins Stormwater Criteria Manual Equation 5-1.

$$Q = CIA$$

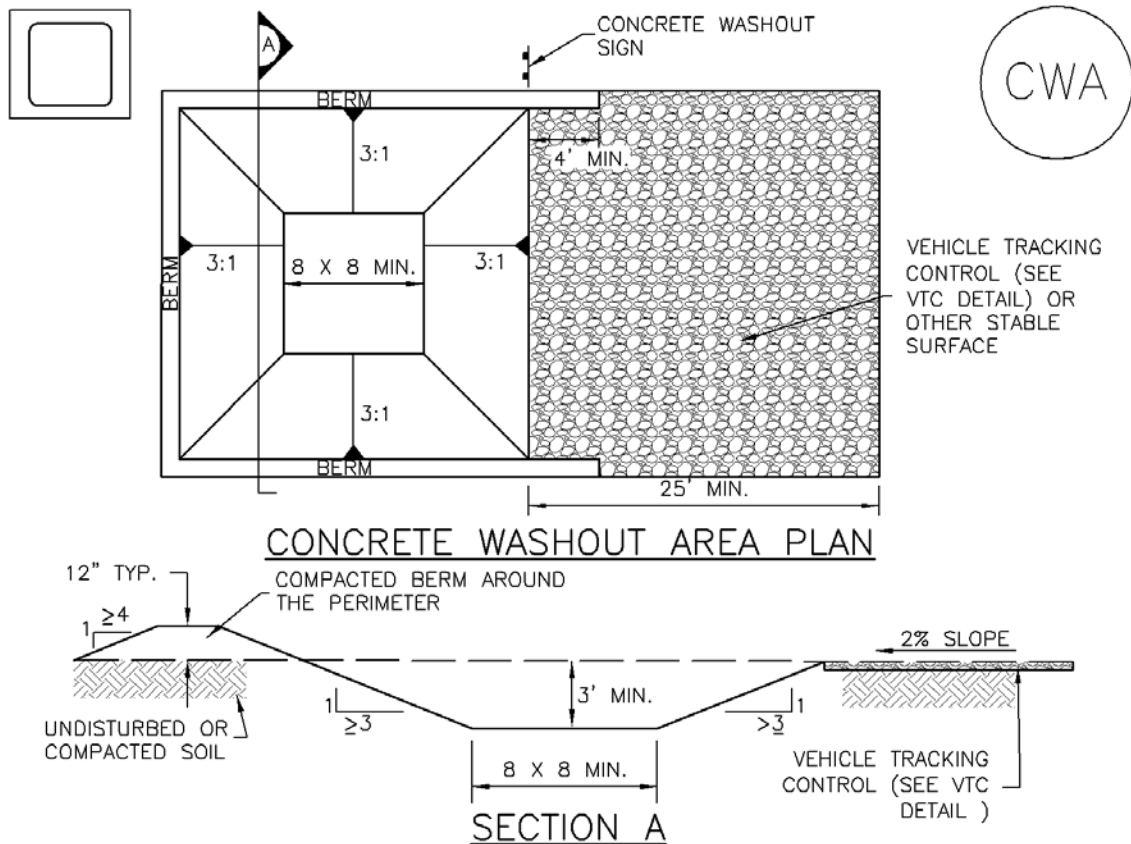
Where: Q = Peak Rate of Runoff, cfs

C = Runoff Coefficient, dimensionless

I = Rainfall Intensity, in/hr

A = Area of the Basin or Sub-basin, acres

APPENDIX E



CWA-1. CONCRETE WASHOUT AREA

CWA INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
-CWA INSTALLATION LOCATION.
2. DO NOT LOCATE AN UNLINED CWA WITHIN 400' OF ANY NATURAL DRAINAGE PATHWAY OR WATERBODY. DO NOT LOCATE WITHIN 1,000' OF ANY WELLS OR DRINKING WATER SOURCES. IF SITE CONSTRAINTS MAKE THIS INFEASIBLE, OR IF HIGHLY PERMEABLE SOILS EXIST ON SITE, THE CWA MUST BE INSTALLED WITH AN IMPERMEABLE LINER (16 MIL MIN. THICKNESS) OR SURFACE STORAGE ALTERNATIVES USING PREFABRICATED CONCRETE WASHOUT DEVICES OR A LINED ABOVE GROUND STORAGE ARE SHOULD BE USED.
3. THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
4. CWA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 8' BY 8' SLOPES LEADING OUT OF THE SUBSURFACE PIT SHALL BE 3:1 OR FLATTER. THE PIT SHALL BE AT LEAST 3' DEEP.
5. BERM SURROUNDING SIDES AND BACK OF THE CWA SHALL HAVE MINIMUM HEIGHT OF 1'.
6. VEHICLE TRACKING PAD SHALL BE SLOPED 2% TOWARDS THE CWA.
7. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CWA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CWA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
8. USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

CWA MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

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

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

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

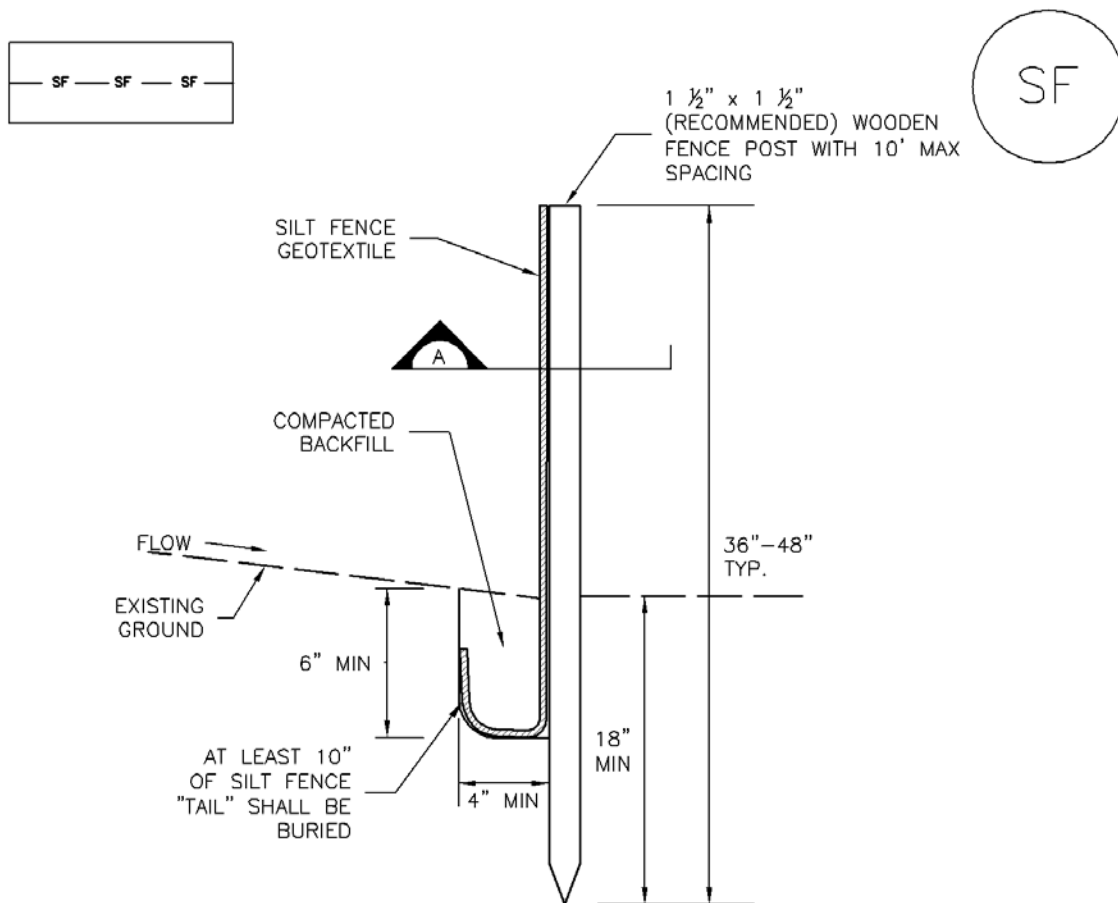
5. CONCRETE WASHOUT WATER, WASTED PIECES OF CONCRETE AND ALL OTHER DEBRIS IN THE SUBSURFACE PIT SHALL BE TRANSPORTED FROM THE JOB SITE IN A WATER-TIGHT CONTAINER AND DISPOSED OF PROPERLY.

6. THE CWA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED.

7. WHEN THE CWA IS REMOVED, COVER THE DISTURBED AREA WITH TOP SOIL, SEED AND MULCH OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

(DETAIL ADAPTED FROM DOUGLAS COUNTY, COLORADO AND THE CITY OF PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD).

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



SILT FENCE



POSTS SHALL OVERLAP AT JOINTS SO THAT NO GAPS EXIST IN SILT FENCE



SECTION A

SF-1. SILT FENCE

SILT FENCE INSTALLATION NOTES

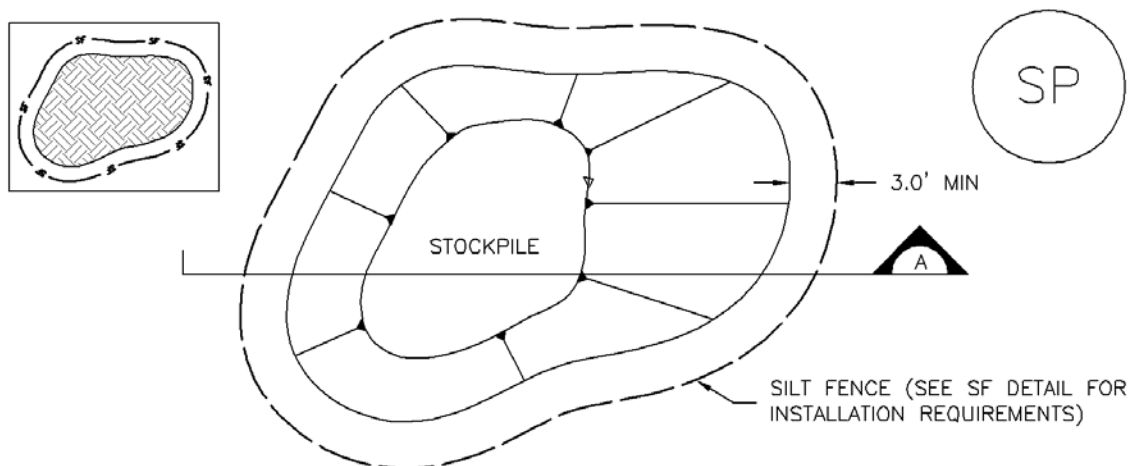
1. SILT FENCE MUST BE PLACED AWAY FROM THE TOE OF THE SLOPE TO ALLOW FOR WATER PONDING. SILT FENCE AT THE TOE OF A SLOPE SHOULD BE INSTALLED IN A FLAT LOCATION AT LEAST SEVERAL FEET (2–5 FT) FROM THE TOE OF THE SLOPE TO ALLOW ROOM FOR PONDING AND DEPOSITION.
2. A UNIFORM 6" X 4" ANCHOR TRENCH SHALL BE EXCAVATED USING TRENCHER OR SILT FENCE INSTALLATION DEVICE. NO ROAD GRADERS, BACKHOES, OR SIMILAR EQUIPMENT SHALL BE USED.
3. COMPACT ANCHOR TRENCH BY HAND WITH A "JUMPING JACK" OR BY WHEEL ROLLING. COMPACTION SHALL BE SUCH THAT SILT FENCE RESISTS BEING PULLED OUT OF ANCHOR TRENCH BY HAND.
4. SILT FENCE SHALL BE PULLED TIGHT AS IT IS ANCHORED TO THE STAKES. THERE SHOULD BE NO NOTICEABLE SAG BETWEEN STAKES AFTER IT HAS BEEN ANCHORED TO THE STAKES.
5. SILT FENCE FABRIC SHALL BE ANCHORED TO THE STAKES USING 1" HEAVY DUTY STAPLES OR NAILS WITH 1" HEADS. STAPLES AND NAILS SHOULD BE PLACED 3" ALONG THE FABRIC DOWN THE STAKE.
6. AT THE END OF A RUN OF SILT FENCE ALONG A CONTOUR, THE SILT FENCE SHOULD BE TURNED PERPENDICULAR TO THE CONTOUR TO CREATE A "J-HOOK." THE "J-HOOK" EXTENDING PERPENDICULAR TO THE CONTOUR SHOULD BE OF SUFFICIENT LENGTH TO KEEP RUNOFF FROM FLOWING AROUND THE END OF THE SILT FENCE (TYPICALLY 10' – 20').
7. SILT FENCE SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.

SILT FENCE MAINTENANCE NOTES

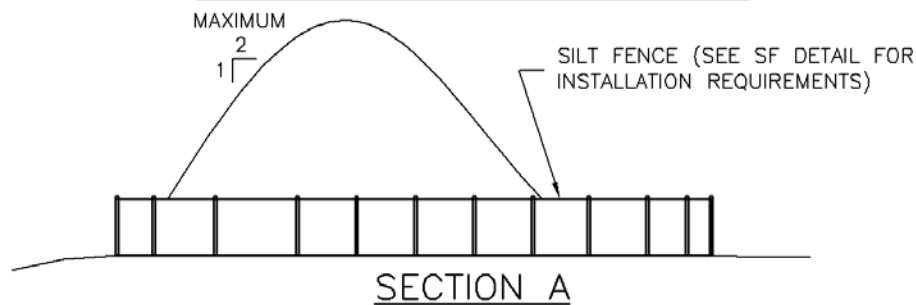
1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. SEDIMENT ACCUMULATED UPSTREAM OF THE SILT FENCE SHALL BE REMOVED AS NEEDED TO MAINTAIN THE FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 6".
5. REPAIR OR REPLACE SILT FENCE WHEN THERE ARE SIGNS OF WEAR, SUCH AS SAGGING, TEARING, OR COLLAPSE.
6. SILT FENCE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION, OR IS REPLACED BY AN EQUIVALENT PERIMETER SEDIMENT CONTROL BMP.
7. WHEN SILT FENCE IS REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

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

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



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

STOCKPILE PROTECTION MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

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

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

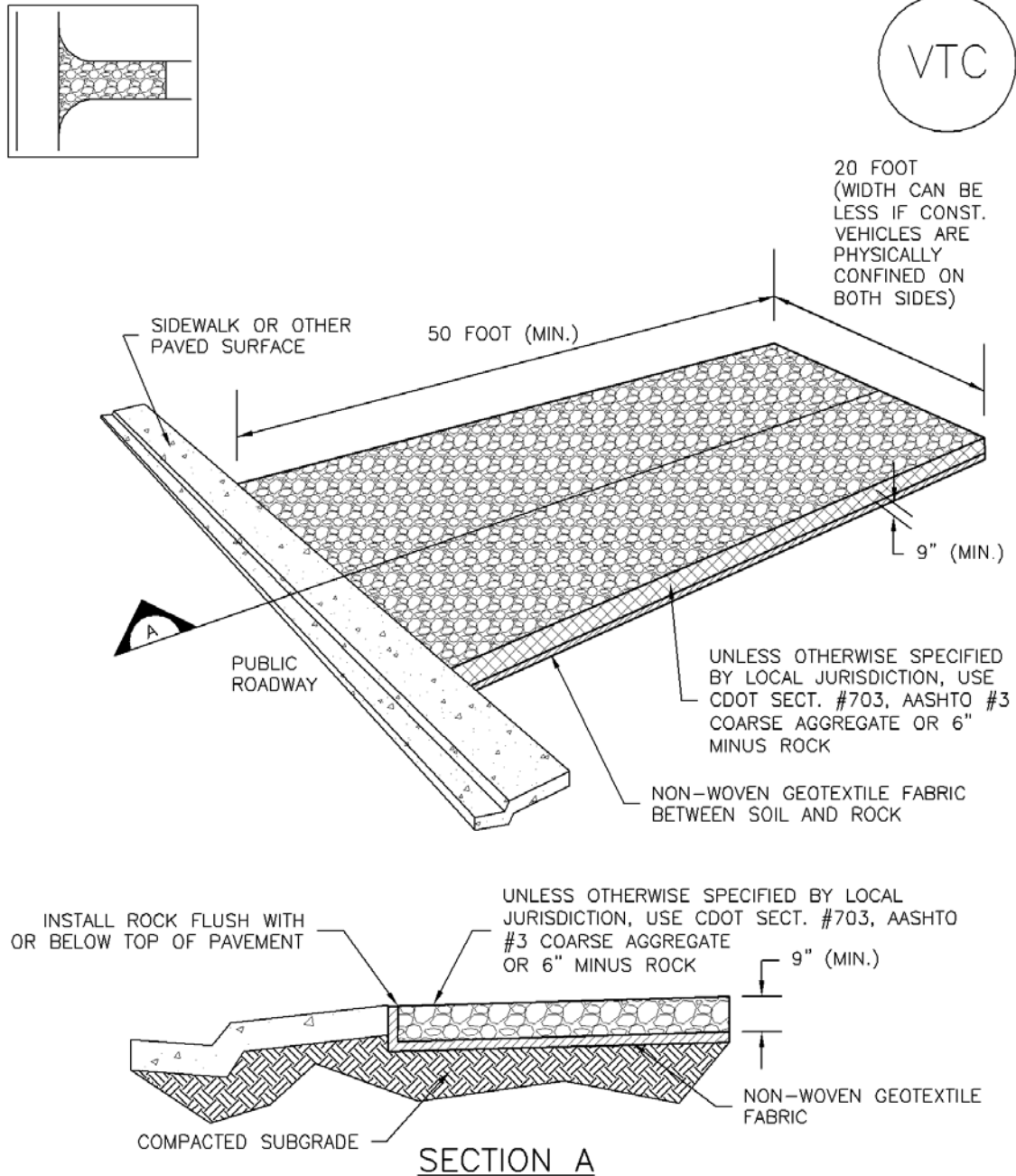
STOCKPILE PROTECTION MAINTENANCE NOTES

4. IF PERIMETER PROTECTION MUST BE MOVED TO ACCESS SOIL STOCKPILE, REPLACE PERIMETER CONTROLS BY THE END OF THE WORKDAY.

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

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

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



VTC-1. AGGREGATE VEHICLE TRACKING CONTROL

STABILIZED CONSTRUCTION ENTRANCE/EXIT INSTALLATION NOTES

1. SEE PLAN VIEW FOR
 - LOCATION OF CONSTRUCTION ENTRANCE(S)/EXIT(S).
 - TYPE OF CONSTRUCTION ENTRANCE(S)/EXITS(S) (WITH/WITHOUT WHEEL WASH, CONSTRUCTION MAT OR TRM).
2. CONSTRUCTION MAT OR TRM STABILIZED CONSTRUCTION ENTRANCES ARE ONLY TO BE USED ON SHORT DURATION PROJECTS (TYPICALLY RANGING FROM A WEEK TO A MONTH) WHERE THERE WILL BE LIMITED VEHICULAR ACCESS.
3. A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE LOCATED AT ALL ACCESS POINTS WHERE VEHICLES ACCESS THE CONSTRUCTION SITE FROM PAVED RIGHT-OF-WAYS.
4. STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
5. A NON-WOVEN GEOTEXTILE FABRIC SHALL BE PLACED UNDER THE STABILIZED CONSTRUCTION ENTRANCE/EXIT PRIOR TO THE PLACEMENT OF ROCK.
6. UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.

STABILIZED CONSTRUCTION ENTRANCE/EXIT MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY TO THE STABILIZED ENTRANCE/EXIT TO MAINTAIN A CONSISTENT DEPTH.
5. SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED THROUGHOUT THE DAY AND AT THE END OF THE DAY BY SHOVELING OR SWEEPING. SEDIMENT MAY NOT BE WASHED DOWN STORM SEWER DRAINS.

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

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

APPENDIX F

Erosion and Sediment Control Escrow/Security Calculation for The City of Fort Collins

Project:

Meyer Subdivision

Disturbed Acres: 0.54

BMP Amount

EROSION CONTROL BMPs	Estimated Quantity	Units	Unit Price	Total Price
Silt Fence (SF)	425	LF	\$2.00	\$850.00
Concrete Washout Area (CWA)	1	EA	\$500.00	\$500.00
Vehicle Tracking Control (VTC)	1	EA	\$500.00	\$500.00
Sub-Total:				\$1,850.00
1.5 x Sub-Total:				\$2,775.00
Amount of security:				\$2,775.00

Reseeding Amount

Unit Price of Seeding per acre: \$720.00		Total Acres x Price/acre:	\$390.08
		Sub-Total:	\$390.08
		1.5 x Sub-Total:	\$585.12
		Amount to Re-seed:	\$585.12

Minimum Escrow Amount

Minimum escrow amount: \$1,500.00

Final Escrow Amount

Erosion Control Escrow: \$2,775.00

"The amount of the security must be based on one and one-half times the estimate of the cost to install the approved measures, or one and one-half times the cost to re-vegetate the disturbed land to dry land grasses based upon unit cost determined by the City's Annual Revegetation and Stabilization Bid, whichever is greater. In no instance, will the amount of security be less than one thousand five hundred dollars (\$1,500) for residential development or three thousand dollars (\$3,000) for commercial development"