



October 22, 2021

Patrick Lennberg
Division of Reclamation, Mining & Safety
1313 Sherman Street, Room 215
Denver, CO 80203

Re: Permit No. M-2004-031 – Hazeltine Mine
Notification of Seeding/Boat Ramp Construction

This letter is to inform you of the City of Thornton's plans for the Hazeltine Mine reseeding following construction of the Cooley East Pump Station. The parcels of land to be seeded contain approximately 1.75 acres in total of upland/sloped areas. Attached is a copy of the City of Thornton's Plan Map and seeding mixture.

In addition, the City of Thornton has also built a boat ramp that can be found in the City of Thornton's Plan Map highlighted in red. A picture is attached as well for your reference.

The name and address of the current owner of the parcel is:

City of Thornton
9500 Civic Center Drive
Thornton, CO 80229

Please contact me at 702-379-4623 with any questions and if you would like to have an in-person meeting.

Sincerely,

A handwritten signature in black ink, appearing to read "Wyatt R. Webster".

Wyatt R. Webster
Environmental & Land Manager



Thornton City Hall
9500 Civic Center Drive
Thornton, CO 80229-4326
www.ThorntonCO.gov

Infrastructure Department
Engineering Division
PH 720-977-6252

October 18, 2021

RE: Aggregate's Hazeltine Mine (Permit # M2004031) Seed Mix

Dear Andre:

This letter is to inform you of the seed mix that was used at the disturbed areas of the Thornton Cooley East Pump Station project located at the Aggregate Hazeltine Mine. See attached for the seed mix specification and map of the approximate coverage area.

Sincerely,

A handwritten signature in cursive script that reads 'Stacy Roberts'.

Stacy Roberts, P.E.
Senior Civil Engineer/Project Manager

cc:



Project Name **Cooley East Pump Station**

Submittal No. **City of Thornton - CIP 18-339A**
& Name

113-A-329200 Seeding

Item(s)
submitted **Native seed mix and accessories**

Spec. Sect. **No. 32 92 00** Art. No. **1.3**

Contractor's Approval (See Contract Documents)

Contractor **Glacier Construction Company**

Approved By **Elias Delacruz**

Date **4/27/2021**

(Do not send information for approval without Contractor's prior Approval.
Attach copy of spec and provide check marks to indicate compliance)

Engineer's Action (See Contract Documents)

Date Received: **4 / 27 / 21**

Date Approved: **5 / 11 / 21**

Definition

Initials & Date

A

Approved

Kate Henske

Digitally signed by Kate Henske
DN: C=US, E=khenske@burnsmcd.com,
O=Burn & McDonnell, OU=BMCD,
CN=Kate Henske
Date: 2021.05.11 11:25:11-06'00'

B Approved as Noted (Resubmit)

C Returned for Revision (Resubmit)

D Not Approved (Submit Anew)

E Preliminary (Submit Addition Info)

F For Reference/Information Only

G Distribution Copy (Previously Approved)

City of Thornton - Concurrence

Signature and Notes

COOLEY EAST PUMP STATION

32 92 00 SEEDING



CERTIFICATION OF COMPLIANCE

SOLD BY: ARKANSAS VALLEY SEED
4300 MONACO STREET
DENVER, CO 80216

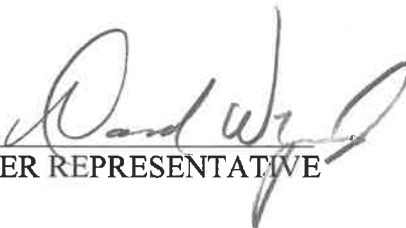
SOLD TO: CDI
JOB NAME: Cooley East Pump Seed Mix
MIX NAME: Native Seed Mix

STATEMENT

WE HEREBY CERTIFY THAT THE MATERIAL FURNISHED AND DESCRIBED BELOW, DO MEET OR EXCEED THE CURRENT COLORADO STATE SEED LAW SPECIFICATIONS.

MATERIAL SUPPLIED

| Pls#/ac | DESCRIPTION | MANUFACTURED BY |
|----------------------|------------------------------|------------------------|
| 1.3 Pls#/ac | Sheet Fescue, (Darar) | Arkansas Valley Seed |
| 7.9 Pls#/ac | Western Wheatgrass, (Arriba) | Arkansas Valley Seed |
| 0.5 Pls#/ac | Alkali Sacaton | Arkansas Valley Seed |
| 5.5 Pls#/ac | Slender Wheatgrass | Arkansas Valley Seed |
| 0.3 Pls#/ac | Canadian Bluegrass, (VNS) | Arkansas Valley Seed |
| 1.3 Pls#/ac | Switchgrass, (Dakota) | Arkansas Valley Seed |
| Total Pls#/ac | 16.8 Pls#/ac | Arkansas Valley Seed |



SUPPLIER REPRESENTATIVE



RICHLAWN FERTILIZER

7-2-1 with Mycorrhizae

Richlawn 7-2-1 is pre-blended with specific Mycorrhizae native to the Western United States, making it a beneficial fungal biomass adding microbial activity to depleted soils wherever this product is applied. Richlawn 7-2-1 with Mycorrhizae is a stable, slow release nitrogen source which enhances establishment of native species of vegetation and shrubs based on the long term germination rates of these native types of vegetation. Richlawn contains beneficial bacterial and fungal biomass used to enhance topsoil building and restore depleted soils with organic matter. This creates a sustainable soil web for long term vegetative establishment. All of Richlawn products are certified to be weed free.

Manufactured by Richlawn Turf Food, LLC
15121 WCR 32, Platteville, CO 80651
Net Weight 50 Lbs. (22.68 Kg.)

Guaranteed Analysis

| | |
|---|------|
| Total Nitrogen(N) | 7.0% |
| 6.07% Water Insoluble Nitrogen* | |
| .93% Water Soluble Nitrogen | |
| Available Phosphate | |
| (P ₂ O ₅) | 2.0% |
| Soluble Potash (K ₂ O) | 1.0% |
| Calcium (Ca) | 6.0% |

Plant Nutrient Sources: Dried Poultry Manure and Feather Meal.
*6.07% Water Insoluble Nitrogen from Dried Poultry Manure and Feather Meal.

Non-Plant Food Ingredients

| | |
|------------------------------------|--------|
| Endo Mychorrhizae | 30,000 |
| Propagules | |
| 7500 Propagules Glomus mosseae | |
| 7500 Propagules Glomus entunicatum | |
| 7500 Propagules Glomus intradices | |
| 7500 Propagules Glomus aggregatum | |

The Benefits of Richlawn 7-2-1

- Mycorrhizae is beneficial fungi which increases the effective rooting area of plants which increases nutrient uptake.
- Extended release nutrients allow for fertilization over a longer period.
- Increases soil porosity which promotes oxygen, water and nutrient flow availability.

DISTRIBUTED BY:
TRITON ENVIRONMENTAL
5433 NEWPORT STREET
COMMERCE CITY, CO 80022
303.945.7588 (O) 303.945.7579 (F)



PRODUCT DATA SHEET

PLANTAGO

Binder/Tackifier

DESCRIPTION

Plantago Binder is a natural, 100% psyllium fiber derived from the outer coating of the seed. It is a solid beige-tan powder used as a binding agent with hydroseeding mulch for seeding or erosion control applications. Plantago Binder has proven to be effective in holding fiber in place, improving grass stands and reducing overall erosion. It is a stable non-toxic dust with no components listed as carcinogens.

CHARACTERISTICS

Active Ingredient: 100% Psyllium

| | | | |
|---------------------|-------------|------------------|---------------------|
| % Protein content | 1.6 ± 0.2% | Ash content | 2.7 ± 0.2% |
| % Settleable solids | 5.0% ± 0.5% | Fiber | 4.0 ± 5% |
| 1% Solution pH | 6.5 - 8.0 | Mucilage content | 75% min. ASTM D7047 |
| % Total Nitrogen | 2.68 | | |

USES

Plantago Binder may be applied as a wet slurry or to dry surfaces in the following applications. To be used in well ventilated areas with a dust mask, goggles and rubber gloves for safety measures. The material is slippery when wet, sweep up any spills and avoid washing them down.

*Erosion control

*Dust Control

*CDOT compliant

*Binding agent

APPLICATION RATES

40 to 160 pounds per acre depending on degree of slope.

Prepare the slurry by mixing seed, mulch, fertilizer, Plantago Binder and water in the tank in the amounts specified. Add all material slowly and mix thoroughly. It should be stored in a cool dry place.

PACKAGING

50 lb. heavy duty paper bags.

Palletized at 40 bags/pallet (2,000 lb.)



TEL: 951.486.0441 FAX: 951.486.0118 www.northstarimpex.com

PLANTAGO BINDER

B i n d e r / T a c k i f i e r

SPECIFICATIONS:

MULCH: Wood fiber or clean paper free of impurities at the rate of 1,000 to 2,000 pounds per acre.

BINDER: Apply Plantago Binder at the following rates by adding slowly to tank to avoid clumping.

As a binder for hydromulch:

- 4:1 slopes use the rate of 60 pounds per acre.
- 2:1 slopes use the rate of 100 pounds per acre.
- 1:1 slopes use the rate of 160 pounds per acre.

As a straw tackifier:

- 2:1 or greater slopes use the rate of 100 pounds per acre.
- 3:1 and flatter slopes use the rate of 60 pounds per acre.
- Use the rate of 160 pounds per acre for high wind areas.

As a dust control:

60-150 pounds per acre.

FERTILIZER: Pre-plant fertilizer is recommended. Apply as specified. Consider existing soil conditions and plant species seeded.

MIXING: Slurry shall contain mulch, seed fertilizer, Plantago Binder and water in the proper proportions as specified. The material shall be mixed thoroughly to ensure a homogenous slurry. The slurry shall have the proper consistency to adhere to the slope surface without running or lumping.



TEL: 951.486.0441 FAX: 951.486.0118 www.northstarimpex.com



EcoFibre™ Hydraulic Mulch — Wood



Description

EcoFibre™ is a fully biodegradable, Hydraulic Mulch (HM) composed of 100% recycled Thermally Refined™ wood fibers. The HM is phyto-sanitized, free from plastic netting, and upon application forms an intimate bond with the soil surface to create a porous and absorbent layer that enhances germination and plant growth.

Recommended Applications

- Erosion control and revegetation for moderate slopes ($\leq 2H:1V$)
- Rough graded slopes
- Enhancement of vegetation establishment

Technical Data

| Physical Properties* | Test Method | Units | Minimum Value |
|---|--------------------------|-------|-------------------|
| Water Holding Capacity | ASTM D7367 | % | 1100 |
| Material Color | Observed | n/a | Green |
| Performance Properties* | Test Method | Units | Value |
| Cover Factor ¹ | Large Scale ² | n/a | 0.55 maximum |
| Percent Effectiveness ³ | Large Scale ² | % | 45 minimum |
| Environmental Properties* | Test Method | Units | Typical Value |
| Functional Longevity ⁴ | ASTM D5338 | n/a | Up to 3 months |
| Ecotoxicity | EPA 2021.0 | % | 96-hr LC50 > 100% |
| Biodegradability | ASTM D5338 | % | 100 |
| Product Composition | | | Typical Value |
| Thermally Processed Wood Fiber ⁵ | | | 100% |
| TriFlo | | | < 1% |

* When uniformly applied at a rate of 2000 pounds per acre (2250 kilograms/hectare) under laboratory conditions. 1. Cover Factor is calculated as soil loss ratio of treated surface versus an untreated control surface. 2. Large scale testing conducted at Utah Water Research Laboratory. For specific testing information please contact a Profile technical service representative at 866-325-6262. 3. % Effectiveness = One minus Cover Factor multiplied by 100%. 4. Functional Longevity is the estimated time period, based upon ASTM D5338 testing and field observations, that a material can be anticipated to provide erosion control and agronomic benefits as influenced by composition, as well as site-specific conditions, including; but not limited to – temperature, moisture, light conditions, soils, biological activity, vegetative establishment and other environmental factors. 5. Heated within a pressurized vessel to a temperature greater than 380 degrees Fahrenheit (193 degrees Celsius) for 5 minutes at a pressure greater than 50 psi (345 kPa) in order to be Thermally Refined™/Processed and to achieve phyto-sanitization.

Packaging Data

| Properties | Test Method | Units | Nominal Value |
|-----------------|-------------|---------|---------------|
| Bag Weight | Scale | kg (lb) | 22.7 (50) |
| Bags per Pallet | Observed | # | 40 |

UV and weather-resistant plastic bags. Pallets are weather-proof stretch wrapped with UV resistant pallet cover.

Profile Products

750 Lake Cook Road, Ste. 440
Buffalo Grove, IL 60089
800-508-8681

www.profileproducts.com

To the best of our knowledge, the information contained herein is accurate. However, Profile Products cannot assume any liability whatsoever for the accuracy or completeness thereof. Final determination of the suitability of any information or material for the use contemplated, of its manner of use and whether the suggested use infringes any patents is the sole responsibility of the user.
Profile Products 2010©



AM120 Arbuscular Mycorrhizal Inoculum

Directions For Use:

Application Rates:

60 lbs per acre (67.5 kg/ha) / 1.4lbs. per 1,000ft² (0.7kg/100m²). Rate provides approximately 3,600,000 or more living propagules per acre (8,895,600 propagules/ha)

Hydroseeding:

Apply in first pass with seed and controlled release or organic fertilizer. A second pass with mulch to cover exposed seed and inoculum is recommended.

Seed Drilling:

Incorporate into the soil at a depth range at or below the seed.

Broadcast and till:

Evenly distribute across seedbed after application. Cover the exposed seed and inoculum by harrowing, chain dragging or applying an organic top-dressing. Do not leave inoculum exposed to sunlight for more than four hours.

Row Crop Applications:

Side dress seed furrows or transplants at rates of 5 to 8lbs. per acre (5.61 kg/ha) on 30in. to 40in. spaced rows. Rate provides 18 to 28 living propagules per linear foot of row crop (60 to 90 propagules per meter of row crop). Incorporate at 2 to 6 inches (5 to 15cm) below soil surface.

Nursery Medium:

Evenly blend at 5lbs. per yd³ (3kg. per m³). 1lb. (454 grams) contains approximately 60,000 living propagules. Rate provides 300,000 living propagules per yd³ (396,000 living propagules per m³) or 6.5 living propagules per in 3.

Caution:

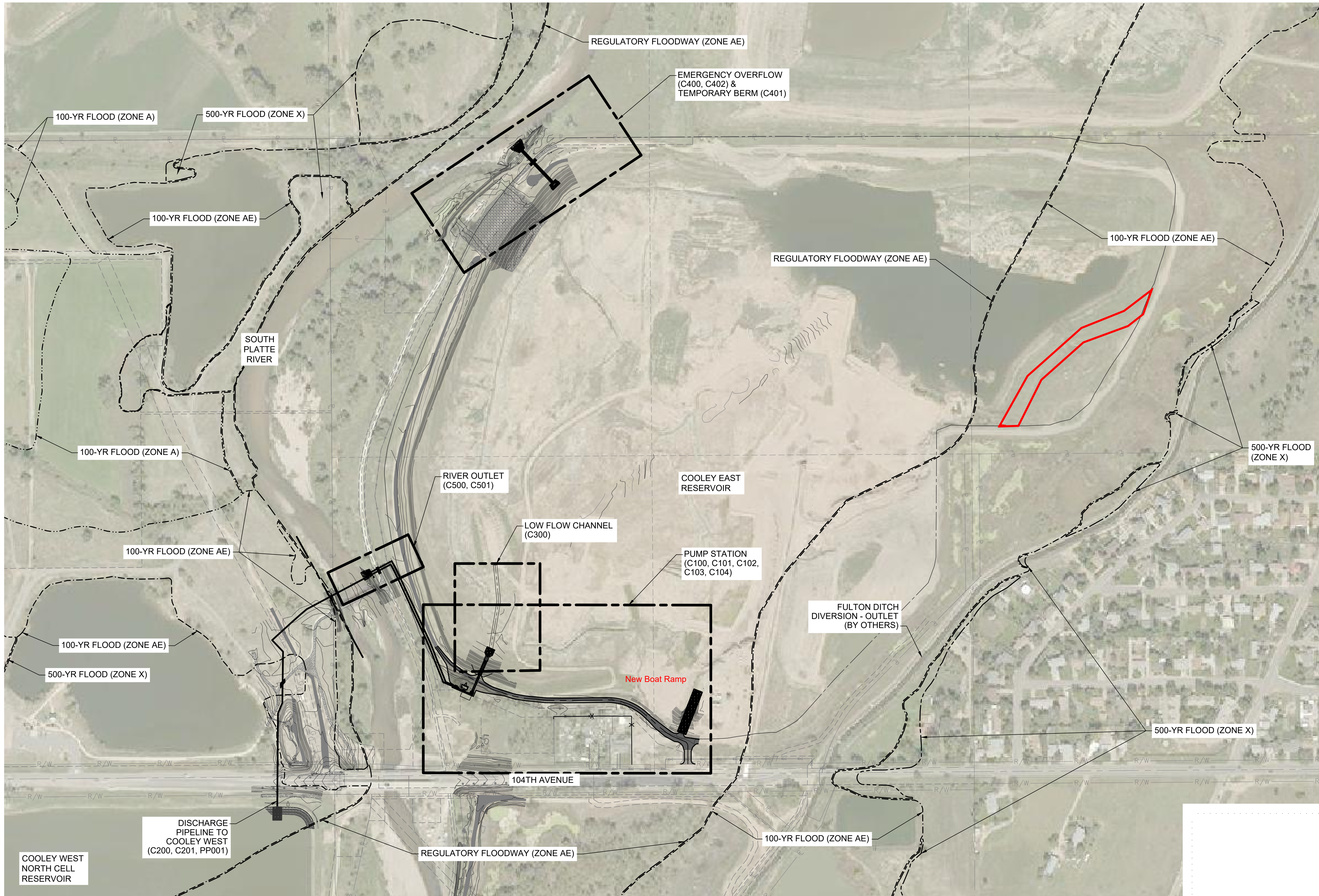
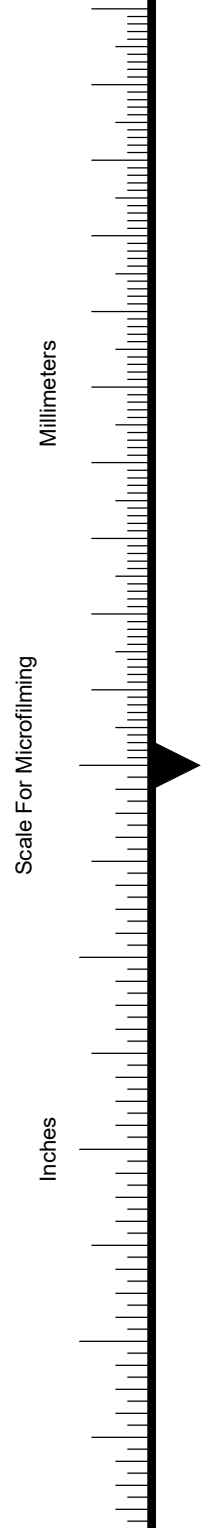
Store under cool dry conditions. Do not expose inoculum to direct sunlight for extended periods of time. This product produces dust...always wear a dust mask when handling.

Statement of Claims:

RTI certifies that this product contains one or more species of mycorrhizae fungi at a minimum rate of 120 propagules per cubic centimeter. The Mycorrhizal symbiosis is sensitive to environmental conditions and RTI is unable to make any guarantees beyond the above statement.

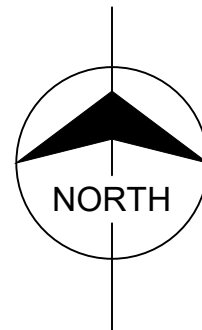
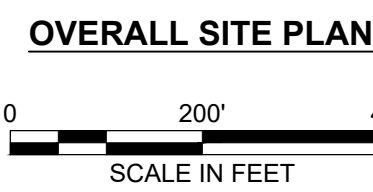
Auxilliary Biotic Soil and Plant Substance

Non Plant Food Ingredient



FLOODPLAIN MAP LEGEND

- - - - - 100-YR FLOOD, 1% ANNUAL CHANCE FLOOD HAZARD (ZONE A)
- - - - - 100-YR FLOOD, 1% ANNUAL CHANCE FLOOD HAZARD (ZONE AE)
- - - - - REGULATORY FLOODWAY, (ZONE AE)
- - - - - 500-YR FLOOD, 0.2% ANNUAL CHANCE FLOOD HAZARD (ZONE X) (INCLUDES 100-YR FLOOD AREAS)

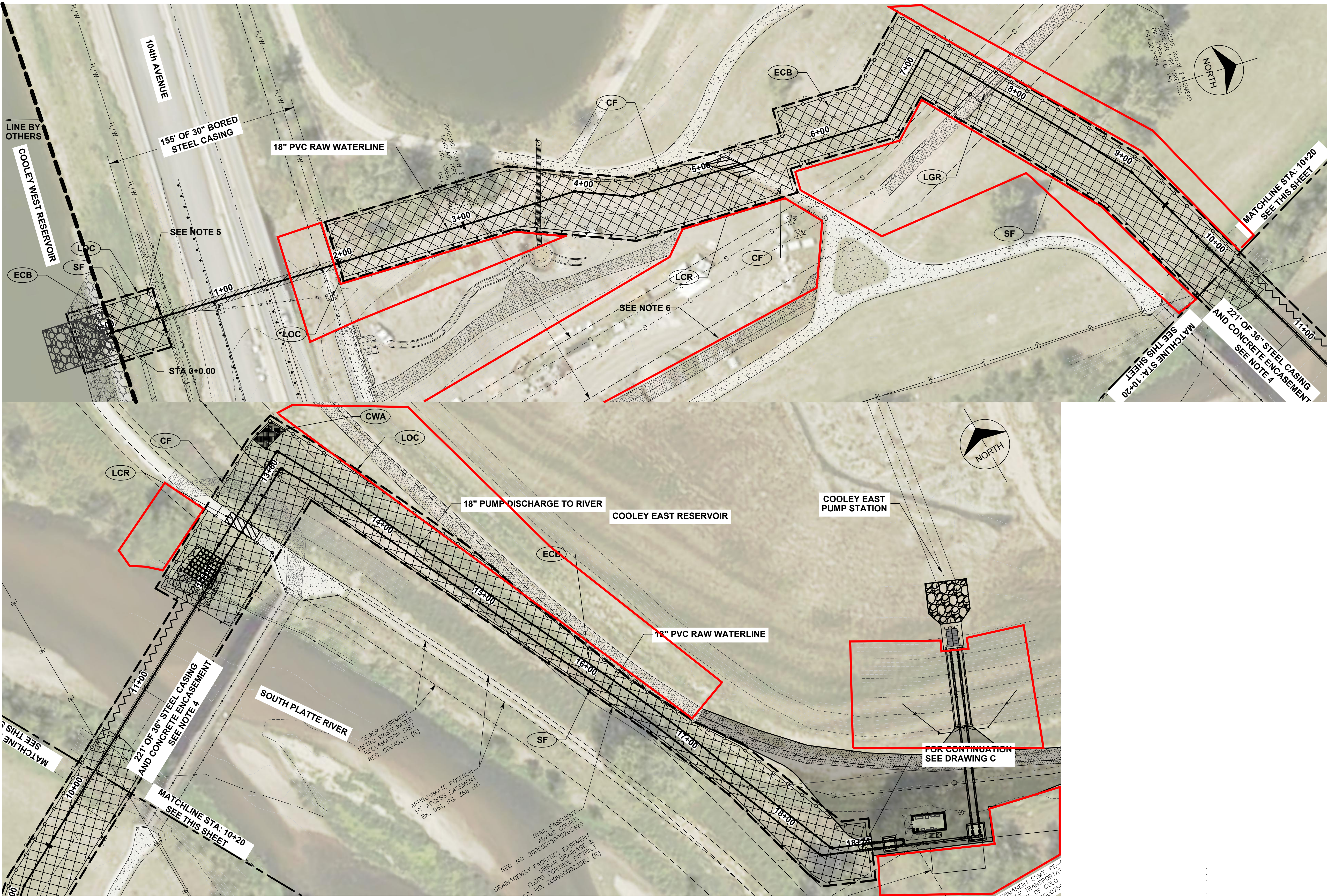


| no. | date | by | ckd | description |
|-----|---------|----|-----|-------------------------|
| 0 | 6/26/20 | JT | NT | ISSUED FOR CONSTRUCTION |

| | | | |
|----------|-----------|----------|--------------|
| date | JUNE 2020 | detailed | J. TUTTLE |
| designed | J. TUTTLE | checked | N. TESSITORE |

CITY OF THORNTON
COOLEY EAST PUMP STATION
OVERALL SITE PLAN

| | | | |
|---------|----------------------------|----------|-----------|
| project | 105931 | contract | |
| drawing | C002 | rev. | 0 |
| sheet | 7 | of | 85 sheets |
| file | C002 OVERALL SITE PLAN.dwg | | |

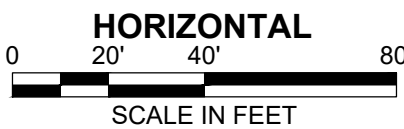


NOTES:

1. ALL UNPAVED DISTURBED AREAS ARE REQUIRED TO BE RESEED.
2. REMOVE AND REPLACE FENCE AS REQUIRED TO FACILITATE CONSTRUCTION.
3. REMOVE AND REPLACE GRAVEL DRIVE AS REQUIRED TO FACILITATE CONSTRUCTION.
4. WATERLINE TO BE ENCASED IN CONCRETE UNDER THE RIVER.
5. PLACE VEHICLE TRACKING CONTROL AT COOLEY WEST RESERVOIR ENTRANCE OFF 104TH AVENUE.
6. PLACE VEHICLE TRACKING CONTROL OFF EXISTING DRIVEWAY AT 104TH AVENUE.

LEGEND:

| | | | | | |
|--------------|--|---|--------------|--|--------------------------------|
| (VTM) | | VEHICLE TRACKING CONTROL | (LCR) | | LIMITS OF CONCRETE REPLACEMENT |
| (ECB) | | EROSION CONTROL BLANKET WITH SEEDING AND MUCH | (LGR) | | LIMITS OF GRAVEL REPLACEMENT |
| (SF) | | SILT FENCE | (CWA) | | CONCRETE WASHOUT AREA |
| (CF) | | CONSTRUCTION FENCE | | | |
| (LOC) | | LIMITS OF CONSTRUCTION | | | |



| no. | date | by | ckd | description |
|-----|---------|-----|-----|-------------------------|
| 0 | 6/26/20 | MDG | KH | ISSUED FOR CONSTRUCTION |



| | | | |
|----------|--------------|----------|---------------|
| date | JUNE 2020 | detailed | M. GALLAGHER |
| designed | M. GALLAGHER | checked | M. LEHRBURGER |



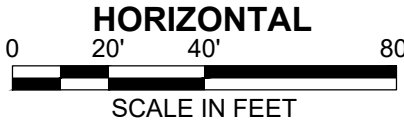
CITY OF THORNTON
COOLEY EAST PUMP STATION
GRADING, EROSION, & SEDIMENT
CONTROL

| | | | |
|---------|-----------|----------|-----------|
| project | 105931 | contract | |
| drawing | EC001 | rev. | 0 |
| sheet | 31 | of | 85 sheets |
| file | EC001.dwg | | |



- NOTES:
1. ALL UNPAVED DISTURBED AREAS ARE REQUIRED TO BE RESEDED.
 2. REMOVE AND REPLACE FENCE AS REQUIRED TO FACILITATE CONSTRUCTION.
 3. REMOVE AND REPLACE GRAVEL DRIVE AS REQUIRED TO FACILITATE CONSTRUCTION.
 4. WATERLINE TO BE ENCASED IN CONCRETE UNDER THE RIVER.
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| LEGEND: | | | | | |
|---------|--|---|-------|--|--------------------------------|
| (VTM) | | VEHICLE TRACKING CONTROL | (LCR) | | LIMITS OF CONCRETE REPLACEMENT |
| (ECB) | | EROSION CONTROL BLANKET WITH SEEDING AND MUGH | (LGR) | | LIMITS OF GRAVEL REPLACEMENT |
| (SF) | | SILT FENCE | | | |
| (CF) | | CONSTRUCTION FENCE | | | |
| (LOC) | | LIMITS OF CONSTRUCTION | | | |



| CITY OF THORNTON COOLEY EAST PUMP STATION EMERGENCY OVERFLOW GRADING, EROSION, & SEDIMENT CONTROL | | | |
|--|-----------|----------|-----------|
| project | 105931 | contract | |
| drawing | EC002 | rev. | 0 |
| sheet | 32 | of | 85 sheets |
| file | EC002.dwg | | |

Hazeltine Mine, M2004031

Map Date: 10/20/2021
Imagery Date: 6/14/2021

South Platte River

City of Thornton Seed Area: 1.75 acres (approximate)

Fulton Ditch

Hazeltine Mine Entrance

Google Earth

E 104th Ave

1000 ft

Image © 2021 Maxar Technologies

E 105th

Counter Dr
E 104th Way



Date & Time: Thu Oct 21 16:42:59 MDT 2021

Position: +039.88567° / -104.89740°

Altitude: 5047ft

Datum: WGS-84

Azimuth/Bearing: 343° N17W 6098mils (True)

Zoom: 1X

Hazeltine Mine

Boat Ramp

