CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES WITH THE PROPOSED ELEVATIONS SHOWN IN THESE PLANS. BUSINESS WILL NOT BE LIABLE FOR ANY COSTS ASSOCIATED WITH CHANGES TO THE DESIGN WITHOUT PROPER NOTIFICATION.

Scott Edgar, General Manager
Farmers Reservoir and Irrigation Company (FROCO)
80 South 27th Avenue
Boulder, CO 80301
(303) 458-7333

General Manager, the Farmers Reservoir and Irrigation Company.

OVERSIGHT / NHS

FHWA REGION VIII OVERSIGHT: NO | YES

NATIONAL HIGHWAY SYSTEM: NO | YES

TOWN OF LOCHBUIE
GREENWAY TRAIL
FINAL DESIGN TRAIL PLANS
PROJECT NO. 19.0580
WELD COUNTY, COLORADO
MAY 3, 2023

TABULATION OF LENGTH & DESIGN DATA

<table>
<thead>
<tr>
<th>STATION</th>
<th>LINEAL FEET</th>
<th>ROADWAY</th>
<th>MAJOR STRUCTURE</th>
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<tr>
<td>GREENWAY TRAIL</td>
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<tr>
<td>STA 68+98.63 BEGIN PROJECT</td>
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<tr>
<td>STA 60+08.65 END PROJECT</td>
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<td>TOTAL</td>
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<td>SUMMARY OF PROJECT LENGTH</td>
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<td>ROADWAY (NET LENGTH)</td>
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DESIGN DATA

| MINIMUM RADIUS OF CURVE | N/A |
| MAXIMUM GRADE | - |
| MINIMUM S.S.D. HORIZONTAL | N/A |
| MINIMUM S.S.D. VERTICAL | N/A |
| MAXIMUM DESIGN SPEED | 20 |
| CLEAR ZONE DISTANCE (MIN) | - |

FROCO APPROVAL BLOCK

The signature of the General Manager of FROCO is for the purpose of acknowledging acceptance of the design of the permitted structures only. The signature shall not in any way change the rights and obligations of either party with respect to the Town of Lochbuie of the Lochbuie Trail to which these designs are attached. These designs are attached for the purpose of allowing the Town of Lochbuie to use the plans in the construction of the Lochbuie Trail. The Town of Lochbuie shall be solely responsible for the construction, the permitted structures shall perform as specified herein.

General Manager, the Farmers Reservoir and Irrigation Company.

Print Date Monday, July 10, 2023 4:52:20 PM

Sheet Revisions

<table>
<thead>
<tr>
<th>Date</th>
<th>Comments</th>
<th>Init</th>
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As Constructed

GREENWAY TRAIL

Project No./Code

MTF 812-004

7/21/2023

7/21/2023
THIS PLAN SET SEALED ON THE COVER SHEET.
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<tr>
<th>Item No.</th>
<th>Description</th>
<th>Unit</th>
<th>Plan</th>
<th>As Const.</th>
<th>Total Plan</th>
<th>Total As Const.</th>
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<td>630-80331</td>
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</tbody>
</table>
NOTES:

1. SEE SHEET 13 FOR LINE AND CURVE TABLE.
2. STATIONING PROVIDED FOR TRAIL AND CONCRETE PAN IS REFERENCING THE TRAIL CENTERLINE UNLESS NOTED OTHERWISE.
NOTES:

1. STATIONING PROVIDED FOR TRAIL AND CONCRETE PAVING IS REFERENCING THE TRAIL CENTERLINE UNLESS NOTED OTHERWISE.
# TABULATION OF REMOVALS

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<tr>
<th>DESCRIPTION</th>
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<th>PATH REMOVAL</th>
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<td>SF</td>
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<td></td>
<td>STA 44+00.00</td>
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<td>CURB GAP</td>
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</table>
SWMP TEMPLATE (PLAN SHEETS) FOR PROJECTS WITH 1 ACRE OR MORE OF DISTURBANCE

1. SITE DESCRIPTION
The Contractor shall comply with all CDOT contractual requirements and all requirements associated with the CDPS-SCC on this project. The SWMP Administrator for Construction shall update the SWMP to reflect current project site conditions.

A. PROJECT SITE LOCATION: The project site is in the Town of Lochbuie, CO along a 53,400 foot stretch of an unpaved trail that runs east-west from Stagecoach Avenue to Valdai Avenue. The existing unpaved trail will be replaced with a concrete multi-use path. The concrete path will continue east from Valdai Avenue to County Road 37. The concrete path will have a total length of 50,560.5 feet.
Location or address of construction office: TBD

B. PROJECT SITE DESCRIPTION: The project consists of replacing an existing unpaved trail with a concrete multi-use path and extending the concrete path east to County Road 37. ADA compliant curb ramps and signage where the path intersects several streets are also included with the proposed improvements. The project will require clearing and grubbing, earthwork (excavation and embankment), paving, and stabilization operations.

C. PROPOSED SCHEDULE FOR SEQUENCE FOR MAJOR CONSTRUCTION ACTIVITIES: Initial construction activities will include clearing the project site, excavation, and embankment placement. The path and curb ramps will then be paved and signage placed. All areas that are not paved or landscaped will be stabilized through establishment of vegetation cover.

D. ACRES OF DISTURBANCE:
1. Total area of construction site (LOC PERMITTED AREA): 4.73 acres
2. Total area of proposed disturbance (LDA): 2.48 acres
3. Total area of seeding: 1.38 acres
4. Total area of pre-project impervious surface: 1,494 sq. ft.
5. Total area of final impervious surface: 48,475 sq. ft.

E. EXISTING SOIL DATA: The on-site soils consist of Olney loamy sand, Olney fine sandy loam, and Vose loamy sand. These soils have slight to moderate erosion hazard rating.
Data Source(s): NRCIS, USGS Web Soil Survey

F. EXISTING VEGETATION INCLUDING PERCENT OF VEGETATIVE COVER: During design, the SWMP Administrator for Construction in collaboration with the Engineer will determine if the SWMP Administrator for Design or the SWMP Administrator for Construction will conduct the Vegetation Transcompetitive. If the site is disturbed, an Adequate Reference Site(s) may be utilized, refer to the permit.

Pre-Construction Data of survey: July 7, 2022
Percent Existing Vegetative Cover: 25%
Description of existing vegetation: the existing vegetation consists mostly of native grasses and weeds.
Method for determining percent vegetative cover: CDOT Vegetative Transect Procedure
Include a map or table showing transect locations, photos documenting pre-Construction vegetative cover, and methodology used to determine existing vegetative cover to SWMP tab 17: Vegetative Transect location shown on plans

Post-Construction Data of survey: _________ Percent Vegetative Cover: _________
Description of vegetation: The method used to determine pre-construction percent cover shall be used to determine post construction percent cover.
Include a map or table showing transect locations, photos documenting pre-Construction vegetative cover, and methodology used to determine existing vegetative cover to SWMP tab 17:

G. POTENTIAL POLLUTANTS SOURCES: Refer to Potential Pollutant Sources in SWMP Section 4A. The SWMP Administrator for Construction shall prepare a list of all potential pollutants and their locations in accordance with subsection 107.25.1

H. DRAINAGE PATTERNS AND RECEIVING WATERS:
1. Description of drainage patterns from the Site: The site generally sheet flows south and east towards an existing drainage ditch immediately south of the site.
2. Names of immediate and ultimate receiving water(s) on site: The site conveys flow to the town’s drainage ditch immediately south of the site, and ultimately is discharged on the South Platte River.
3. Description of all stream crossings located within the Construction Site Boundary: None. The Sper Canal and West Burlington Extension Ditch are adjacent to the project but will not be disturbed by construction.

I. ALLOWABLE NON-STORMWATER DISCHARGES:

<table>
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<tr>
<th>Discharge Description</th>
<th>Site Map #</th>
<th>Method Statement (Location)</th>
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<tbody>
<tr>
<td>Uncontaminated Springs</td>
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<tr>
<td>Concrete Washout Water (in-ground washout structure)</td>
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<tr>
<td>Landscape irrigation Returns</td>
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<td>Discharges from Diversion of State Waters</td>
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<tr>
<td>Emergency fire fighting</td>
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</tbody>
</table>

#Concrete washout water associated with the washing of concrete tools and concrete mixer chute can be discharged to the ground if it is managed accordingly to prevent the water from leaving the site as surface runoff or reaching receiving waters.

J. DIVERSION CRITERIA:
1. Is a diversion planned for the Site? Yes ____, No ____. X ____. X

2. SITE MAP COMPONENTS:
Pre-construction

A. PROJECT CONSTRUCTION POTENTIAL SITE BOUNDARIES: See SWMP Site Maps

B. FLOW ARROWS THAT DEPICT STORMWATER FLOW DIRECTIONS ON-SITE, RUN-ON AND RUNOFF DIRECTION: See SWMP Site Maps

C. ALL AREAS OF GROUND SURFACE DISTURBANCE: See SWMP Site Maps

D. AREAS UP,LUI ANU FILL: See SWMP Site Maps

E. AREAS USED FOR STORING AND STOCKPILING OF MATERIAL: Staging Areas [field trailer, fueling, etc.] and Locations of All Waste Accumulation and Batch Plants Including Masonry Mixing Stations: Location unknown and to be decided by the contractor.

F. LOCATION OF ALL STRUCTURAL CONTROL MEASURES IDENTIFIED IN THE SWMP: See SWMP Site Maps

G. LOCATION OF NON-STRUCTURAL CONTROL MEASURES AS APPLICABLE IN THE SWMP: See SWMP Site Maps

H. SPRINGS, STREAMS, WETLANDS, DIVERSIONS, AND OTHER STATE WATERS, INCLUDING AREAS THAT REQUIRE PRE-EXISTING VEGETATION BE MAINTAINED WITHIN 50 FEET OF A RECEIVING WATER: See SWMP Site Maps

Template Revised: 5.6.2021
I. LOCATIONS OF ALL STREAM CROSSING LOCATED WITHIN THE CONSTRUCTION SITE BOUNDARY: See SWMP Site Maps

J. PROTECTION OF TREE, SHRUBS, SENSITIVE HABITAT, AND CULTURAL RESOURCES: See SWMP Site Maps

K. LOCATIONS WHERE ALTERNATIVE TEMPORARY STABILIZATION SCHEDULES APPLY: Not applicable

3. QUALIFIED STORMWATER MANAGERS:
   A. SWMP ADMINISTRATOR FOR DESIGN:
      CDOT Certified Individual responsible for developing SWMP Plan Sheets and SWMP Site Maps during the design phase.
      Name/Title: Deborah Alvarado, P.E./Senior Project Engineer
      Contact Information: phone & email: 303.431.4600 / dalvarado@martinmartin.com
      Certification #: PACE/CEPE
   B. SWMP ADMINISTRATOR FOR CONSTRUCTION: (As defined in Section 208) The Contractor shall designate a SWMP Administrator for Construction upon accepting co-permittee of the permit. The SWMP Administrator for Construction shall become the operator for the SWMP and assume responsibility for all design changes to the SWMP Implementation and maintenance in accordance to 208.03. The SWMP Administrator for Construction shall be responsible for implementing, maintaining and revising SWMP, including the title and contact information. The activities and responsibilities of the SWMP Administrator for Construction shall address all aspects of the project’s SWMP. (Update the information below for each new SWMP Administrator for Construction) [A copy of TEC Certification must be included in the SWMP.]
      Name/Title: TBD
      Contact Information: TBD
      Certification #: TBD
      Start Date: TBD
      Engineer Approval: TBD
   C. EROSION CONTROL INSPECTOR: (As defined in Section 208) The Contractor may designate an Erosion Control Inspector. The Erosion Control Inspector shall complete duties in accordance with subsection 208.03(c) (copy of TEC Certification must also be included in the SWMP)
      Name/Title: TBD
      Contact Information: TBD
      TEC Certification #: TBD
      Start Date: TBD
      Engineer Approval: TBD
   D. PERMANENT STABILIZATION SUBJECT MATTER EXPERT: this qualified individual will be either a Regional Environmental Staff member, or an Independent Contractor Controller (Independent Assurance Program). This expert is a project team leader responsible for ensuring project adherence to permanent stabilization requirements.
      1. Review the Topp Management Plan and the Permanent Stabilization Site Maps.
      2. Attend the Environmental Pre-Construction Conference.
      3. Coordinate the Site Pre-Vegetation Conference.
      4. Review and recommend approval of products.
      5. Review and recommend approval of the Quantities Verification Permits.
      6. Attend the Final Landscape Completion Walkthrough.
      7. Attend the Final Landscape Completion Walkthrough.
      Name/Title: TBD
      Contact Information: TBD

4. STORMWATER MANAGEMENT CONTROLS FOR FIRST CONSTRUCTION ACTIVITIES

THE CONTRACTOR SHALL PERFORM THE FOLLOWING:

A. POTENTIAL POLLUTANT SOURCES:
   Evaluate, identify, locate and describe all potential sources of pollutants at the site in accordance with subsection 107.25, CDPS-SCP and place in the SWMP. All control measures related to potential pollutants shall be shown on the SWMP Site Map by the Contractor’s SWMP Administrator for Construction.

B. OFFSITE DRAINAGE (RUN ON WATER):
   Describe and record control measures on the SWMP Site Map that have been implemented to address off site run on water in accordance with subsection 208.03.

C. VEHICLE TRACKING CONTROL:
   Control measures shall be implemented in accordance with subsection 208.04.

D. PERMANENT CONTROL:
   1. Perimeter control shall be established as the first item on the SWMP to prevent the potential for pollutants leaving the construction site boundaries, entering the stormwater drainage system, or discharging to state waters. Perimeter control shall be in accordance with subsection 208.04.
   2. Perimeter control may consist of berms, slit fence, erosion logs, existing landforms, or other control measures as approved.

5. DURING CONSTRUCTION

RESPONSIBILITIES OF THE SWMP ADMINISTRATOR FOR CONSTRUCTION: Considered a “living document”, the SWMP is continuously reviewed and modified through the construction phases. During construction, SWMP Administrator for Construction shall add, update, or amend the items A-G below as needed in accordance with subsection 208.03.

   A. MATERIALS HANDLING AND SPILL PREVENTION AND RESPONSE PLAN: prior to construction commencing the Contractor shall submit a Spill Response Plan. Materials handling and Spill Response Plan shall be in accordance with subsection 208.06.
   B. OTHER CDPS PERMITS: list applicable CDPS permits associated with the permitted site and activities.
   C. STOCKPILE MANAGEMENT: Shall be done in accordance with subsections 107.25 and 208.07
   D. CONCRETE WASHOUT: Concrete washout water or waste from field laboratories and paving equipment shall be contained in accordance with subsection 208.05.
   E. SAW CUTTING: Shall be done in accordance with subsections 107.25, 208.04, 208.05
   F. STREET SWEEPING: Shall be done in accordance with subsection 208.04

6. INSPECTIONS

   A. Water Quality Inspections shall be in accordance with subsection 208.03(c).
   B. Permanent Stabilization Inspections shall be in accordance with subsections 208.04(e) and 208.10.

7. CONTROL MEASURE MAINTENANCE

   Maintenance shall be in accordance with subsection 208.04(f).

8. RECORD KEEPING

   Records shall be kept in accordance with subsection 208.03(d).

9. INTERIM PERMANENT STABILIZATION AND LONG TERM STORMWATER MANAGEMENT

   The Contractor shall comply with all interim stabilization and permanent stabilization requirements in accordance with subsection 208.04(e).
A. SEEDING PLAN:
The following seed mix(es) and rates are for all seeding methods as shown on the Permanent Stabilization Site Maps shall be used:

<table>
<thead>
<tr>
<th>COMMON NAME</th>
<th>BOTANICAL NAME</th>
<th>185. PLS PER ACRE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dots</td>
<td>Arvina setosa</td>
<td>2.5</td>
</tr>
<tr>
<td>Big bluestem</td>
<td>Andropogon gerardii Paxonii</td>
<td>2.9</td>
</tr>
<tr>
<td>Cane bluestem</td>
<td>Bothriochloa barbinodis VNS</td>
<td>0.6</td>
</tr>
<tr>
<td>Fringed broom</td>
<td>Bromus ciliatus VNS</td>
<td>2.1</td>
</tr>
<tr>
<td>Green argrotop</td>
<td>Leyachloa dubia Marta</td>
<td>0.8</td>
</tr>
<tr>
<td>Sand lovegrass</td>
<td>Eragrostis nitidae Mason</td>
<td>0.3</td>
</tr>
<tr>
<td>Switchgrass</td>
<td>Panicum virgatum Grenville</td>
<td>1.6</td>
</tr>
<tr>
<td>Yellow Indiangrass</td>
<td>Sorghastrum nutans Lometa</td>
<td>2.8</td>
</tr>
<tr>
<td>Desert verbena</td>
<td>Glandularia goodalang VNS</td>
<td>0.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>14.1</strong></td>
</tr>
</tbody>
</table>

B. SEEDING APPLICATION METHOD:
The following seeding methods shall be used for all areas shown on the Permanent Stabilization Site Maps. Soil compaction shall be minimized for areas where permanent stabilization will be achieved through vegetative cover.

C. SOIL STABILIZATION METHODS:
Minimum soil stabilization methods (attached mulch) for all disturbances to receive seeding:
1. Apply a minimum of 2 tons/ac certified weed free hay or 2 tons/ac of certified weed free straw and mechanically mix into the soil in combination with natural mulch faciltiern in accordance with Section 213.
2. Prior to winter shutdown or the summer seeding window closure: Uncompleted slopes shall be mulched with 2 tons of mulching (weed free) per acre, mechanically crimped into the topsoil in combination with an organic mulch faciltiern in accordance with sections 208 and 213.

D. SPECIAL REQUIREMENTS:
1. Soil amendments, seedbed preparation, and permanent stabilization mulching shall be accomplished within four working days of placing the topsoil on the de-compacted civil subgrades. If placed topsoil is not mulched with permanent stabilization mulch within four working days, the Contractor shall complete interim stabilization methods in accordance with subsection 208.04(e) at no additional cost to the Department.
2. Complete permanent stabilization mulching within 24 hours of hydraulic application of native seed.
3. The Contractor shall submit a proposed Permanent Stabilization Phasing Plan to the Engineer for approval showing how implementation of SWMP Permanent Stabilization Plans will minimize damage to seeded areas.

D. SOIL AMENDMENT REQUIREMENTS:
Minimum amendment material requirements for disturbances to receive seeding.

<table>
<thead>
<tr>
<th>Pay Item</th>
<th>Description</th>
<th>Amount/ Acre</th>
<th>Units</th>
<th>Total For This Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>212-00700</td>
<td>Organic Fertilizer Low N</td>
<td>230</td>
<td>Pounds 88</td>
<td></td>
</tr>
<tr>
<td>212-00702</td>
<td>Biotic Soil Amendments (Hydric Applied)</td>
<td>3000</td>
<td>Pounds 1090</td>
<td></td>
</tr>
<tr>
<td>212-00703</td>
<td>Humate</td>
<td>130</td>
<td>Pounds 33</td>
<td></td>
</tr>
<tr>
<td>212-00704</td>
<td>Mycorrhizae</td>
<td>20</td>
<td>Pounds 7</td>
<td></td>
</tr>
</tbody>
</table>
11. NARRATIVES

Control Measure Matrixes During Construction:
- Control measure narratives have been included for the CDSOT Standard Specifications and Standard Plan M-208 and M-216 along with any non-standard control measures approved during the design process. If a Non-Standard Control Measure not included in the SWMP is proposed and approved by the Engineer the SWMP Administrator for Construction shall do the following: Place an "X" in the column for non-standard and complete a Non-Standard Control Measure Specification and Narrative covering the what, when, where and why the control measure is being used and why the SWMP Administrator for Construction shall place an "X" in the column in Use On Site when the control measure has been installed.
- The SWMP Administrator for Construction shall place an "X" in the column in Use On Site when the control measure has been installed.
- A "B" in the initial Activities Column indicates that the control measure shall be installed before construction activity starts. Locations and quantities will be discussed during the Environmental Pre-Construction Conference with the Regional Water Pollution Control Manager.

**STRUCTURAL Control Measures** that may be potentially used on the project for erosion and sediment control practices may include, but are not limited to the following:

<table>
<thead>
<tr>
<th>APPURtenat CONTROL MEASURE</th>
<th>NARRATIVE</th>
<th>M-208 STANDARD or &quot;X&quot; for NON-STANDARD</th>
<th>CONTROL MEASURE IMPLEMENTATION PHASE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>IN USE ON SITE</td>
<td>INITIAL ACTIVITIES</td>
</tr>
<tr>
<td>CULVERT INLET/OUTLET PROTECTION</td>
<td>Erosion legs, aggregate bags</td>
<td>Placed at mouth of culvert inlet and over top of culvert at inlet and outlet where disturbance may be occurring adjacent to pipe to prevent sediment laden water from entering pipe or drainage. Place prior to the start of construction disturbances.</td>
<td>M-208</td>
</tr>
<tr>
<td>STOPLINE PROTECTION</td>
<td>Erosion leg, aggregate bags</td>
<td>Placed within specified distance, in accordance with subsection 208.06, from toe to contain sediment around stockpile. Aggregate bags are easily moved and replaced for access during the work day. Place prior to start of stockpiling, increase control as the stockpile increases size.</td>
<td>M-208</td>
</tr>
<tr>
<td>TOE OF FALL PROTECTION</td>
<td>Erosion legs, temporary berm, stiff fence, topsoil window*</td>
<td>Placed prior to slope/embankment work to capture sediment and protect and delineate undisturbed areas. *Can be used to stockpile topsoil for salvage.</td>
<td>M-208</td>
</tr>
<tr>
<td>PERIMETER CONTROL</td>
<td>Erosion legs, stiff fence, temporary berm, topsoil window*</td>
<td>Placed prior to construction commencing to address potential run-off water from all sides, and to divert around disturbed area. *Can be used to stockpile topsoil for salvage.</td>
<td>M-208</td>
</tr>
<tr>
<td>SEDIMENT CONTROL/SLOPE CONTROL</td>
<td>Silt fence, erosion legs</td>
<td>Placed on the contour of a slope to contain and slow down construction runoff. Place prior to the start of construction disturbances.</td>
<td>M-208</td>
</tr>
<tr>
<td>OUTLET PROTECTION</td>
<td>Riprap, or approved other</td>
<td>Material placed as an energy dissipator to prevent erosion of outlet structure.</td>
<td>M-401-12</td>
</tr>
<tr>
<td>CONCRETE WASHOUT</td>
<td>In-ground or fabricated</td>
<td>Construction control, used for waste management of concrete and concrete equipment cleaning.</td>
<td>M-208</td>
</tr>
<tr>
<td>VEHICLE TRACKING PAD</td>
<td>Source control, placed to prevent tracking of sediment from disturbed area to offsite surface. Place prior to the start of construction disturbances.</td>
<td>M-208</td>
<td>B</td>
</tr>
<tr>
<td>OTHER</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**NON-STRUCTURAL Control Measures** that may be potentially used on the project for erosion and sediment control practices may include, but are not limited to:
- Erosion control devices are used to limit the amount of soil loss on site. Sediment control devices are designed to capture sediment on the project site. Construction controls are control measures related to construction access and staging. Control Measure locations are indicated on the SWMP Site Map.

* Use of vegetative buffer strip requirements. The CDPE Water Quality Control Division Technical Memorandum dated August 27, 2015 clarifies the requirements for utilization of existing vegetation as a buffer type of sediment control measure, while maintaining compliance with the CDPS permit for Stormwater Discharges Associated with Construction Activity – CDPS Permit No. CCR4000000. In general, the division does not recommend that vegetative buffers be implemented as a sediment removal control measure for runoff from disturbed areas at construction sites, unless implemented as a "finishing" component of a treatment train comprised of additional, adequate up-gradient Control Measures. The entire memorandum can be found at: [https://www.colorado.gov/pacific/sites/default/files/Vegetative%20buffer%20Memo.pdf](https://www.colorado.gov/pacific/sites/default/files/Vegetative%20buffer%20Memo.pdf)
<table>
<thead>
<tr>
<th>APPLICATION, CONTROL MEASURE</th>
<th>NARRATIVE</th>
<th>M-STD</th>
<th>USEON</th>
<th>INITIAL ACTIVITY</th>
<th>INTERIM ACTIVITIES</th>
<th>PERMANENT STABILIZATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>* VEGETATIVE BUFFER STRIP</td>
<td>Finishing component for filtering sediment-laden runoff from disturbance area. Area within CDOT ROW or temporary easement to be identified on SWMP prior to construction starting.</td>
<td>M-208</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>TOPSOIL MANAGEMENT STOCKPILE/SALVAGE</td>
<td>Prior to any site disturbance work commencing, existing topsoil shall be scraped to a depth six inches or as specified, and placed in stockpiles or windows. Upon completion of final grading, topsoil shall be evenly distributed over embankment to a depth of six inches or as specified.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SURFACE ROUGHENING / GRADING TECHNIQUES</td>
<td>Temporary stabilization of disturbance and to minimize wind and erosion.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SEEDING (TEMPORARY)</td>
<td>Temporary stabilization used for over wintering of disturbance or used to control erosion for areas scheduled for future construction.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BONDED FIBER MATRIX OR MULCHING (HYDRAULIC)</td>
<td>Not to be used in areas of concentrated flows, i.e. ditch lines. To be for either interim or permanent Stabilization placed as a surface cover for erosion control. May be used as surface cover when work is temporarily halted and as approved by the Engineer for stockpiles.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Straw or Hay MULCH/MULCH TACKIFIER</td>
<td>Interim or Permanent Stabilization placed as a surface cover for erosion control and or seeding establishment. To be installed as Interim Stabilization as a surface cover when work is temporarily halted and as approved by the Engineer</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPRAY-ON MULCH BLANKET (Not to be used in areas of concentrated flows, i.e. ditch lines)</td>
<td>Interim or Permanent Stabilization placed as a surface cover for erosion control and or seeding establishment. To be installed as temporary surface cover when work is temporarily halted and as approved by the Engineer</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SEEDING PERMANENT (NATIVE PERENNIAL)</td>
<td>Permanent Stabilization of disturbance and to reduce runoff and control erosion on disturbed areas.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>SOIL RETENTION BLANKET (SRB)</td>
<td>Permanent Stabilization of disturbance and to reduce runoff and control erosion on disturbed areas.</td>
<td>M-216</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Sweeping</td>
<td>Source control, used to remove sediment tracked onto paved surfaces and to prevent sediment from entering drainage system. Sweep daily and at the end of the construction shift as needed. Kick brooms shall not be permitted.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>OTHER</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### 12. TABULATION OF STORMWATER QUANTITIES

A. Control Measure sediment removal and disposal shall be paid for as: 208 Removal and Disposal of Sediment (Equipment) and 208 Removal and Disposal of Sediment (Labor). All other control measure maintenance shall be included in the cost of the control measure.

B. If estimated that 40 hours each of blading (140-250 horsepower) and dazing (130-250 horsepower) may be required for miscellaneous erosion control work as directed by the Engineer. Work shall be paid for as: 203 Blading and 203 Dazing.

<table>
<thead>
<tr>
<th>PSP Spec.</th>
<th>Pay Item</th>
<th>Description</th>
<th>Pay Unit</th>
<th>Initial Const</th>
<th>Interim Const</th>
<th>Permanent Stabilization</th>
<th>*Total Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>202-0402</td>
<td>Clean Culvert</td>
<td>Each</td>
<td>4</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>203-0150</td>
<td>Blading</td>
<td>Hour</td>
<td>40</td>
<td></td>
<td>40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>203-0150</td>
<td>Dazing</td>
<td>Hour</td>
<td>40</td>
<td>40</td>
<td>40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>207-0070</td>
<td>Topsoil (Onsite)</td>
<td>CY</td>
<td>1105</td>
<td></td>
<td>1105</td>
<td></td>
<td></td>
</tr>
<tr>
<td>207-0074</td>
<td>Subgrade Soil Preparation</td>
<td>SY</td>
<td>5386</td>
<td></td>
<td>5386</td>
<td></td>
<td></td>
</tr>
<tr>
<td>208-0012</td>
<td>Erosion Log Type 1 (Hinch)</td>
<td>LF</td>
<td>5150</td>
<td>510</td>
<td>5660</td>
<td></td>
<td></td>
</tr>
<tr>
<td>208-0035</td>
<td>Aggregate Bag</td>
<td>LF</td>
<td>40</td>
<td></td>
<td>40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>208-0045</td>
<td>Concrete Washout Structure</td>
<td>Each</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>208-0075</td>
<td>Pre-fabricated Vehicle Tracking Pad</td>
<td>Each</td>
<td>4</td>
<td></td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>208-0016</td>
<td>Sweeping (Sediment Removal)</td>
<td>Hour</td>
<td>24</td>
<td>16</td>
<td>40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>208-0027</td>
<td>Erosion Control Management (ECM)</td>
<td>Day</td>
<td>3</td>
<td>6</td>
<td>3</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>212-0070</td>
<td>Organic Fertilizer</td>
<td>Pounds</td>
<td>88</td>
<td></td>
<td>88</td>
<td></td>
<td></td>
</tr>
<tr>
<td>212-0072</td>
<td>Biotic Soil Amendments (Hydraulic Applied)</td>
<td>Pounds</td>
<td>1050</td>
<td>1050</td>
<td>1050</td>
<td></td>
<td></td>
</tr>
<tr>
<td>212-0073</td>
<td>Humate</td>
<td>Pounds</td>
<td>53</td>
<td></td>
<td>53</td>
<td></td>
<td></td>
</tr>
<tr>
<td>212-0074</td>
<td>Mycorrhizae</td>
<td>Pounds</td>
<td>7</td>
<td></td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>212-0077</td>
<td>Seeding (Native) hydraulic</td>
<td>Acre</td>
<td>0.35</td>
<td></td>
<td>0.35</td>
<td></td>
<td></td>
</tr>
<tr>
<td>213-0002</td>
<td>Mulching (Weed Free Hay)</td>
<td>Acre</td>
<td>0.35</td>
<td></td>
<td>0.35</td>
<td></td>
<td></td>
</tr>
<tr>
<td>213-0061</td>
<td>Mulch Topper</td>
<td>LB</td>
<td>180</td>
<td></td>
<td>180</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*It is anticipated that additional control measures and control measure quantities not shown on the SWMP Site Maps shall be required on the project for unforeseen conditions and replacement of items that are beyond their useful service life, see subsections 206.03 and 208.04. Quantities for all control measures shown above are estimated, and have been increased for unforeseen conditions and normal control measure life expectancy. Quantities shall be adjusted according to the conditions encountered in the field as directed and approved by the Engineer. Payment shall be for the actual work completed and material used.

**Pay Item 208-0027 is included for anticipated maintenance of vehicle tracking pads based on the service life of the control measure in the field. The use of the material shall be directed and approved by the Engineer.***

**FIA refers to CDOT's Force Account Pay Items.**

### 14. NOTES

Project is assumed to be seeded at the end of project construction for final stabilization.

B. DEWATERING: (Not covered under the CDPE guidance document Low Risk Discharge Guidance (Discharges of Uncontaminated Groundwater to Land):

https://www.colorado.gov/pacific/sites/default/files/WQ%20OWS%20HS%20GW.pdf

1. Dewatering. Refer to other environmental permits in accordance with subsection 107.02 and the permits contained in Tab 16 of this SWMP.
2. If groundwater does not meet water quality standards for receiving water a separate LCPs Dewatering Permit shall be obtained by the Contractor from CDPE in accordance with subsections 107.02 and 107.25.
EROSION CONTROL NOTES:

1. The contractor is responsible for obtaining all required permits and implementing and maintaining erosion and sediment control measures at all times during construction to prevent damaging flows on the site and in the watershed below the site. Control systems shall be installed prior to stripping of native vegetation cover and as grading progresses. Refer to sediment and erosion control plans and storm water management plans. Conditions in the field may warrant erosion control measures in addition to what is shown on these plans. The plan may be modified with appropriate approvals as field conditions warrant.

2. Natural vegetation shall be retained and protected wherever possible. Exposure of soil to erosion by removal or disturbance of vegetation shall be limited to the area required for immediate construction and for the shortest practical period of time.

3. Topsoil shall be stockpiled to the extent practicable on the site for use on areas to be revegetated, and any and all stockpiles shall be located and protected from erosion elements.

4. At all times, the property shall be maintained and/or watered to prevent wind-caused erosion. Earthwork operations shall be discontinued when no protective action will reduce erosion. Erosion control measures shall be in place.

5. Permanent or temporary soil stabilization measures shall be applied to disturbed areas within 30 days after final grade is reached on any portion of the site. Unless specified otherwise, temporary measures shall be installed on all disturbed areas where permanent erosion improvements are not scheduled for installation within three months. Temporary vegetation shall be a vigorous, drought-tolerant, native species mix project scheduling should take advantage of spring or fall planting seasons for natural germination, but seedbeds shall be added, if conditions warrant.

6. Temporary fences shall be installed along all boundaries of the construction limits or property lines as shown on the approved erosion control plan, to prevent grading or property damage to the property owner in development. In all areas of construction, the town of Lochbuie may require additional temporary fences if field conditions warrant.

7. The contractor shall maintain sediment, debris and all other pollutants from entering the storm sewer system during all demolition, excavation, trenching, grading or other construction operations that are part of this project. The contractor shall be held responsible for remediation of any impacts to adjacent waterways, roadways, wetlands, etc., resulting from work done as part of this project.

8. The contractor and/or their authorized agents shall remove all sediment, mud, construction debris, or other potential pollutants that may have been inadvertently discharged to, or accumulated in, the floodways and public right-of-way as a result of construction activity associated with this site development or construction project.

9. The grading contractor and/or their authorized agents shall ensure that all loads of cut and fill material imported to or exported from this site shall be properly covered to prevent loss of the material during transport on public roadways.

10. Approved erosion and sediment control "best management practices" (BMP) shall be maintained and kept in good repair for the duration of this project. At a minimum, the contractor or his agent shall inspect all BMPs weekly and after significant precipitation events. All necessary maintenance and repair shall be completed in a timely manner, and sediment and debris shall be removed from any BMP when the sediment level reaches one half the height of the BMP or, at any time that sediment or debris adversely impact the functioning of the BMP.

11. Water used in the cleaning of concrete truck delivery chutes shall be discharged into a pre-defined, riprapped containment area on the job site. The riprapped containment area is to be bermed so that wash water is totally contained. Wash water discharged into the containment area shall be treated as storm water and not allowed to be directed into the sanitary sewer. Any sediment or debris in the discharge area may result in the discharge of wash water containing waste concrete to the storm sewer system. Any discharge of storm water containing waste concrete to the storm sewer system is prohibited. Adjustments to the BMP may be necessary if discharges are detected.

12. The contractor shall protect all storm sewer facilities adjacent to any location where pavement cutting operations involving wheel cutting, saw cutting or abrasive water jet cutting are to take place. The contractor shall remove and properly dispose of all waste products generated by said cutting operations on a daily basis. The discharge of any water contaminated by waste products from cutting operations to the storm sewer system is prohibited.

13. Pavement surfaces which are adjacent to construction sites shall be swept in a timely manner when sediment and other materials are tracked or carried along or placed on them. Sweeping by hand is not an acceptable street sweeping method. Street sweeping by using water while sweeping is preferred in order to remove dust. Flushing off paved surfaces with water is prohibited.

---

**GREENWAY TRAIL**

**Project No./Code:** M15 M912-004

**As Constructed:**

**LoCHBUiE**

**W13322-1530, 503-697-3555**

**MARTIN CONSULTING ENGINEERS**

12499 WEST COLFAX AVENUE,
LAKEWOOD, COLORADO 80215

**Main: 303.431.6100**

**MARTINMARTIN.COM**

---

**LEGEND**

- **SCL** - SEDIMENT CONTROL LOG
- **VTC** - VEHICLE TRACKING CONTROL
- **OP** - OUTLET PROTECTION
- **CIP** - CULVERT INLET PROTECTION
- **SSA** - STABILIZED STAGING AREA
- **CWA** - CONCRETE WASHER OUT
- **CF** - CONSTRUCTION FENCE
- **AG** - AGGREGATE BAG
- **PS** - PERMANENT SEEDING
- **LOC** - LIMITS OF CONSTRUCTION

---

**7/21/2023**

THIS PLAN SET SEALED ON THE COVER SHEET.
NOTES:

1. THE INITIAL SWAMP REPRESENTS CONTROL MEASURES THAT SHALL BE INSTALLED PRIOR TO START OF CONSTRUCTION (ANY DISTURBANCE OF EXISTING VEGETATION).

2. ONCE DISTURBANCE OF EXISTING VEGETATION STARTS THE SWAMP ADMINISTRATOR FOR CONSTRUCTION SHALL OUTLINE THE AREA WITH THE AREA OF DISTURBANCE LINE AND USE THE INITIAL SWAMP TO REPRESENT CURRENT INSTALLED CONTROL MEASURES.

3. CONTROL MEASURES ARE NOT DRAWN TO SCALE AND LOCATIONS ARE APPROXIMATE.

4. VITURAL MAPPING WAS DONE BY THE SWAMP ADMINISTRATOR FOR DESIGN PRIOR TO THE START OF CONSTRUCTION.
NOTES:

1. THE INITIAL SWAP REPRESENTS CONTROL MEASURES THAT SHALL BE INSTALLED PRIOR TO START OF CONSTRUCTION (ANY DISTURBANCE OF EXISTING VEGETATION).

2. ONCE DISTURBANCE OF EXISTING VEGETATION STARTS THE SWAP ADMINISTRATOR FOR CONSTRUCTION SHALL OUTLINE THE AREA WITH THE AREA OF DISTURBANCE LINE AND USE THE INTERNAL SWAP TO REPRESENT CURRENT INSTALLED CONTROL MEASURES.

3. CONTROL MEASURES ARE NOT DRAWN TO SCALE AND LOCATIONS ARE APPROXIMATE.

4. VEGETATIVE TRANSIENTS WERE DONE BY THE SWAP ADMINISTRATOR FOR DESIGN PRIOR TO THE START OF CONSTRUCTION.
NOTES:

1. THE INITIAL SWAP REPRESENTS CONTROL MEASURES THAT SHALL BE INSTALLED PRIOR TO START OF CONSTRUCTION (ANY DISTURBANCE OF EXISTING VEGETATION).

2. ONCE DISTURBANCE OF EXISTING VEGETATION STARTS THE SWAP ADMINISTRATOR FOR CONSTRUCTION SHALL OUTLINE THE AREA WITH THE AREA OF DISTURBANCE LINE AND USE THE INTERNAL SWAP TO REPRESENT CURRENT INSTALLED CONTROL MEASURES.

3. CONTROL MEASURES ARE NOT DRAWN TO SCALE AND LOCATIONS ARE APPROXIMATE.

4. VEGETATIVE TRANSPORTS WERE DONE BY THE SWAP ADMINISTRATOR FOR DESIGN PRIOR TO THE START OF CONSTRUCTION.
NOTES:

1. The initial SMP represents control measures that shall be installed prior to start of construction (any disturbance of existing vegetation).

2. Once disturbance of existing vegetation starts the SMP administrator for construction shall outline the area with the area of disturbance line and use the interim SMP to represent current installed control measures.

3. Control measures are not drawn to scale and locations are approximate.

4. Vegetative transects were done by the SMP administrator for design prior to the start of construction.
NOTES:

1. The initial survey represents control measurements that shall be installed prior to start of construction (any disturbance of existing vegetation).

2. Once disturbance of existing vegetation starts the survey administration for construction shall outline the area with the area of disturbance line and use the initial survey to represent current installed control measures.

3. Control measures are not drawn to scale and locations are approximate.

4. Vegetative transects were done by the survey administration for design prior to the start of construction.

KEY MAP
SCALE: 1"=800'

TRAIL ALIGNMENT
NOTES:

1. THE INITIAL SWAMP REPRESENTS CONTROL MEASURES THAT
   SHALL BE INSTALLED PRIOR TO START OF CONSTRUCTION (ANY
   DISTURBANCE OF EXISTING VEGETATION).

2. ONCE DISTURBANCE OF EXISTING VEGETATION STARTS, THE
   SWAMP ADMINISTRATION FOR CONSTRUCTION SHALL OUTLINE THE
   AREA WITH THE AREA OF DISTURBANCE LINE AND USE THE
   INITIAL SWAMP TO REPRESENT CURRENT INSTALLED CONTROL
   MEASURES.

3. CONTROL MEASURES ARE NOT DRAWN TO SCALE AND
   LOCATIONS ARE APPROPRIATE.

4. VEGETATIVE TRANSCENDS WERE DONE BY THE SWAMP
   ADMINISTRATION FOR DESIGN PRIOR TO THE START OF
   CONSTRUCTION.

MARTIN/MARTIN CONSULTING ENGINEERS
12499 WEST COLFAX AVENUE,
LAKEWOOD, COLORADO 80215
MAIN  303.431.6100
MARTINMARTIN.COM

GREENWAY TRAIL - INITIAL
Erosion Control Plan - Initial

Project No./Code: M812-004
Sheet Number: 35

Call 811 Before You Dig!
NOTES:

1. The initial SWMP represents control measures that shall be installed prior to start of construction (any disturbance of existing vegetation).

2. Once disturbance of existing vegetation starts, the SWMP administrator for construction shall outline the area with the area of disturbance line and use the internal SWMP to represent current installed control measures.

3. Control measures are not drawn to scale and locations are approximate.

4. Vegetative transects were done by the SWMP administrator for design prior to the start of construction.

KEY MAP
SCALE: 1"=800'

MARTIN/MARTIN CONSULTING ENGINEERS
12499 WEST COLFAX AVENUE, LAKEWOOD, COLORADO 80215
MAIN 303.431.6100
MARTINMARTIN.COM

GREENWAY TRAIL
EROSION CONTROL PLAN - INITIAL

Project No./Code
MTW M812-004

As Constructed

Sheet Revisions

Date

Comments

Init.

Print Date Monday, July 10, 2023 3:35:30 PM
File Name: DESIGN - CONTROL PLAN - METAL
Sheet: 35
Scale: 1"=800'

LOCHBUIE
COLORADO

THIS PLAN SET SEALED ON THE COVER SHEET.

COUNTY OF DENVER, COLORADO
MARTIN/MARTIN, ENGINEERS
33322
7/21/2023
953489
NOTES:

1. The initial swp represents control measures that shall be installed prior to start of construction (any disturbance of existing vegetation).

2. Once disturbance of existing vegetation starts the swp administrator for construction shall outline the area with the area of disturbance line and use the interim swp to represent current installed control measures.

3. Control measures are not drawn to scale and locations are approximate.

4. Vegetative transplants were done by the swp administrator for design prior to the start of construction.

KEY MAP

SCALE: 1"=800'

TRAIL ALIGNMENT

FLAT HOMPLANS FLING 1 AND INTERIOR LTS
NOTES:

1. THE INTERNAL SWAMP REPRESENTS CONTROL MEASURES THAT SHALL BE INSTALLED AFTER GRADING ACTIVITIES START. PROPOSED INITIAL CONTROL MEASURES ARE LAYERED AND SHOWN GRAPHICALLY SCREENED BACK. AREAS OF INTERNAL STABILIZATION SHALL BE SHOWN ON THESE SHEETS.

2. ONCE DISTURBANCE OF EXISTING VEGETATION STARTS THE SWAMP ADMINISTRATOR FOR CONSTRUCTION SHALL OUTLINE THE AREA WITH THE AREA OF DISTURBANCE LINE AND USE THE INTERNAL SWAMP TO REPRESENT CURRENT INSTALLED CONTROL MEASURES.

3. CONTROL MEASURES ARE NOT DRAWN TO SCALE AND LOCATIONS ARE APPROXIMATE.

4. VEGETATIVE TRANSPLANTS WERE DONE BY THE SWAMP ADMINISTRATOR FOR DESIGN PRIOR TO THE START OF CONSTRUCTION.
NOTES:

1. THE INTERIM SWAMP REPRESENTS CONTROL MEASURES THAT SHALL BE INSTALLED AFTER GRADING ACTIVITIES START. PROPOSED INITIAL CONTROL MEASURES ARE LABELED AND SHOWN GRAPHICALLY SCREENED BACK. AREAS OF INTERIM STABILIZATION SHALL BE SHOWN ON THESE SHEETS.

2. ONCE DISTURBANCE OF EXISTING VEGETATION STARTS THE SWAMP ADMINISTRATOR FOR CONSTRUCTION SHALL OUTLINE THE AREA WITH THE AREA OF DISTURBANCE LINE AND USE THE INTERIM SWAMP TO REPRESENT CURRENT INSTALLED CONTROL MEASURES.

3. CONTROL MEASURES ARE NOT DRAWN TO SCALE AND LOCATIONS ARE APPROXIMATE.

4. VEGETATIVE TRANSMITS WERE DONE BY THE SWAMP ADMINISTRATOR FOR GROWTH PRIOR TO THE START OF CONSTRUCTION.
NOTES:

1. THE INTERIM SWAMP REPRESENTS CONTROL MEASURES THAT SHALL BE INSTALLED AFTER GRADE ACTIVITIES START. PROPOSED INTERIM CONTROL MEASURES ARE LABELED AND SHOWN GRAPHICALLY SCREENED BACK. AREAS OF INTERIM STABILIZATION SHALL BE SHOWN ON THESE SHEETS.

2. ONCE DISTURBANCE OF EXISTING VEGETATION STARTS THE SWAMP ADMINISTRATOR FOR CONSTRUCTION SHALL OUTLINE THE AREA WITH THE AREA OF DISTURBANCE LINE AND USE THE INTERIM SWAMP TO REPRESENT CURRENT INSTALLED CONTROL MEASURES.

3. CONTROL MEASURES ARE NOT DRAWN TO SCALE AND LOCATIONS ARE APPROXIMATE.

4. VEGETATIVE TRANSPORTS WERE DONE BY THE SWAMP ADMINISTRATOR FOR DESIGN PRIOR TO THE START OF CONSTRUCTION.

KEY MAP
SCALE: 1"=800'
MARCH LINE STA 54+50 SEE SHEET 44

NOTES:

1. THE INTERIM SWMP REPRESENTS CONTROL MEASURES THAT SHALL BE INSTALLED AFTER GRADING ACTIVITIES START. PROPOSED INITIAL CONTROL MEASURES ARE LABELED AND SHOWN GRAPHICALLY SCHEDULED IMP. AREAS OF INTERIM STABILIZATION SHALL BE SHOWN ON THESE SHEETS.

2. ONCE DISTURBANCE OF EXISTING VEGETATION STARTS THE SWMP ADMINISTRATOR FOR CONSTRUCTION SHALL OUTLINE THE AREA WITH THE AREA OF DISTURBANCE LINE AND USE THE INTERIM SWMP TO REPRESENT CURRENT INSTALLED CONTROL MEASURES.

3. CONTROL MEASURES ARE NOT DRAWN TO SCALE AND LOCATIONS ARE APPROXIMATE.

4. VEGETATIVE TRANSPLANTING WERE DONE BY THE SWMP ADMINISTRATOR FOR DESIGN Prior TO THE START OF CONSTRUCTION.

KEY MAP

SCALE: 1"=800'

---

This plan set sealed on the cover sheet.
NOTES:

1. THE FINAL SWMP SITE MAPS SPECIFY THE SOIL CONDITIONING, SEEDING AND WILDFLOW REQUIREMENTS FOR THE AREAS ONCE SALVAGED SOILS IS
   PLACED AND GRADES APPROVED. THE REQUIREMENTS OF THE PLANS
   ARE BASED ON DECISIONS THROUGH THE PROJECT DEVELOPMENT
   PROCESS AND SPECIFIC SITE CONDITIONS IDENTIFIED.

2. ONCE AN AREA HAS BEEN PERMANENTLY STABILIZED THE SWMP
   ADMINISTRATOR FOR CONSTRUCTION SHALL IDENTIFY THE AREA ON
   THE PLANS AND DATE WHEN THE WORK WAS COMPLETED.

3. CONTROL MEASURES SHOWN ARE FROM EITHER THE INITIAL OR INTERIM
   SWMP SHEETS AND MAY REMAIN BASED ON THE REVIEW WITH THE
   CDOT REGIONAL POLLUTION CONTROL MANAGER AND THE ENGINEER.

4. CONTROL MEASURES ARE NOT DRAWN TO SCALE AND LOCATIONS ARE
   APPROXIMATE.

5. VEGETATIVE TRANSCENDS WERE DONE BY THE SWMP ADMINISTRATOR FOR
   DESIGN PRIOR TO THE START OF CONSTRUCTION.
NOTES:

1. THE FINAL SWMP SITE MAPS SPECIFY THE SOIL CONDITIONING, SEEDING AND MULCH REQUIREMENTS FOR THE AREAS ONCE SALVAGED TOPSOIL IS PLACED AND GRADES APPROVED. THE REQUIREMENTS OF THE PLANS ARE BASED ON DECISIONS THROUGH THE PROJECT DEVELOPMENT PROCESS AND SPECIFIC SITE CONDITIONS IDENTIFIED.

2. ONCE AN AREA HAS BEEN PERMANENTLY STABILIZED THE SWMP ADMINISTRATOR FOR CONSTRUCTION SHALL IDENTIFY THE AREA ON THE PLANS AND DATE WHEN THE WORK WAS COMPLETED.

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NOTES:

1. THE FINAL SWAMP SITE MAPS SPECIFY THE SOIL CONDITIONING, SEEDING
   AND MULCH REQUIREMENTS FOR THE AREAS ONCE SALVAGED TOPSOIL IS
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   PLANS AND DATE WHEN THE WORK WAS COMPLETED.

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   SWAMP SHEETS AND MIGHT REMAIN BASED ON THE DECISIONS OF THE
   COOT REGIONAL POLLUTION CONTROL MANAGER AND THE ENGINEER.

4. CONTROL MEASURES ARE NOT DRAWN TO SCALE AND LOCATIONS ARE
   APPROXIMATE.

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   DESIGN PRIOR TO THE START OF CONSTRUCTION.
NOTES:

1. THE FINAL SWAP SITE MAPS SPECIFY THE SOIL CONDITIONING, SEEDING AND MULCH REQUIREMENTS FOR THE AREAS. ONGOING MAINTENANCE IS PLANNED AND GRADES APPROVED. THE REQUIREMENTS OF THE PLANS ARE BASED ON DECISIONS THROUGH THE PROJECT DEVELOPMENT PROCESS AND SPECIFIC SITE CONDITIONS IDENTIFIED.

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4. CONTROL MEASURES ARE NOT DRAWN TO SCALE AND ARE APPROXIMATE.

5. VEGETATIVE TRANSPLANTS WERE DONE BY THE SWAP ADMINISTRATOR FOR DESIGN PRIOR TO THE START OF CONSTRUCTION.
NOTES:

1. The final SWMP site maps specify the soil conditioning, seeding, and mulch requirements for the areas once salvaged topsoil is placed and approved. The requirements of the plans are based on decisions through the project development process and specific site conditions identified.

2. Once an area has been permanently stabilized, the SWMP administrator for construction shall identify the area on the plans and date when the work was completed.

3. Control measures shown are from either the initial or interim SWMP sheets and might remain based on the review with the SWMP regional pollution control manager and the engineer.

4. Control measures are not drawn to scale and locations are approximate.

5. Vegetative transplants were done by the SWMP administrator for design prior to the start of construction.
NOTES:

1. The final grading site maps specify the soil conditioning, seeding and mulch requirements for the areas once salvaged topsoil is placed and gradation approved. The requirements of the plans are based on decisions through the project development and specific site conditions identified.

2. Once an area has been permanently stabilized, the SWMP administrator for construction shall identify the area on the plans and date when the work was completed.

3. Control measures shown are from either the initial or interim SWMP sheets and weight remain based on the review with the Regional Pollution Control Manager and the Engineer.

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4. CONTROL MEASURES ARE NOT DRAWN TO SCALE AND LOCATIONS ARE APPROXIMATE.

5. VEGETATIVE TRANSPLANTS WERE DONE BY THE SWAPP ADMINISTRATOR FOR DESIGN PRIOR TO THE START OF CONSTRUCTION.
## Trail Tabulation

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Description</th>
<th>Unit</th>
<th>QTY</th>
</tr>
</thead>
<tbody>
<tr>
<td>206-01000</td>
<td>Bed Course Material (Fine Aggregate)</td>
<td>CY</td>
<td>8</td>
</tr>
<tr>
<td>304-06007</td>
<td>Aggregate Base Course (Class 6)</td>
<td>CY</td>
<td>630</td>
</tr>
<tr>
<td>506-00206</td>
<td>Riprap (6 inch)</td>
<td>CY</td>
<td>0.5</td>
</tr>
<tr>
<td>514-00000</td>
<td>Pipe Railing</td>
<td>LF</td>
<td>30</td>
</tr>
<tr>
<td>608-00006</td>
<td>Concrete Sidewalk (6 inch)</td>
<td>SY</td>
<td>4590</td>
</tr>
<tr>
<td>608-00100</td>
<td>Concrete Curb Ramp</td>
<td>SY</td>
<td>33</td>
</tr>
<tr>
<td>608-00105</td>
<td>Detectable Warning</td>
<td>SF</td>
<td>60</td>
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<tr>
<td>609-20010</td>
<td>Curb Type 2 (Section B)</td>
<td>LF</td>
<td>74</td>
</tr>
<tr>
<td>609-22021</td>
<td>Curb, Gutter and Sidewalk Type 2 (Section MS)</td>
<td>LF</td>
<td>44</td>
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<tr>
<td>609-24002</td>
<td>Gutter Type 2 (2 foot)</td>
<td>LF</td>
<td>432</td>
</tr>
</tbody>
</table>

THIS PLAN SET SEALED ON THE COVER SHEET.
STEEL RAILING NOTES

1. ALL STRUCTURAL STEEL SHALL BE A572. UNLESS NOTED OTHERWISE, ALL STEEL RAILS AND POSTS SHALL BE ASTM A500 GRADE B.

2. THREADED ANCHORS SHALL BE EPOXY GRouted INTO TOP OF WALL USING MLI-MHE 500-60 ANCHORAGE SYSTEM OR ENGINEER APPROVED EQUAL. 3/8" MINIMUM ENGROUTMENT DEPTH SHALL BE THAT RECOMMENDED BY GRout MANUFACTURER TO DEVELOP FULL STRENGTH OF GRout.

3. ALL RAILING COMPONENTS SHALL BE FABRICATED AND INSTALLED WITH POSTS PLUMB AND RAILS TRUE TO LINE IN ACCORDANCE WITH THE PLANS.

4. ALL WELDS SHALL BE GROUND SMOOTH AND ALL CUT EDGES AND WATERS GROUND TO A SLIGHT BEVEL.

5. FRAME CUTTING WILL NOT BE PERMITTED.

6. ALL WELDS SHALL BE 1/4" FILLET MINIMUM UNLESS OTHERWISE NOTED.

7. ALL STRUCTURAL STEEL AND BOLT ASSEMBLIES SHALL BE GALVANIZED IN ACCORDANCE WITH SECTION 509.23 OF THE GORT STANDARD SPECIFICATIONS.

8. SHOP DRAWINGS FOR RAILING SHALL BE SUBMITTED IN ACCORDANCE WITH SECTION 105 OF THE GORT STANDARD SPECIFICATIONS.

STEEL RAILING AT STATION 33+00

STEEL RAILING AT STATION 60+50

BASE PLATE DETAIL
## TABULATION OF EARTHWORK

**SUMMARY OF EARTHWORK QUANTITIES**

<table>
<thead>
<tr>
<th>PAY QUANTITIES</th>
<th>CUBIC YARDS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>UNCLASSIFIED EXCAVATION (COMPLETE IN PLACE)</strong></td>
<td></td>
</tr>
<tr>
<td>TRAIL REGULAR UNCLASSIFIED EXCAVATION QUANTITY</td>
<td>950</td>
</tr>
<tr>
<td>TOTAL QUANTITY FOR UNCLASSIFIED EXCAVATION MATERIAL (COMPLETE IN PLACE) PAY QUANTITY</td>
<td>950</td>
</tr>
<tr>
<td><strong>TOPSOIL</strong></td>
<td></td>
</tr>
<tr>
<td>TOTAL TOPSOIL PAY QUANTITY</td>
<td>1105</td>
</tr>
</tbody>
</table>

**FOR INFORMATION ONLY:**

<table>
<thead>
<tr>
<th>PAY QUANTITIES</th>
<th>CUBIC YARDS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EMBANKMENT MATERIAL (COMPLETE IN PLACE)</strong></td>
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<tr>
<td>ROADWAY REGULAR EMBANKMENT QUANTITY</td>
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</tr>
<tr>
<td>TOTAL FOR EMBANKMENT MATERIAL (COMPLETE IN PLACE)</td>
<td>140</td>
</tr>
</tbody>
</table>

**FOR INFORMATION ONLY - EARTHWORK BALANCE**

<table>
<thead>
<tr>
<th>PAY QUANTITIES</th>
<th>CUBIC YARDS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EMBANKMENT MATERIAL (COMPLETE IN PLACE) (CUT)</strong></td>
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</tr>
<tr>
<td>UNCLASSIFIED EXCAVATION</td>
<td>950</td>
</tr>
<tr>
<td>TOTAL UNCLASSIFIED EXCAVATION</td>
<td>950</td>
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<tr>
<td>TOTAL MATERIAL AVAILABLE FROM EXCAVATION</td>
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</tr>
<tr>
<td><strong>EMBANKMENT MATERIAL (COMPLETE IN PLACE) (FILL)</strong></td>
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<tr>
<td>EMBANKMENT MATERIAL</td>
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<tr>
<td>TOTAL MATERIAL NEEDED FOR EMBANKMENTS</td>
<td>140</td>
</tr>
</tbody>
</table>

**BALANCE**

<table>
<thead>
<tr>
<th>PAY QUANTITIES</th>
<th>CUBIC YARDS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TOTAL EXCESS MATERIAL</strong></td>
<td></td>
</tr>
<tr>
<td>TOTAL MATERIAL AVAILABLE FROM EXCAVATIONS LESS TOTAL MATERIAL NEEDED FOR EMBANKMENT</td>
<td>810</td>
</tr>
</tbody>
</table>

**EARTHWORK NOTES:**

1. **Earthwork Numbers Utilize Compaction Factor of 1.0.**
2. Cross sections reflect existing grades without adjustment for topsoil stripping and stockpile.
3. Imported material shall meet the requirements as stated in the geotechnical evaluation prepared by Rocksoil Consulting Group, Inc. on October 21, 2021.
4. Overbulld required to meet the earthwork specifications is required but is not included or calculated in this tabulation.
5. Removal of existing topsoil is paid for as cleaning and grubbing.
6. The cost for handling unsuitable material away and furnishing suitable material will not be paid for separately.
This plan set sealed on the cover sheet.

Key Map

Scale: 1"=800'

TRAIL ALIGNMENT

See Trail Detail 2 Sheet 08

Irrigation Main
RCA=5098.98
ACP=5047.38
ACP Intake (33") 
Strong Flow, unable to give pipe size.

Existing Irrigation Canal Pipe

Power Tower

Multi-use Concrete Path

2" Concrete Pan

4½", 1" Depth Interim Sumps 0=6"

MULTI-USE CONCRETE PATH

DRAWN BY:

Martin/Martin Consulting Engineers

12499 West Colfax Avenue,
Lakewood, Colorado 80215

Main 303.431.6100
MartinMartin.com

7/21/2023

Call 811 Buried Lines In Advance

Prior To All Work Of Excavation And
Development Of Underground Utilities

In The State of Colorado, It Is A Violation Of
Civil Law To Excavate Without Prior Notification

To Call 811, The Safe Dig Service. Call Before
Excavation. Check With Your Local Government.

This Plan Set Sealed on the Cover Sheet.
GREENWAY TRAIL
TRAIL PLAN AND PROFILES

As Constructed

Project No./Code
MTW-812-004

Sheet 85

Print Date: Monday, July 10, 2023 4:40:20 PM

Scale: 1"=80'0"
NOTES:
1. Extents of survey boundary, design elevations outside of the boundary are based on assumed existing curb.
Flowline elevations, contractor to verify elevations of tie-in points and inform engineer of differences greater than 0.3' from assumed elevations. Trail to be accessible and curb ramp to match ADA details.

KEY MAP
SCALE: 1"=80'
KEY MAP
SCALE: 1"=800'

This plan set sealed on the cover sheet.

Colorado Licensed
7/21/2023

This plan set sealed on the cover sheet.

Call 811 24 hours a day to locate any underground utility.

Important: Always call 811 before digging.

Martin/Martin, Inc.
12499 West Colfax Avenue, Lake Wood, Colorado 80215
Main 303.431.6100
MartinsMart.com

Martin/Martin Consulting Engineers

As Constructed
UTILITY PLAN
Project No./Code
MTW M812-004

Sheet Revisions
Date
Comments
Init.

0000

Sheet Number 75
EXISTING IRRIGATION MANHOLE
NOT TO SCALE

REMOVE EXISTING ~9" MANHOLE FRAME AND COVER

EXISTING FLAT TOP MANHOLE LID

HEAVY DUTY GENERAL FOUNDRIES FRAME AND COVER, PRODUCT NO. 12665 (OR APPROVED EQUAL) WITH 6" HEIGHT AND ML-93 LOAD RATING
12" MIN CONCRETE COLLAR

TO BE FLUSH WITH ADJACENT PAVEMENT

6" COTTON CLASS B OR EQUIVALENT CONCRETE TRAIL WITH FIREPROOF REINFORCEMENT

EXISTING MANHOLE BASE

INSTALL CONSEAL CS-100 RUBBER SEALANT (OR APPROVED EQUAL) ON JOINT BEFORE SETTING MANHOLE LID ON BASE. WRAP EXTERIOR OF JOINT WITH CONSEAL CS-212 JOINT WRAP (OR APPROVED EQUAL)

EXISTING FLAT TOP MANHOLE LID

ADJUSTED IRRIGATION MANHOLE
NOT TO SCALE

EXISTING MANHOLE BASE

4" COTTON CLASS B AGGREGATE BASE COURSE
### TABULATION OF SIGNS

<table>
<thead>
<tr>
<th>SIGN NO</th>
<th>SIGN CODE</th>
<th>SIGN PANEL SIZE</th>
<th>BACKGROUND COLOR</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>W11-15</td>
<td>8x15 30 x 36</td>
<td>YELLOW</td>
<td>SAME POST AS SIGN NO. 1</td>
</tr>
<tr>
<td>2</td>
<td>W15-89</td>
<td>24 x 12</td>
<td>YELLOW</td>
<td>SAME POST AS SIGN NO. 3</td>
</tr>
<tr>
<td>3</td>
<td>W11-15</td>
<td>30 x 36</td>
<td>YELLOW</td>
<td>SAME POST AS SIGN NO. 5</td>
</tr>
<tr>
<td>4</td>
<td>W15-89</td>
<td>24 x 12</td>
<td>YELLOW</td>
<td>SAME POST AS SIGN NO. 7</td>
</tr>
<tr>
<td>5</td>
<td>R1-2</td>
<td>30 x 36 x 36</td>
<td>WHITE</td>
<td>SAME POST AS SIGN NO. 8</td>
</tr>
<tr>
<td>6</td>
<td>R5-11</td>
<td>30 x 34</td>
<td>WHITE</td>
<td>SAME POST AS SIGN NO. 10</td>
</tr>
<tr>
<td>7</td>
<td>R5-11</td>
<td>30 x 34</td>
<td>WHITE</td>
<td>SAME POST AS SIGN NO. 13</td>
</tr>
<tr>
<td>8</td>
<td>W11-15</td>
<td>30 x 36</td>
<td>YELLOW</td>
<td>SAME POST AS SIGN NO. 15</td>
</tr>
<tr>
<td>9</td>
<td>W15-89</td>
<td>24 x 12</td>
<td>YELLOW</td>
<td>SAME POST AS SIGN NO. 18</td>
</tr>
<tr>
<td>10</td>
<td>R1-2</td>
<td>30 x 36 x 36</td>
<td>WHITE</td>
<td>SAME POST AS SIGN NO. 20</td>
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<tr>
<td>11</td>
<td>R5-11</td>
<td>30 x 34</td>
<td>WHITE</td>
<td>SAME POST AS SIGN NO. 22</td>
</tr>
</tbody>
</table>

**PROJECT TOTALS**

|                      | 12 | 144 | 0 | 106 | 0 | 0 |

---

### TABULATION OF PAVEMENT MARKINGS

<table>
<thead>
<tr>
<th>STATION (MWT 28FT. HCL)</th>
<th>LOCATION</th>
<th>EDGE WHITE SOLID 2 INCH</th>
<th>LANE WHITE SOLID 6 INCH</th>
<th>CENTER YELLOW SOLID 8 INCH</th>
<th>SHOULDER WHITE SOLID 6 INCH</th>
<th>YIELD LINE WHITE YIELD TRIANGLES (L FT.)</th>
<th>ARROW (SQ. FT.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>STA 43+14 TO STA 44+00</td>
<td>VALDAH AVENUE</td>
<td>112</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>STA 44+08</td>
<td>STATE ROAD AVENUE</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>STA 43+56</td>
<td>VALDAH AVENUE</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>STA 44+17</td>
<td>VALDAH AVENUE</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>STA 8+05</td>
<td>WCR 37</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
</tr>
</tbody>
</table>

**TOTAL LINEAR FEET**

|                           | 0 | 0 | 0 | 160 | 0 | 0 |

**TOTAL SQUARE FEET**

|                           | 0 | 0 | 0 | 112 | 160 | 0 |

**PROJECT TOTALS**

|                           | 0 | 128 |
# Tabulation of Construction Traffic Control

<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>DESCRIPTION</th>
<th>UNIT</th>
<th>QTY</th>
</tr>
</thead>
<tbody>
<tr>
<td>630-00007</td>
<td>TRAFFIC CONTROL INSPECTION</td>
<td>DAY</td>
<td>12</td>
</tr>
<tr>
<td>630-00012</td>
<td>TRAFFIC CONTROL MANAGEMENT</td>
<td>DAY</td>
<td>30</td>
</tr>
<tr>
<td>630-80331</td>
<td>BARRICADE (TYPE 3 F-A) (TEMPORARY)</td>
<td>EA</td>
<td>1</td>
</tr>
<tr>
<td>630-80341</td>
<td>CONSTRUCTION TRAFFIC SIGN (PANEL SIZE A)</td>
<td>EA</td>
<td>15</td>
</tr>
<tr>
<td>630-80380</td>
<td>TRAFFIC CONE</td>
<td>EA</td>
<td>30</td>
</tr>
</tbody>
</table>
THIS PLAN SET SEALED ON THE COVER SHEET.

SCALES:

HORIZ. 1"=20' VERT. 1"=4'
SLT FENCE

SECTION A-A

NOTES:
1. GROTTEX FENCE SHALL BE ATTACHED TO WIRE POSTS WITH THREE OR MORE STAPLES PER POST. STAPLES SHALL BE HEAVY DUTY WIRE AND AT LEAST 2 INCH LONG.
2. WIRE POST SHALL BE 1 IN X 4 IN X 6 FT.
3. THE PAY ITEM NUMBER FOR SLT FENCE (LF) IS 200-0002.

END SECTION DETAIL (PLAN VIEW)

NOTES:
1. THE END OF THE SLT FENCE FABRIC SHALL BE WRAPPED AROUND A WOODEN POST AND TIED DOWN, THEN SECURED ALONG THE POST WITH A HEAVY DUTY WIRE STAPLES AT LEAST 1 INCH LONG.
2. POSTS SHALL BE TIGHTLY ATTACHED WITH NO GAPS TO PREVENT POTENTIAL FLOW THROUGH OF SEEDING AT GATE.

SLT FENCE APPLICATIONS

ELEVATION VIEW

SID VIEW

SLT FENCE (REINFORCED)
CURB RAMPS GENERAL NOTES:

1. In new construction or full-depth reconstruction, provide a separate curb ramp for each change of pedestrian street crossing. Curb ramps shall be constructed within the width of the pedestrian street crossing on sidewalks or medians, as shown on the construction plans.

2. Alternations are defined as changes to an existing roadway that affect pedestrian access, circulation, or use. Alternations include, but are not limited to, the installation of pedestrian ramps, additional curb ramps, changes to street pavement, changes to sidewalks, new street crossings, changes to the pedestrian crossing, and changes to the street surface.

3. A walkway shall be provided as a fixed surface adjacent to a curb ramp or turning space, without raised obstructions, that could be inadvertently traversed by a user who is visually impaired.

4. In alterations, where an existing physical constraint prevents providing a separate curb ramp for each pedestrian street crossing, a single diagonal curb ramp, with an entrance point at the face of the pavement, shall be provided in accordance with the following:
   - The curb ramp shall be at least 48 inches in width.
   - The curb ramp shall be constructed on the side of the street where the sidewalk is least obstructed.
   - The curb ramp shall be at least 6 inches wide and 12 inches deep.
   - The curb ramp shall be constructed of a material that is durable and slip-resistant.

5. Where pedestrian access to buildings or streets is provided by a sidewalk, a curb ramp is not required to extend to its full depth unless the sidewalk has a step or other obstruction.

CURB RAMPS PAY AREAS:

1. On streets where there is a median strip, a curb ramp shall be provided at each entrance point of the sidewalk.

2. In alterations, where an existing physical constraint prevents providing a separate curb ramp for each pedestrian street crossing, a single diagonal curb ramp, with an entrance point at the face of the pavement, shall be provided in accordance with the following:
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GENERAL NOTES & PAY AREAS:

SLOPE TABLE

<table>
<thead>
<tr>
<th>PERCENT SLOPE</th>
<th>1.00</th>
<th>2.00</th>
<th>3.00</th>
<th>6.00</th>
<th>12.00</th>
<th>24.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE LIMITS</td>
<td>1/4</td>
<td>1/2</td>
<td>1/3</td>
<td>1/4</td>
<td>1/8</td>
<td>1/6</td>
</tr>
</tbody>
</table>

CURB RAMPS SPECIFICATIONS:

1. Curb ramps shall be constructed of concrete, asphalt, or other durable material.

2. Curb ramps shall be constructed to a minimum width of 4 feet and a minimum depth of 3 feet.

3. Curb ramps shall be constructed to a minimum slope of 1:4 (25% grade).

4. Curb ramps shall be constructed with a minimum finish grade of 70 feet.

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CURB RAMPS

STANDARD PLAN NO.
M-608-1

Sheet No. 3 of 10

GREENWAY TRAIL

As Constructed

Project No./Code
MTF M812-004

M-608-1

23937

Sheet Number 111
COMBINATION CURB RAMP NOTES:

1. The curb ramp placement shown are typical configurations only and not indicative of all.

2. If the curb ramp construction may be acceptable as long as they comply with the
   criteria in the standards, and are approved by the Engineer.

3. If the ramp and turning space cros-s-slope - 2.00 typical at crossings without
   3-ft. stops or stop
   control, or when a clear, under-vehicle can penetrate through the intersection
   without
   obstruction, the turning space cros-s-slope should be equal to the roadway
   surface.

4. Where it is acceptable for a ramp on turning space cros-s-slope to exceed 3.05 and
   match
   the roadway, the ramp above the turning space may be warped to rise to the
   adjoining
   sidewalk. The transition to the sidewalk cros-s-slope may be made evenly over
   the length of the ramp and minimize warping. The rate of change in cros-s-slope
   may not
   exceed 3.05 per linear foot.

COMBINATION CURB RAMPS TYPICAL CONFIGURATIONS
DETECTABLE WARNING SURFACE DETAILS

SECTION VIEW OF DETECTABLE WARNING SURFACE PLATE

SECTION VIEW FOR PARALLEL CURB RAMP TYPES

SECTION VIEW FOR PERPENDICULAR CURB RAMP TYPES

ELEVATION VIEW OF SINGLE TRUNCATED DOME

ELEVATION VIEW OF TRUNCATED DOME FOR DETECTABLE WARNING PLATE

PLAN VIEW OF DETECTABLE WARNING SURFACE PLATE

CURB RAMPS

STANDARD PLAN NO.
M-608-1

Standard Sheet No. 10 of 10

Issued by the Project Development Branch: July 31, 2019

MARTIN CONSULTING ENGINEERS
12499 WEST COLFAX AVENUE, LAKEWOOD, COLORADO 80215
MAIN  303.431.6100  MARTIN.COM
**GENERAL NOTES**

1. ON PARADEWAY CURVES, WITH A RADIUS OF LESS THAN 75 FT. CURB AND GUTTERS ARE TO BE PLACED ON THE CURVEuxuNG THE NOTES. UNLESS OTHERWISE NOTED, DRAINAGE FOR THE PLANS A SHALL BE NO LESS THAN 12.75 FT.  

2. CONCRETE SHALL BE CLASS B.  

3. PROFICIENCY GUIDE FOR CURB AND GUTTERS SHALL BE LOCATED AT THE PLATE LINE.  

4. CURB TYPE A-GUTTER MAY BE USED IN ROOMS OF CURB AND GUTTER TYPE 2.  

5. GUTTER CROSS SECTIONS MAY BE ADDED TO FACILITATE DRAINAGE FOR PROFICIENCY GUIDES AS SHOWN ON THE PLAN.  

6. THICKNESS OF CURB AND GUTTER SECTION SHALL BE BASED ON CONCRETE PAVEMENT THICKNESS SHOWN ON THE PLAN. CURB AND GUTTER SHALL BE CLASS C If CONCRETE IS PLACED NON-CONTINUOUSLY. WITH CONCRETE PAVEMENT.  

7. INCREASE EXPANSION JOINTS TO 10 AT LOCATIONS SHOWN ON THE PLAN.  

8. HORIZONTAL SLOPE SHAPE IS 3%.  

---

**CONCRETE SIDEWALK**

**SIDEWALK EXPANSION JOINT**

**GREENWAY TRAIL**

**STANDARD PLAN NO. M-609-1**

**Project No./Code:** MTF W812-004  
**Sheet Number:** 115
**TUBULAR STEEL POSTS**
(See Sheet 2 for P1 and P2 Post Installations)

**SIGNPOST SELECTION GUIDE (90 MPH WIND LOAD DESIGN)**
(For Socket System and Slip Base Installations using P1, P2 or P3 Posts)

**POST NOTES**
The post may be pre-finished with a stainless steel to the post, or an approved mounting clamp may be used to avoid the sign to be posted if the post is pre-finished. The posts shall be spaced at 60 feet from the top of the post.

**CHART NOTES**
1. Typical post mounting heights from ground to bottom of sign frame are 1.25, 2.5, 3.75, and 5 ft. Other heights may be required when signs are mounted on stopper pole or cut slopes.
2. For signs mounted on two posts, the minimum distance between posts shall be 2 ft and the horizontal distance shall be 10 ft. Distance from post to edge of sign frame shall be 3 to 4 ft. When backing off, posts shall be installed with a minimum of 2 inches to the edge of the backing off.
3. All sign panels greater than 8 inches in length must be installed on two posts to prevent turning.
4. The post shown is the minimum size required. Two posts may be substituted where the post is indicated for posts may be substituted for p3 posts when directed by the engineer.
5. Use R-8 frame only for sign posts.

**POST SPECSIFICATIONS**

<table>
<thead>
<tr>
<th>POST SIZE</th>
<th>WALL THICKNESS</th>
<th>MATERIAL</th>
<th>COATING</th>
<th>FRAME FOR SIGNS</th>
</tr>
</thead>
<tbody>
<tr>
<td>P 3.500”</td>
<td>0.300”</td>
<td>ALUM 6063 (0.5” 0.75” with 3.00” Width)</td>
<td>POWDER COATING</td>
<td>2.500”</td>
</tr>
<tr>
<td>P 3.000”</td>
<td>0.300”</td>
<td>ALUM 6063 (0.5” 0.75” with 3.00” Width)</td>
<td>POWDER COATING</td>
<td>2.500”</td>
</tr>
</tbody>
</table>

**STANDARD PLAN NO.**

S-614-8

**GREENWAY TRAIL**

S-614-08

**Project No./Code**

MTF M012-004

**Project Sheet Number**

23387

**Issue By**
Traffic & Safety Engineering
KMB

**Prepared**

Traffic & Safety Engineering Branch
July 31, 2006