AGENDA
PLANNING COMMISSION
July 2, 2024
6:00 p.m.

PLEASE NOTE THE NEW 6PM TIME FOR THE MEETING

The Planning Commission meeting will be held in-person and remotely, and members of the public wishing to attend may view the Meeting by visiting the Town's website: https://www.superiorcolorado.gov

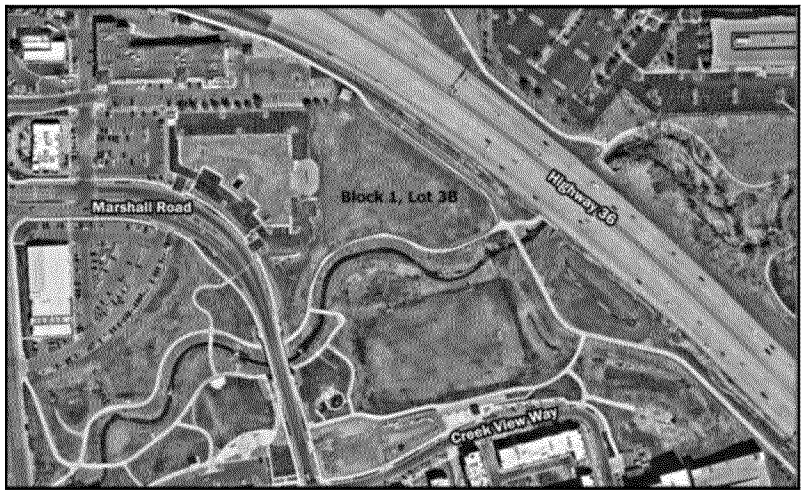
The Planning Commission regular meeting recording will be posted subsequently on the Town's website.

1. Call to Order a regular meeting of the Planning Commission

2. Preliminary Matters
    a. Roll Call
    b. Public Comment on Non-Agenda Items (limit 5 min./person)

3. Approval of Minutes of Planning Commission
    a. May 21, 2024

4. Public Hearing to review and comment on the Final Development Plan for Everhome Suites, Block 1, Lot 3B.
    a. The request proposes a four-story, 60 thousand square foot extended stay hotel with 114 guest rooms on a 2-acre lot. Additional improvements to the site would include a 114-space parking lot, an amenity space, landscaping, drainage and water quality infrastructure



5. Planning and Building Update

6. Adjournment

PLANNING COMMISSION
MEETING MINUTES

Regular Meeting
May 21st, 2024
Town Hall, 124 E. Coal Creek Drive
6:00 p.m.

1. **CALL TO ORDER A REGULAR MEETING OF THE PLANNING COMMISSION.**

Chair David Harper called the meeting to order at 6:00PM

2. **PRELIMINARY MATTERS**

a. ROLL CALL

Present:	Chair David Harper Commissioner Amanda Vaughan Commissioner Ryan Mojo Commissioner David Gross Commissioner Michael Barnes Commissioner Steve Witte
Absent:	Vice Chair Lonny Rose Commissioner Michael J Gordon
Others Present:	Planning and Building Director, Lisa Ritchie

b. PUBLIC COMMENT ON CONSENT AGENDA AND NON-AGENDA ITEMS

There was no public comment presented.

3. APPROVAL OF MINUTES OF PLANNING COMMISSION

a. April 9TH, 2024 MEETING MINUTES

MOTION: Commissioner Steve Witte moved to approve April 9th, 2024 Meeting Minutes, Seconded by Commissioner Ryan C. Mojo

VOTE: Motion carried 6 – 0

AYES: Chair David Harper, Commissioner Amanda Vaughan, Commissioner Ryan C. Mojo, Commissioner Steve Witte, Commissioner David Gross, Michael Barnes

NOES: None

4. Presentation – Strategic Housing Plan Update

a. The final Strategic Housing Plan draft is currently under development. Staff is presenting the anticipated structure of the plan requesting comment on Section 5, Objectives, Strategies, and Actions.

PLANNING COMMISSION RECOMMENDATIONS:

- Add "In new neighborhoods" to some of these, they may be fine in new neighborhoods, but are not interested in change in existing neighborhoods
- Overlap and redundancy – consolidate where we can
- Add "Cost" to the list of items
- Concern over density and height bonus, concern over impacts to neighborhoods with on-street parking
- Explore co-housing, or supportive housing programs that pair seniors or others with higher needs with others to help offset cost and assistance
- Remove establish thresholds for development types that could be approved administratively
- Programmatic goals related to access to transportation

5. Presentation – Comprehensive Plan Scope

a. Staff is presenting the Draft Comprehensive Plan scope for review by the Planning Commission. Where feasible, feedback from the Planning Commission may be included in the final scope presented to the Town Board.

6. Planning and Building Update

Staff updated the Planning Commission with the status of all current active development projects throughout the Town of Superior

7. ADJOURNMENT

Chair David Harper adjourned meeting at 8:13PM

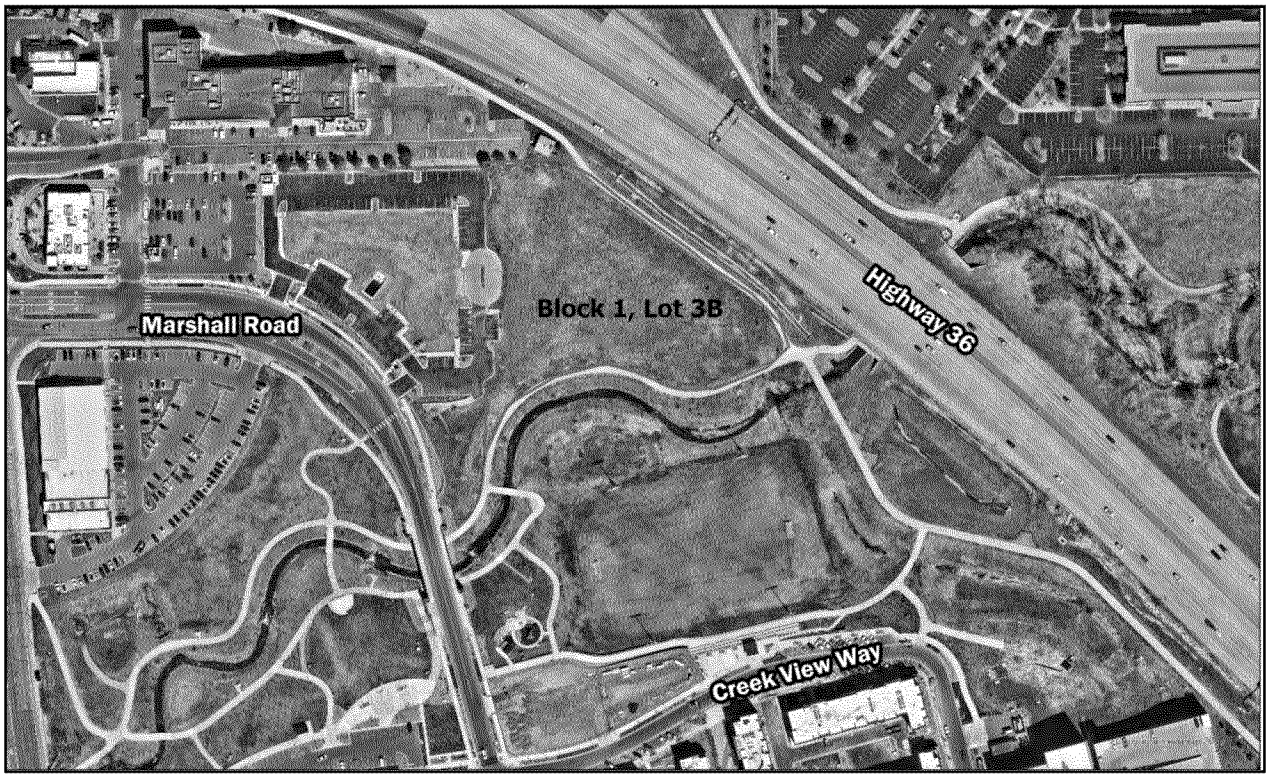
ITEM NO. 4

INFORMATION FOR MEETING
OF THE SUPERIOR PLANNING COMMISSION

AGENDA ITEM:	**Final Development Plan (FDP) for Superior Town Center, Lot 3B of Block 1 (Case No. FDP-2024-03)**
MEETING DATE:	**July 2, 2024**
PRESENTED BY:	**Geoffrey Weathers, Planner I**
PRESENTED FOR:	**Discussion and Recommendation**

Item:	FDP, Block 1, Lot 3B – Case No. FDP-2024-03
Applicant:	Krysta M. Houtchens, Entitlement and Engineering Solutions, Inc., on behalf of Everhome Suites
Existing Zoning:	Planned Development – Downtown Superior (Superior Town Center)
Location:	Lot 3B, Block 1 within Downtown Superior (north of Creek View Way, east of Marshall Rd)
Request:	FDP proposes a four-story, roughly 60,000 square foot extended stay hotel with 114 guest rooms on a 1.97-acre lot, including a parking lot, landscaping, drainage and water quality infrastructure.

VICINITY MAP:



SUMMARY:

The Applicant, Entitlement and Engineering Solutions, Inc., requests approval of a Final Development Plan (FDP) for Block 1, Lot 3B of the Superior Town Center, located between Marshall Road and Highway 36, north of Creek View Way and Superior Commons Park.

FDP proposes a four-story, 57,972 square foot extended stay hotel with 114 guest rooms on a 1.97-acre lot. Additional improvements to the site would include a 114-space parking lot, an amenity space, landscaping, drainage and water quality infrastructure.

BACKGROUND:

The property is located within the Superior Town Center Planned Development (PD), originally approved in 2012. Subsequent amendments have been approved by the Town; however, this site has continued to be designated for a hotel use since the current configuration for Downtown was adopted with the first PD Amendment in 2013. The most significant change to the original conception for the lot came in 2016, when the Town approved a subdivision plat that divided the block into 2 lots, in conjunction with an FDP for the Element Hotel on the adjacent Lot 3A. This hotel was constructed and operational for a few years prior to being destroyed during Marshall Fire on December 30, 2021.

The site is located in the northern part of Downtown Superior and has exceptional proximity to Superior's multimodal transportation network, recreational resources, and retail destinations. The property abuts the Coal Creek and Highway 36 Trails along the full extent of its southern and

eastern frontages, providing local and regional recreational and mobility opportunities for walking and biking directly from the site. Coal Creek and Superior Commons Park border the site to the south, and the Mayhoffer-Singletree Trailhead to Boulder County Open Space is located only about a mile away. The site is a quarter mile walk to destinations such as Downtown Superior Main Street, Blue Sport Stable, the RTD Park and Ride, and Superior Marketplace, each of which can be accessed by bike or on foot without crossing a street.

This property is the only remaining lot within the PD to not have approval of a FDP.

PROPOSAL & FINAL DEVELOPMENT PLAN DETAILS:

The FDP for Everhome Suites proposes a single, four-story, 57,972 square foot hotel building on Lot 3B, Block 1 of Superior Town Center. This block is located a quarter mile north of Main Street, east of Marshall Road in Planning Area 1 of Superior Town Center. The plan proposes a 14,901 square foot building footprint with 51,575 square feet of the lot being impermeable surface and 19,428 square feet devoted to landscaping. The project includes a 114-stall parking lot, the vast majority of which is located on the east side of the building. An ADA compliant sidewalk provides pedestrian access to the site and buildings front, side and rear entrances from Marshall Road, the Lot 3A parking lot, and the US 36 Trail. The plans also include a 2,200 square foot partially covered, outdoor private amenity space with an artificial turf area, fire pits, grills, dining tables, lounge chairs, and string lighting.

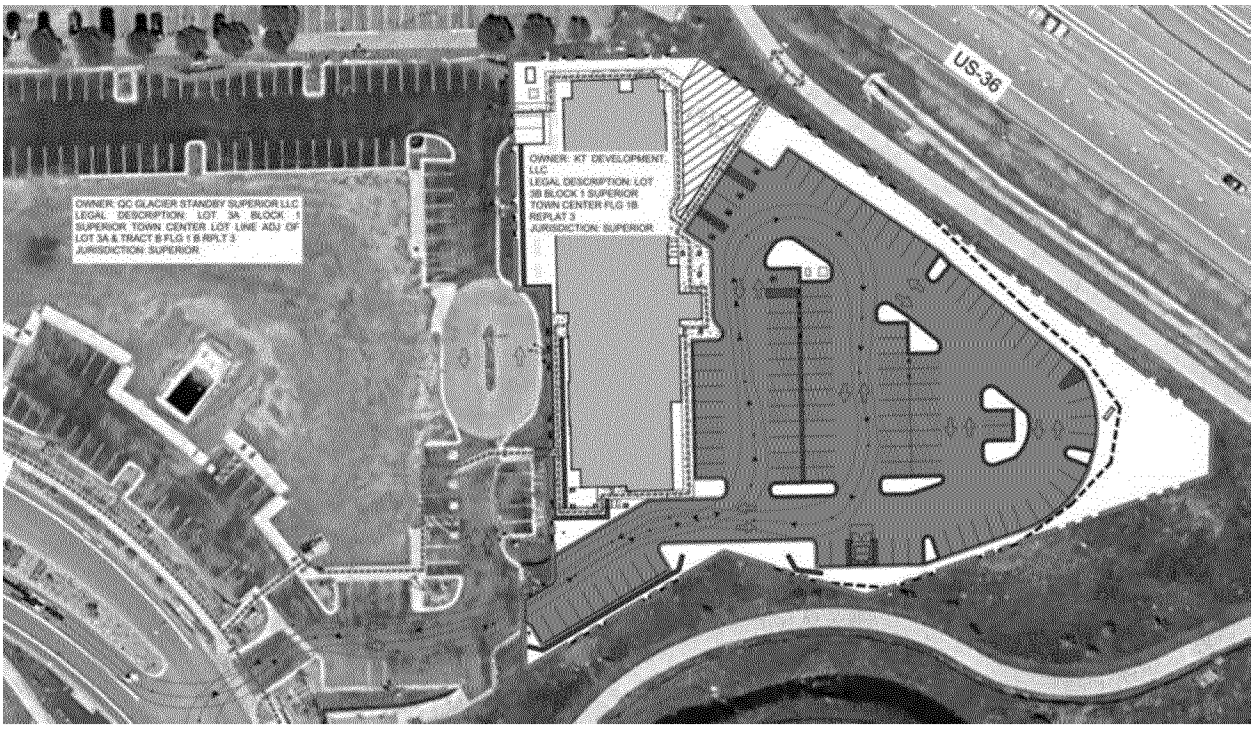


Figure 1 From Sheet P1.0 - Context Site Plan

Site Design, Setbacks, and Building Height

The application proposes a 57,972-hotel building on an 85,732 square foot (1.97 acres) lot. The rectangular building is 4-stories tall with equally dimensioned floors and total building coverage

area of 14,901 square feet (.34 acres), taking up 17% of the lot area. Hard surface or paving comprises 60% of the remaining lot or 51,575 square feet (1.18 acres), while 23% or 19,428 square feet (.45 acres) of the lot is landscaping. The Superior Town Center PD contains no lot coverage requirements.

The proposed building setbacks comply with requirements set out by the PD and do not encroach on any easements nor the 100-year floodplain area. The only setback requirement stipulated by the PD for this lot is a 10' minimum along the northern lot line. As proposed, the nearest horizontal distance from the north lot line to the building foundation is 12.8 feet. The proposed setbacks for the rest of the building are 46.2 feet on the south side, 314.3 feet on the east side, and 5.9 feet on the west side. The building's placement avoids conflict with both the sanitary sewer and trail easements that run along the eastern lot line as well as the floodplain boundary to the south. The orientation of the building also minimizes shading on the US 36 Bikeway just to the north of the site.

The PD allows for 3-6 story structures with a maximum height of 90 feet on this site. The proposal calls for a 4-story hotel with a maximum height of 56 feet, well below the maximum allowance. The proposed site design meets the PD requirements, and the application neither requires nor requests any exceptions for lot coverage, setbacks or building height.

Setbacks	**Minimum**	**Maximum**	**Proposed**
North	10'	None	12.8'
South	0' (Subject to Floodplain)	None	46.2'
East	0' (Subject to 20' Trail Easement)	None	314.3'
West	0'	None	5.9
Height	**Maximum**	**Stories**	
	90'	3-6	56' (4 story)

Parking

For a hotel use, the PD requires a single space per room key. The applicant proposes to provide 114 parking spaces, one for each room in the hotel. Citing the constraints of easements and the floodplain boundary, the applicant is requesting an exception to the Municipal Code Section 16-24-10(e)7, which stipulates that off-street parking stalls must be a minimum of 9 feet wide by 18 feet deep. The request is to reduce the width of 26 stalls (23% of the total 114 stalls) to 8.5 feet wide by 16 feet deep around the boundary of the parking lot on the southern and eastern sides of the site (see highlighted yellow area below). Additionally, the application proposes to reduce the depth of 27 9-foot-wide spaces to a depth of 16 feet (24% of the total 114 stalls) (see highlighted green area below). All of the spaces proposed for reduced size abut areas that can accommodate the overhang of a vehicle, and will continue to meet minimum width requirements for adjacent drive aisles. (Note that Staff has asked the applicant to confirm the exception request as the number of spaces appears to be inconsistent across the application documents.)

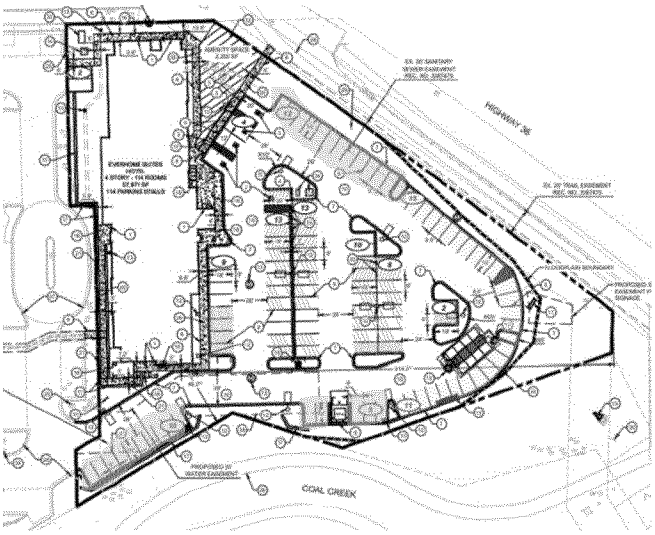


Figure 2 From FDP Sheet P1.1

The applicant is also requesting to provide a reduced number of Electric Vehicle (EV) capable parking stalls. Section CD103 of Section 18-9-20 of the Municipal Code requires parking lots for new commercial construction to provide a minimum 20% EV ready spaces, 20% EV capable spaces, and 10% EV installed spaces. An EV ready space is a parking space that is provided with one 40-amp, 208/2400-Volt dedicated branch circuit for EVSE that is terminated at a receptacle, junction box, or EVSE within the parking space; An EV capable space is a designated parking space that is provided with conduit sized for a 40-amp, 208/240-Volt dedicated branch circuit from a building electrical panel board to the parking space and with sufficient physical space in the same building electrical panel board to accommodate a 40-amp, dual-pole circuit breaker; and an EV installed space is a parking space with EVSE capable of supplying a 40-amp dedicated branch circuit rated at 208/240 Volt from a building electrical panel board.

The existing floodplain boundary and existing easement constraints in the parking lot prohibit EV infrastructure being installed in the perimeter stalls, therefore the applicant requests to provide only 1/3 of the required 24 EV capable stalls. As reflected in the table below, the applicant still meets the requirement for the EV installed and ready spaces:

	Required	Provided
EV Installed	12 (10% of 114 stalls)	12
EV Ready	24 (20% of 114 stalls)	24
EV Capable	24 (20% of 114 stalls)	8

Figure 3 From the Project Narrative

The PD also requires that bicycle parking should be provided in an amount equal to 10% of the required vehicular parking, with 1/3 of these provided in a covered environment. The proposal complies with the requirement, providing 12 total bike stalls, including 8 uncovered at the main building entrance and 4 covered at the south building entrance.

Traffic
A traffic study was submitted for the proposed hotel development. The study analysis projected 2043 peak hour level of service (LOS) for nearby intersections. The study demonstrates that future LOS near the site will be the same with or without the hotel development and concludes that the traffic generated by the hotel will not induce enough additional traffic to negatively impact traffic conditions at nearby intersections.

Pedestrian and Bicycle Access and Circulation
The Context Plan on Sheet P1.0 reflects ADA routes that provide pedestrian access to all the building entrances from Marshall Road to the south, Lot 3A to the west and US 36 Trail to the east. Because the access point from Marshall Road crosses private property not within right-of-way, staff is requiring the applicant enter into a joint access and maintenance agreement that ensures emergency, vehicular, pedestrian and ADA access is maintained. Staff will continue to work with the applicant to ensure the language is sufficient prior to consideration of the FDP by the Town Board.

Although the plans do not call out bicycle facilities specifically, bicycles can also access the site from the US 36 Trail as well as the painted bike lanes along Marshall Road.

Truck Fire Access
The Context Plan on Sheet P1.0 also reflects the truck access to and from the property and demonstrate the turning radius calculations based on average of inner and outer front wheel cramp angles for a truck. The site plan reflects the ability of the truck to access each hydrant location and navigate the parking lots in the front and rear of the building. One of Staff's outstanding comments to the applicant is to add and label the emergency access on the east and west sides of the building, as well as specify the type of emergency vehicle studied. Furthermore, the applicant still needs to address turning radius concerns for the east side emergency route raised by Staff and Mountain View Fire. As noted above, because portions of the emergency access are on private property adjacent to this site, an agreement is under negotiation to ensure the access is properly maintained prior to, during and ongoing with any redevelopment of Lot 3A (the Element Hotel site).

Utilities
Block 1 is served by public utilities, some of which are already installed. The Utility Plan on Sheet P3.0 reflects the existing water, sanitary sewer and electric lines in grey, while proposed improvements are reflected in black. Water lines connect to the site via the adjacent lot on the west side of the building, and sewer lines run through the parking lot area on the east side of the lot, connecting to existing services located in the existing utility easement adjacent to the US 36 Trail. Electric services connect to a proposed transformer at the northwest corner of the building.

Drainage & Grading
A Final Drainage Report was submitted with the application. The report confirms that the proposed Finished Floor Elevation of 5475.50 is well above the base floodplain elevation in this location. According the report, the proposed improvements will increase site imperviousness to 79.0% from the current native state of 0.0%. The report finds that peak stormwater runoff will have no impact on the peak flows from the Coal Creek watershed because the runoff from the site will have passed prior to the peak flow of the larger watershed. The report agrees with the Town's assessment that

additional detention is not required at this location but finds that the development must comply with water quality requirements in accordance with the Town's MS4 permit. The report details the proposed treated outfall to the major drainageway of Coal Creek: "The proposed water quality treatment system is required to have a water quality capture volume of 2,309 CF. To achieve this volume, a proposed ADS Stormtech chamber system with a surface area of 727 SF will be utilized. The water quality pond will utilize an outlet structure with three (3), one-half-inch (1/2") orifices. Water Quality within the ADS system will be handled by the isolation row within the ADS system. The ADS system also includes a 2' sump at the manhole where flow enters the system. There are currently three different third-party tests for this product, all showing a minimum of 80% TSS removal…"

Sheets P2.0-P3.0 demonstrate the proposed grading and drainage for the site. The plans indicate that runoff flows to, and collects in, one of six inlets on the site, which empty into the proposed ADS stormwater treatment system. Along the western portion of the southern lot line, two 1.5 foot retaining walls curb runoff toward the nearest inlets. Once treated by the ADS system, the stormwater is release into Coal Creek.

The proposed grading for the site slopes east and slightly south to conduct water toward the planned ADS stormwater treatment system. Due to the grade change on the lot, the building will sit below the current grade of the adjacent lot to the west. On the west side of the building, a retaining wall rises 4 feet from finished grade of the subject lot up to the existing grade of the Element lot to account for the lot slope.

Landscaping and Irrigation

Landscape and irrigation plans are on Sheets L1-L9. The landscape plans reflect the types and location of vegetation and ground covers on the site as well as that of the decorative and recreational features found in the amenity area, such as string lighting, fire pits and grills. The plans also include plant specifications, overall landscape requirements, planning notes, soil specifications, and detail sheets. The irrigation plan shows all planting areas will be irrigated by a drip system internal to the lot. The perimeter areas are watered by rotators Since these perimeter areas are narrow irrigation (reclaimed) water will likely reach the parking lot and/or Coal Creek, causing the customer to be in violation of State Regulation 84, Staff advises the applicant to consider replacing the rotators with drip irrigation in these areas.

Section 4.6D of the Design Guidelines calls for one 2 ½" caliper shade tree and five shrubs are to be provided for every 8 parking spaces in the parking lot. The plans demonstrate compliance with 14 trees and 71 shrubs being provided for the 114-space lot.

Site Lighting

The lighting and photometric plans are found on Sheets PH.1-PH.3. The photometric plan reflects the placement of lighting fixtures on the site and demonstrates external lighting coverage over areas with pedestrian walkways, parking lots and outdoor amenity areas. According to the plan, lighting within the lot does not cross the property lines. The Lighting Fixture Schedule provides details about the lighting fixtures, including their manufacturers, lumens, and description. Further information of each fixture is also provided on supplemental pages and are assigned labels. Staff

has requested that the applicant add additional lighting to pedestrian areas and confirm that all fixtures are night sky compliant.

Architecture and Design

The architecture and design requirements for the site are stipulated by the Design Guidelines. The purpose and intent of the Design Guidelines is "to establish and maintain a high-quality community appearance, assure consistency, direct character and form, encourage sustainable development, and enhance the overall value of Superior Town Center." The Design Guidelines also provide specific criteria to contribute to an overall sense of community" (Section 1-1). Sections 7-8 lays out the guidelines specifically related to hospitality uses, notably:

- The overall hotel layout shall relate to and enhance the north entry to the Town Center.
- The overall layout and design of the hotel shall enrich its relationship to the Coal Creek corridor.
- The strategic location, program and characteristics of the proposed hotel offer an excellent opportunity to create an iconic imagery/landmark along US 36. All sides of the block will be articulated with modulated facades that reduce the scale and mass of the building.
- For visual interest, and to reduce a monolithic appearance, the mass of the building will be broken down, horizontally and vertically, into a hierarchy of volumes.
- Further articulation will be considered at the ground floor (podium).
- The design of the roof form and other related elements such as roof material, color, and trim should be an integral part of the architecture to enhance the overall Town Center roof character.
- The roof forms at the lower floor (podium and porte cochere) should be highly articulated, crafted in appearance and built from regional palette of materials. The roof forms at the top floors should provide a distinct pitched form with minimal flat roof forms.
- Primary vehicular entry (hotel porte cochere) shall be easily and directly accessible from Marshall Road and/or adjacent drive aisle (conference porte cochere, if programmed).
- Unique building massing, special architectural features and articulation will be incorporated in roof lines to emphasize building entrances (vehicular and pedestrian).
- The site design for the hotel should feel integrated within the natural, recreational and resort character of Planning Area One and include a landscaped area oriented towards the Coal Creek Open Space.
- The hotel should offer attractive and inviting pedestrian scale features, spaces and amenities such as: 1) patio/seating areas, 2) landscaped gardens, 3) other amenities.
- Required overnight parking shall be located along the west and east portions of the parcel (screened from public view along the Coal Creek corridor. Short-term / drop-off parking along the Marshall Road frontages shall be landscaped and efforts made to maintain a pedestrian priority environment.

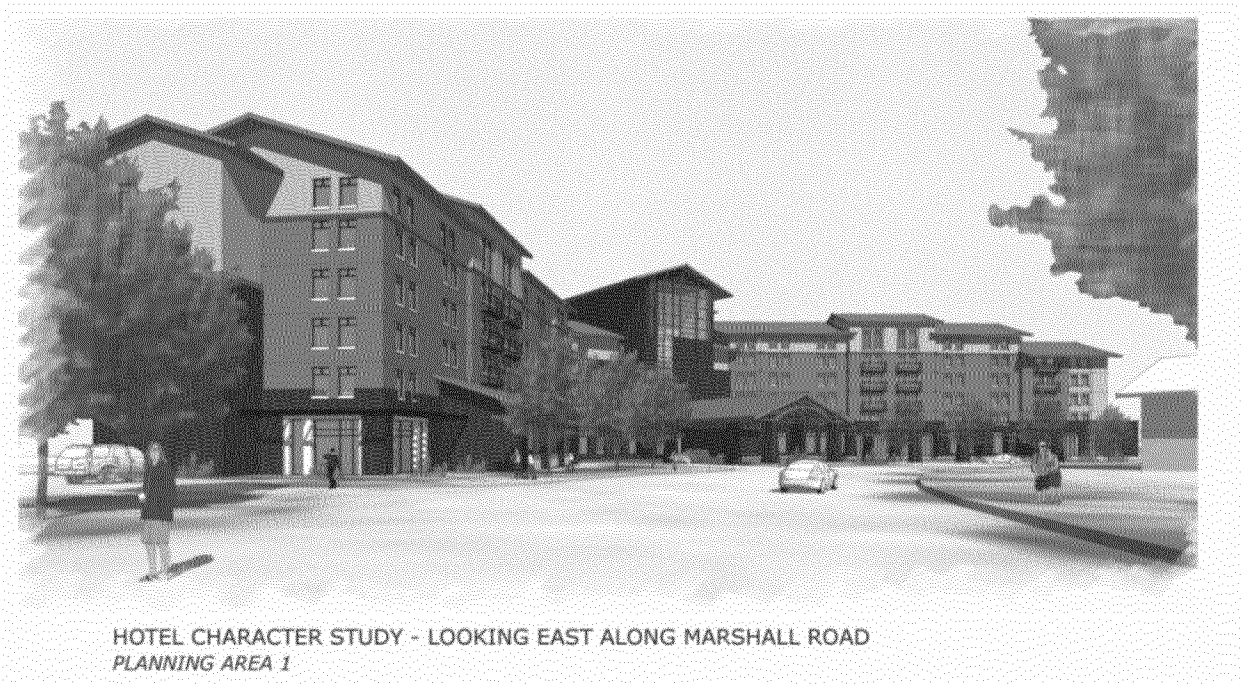


Figure 4 From Planned Development Amendment #1

To satisfy these requirements, the applicant proposes a rectangular building with modest articulation and 4th story awnings, situated on the northwest corner of the lot, facing east toward Highway 36. Sloped roof forms accent the north, west and east elevations. The building materials include white, gray, and blue stucco; "spruce" fiber cement; Grand Banks Limestone masonry and a Lead-Cote metal on the sloped roof features. The rear of the building sits approximately 4 feet below the grade of Marshall Road, hiding a portion of building from view. In part, the placement of the building was chosen so as not to cast a shadow over the US 36 trail or Coal Creek corridor. In the northwest corner, a pedestrian walkway connects the site to the Highway 36 trail. The plans also call for wall murals on the east and south building elevations as well as an amenity area with an artificial turf area, fire pits, grills, dining tables, lounge chairs, and string lighting.



Figure 5, Rendering of East Elevation of Proposed Hotel

Analysis of FDPs Requests
The Superior Municipal Code includes the following criteria for consideration of approval of FDPs:

Sec. 16-10-40 (b) Criteria:

1. *Prior to approving an FDP, the Planning Commission and the Board of Trustees shall find that the FDP is consistent with the PD Plan and all other Town ordinances and regulations.*
2. *The Planning Commission and Board of Trustees, however, may approve an FDP which has been modified to reflect improvements in design or changes which have occurred in its natural surroundings and environment since the time of the PD plan review and approval.*
3. *An FDP may be submitted in sections covering representative and reasonable portions of the subdivision tract. In such cases, submission shall include a map indicating the sections designated for the entire tract, and each sheet numbered accordingly, including title, legend, matchlines and other appropriate information. When an entire parcel is not subdivided, the applicant shall indicate his or her intended plans for disposition of the remainder of the parcel.*
4. *When ambiguity exists in the application of a PD plan to an FDP, or when a PD plan does not address a development standard, the applicable development standard of this Chapter shall apply to the FDP.*

Staff acknowledges that the Design Guidelines contemplated a higher end hotel that may include conference or meeting space on Block 1. As noted above, the Town approved a replat of Block 1 and an FDP for the Element Hotel on the adjacent lot that results in legitimate challenges realizing that outcome at this point. Additionally, the hotel market is responding to the performance of the former Element Hotel with this application. Staff finds that, in spite of these circumstances, there is no physical constraint that prevents additional articulation and architectural enhancements, particularly at the ground floor level. Staff recommends careful consideration by the Planning Commission of compliance with the Design Guidelines as they relate to the proposed architecture of the hotel.

Staff finds the FDP to be generally consistent with the Superior Town Center PD as well as all other Town ordinances and regulations should the exceptions be accepted, and conditions and technical corrections be addressed. The following exceptions are being requested by the applicant:

1) Reduced parking dimensions: Section 16-24-10(e)7 of the Municipal Code requires off-street parking stalls to be 9' wide by 18' depth. The exception request is to reduce 26 stalls (23% of the total 114 stalls) to 8.5'wide x 16' depth. Additionally, the application proposes to reduce the depth of 27 spaces to 16 feet (24% of the total 114 stalls). The narrower stalls are proposed at the outer boundary of the parking lot on the southern and eastern sides of the site due to floodplain and easement constraints.
2) EV Capable Parking Reduction: Section CD103 of Section 18-9-20 of the Municipal Code requires parking lots for new commercial construction to provide a minimum 20% EV capable spaces. Due to floodplain boundary and easement constraints on parking configuration which prohibit EV infrastructure being installed for the perimeter stalls, the applicant requests to provide only 8 of the required 24 EV capable stalls.

STAFF RECOMMENDATION:
If the Planning Commission finds the application meets the applicable criteria, staff has provided a Resolution approving the Everhome Suites Final Development Plan for Block 1, Lot 3B of the Superior Town Center Planned Development, with the following conditions:

A. Prior to the recordation of final mylars, the Applicants shall make minor technical and redline corrections to plans as identified by Town staff and directed by the Town Board.

ATTACHMENTS:
- Resolution
- FDP Project Narrative
- FDP Plan Sheets
- Drainage Report
- Water Demand Utility Report
- Geotechnical Report
- Traffic Impact Study
- Applicant Presentation

TOWN OF SUPERIOR
PLANNING COMMISSION
RESOLUTION NO. PC-
SERIES 2024

A RESOLUTION OF THE PLANNING COMMISSION OF THE TOWN OF SUPERIOR RECOMMENDING APPROVAL OF A FINAL DEVELOPMENT PLAN FOR LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER, CASE NO. FDP-2024-03

WHEREAS, Entitlement and Engineering Solutions, Inc., on behalf of Everhome Suites (the "Applicant"), wishes to develop certain property within the Town, legally described in **Exhibit A**, attached hereto and incorporated herein by this reference, and generally described as Lot 3B, Block 1 within Superior Town Center (the "Property");

WHEREAS, the Applicant has filed an application for approval of a final development plan (the "FDP") to construct a hotel with a surface parking lot and private amenity area (the "Application");

WHEREAS, Section 16-10-40 of the Superior Municipal Code (the "Code") requires a public hearing and recommendation by the Planning Commission on the FDP;

WHEREAS, the specific approval criteria for the FDP are set forth in Section 16-10-40(b) of the Code; and

WHEREAS, on _____, 2024, the Planning Commission held a properly-noticed public hearing on the Application.

NOW, THEREFORE, BE IT RESOLVED BY THE PLANNING COMMISSION OF THE TOWN OF SUPERIOR, COLORADO, as follows:

Section 1. The Planning Commission hereby finds that FDP satisfies the applicable approval criteria in the Code, and recommends that the Board of Trustees approve the Application in the form submitted by the Applicant, subject to the following condition: Prior to executing and recording final mylars, the Applicant shall make minor technical and redline corrections to plans as identified by the Town staff.

Section 2. This Resolution is hereby adopted by a majority of those Planning Commissioners present to hear the matter according to the following numbers of votes:

_____ "yes" votes

_____ "no" votes

ADOPTED this ___ day of _____, 2024.

_____
David Harper, Chair

ATTEST:

_____
Lydia Yecke, Town Clerk

Exhibit A
Legal Description

LOT 3B, BLOCK 1 SUPERIOR TOWN CENTER FILING 1B REPLAT NO. 3, TOWN OF SUPERIOR, COUNTY OF BOULDER, STATE OF COLORADO

EES
ENTITLEMENT AND ENGINEERING SOLUTIONS, INC.

3801 E. Florida Avenue
Suite 425
Denver, CO 80210
www.ees.us.com
303-572-7997

May 3, 2024

Town of Superior
Town Hall
124 E. Coal Creek Drive
Superior, Colorado 80027

RE: Everhome Suites – Superior – Project Narrative

Entitlement and Engineering Solutions, INC. is pleased to submit the Final Development Plan package of the proposed Everhome Suites development at 3 S. Marshall Street. The proposed 1.97 acre development is a four-story 59,971 GSF extended stay hotel with 114 guest rooms. There will be additional improvements to the site aside from the hotel, including a parking lot, landscaping, and drainage and water quality infrastructure. This submittal package follows the FDP application checklist provided by the Town of Superior and addresses the review criteria where applicable.

The proposed development site is currently vacant and is bordered by the Element Hotel to the west, the Coal Creek Trail to the south and the northeast, and US-36 to the northeast. There is no direct proposed access to Marshall Road. Access to the site is through a single access point to the shared private drive on the Element Hotel site. There is an existing access and utility easement in place that will be utilized.

The project will utilize an existing regional detention pond but will have water quality infrastructure installed on site. Existing sanitary and water mains will be utilized for this project, there are no mainline extensions anticipated.

There is an existing reciprocal easement agreement (Rec. #03572997) for shared parking and access through the adjacent Element Hotel site is currently being modified as needed for this development. This easement includes utility and emergency vehicle access as well. KT Development is currently working with neighboring property on agreements and can be provided to Town as reference once completed.

Since this lot relies on access through the Element Hotel site, a pedestrian access and maintenance easement will be established for the ADA route that will connect our site to Marshall Road. This will ensure that the ADA path is properly and safely maintained until that site is redeveloped. KT Development is currently working with neighboring property on agreements and can be provided to Town as reference once completed. The extents of this easement is provided on FDP for reference.

EES
ENTITLEMENT AND
ENGINEERING
SOLUTIONS, INC.

3801 E. Florida Avenue
Suite 425
Denver, CO 80210
www.ees.us.com
303-572-7997

Description of Everhome Suites

The Everhome Suites brand is built to suit the exact need of today's extended-stay guest providing them with precisely what they need to own their routine and stay just as they do at home. Most of the guest will be traveling on business, often on long-term work assignments or relocating, while a smaller subset of guests will be traveling on extended vacations, typically with, or to visit, family. By understanding the practical needs of these types of travelers, Everhome Suites is able to provide inviting and functional amenities and services. They provide spacious one bedroom and studio suite layouts that feature defined spaces that separate work from play, kitchens with everything guests need to prepare a meal, modern and sophisticated lobby area, spacious fitness centers with cardio and strength training equipment, guest laundry facilities and 24/7 self-service tech-enabled marketplaces with a variety of hot and cold food and beverage options. Everhome Suites also offer an outdoor amenity area with seating, turf area for yard games and fire pits.

This Everhome Suites belongs in this area and will benefit and serve patrons of neighboring business such as the Sports Stable for any extended sporting events, commercial restaurant as this will be walking distance to many for hotel guest and nearby businesses that require long term business travel.

Hours of Operation & Number of Employees

Everhome Suites will operate 24-hours a day to allows patrons to check-in at all hours as needed. There are typically 2-5 employees onsite at any given time. With this being an extended-stay hotel, there are not as regular of guest turnover requiring additional clean staff for room cleaning.

Snow Removal

Snow will be removed from the parking and sidewalk areas and placed in the landscape islands or in the landscape area at the eastern side of the site outside of the parking lot.

Timeline and Phasing of Project

The intended timeline of the this project is to start construction of the site in the third quarter of this year (2024). Typical construction of a Everhome Suite project is 12-13 months, therefore intended opening date would be third/fourth quarter of 2025. This project will be completed at one time and there is no anticipated phases.

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Compliance with Superior Town Center Design Guidelines

The project site falls within the Superior Town Center. As such this development has been design with the Superior Town Center Design Guidelines as the standards. Below is a list of the Development and Design Principals and how they are being met:

- Connectivity – The project site is connecting to the existing Marshall Road through an existing access easement on the neighboring property to the west of the site. The development is providing both vehicular and pedestrian connectivity to Marshall Road. Coal Creek Trail runs adjacent to the site on the east and south of the site and the hotel development is provide trail connection to the east of the site.
- Mix of Uses – the hotel use provides variety to the mix of commercial, retail and housing development in the area. The extended stay component of the hotel also adds some diversity to the area.
- Place Making – The site layout and design allows for walkable urban town center, connection to natures trails and maintains the functionality of the Coal Creek Trail by placing the building away from the trail to not cast a shadow over it.
- Sustainability – This development is providing EV installed and EV Ready stalls.
- Memorable – The building has been designed with uniques features that meet the design criteria as required.

Exception Requests

There are three proposed exception request as part of this proposed development as outlined below.

Exception Request #1 – Reduced Parking Dimension:

As part of this project, we are requesting an exception request to the standard parking stall dimension. Town of Superior code requires parking stalls dimensions at 90 degrees to be 9' wide by 18' depth. The exception request is to reduce 26 stalls (23% of the total 114 stalls) to 8.5'wide x 16' depth. The reduced sized parking stalls are proposed at the outer boundary of the parking lot on the southern and eastern sides of the site. The proposed 8.5' width reduction will not have an impact on a vehicles ability to park as the average mid-sized vehicle has a 6' width leaving 2.5' additional room for vehicle doors to open and maneuver. Per Town of Superior Code Section 16-24-60 (d), it states that the perimeter parking length can be shortened to allow from the front of the vehicle to overhang in the landscape area. The code does not state the allowed amount of the reductions, however we researched the codes of neighboring communities and found that a 2' reduction was acceptable in many of those jurisdictions.

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This exception should be granted as there is no negative impact on the functionality of the site while being able to fit the Town desired use with the site hardship of the existing easements and Floodplain surrounding the site.

Exception Request #2 – Building Setback Maximum:

We are requesting exceptions to the maximum required setbacks specified in the Design Standards on the eastern and south sides of the site. The site layout was established through several conversations with the Town, see the table below for a summary of the required and provided setbacks:

Building Setbacks	**Required**	**Provided**
Rear (east)	0' min – 10' max	314.3'
Side (south)	0' min – 15' max	46.2'

These exceedances are due to several factors including the unique shape of the lot, placing the building so that it did not cast a shadow over the existing Coal Creek Trail, and utilizing the existing access easement from the Element Hotel site since this site has no direct connection to a right-of -way for access. In addition, the building had to be kept out of the 100-year flood plain as shown on the FEMA Flood Insurance Rate Map number 08013C0583K, effective date August 15, 2019 as well as a 30' sanitary sewer easement on the eastern property boundary.

This exception request should be granted due to the existing site constraint restrictions mentioned above as well as the Towns desire to maintain visibility of the Coal Creek Trail and not cast a shadow over it.

Exception Request #3 – EV Capable Parking Reduction:

We are requesting an exception to the EV parking and charging requirements due to several hardships imposed by the site. Per Chapter 18, Article IX, Section 18-9-20 Amendments Section CD103 of the Town of Superior Municipal Code, this development is required to provide EV installed, EV Ready and EV Capable stalls based on the total 114 stalls provided. See the table below for a summary of the required and provided EV parking stalls:

	Required	**Provided**
EV Installed	12 (10% of 114 stalls)	12
EV Ready	24 (20% of 114 stalls)	24
EV Capable	24 (20% of 114 stalls)	8

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As outlined in the table above, this development is meeting the EV Installed and EV Ready required stall requirement. This exception is to reduce the required EV Capable requirement of 24 stalls to 8 stalls (reduction of 16 stalls).

This exception request should be granted due to site constraints making it unfeasible to meet the requirement. The constraints of the site including the 100-year flood plain boundary and the utility easements running through the site have constricted our parking stall configuration which prohibits the EV infrastructure from being installed at any of the perimeter parking stalls. In addition there is a Tesla Supercharger site at the corner of McCaslin and Marshall with multiple charging stations that can be utilities as well.

FDP Plan Sheet Descriptions

The sheets included in this submittal are the following:

Sheet #	Sheet Title	Description
P0.0	COVER SHEET	Project title, legal description, vicinity map, signature blocks, sheet index, applicant and development team information, site data table, basis of bearing, and project benchmark.
P1.0	CONTEXT SITE PLAN	Provides neighborhood context, pedestrian, bicycle, and vehicular connections with the surrounding area and onsite circulation
P1.1	SITE PLAN	Dimensional layout, parking and striping plan, development standards table, parking stall summary
P2.0	DRAINAGE PLAN	Water quality system, stormwater layout, basin information, surface contours
P2.1	GRADING PLAN	Topo surface contours, spot elevations
P3.0	UTILITY PLAN	Water, hydrants, sewer, stormwater, gas, and electric layouts
A2.0	BUILDING ELEVATIONS	South and West building elevations. Trash Enclosure elevation and details
A2.1	BUILDING ELEVATIONS	East and North building elevations. Amenity Area structure detailed elevations
A2.2	PERSPECTIVES	3-D perspective renderings of the proposed building
A2.3	MATERIALS BOARD	Building Material descriptions and images
PH.1	SITE PHOTOMETRIC PLAN	Photometric study, lighting fixture schedule, pole mounted fixtures installation detail

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PH.2	SITE LIGHTING FIXTURES	"L", "FA" and "FB" fixture details
PH.3	SITE LIGHTING FIXTURES	"SA3-HSS", "SA23", and "SA5" fixture details
L1	LANDSCAPE PLAN	Planting and seeding plan and legend
L2	LANDSCAPE SCHEDULE & NOTES	Plant schedule, landscape requirement tables, landscape notes
L3	LANDSCAPE DETAILS	Details for mulch adjacent to building, steel edging, shrub planting, deciduous tree planting, and evergeen tree planting
L4	SITE DETAILS	Amenity Area Site Details
L5	IRRIGATION PLAN	Irrigation point of connection, wall mount controller and irrigation system layout
L6	IRRIGATION NOTES & DETAILS	Irrigation notes and fixture details
L7	IRRIGATION DETAILS	Irrigation fixture details

Entitlement and Engineering Solutions, INC. has performed thorough research of the existing information on the property, solicited a survey, and coordinated with the City and other jurisdictions to compile and complete the finalized project design.

Should you have any questions, please do not hesitate to contact us.

Respectfully Submitted,
Entitlement and Engineering Solutions, Inc.

Krysta Houtchens

Krysta M. Houtchens, P.E.
Associate/Sector Lead

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CONTACTS:

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CONTACT: LUKE TAYLOR
PH: (303) 906-9002

ENGINEER:
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GEOTECHNICAL ENGINEER
KUMAR & ASSOCIATES, INC.
2390 SOUTH LIPAN STREET
DENVER, CO 80223
ATTN: GRANT MILLER
P: (303) 742-9700

SURVEYOR:
FORESIGHT WEST SURVEYING, INC
1309 S. INCA STREET
DENVER, CO 80223
CONTACT: LESTER LUDEMAN
PH: (303) 504-4440
E: LLUDEMAN@FORESIGHTWEST.COM

BASIS OF BEARING

BEARINGS ARE BASED UPON THE NORTHEASTERLY LINE OF LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING NO. 1B REPLAT NO. 3, SAID LINE BEING AN ARC WITH A RECORD CHORD BEARING OF NORTH 54°18'05" WEST AS SHOWN ON SAID PLAT. THE MONUMENTS ARE DESCRIBED HEREON.

PROJECT BENCHMARK

ELEVATIONS ARE BASED UPON A POST-PROCESSED STATIC GNSS CONNECTION MADE TO NGS BENCH MARK W 413 (PID KK1549) UTILIZING GEOID12B TO MODEL THE ELLIPSOID SEPARATION. ELEVATION 5459.62 (NAVD 88).

LEGAL DESCRIPTION

LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING NO. 1B REPLAT NO. 3, ACCORDING TO THE PLAT THEREOF RECORDED DECEMBER 1, 2016 UNDER RECEPTION NO. 03560623, COUNTY OF BOULDER, STATE OF COLORADO

EXCEPTION REQUESTS

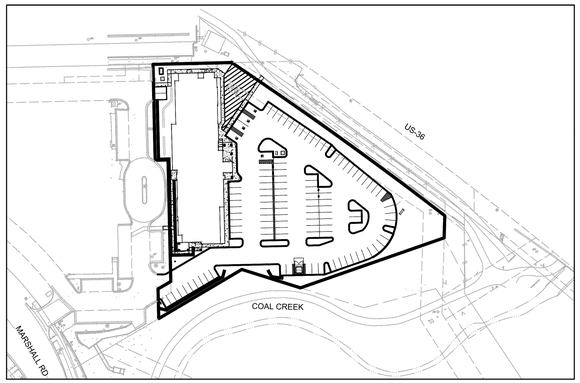
1. REDUCTION OF STANDARD PARKING STALL DIMENSION TO 8.5' WIDE BY 16' DEEP AT PERIMETER PARKING. REDUCTION REQUESTED FOR 26 STALLS (23% OF TOTAL STALLS PROVIDED).
2. EXCEPTIONS TO THE MAXIMUM REQUIRED SETBACKS ON THE EAST AND SOUTH SIDES. THE MAXIMUM EAST SETBACK IS 10' AND THE PROVIDED EAST SETBACK IS 314.3'. THE MAXIMUM SOUTH SETBACK IS 15' AND PROVIDED SOUTH SETBACK IS 46.2'.
3. REDUCTION OF PROVIDED EV CAPABLE PARKING STALLS DUE TO UTILITY AND EASEMENT CONFLICT. REDUCTION REQUESTED TO REDUCE THE REQUESTED 23 EV CAPABLE STALLS TO 10 EV CAPABLE STALLS PROVIDED.

SITE DATA TABLE	
GENERAL ZONE LOT INFORMATION	
ZONING	PD
TOTAL SITE SIZE	85,732 SF (1.97 ACRES)
LEGAL DESCRIPTION	LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING NO. 1B REPLAT NO. 3, ACCORDING TO THE PLAT THEREOF RECORDED DECEMBER 1, 2016 UNDER RECEPTION NO. 03560623, COUNTY OF BOULDER, STATE OF COLORADO
PROPOSED USE	HOTEL
BUILDING DATA	
BUILDING HEIGHT, STORIES	4 STORIES
BUILDING HEIGHT, FEET	56 FT
FIRST FLOOR AREA (SF)	14,493 SF
SECOND FLOOR AREA (SF)	14,493 SF
THIRD FLOOR AREA (SF)	14,493 SF
FOURTH FLOOR AREA (SF)	14,493 SF
SITE DATA	
BUILDING COVERAGE AREA, SF (ACRES)	14,901 SF (0.34 ACRES)
HARD SURFACE/PAVING AREA, SF (ACRES)	51,575 SF (1.18 ACRES)
LANDSCAPING AREA, SF (ACRES)	19,428 SF (0.45 ACRES)
OWNERSHIP	
BLOCK 1, LOT 3B	RC SUPERIOR LLC (PRIVATE)

FINAL DEVELOPMENT PLAN

EVERHOME SUITES - SUPERIOR

LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING 1B REPLAT NO. 3



SITE MAP
1"= 100'



VICINITY MAP
SCALE: 1"=650'

SHEET INDEX

P0.0	COVER SHEET
P1.0	CONTEXT SITE PLAN
P1.1	SITE PLAN
P2.0	DRAINAGE PLAN
P2.1	GRADING PLAN
P3.0	UTILITY PLAN
A2.0	BUILDING ELEVATIONS
A2.1	BUILDING ELEVATIONS
A2.2	PERSPECTIVES
A2.3	MATERIALS BOARD
PH.1	SITE PHOTOMETRIC PLAN
PH.2	SITE LIGHTING FIXTURES
PH.3	SITE LIGHTING FIXTURES
L1	LANDSCAPE PLAN
L2	AMENITY AREA ENLARGEMENT
L3	LANDSCAPE SCHEDULE & NOTES
L4	LANDSCAPE DETAILS
L5	SITE DETAILS
L6	IRRIGATION PLAN
L7	IRRIGATION SCHEDULE & NOTES
L8	IRRIGATION DETAILS
L9	IRRIGATION DETAILS

CERTIFICATE OF OWNERSHIP

I CERTIFY THAT I,_____, AM THE SOLE OWNER OF THE PROPERTY AND CONSENT TO THIS PLAN.

IN WITNESS WHEREOF I HEREUNTO SET MY HAND THIS ___ DAY OF _____, 20___.

_____ _____
OWNERS

_____
MORTGAGEES OR LIEN HOLDERS

STATE OF _____)
) SS.
COUNTY OF _____)

THE FOREGOING CERTIFICATE OF OWNERSHIP WAS ACKNOWLEDGED BEFORE ME THIS _____ DAY OF _____, 20__, BY _____.

MY COMMISSION EXPIRES:_____ _____
NOTARY PUBLIC

(SEAL)

TOWN CLERK CERTIFICATE

I HEREBY CERTIFY THAT THIS INSTRUMENT WAS ADOPTED BY THE BOARD OF TRUSTEES BY (RESOLUTION/ ORDINANCE) NO. _____, SERIES 20____ ON THIS _____ DAY OF _____, 20_____, AND WAS FILED IN MY OFFICE ON THE _____DAY OF _____, 20_____, AT _____O'CLOCK ___M.

_____
LYDIA YECKE, TOWN CLERK

PLANNING COMMISSION CERTIFICATE

RECOMMENDED APPROVAL THIS _____DAY OF _____, 20__, BY THE TOWN OF SUPERIOR PLANNING COMMISSION, RESOLUTION NO. PC _____SERIES 20___.

BOARD OF TRUSTEES CERTIFICATE

APPROVED BY THE BOARD OF TRUSTEES OF THE TOWN OF SUPERIOR, STATE OF COLORADO.

WITNESS MY HAND WITH THE CORPORATE SEAL OF THE TOWN OF SUPERIOR THIS _____DAY OF _____ ____, 20____.

ATTEST:

_____ _____
LYDIA YECKE, TOWN CLERK — MARK LACIS, MAYOR

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CALL 3-BUSINESS DAYS (NOT INCLUDING INITIAL DAY OF CONTACT) IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

No.	REVISION	BY	DATE

PRELIMINARY NOT FOR CONSTRUCTION

K2 CIVIL CONSULTANTS

FINAL DEVELOPMENT PLAN
EVERHOME SUITES - SUPERIOR
MCCASLIN & MARSHALL RD, SUPERIOR, CO
COVER SHEET

PROJECT NO: KTD005.01
DESIGNED BY: AMG
DRAWN BY: AMG
DATE: 06/07/24

P0.0

P:\KT DEVELOPMENT\CO, SUPERIOR - MCCASLIN & MARSHALL RD\08 CAD\FDP\P0.0 COVER SHEET.DWG

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FINAL DEVELOPMENT PLAN

EVERHOME SUITES - SUPERIOR

LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING 1B REPLAT NO. 3



LEGEND

- NEW BUILDING
- NEW ASPHALT PARKING / DRIVE ACCESS
- FDP LIMIT LINE
- DENOTES TRAFFIC FLOW PATTERNS
- DENOTES ADA ROUTE

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FINAL DEVELOPMENT PLAN
EVERHOME SUITES - SUPERIOR
MCCASLIN & MARSHALL RD, SUPERIOR, CO
CONTEXT SITE PLAN

PROJECT NO:	KTD005.01
DESIGNED BY:	AMG
DRAWN BY:	AMG
DATE:	06/07/24

P1.0

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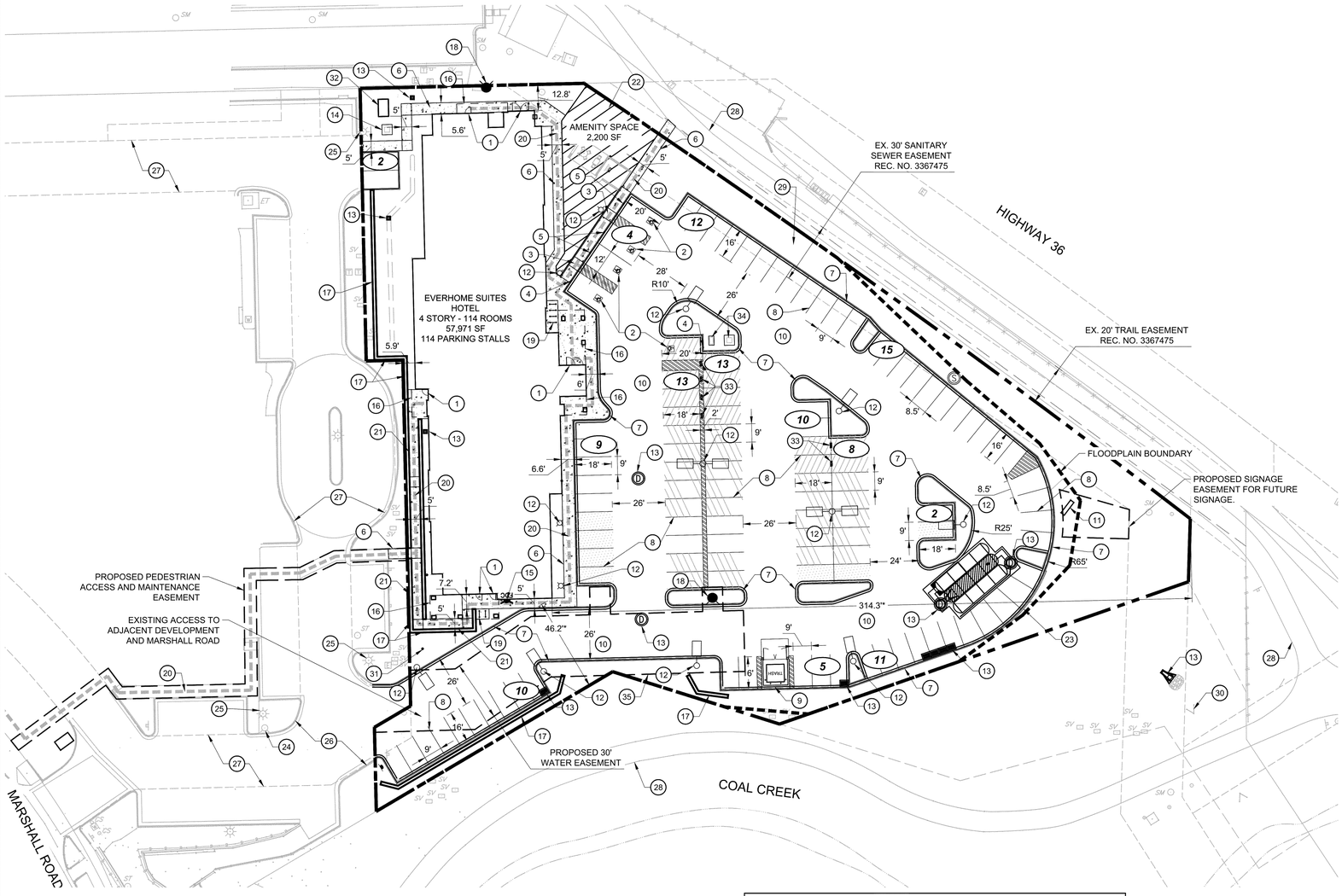
FINAL DEVELOPMENT PLAN

EVERHOME SUITES - SUPERIOR

LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING 1B REPLAT NO. 3



LEGEND

- PROPERTY LINE
- OFF-SITE PROPERTY LINE
- PROPOSED BUILDING
- PARKING COUNT
- EXISTING CURB AND GUTTER
- PROPOSED 6" CURB AND GUTTER
- PROPOSED SITE LIGHTING
- EXISTING/PROPOSED FIRE HYDRANT
- PROPOSED CONCRETE WALK
- DENOTES TRAFFIC FLOW PATTERNS
- DENOTES ADA ROUTE
- EXISTING STM & SAN. MANHOLES
- PROPOSED STORM GRATE/INLET
- PROPOSED STORM MANHOLE
- FLOODPLAIN LIMIT

SITE PLAN SCHEDULE

1. BUILDING ENTRY - REFER TO ARCHITECTURE DRAWINGS.
2. ADA PARKING STALL.
3. ADA CURB RAMP.
4. ADA VAN PARKING SIGNAGE.
5. ADA PARKING SIGNAGE.
6. CONCRETE SIDEWALK.
7. 6" CURB AND GUTTER.
8. 4" WHITE PAVEMENT MARKING (TYP.).
9. TRASH ENCLOSURE - SEE ARCHITECTURAL ELEVATIONS FOR ADDTIONAL DETAIL.
10. ASPHALT PAVEMENT.
11. FUTURE MONUMENT SIGN BY OTHERS. MAX HEIGHT: 15', MAX SIGN FACE AREA: 100 SF PER SIDE (50 PER TENANT) NO SINGLE TENANT SIGN GREATER THAN 50 SF, SETBACK 10'.
12. SITE LIGHTING - REFER TO PHOTOMETRICS PLAN.
13. STORM INFRASTRUCTURE, REFER TO UTILITY PLAN ON SHEET P3.0 FOR ADDITIONAL DETAIL.
14. BUILDING TRANSFORMER LOCATION.
15. FDC LOCATION.
16. BUILDING OVERHANG.
17. PROPOSED RETAINING WALL - SEE SHEET P2.1 FOR HEIGHT.
18. PROPOSED FIRE HYDRANT.
19. PROPOSED BIKE RACKS, 12 TOTAL STALLS (8 UNCOVERED AT MAIN BUILDING ENTRANCE AND 4 COVERED AT SOUTH BUILDING ENTRANCE).
20. ADA ROUTE
21. PROPOSED ADA RAMP WITH HANDRAILS.
22. PROPOSED AMENITY SPACE.
23. PROPOSED EXTENDED CURB.
24. EXISTING FIRE HYDRANT.
25. EXISTING LIGHT POLE.
26. EXISTING CURB AND GUTTER.
27. EXISTING ACCESS, UTILITY, AND EMERGENCY ACCESS EASEMENT TO BE MODIFIED.
28. EXISTING CONCRETE TRAIL.
29. SNOW STORAGE AREA.
30. EXISTING RIPRAP SWALE.
31. PROPOSED PET RELIEF STATION
32. PROPOSED PREFABRICATED SMOKING SHELTER
33. PROPOSED EV CHARGING PEDESTAL.
34. PROPOSED EV CHARGING TRANSFORMER AND PANELS.
35. PROPOSED 30' WIDE WATER UTILITY EASEMENT.

EV STALL LEGEND

- EV INSTALLED STALL (LOT 1 - 12 STALLS)
- EV READY (LOT 1 - 24 STALLS)
- EV CAPABLE (LOT 1 - 8 STALLS)

*EXCEPTIONS TO THE MAXIMUM REQUIRED SETBACKS ON THE EAST AND SOUTH SIDES. THE MAXIMUM EAST SETBACK IS 10' AND THE PROVIDED EAST SETBACK IS 314.3'. THE MAXIMUM SOUTH SETBACK IS 15' AND PROVIDED SOUTH SETBACK IS 46.2'.

DEVELOPMENT STANDARDS		
PARKING	**REQUIRED**	**PROVIDED**
HOTEL	1 SPACE / GUEST ROOM = 114 SPACES	114 SPACES
ACCESSIBLE	5 SPACES	5 SPACES
BUILDING SETBACKS	**REQUIRED**	**PROVIDED**
FRONT (WEST)	0' MIN - 35' MAX	5.9'
REAR (EAST)	0' MIN - 10' MAX	314.3'*
SIDE (NORTH)	10'	12.8'
SIDE (SOUTH)	0' MIN - 15' MAX	46.2'*
MAXIMUM HEIGHT	**REQUIRED**	**PROVIDED**
	90'	56'
# OF BUILDING STORIES	4 STORIES	
BUILDING FOOTPRINT (SF)	14,901 SF	
PROPOSED USE	HOTEL (57,971 SF)	
OPEN SPACE SUMMARY	**REQUIRED ACREAGE (% OF TOTAL SITE)**	**PROVIDED ACREAGE (% OF TOTAL SITE)**
	0.39 AC (20%)	0.45 AC (23%)

PARKING STALL SUMMARY		
PARKING STALL SIZE	**#**	**%**
9'X18'	42	37%
12'X20' (ADA STALLS)	5	4%
9'X20'	14	12%
9'X16'	29	25%
8.5'X16'	24	21%
TOTAL	**114**	**100%**

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No.	REVISION	BY	DATE

PRELIMINARY
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CONSTRUCTION

K2 CIVIL CONSULTANTS

FINAL DEVELOPMENT PLAN
EVERHOME SUITES - SUPERIOR
MCCASLIN & MARSHALL RD, SUPERIOR, CO
SITE PLAN

PROJECT NO:	KTD005.01
DESIGNED BY:	AMG
DRAWN BY:	AMG
DATE:	06/07/24

P1.1

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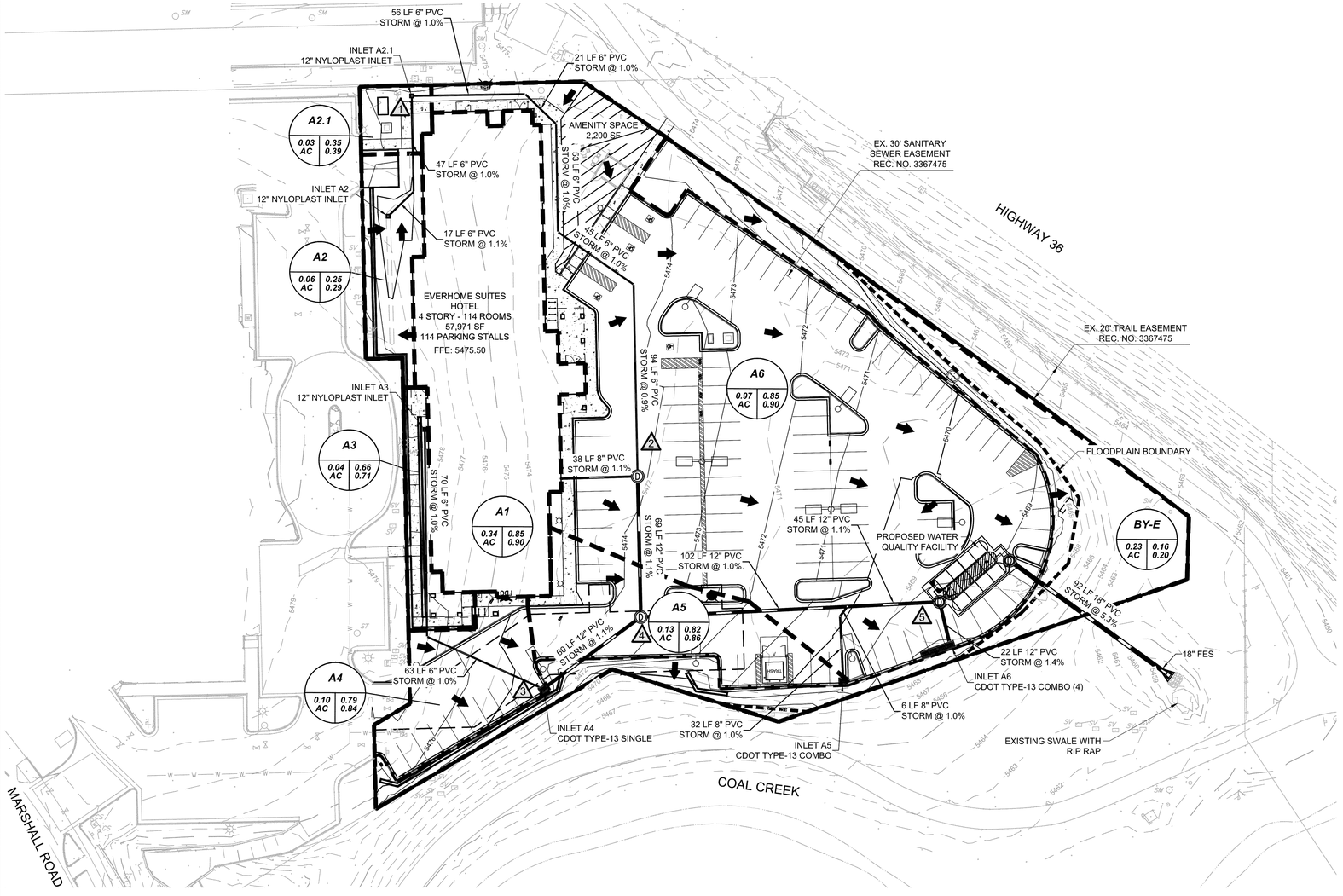
FINAL DEVELOPMENT PLAN

EVERHOME SUITES - SUPERIOR

LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING 1B REPLAT NO. 3



LEGEND

- PROPOSED CONTOURS
- EXISTING CONTOURS
- PROPOSED EASEMENT
- PROPOSED BASIN DELINEATION
- PROPOSED BUILDING SETBACK
- PROPOSED BUILDING
- EXISTING CURB AND GUTTER
- PROPOSED 6" CURB AND GUTTER
- EXISTING STORM SEWER LINE
- PROPOSED STORM SEWER LINE
- PROPOSED STORM MANHOLES
- EXISTING STORM MANHOLES
- PROPOSED STORM INLET/GRATE
- EXISTING STORM INLET
- FLOW ARROW AND GRADE
- FLOODPLAIN LIMIT
- DRAINAGE FLOW ARROW
- DESIGN POINT
- BASIN DESIGNATION
- 5-YEAR RUNOFF COEFFICIENT
- 100-YEAR RUNOFF COEFFICIENT
- BASIN AREA IN ACRES

BASIN SUMMARY

DESIGN POINT	TRIBUTARY BASIN	AREA (AC)	PERCENT IMPERVIOUS	COEFFICIENT		TOTAL RUNOFF*	
				C5	C100	Q5 (CFS)	Q100 (CFS)
1	A2	0.06	14.6	0.25	0.29	0.06	0.12
	A2.1	0.03	28.0	0.35	0.39	0.03	0.07
2	A1	0.34	90.0	0.85	0.90	1.31	2.67
3	A3	0.04	70.2	0.66	0.71	0.13	0.26
	A4	0.10	87.6	0.79	0.84	0.34	0.70
4	A5	0.13	91.2	0.82	0.86	0.50	1.01
5	A6	0.97	96.3	0.85	0.90	3.67	7.45
	BY-E	0.30	2.0	0.16	0.20	0.22	0.52
Total Proposed Site		1.97	76.1	0.71	0.76	6.26	12.80

PROJECT BENCHMARK

ELEVATIONS ARE BASED UPON A POST-PROCESSED STATIC GNSS CONNECTION MADE TO NGS BENCH MARK W 413 (PID KK1549) UTILIZING GEOID12B TO MODEL THE ELLIPSOID SEPARATION. ELEVATION 5459.62 (NAVD 88).

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N

SCALE IN FEET
0 30 60

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No.	REVISION	BY	DATE

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K2 CIVIL CONSULTANTS

FINAL DEVELOPMENT PLAN

EVERHOME SUITES - SUPERIOR

MCCASLIN & MARSHALL RD, SUPERIOR, CO

DRAINAGE PLAN

PROJECT NO: KTD005.01
DESIGNED BY: AMG
DRAWN BY: AMG
DATE: 06/07/24

P2.0

P:\KT DEVELOPMENT\CO, SUPERIOR - MCCASLIN & MARSHALL RD\08 CAD\FDP\P2.0 DRAINAGE PLAN.DWG

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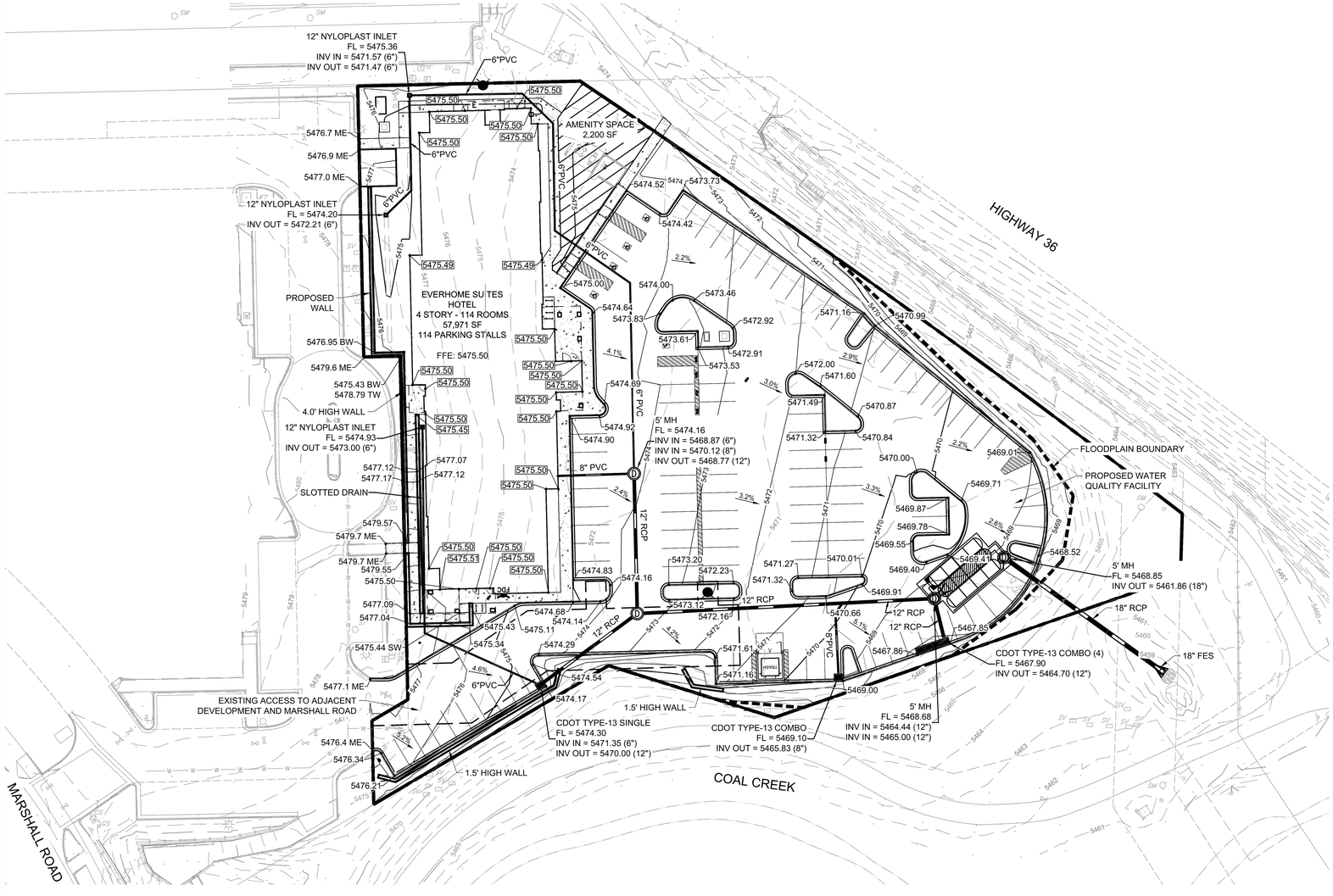
FINAL DEVELOPMENT PLAN

EVERHOME SUITES - SUPERIOR

LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING 1B REPLAT NO. 3



LEGEND

- PROPOSED CONTOURS
- EXISTING CONTOURS
- PROPOSED EASEMENT
- FLOODPLAIN LIMIT
- PROPOSED BUILDING SETBACK
- PROPOSED BUILDING
- EXISTING CURB AND GUTTER
- PROPOSED 6" CURB AND GUTTER
- EXISTING STORM SEWER LINE
- PROPOSED STORM SEWER LINE
- PROPOSED STORM MANHOLES
- EXISTING STORM MANHOLES
- PROPOSED STORM INLET/GRATE
- EXISTING STORM INLET
- PROPOSED FLOW LINE ELEVATION
- PROPOSED EXTERIOR GRADE AT FOUNDATION
- PROPOSED SIDEWALK ELEVATION
- PROPOSED GRADE TO MATCH EXISTING
- PROPOSED FINISHED GRADE
- FLOW ARROW AND GRADE

PROJECT BENCHMARK

ELEVATIONS ARE BASED UPON A POST-PROCESSED STATIC GNSS CONNECTION MADE TO NGS BENCH MARK W 413 (PID KK1549) UTILIZING GEOID12B TO MODEL THE ELLIPSOID SEPARATION. ELEVATION 5459.62 (NAVD 88).

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

CALL UTILITY NOTIFICATION CENTER OF COLORADO
1-800-922-1987 or 811
CALL 3-BUSINESS DAYS (NOT INCLUDING INITIAL DAY OF CONTACT) IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

N

SCALE IN FEET
0 30 60

IF BAR DOES NOT MEASURE 1 INCH THEN DRAWING IS NOT TO SCALE

No.	REVISION	BY	DATE

PRELIMINARY
NOT FOR
CONSTRUCTION

K2 CIVIL CONSULTANTS

FINAL DEVELOPMENT PLAN
EVERHOME SUITES - SUPERIOR
MCCASLIN & MARSHALL RD, SUPERIOR, CO
GRADING PLAN

PROJECT NO:	KTD005.01
DESIGNED BY:	AMG
DRAWN BY:	AMG
DATE:	06/07/24

P2.1

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FINAL DEVELOPMENT PLAN

EVERHOME SUITES - SUPERIOR

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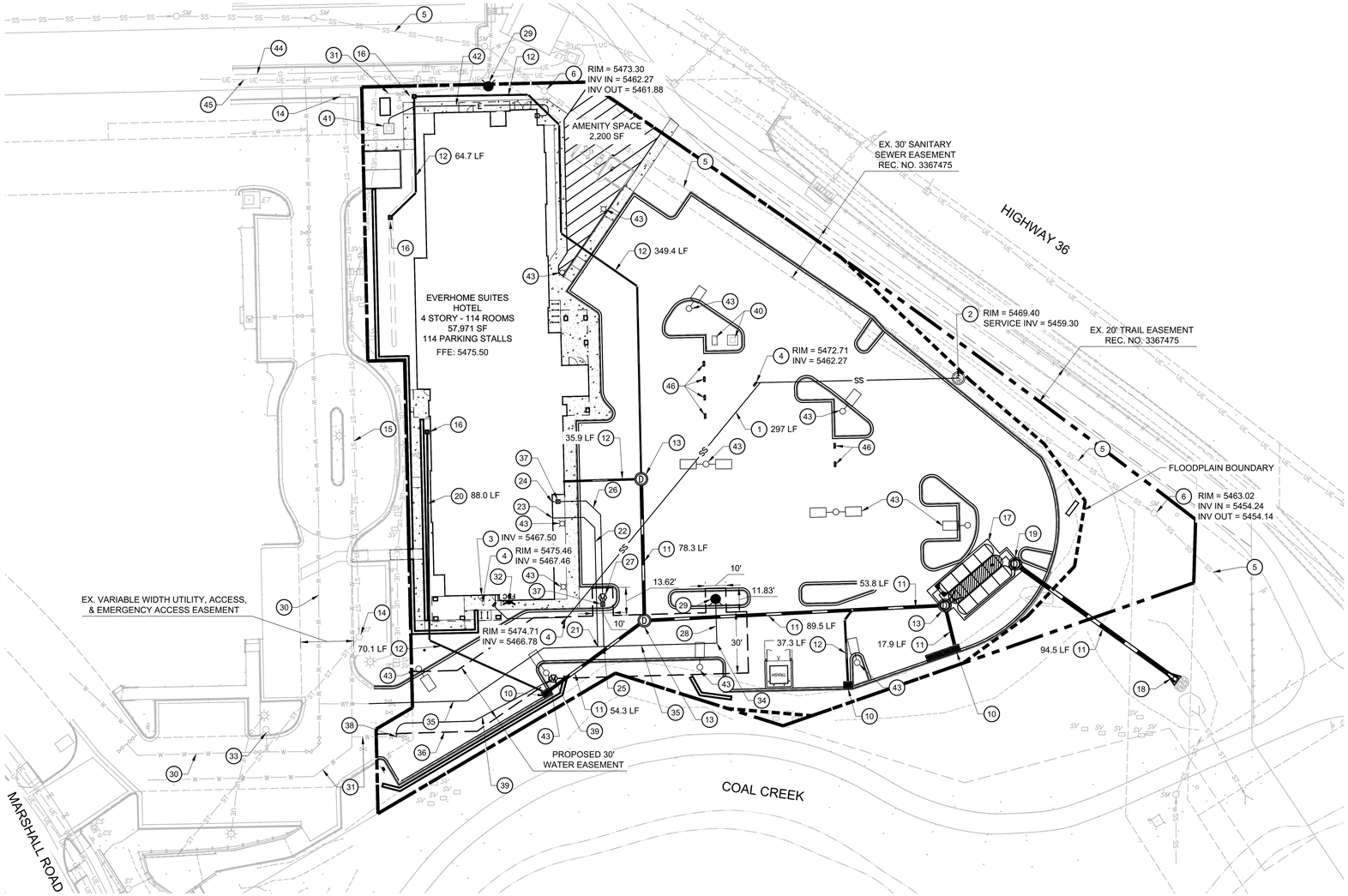

UTILITY NOTES:

1. ALL ITEMS IN SCHEDULE ARE PROPOSED UNLESS OTHERWISE NOTED.
2. ALL EXISTING ITEMS IN SCHEDULE ARE TO REMAIN UNLESS OTHERWISE NOTED.

TOWN OF SUPERIOR UTILITY MAINTENANCE STATEMENT

ALL PUBLIC WATER, REUSE WATER, STORM SEWER, AND SANITARY SEWER MAINS AND APPURTENANCES LOCATED IN PUBLIC ROW SHALL BE MAINTAINED BY THE TOWN'S PUBLIC WORKS AND UTILITIES DEPARTMENT. ALL PUBLIC WATER, REUSE WATER, STORM SEWER, SANITARY SEWER MAINS, AND APPURTENANCES UNDER PRIVATE DRIVES ARE LOCATED IN UTILITY EASEMENTS. THE TOWN IS RESPONSIBLE FOR MAINTENANCE OF THESE FACILITIES. THE TOWN IS NOT RESPONSIBLE FOR REPAIR OR REPLACEMENT OF PRIVATE DRIVE, CURB AND GUTTER, OR LANDSCAPING DAMAGED DURING UTILITY REPAIR OR MAINTENANCE.

PROJECT BENCHMARK

ELEVATIONS ARE BASED UPON A POST-PROCESSED STATIC GNSS CONNECTION MADE TO NGS BENCH MARK W 413 (PID KK1549) UTILIZING GEOID12B TO MODEL THE ELLIPSOID SEPARATION. ELEVATION 5459.62 (NAVD 88).

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LEGEND

- PROPOSED EASEMENT
- PROPERTY LINE
- PROPOSED BUILDING
- EXISTING CURB AND GUTTER
- EXISTING SANITARY SEWER
- PROPOSED STORM SEWER LINE
- PROPOSED SANITARY SEWER
- PROPOSED GAS LINE
- PROPOSED UNDERGROUND ELECTRIC LINE
- PROPOSED WATER LINE
- PROPOSED WATER METER
- PROPOSED FIRE DEPARTMENT CONNECTION
- PROPOSED FIRE HYDRANT
- FLOODPLAIN LIMIT
- PROPOSED STORM MANHOLES
- EXISTING STORM MANHOLES
- PROPOSED STORM INLET
- PROPOSED CLEANOUT

UTILITY SCHEDULE

SANITARY

1. PROPOSED 6" SANITARY SERVICE @ 2% MINIMUM SLOPE.
2. PROPOSED SANITARY SEWER MANHOLE AT SERVICE CONNECTION TO EXISTING SEWER.
3. PROPOSED 6" SANITARY SERVICE CONNECTION TO BUILDING.
4. PROPOSED SANITARY CLEANOUT.
5. EXISTING 15" PVC SANITARY SEWER MAIN.
6. EXISTING SANITARY SEWER MANHOLE.

STORMWATER

10. PROPOSED TYPE 13 COMBO INLET.
11. PROPOSED 12"-18" RCP STORM SEWER PIPE.
12. PROPOSED 6" PVC STORM SEWER PIPE.
13. PROPOSED 5' STORM MANHOLE.
14. EXISTING STORM SEWER INFRASTRUCTURE
15. EXISTING STORM SEWER PIPE.
16. PROPOSED 12" NYOPLAST AREA INLET.
17. PROPOSED ADS STORMWATER TREATMENT SYSTEM.
18. PROPOSED 18" FLARED END SECTION.
19. PROPOSED OUTLET CONTROL STRUCTURE.
20. PROPOSED DURASLOT SLOTTED DRAIN.

WATER

21. PROPOSED 6" FIRE LINE CONNECTION TO 12" PVC WATER LINE.
22. PROPOSED 6" FIRE LINE SERVICE
23. PROPOSED 6" FIRE LINE CONNECTION TO BUILDING, BACKFLOW PREVENTOR LOCATED INSIDE THE BUILDING.
24. PROPOSED 2" DOMESTIC CONNECTION TO BUILDING. BACKFLOW PREVENTOR LOCATED INSIDE THE BUILDING.
25. PROPOSED 2" DOMESTIC CONNECTION TO 12" PVC WATER LINE.
26. PROPOSED 2" DOMESTIC SERVICE.
27. PROPOSED 2" DOMESTIC WATER METER.
28. PROPOSED 6" FIRE HYDRANT LINE.
29. PROPOSED FIRE HYDRANT.
30. EXISTING WATER MAIN.
31. EXISTING IRRIGATION MAIN.
32. PROPOSED FDC LOCATION.
33. EXISTING FIRE HYDRANT.
34. PROPOSED 6" FIRE HYDRANT CONNECTION TO 12" PVC WATER LINE.
35. PROPOSED 12" PVC WATER LINE EXTENSION.
36. 30' WIDE WATER UTILITY EASEMENT.
37. PROPOSED 2" BALL VALVE.
38. PROPOSED 1" IRRIGATION LINE CONNECTION TO 8" NON-POTABLE MAIN.
39. PROPOSED 1" IRRIGATION LINE & METER. REFER TO IRRIGATION PLAN FOR CONTINUATION.

DRY UTILITIES

40. PROPOSED EV CHARGING TRANSFORMER AND PANELS.
41. PROPOSED BUILDING TRANSFORMER LOCATION - GENERAL CONTRACTOR TO FINALIZE LOCATION WITH UTILITY PROVIDER.
42. PROPOSED ELECTRIC SERVICE
43. PROPOSED SITE LIGHTING (REFER TO PHOTOMETRIC PLANS FOR FINAL LOCATION).
44. EXISTING GAS MAIN.
45. EXISTING UNDERGROUND ELECTRIC.
46. PROPOSED EV CHARGING PEDESTAL.

N

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FINAL DEVELOPMENT PLAN
EVERHOME SUITES - SUPERIOR
MCCASLIN & MARSHALL RD, SUPERIOR, CO

UTILITY PLAN

PROJECT NO:	KTD005.01
DESIGNED BY:	AMG
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DATE:	06/07/24

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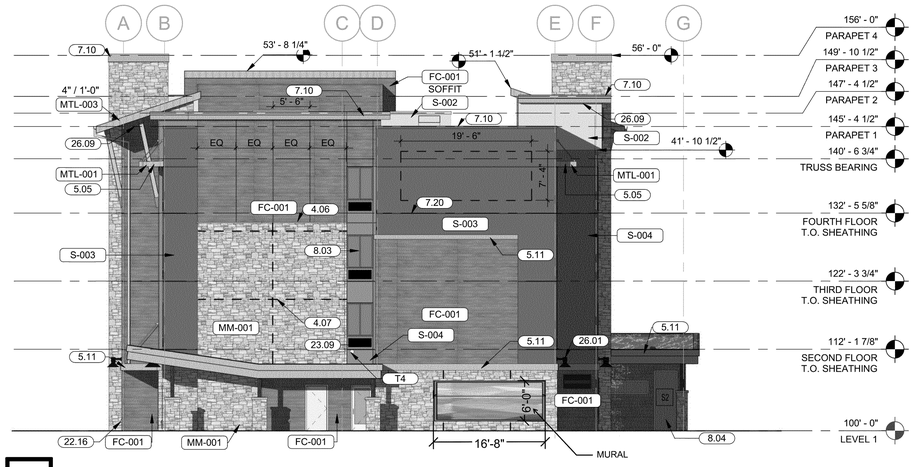
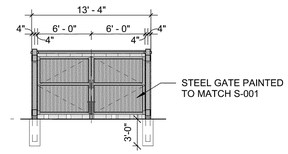
FINAL DEVELOPMENT PLAN
EVERHOME SUITES - SUPERIOR
LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING 1B REPLAT NO. 3



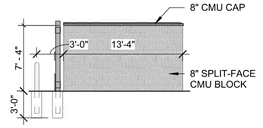
2 SOUTH ELEVATION
3/32" = 1'-0"

SOUTH FRONTAGE = 414' - SIGNAGE AREA = 145 SF

Everhome Suites will coordinate on the final design for the local wall mural with the Town's Cultural Arts and Public Spaces Advisory Committee (CAPS) to ensure final design represents the integrity of the Downtown Superior aesthetics prior to FDP recording.



3 TRASH ENCLOSURE GATE ELEVATION
1/8" = 1'-0"



4 TRASH ENCLOSURE ELEVATION SIDE
1/8" = 1'-0"

KEYNOTES

Tag	Keynote Description
4.06	MANUFACTURED MASONRY CAP OR SILL
4.07	CULTURED STONE EXPANSION JOINT, SPACING NOT TO EXCEED 10'-0" IN EITHER DIRECTION, REF MANUFACTURER REQ
5.05	METAL AWNING
5.11	BRAKE METAL WRAPPED ACCENT BAND, REF A500
7.10	PARAPET WALL METAL CAP FLASHING OVER CONTINUOUS METAL CLEAT, SLOPED TO MAIN ROOF FOR DRAINAGE (PAINTED)
7.20	STUCCO 1" METAL REVEAL
8.03	SLIDING WINDOW, TYP.: SEE SPECS
8.04	STOREFRONT WINDOWS WITH CLEAR ANODIZED ALUMINUM FRAME
10.20	LOCAL WALL MURAL
22.16	ROOF DISCHARGE NOZZLE, REF PLUMBING SHEETS, 18" ABOVE GRADE
23.08	EXTERIOR VENT, REF MECHANICAL PLANS. PAINT TO MATCH ADJACENT FINISH
23.09	THRU-WALL HVAC UNIT W/ GRILLE FLUSH W/ EXT. MATERIAL, REF HVAC SHEETS
26.01	SURFACE MOUNTED FIXTURE, REF ELECTRICAL
26.09	EXTERIOR LIGHTING, REF MEP

FINISH KEYNOTES

Tag	Keynote Description
FC-001	FIBER CEMENT - NICHIHA VINTAGEWOOD "SPRUCE"
MM-001	MFR. MASONRY - EL DORADO "GRAND BANKS LIMESTONE"
MTL-001	FLAT SEAM METAL PANEL - LEAD-COTE
MTL-002	PREFINISHED BRAKE METAL WRAP - BERRIDGE METAL - LEAD-COTE
MTL-003	STANDING SEAM METAL ROOF - "LEAD-COTE"
S-001	STUCCO - SW 2850 "CHELSEA GRAY"
S-002	STUCCO - SW 7056 "RESERVED WHITE"
S-003	STUCCO - SW 6243 "DISTANCE"
S-004	STUCCO - SW 9163 "TIN LIZZIE"

TECHNOLOGY NOTES

Tag	Keynote Description
T4	(6) EXTERIOR CAMERAS TO BE INSTALLED 12FT ABOVE GROUND



1 EAST ELEVATION
3/32" = 1'-0"

EAST FRONTAGE = 366' - SIGNAGE AREA = 170 SF

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Know what's below. Call before you dig.

C:\Users\FPoppe\Documents\24505 ES SUPERIOR_R24_V2-4_181 Central_fvanmeter04.rvt

No.	REVISION	BY	DATE

PRELIMINARY
NOT FOR
CONSTRUCTION

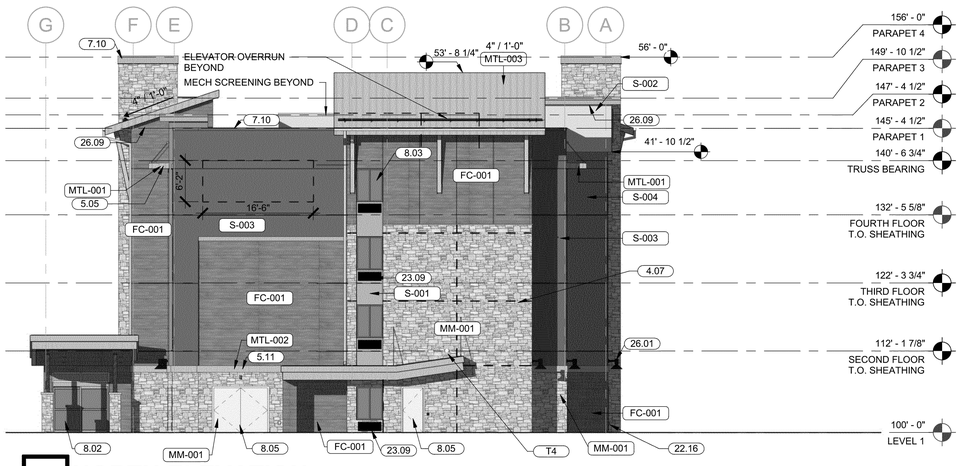
1 architecture
ARCHITECTURE - PLANNING - INTERIORS
8400 E. CRESENT PARKWAY, SUITE 160
GREENWOOD VILLAGE, CO 80111
VOICE: 720-961-1600

FINAL DEVELOPMENT PLAN
EVERHOME SUITES - SUPERIOR
MCCASLIN & MARSHALL RD, SUPERIOR, CO

PROJECT NO:	CO533
DESIGNED BY:	BG
DRAWN BY:	FM
DATE:	06/07/24

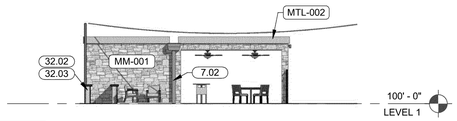
A2.0

FINAL DEVELOPMENT PLAN
EVERHOME SUITES - SUPERIOR
LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING 1B REPLAT NO. 3

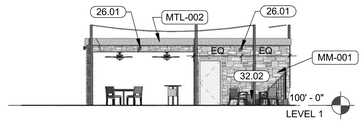


2 NORTH ELEVATION
3/32" = 1'-0"

NORTH FRONTAGE = 110 SF - SIGNAGE AREA 102 SF



5 AMENITY BUILDING ELEVATION
3/32" = 1'-0"



4 AMENITY BUILDING ELEVATION
3/32" = 1'-0"



3 AMENITY AREA ELEVATION
3/32" = 1'-0"



1 WEST ELEVATION
3/32" = 1'-0"

WEST FRONTAGE = 355' - SIGNAGE AREA = 170 SF

KEYNOTES

Tag	Keynote Description
4.06	MANUFACTURED MASONRY CAP OR SILL
4.07	CULTURED STONE EXPANSION JOINT, SPACING NOT TO EXCEED 10'-0" IN EITHER DIRECTION, REF MANUFACTURER REQ
5.01	HEAVY DUTY STEEL ANGLE BRACES, REF E5/A5.0
5.05	METAL AWNING
5.11	BRAKE METAL WRAPPED ACCENT BAND, REF A500
7.02	COLLECTOR HEAD AND DOWNSPOUT, COLOR TO MATCH ADJACENT
7.10	PARAPET WALL METAL CAP FLASHING OVER CONTINUOUS METAL CLEAT, SLOPED TO MAIN ROOF FOR DRAINAGE (PAINTED)
7.20	STUCCO 1" METAL REVEAL
8.02	STOREFRONT AUTOMATED SLIDING DOOR PACKAGE WITH CLEAR ANODIZED ALUMINUM FRAME
8.03	SLIDING WINDOW, TYP.; SEE SPECS
8.04	STOREFRONT WINDOWS WITH CLEAR ANODIZED ALUMINUM FRAME
8.05	HOLLOW METAL DOOR AND FRAME, PAINT TO MATCH ADJACENT FINISH
22.16	ROOF DISCHARGE NOZZLE, REF PLUMBING SHEETS, 18" ABOVE GRADE
23.09	THRU-WALL HVAC UNIT W/ GRILLE FLUSH W/ EXT. MATERIAL, REF HVAC SHEETS
26.01	SURFACE MOUNTED FIXTURE, REF ELECTRICAL
26.09	EXTERIOR LIGHTING, REF MEP
32.01	FENCES AND GATES REF. LANDSCAPE SHEETS
32.02	MANUFACTURED FIRE PITS AND PLANTERS REF. LANDSCAPE SHEETS
32.03	LANDSCAPE KNEE WALLS AND BUILT-IN-GRILLS REF. LANDSCAPE SHEETS

FINISH KEYNOTES

Tag	Keynote Description
FC-001	FIBER CEMENT - NICHIHA VINTAGEWOOD "SPRUCE"
MM-001	MFR. MASONRY - EL DORADO "GRAND BANKS LIMESTONE"
MTL-001	FLAT SEAM METAL PANEL - LEAD-COTE
MTL-002	PREFINISHED BRAKE METAL WRAP - BERRIDGE METAL - LEAD-COTE
MTL-003	STANDING SEAM METAL ROOF - "LEAD-COTE"
S-001	STUCCO - SW 2850 "CHELSEA GRAY"
S-002	STUCCO - SW 7056 "RESERVED WHITE"
S-003	STUCCO - SW 6243 "DISTANCE"
S-004	STUCCO - SW 9163 "TIN LIZZIE"

TECHNOLOGY NOTES

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FINAL DEVELOPMENT PLAN
EVERHOME SUITES - SUPERIOR
MCCASLIN & MARSHALL RD, SUPERIOR, CO

PROJECT NO:	CO533
DESIGNED BY:	BG
DRAWN BY:	FM
DATE:	06/07/24

A2.1

FINAL DEVELOPMENT PLAN

EVERHOME SUITES - SUPERIOR

LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING 1B REPLAT NO. 3









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MCCASLIN & MARSHALL RD, SUPERIOR, CO

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DESIGNED BY:	BG
DRAWN BY:	FM
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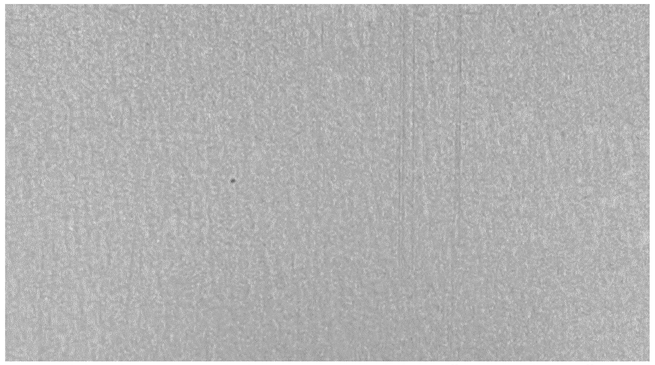
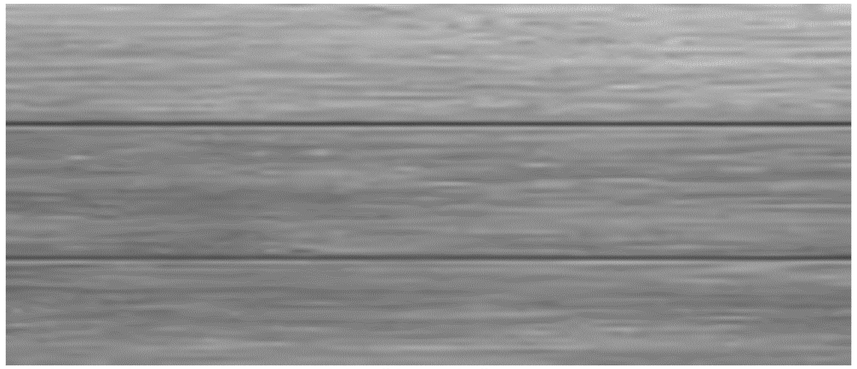
A2.2

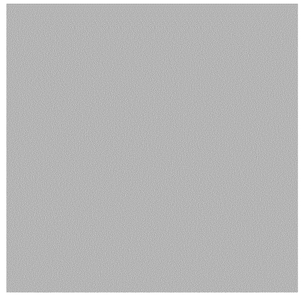
FINAL DEVELOPMENT PLAN
EVERHOME SUITES - SUPERIOR
LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING 1B REPLAT NO. 3



MTL-001 STANDING SEEM MTL ROOF - "LEAD COTE"

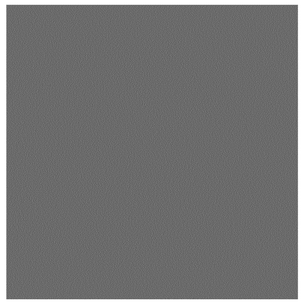


FC-001 NICHIHA VINTAGEWOOD "SPRUCE"

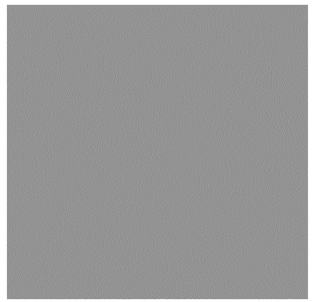


S-001 SW2850
CHELSEA GRAY

S-002 SW7056
RESERVED WHITE



S-003 SW6243
DISTANCE



S-004 SW 9163
TIN LIZZIE



MM-001 ELDORADO STONE - GRAND BANKS LIMESTONE

KEYNOTES

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5.05	METAL AWNING
5.11	BRAKE METAL WRAPPED ACCENT BAND, REF A500
7.02	COLLECTOR HEAD AND DOWNSPOUT, COLOR TO MATCH ADJACENT
7.10	PARAPET WALL METAL CAP FLASHING OVER CONTINUOUS METAL CLEAT, SLOPED TO MAIN ROOF FOR DRAINAGE (PAINTED)
7.20	STUCCO 1" METAL REVEAL
8.02	STOREFRONT AUTOMATED SLIDING DOOR PACKAGE WITH CLEAR ANODIZED ALUMINUM FRAME
8.03	SLIDING WINDOW, TYP.; SEE SPECS
8.04	STOREFRONT WINDOWS WITH CLEAR ANODIZED ALUMINUM FRAME
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22.16	ROOF DISCHARGE NOZZLE, REF PLUMBING SHEETS, 18" ABOVE GRADE
23.09	THRU-WALL HVAC UNIT W/ GRILLE FLUSH W/ EXT. MATERIAL, REF HVAC SHEETS
26.01	SURFACE MOUNTED FIXTURE, REF ELECTRICAL
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32.03	LANDSCAPE KNEE WALLS AND BUILT-IN-GRILLS REF. LANDSCAPE SHEETS

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TECHNOLOGY NOTES

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1-800-922-1987 or 811
CALL 3-BUSINESS DAYS (NOT INCLUDING INITIAL DAY OF CONTACT) IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

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No.	REVISION	BY	DATE

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CONSTRUCTION

101 architecture
ARCHITECTURE - PLANNING - INTERIORS
8400 E. CRESENT PARKWAY, SUITE 160
GREENWOOD VILLAGE, CO 80111
VOICE: 720-851-1600

FINAL DEVELOPMENT PLAN
EVERHOME SUITES - SUPERIOR
MCCASLIN & MARSHALL RD., SUPERIOR, CO

PROJECT NO:	CO533
DESIGNED BY:	BG
DRAWN BY:	FM
DATE:	06/07/24

A2.3

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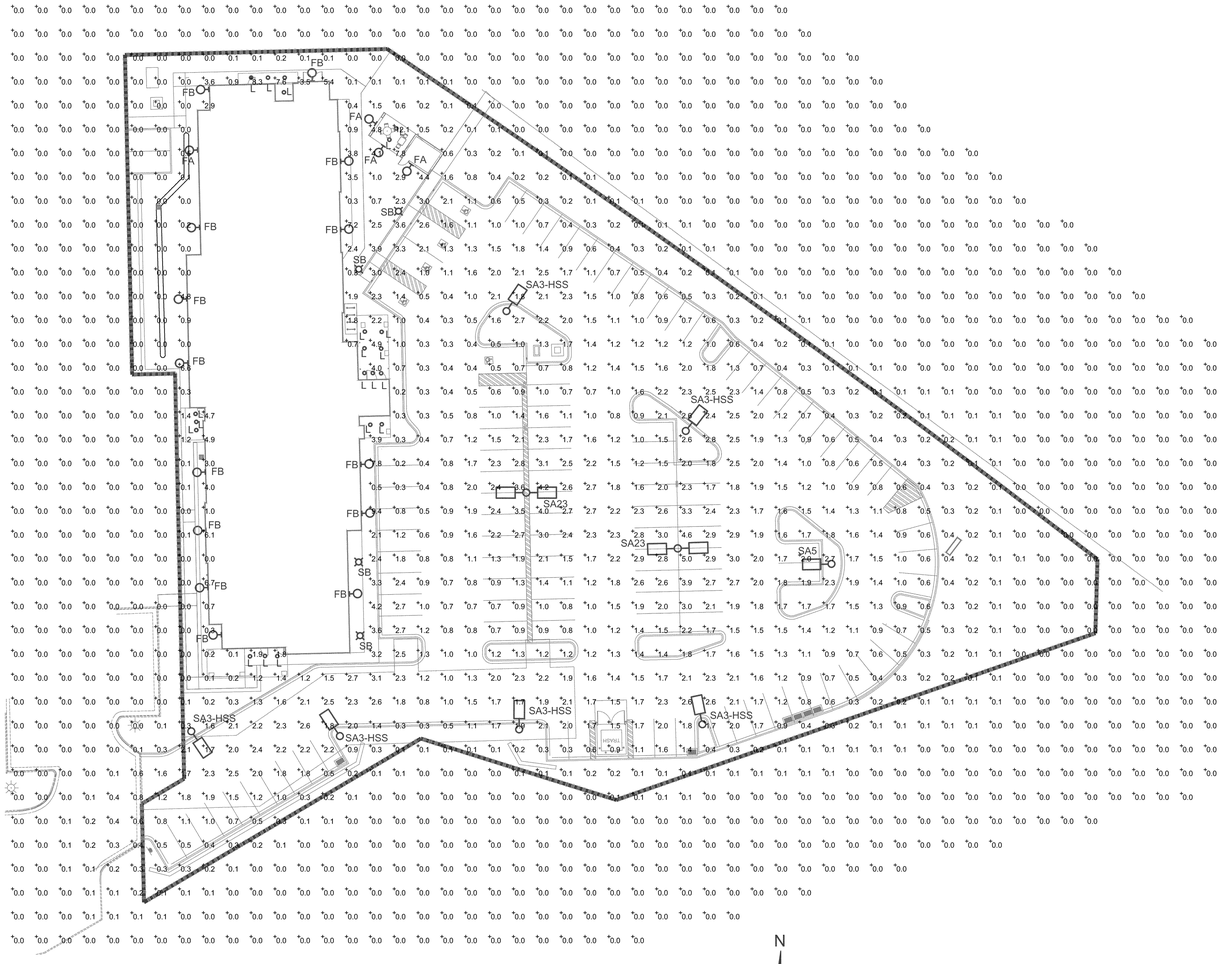
FINAL DEVELOPMENT PLAN

EVERHOME SUITES - SUPERIOR

LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING 1B REPLAT NO. 3



SITE PHOTOMETRIC PLAN

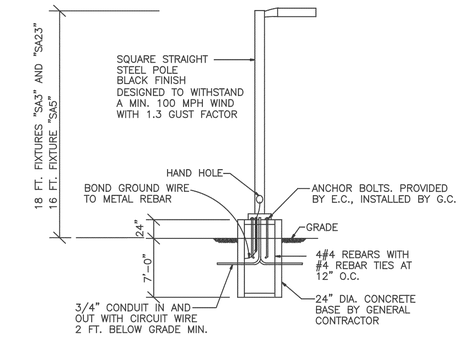
SCALE: 1" = 30'-0"

N

SITE PHOTOMETRIC SUMMARY

AVERAGE = 0.5 FT. CANDLE
MAXIMUM = 12.1 FT. CANDLE
MINIMUM = 0.0 FT. CANDLE
AT PROPERTY LINE = 0.1 FC MAX.

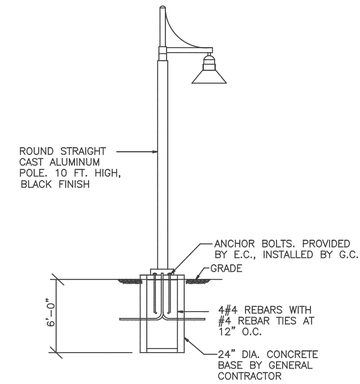
NOTE ON LIGHTING CONTROLS:
ALL SITE LIGHTS ON THESE PLANS SHALL BE PHOTO CELL CONTROLLED AND OPERATE DUSK UNTIL DAWN.



POLE MOUNTED FIXTURES INSTALLATION DETAIL

FIXTURES "SA3", "SA23", "SA5"

NO SCALE



POLE MOUNTED FIXTURE "SB"

NO SCALE

LIGHTING FIXTURE SCHEDULE

ITEM	MANUFACTURER	CAT. NO.	LAMPS	L.L.F.	DESCRIPTION
L	ELITE LIGHTING	ER3-LED-IC-700L-DIM10120-MWD-90-ER3-F-1307-W	15W, 3000K LED 700 LUMENS	1.0	3" EXTERIOR CANOPY RECESSED DOWN LIGHT
FA	GENESIS	GLSWPSL-20W-4000-120/277-BRONZE	20W, 3000K LED 1,200 LUMENS	1.0	WET LOCATION FULL CUT OFF WALL LIGHT, INSTALLED AT +12 FT ABOVE GRADE ON BUILDING TO BOTTOM OF FIXTURE
FB	INTRIGUE	EL-WA-37LED-30K-D-OL-12-BLK	30W, 3000K LED 3000 LUMENS	1.0	EXTERIOR BIRDCAGE STYLE, ROUND SHADE WALL LIGHT INSTALLED AT +7'-8" ABOVE GRADE TO BOTTOM OF FIXTURE
SA3-HSS	LUMARK	PREVAIL PETITE DISCRETE PRV-P-PA1A-730-U-T3-BK-HSS	31W, 3000K LED 4,443 LUMENS	1.0	SINGLE-HEAD FULL CUT OFF POLE LIGHT ON 16 FT. SQUARE POLE ON TOP OF 2 FT CONCRETE BASE. TYPE III OPTICS, HOUSE SIDE SHIELD
SA23	LUMARK	PREVAIL DISCRETE PRV-PA1A-730-U-T3-BK	54W, 3000K LED 6,899 LUMENS EACH	1.0	DOUBLE-HEAD FULL CUT OFF POLE LIGHT ON 16 FT. SQUARE POLE ON TOP OF 2 FT CONCRETE BASE. TYPE III OPTICS
SA5	LUMARK	PREVAIL DISCRETE PRV-PA1A-730-U-T5WQ-BK	54W, 3000K LED 7,831 LUMENS	1.0	SINGLE-HEAD FULL CUT OFF POLE LIGHT ON 14 FT. SQUARE POLE ON TOP OF 2 FT CONCRETE BASE. TYPE V SQUARE OPTICS
SB	STREETWORKS	EPIC MEDIUM MEM-E01LED-E1-T3-SO-SW-BK-7030-SA6159	25W, 3000K LED 2,936 LUMENS	1.0	PEDESTRIAN ROUND SHADE POLE LIGHT ON 10 FT ROUND POLE, BLACK FINISH

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D:\RGEC-DROPBOX\JOBS\JOBS\2024\EVERHOME SUITES SUPERIOR CO\SITE PHOTOMETRICS\PH-1.DWG

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VOICE: 720-881-1600

FINAL DEVELOPMENT PLAN
EVERHOME SUITES - SUPERIOR
MCCASLIN & MARSHALL RD, SUPERIOR, CO

SITE PHOTOMETRIC PLAN

PROJECT NO:	KTD005.01
DESIGNED BY:	AMG
DRAWN BY:	AMG
DATE:	4/19/24

PH.1

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FINAL DEVELOPMENT PLAN

EVERHOME SUITES - SUPERIOR

LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING 1B REPLAT NO. 3

FIXTURE "L"

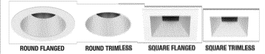
fusion LIGHTING By Elite Lighting

ER3-LED-IC 3"

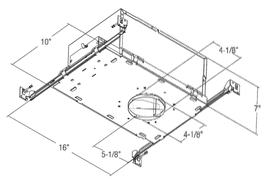
3" Architectural High Lumen Adjustable LED Downlight



TRIM OPTIONS



ROUND FLANGED | ROUND TRIMLESS | SQUARE FLANGED | SQUARE TRIMLESS



NOMINAL LUMENS	DELIVERED LUMENS	WATTAGE
1200	1392	16 W
900	1037	12 W
700	881	10 W

Based on 4000K, 90+ CRI. Actual wattage may vary +/- 5%

HIGH PERFORMANCE OPTIONS

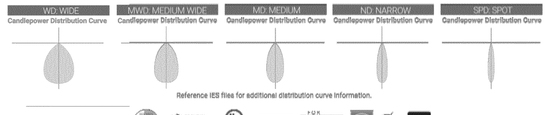
NOMINAL LUMENS	DELIVERED LUMENS	WATTAGE
1500	1680	17 W
1200	1380	14 W

Based on 4000K, 90+ CRI. Actual wattage may vary +/- 5%

FEATURES

A small aperture, architectural LED downlight that delivers the ultimate in uncompromised quality and performance, with precise, glare-free illumination, and unmatched flexibility. With the use of a single universal housing, it utilizes a multitude of trims, field changeable optics, and is fully adjustable to any beam angle, up to 45 degrees, with a full 365-degree horizontal rotation. Whether it's high-end architectural, hospitality, commercial, residential, or retail, the ER3 provides the most innovative solution to any design application that requires a small aperture.

LUMENS	700, 900, 1200, 1500 (Custom lumen packages available)
CCT & DYNAMIC PLATFORMS	2/K, 30K, 3uK, 40K, 50K, Tunable White, Dims to Warm, RGB + White
CRI	90+ Standard, 98+ Optional
COLOR QUALITY	2 Step MacAdam Ellipse
DISTRIBUTIONS	SPD(Sport-15°),NDiNarrow-24°), MD(Medium-35°), MWD(Medium Wide-45°), WD(Wide-52°)
TRIM OPTIONS	Downlight, Lcrocd Downlight, Wall Wash, Adjustable Accent, and Pinhole , Square and Round Trim and Trim-less Options
REFLECTOR COLORS	WH-(White), CI (Chrome), SN-(Satin Nickel), BK-(Black)
FLANGE COLORS	WH-(White)
DIMMING	0-10V Flicker Free 1% Dimming Standard (DIM10), (UTH, (UTP1R, (UTPW, H (3010.1, H (3030MX.1, H (3030V.1.1, DIMTR.
EMERGENCY	10W - Up to 1000L Output (Bodine BSL310) 20W - Up to 2000L Output (Bodine BSL20)
LIFETIME	L70 at 102,000 Hours
PHOTOMETRIC TESTS	In Accordance with IES I M79-08, I M80 and TM-30, I M-21
CCEA OPTION	For CCEA approved ER3 Family, please contact Elite Lighting for more information.



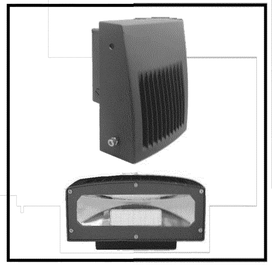
Reference IES files for additional distribution curve information.

elite LED LIGHTING | www.iuseelite.com | Due to the chances of constant improvement in LED technology, all details are subject to change without notice. Product factory warranty for up to date information. M3637 11.1.11, M3637.11.11

FIXTURE "FA"

GENESIS Lighting Solutions

LED Slim Wall Pack



FEATURES:
- Heavy Duty die-cast aluminum housing with anti-corrosion texture architectural baked polyester powder coating
- Tempered and impact resistant clear prismatic borosilicate glass
- No UV or IR radiation

ENERGY DATA
- Input Voltage: 120 - 277
- Power Factor: >0.90
- Power: 20W / 30W / 60W / 80W
- System Efficacy: (120Lm/W)
- Color Temperature: 5000K
- Lifetime Hours: 50000
- Operating Temperature: -13°F~ 131°F
- Color Rendering Index (CRI) : ≥80
- IP Rating: IP65

WARRANTY
5 - year limited warranty.

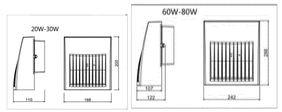
Note: Actual performance may differ as a result of end user environment and application. All values are design or typical values measure under laboratory conditions.

Ordering Information: **Example: GLSWPSL60W5000**

MODEL	WATTAGE	KELVIN	VOLTAGE	FINISH	OPTIONS
GLSWPSL	60W	5000	120/277	Bronze	

GLSWPSL	20W	3000	120/277v	Bronze	Photocell
	30W	4000			
	60W	5000			
	80W				

Product Size



APPLICATIONS:
- Shopping Centers
- Restaurants
- Offices & Schools
- Hospitals
- Hotels

CERTIFICATIONS:
- UL Listed
- DLC Certification Approved

DIMMABLE

FIXTURE "FB"

Type: _____ Model: _____

Project: _____

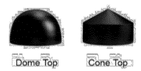
intrigue lighting LED

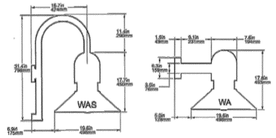
ELEGANT

LED Wall Mount



shown with straight arm mount (-WA)





General: The open birdcage style of the Elegant series provides a decorative uplight component in a classic fixture. Appropriate for pedestrian scale installations, the varied mounting configurations provide an aesthetic appeal across a variety of installations.

Construction: Top, housing, and mounting gear are constructed of low copper content cast aluminum. Shade shall be spun aluminum. Stainless steel external hardware to protect against the exterior elements.

Lens: Glass globe available in opal (-OU) or clear (-CL).

Tops: Two (2) top styles available: cone (-C) and dome (-D). Dome for –WA arm style only.

LED Light Engine: LED module located in upper housing with LED module offering 37 nominal input watts. Available in color temperatures of 3000K, 3500K, 4000K, and 5000K. Minimum CRI = 80.

Driver: Constant current LED driver; input voltage of 120v to 277v, internally mounted.

Heat Sink: Finned heat sink shall be extruded aluminum and shall be located in housing above LED module.

Mounting: Two (2) wall mount styles available: straight arm (-WA) and shepherds crook (-WAS).

Finish: Textured polyester powder coat finish. Shade underside is standard white finish. Black, bronze, grey, white, silver, and verde green options available. For woodgrain finish and custom colors, consult factory.

Gaskets: EPDM gaskets standard.

Weight: WA 27 lbs
WAS 28 lbs

Listings: ETL Listed to UL 8750. IESNA LM79.

Made in USA

www.intrigueled.com N60 W14592 Kaul Avenue Menomonee Falls, WI 53051
P: (877) 965 0005 F: (262) 436 1745

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D:\RGEC DROPBOX\JOBS\JOBS\2024\EVERHOME SUITES SUPERIOR CONSITE PHOTOMETRICS\PH-1.DWG

No.	REVISION	BY	DATE

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GREENWOOD VILLAGE, CO 80111
VOICE: 720-881-1600

FINAL DEVELOPMENT PLAN

EVERHOME SUITES - SUPERIOR

MCCASLIN & MARSHALL RD, SUPERIOR, CO

SITE LIGHTING FIXTURES

PROJECT NO:	KTD005.01
DESIGNED BY:	AMG
DRAWN BY:	AMG
DATE:	4/19/24

PH.2

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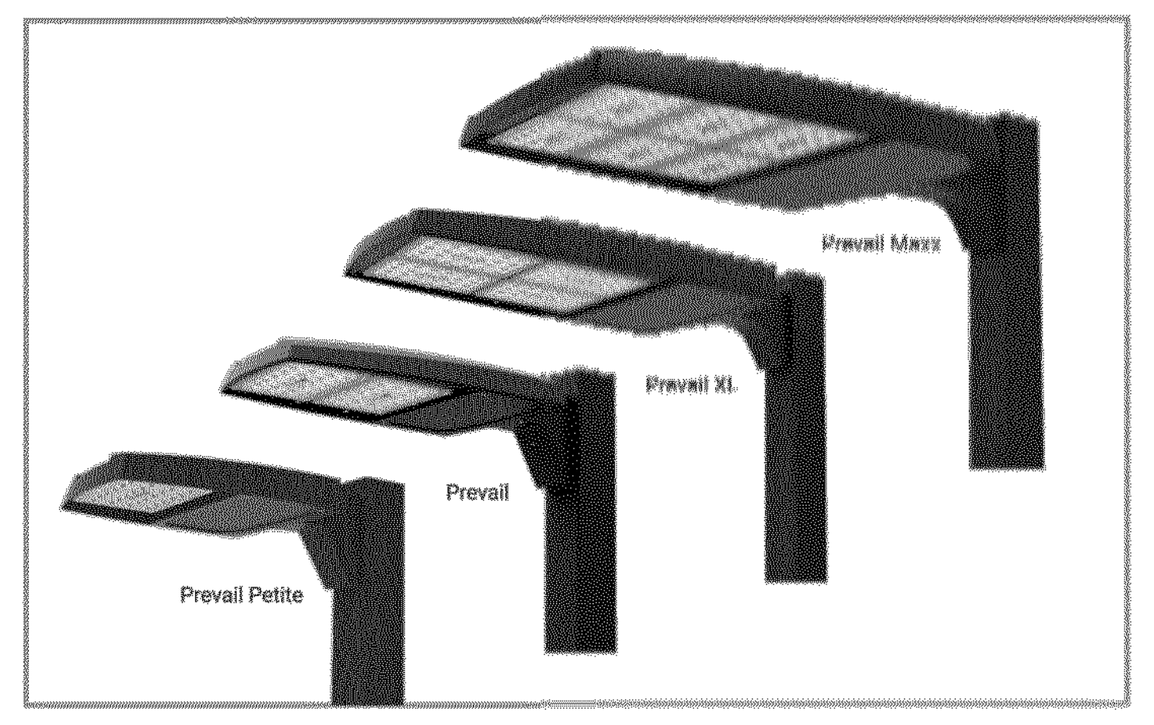
FINAL DEVELOPMENT PLAN

EVERHOME SUITES - SUPERIOR

LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING 1B REPLAT NO. 3

FIXTURE "SA3-HSS", "SA23" AND "SA5"

Project		Catalog #		Type	
Prepared by		Notes		Date	



Lumark

Prevail Discrete LED

Area / Site Luminaire

Product Features

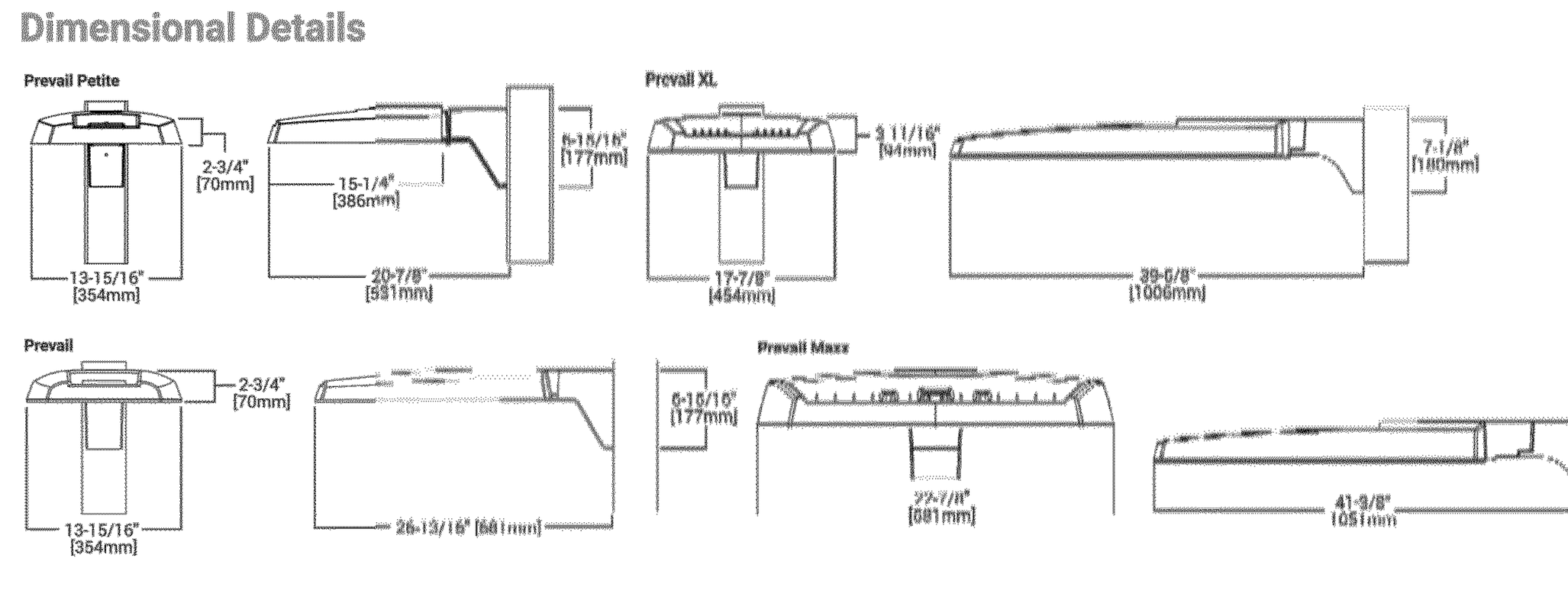
Interactive Menu
- Ordering Information page 2
- Mounting Details page 3, 4
- Optical Configurations page 5
- Product Specifications page 5
- Energy and Performance Data page 6, 7
- Control Options page 8

Product Certifications

Quick Facts
- Direct-mounted discrete light engine for improved optical uniformity and visual comfort
- Lumen packages range from 4,300 - 68,000 nominal lumens (30W - 550W)
- Replaces 70W up to 1,000W HID equivalents
- Efficacies up to 157 lumens per watt
- Standard universal quick mount arm with universal drill pattern

Connected Systems
- WaveLinx

Dimensional Details



NOTES:
1. Visit https://www.designlights.org/search/ to confirm qualification. Not all product variations are DLC qualified.
2. IDA Certified for 3000K CCT and warmer only.

COOPER Lighting Solutions

FIXTURE "SA3-HSS", "SA23" AND "SA5"

Lumark — **Prevail Discrete LED**

Ordering Information

SAMPLE NUMBER: **PRV-XL-PA4B-740-U-T4W-BZ**

Product Family [1, 2]	Light Engine: Configuration	Light Engine: Drive Current [4]	Color Temperature	Voltage	Distribution	Mounting (Included)	Finish
PRV-P=Prevail Petite **BAA-PRV-P**=Prevail Petite BAA Buy American Act Compliant [3] **TAA-PRV-P**=Prevail Petite TAA Trade Agreements Act Compliant [3]	**PA1**=1 Panel, 24 LED Rectangle	**A**=400mA Nominal **B**=700mA Nominal **C**=950mA Nominal **D**=1200mA Nominal	**740**=70CRI, 4000K **730**=70CRI, 3000K **750**=70CRI, 5000K **8540**=85CRI, 4000K	**U**=Universal, 120-277V **H**=High Voltage, 347-480V **1**=120V **2**=208V **3**=240V **4**=277V **8**=480V [5] **9**=347V **DV**=DuraVolt, 277-480V [5, 6]	**T2R**=Type II Roadway **T2U**=Type II Urban **T3**=Type III **T4W**=Type IV Wide **5WQ**=Type V Square Wide	**SA**=QM Standard Versatile Arm **MA**=QM Mast Arm **FMA**=Fixed Mast Arm [28] **WM**=QM Wall Mount Arm **ADJA-WM**= Adjustable Arm – Wall Mount [28] **ADJA**=Adjustable Arm – Pole Mount [28] **ADJS**=Adjustable Arm Slipfitter, 3" vertical tenon [28] **SP2**=Adjustable Arm – Slipfitter, 2 3/8" vertical tenon [28, 30]	**AP**=Grey **BZ**=Bronze **BK**=Black **DP**=Dark Platinum **GM**=Graphite Metallic **WH**=White
PRV=Prevail **BAA-PRV**=Prevail BAA Buy American Act Compliant [3] **TAA-PRV**=Prevail TAA Trade Agreements Act Compliant [3]	**PA1**=1 Panel, 24 LED Rectangle **PA2**=2 Panels, 48 LED Rectangles	**A**=700mA Nominal **B**=950mA Nominal					
PRV-XL=PRV XL **BAA-PRV-XL**=Prevail XL BAA Buy American Act Compliant [3] **TAA-PRV-XL**=Prevail XL TAA Trade Agreements Act Compliant [3]	**PA3**=3 Panels, 72 LED Rectangles **PA4**=4 Panels, 96 LED Rectangles	**A**=750mA Nominal **B**=950mA Nominal					
PRV-M=Prevail Maxx **BAA-PRV-M**=Prevail Maxx BAA Buy American Act Compliant [3] **TAA-PRV-M**=Prevail Maxx TAA Trade Agreements Act Compliant [3]	**PA6**= 6 Panels, 144 LED Rectangles	**A**=600mA Nominal **B**=800mA Nominal **C**=1000mA Nominal **D**=1200mA Nominal					

Options (Add as Suffix)

- **10K**=10kV UL 1449 Fused Surge Protective Device
- **20MSP**=20kV MOV Surge Protective Device
- **20K**=20kV UL 1449 Fused Surge Protective Device
- **F**=Single Fuse (Used with Voltages 120, 277 or 347V)
- **FF**=Double Fuse (Used with Voltages 208, 240 or 480V)
- **L90**=Optics Rotated 90° Left
- **R90**=Optics Rotated 90° Right
- **CC**=Coastal Construction finish [31]
- **HSS**=House Side Shield (Factory Installed) [7]
- **HA**=50°C High Ambient Temperature [8]
- **PR**=NEMA 3-PIN Twistlock Photocontrol Receptacle [10]
- **PR7**=NEMA 7-PIN Twistlock Photocontrol Receptacle [10]
- **MS/DIM-L08**=Motion Sensor for Dimming Operation, Up to 8' Mounting Height [11, 12, 13, 22]
- **MS/DIM-L20**=Motion Sensor for Dimming Operation, 9' - 20' Mounting Height [11, 12, 13, 28, 29]
- **MS/DIM-L40**=Motion Sensor for Dimming Operation, 21' - 40' Mounting Height [11, 12, 13]
- **SPB1**=Motion Sensor for Dimming Operation, BLE Interface, Up to 8' Mounting Height [11, 14, 22]
- **SPB2**=Motion Sensor for Dimming Operation, BLE Interface, 8' - 20' Mounting Height [11, 14, 28, 29]
- **SPB4**=Motion Sensor for Dimming Operation, BLE Interface, 21' - 40' Mounting Height [11, 14, 29]
- **ZW**=Wavelinx-enabled 4-PIN Twistlock Receptacle [11, 17]
- **ZD**=DALI-enabled 4-PIN Twistlock Receptacle [11, 17]
- **ZW-SWPD4XX**=Wavelinx Pro, Dimming Motion and Daylight, WAC Programmable, 7' - 15' Mounting Height [11, 15, 16, 17, 22]
- **ZW-SWPD5XX**=Wavelinx Pro, Dimming Motion and Daylight, WAC Programmable, 15' - 40' Mounting Height [11, 15, 16, 17, 28, 29]
- **ZD-SWPD4XX**=Wavelinx Pro, SR Driver, Dimming Motion and Daylight, 7' - 15' Mounting Height [11, 12, 15, 16, 17, 22]
- **ZD-SWPD5XX**=Wavelinx Pro, SR Driver, Dimming Motion and Daylight, 15' - 40' Mounting Height [11, 12, 13, 15, 17, 28, 29]
- **(See Table Below)**=LumenSafe Integrated Network Security Camera [18, 19]

Accessories (Order Separately) [20, 21]

- **PRVSA-XX**=Standard Arm Mounting Kit [27]
- **PRVMA-XX**=Mast Arm Mounting Kit [27]
- **PRVWM-XX**=Wall Mount Kit [27]
- **PRV-ADJA-XX**=Adjustable Arm - Pole Mount Kit [22]
- **PRV-ADJS-XX**=Adjustable Arm - Slipfitter Kit [22]
- **PRV-ADJA-WM-XX**=Adjustable Arm - Wall Mount Kit [22]
- **PRVXLSA-XX**=Standard Arm Mounting Kit [29]
- **PRVXLMA-XX**=Mast Arm Mounting Kit [29]
- **PRVXLWM-XX**=Wall Mount Kit [29]
- **PRV-XL-ADJA-XX**=Adjustable Arm - Pole Mount Kit [29]
- **PRV-XL-ADJA-WM-XX**= Adjustable Arm - Wall Mount Kit [29]
- **PRV-XL-ADJS-XX**= Adjustable Arm - Slipfitter Kit [29]
- **PRV-M-ADJA-XX**=Adjustable Arm - Pole Mount Kit [28]
- **PRV-M-ADJS-XX**=Adjustable Arm - Slipfitter Kit [28]
- **PRV-M-ADJA-WM-XX**=Adjustable Arm - Wall Mount Kit [28]
- **MA1010-XX**=Single Tenon Adapter for 3-1/2" O.D. Tenon
- **MA1011-XX**=2@180°Tenon Adapter for 3-1/2" O.D. Tenon
- **MA1017-XX**=Single Tenon Adapter for 2-3/8" O.D. Tenon
- **MA1018-XX**=2@180° Tenon Adapter for 2-3/8" O.D. Tenon
- **SRA238**=Tenon Adapter from 3" to 2-3/8"
- **PRV/DIS-FDV**=Full Drop Visor [22]
- **PRVXL/DIS-FDV**=Full Drop Visor [19]
- **HSS-VP**=House Side Shield Kit, Vertical Panel [7, 24]
- **HSS-HP**=House Side Shield Kit, Horizontal Panel [7, 24]
- **VGS-ARCH**= Panel Drop Shield, Short
- **VGL-ARCH**= Panel Drop Shield, Long
- **OA/RA1013**=Photocontrol Shorting Cap
- **OA/RA1014**=NEMA Photocontrol - 120V
- **OA/RA1016**=NEMA Photocontrol - Multi-Tap 105-285V
- **OA/RA1201**=NEMA Photocontrol - 347V
- **OA/RA1027**=NEMA Photocontrol - 480V
- **FSIR-100**=Wireless Configuration Tool for Occupancy Sensor [25]
- **WOLC-7P-10A**=WaveLinx Outdoor Control Module (7-PIN) [27]
- **SWPD4-XX**=WaveLinx Wireless Sensor, 7' - 15' Mounting Height [14, 16, 17, 22, 26]
- **SWPD5-XX**=WaveLinx Wireless Sensor, 15' - 40' Mounting Height [15, 16, 17, 26, 28, 29]

NOTES:
1. DesignLights Consortium® Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details.
2. Customer is responsible for engineering analysis to confirm pole and fixture compatibility for applications. Refer to installation instructions and pole white paper WP513001EN for additional support information.
3. Only product configurations with these designated prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or Trade Agreements Act of 1979 (TAA), respectively. Please refer to DOMESTIC PREFERENCES website for more information. Components shipped separately may be separately analyzed under domestic preference requirements.
4. Nominal drive currents shown here. For actual drive current by configuration, refer to Power and Lumens tables.
5. 480V not to be used with ungrounded or impedance grounded systems.
6. DuraVolt drivers feature added protection from power quality issues such as loss of neutral, transients and voltage fluctuations. Visit www.signify.com/duravolt for more information.
7. House Side Shield not for use with 5WQ distribution.
8. Not available with PA1D light engine in Petite housing (PRV-P).
9. Coastal construction finish salt spray tested to over 5,000 hours per ASTM B117, with a scribe rating of 9 per ASTM D1654.
10. If High Voltage (H) or DuraVolt (DV) is specified, use a photocontrol that matches the input voltage used.
11. Controls system is not available in combination with a photocontrol receptacle (PR or PR7) or another controls system (MS, SPB, ZD, or ZW).
12. Option not available with High Voltage (H) or DuraVolt (DV). Must specify Universal (U), 347V (9), or 480V (8) voltage.
13. Utilizes the Wattstopper sensor FSP-211. Sensor color white unless specified otherwise via POR. To field configure, order FSIR-100 accessory separately.
14. Utilizes the Wattstopper sensor FSP-3XX series. Sensor color determined by product finish. See Sensor Color Reference Table. Field-configures via mobile application. See Controls section for details.
15. Sensor passive infrared (PIR) may be overly sensitive when operating below -20°C (-4°F).
16. In order for the device to be field-configurable, requires WAC Gateway components WAC-PoE and WPOE-120 in appropriate quantities. Only compatible with WaveLinx system and software and requires system components to be installed for operation. See website for more Wavelinx application information.
17. Replace XX with sensor color (WH, BZ or BK).
18. Only available in PRV-XL configurations.
19. Not available with High Voltage (H, DV, 8 or 9) or HA options. Consult LumenSafe system product pages for additional details and compatibility information.
20. Replace XX with paint color.
21. For BAA or TAA requirements, Accessories sold separately will be separately analyzed under domestic preference requirements. Consult factory for further information.
22. Not for use with PRV-XL or PRV-M configurations.
23. Only for use with PRV. Not applicable to PRV-M, PRV-XL, or PRV-P.
24. Must order one per optic/LED when ordering as a field-installable accessory (1, 2, 3, 4, or 6). Refer to House Side Shield reference table for details.
25. This tool enables adjustment to Motion Sensor (MS) parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative for more information.
26. Requires 4-PIN twistlock receptacle option (ZD or ZW) option.
27. Requires 7 PIN NEMA twistlock photocontrol receptacle (PR7) option. The WOLC 7 cannot be used in conjunction with other controls systems (MS, ZD, ZW or LWR). Only for use at 120-347V.
28. Only available for PRV-M configurations.
29. Only for use with PRV-XL.
30. Fixed for PRV-M

LumenSafe Integrated Network Security Camera Technology Options (Add as Suffix)

Product Family	Camera Type	Data Backhaul	
L=LumenSafe Technology	**H**=Dome Camera, High Res **Z**=Dome Camera, Remote PTZ	**C**=Cellular, Customer Installed SIM Card **A**=Cellular, Factory Installed AT&T SIM Card **V**=Cellular, Factory Installed Verizon SIM Card	**S**=Cellular, Factory Installed Sprint SIM Card **E**=Ethernet Networking

COOPER Lighting Solutions

FIXTURE "SB"

Streetworks

Catalog #		Type
Project		
Comments		Date
Prepared by		

DESCRIPTION

The EPIC Collection delivers custom luminaire flexibility with high quality, yet availability expectations of standard specification grade product. The EPIC Collection can be dressed to suit any application. Recognizing evolving environmental and legislative trends, the EPIC Collection delivers world class LED optical and performance solutions to the decorative luminaire marketplace.

SPECIFICATION FEATURES

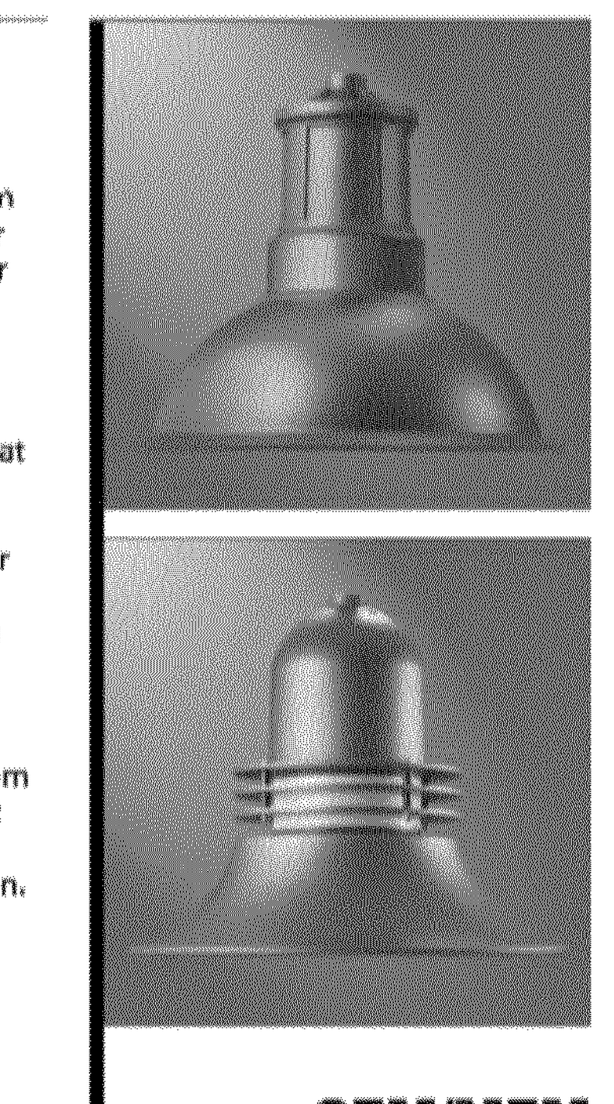
Construction
TOP: Cast aluminum top housing attaches to cast aluminum mounting arm hub with four stainless steel fasteners. One-piece silicone gasket between mounting hub and top casting seals out moisture and contaminants. (See the mounting accessories section for a full selection of mounting arms. (Only these arms are compatible with the Epic luminaire). MIDSECTION: Continuous silicone gaskets seal lens to top casting and shade. The mid section features cast aluminum construction and stainless steel assembly. SHADES: Heavy gauge precision spun aluminum shades offer superior surface finish and consistency in form. DOORFRAME: Die-cast aluminum 1/8" thick door and doorframe seal to underside of shade with a thick wall continuous silicone gasket. Mounting hub ships attached to mounting arm.

Optics
Choice of twelve patented, high-efficiency AccuLED Optic™ technology manufactured from injection-molded acrylic. Optics are precisely designed to shape the optics, maximizing efficiency and application spacing. AccuLED Optic technology, creates consistent distributions with the scalability to meet customized application requirements. Offered Standard in 4000K (+/- 275K) CCT and nominal 70 CRI. Optional 3000K CCT and 5000K CC. For the ultimate level of spill light control, an optional house-side shield accessory can be field or factory installed. The house-side shield is designed to seamlessly integrate with the SL2, SL3 or SL4 optics.

Electrical
LED drivers mount to die-cast aluminum back housing for optimal heat sinking, operation efficacy, and prolonged life. Standard drivers feature electronic universal voltage (120-277V 50/60Hz), 347V 60Hz or 480V 60Hz operation, greater than 0.9 power factor, less that 20% harmonic distortion, and is suitable for operation in -40°C to 40°C ambient environments. All fixtures are shipped standard with 10kV/10kA common – and differential – mode surge protection. LightBARs feature and IP66 enclosure rating and maintain greater than 95% lumen maintenance at 60,000 hours per IESNA TM-21. Occupancy sensor and dimming options available.

Finish
Housing is finished in five-stage super TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. LightBAR™ cover plates are standard white and may be specified to match finish of luminaire housing. Standard colors include black, bronze, grey, white, dark platinum and graphite metallic. RAL and custom color matches available. Consult Outdoor Architectural Colors brochure for a complete selection. Options to meet Buy American and other domestic preference requirements.

Warranty
Five-year warranty.



CEM/MEM
EPIC MEDIUM LED

1 - 4 LightBARs
Solid State LED

DECORATIVE AREA LUMINAIRE

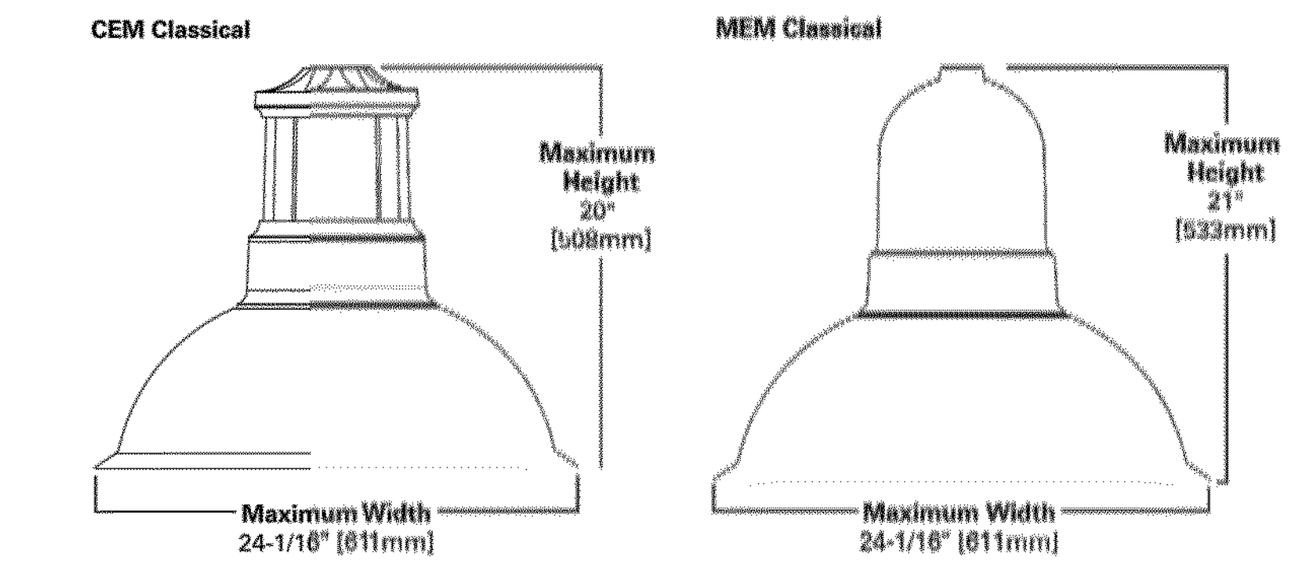
CERTIFICATION DATA
UL/cUL Listed
IP66 LightBARs
LM79 / LM80 Compliant
2G Vibration Tested
ISO 9001

ENERGY DATA
Electronic LED Driver
>0.9 Power Factor
<20% Total Harmonic Distortion
120-277V 50/60Hz, 347V/60Hz, 480V/60Hz
-40°C Minimum Temperature
40°C Ambient Temperature Rating

EPA
Effective Projected Area: (Sq. Ft.) 0.94

SHIPPING DATA
Approximate Net Weight:
45 lbs. [20 kgs.]

DIMENSIONS



See configurations for more detailed information.

COOPER Lighting Solutions

ORDERING INFORMATION

Sample Number: CEM-E04-LED-E1-T2-FL-GM

Product Family [1]	Number of LightBARs [2, 3]	Lamp Type	Voltage	Distribution	Mid Section Type	Shade Type	Color [5]
CEM=Epic Classical Medium **MEM**=Epic Modern Medium **BAA-CEM**= Epic Classical Medium, Buy American Act Compliant [19] **TAA-CEM**= Epic Classical Medium, Trade Agreements Act Compliant [19] **BAA-MEM**= Epic Modern Medium, Buy American Act Compliant [19] **TAA-MEM**= Epic Modern Medium, Trade Agreements Act Compliant [19]	**E01**=(1) 21 LED LightBAR **E02**=(2) 21 LED LightBARs **E03**=(3) 21 LED LightBARs **E04**=(4) 21 LED LightBARs **F01**=(1) 7 LED LightBAR **F02**=(2) 7 LED LightBARs **F03**=(3) 7 LED LightBARs **F04**=(4) 7 LED LightBARs	**LED**=Solid State Light Emitting Diodes	**E1**=Electronic (120-277V) **347**=347V **480**=480V [4]	**T2**=Type II **T3**=Type III **T4**=Type IV **SL2**=Type II w/Spill Control **SL3**=Type III w/Spill Control **SL4**=Type IV w/Spill Control **5MQ**=Type V Square Medium **5WQ**=Type V Square Wide **5XQ**=Type V Square Extra Wide **RW**=Rectangular Wide **SLL**=90° Spill Light Eliminator Left **SLR**=90° Spill Light Eliminator Right	**SO**=Solid **SR**=Solid Rings	**SN**=Straight Narrow **SW**=Straight Wide **BL**=Bell **FL**=Flute	**AP**=Grey **BZ**=Bronze **BK**=Black **DP**=Dark Platinum **GM**=Graphite Metallic **GN**=Hartford Green **WH**=White

Options (Add as Suffix)

- **2L**=Two Circuits [6]
- **7030**=70 CRI / 3000K CCT [7]
- **7050**=70 CRI / 5000K CCT [7]
- **8030**=80 CRI / 3000K CCT [7]
- **LCF**=LightBAR Cover Plate Matches Housing Finish
- **MS-LXX**=Motion Sensor for ON/OFF Operation [8]
- **MS/X-LXX**=Motion Sensor for Bi-Level Switching [9]
- **PMXX**=Pendant Mount (XX=Pendant Length in Inches, 9.5" min - 48.0" max) [10]
- **HSS**=Factory Installed House Side Shield [11]
- **DIM**=0-10V Dimming Driver [12]
- **10MSP**=Parallel 10kV MOV Surge Protective Device
- **20MSP**=Parallel 20kV MOV Surge Protective Device
- **20K**=Series 20kV UL 1449 Surge Protective Device

Accessories (Order Separately) [13, 20]

- **OA/RA1016**=NEMA Twistlock Photocontrol - Multi-Tap
- **OA/RA1027**=NEMA Twistlock Photocontrol - 480V
- **OA/RA1201**=NEMA Twistlock Photocontrol - 347V
- **OA/RA1013**=Photocontrol Shorting Cap
- **LB/HSS-21**=Field Installed House Side Shield for "E" LightBARs [11, 15]
- **LB/HSS-07**=Field Installed House Side Shield for "F" LightBARs [11, 15]

Mounting Accessories (Order Separately)

Classical
- **SA6150-XX**=Bishop Wall Mount Arm
- **SA6151-XX**=Bishop Wall Mount Arm with Cross Rod
- **SA6152-XX**=Traditional Wall Mount Arm
- **SA6153-XX**=Traditional Wall Mount Arm with 45° Strap
- **SA6154-XX**=Bishop Single Pole Mount Arm
- **SA6155-XX**=Bishop Single Pole Mount Arm with Cross Rod
- **SA6156-XX**=Bishop Twin Pole Mount Arm
- **SA6157-XX**=Bishop Twin Pole Mount Arm with Cross Rods
- **SA6158-XX**=Traditional Single Pole Mount Arm
- **SA6159-XX**=Traditional Single Pole Mount Arm with Rounded Upper Bar
- **SA6160-XX**=Traditional Single Pole Mount Arm with Rounded Lower Bar [14]
- **SA6161-XX**=Traditional Single Pole Mount Arm with 45° Upper Bar
- **SA6162-XX**=Traditional Single Pole Mount Arm with 45° Lower Bar [14]
- **SA6163-XX**=Traditional Single Pole Mount Arm with 45° Upper Strap
- **SA6165-XX**=Traditional Twin Pole Mount Arm
- **SA6166-XX**=Traditional Twin Pole Mount Arm with Rounded Upper Bars
- **SA6167-XX**=Traditional Twin Pole Mount Arm with Rounded Lower Bars [14]
- **SA6168-XX**=Traditional Twin Pole Mount Arm with 45° Upper Bars
- **SA6169-XX**=Traditional Twin Pole Mount Arm with 45° Lower Bars [14]
- **SA6170-XX**=Traditional Twin Pole Mount Arm with 45° Upper Straps
- **SA6171-XX**=Mast Arm Adapter

Modern
- **SA6101-XX**=Bishop Wall Mount Arm
- **SA6102-XX**=Bishop Wall Mount Arm with Cross Rod
- **SA6103-XX**=Traditional Wall Mount Arm
- **SA6104-XX**=Traditional Wall Mount Arm with 45° Strap
- **SA6105-XX**=Bishop Single Pole Mount Arm
- **SA6106-XX**=Bishop Single Pole Mount Arm with Cross Rod
- **SA6107-XX**=Bishop Twin Pole Mount Arm
- **SA6108-XX**=Bishop Twin Pole Mount Arm with Cross Rods
- **SA6109-XX**=Traditional Single Pole Mount Arm
- **SA6110-XX**=Traditional Single Pole Mount Arm with Rounded Upper Bar
- **SA6111-XX**=Traditional Single Pole Mount Arm with Rounded Lower Bar [14]
- **SA6112-XX**=Traditional Single Pole Mount Arm with 45° Upper Bar
- **SA6113-XX**=Traditional Single Pole Mount Arm with 45° Lower Bar [14]
- **SA6114-XX**=Traditional Single Pole Mount Arm with 45° Upper Strap
- **SA6116-XX**=Traditional Twin Pole Mount Arm
- **SA6117-XX**=Traditional Twin Pole Mount Arm with Rounded Upper Bars
- **SA6118-XX**=Traditional Twin Pole Mount Arm with Rounded Lower Bars [14]
- **SA6119-XX**=Traditional Twin Pole Mount Arm with 45° Upper Bars
- **SA6120-XX**=Traditional Twin Pole Mount Arm with 45° Lower Bars [14]
- **SA6121-XX**=Traditional Twin Pole Mount Arm with 45° Upper Straps
- **SA6122-XX**=Mast Arm Adapter

Accessory Options [16]
- **V**=Victorian Finial [17]
- **M**=Modern Finial [17]
- **A**=Architectural Finial [17]
- **N**=Nostalgic Finial [17]
- **R**=NEMA Twistlock Photocontrol Receptacle [18]
- **PER7**=NEMA 7-PIN Twistlock Photocontrol Receptacle [18]

NOTES:
1. Arm not included. Order separately. See accessories.
2. Standard 4000K CCT and greater than 70 RI.
3. 21 LED LightBAR powered by 350mA and 7 LED LightBAR powered by 1A.
4. Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).
5. Custom and RAL color matching available upon request. Consult your lighting representative at Cooper Lighting Solutions for more information.
6. Low-level output varies by bar count. Consult factory. Requires quantity of two or more LightBARs.
7. Consult customer service for lead times and multiplier.
8. Sensor mounted to the luminaire. Available in E01-E04 and F01-F04 configurations. Replace "XX" with mounting height in feet for proper lens selection, (e.g., MS-L25). Consult factory for additional information.
9. Sensor mounted to the luminaire. Available in E02-E04 and F02-F04 configurations. Replace "X" with number of LightBARs operating in low output mode and replace XX with mounting height in feet for proper lens selection, (e.g., MS/3-L25). Maximum four bars in low output mode. Consult factory for additional information.
10. Pendant mount option "PMXX" must be used with Invue Pendant mount kit only. Includes pendant pipe, swivel hanger and canopy cover. Other pendant lengths can be specified in inches (XX). Minimum pendant length is 9-1/2". For lengths above 48", consult your lighting representative at Cooper Lighting Solutions for more information.
11. Only for use with SL2, SL3 and SL4 distributions.
12. Dimming leads provide for external 0-10V control system (by others).
13. Replace XX with color suffix.
14. Only available with traditional arms.
15. One required for each LightBAR.
16. Add as suffix to mounting accessory. Example: VA6106-BK-R.
17. Not available with finials, pendant mount "PM48" or bishop wall mounts.
18. Requires use of 4" O.D. round straight pole.
19. Only product configurations with these designated prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or Trade Agreements Act of 1979 (TAA), respectively. Please refer to DOMESTIC PREFERENCES website for more information. Components shipped separately may be separately analyzed under domestic preference requirements.
20. Accessories sold separately will be separately analyzed under domestic preference requirements. Consult factory for further information.

COOPER Lighting Solutions

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

CALL UTILITY NOTIFICATION CENTER OF COLORADO
1-800-922-1987 or 811
CALL 3-BUSINESS DAYS (NOT INCLUDING INITIAL DAY OF CONTACT) IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

D:\RGEC DROPBOX\JOBS\JOBS\2024\EVERHOME SUITES SUPERIOR CO\SITE PHOTOMETRICS\PH-1.DWG

No.	REVISION	BY	DATE

PRELIMINARY NOT FOR CONSTRUCTION

1@rchitecture
ARCHITECTURE - PLANNING - INTERIORS
8400 E. CRESENT PARKWAY, SUITE 160
GREENWOOD VILLAGE, CO 80111
VOICE: 720-881-1600

FINAL DEVELOPMENT PLAN
EVERHOME SUITES - SUPERIOR
MCCASLIN & MARSHALL RD, SUPERIOR, CO
SITE LIGHTING FIXTURES

PROJECT NO:	KTD005.01
DESIGNED BY:	AMG
DRAWN BY:	AMG
DATE:	4/19/24

PH.3

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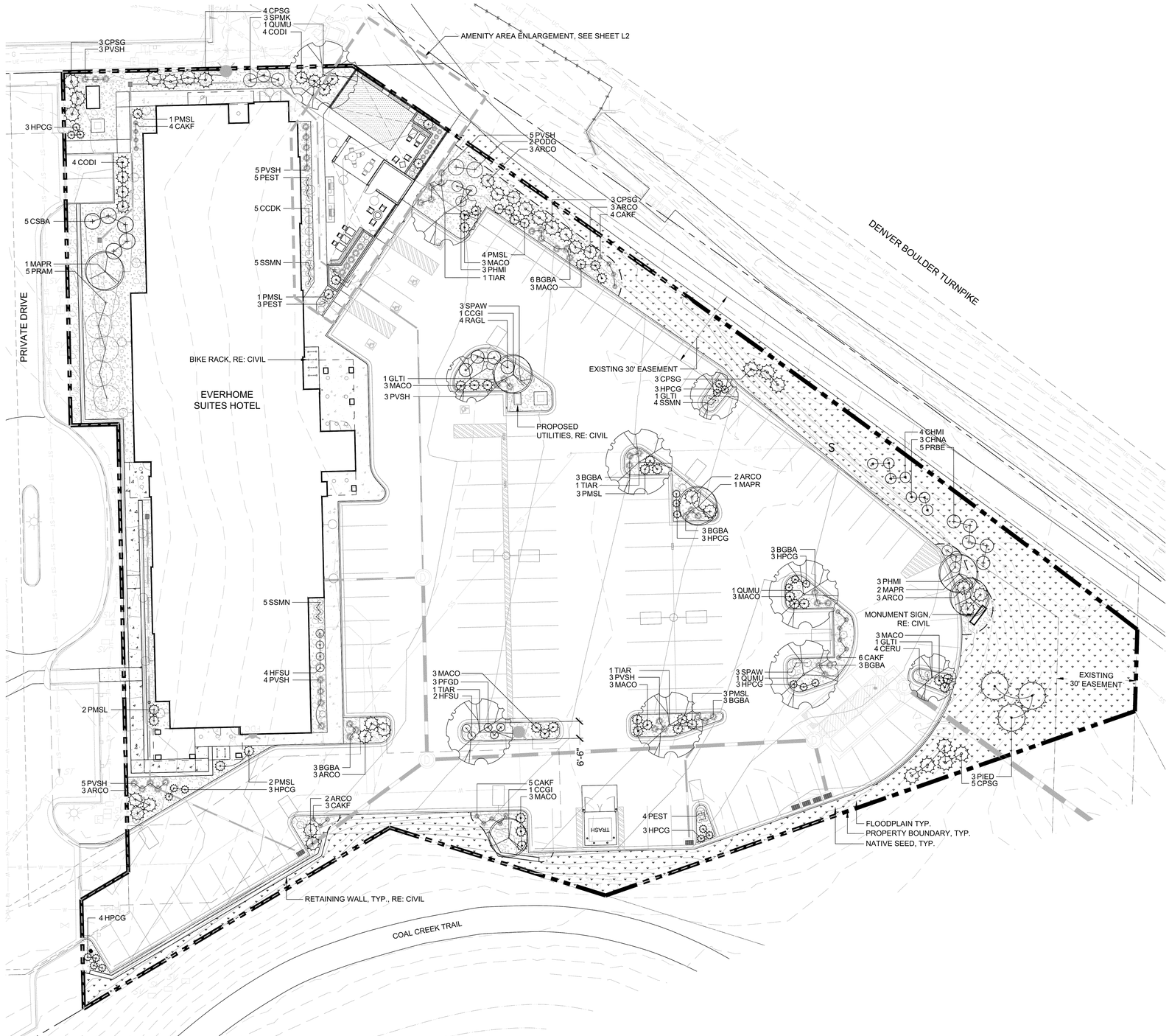
FINAL DEVELOPMENT PLAN

EVERHOME SUITES - SUPERIOR

LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING 1B REPLAT NO. 3

LEGEND

- DECIDUOUS TREE
- EVERGREEN TREE
- DECIDUOUS SHRUBS
- EVERGREEN SHRUBS
- ORNAMENTAL GRASSES
- PERENNIALS
- NATIVE SEED
- ARTIFICIAL TURF
- 1-1/2" GRAY GRANITE MULCH
- SHREDDED WOOD MULCH
- PROPERTY BOUNDARY
- FLOODPLAIN
- LANDSCAPE EDGER
- STRING LIGHTING
- 4' ORNAMENTAL FENCING
- LOUNGE CHAIR
- DINING TABLE & CHAIRS
- SEAT BENCH
- OUTDOOR GRILL
- ROUND FIRE PIT
- SCREEN WALL WITH FENCE
- RAISED PLANTER WALL



1 LANDSCAPE PLAN

NORTH

0 20 40 60 feet

SCALE: 1" = 20'

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

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No.	REVISION	BY	DATE
1	REVISIONS PER COMMENTS	NR	04/22/24
2	REVISIONS PER COMMENTS	LR	06/07/24

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NOT FOR
CONSTRUCTION

K2 CIVIL CONSULTANTS

VALERIAN
Landscape Architecture | Urban Design
Irrigation Design | Planning
970 Yuma Street | Suite 130 | Denver, CO 80204

FINAL DEVELOPMENT PLAN

EVERHOME SUITES - SUPERIOR

MCCASLIN & MARSHALL RD, SUPERIOR, CO

LANDSCAPE PLAN

PROJECT NO:	KTD005.01
DESIGNED BY:	LR
DRAWN BY:	LR
DATE:	4/19/24

L1

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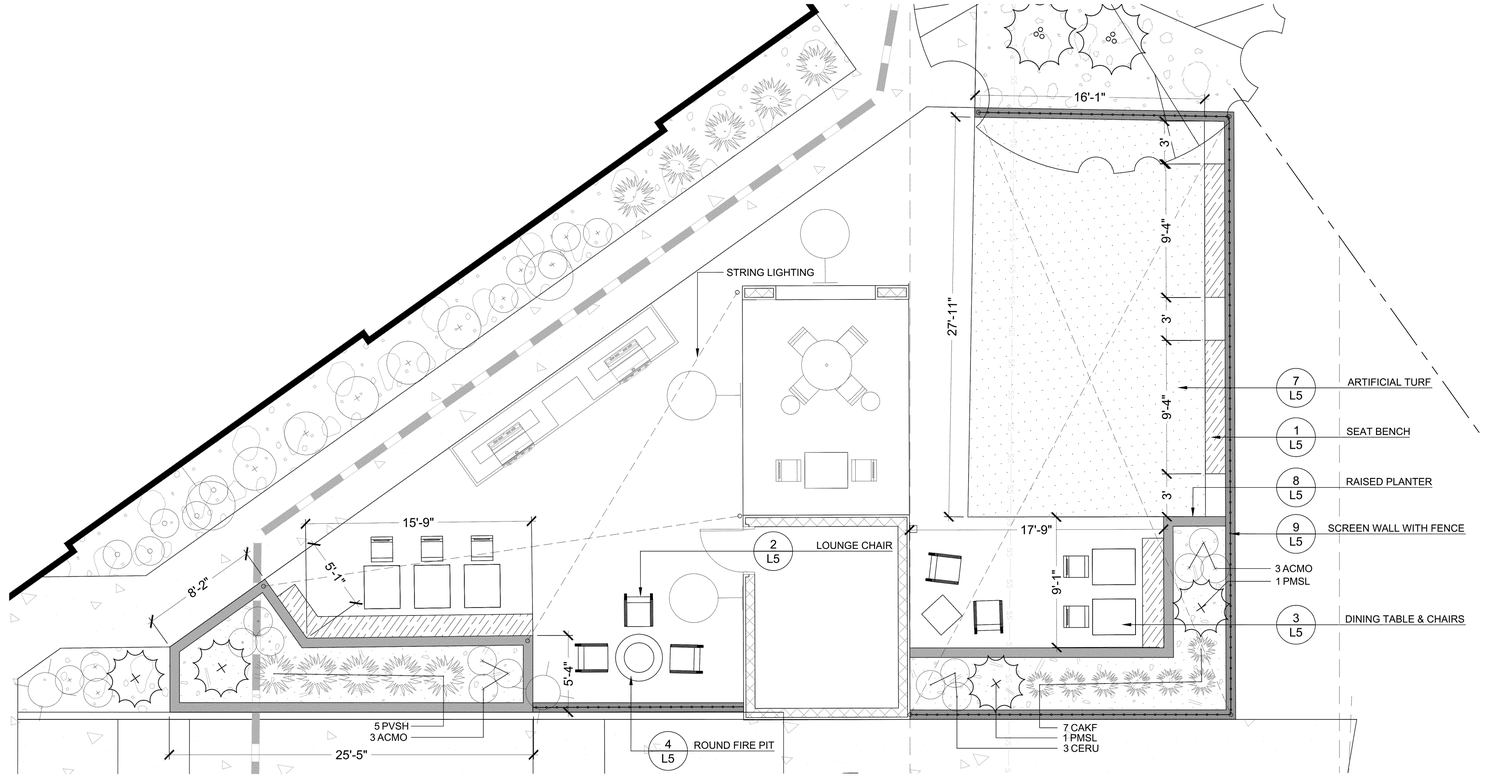
FINAL DEVELOPMENT PLAN

EVERHOME SUITES - SUPERIOR

LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING 1B REPLAT NO. 3

LEGEND

- DECIDUOUS TREE
- EVERGREEN TREE
- DECIDUOUS SHRUBS
- EVERGREEN SHRUBS
- ORNAMENTAL GRASSES
- PERENNIALS
- NATIVE SEED
- ARTIFICIAL TURF
- 1-1/2" GRAY GRANITE MULCH
- SHREDDED WOOD MULCH
- PROPERTY BOUNDARY
- FLOODPLAIN
- LANDSCAPE EDGER
- STRING LIGHTING
- 4' ORNAMENTAL FENCING
- LOUNGE CHAIR
- DINING TABLE & CHAIRS
- SEAT BENCH
- OUTDOOR GRILL
- ROUND FIRE PIT
- SCREEN WALL WITH FENCE
- RAISED PLANTER WALL



1 AMENITY AREA ENLARGEMENT

NORTH

0 5 10 15 feet

SCALE: 1" = 5'

CALL UTILITY NOTIFICATION CENTER OF COLORADO

1-800-922-1987 or 811

CALL 3-BUSINESS DAYS (NOT INCLUDING INITIAL DAY OF CONTACT) IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

Know what's below. Call before you dig.

No.	REVISION	BY	DATE
1	REVISIONS PER COMMENTS	NR	04/22/24
2	REVISIONS PER COMMENTS	LR	06/07/24

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VALERIAN
Landscape Architecture | Urban Design
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970 Yuma Street | Suite 130 | Denver, CO 80204

FINAL DEVELOPMENT PLAN

EVERHOME SUITES - SUPERIOR

MCCASLIN & MARSHALL RD, SUPERIOR, CO

AMENITY AREA ENLARGEMENT

PROJECT NO:	KTD005.01
DESIGNED BY:	LR
DRAWN BY:	LR
DATE:	4/19/24

L2

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X:\VALERIAN DROPBOX\VALERIAN TEAM FOLDER\PROJECTS\23-067_EES_EVERHOME SUPERIOR\2-WORKING\2024-06-07_FDP LANDSCAPE & IRRIGATION SUBMITTAL_3RD\23-067_03_LANDSCAPE SCHEDULE & NOTES.DWG

FINAL DEVELOPMENT PLAN

EVERHOME SUITES - SUPERIOR

LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING 1B REPLAT NO. 3

PLANT SCHEDULE

CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL
DECIDUOUS TREES					
GLTI	3	GLEDITSIA TRIACANTHOS INERMIS `SUNBURST`	SUNBURST HONEYLOCUST	B & B	2.5"CAL
QUMU	3	QUERCUS MUEHLENBERGII	CHINKAPIN OAK	B & B	2.5"CAL
TIAR	4	TILIA AMERICANA `REDMOND`	REDMOND LINDEN	B & B	2.5"CAL
EVERGREEN TREES					
PIED	3	PINUS EDULIS	PINYON PINE	B & B	10' HT.
ORNAMENTAL TREES					
CCGI	2	CRATAEGUS CRUS-GALLI INERMIS	THORNLESS COCKSPUR HAWTHORN	B & B	2"CAL
MAPR	4	MALUS X `PRAIRIFIRE`	PRAIRIFIRE CRABAPPLE	B & B	2"CAL
CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	
DECIDUOUS SHRUBS					
CCDK	5	CARYOPTERIS X CLANDONENSIS 'DARK KNIGHT'	DARK KNIGHT BLUEBEARD	#5	
CHMI	4	CHAMAEBATIARIA MILLEFOLIUM	FERNBUSH	#5	
CHNA	3	CHRYSOTHAMNUS NAUSEOSUS	RABBITBRUSH	#5	
CSBA	5	CORNUS SERICEA 'BAILEYI'	BAYLEY'S RED TWIG DOGWOOD	#5	
HFSU	6	HYPERICUM FRONDOSUM 'SUNBURST'	SUNBURST ST. JOHN'S WORT	#5	
PHMI	6	PHILADELPHUS MICROPHYLLUS	LITTLELEAF MOCKORANGE	#5	
PODG	2	PHYSOCARPUS OPULIFOLIUS 'DART'S GOLD'	DART'S GOLD NINEBARK	#5	
PFGD	3	POTENTILLA FRUTICOSA 'GOLD DROP'	GOLD DROP BUSH CINQUEFOIL	#5	
PRAM	5	PRUNUS AMERICANA	AMERICAN PLUM	#5	
PRBE	5	PRUNUS BESSEYI	SAND CHERRY	#5	
RAGL	4	RHUS AROMATICA 'GRO-LOW'	GRO-LOW FRAGRANT SUMAC	#5	
SPAW	6	SPIRAEA JAPONICA 'ANTHONY WATERER'	ANTHONY WATERER JAPANESE SPIREA	#5	
SPMK	3	SYRINGA PUBESCENS PATULA 'MISS KIM'	MISS KIM KOREAN LILAC	#5	
EVERGREEN SHRUBS					
ARCO	19	ARCTOSTAPHYLOS X COLORADENSIS	CHEIFTAN MANZANITA	#5	
CODI	8	COTONEASTER DIVARICATUS	SPREADING COTONEASTER	#5	
CPSG	18	CYTISUS PURGANS 'SPANISH GOLD'	SPANISH GOLD BROOM	#5	
HPCG	25	HESPERALOE PARVIFLORA 'CORAL GLOW'	CORAL GLOW RED YUCCA	#5	
MACO	24	MAHONIA AQUIFOLIUM 'COMPACTA'	COMPACT OREGON GRAPE	#5	
PMSL	19	PINUS MUGO 'SLOWMOUND'	SLOWMOUND MUGO PINE	#5	
ORNAMENTAL GRASSES					
BGBA	24	BOUTELOUA GRACILIS 'BLONDE AMBITION'	BLONDE AMBITION BLUE GRAMA	#5	
CAKF	29	CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER'	KARL FOERSTER FEATHER REED GRASS	#5	
PVSH	33	PANICUM VIRGATUM 'SHENANDOAH'	SHENANDOAH SWITCH GRASS	#5	
PERENNIALS					
ACMO	6	ACHILLEA X 'MOONSHINE'	MOONSHINE YARROW	#1	
CERU	10	CENTRANTHUS RUBER	RED VALERIAN	#1	
PEST	12	PENSTEMON STRICTUS	ROCKY MOUNTAIN PENSTEMON	#1	
SSMN	14	SALVIA X SYLVESTRIS 'MAY NIGHT'	MAY NIGHT SAGE	#1	
SYMBOL	QTY	BOTANICAL NAME	COMMON NAME		
GROUND COVERS					
	11,173 SF	NATIVE SEED	SEED		

OVERALL LANDSCAPE REQUIREMENTS

	LIVE PLANT MATERIAL	
OVERALL LANDSCAPE AREA	REQUIRED (75%)	PROVIDED
21,657 SF	16,243 SF	19,491 SF

		DECIDUOUS PLANT DIVERSITY		EVERGREEN PLANT DIVERSITY	
TOTAL DECID. SHRUBS	TOTAL EVER. SHRUBS	REQUIRED (10% MAX. OF ONE SPECIES)	PROVIDED	REQUIRED (25% MAX. OF ONE SPECIES)	PROVIDED
57	113	6 MAX.	6	28 MAX.	25

	TOTAL PLANT TYPE DIVERSITY			
TOTAL PLANTS	REQUIRED (1/3 DECIDUOUS PLANTS MAX)	PROVIDED	REQUIRED (2/3 EVERGREEN PLANTS MIN)	PROVIDED
170	57	57	113	113

	TREE REQUIREMENT 1/825 SF		SHRUB REQUIREMENT 1/100 SF	
DEVELOPED LANDSCAPE AREA	REQUIRED	PROVIDED	REQUIRED	PROVIDED
9,710 SF	12	12	98	147

	TREE REQUIREMENT 1/4000 SF		SHRUB REQUIREMENT 1/500 SF	
NATURALIZED LANDSCAPE AREA	REQUIRED	PROVIDED	REQUIRED	PROVIDED
11,271 SF	3	3	23	23

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CALL 3-BUSINESS DAYS (NOT INCLUDING INITIAL DAY OF CONTACT) IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

GENERAL NOTES:

1. VERIFY ALL EXISTING CONDITIONS PRIOR TO BEGINNING WORK. BE AWARE OF ANY UNDERGROUND UTILITIES. PROTECT ALL EXISTING SITE FEATURES TO REMAIN FROM POTENTIAL DAMAGE BY SITE CONSTRUCTION OPERATIONS. AVOID ANY WORK BEYOND SCOPE OF PROJECT AREA.
2. COORDINATE ALL DISCIPLINES AND SITE CONSTRUCTION THAT WILL BE NEEDED TO COMPLETE THE PROJECT IN THE TIME FRAME GIVEN AND WITHIN BUDGET. ALL ACCESS TO SITE, USE OF UTILITIES, STORAGE, AND OTHER REQUIREMENTS SHALL BE COORDINATED PRIOR TO BEGINNING WORK.
3. CONTRACTOR IS RESPONSIBLE TO INSPECT AND CONFIRM SITE CONDITIONS PRIOR TO BEGINNING WORK. COMMENCEMENT OF WORK SHALL SIGNIFY ALL CONDITIONS ARE ACCEPTABLE AND NO ALLOWANCE WILL BE MADE FOR UNRECOGNIZED CONDITIONS AFTER START OF WORK.
4. NOTIFY OWNER/LANDSCAPE ARCHITECT IMMEDIATELY UPON DISCOVERY OF UNFORESEEN SITE CONDITIONS OR PLAN DISCREPANCIES. NO CHANGE TO SPECIFIED WORK SHALL BE COMPLETED WITHOUT VERIFICATION OF EXISTING CONDITIONS AND WRITTEN APPROVAL OF MODIFICATION BY THE LANDSCAPE ARCHITECT.

PLANTING NOTES:

1. LANDSCAPE CONTRACTOR SHALL LOCATE ALL TREES, SHRUBS AND PLANTING BEDS ACCORDING TO LOCATIONS SHOWN ON DRAWINGS. ALL PLANTING LOCATIONS SHALL BE SUBJECT TO REVIEW AND APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO THE START OF PLANTING OPERATIONS. LANDSCAPE CONTRACTOR SHALL MAKE MODIFICATIONS IN LOCATIONS AS DIRECTED BY LANDSCAPE ARCHITECT.
2. THE PLANT SCHEDULE IS FOR CONTRACTOR'S CONVENIENCE ONLY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING EXISTING CONDITIONS AND REPORTING IN WRITING TO THE LANDSCAPE ARCHITECT ANY CONFLICTS RELATIVE TO IMPLEMENTATION OF THE LANDSCAPE CONSTRUCTION DOCUMENTS. VALERIAN LLC. SHALL NOT ASSUME ANY ERRORS OR OMISSIONS IN THE PLANT SCHEDULE LISTED HEREIN. THE PLANT SYMBOLS SHOWN ON THE LANDSCAPE PLAN SHALL PREVAIL SHOULD THERE BE ANY DISCREPANCIES IN QUANTITIES BETWEEN THE PLAN AND PLANT SCHEDULE.
3. LANDSCAPE CONTRACTOR SHALL PROVIDE PLANT PROTECTION AND MAINTENANCE THROUGHOUT INSTALLATION AND UNTIL FINAL ACCEPTANCE OF LANDSCAPE INSTALLATION AS FOLLOWS:
   A) ALL PLANT MATERIAL SHALL BE PROTECTED, FROM TIME OF DIGGING TO TIME OF FINAL ACCEPTANCE, FROM INJURY, EXCESSIVE DRYING FROM WINDS, IMPROPER VENTILATION, OVER-WATERING, FREEZING, HIGH TEMPERATURES, OR ANY OTHER CONDITION DAMAGING TO PLANTS.
   B) PLANT MATERIAL SHALL BE PLANTED ON THE DAY OF DELIVERY IF POSSIBLE. ALL PLANTS NOT PLANTED ON THE DAY OF DELIVERY SHALL BE PLACED IN A TEMPORARY NURSERY AND KEPT MOIST, SHADED, AND PROTECTED FROM THE SUN AND WIND. EACH ROOTBALL SHALL BE COVERED ENTIRELY WITH MULCH. ALL PLANT MATERIALS SHALL BE INSTALLED PER THE PLAN DRAWINGS AND SPECIFICATIONS.
   C) LANDSCAPE CONTRACTOR SHALL PROVIDE PLANT MATERIALS THAT COMPLY WITH THE REQUIREMENTS OF THE MOST RECENT ANSI Z 60.1 "STANDARDS FOR NURSERY STOCK" UNLESS OTHERWISE SPECIFIED. CALIPER OF B&B TREES SHALL BE TAKEN 6 INCHES ABOVE THE GROUND UP TO AND INCLUDING 4 INCH CALIPER SIZE, AND 12 INCHES ABOVE THE GROUND FOR LARGER SIZES.
   D) PLANTING MAINTENANCE SHALL INCLUDE WATERING, WEEDING, CULTIVATING, RESETTING PLANTS TO PROPER GRADES OR POSITION, REESTABLISHING SETTLED GRADES. HERBICIDE IS NOT RECOMMENDED FOR ONE YEAR FOLLOWING LANDSCAPE INSTALLATION.
   E) PLANT MAINTENANCE SHALL INCLUDE THOSE OPERATIONS NECESSARY TO PROPER GROWTH AND SURVIVAL OF ALL PLANT MATERIALS. CONTRACTOR SHALL PROVIDE THIS WORK IN ADDITION TO SPECIFIC WARRANTY/GUARANTEES.
4. CONTRACTOR SHALL VERIFY AND MAINTAIN ALL SETBACKS, CLEAR ZONES AND SIGHT TRIANGLES REQUIRED BY ALL LOCAL AND MUNICIPAL CODES WHERE APPLICABLE.
5. LANDSCAPE CONTRACTOR SHALL ENSURE THAT THE LANDSCAPE INSTALLATION IS COORDINATED WITH THE PLANS PREPARED BY OTHER CONSULTANTS SO THAT THE PROPOSED GRADING, STORM DRAINAGE OR OTHER PROPOSED CONSTRUCTION DOES NOT CONFLICT WITH NOR PRECLUDE INSTALLATION AND MAINTENANCE OF LANDSCAPE ELEMENTS AS DESIGNATED ON THIS PLAN.
6. ALL LANDSCAPE AREAS SHALL BE IRRIGATED BY AN AUTOMATIC UNDERGROUND IRRIGATION SYSTEM. THE SYSTEM SHALL BE PROPERLY ZONED TO SEPARATE PLANT MATERIAL BY WATER REQUIREMENT. ALL SHRUB BEDS AND TREES IN NATIVE SEED AREAS SHALL BE IRRIGATED BY USING LOW WATER/DRIP TECHNIQUES. ALL TURF AREAS SHALL BE IRRIGATED USING POP-UP SPRAY OR ROTOR APPLICATION. LOTS TO IRRIGATED INDIVIDUALLY BY SEPARATE TAPS.
7. ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITY BOTH INSIDE AND OUTSIDE OF THE CONSTRUCTION LIMITS WILL BE REVEGETATED.

CLEARING & GRADING:

1. ALL CONSTRUCTION MUST BE IN ACCORDANCE WITH ALL APPLICABLE MUNICIPAL CODES AND DEVELOPMENT STANDARDS; UNIFORM BUILDING CODES; PERMIT CONDITIONS; AND ALL OTHER APPLICABLE CODES, ORDINANCES, STANDARDS, AND POLICIES.
2. A COPY OF THE APPROVED PLANS MUST BE ON-SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
3. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY OTHER RELATED OR REQUIRED PERMITS PRIOR TO BEGINNING CONSTRUCTION.
4. ALL LOCATIONS OF EXISTING UTILITIES HAVE BEEN ESTABLISHED BY FIELD SURVEY OR OBTAINED FROM AVAILABLE RECORDS AND SHOULD, THEREFORE, BE CONSIDERED APPROXIMATE ONLY AND NOT NECESSARILY COMPLETE. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR (1) TO INDEPENDENTLY VERIFY THE ACCURACY OF ALL UTILITY LOCATIONS AND (2) TO DISCOVER AND AVOID ANY OTHER UTILITIES NOT SHOWN WHICH MAY BE AFFECTED BY THE IMPLEMENTATION OF THIS PLAN.

SOIL SPECIFICATIONS:

1. ANY PLANTING AREA THAT DOES NOT MEET THE FOLLOWING SOIL PREPARATION REQUIREMENTS ARE SUBJECT TO REJECTION AT OWNER/OWNERS REPRESENTATIVES DISCRETION.
2. LANDSCAPE CONTRACTOR IS REQUIRED TO NOTIFY OWNER/OWNERS REPRESENTATIVE A MINIMUM OF 24 HOURS PRIOR TO BEGINNING SOIL PREP WORK. SOIL PREP NOT INSPECTED BY OWNER/OWNERS REPRESENTATIVE IS SUBJECT TO REJECTION AT ANYTIME PRIOR TO INITIAL ACCEPTANCE.
3. LANDSCAPE CONTRACTOR SHALL SUBMIT DELIVERY (TRIP) TICKETS TO OWNER/OWNERS REPRESENTATIVE FOR ALL ORGANIC SOIL AMENDMENTS WITHIN 24 HOURS AFTER DELIVERY .
4. IMPORTED TOPSOIL SHALL BE FERTILE, FRIABLE, SANDY LOAM FROM THE 'A' HORIZON AND SHALL BE FREE OF STONES OVER .75" IN DIAMETER, REFUSE, PLANTS OR THEIR ROOTS, STICKS, NOXIOUS WEEDS, SALTS, SOIL STERILANTS, OR OTHER MATERIAL WHICH WOULD BE DETRIMENTAL TO PLANT GROWTH.
5. ORGANIC SOIL AMENDMENT SHALL CONSIST OF DRY, WELL-ROTTED, PULVERIZED, AGED MINIMUM ONE YEAR ORGANIC COMPOST CLASS I TYPE SUCH AS AVAILABLE FROM A-1 COMPOST, JENSEN SALES. PULVERIZED HORSE, SHEEP OR DAIRY COW MANURE ***NOT ACCEPTABLE***. SUBMIT DATED RECENT MATERIAL ANALYSIS TO OWNER/OWNERS REPRESENTATIVE TO GUARANTEE PRODUCT CONDITION AND PROOF NO LIVE WEED SEEDS AND CHEMICAL ADDITIVES ARE PRESENT.
6. PREPARED BACKFILL FOR TREE/SHRUB PLANTING SHALL BE A MIX OF 2/3 IMPORTED/ SALVAGED TOPSOIL AND 1/3 ORGANIC SOIL AMENDMENT. WHERE TREES AND SHRUBS ARE LOCATED IN LARGE BEDS PROVIDE SOIL AMENDMENT AT A RATE OF FIVE CUBIC YARDS PER ONE THOUSAND SQUARE FEET AND TILL EIGHT INCHES INTO THE SOIL THROUGHOUT THE ENTIRE PLANTING BED, NOT JUST IN EXCAVATED PLANTING HOLES.

MULCH:

1. PLANTING BEDS (AS SPECIFIED) SHALL CONTAIN 2"-4" ROCK COBBLE MULCH OVER FABRIC AT A MINIMUM DEPTH OF 3" WITH A DOUBLE SHREDDED CEDAR MULCH RING AROUND EACH TREE, SHRUB, GRASS, AND PERENNIAL. WOOD MULCH RING SHALL BE 1.5X THE CONTAINER SIZE OF THE SHRUB, GRASS OR PERENNIAL. TREE MULCH RING SHALL BE GREEN INDUSTRY STANDARD SIZE.
2. GEOTEXTILE FABRIC (FILTER FABRIC) UNDERLAYMENT IN PLANTING BEDS SHALL BE MIRAFI, MIRASCAPE, DUPONT TYPAR 3301 OR APPROVED EQUAL (SUBMIT SAMPLE).

NATIVE SEED:

1. NATIVE SEED MIX TO BE TOWN OF SUPERIOR STANDARD NATIVE SEED MIX. REFERENCE TOWN OF SUPERIOR PARKS AND RECREATION STANDARDS FOR NATIVE SEED MIX.

EDGING:

1. ALL EDGING SHALL BE 1/8" X 4" GREEN PAINTED "RYERSON TYPE" METAL EDGING W/ ROLL TOP EDGE AND ANCHOR STAKES PER MANUFACTURE'S SPECIFICATIONS OR EQUAL.

PARKING LOT ISLAND LANDSCAPE REQUIREMENTS

TREE REQUIREMENT		SHRUB REQUIREMENT (ISLAND WIDTH < 7 FEET)	
REQUIRED	PROVIDED	REQUIRED	PROVIDED
9	9	8	8

PARKING LOT LANDSCAPE REQUIREMENTS

TREE REQUIREMENT		SHRUB REQUIREMENT	
REQUIRED 1 TREE/8 PARKING SPACES (114 SPACES)	PROVIDED	REQUIRED 5 SHRUBS/8 PARKING SPACES (114 SPACES)	PROVIDED
14	14	71	71

No.	REVISION	BY	DATE
1	REVISIONS PER COMMENTS	NR	04/22/24
2	REVISIONS PER COMMENTS	LR	06/07/24

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FINAL DEVELOPMENT PLAN
EVERHOME SUITES - SUPERIOR
MCCASLIN & MARSHALL RD, SUPERIOR, CO

LANDSCAPE SCHEDULE & NOTES

PROJECT NO: KTD005.01
DESIGNED BY: LR
DRAWN BY: LR
DATE: 4/19/24

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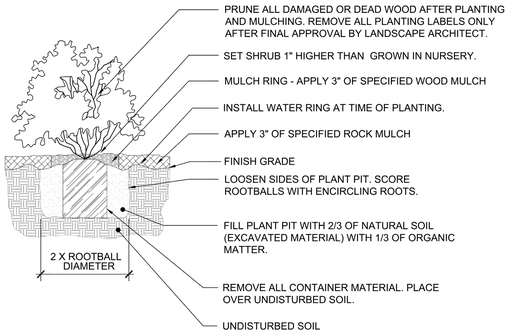
FINAL DEVELOPMENT PLAN

EVERHOME SUITES - SUPERIOR

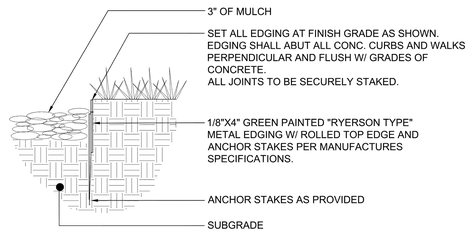
LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING 1B REPLAT NO. 3



NOTE: ANY PLANT NOT IN ACCORDANCE WITH COLORADO NURSERY ACT REQUIREMENTS WILL BE REJECTED. HOLD MULCH GRADE 1" BELOW EDGE OF WALK, EDGING AND CURB. JUNIPER PLANTS SHALL BE PLANTED WITH TOP OF ROOTBALL AT FINISH GRADE OF MULCH LAYER.

1 SHRUB / ORNAMENTAL GRASS PLANTING WITH MULCH RING

1" = 1'-0" 32 9333.13-11

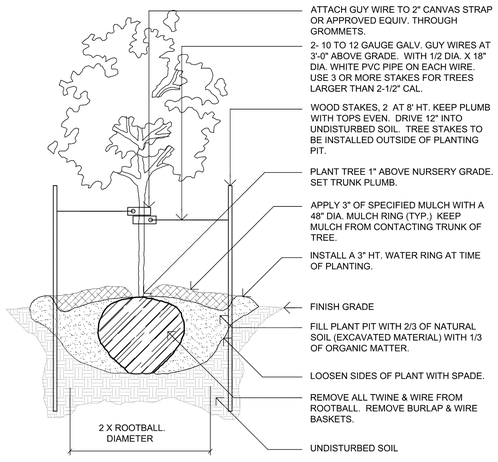


2 1/8" STEEL EDGING

1" = 1'-0" 32 9413.23-10

DURING FIRST YEAR OF INSTALLATION:
AT ONSET OF WINTER:
WRAP ENTIRE SURFACE OF TRUNK UP TO BRANCHES WITH SPECIFIED WRAPPING. SECURE AT TOP AND BOTTOM WITH DUCT TAPE.
AT ONSET OF SPRING:
REMOVE ALL WRAPPING.

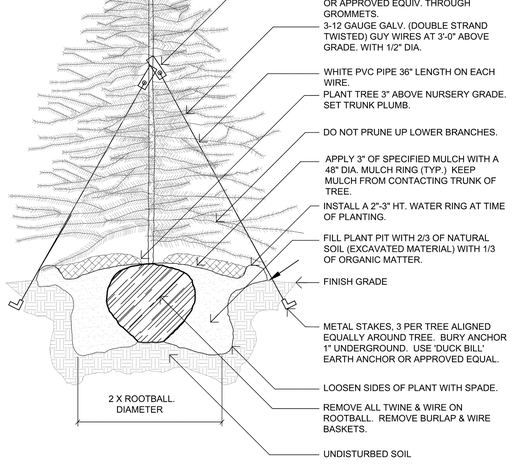
DO NOT CUT LEADER. PRUNE ALL DAMAGED OR DEAD WOOD AFTER PLANTING, STAKING AND MULCHING. KEEP CROWN SHAPE TYPICAL OF SPECIES. REMOVE ALL PLANTING LABELS AFTER FINAL ACCEPTANCE BY LANDSCAPE ARCHITECT/OWNERS REPRESENTATIVE.



3 DECIDUOUS TREE PLANTING

N.T.S. ES2-01

DO NOT CUT LEADER. PRUNE ALL DAMAGED OR DEAD WOOD AFTER PLANTING, STAKING AND MULCHING. KEEP CROWN SHAPE TYPICAL OF SPECIES. REMOVE ALL PLANTING LABELS AFTER FINAL ACCEPTANCE BY LANDSCAPE ARCHITECT/OWNERS REPRESENTATIVE.



4 EVERGREEN TREE PLANTING

N.T.S. ES2-02

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2	REVISIONS PER COMMENTS	LR	06/07/24

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FINAL DEVELOPMENT PLAN
EVERHOME SUITES - SUPERIOR
MCCASLIN & MARSHALL RD, SUPERIOR, CO

LANDSCAPE DETAILS

PROJECT NO:	KTD005.01
DESIGNED BY:	LR
DRAWN BY:	LR
DATE:	4/19/24

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FINAL DEVELOPMENT PLAN

EVERHOME SUITES - SUPERIOR

LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING 1B REPLAT NO. 3



MANUFACTURER: CUSTOM BUILD
MODEL: SEAT BENCH
COLOR/FINISH: NATURAL WOOD

1 SEAT BENCH
NOT TO SCALE



MANUFACTURER: CRATE AND BARREL
MODEL: ANDORRA WEATHERED GREY WOOD OUTDOOR LOUNGE CHAIR WITH CHARCOAL GREY SUNBRELLA CUSHION #564777

2 LOUNGE CHAIR
NOT TO SCALE



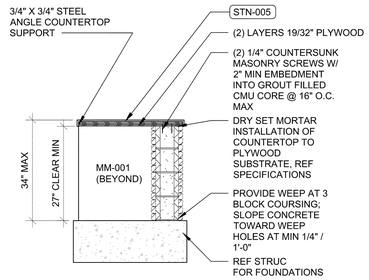
MANUFACTURER: KEYSTONE RIDGE DESIGNS
MODEL: ENZO RECTANGLE TABLE SET EZ5-2RT - ENZO RECTANGLE TABLE, 4 SEATS, WITH ARMS

3 DINING TABLES & CHAIRS
NOT TO SCALE

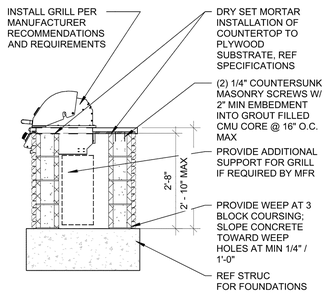


MANUFACTURER: FIRE PIT SURPLUS
MODEL: MODENO ROCA FIRE TABLE OFG107
COLOR: AS SHOWN

4 ROUND FIRE PIT
NOT TO SCALE

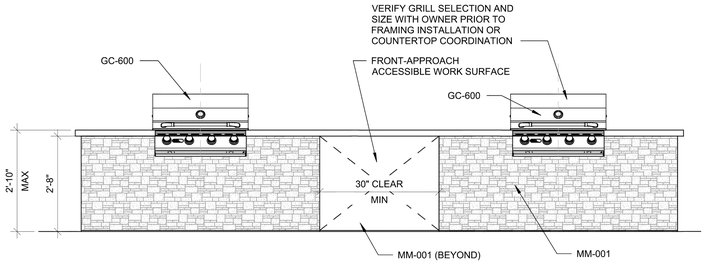


5 OUTDOOR COUNTERTOP
SCALE: 1/2" = 1'-0"



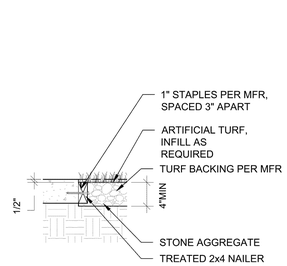
MANUFACTURER: BULL
MODEL: OUTLAW 26039NG
COLOR: STAINLESS STEEL

GRILL SECTION
SCALE: 1/2" = 1'-0"

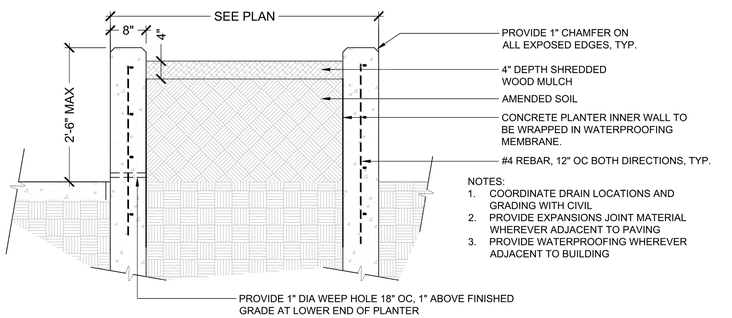


GRILL ELEVATION
SCALE: 1/2" = 1'-0"

6 OUTDOOR GRILL
SCALE: 1/2" = 1'-0"

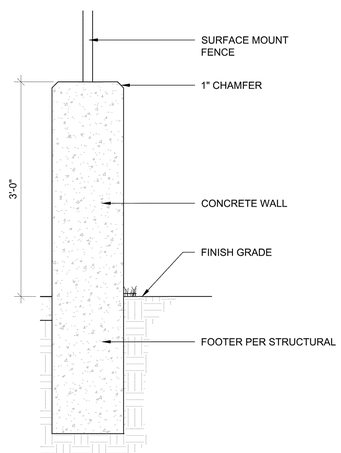


7 ARTIFICIAL TURF
SCALE: 1" = 1'-0"



8 RAISED PLANTER
1/16" = 1'-0"

ES-01





FENCE MANUFACTURER: AMERISTAR
MODEL: ECHELON SURFACE MOUNT ALUMINUM FENCE - MAJESTIC 4' HEIGHT
COLOR: BLACK

9 SCREEN WALL WITH FENCE
SCALE: 1" = 1'-0"

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FINISH KEYNOTES

Tag	Keynote Description
STN-005	OUTDOOR COUNTERTOP
GC-600	GAS GRILL
MM-001	STONE VENEER

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FINAL DEVELOPMENT PLAN
EVERHOME SUITES - SUPERIOR
MCCASLIN & MARSHALL RD, SUPERIOR, CO

SITE DETAILS

PROJECT NO: KTD005.01
DESIGNED BY: LR
DRAWN BY: LR
DATE: 4/19/24

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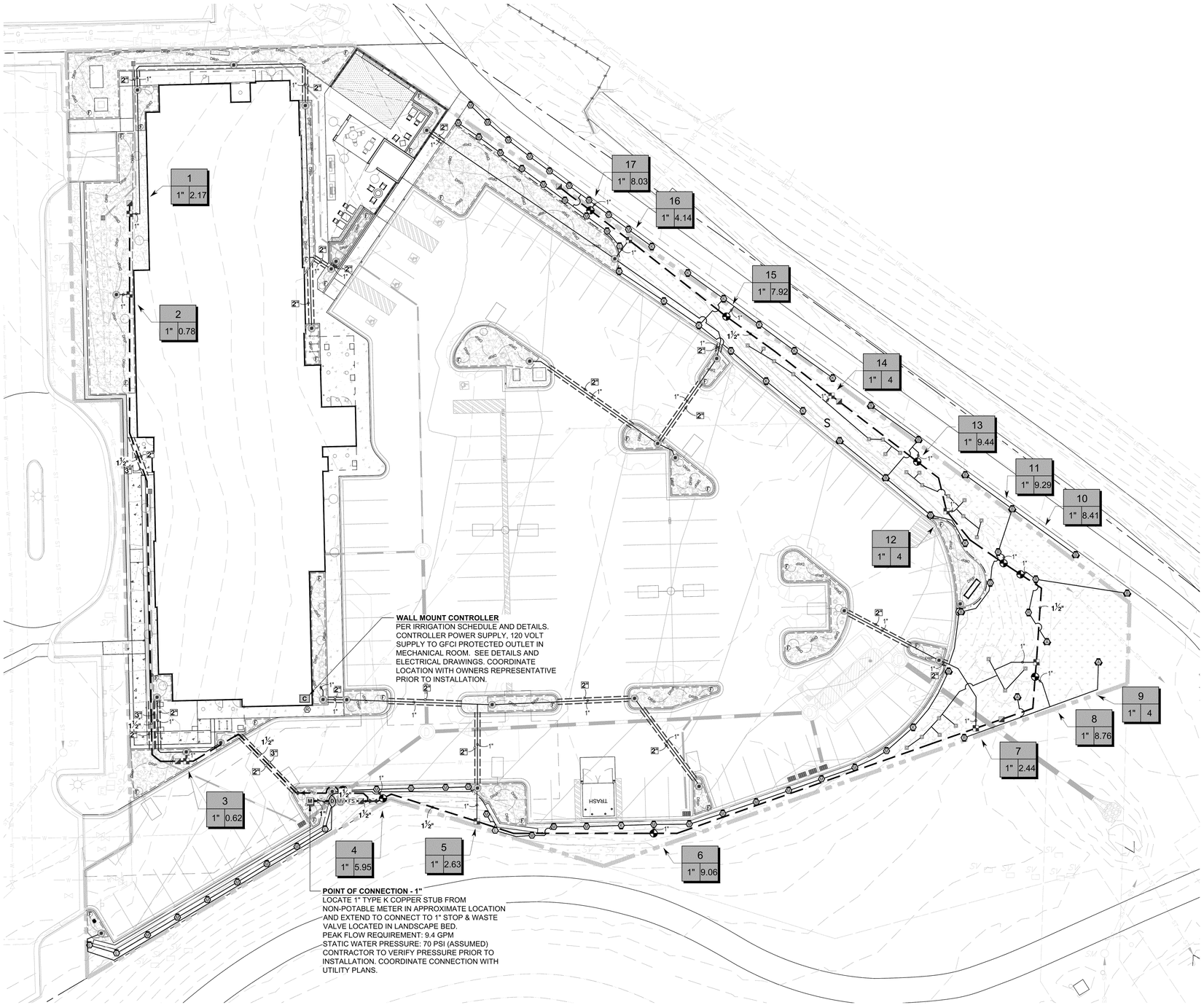
FINAL DEVELOPMENT PLAN

EVERHOME SUITES - SUPERIOR

LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING 1B REPLAT NO. 3



1 IRRIGATION PLAN

NORTH

0 20 40 60 feet

SCALE: 1" = 20'

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FINAL DEVELOPMENT PLAN
EVERHOME SUITES - SUPERIOR
MCCASLIN & MARSHALL RD, SUPERIOR, CO

IRRIGATION PLAN

PROJECT NO:	KTD005.01
DESIGNED BY:	LR
DRAWN BY:	LR
DATE:	4/19/24

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FINAL DEVELOPMENT PLAN

EVERHOME SUITES - SUPERIOR

LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING 1B REPLAT NO. 3

GENERAL NOTES:

1. PRIOR TO BEGINNING WORK VERIFY THE CONTRACT DRAWINGS AGAINST ALL APPLICABLE EXISTING CONDITIONS, NOTIFY THE DESIGNER IMMEDIATELY UPON DISCOVERY OF UNFORESEEN SITE CONDITIONS OR PLAN DISCREPANCIES.
2. CONTRACTOR IS RESPONSIBLE TO INSPECT AND CONFIRM SITE CONDITIONS PRIOR TO BEGINNING WORK.
3. VERIFY LOCATION OF ALL ABOVE AND BELOW GRADE MECHANICAL, PLUMBING, ELECTRICAL/UTILITY LINES AND EQUIPMENT AND ADHERE TO ALL FEDERAL, MUNICIPAL, UTILITY PURVEYOR REQUIRED EASEMENTS, MINIMUM OFFSETS AND SETBACKS.
4. ALL ACCESS TO SITE, USE OF UTILITIES, STORAGE, AND OTHER REQUIREMENTS SHALL BE COORDINATED PRIOR TO BEGINNING WORK.
5. ALL VALVE BOX LIDS SHALL BE CARSON LIDS.
6. ALL DECODERS SHALL BE LABELED WITH ASSOCIATED ZONE NUMBER.

IRRIGATION NOTES:

1. THE CONTRACTOR IS TO INSTALL AN AUTOMATIC IRRIGATION SYSTEM THAT WILL PROVIDE COVERAGE FOR ALL LANDSCAPED AREAS AS SHOWN ON CONTRACT DRAWINGS.
2. REFER TO DETAILS FOR INSTALLATION INSTRUCTIONS.
3. ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE LOCAL AND MUNICIPAL CODES FOR WORK NECESSARY IN IRRIGATION SYSTEM INSTALLATION.
4. POINT OF CONNECTION SHOWN ON THE IRRIGATION PLANS ARE PER THE CIVIL DOCUMENTS. REPORT ANY DISCREPANCIES IN THE LOCATION TO THE DESIGNER FOR CLARIFICATION OR REVISION.
5. CONTRACTOR IS TO PROVIDE ALL NECESSARY PIPE, VALVES, ETC. DOWNSTREAM FROM POINT OF CONNECTION NOT INSTALLED BY OTHER DISCIPLINES.
6. WORK SHALL BE DONE IN FULL ACCORDANCE WITH THE RULES AND REGULATIONS OF THE 2009 INTERNATIONAL PLUMBING CODE (IPC) AND ALL OTHER STATE OR LOCAL MUNICIPAL REGULATIONS CURRENT UPON THE SIGNING OF THIS CONTRACT.
7. CONTRACT DRAWINGS ARE GENERALLY DIAGRAMMATIC AND INDICATIVE OF THE WORK TO BE INSTALLED. IT IS THE INTENT OF THIS DESIGN THAT ALL IRRIGATION EQUIPMENT BE INSTALLED IN LANDSCAPED AREAS WHEREVER POSSIBLE AND WITHIN THE PROPERTY LIMITS. ANY EQUIPMENT SHOWN OUTSIDE OF THESE LIMITS IS SHOWN IN THAT LOCATION FOR GRAPHICAL CLARITY ONLY.
8. LATERAL AND MAINLINE PIPE, CONTROL WIRES AND SLEEVES ARE SHOWN ON CONTRACT DRAWINGS SPACED HORIZONTALLY ON PLAN FOR GRAPHIC CLARITY ONLY. CONTRACTOR SHALL CONSOLIDATE IRRIGATION LATERALS, MAINLINES AND COMPONENTS WHEREVER POSSIBLE. IRRIGATION PIPING SHALL BE INSTALLED WITH A MINIMUM OF 4 INCHES CLEAR ON ALL SIDES.
9. CONTRACTOR SHALL MAINTAIN THE MINIMUM DEPTHS DETAILED AND SPECIFIED FOR ALL IRRIGATION EQUIPMENT.
10. CONTRACTOR IS TO VERIFY AVAILABLE PRESSURE AND FLOW AT POINT OF CONNECTION PRIOR TO INSTALLATION OF IRRIGATION SYSTEM EQUIPMENT.
11. CONTRACTOR TO COORDINATE INSTALLATION OF SLEEVING WITH OVERALL SITE CONSTRUCTION AND INSTALLATION OF PAVING AND SIDEWALKS. ALL SLEEVING UNDER PAVED SURFACES SHOWN ON CONTRACT DRAWINGS IS BY CONTRACTOR UNLESS OTHERWISE NOTED. ALL MAINLINES, LATERAL LINES, DRIP LINES AND CONTROL WIRES UNDER PAVED SURFACES ARE TO BE INSTALLED IN SLEEVING. INSTALL SLEEVING AS PER DETAIL, NOTES, SCHEDULES AND SPECIFICATIONS.
12. ALL PIPING, PVC ELECTRICAL SLEEVES, ETC. UNDER PAVING SHALL BE INSTALLED PRIOR TO PAVING WORK. NO TEES, ELLS OR OTHER TURNS IN PIPING SHALL BE LOCATED UNDER PAVING. CAP ALL ENDS HAND TIGHT PRIOR TO BACKFILL.
13. EACH MAINLINE SLEEVE REPRESENTED IN THE DRAWINGS SHALL CONSIST OF TWO SLEEVES: ONE FOR MAINLINE PIPING AND ONE FOR FIELD WIRING.
14. CONTRACTOR IS TO PROVIDE ELECTRICAL POWER TO THE AUTOMATIC CONTROLLER, SEE ELECTRICAL DRAWINGS.
15. INSTALL ALL MATERIALS AND EQUIPMENT AS SHOWN IN DETAILS. USE TEFLON TAPE OR TEFLON PIPE DOPE ON ALL MALE PIPE THREADS ON ALL IRRIGATION SWING JOINT AND VALVE ASSEMBLIES.
16. BACKFILLING SHALL BE DONE IN LIFTS AND COMPACTED.
17. MAINTENANCE AND OPERATION REQUIREMENTS: A SEASONAL MAINTENANCE SCHEDULE BEGINNING ON APRIL 1 THROUGH OCTOBER 1 SHALL ESTABLISH PROCEDURES FOR OPTIMUM IRRIGATION EFFICIENCY AND PREVENTIVE MAINTENANCE PRACTICES THAT WILL CONSERVE WATER RESOURCES. THE MAINTENANCE SCHEDULE SHOULD INCLUDE THE FOLLOWING ITEMS:
    - VERIFY COVERAGE OF HEADS (BI-MONTHLY)*
    - CHECK FOR BROKEN HEADS OR LEAKAGE (BI-MONTHLY)*
    - REPROGRAM CONTROLLERS ACCORDING TO THE SEASONAL NEEDS (MONTHLY)*
    - VERIFY WATER SUPPLY AND PRESSURE (UPON SYSTEM STARTUP, THEN TWO ADDITIONAL TIMES)
    - INSPECT THE BACKFLOW PREVENTER DEVICE (UPON SYSTEM STARTUP)
    - VERIFY SENSOR FUNCTIONALITY (BI-MONTHLY)*

    *ALL ITEMS SHALL BE PERFORMED UPON SYSTEM START UP AND THEN AT A MINIMUM OF THE PERIOD STATED, INSPECTIONS SHALL BE PERFORMED MORE FREQUENTLY AS REQUIRED.

POINT OF CONNECTION (P.O.C.) NOTES:

P.O.C. '1' - LOCATE 1" TYPE K COPPER STUB FROM NON-POTABLE METER IN APPROXIMATE LOCATION AND EXTEND TO CONNECT TO 1" BACKFLOW LOCATED IN LANDSCAPE BED.

AVAILABLE WATER PRESSURE (ASSUMED): THE ASSUMED AVAILABLE PSI AT THE POINT OF CONNECTION IS - **70 PSI**. CONTRACTOR SHALL TEST PRIOR TO INSTALLATION.

DESIGN PRESSURE: **70 PSI**

DESIGN FLOW : **9.4 GPM (MAX)**, (SINGLE VALVE OPERATION)

1. THE IRRIGATION SYSTEMS ARE DESIGNED WITHIN A WATER WINDOW AND SIZED TO ACCOMMODATE SINGLE VALVE STARTS NOT TO EXCEED DESIGN FLOW LISTED. CONTRACTOR TO PROGRAM CONTROLLER ACCORDINGLY.
2. CONTRACTOR TO INSTALL ALL REQUIRED EQUIPMENT IN ACCORDANCE WITH ALL LOCAL WATER PURVEYORS REQUIREMENTS.
3. CONTRACTOR TO FIELD LOCATE REQUIRED IRRIGATION EQUIPMENT DOWNSTREAM FROM METER FOR APPROVAL PRIOR TO INSTALLATION. ALL ATTEMPTS SHALL BE MADE TO INSTALL EQUIPMENT IN LANDSCAPE BEDS.
4. ALL ENCLOSURES SHALL BE SECURELY MOUNTED AND LOCKABLE TO PREVENT VANDALISM, DAMAGE AND/OR THEFT. TURN KEYS OVER TO OWNERS REPRESENTATIVE AT COMPLETION OF WORK AS PER SPECIFICATIONS.
5. CONTRACTOR TO COORDINATE CONTROLLER LOCATIONS WITH OWNERS REPRESENTATIVE PRIOR TO INSTALLATION.
6. RAIN SENSOR, MOUNT WIRELESS RAIN SENSOR WITHIN OPTIMAL RANGE FROM CONTROLLER, PER MANUFACTURERS RECOMMENDATIONS. INSTALL SENSOR ON LIGHT/UTILITY POLE A MINIMUM OF 10' ABOVE GRADE TO MINIMIZE DAMAGE/VANDALISM, CLEARLY NOTE LOCATION AND PROVIDE INFORMATION TO OWNERS REPRESENTATIVE.
7. IRRIGATION ZONES HAVE BEEN CREATED TO PROPERLY HYDROZONE THE SITE BASED ON SITE CONDITIONS AND MICROCLIMATES. IF FIELD ADJUSTMENTS ARE TO BE MADE IRRIGATION EQUIPMENT IRRIGATING A NORTH AND EAST EXPOSURE SHOULD NOT BE INSTALLED ON THE SAME ZONE AS IRRIGATION EQUIPMENT ON THE SOUTH AND WEST EXPOSURES TO ALLOW FOR MICROCLIMATE ADJUSTMENTS IN THE CONTROLLER PROGRAMMING.

IRRIGATION SCHEDULE

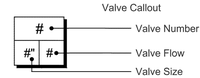
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	PSI
M O	TURF ROTARY - 1000 HUNTER MP1000 PROS-06-PRS40-CV-R 6" POP-UP WITH CHECK VALVE, PRESSURE REGULATED TO 40 PSI, MP ROTATOR NOZZLE ON PRS40 BODY. RECLAIMED WATER ID. M=MAROON ADJ ARC 90 TO 210, L=LIGHT BLUE 210 TO 270 ARC, O=OLIVE 360 ARC.	45	40
K G R	TURF ROTARY - 2000 HUNTER MP2000 PROS-06-PRS40-CV-R 6" POP-UP WITH FACTORY INSTALLED CHECK VALVE, PRESSURE REGULATED TO 40 PSI. RECLAIMED WATER ID. MP ROTATOR NOZZLE ON PRS40 BODY. K=BLACK ADJ ARC 90-210, G=GREEN ADJ ARC 210-270, R=RED 360 ARC.	20	40
B Y A	TURF ROTARY - 3000 HUNTER MP3000 PROS-06-PRS40-CV-R 6" POP-UP WITH FACTORY INSTALLED CHECK VALVE, PRESSURE REGULATED TO 40 PSI. RECLAIMED WATER ID. MP ROTATOR NOZZLE ON PRS40 BODY. B=BLUE ADJ ARC 90-210, Y=YELLOW ADJ ARC 210-270, A=GRAY 360 ARC.	14	40
1401 1402 1404 1408	TREE DRIPLINE LOOP 1401 XFS-06-12 SUBSURFACE DRIP TUBING WITH 0.60 GPH, PRESSURE COMPENSATING EMITTERS INTERNALLY INSTALLED IN THE DRIP TUBING AT 12" O.C. SPACING. DRIP TUBING SHALL BE INSTALLED 2" BELOW FINISHED SOIL GRADE (NOT COUNTING GROUNDCOVER MATERIAL) AND IN A DUAL "RING" AROUND THE TRUNK TO BE 50 FEET IN LENGTH AND CONTAIN APPROXIMATELY 50 DRIP EMITTERS FOR A TOTAL FLOW RATE OF 0.5 GPM (50 X 0.6 GPH = 30 GPH = 0.5 GPM). SEE DETAIL DRAWING FOR ALL THE COMPONENTS REQUIRED FOR INSTALLATION OF EACH TREE DRIP ASSEMBLY.	24	30

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	WIDE FLOW DRIP CONTROL KIT RAIN BIRD XCZ-100-LC-R LIGHT COMMERCIAL USES. 1IN. PEB VALVE, WITH 1IN. PRESSURE REGULATING 40PSI BASKET FILTER. 0.3-20 GPM. PURPLE CAP.	9
	PIPE TRANSITION POINT PIPE TRANSITION FROM PVC LATERAL TO DRIP TUBING WITH RISER IN 6" DRIP BOX.	27
F	FLUSH VALVE 3/4" PVC BALL VALVE IN 10" VALVE BOX.	31
	AREA TO RECEIVE DRIP EMITTERS AREA FOR DRIP EMITTERS RAIN BIRD XB-PC, SINGLE OUTLET, PRESSURE COMPENSATING DRIP EMITTERS. FLOW RATES OF 0.5 GPH=BLUE, 1.0 GPH=BLACK, AND 2.0 GPH=RED. COMES WITH A SELF-PIERCING BARB INLET X BARB OUTLET. Emitter Notes: 05PC emitters (2 assigned to each #1 plant) 10PC emitters (2 assigned to each #5 plant) 20PC emitters (6 assigned to each B & B, 2.5"Cal plant) 20PC emitters (6 assigned to each B & B, 2"Cal plant) 20PC emitters (6 assigned to each B & B, 8` HT. plant)	7,381 S.F.
	PURPLE POLY DRIP TUBING - 3/4"	1,005 L.F.

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	REMOTE CONTROL VALVE RAIN BIRD PESBR-PRS-D, 1IN., 1-1/2IN., 2IN. ELECTRIC REMOTE CONTROL VALVE, GLOBE FOR RECLAIMED WATER IRRIGATION. WITH PRESSURE REGULATOR MODULE.	8
	QUICK COUPLER VALVE RAIN BIRD 44-NP 1" BRASS NON-POTABLE QUICK-COUPLING VALVE, WITH CORROSION-RESISTANT STAINLESS STEEL SPRING, PURPLE THERMOPLASTIC RUBBER COVER, AND 2-PIECE BODY.	6
	GATE VALVE - 2-1/2" AND SMALLER MATCO-NORCA 514T BRASS GATE VALVE, FULL PORT, WITH SQUARE NUT OPERATOR. IPS. WHEEL HANDLE. SAME SIZE AS MAINLINE PIPE.	2
	MUELLER STOP & WASTE VALVE 1" FIPT MUELLER H10284-N1 BRASS STOP & WASTE VALVE, 1" X 1" FIPT X FIPT CONNECTION. NON-REGULATED.	1
MV	MASTER VALVE - NORMALLY CLOSED 1" RAIN BIRD EFB-CP BRASS MASTER VALVE, THAT IS CONTAMINATION PROOF W/SELF-FLUSHING FILTER SCREEN AND FD-101TURF DECODER. GLOBE CONFIGURATION, RECLAIMED WATER COMPATIBLE.	1
D	MANUAL DRAIN VALVE MUELLER ORISEAL #H-10283, WITH BRASS SWING JOINT ASSEMBLY. INSTALL PER INSTALLATION DETAIL.	1
C	RAIN BIRD ESPLXME2 W/ (2) ESPLXMSM12 36 STATION, TRADITIONALLY-WIRED, COMMERCIAL CONTROLLER. (1) ESPLXME2 12-STATION, INDOOR/OUTDOOR, PLASTIC WALL-MOUNT ENCLOSURE W/ (2) ESPLXMSM12 - 12-STATION EXPANSION MODULES.	1
R	RAIN BIRD WR2-RFS WIRELESS RAIN/FREEZE SENSOR.	1
FS	FLOW SENSOR -1" RAINBIRD MJ100B - 1" FLOW SENSOR FOR USE WITH RAIN BIRD ESP-ME.	1
M	WATER METER 1"	1

	IRRIGATION LATERAL LINE: PVC CLASS 200 SDR 21	2,407 L.F.
	IRRIGATION MAINLINE: PVC CLASS 200 SDR 21	884.9 L.F.
	IRRIGATION MAINLINE: TYPE K COPPER PIPE	4.3 L.F.
	PIPE SLEEVE: PVC CLASS 160 SDR 26	350.3 L.F.

Valve Callout



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FINAL DEVELOPMENT PLAN

EVERHOME SUITES - SUPERIOR

MCCASLIN & MARSHALL RD, SUPERIOR, CO

IRRIGATION SCHEDULE & NOTES

PROJECT NO:	KTD005.01
DESIGNED BY:	LR
DRAWN BY:	LR
DATE:	4/19/24

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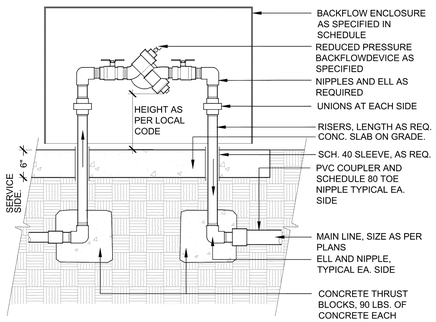
FINAL DEVELOPMENT PLAN

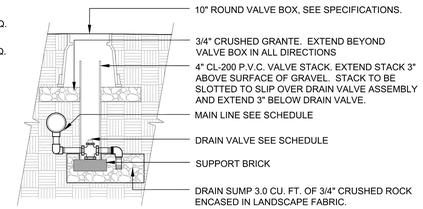
EVERHOME SUITES - SUPERIOR

LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING 1B REPLAT NO. 3



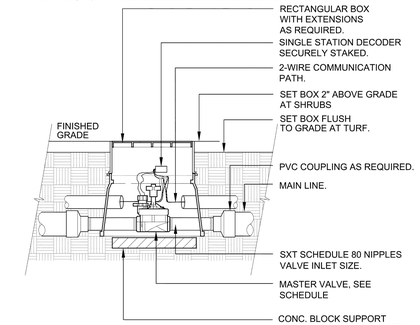
1 REDUCED PRESSURE BACKFLOW DEVICE
1" = 1'-0" 328409.46-05

NOTE:
1. BRAND (DV) INTO VALVE BOX LID WITH 2" HIGH LETTERS MIN.
2. EXTEND VERTICAL DISCHARGE NIPPLE INTO DRAIN SUMP A MINIMUM OF 3".
3. SET TOP OF VALVE BOX LID LEVEL WITH FINISHED GRADE OF ADJACENT UNDISTURBED TURF GRASS AREAS.



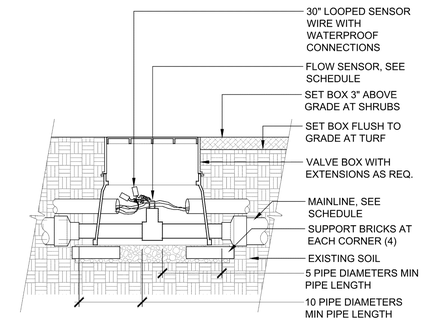
2 MANUAL DRAIN VALVE
1/2" = 1'-0" 328409.86-13

NOTE:
1. BRAND (MV) INTO VALVE BOX LID WITH 2" HIGH LETTERS MINIMUM.



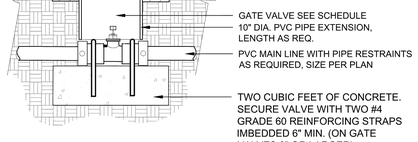
3 MASTER CONTROL VALVE
1 1/2" = 1'-0" 328406.23-12

NOTE:
1. HEAT BRAND (FS) ON VALVE BOX LID IN 2" HIGH LETTERS MINIMUM

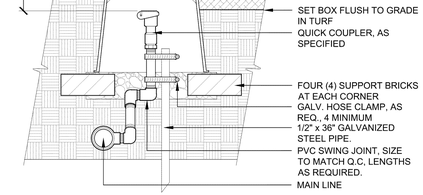


4 FLOW SENSOR
1" = 1'-0" 328409.63-11

NOTE:
1. HEAT BRAND (GV) ON LID WITH 2" HIGH CHARACTERS

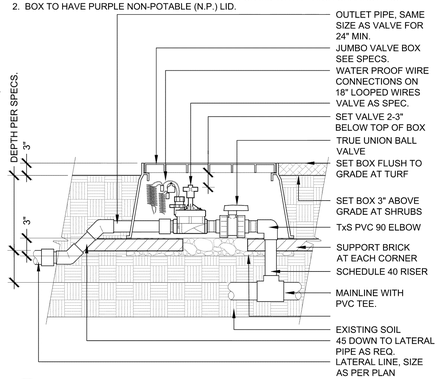


5 GATE VALVE UNDER 3"
1" = 1'-0" DPR 328406.33-90

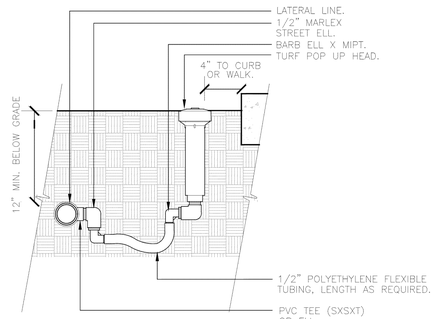


6 QUICK COUPLING VALVE
1 1/2" = 1'-0"

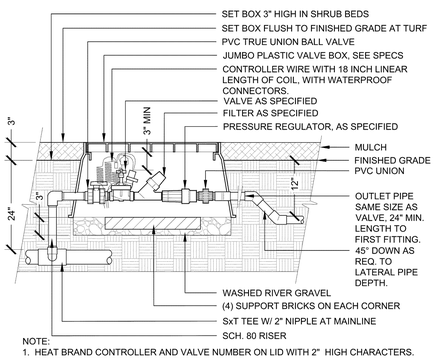
NOTE:
1. HEAT BRAND VALVE AND CONTROLLER NUMBER ON LID WITH 2" HIGH CHARACTERS.
2. BOX TO HAVE PURPLE NON-POTABLE (N.P.) LID.



7 REMOTE CONTROL VALVE
1" = 1'-0" 328406.13-06



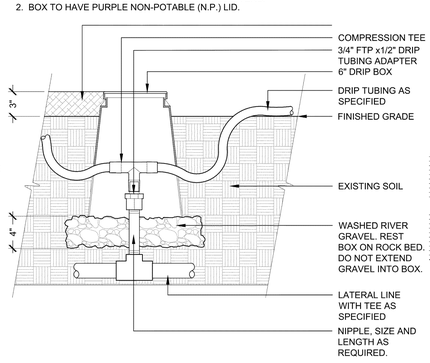
8 TURF SPRAY-FLEX ASSEMBLY
3" = 1'-0" 328403.13-03



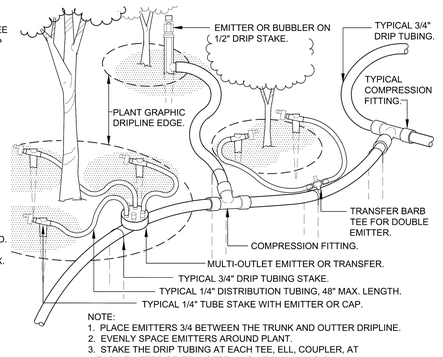
NOTE:
1. HEAT BRAND CONTROLLER AND VALVE NUMBER ON LID WITH 2" HIGH CHARACTERS.
2. BOX TO HAVE PURPLE NON-POTABLE (N.P.) LID.

9 1" DRIP VALVE/FILTER/REGULATOR
1" = 1'-0" 328413.76-30

NOTE:
1. HEAT BRAND 'ZC' ON LID WITH 2" HIGH CHARACTERS.
2. BOX TO HAVE PURPLE NON-POTABLE (N.P.) LID.

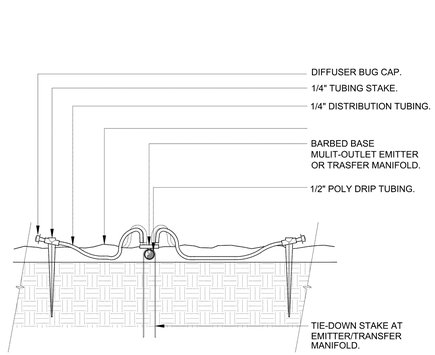


10 DRIPLINE ZONE CONTROL
1 1/2" = 1'-0" 328413.46-04



NOTE:
1. PLACE EMITTERS 3/4 BETWEEN THE TRUNK AND OUTTER DRIPLINE.
2. EVENLY SPACE EMITTERS AROUND PLANT.
3. STAKE THE DRIP TUBING AT EACH TEE, ELL, COUPLER, AT EACH EMITTER OR TRANSFER, AND AT 6'-0" MAX O.C.

11 TYPICAL DRIP TUBING
1 1/2" = 1'-0" 328413.43-01



12 1/4" TUBING SINGLE OUTLET EMITTER
3" = 1'-0" 328413.13-26

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FINAL DEVELOPMENT PLAN
EVERHOME SUITES - SUPERIOR
MCCASLIN & MARSHALL RD, SUPERIOR, CO

IRRIGATION DETAILS

PROJECT NO:	KTD005.01
DESIGNED BY:	LR
DRAWN BY:	LR
DATE:	4/19/24

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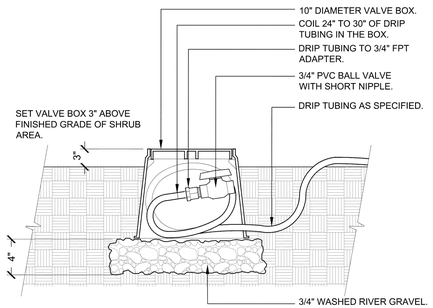
FINAL DEVELOPMENT PLAN

EVERHOME SUITES - SUPERIOR

LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING 1B REPLAT NO. 3

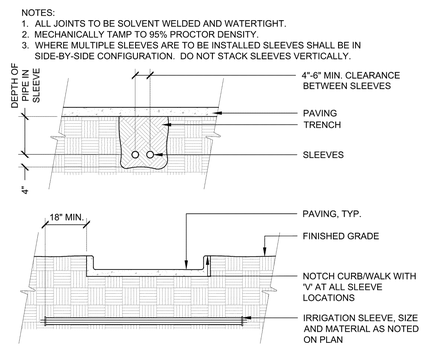
NOTE:
1. HEAT BRAND "FV" ON LID WITH 2" HIGH CHARACTERS.
2. BOX TO HAVE PURPLE NON-POTABLE (N.P.) LID.



1 DRIP FLUSH VALVE

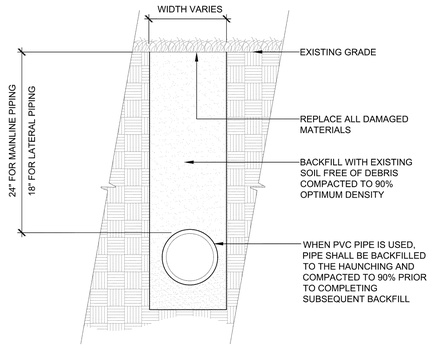
1 1/2" = 1'-0" — 328413.49-04

NOTES:
1. ALL JOINTS TO BE SOLVENT WELDED AND WATERTIGHT.
2. MECHANICALLY TAMP TO 95% PROCTOR DENSITY.
3. WHERE MULTIPLE SLEEVES ARE TO BE INSTALLED SLEEVES SHALL BE IN SIDE-BY-SIDE CONFIGURATION. DO NOT STACK SLEEVES VERTICALLY.



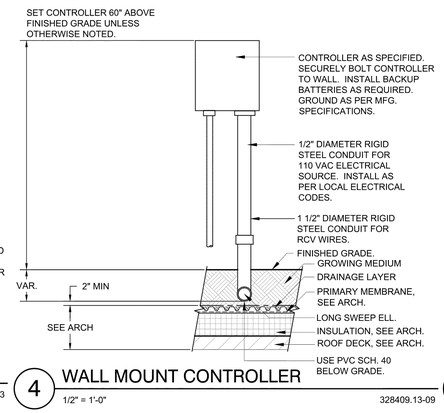
2 SLEEVING

3/8" = 1'-0" — 328409.76-17



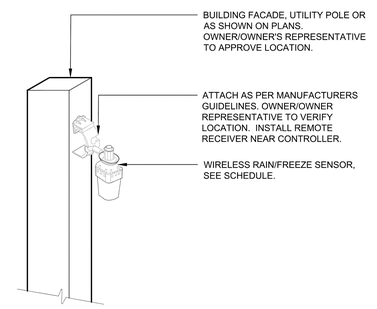
3 TRENCH DETAIL

1 1/2" = 1'-0" — 328409.76-103



4 WALL MOUNT CONTROLLER

1/2" = 1'-0" — 328409.13-09



5 WIRELESS RAIN/FREEZE SENSOR

3/4" = 1'-0" — 328409.66-13

6 BACKFLOW DEVICE ENCLOSURE

3/8" = 1'-0" — 328409.46-89

NOTE:
1. CONTRACTOR TO INSTALL ALL DRIP TUBING IN TURF AND NATIVE AREAS 2-3" BELOW GRADE.
2. DIAMETER OF DRIP RINGS ARE DEPENDENT ON TREE CANOPY SIZE.

7 TREE DRIP TUBING LAYOUT

N.T.S. — 328413.56-101

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FINAL DRAINAGE REPORT

FOR

Everhome Suites Water Quality Facility
Superior, CO

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E.E.S. Job No. KTD005.01

I. CERTIFICATION:

I hereby certify that this drainage assessment report for the Town of Superior Town Center Everhome Suites Water Quality Facility was prepared under my direct supervision in accordance with the provisions of Town of Superior Standards & Specifications (2021) and was designed to comply with the provisions thereof.

Krysta M. Houtchens P.E.
Registered Professional Engineer
State of Colorado No. 49550

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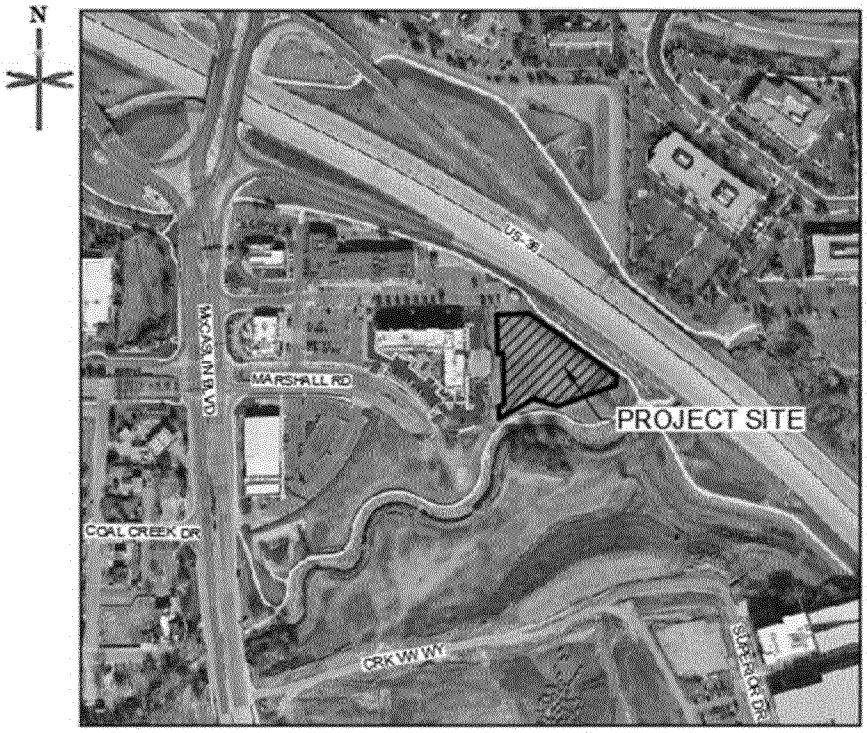
I. General Location and Description

A. Site Location

The Everhome Suites project site is located east of McCaslin Boulevard and Marshall Road and east of the Element Hotel within the Superior Town Center. The Vicinity Map below shows the general vicinity of the property area.



VICINITY MAP

i. Township, Range, ¼ Section. Everhome Suites Water Quality Facility is located in the NW 1/4, Section 19, Township 1 South, Range 69 West of 6th PM in the Town of Superior, Boulder County, Colorado.

ii. Street Location. Everhome Suites is located within the Superior Town Center Park which is bounded by US 36 on the north and east, the Element Hotel to the west, and Coal Creek on the south.

iii. Major Drainageways and Facilities. Coal Creek flows west to east through the Superior Town Center Park.

iv. Tributary Developments. There are no offsite triburtary areas to the proposed water quality facility. The tributary area is limited to on-site runoff from the Everhome Suites.

B. Description of Property

The project site is at Lot 3B, Block 1, Superior Town Center Filing No. 1B Replat No. 3. More specifically the site address is 3 S. Marshall, Superior, CO 80227 and is a 1.97 acre

parcel. Lot 3B is currently zoned Planned Development (PD) and will remain as such for the proposed development.

Matrix Design Group (Matrix) evaluated the Old Town tributary watershed, reviewed previous design reports, and analyzed the existing drainage system to define the on-going needs for stormwater management – See "Superior Town Center Park, Detention Basin #11, Drainage Assessment," dated April 18, 2018.

Basin #11 provided regional stormwater controls for detention and water quality. As development occurred in the watershed, stormwater was managed by individual sub-basins on-site for each development area with detention and water quality per Town of Superior Drainage Criteria, rather than regionally. With most of the watershed developed and the upstream detention and water quality basins in-place, the requirement for detention and water quality at the outfall has significantly diminished.

The Town of Superior waived detention requirements for a facility immediately adjacent to the receiving major drainageway of Coal Creek. Waiving detention of this 1.97-acre watershed will not have any adverse flood impacts to downstream properties. Only water quality is required to be provided for stormwater runoff. The watershed needs a minimum of 0.053 acre-feet of Water Quality Capture Volume (WQCV) for an Extended Dry Detention facility.

Important Design Facts:
- Tributary Area – 1.97 acres
- Tributary Composite Imperviousness – 76.1%
- WQCV only for Underground Extended Dry Detention (no flood control detention)
- 40 hour drain time
- Design Volume 0.053 acre-feet
- Inlet pipes 12", 15" with 100-year capacity

Proposed construction will consist of a four-story, 59,971 GSF extended stay hotel building and 114 parking spaces located on a 1.97 acres parcel. The area disturbed will be 1.97 acres. In addition to the hotel and the parking lot, drive aisles, landscaping and utility services will also be constructed. In the existing condition as an undeveloped site, the project site is 2% impervious. The site imperviousness increases by 74.1% in the proposed condition for an impervious value of 76.1%. The report details the stormwater measures incorporated to account for the site impervious increase.

The site in the existing condition contains 2% impervious area. The site in the proposed condition contains 1.58 acres (68,868 SF) of impervious area.

C. Description of the Watershed

i. Tributary Watershed. See the Drainage Basin Map for the watershed boundary.

ii. Tributary Area. 1.97 acres of developed area.

iii. Ground Cover and Soils. The watershed is currently vacant and covered with native weeds and grasses. Proposed land uses are commercial developments, roadways, and parking lots. NRCS hydrologic soil groups (HSG) are Type B soils for the watershed which have moderate infiltration rates.

iv. Major Drainageways. Coal Creek is the receiving major drainageway. The

contributing drainage area of the Coal Creek waterway at McCaslin Boulevard is 25.7 square miles, as referenced in the 2014 *Flood Hazard Area Delineation*.

D. Groundwater Investigation

A *Geotechnical Engineering Study and Pavement Thickness Design* was completed by Kumar & Associates, Inc., dated November 13, 2023. Per the above reference geotechnical report ground water was encountered in Borings 1 and 2 at depths of about 19 feet and 14 feet, respectively. The remaining four borings were found to be dry. Borings 1 through 4 were left open to allow for a follow-up groundwater level measurement with Borings P-1 and P-2 backfilled subsequent to drilling. Stabilized groundwater was measured in Borings 1, 3, and 4 at depths of about 16.5, 22.5, and 22 feet, respectively when measured 7 days subsequent to drilling. Groundwater was not present in Boring 2 at the time of the follow-up measurement. The open borings were backfilled upon completion of the follow-up measurements. Based on the above listed findings, groundwater is not anticipated to have an impact on the proposed development.

E. Subsurface Soils Analysis

The *Geotechnical Engineering Study and Pavement Thickness Design* was completed by Kumar & Associates, Inc., dated November 13, 2023 determined the onsite soil to be a relatively thin layer of topsoil underlain by existing fill extending to naturally deposited (native) granular soils at depths ranging from about 4 feet to 6 feet in Borings 1 through 4 and the the maximum explored depth of about 5 feet in Borings P-1 and P-2. The native granular soils extended to claystone bedrock at depths ranging from about 14 feet to 21 feet below existing grades at the time of drilling. The claystone continued to the maximum explored depths of about 25 feet or 30 feet.

The recommendation from Kumar & Associates, Inc. is that the existing fill should be removed from beneath foundations and soil-supported slabs, movement-sensitive exterior flatwork, and pavements consistent with the recommendations for fill removal presented in specific sections of their report and replaced with structural fill. The structural fill should meet the material and placement requirements presented in their report.

II. Floodplain

A. Major Drainageway – Designated Floodplain

According to the FEMA Flood Insurance Rate Map number 08013C0583K, effective date August 15, 2019, the site is located in Zone X which is within of the 100-year flood plain.

A LOMR-F, case number 19-08-0084A, effective date December 3, 2018, removes the majority of the site from the 100-year flood plain. The proposed Finished Floor Elevation is set at 5475.50, which is well above the base flood plain elevation in this location.

III. Drainage Basins and Sub-Basins

A. Major Drainage Basins

The total tributary area to the proposed Everhome Suites facility is 1.97 acres. See Drainage Area Map. The site in the historic condition consists of one major drainage basin (H1), and the general historic drainage pattern at this site is runoff entering the site from the western property line and sheet flowing to the east. There is approximately 10 feet of

fall from the western property line to the eastern property line where the runoff is collected into a riprap swale that conveys the runoff into Coal Creek.

Everhome Suites Improvements include a treated outfall to the major drainageway of Coal Creek.

Basin H1: Basin H1 is 1.97 acres and consists of the undeveloped lot with an impervious value of 2.0%. The 5-year and 100-year C values were determined to be 0.16 and 0.20, respectively; and anticipated 5-year runoff flows of 0.81 CFS and 100-year runoff flows of 1.93 CFS. Flows from Basin H1 are directed to a riprap swale that conveys the runoff into Coal Creek.

B. Minor Drainage Basins

The site in the proposed condition consists of 6 total basins (A1-A5, BY-E) which direct flows towards Coal Creek. The stormwater is conveyed through on-site stormwater inlets and the existing riprap swale at the southeast corner of the site. The following is a description of the proposed drainage basins.

Basin A1: Basin A1 is 0.34 acres and consists of the footprint of the proposed Everhome Suites Hotel for an impervious value of 90.0%. The 5-year and 100-year C values were determined to be 0.85 and 0.90, respectively; and anticipated 5-year runoff flows of 1.31 CFS and 100-year runoff flows of 2.67 CFS. Flows from Basin A1 are directed underground through 6" roof drains and will connect directly into the proposed stormwater manhole. Flows will continue towards the ADS water quality system. Captured runoff will be conveyed from the ADS system via a proposed 18" RCP storm pipe towards a proposed riprap swale at the southeastern corner of the site that will ultimately flow into Coal Creek.

Basin A2: Basin A2 is 0.06 acres and consists of the landscape area on the northwest corner of the site and parking stalls for an impervious value of 14.6%. The 5-year and 100-year C values were determined to be 0.25 and 0.29, respectively; and anticipated 5-year runoff flows of 0.06 CFS and 100-year runoff flows of 0.12 CFS. Flows from Basin A2 are conveyed via sheet flow and drainage swale to a 12" Nyloplast inlet where the developed runoff is fully captured. The captured runoff is then conveyed underground through a 6" PVC pipe to the proposed ADS water quality system.

Basin A2.1: Basin A2.1 is 0.03 acres and consists of the landscape area on the northwest corner of the site and sidewalk for an impervious value of 28.0%. The 5-year and 100-year C values were determined to be 0.35 and 0.39, respectively; and anticipated 5-year runoff flows of 0.03 CFS and 100-year runoff flows of 0.07 CFS. Flows from Basin A2.1 are conveyed via sheet flow and drainage swale to a 12" Nyloplast inlet where the developed runoff is fully captured. The captured runoff is then conveyed underground through a 6" PVC pipe to the proposed ADS water quality system.

Basin A3: Basin A3 is 0.04 acres and consists of the ramp and landscaped area between the western face of the Everhome Suites building and the property line for an impervious value of 70.2%. The 5-year and 100-year C values were determined to be 0.66 and 0.71, respectively; and anticipated 5-year runoff flows of 0.13 CFS and 100-year runoff flows of 0.26 CFS. Flows from Basin A3 are conveyed via sheet flow and drainage swale to a 12" Nyloplast inlet and ADS slotted drain system where the developed runoff is fully captured. The captured runoff is then conveyed underground through a 6" PVC pipe to the proposed ADS water quality system.

Basin A4: Basin A4 is 0.10 acres and consists of the drive aisle, parking stalls, sidewalk, and landscaped area at the southwestern corner of the site for an impervious value of 87.6%. The 5-year and 100-year C values were determined to be 0.79 and 0.84, respectively; and anticipated 5-year runoff flows of 0.34 CFS and 100-year runoff flows of 0.70 CFS. Flows from Basin A4 are directed to a type 13 combo inlet, then underground through a 12" RCP pipe to the proposed ADS water quality system.

Basin A5: Basin A5 is 0.13 acres and consists of the parking lot, landscaped islands and sidewalk for an impervious value of 91.2%. The 5-year and 100-year C values were determined to be 0.82 and 0.86, respectively; and anticipated 5-year runoff flows of 0.50 CFS and 100-year runoff flows of 1.01 CFS. Flows from Basin A5 are directed to a Type 13 combination inlet, then underground through a 12" RCP pipe to the proposed ADS water quality system.

Basin A6: Basin A6 is 0.97 acres and consists of the parking lot, landscaped islands and sidewalk for an impervious value of 96.3%. The 5-year and 100-year C values were determined to be 0.85 and 0.90, respectively; and anticipated 5-year runoff flows of 3.67 CFS and 100-year runoff flows of 7.45 CFS. Flows from Basin A6 are directed to four Type 13 combination inlets, then underground through a 12" RCP pipe to the proposed ADS water quality system.

Basin BY-E: Basin BY-E is 0.23 acres and consists of the undisturbed area between the parking lot and the property line for an impervious value of 2.0%. This basin will remain in the existing condition. The 5-year and 100-year C values were determined to be 0.16 and 0.20, respectively; and anticipated 5-year runoff flows of 0.22 CFS and 100-year runoff flows of 0.52 CFS. Flows from Basin BY-E are directed to the existing riprap swale and into Coal Creek.

IV. Drainage Design Criteria

A. Criteria

This project's storm drainage design follows the regulations, standards, and criteria of the Town of Superior's Standards & Specifications (2021) and the Mile High Flood District's Urban Storm Drainage Criteria Manual, Volumes I, II, and III ('USDCM').

B. Calculations

i. Hydrologic Criteria

Peak runoff values were calculated using the rational method:

$$Q = CIA$$

Q = Storm runoff in cubic feet per second (cfs)
C = Rainfall coefficients - ratio runoff to rainfall
I = Rainfall intensity in inches per hour
A = Drainage area in acres

The minor (5-year) and major (100-year) storm events were calculated using the

Rainfall Intensity Frequency Values from the criteria. The runoff coefficient values "C" were taken from the UDSCM, Volume 1. Composite "C" values were determined for each basin and times of concentration (tc) calculated using UDSCM methods also described in the referenced Volume 1 document. All hydrologic calculations for the 5-year and 100-year frequency events are included in the Appendix.
Hydrologic summary of the data and methods utilized in this report includes:

- Design Rainfall: 1-hour point rainfall depths of 1.34 and 2.57 for the 5-year and 100-year storm events, respectively. Depths were obtained from Table 5.2 of the criteria.
- Hydrologic Soil Group: NRCS hydrologic soil group B
- Conveyance System Design Storm Recurrence Intervals: 5-year and 100-year
- Detention is per the USDCM, Volume 2 full spectrum detention design guidelines as aided by the MHFD Excel design tool "Detention Design" available through the district's website.

ii. Hydraulic Criteria

Inlet capacities have been analyzed per the procedures of the USDCM, Volume 1 street, inlet, and storm drain guidelines as aided by the MHFD Excel design tool "Street Capacity and Inlet Sizing" available through the district's website. Hydraulic Grade Line analysis was completed utilizing Bentley StormCAD software.
Hydraulic data and analysis methods in this report include:

- Inlets and storm drains sized for the 100-year event.
- Drains sized with a manning's 'n' value of 0.011 for PVC and 0.013 for RCP

iii. Storm Water Quality Criteria

The on-site water quality pond will be provided with an Extended Detention Basin facility, satisfying all Town of Superior permit requirements. Design is per the USDCM, Volume 3 guidelines and is aided by the aforementioned "Detention Design" tool.

C. Detention Design

The Town of Superior Land Use Code Section 16-26-20 (d) indicates that drainage and flood control measures should use the most restrictive criteria of SMD-1 Rules and Regulations, Urban Drainage & Flood Control District (UDFCD) Criteria, or Boulder County Criteria. This project used criteria outlined by UDFCD.

In general, detention is necessary to minimize impacts from development to downstream properties. According to the UDFCD Urban Storm Drainage Criteria Manual, "Planning and design of stormwater drainage systems should not be based on the premise that problems can be transferred from one location to another. Urbanization tends to

increase downstream peak flow by increasing runoff volumes and velocities. Stormwater runoff can be stored and slowly released via detention facilities to manage peak flows, thereby reducing the drainage capacity required immediately downstream." However, it is generally accepted that exemptions for flood control detention can be made for development of an area immediately adjacent to a major drainageway that is capable of conveying the fully developed basin 100-year flood. The peak stormwater runoff from the 1.97-acre watershed will have no impact on the peak flows from the 25.7 square mile Coal Creek watershed. This is commonly referred to as "beat the peak" where the peak flow from the small watershed will have arrived and ended prior to the peak flow from the much larger watershed. UDFCD staff generally concur that detention is not required by the Town at this location, although it does provide some minor benefit to match historic release rates into Coal Creek. However, water quality must be provided for developed areas, regardless, and cannot be waived in accordance with the Town's MS4 permit.

D. Water Quality Design

The water quality capture volume was generated with a contributing watershed area of 1.97 acres and 76.1% impervious. The proposed water quality treatment system is required to have a water quality capture volume of 2,309 CF. To achieve this volume, a proposed ADS Stormtech chamber system with a surface area of 727 SF will be utilized. The water quality pond will utilize an outlet structure with three (3), one-half-inch (1/2") orifices.

Water Quality within the ADS system will be handled by the isolation row within the ADS system. The ADS system also includes a 2' sump at the manhole where flow enters the system. There are currently three different third party tests for this product, all showing a minimum of 80% TSS removal; The City of Charlotte field testing report for Isolator Row, 2006 Tennessee Tech Lab Report, and University of New Hampshire Test Report.

E. Maintenance

The detention facilities will be private and maintenance of the facilities will be the responsibility of the property owner. For the underground facility, inspection ports will be provided for access to the system. Refer to general maintenance and inspection guidelines in the appendix for more information.

V. Conclusions

A. Compliance with Standards

This drainage report presents the drainage analysis for an Everhome Suites at 3 S. Marshall Road and complies with the regulations, standards, and criteria of the Town of Superior's Standards & Specifications (2021) and the Mile High Flood District's Urban Storm Drainage Criteria Manual, Volumes I, II, and III ('USDCM').

B. Impact of Proposed Development

The proposed development will improve upon the historical condition as it exists today. The embankment that goes to Coal Creek will see less erosion and degradation than it currently does which will benefit the downstream water quality.

VI. References

The following drainage studies were used in the current drainage report for the Superior Town Center Park:

• *Preliminary Drainage Report for Superior Town Center Planned Development,* Town of Superior, November 2012, Civil Resources, LLC

• *Drainage Report Update for Superior Town Center Phase 1 and Discovery Office Park,* RC Superior Metro District and Aweida Properties Inc., September 2015, Civil Resources, LLC

• *Superior Town Center Park Detention Basin #11, Drainage Assessment,* Matrix Design Group, April 18, 2018

• *Drainage Letter, Superior Town Center – Block 1 Lot 3 – Hotel Site.* Civil Resources, LLC, dated August 22, 2016

Appendix A – Reference Materials

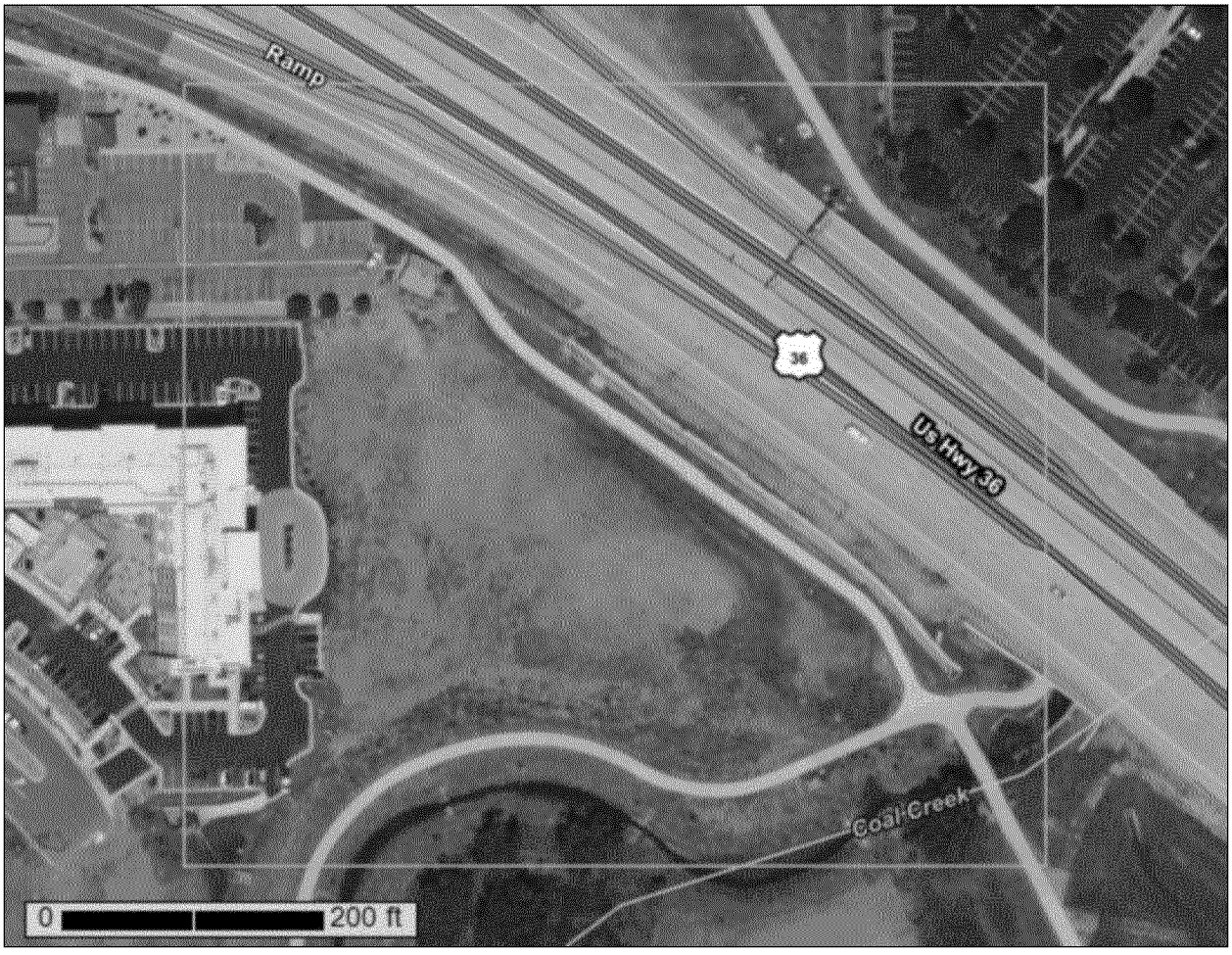
United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Boulder County Area, Colorado



January 3, 2024

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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MdB—Manter sandy loam, 1 to 3 percent slopes.....14
NdD—Nederland very cobbly sandy loam, 1 to 12 percent slopes.....15
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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



Map Scale: 1:1,540 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 20 40 80 120

Feet
0 50 100 200 300

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

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

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

Special Point Features

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

Water Features

- Streams and Canals

Transportation

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

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

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: Boulder County Area, Colorado
Survey Area Data: Version 20, Aug 24, 2023

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

Date(s) aerial images were photographed: Jul 1, 2020—Jul 2, 2020

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
CaB	Calkins sandy loam, 1 to 3 percent slopes	4.8	53.3%
MdB	Manter sandy loam, 1 to 3 percent slopes	1.3	14.6%
NdD	Nederland very cobbly sandy loam, 1 to 12 percent slopes	2.9	32.1%
Totals for Area of Interest		**9.0**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or

landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Boulder County Area, Colorado

CaB—Calkins sandy loam, 1 to 3 percent slopes

Map Unit Setting

National map unit symbol: jprc
Elevation: 4,900 to 5,500 feet
Mean annual precipitation: 12 to 18 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 140 to 155 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Calkins and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Calkins

Setting

Landform: Terraces, flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy alluvium

Typical profile

H1 - 0 to 14 inches: sandy loam
H2 - 14 to 60 inches: sandy loam

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: About 24 to 36 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.2 inches)

Interpretive groups

Land capability classification (irrigated): 3w
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: B
Ecological site: R067BY031CO - Sandy Bottomland
Hydric soil rating: No

Minor Components

Valmont

Percent of map unit: 6 percent
Ecological site: R067BY042CO - Clayey Plains
Hydric soil rating: No

Mcclave

Percent of map unit: 6 percent
Ecological site: R067BY035CO - Salt Meadow
Hydric soil rating: No

Nunn

Percent of map unit: 3 percent
Ecological site: R067BY042CO - Clayey Plains
Hydric soil rating: No

MdB—Manter sandy loam, 1 to 3 percent slopes

Map Unit Setting

National map unit symbol: jps3
Elevation: 4,900 to 5,500 feet
Mean annual precipitation: 12 to 18 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 140 to 155 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Manter and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Manter

Setting

Landform: Terraces
Landform position (three-dimensional): Side slope, tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy eolian deposits and/or outwash

Typical profile

H1 - 0 to 6 inches: sandy loam
H2 - 6 to 16 inches: fine sandy loam
H3 - 16 to 60 inches: sandy loam

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 7.0 inches)

Interpretive groups

Land capability classification (irrigated): 3e
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: A
Ecological site: R067BY024CO - Sandy Plains
Hydric soil rating: No

Minor Components

Calkins

Percent of map unit: 8 percent
Ecological site: R067BY031CO - Sandy Bottomland
Hydric soil rating: No

Ascalon

Percent of map unit: 7 percent
Ecological site: R067BY002CO - Loamy Plains
Hydric soil rating: No

NdD—Nederland very cobbly sandy loam, 1 to 12 percent slopes

Map Unit Setting

National map unit symbol: jps7
Elevation: 5,500 to 6,500 feet
Mean annual precipitation: 15 to 20 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 140 to 155 days
Farmland classification: Not prime farmland

Map Unit Composition

Nederland and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Nederland

Setting

Landform: Alluvial fans, terraces
Landform position (three-dimensional): Base slope, tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Cobbly loamy alluvium

Typical profile

H1 - 0 to 7 inches: very cobbly sandy loam
H2 - 7 to 20 inches: very cobbly sandy clay loam
H3 - 20 to 60 inches: very cobbly sandy loam

Properties and qualities

Slope: 1 to 12 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: B
Ecological site: R049XY213CO - Cobbly Foothill
Hydric soil rating: No

Minor Components

Valmont

Percent of map unit: 20 percent
Hydric soil rating: No

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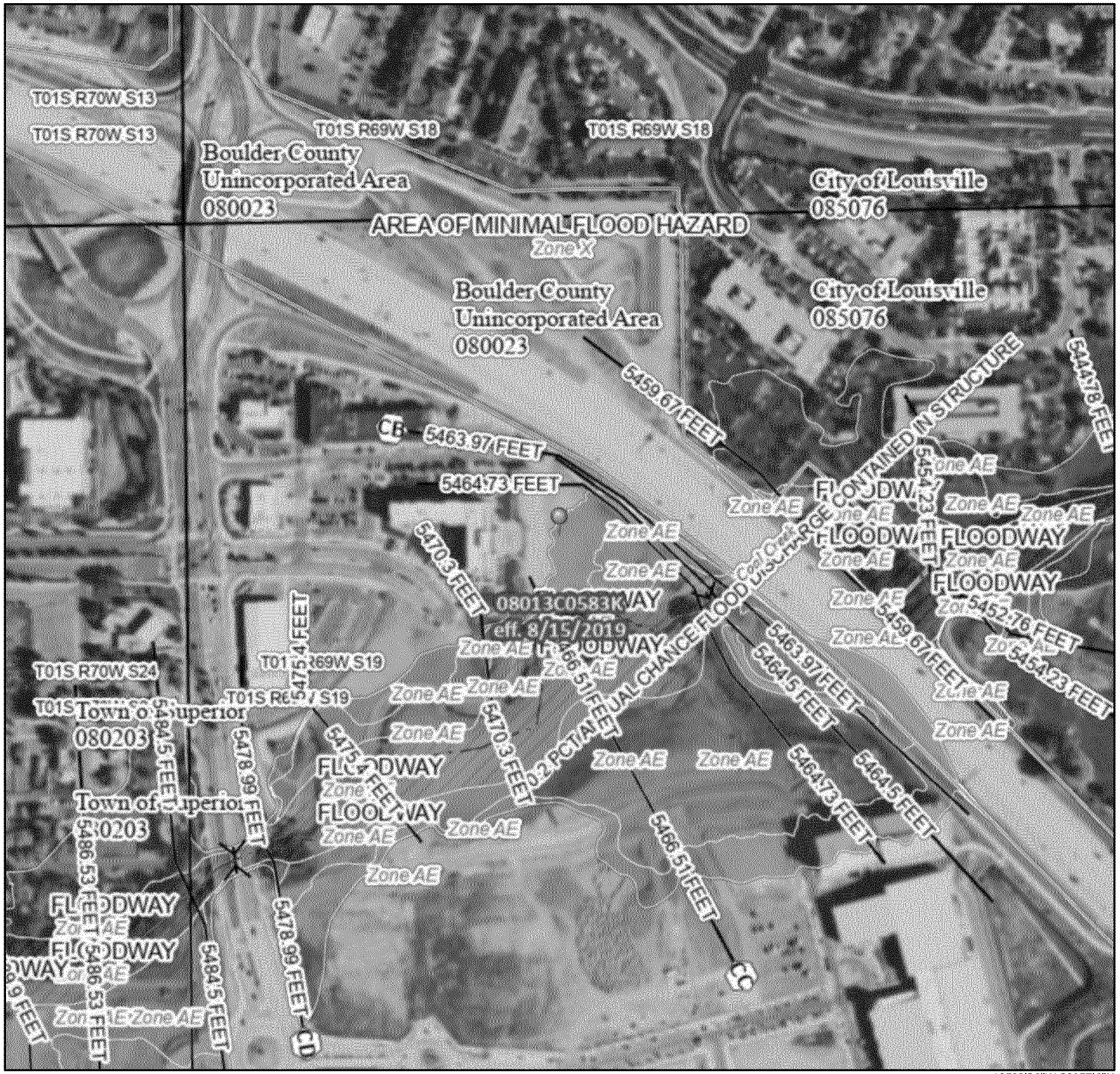
National Flood Hazard Layer FIRMette

FEMA

105°10'3"W 39°57'33"N



105°9'26"W 39°57'6"N

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

1:6,000

Basemap Imagery Source: USGS National Map 2023

Legend

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

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 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*

OTHER AREAS
- NO SCREEN — Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 — Cross Sections with 1% Annual Chance
- 17.5 — Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

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 10/5/2023 at 6:54 PM 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.

Federal Emergency Management Agency

Washington, D.C. 20472

LETTER OF MAP REVISION BASED ON FILL DETERMINATION DOCUMENT (REMOVAL)

COMMUNITY AND MAP PANEL INFORMATION		LEGAL PROPERTY DESCRIPTION
COMMUNITY	TOWN OF SUPERIOR, BOULDER COUNTY, COLORADO	A portion of Lot 3B, Block 1, Superior Town Center Filing No. 1B Replat No. 3, as shown on the Plat recorded as Document No. 03560623, in the Office of the County Clerk and Recorder, Boulder County, Colorado The portion of property is more particularly described by the following metes and bounds:
	COMMUNITY NO.: 080203	
AFFECTED MAP PANEL	NUMBER: 08013C0583J	
	DATE: 12/18/2012	
FLOODING SOURCE: COAL CREEK		APPROXIMATE LATITUDE & LONGITUDE OF PROPERTY:39.955476, -105.162202 SOURCE OF LAT & LONG: LOMA LOGIC DATUM: NAD 83

DETERMINATION

LOT	BLOCK/ SECTION	SUBDIVISION	STREET	OUTCOME WHAT IS REMOVED FROM THE SFHA	FLOOD ZONE	1% ANNUAL CHANCE FLOOD ELEVATION (NAVD 88)	LOWEST ADJACENT GRADE ELEVATION (NAVD 88)	LOWEST LOT ELEVATION (NAVD 88)
3B	1	Superior Town Center Filing No. 1B Replat 3	3 Marshall Road	Portion of Property	X (shaded)	--	--	5466.6 feet

Special Flood Hazard Area (SFHA) - The SFHA is an area that would be inundated by the flood having a 1-percent chance of being equaled or exceeded in any given year (base flood).

ADDITIONAL CONSIDERATIONS (Please refer to the appropriate section on Attachment 1 for the additional considerations listed below.)

LEGAL PROPERTY DESCRIPTION REVISED BY LETTER OF MAP REVISION
PORTIONS REMAIN IN THE FLOODWAY
FILL RECOMMENDATION

This document provides the Federal Emergency Management Agency's determination regarding a request for a Letter of Map Revision based on Fill for the property described above. Using the information submitted and the effective National Flood Insurance Program (NFIP) map, we have determined that the described portion(s) of the property(ies) is/are not located in the SFHA, an area inundated by the flood having a 1-percent chance of being equaled or exceeded in any given year (base flood). This document revises the effective NFIP map to remove the subject property from the SFHA located on the effective NFIP map; therefore, the Federal mandatory flood insurance requirement does not apply. However, the lender has the option to continue the flood insurance requirement to protect its financial risk on the loan. A Preferred Risk Policy (PRP) is available for buildings located outside the SFHA. Information about the PRP and how one can apply is enclosed.

This determination is based on the flood data presently available. The enclosed documents provide additional information regarding this determination. If you have any questions about this document, please contact the FEMA Map Information eXchange (FMIX) toll free at (877) 336-2627 (877-FEMA MAP) or by letter addressed to the Federal Emergency Management Agency, Engineering Library, 3601 Eisenhower Ave Ste 500, Alexandria, VA 22304-6426.

Luis V. Rodriguez, P.E., Director
Engineering and Modeling Division
Federal Insurance and Mitigation Administration

Federal Emergency Management Agency
Washington, D.C. 20472

LETTER OF MAP REVISION BASED ON FILL DETERMINATION DOCUMENT (REMOVAL)

ATTACHMENT 1 (ADDITIONAL CONSIDERATIONS)

LEGAL PROPERTY DESCRIPTION (CONTINUED)

BEGINNING at the Northwest corner of said Lot 3B and assuming the North line of Lot 3B as bearing North 88°42'50" East a distance of 110.00 feet with all other bearings contained herein relative thereto; THENCE along the Northerly line of said Lot 3B, North 88°42'50" East a distance of 110.00 feet to the beginning point of a non-tangent curve; THENCE along the arc of a curve concave to the Southwesterly an arc distance of 151.23 feet, a Radius of 5574.64 feet, a Delta of 01°33'16" and is subtended by a Chord bearing South 55°24'31" East a distance of 151.23 feet to a line non-tangent to this curve; THENCE departing said Northerly line, South 46°25'13" East a distance of 87.76 feet; THENCE South 49°21'50" East a distance of 47.10 feet; THENCE South 35°35'12" East a distance of 34.35 feet; THENCE South 09°22'00" West a distance of 32.35 feet; THENCE South 43°25'53" West a distance of 33.62 feet; THENCE South 53°55'27" West a distance of 38.93 feet to a point on the Southerly line of said Lot 3B; THENCE along said Southerly line, South 70°48'10" West a distance of 78.11 feet; THENCE departing said Southerly line, North 85°08'26" West a distance of 41.14 feet to a point on the Southerly line of Lot 3B;THENCE along Southerly and Westerly lines of said Lot 3B the next Seven (7) courses; THENCE North 72°34'13" West a distance of 57.78 feet; THENCE South 59°24'46" West a distance of 134.83 feet; THENCE North 01°17'10" West a distance of 41.28 feet; THENCE North 59°24'46" East a distance of 20.64 feet; THENCE North 01°17'10" West a distance of 169.95 feet; THENCE South 88°42'50" West a distance of 18.00 feet; THENCE North 01°17'10" West a distance of 134.00 feet to the POINT OF BEGINNING.

PORTIONS OF THE PROPERTY REMAIN IN THE FLOODWAY (This Additional Consideration applies to the preceding 1 Property.)

A portion of this property is located within the Special Flood Hazard Area and the National Flood Insurance Program (NFIP) regulatory floodway for the flooding source indicated on the Determination/Comment Document while the subject of this determination is not. The NFIP regulatory floodway is the area that must remain unobstructed in order to prevent unacceptable increases in base flood elevations. Therefore, no construction may take place in an NFIP regulatory floodway that may cause an increase in the base flood elevation, and any future construction or substantial improvement on the property remains subject to Federal, State/Commonwealth, and local regulations for floodplain management. The NFIP regulatory floodway is provided to the community as a tool to regulate floodplain development. Modifications to the NFIP regulatory floodway must be accepted by both the Federal Emergency Management Agency (FEMA) and the community involved. Appropriate community actions are defined in Paragraph 60.3(d) of the NFIP regulations. Any proposed revision to the NFIP regulatory floodway must be submitted to FEMA by community officials. The community should contact either the Regional Director (for those communities in Regions I-IV, and VI-X), or the Regional Engineer (for those communities in Region V) for guidance on the data which must be submitted for a revision to the NFIP regulatory floodway. Contact information for each regional office can be obtained by calling the FEMA Map Assistance Center toll free at (877) 336-2627 (877-FEMA MAP) or from our web site at http://www.fema.gov/about/regoff.htm.

Luis V. Rodriguez, P.E., Director
Engineering and Modeling Division
Federal Insurance and Mitigation Administration

Federal Emergency Management Agency
Washington, D.C. 20472

LETTER OF MAP REVISION BASED ON FILL DETERMINATION DOCUMENT (REMOVAL)

ATTACHMENT 1 (ADDITIONAL CONSIDERATIONS)

FILL RECOMMENDATION (This Additional Consideration applies to the preceding 1 Property.)

The minimum NFIP criteria for removal of the subject area based on fill have been met for this request and the community in which the property is located has certified that the area and any subsequent structure(s) built on the filled area are reasonably safe from flooding. FEMA's Technical Bulletin 10-01 provides guidance for the construction of buildings on land elevated above the base flood elevation through the placement of fill. A copy of Technical Bulletin 10-01 can be obtained by calling the FEMA Map Assistance Center toll free at (877) 336-2627 (877-FEMA MAP) or from our web site at http://www.fema.gov/mit/tb1001.pdf. Although the minimum NFIP standards no longer apply to this area, some communities may have floodplain management regulations that are more restrictive and may continue to enforce some or all of their requirements in areas outside the Special Flood Hazard Area.

REVISED BY LETTER OF MAP REVISION (This Additional Consideration applies to the preceding 1 Property.)

The effective National Flood Insurance Program map for the subject property, has since been revised by a Letter of Map Revision (LOMR) dated 11/16/2017. The 11/16/2017 LOMR has been used in making the determination/comment for the subject property.

This attachment provides additional information regarding this request. If you have any questions about this attachment, please contact the FEMA Map Information eXchange (FMIX) toll free at (877) 336-2627 (877-FEMA MAP) or by letter addressed to the Federal Emergency Management Agency, Engineering Library, 3601 Eisenhower Ave Ste 500, Alexandria, VA 22304-6426.

Luis V. Rodriguez, P.E., Director
Engineering and Modeling Division
Federal Insurance and Mitigation Administration

TITLE EXCEPTIONS:

1. Any facts, rights, interests, or claims thereof, not shown by the Public Records but that could be ascertained by an inspection of the Land or that may be asserted by persons in possession of the Land.

2. Easements, liens or encumbrances, or claims thereof, not shown by the Public Records.

3. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land and not shown by the Public Records.

4. Any lien, or right to a lien, for services, labor or material heretofore or hereafter furnished, imposed by law and not shown by the Public Records.

5. Defects, liens, encumbrances, adverse claims or other matters, if any, created, first appearing in the public records or attaching subsequent to the effective date hereof but prior to the date of the proposed insured acquires of record for value the estate or interest or mortgage thereon covered by this Commitment.

6. (a) Taxes or assessments that are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the Public Records; (b) proceedings by a public agency that may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the Public Records.

7. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water.

8. EXISTING LEASES AND TENANCIES, IF ANY.

9. AN UNDIVIDED ONE HALF INTEREST IN AND TO ALL COAL AND OTHER MINERALS, INCLUDING OIL AND GAS, AS RESERVED BY ATKINSON, IN DEED RECORDED OCTOBER 16, 1948 IN BOOK 835 AT PAGE 30, AND ANY AND ALL ASSIGNMENTS THEREOF OR INTERESTS THEREIN.

(AFFECTS THE W1/2 NW1/4 SECTION 19–1S–69W)
Includes all of the subject property. Not plotted.

10. AN UNDIVIDED ONE HALF INTEREST IN AND TO ALL COAL AND OTHER MINERALS, INCLUDING OIL AND GAS, AS RESERVED BY BROWN, IN DEED RECORDED OCTOBER 16, 1948 IN BOOK 835 AT PAGE 33, AND ANY AND ALL ASSIGNMENTS THEREOF OR INTERESTS THEREIN.

(AFFECTS THE W1/2 NW1/4 SECTION 19–1S–69W)
Same description as exception 9. Includes all of the subject property. Not plotted.

11. THOSE MINERAL INTERESTS, TOGETHER WITH ANY RIGHTS OF INGRESS AND EGRESS FOR THE PURPOSE OF MINING, DRILLING, AND EXPLORATION, AS CONVEYED OR AS EVIDENCED BY MINERAL DEEDS RECORDED MARCH 9, 1964 IN BOOK 1325 AT PAGE 120; APRIL 7, 1977 UNDER RECEPTION NO. 217506; JULY 1, 1980 UNDER RECEPTION NO. 401365; JULY 29, 1988 UNDER RECEPTION NO. 00932643; MAY 7, 1997 UNDER RECEPTION NO. 1696587; MARCH 30, 2012 UNDER RECEPTION NO. 3213069 AND MARCH 12, 2013 UNDER RECEPTION NO. 3296444.

(AFFECTS THE W1/2 NW1/4 SECTION 19–1S–69W)
Ruffenach and Rosenbaums Addition lies north of the subject property. The south 16 acres of the Northwest Quarter of the Northwest Quarter of Section 19 does include part of the subject property. Plotted.

12. OIL, GAS AND OTHER MINERAL RIGHTS AS RESERVED BY DENISON, MALCZYK, DEUEL AND CABLE, IN DEEDS RECORDED MAY 23, 1979 UNDER RECEPTION NOS. 338662, 338663, 338664 AND 338665, AND ANY AND ALL ASSIGNMENTS THEREOF OR INTERESTS THEREIN.

(AFFECTS THE W1/2 NW1/4 SECTION 19–1S–69W)
Includes all of the subject property. Not plotted.

13. TERMS, CONDITIONS, PROVISIONS, BURDENS AND OBLIGATIONS OF TOWN OF SUPERIOR ANNEXATION, AS EVIDENCED IN TOWN OF SUPERIOR ORDINANCE #98–O–1 AND MAP RECORDED FEBRUARY 23, 1998 UNDER RECEPTION NOS. 1773928 AND 1773929.
Includes all of the subject property. Not plotted.

14. ANY TAX, LIEN, FEE, ASSESSMENT OR EFFECT OF INCLUSIONS OF SUBJECT PROPERTY IN THE NORTHERN COLORADO WATER CONSERVANCY DISTRICT, AS EVIDENCED BY ORDER OF THE DISTRICT COURT, RECORDED JULY 22, 1999 UNDER RECEPTION NO. 1963438 AND ORDER RECORDED OCTOBER 18, 2002 UNDER RECEPTION NO. 2345200.
Includes all of the subject property. Not plotted.

15. REQUEST FOR NOTICE OF SURFACE DEVELOPMENT BY NRC–CO 1 LLC, RECORDED SEPTEMBER 28, 2009 UNDER RECEPTION NO. 3032258.

(AFFECTS THE NW1/4 SECTION 19–1S–69W)
Includes all of the subject property. Not plotted.

16. TERMS, CONDITIONS, PROVISIONS, BURDENS AND OBLIGATIONS AS SET FORTH IN SUPERIOR TOWN CENTER PLANNED DEVELOPMENT PLAN (ZONING), EVIDENCED BY RECORD OF APPROVAL BY THE TOWN OF SUPERIOR RECORDED FEBRUARY 04, 2013 UNDER RECEPTION NO. 3287102 AND AMENDMENT THERETO, EVIDENCED BY RECORD OF APPROVAL BY THE TOWN OF SUPERIOR RECORDED MAY 20, 2015 UNDER RECEPTION NO. 3446671, AND FURTHER AMENDMENT THERETO, EVIDENCED BY RECORD OF APPROVAL BY THE TOWN OF SUPERIOR RECORDED JUNE 22, 2016 UNDER RECEPTION NO. 3525749. (THE PLANS ARE NOT RECORDED)
Includes Superior Town Center. Appears to include all of the subject property. Not plotted.

17. EASEMENTS AS SET FORTH ON THE PLAT OF SUPERIOR TOWN CENTER FILING NO. 1 RECORDED FEBRUARY 4, 2013 UNDER RECEPTION NO. 3287103.

NOTE: THE LOCATION OF SAID EASEMENTS ARE PURPORTEDLY SHOWN AND PLOTTED ON ALTA/NSPS LAND TITLE SURVEY PREPARED BY KING SURVEYORS, JOB # 20160578–A, DATED FEBRUARY 1, 2017.
The 25' trail easement shown on this plat which included part of the subject property has been vacated. Not plotted. The 25' Superior Metro District easement shown on this plat does not include any of the subject property, and is plotted.

18. EASEMENTS, TERMS, CONDITIONS AND NOTES ON THE PLAT OF SUPERIOR TOWN CENTER FILING NO. 1B RECORDED FEBRUARY 25, 2014 UNDER RECEPTION NO. 3367475.

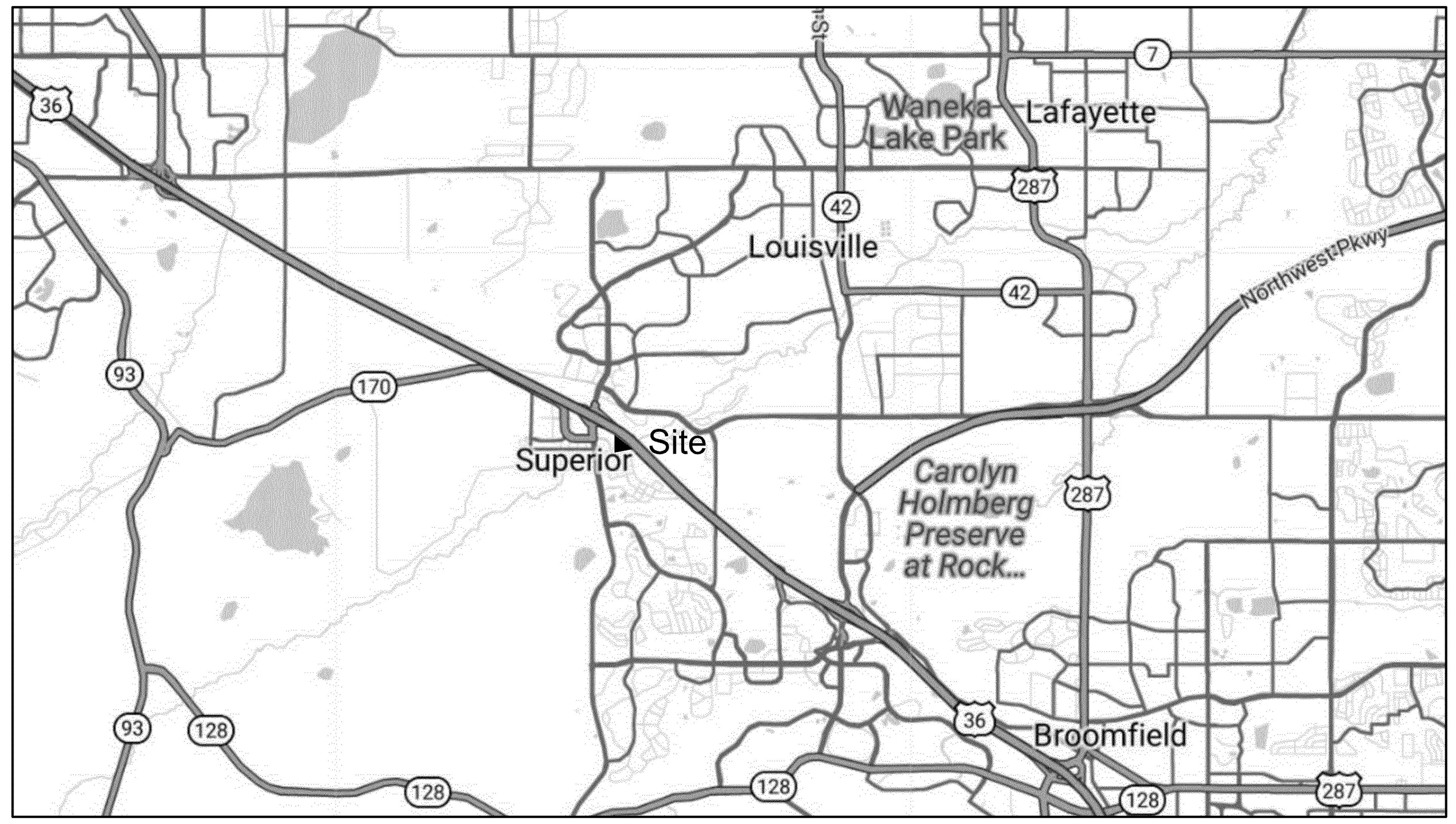
NOTE: THE LOCATION OF SAID EASEMENTS ARE PURPORTEDLY SHOWN AND PLOTTED ON ALTA/NSPS LAND TITLE SURVEY PREPARED BY KING SURVEYORS, JOB # 20160578–A, DATED FEBRUARY 1, 2017.

ADDENDUM TO FINAL PLAT RECORDED NOVEMBER 14, 2014 UNDER RECEPTION NO. 3413028.

NOTE: RATIFICATION AND CONFIRMATION OF PLATS RECORDED APRIL 14, 2015 UNDER RECEPTION NO. 03439335.
Easements include part of the subject property, except the portion of the trail easement that has been vacated. Plotted.

19. TERMS, CONDITIONS, PROVISIONS, BURDENS AND OBLIGATIONS AS SET FORTH IN FINAL DEVELOPMENT PLAN – PHASE 1 FOR THE SUPERIOR TOWN CENTER, EVIDENCED BY RECORD OF APPROVAL BY THE TOWN OF SUPERIOR RECORDED MARCH 11, 2014 UNDER RECEPTION NO. 03369753. (THE PLANS ARE NOT RECORDED)
Includes Superior Town Center. Appears to include all of the subject property. Not plotted.

20. TERMS, CONDITIONS, PROVISIONS, BURDENS AND OBLIGATIONS AS SET FORTH IN SUBDIVISION IMPROVEMENT AGREEMENT BY AND BETWEEN TOWN OF SUPERIOR AND RC SUPERIOR, LLC, RECORDED MARCH 11, 2014 UNDER RECEPTION NO. 03369754, FIRST AMENDMENT RECORDED JANUARY 14, 2014 UNDER RECEPTION NO. 3413029 AND UNRECORDED SECOND AMENDMENT DATED NOVEMBER 9, 2015 STORED AS OUR IMAGE 21366425, AND THIRD AMENDMENT THERETO RECORDED NOVEMBER 16, 2016 UNDER RECEPTION NO. 03557512.
Includes Superior Town Center. Appears to include all of the subject property. Not plotted.



VICINITY MAP 1" = 5000'

TITLE EXCEPTIONS (Cont'd):

21. RESTRICTIVE COVENANTS, WHICH DO NOT CONTAIN A FORFEITURE OR REVERTER CLAUSE, BUT OMITTING ANY COVENANTS OR RESTRICTIONS, IF ANY, BASED UPON RACE, COLOR, RELIGION, SEX, SEXUAL ORIENTATION, FAMILIAL STATUS, MARITAL STATUS, DISABILITY, HANDICAP, NATIONAL ORIGIN, ANCESTRY, OR SOURCE OF INCOME, AS SET FORTH IN APPLICABLE STATE OR FEDERAL LAWS, EXCEPT TO THE EXTENT THAT SAID COVENANT OR RESTRICTION IS PERMITTED BY APPLICABLE LAW, AS CONTAINED IN MASTER DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS FOR SUPERIOR TOWN CENTER BY RC SUPERIOR, LLC, RECORDED APRIL 14, 2015, UNDER RECEPTION NO. 03439339 AND FIRST AMENDMENT IN CONNECTION THEREWITH WAS RECORDED OCTOBER 18, 2021 UNDER RECEPTION NO. 03921592.

CONFIRMATION OF BUILDER DESIGNATION IN CONNECTION THEREWITH WAS RECORDED JANUARY 26, 2017 UNDER RECEPTION NO. 03571646.

CONFIRMATION OF BUILDER DESIGNATION IN CONNECTION THEREWITH WAS RECORDED FEBRUARY 2, 2017 UNDER RECEPTION NO. 03572998.

CORRECTIVE AMENDMENT OF CONFIRMATION OF BUILDER DESIGNATION IN CONNECTION THEREWITH WAS RECORDED FEBRUARY 3, 2017 UNDER RECEPTION NO. 03573103.

CONFIRMATION OF BUILDER DESIGNATION IN CONNECTION THEREWITH WAS RECORDED MARCH 20, 2017 UNDER RECEPTION NO. 03581164 AND 03581160.

CONFIRMATION OF BUILDER DESIGNATION IN CONNECTION THEREWITH WAS RECORDED MARCH 29, 2017 UNDER RECEPTION NO. 03583192.

CONFIRMATION OF BUILDER DESIGNATION IN CONNECTION THEREWITH WAS RECORDED MARCH 29, 2019 UNDER RECEPTION NO. 03703627.

CONFIRMATION OF BUILDER DESIGNATION IN CONNECTION THEREWITH WAS RECORDED JUNE 06, 2019 UNDER RECEPTION NO. 03716742.

CONFIRMATION OF BUILDER DESIGNATION IN CONNECTION THEREWITH WAS RECORDED FEBRUARY 19, 2020 UNDER RECEPTION NO. 03766889.

CONFIRMATION OF BUILDER DESIGNATION IN CONNECTION THEREWITH WAS RECORDED JANUARY 05, 2021 UNDER RECEPTION NO. 03847644.

CONFIRMATION OF BUILDER DESIGNATION IN CONNECTION THEREWITH WAS RECORDED DECEMBER 05, 2022 UNDER RECEPTION NO. 03990813.
Includes Superior Town Center. Appears to include all of the subject property. Not plotted.

22. EASEMENTS, CONDITIONS, COVENANTS, RESTRICTIONS, RESERVATIONS AND NOTES ON THE PLAT OF SUPERIOR TOWN CENTER FILING NO. 1B REPLAT NO. 3, RECORDED DECEMBER 1, 2016 UNDER RECEPTION NO. 03560623.
Easements include part of the subject property. Plotted.

23. TERMS, CONDITIONS, PROVISIONS, BURDENS AND OBLIGATIONS AS SET FORTH IN SUBDIVISION IMPROVEMENT AGREEMENT (FDP1–PHASE III) RECORDED SEPTEMBER 01, 2016 UNDER RECEPTION NO. 03541132.
Includes Superior Town Center. Appears to include all of the subject property. Not plotted.

24. TERMS, CONDITIONS, PROVISIONS, BURDENS AND OBLIGATIONS AS SET FORTH IN SUBDIVISION IMPROVEMENT AGREEMENT RECORDED OCTOBER 12, 2016 UNDER RECEPTION NO. 03550038.
Includes Superior Town Center. Appears to include all of the subject property. Not plotted.

25. ANY TAX, LIEN, FEE, OR ASSESSMENT BY REASON OF INCLUSION OF SUBJECT PROPERTY IN THE STC METROPOLITAN DISTRICT NO. 3, AS EVIDENCED BY INSTRUMENT RECORDED FEBRUARY 2, 2017 UNDER RECEPTION NO. 03572956.
Includes Lot 3A adjoining to the west. Not plotted.

26. TERMS, CONDITIONS, PROVISIONS, BURDENS, OBLIGATIONS AND EASEMENTS AS SET FORTH AND GRANTED IN RECIPROCAL EASEMENT AGREEMENT BY AND BETWEEN RC SUPERIOR LLC AND QC GLACIER STANDBY SUPERIOR LLC, RECORDED FEBRUARY 2, 2017 UNDER RECEPTION NO. 03572997.
Includes part of the subject property. Easement is not defined mathematically. Not plotted.

27. THE EFFECT OF VACATION EXHIBIT, RECORDED APRIL 20, 2017, UNDER RECEPTION NO. 03587780.
The 25' trail easement which included part of the subject property has been vacated. Not plotted.

28. TERMS, CONDITIONS, PROVISIONS, BURDENS AND OBLIGATIONS AS SET FORTH IN INCLUSION AGREEMENT FOR STC METROPOLITAN DISTRICTS NOs. 1, 2, AND 3 RECORDED DECEMBER 18, 2019 UNDER RECEPTION NO. 03755495.
Includes all of the subject property. Not plotted.

29. TERMS, CONDITIONS, PROVISIONS, BURDENS AND OBLIGATIONS AS SET FORTH IN AMENDED AND RESTATED DECLARATION OF THE SUPERIOR TOWN CENTER PAYMENT IN LIEU OF TAXES RECORDED DECEMBER 19, 2019 UNDER RECEPTION NO. 03755979.
Includes all of the subject property. Not plotted.

30. TERMS, CONDITIONS, PROVISIONS, BURDENS AND OBLIGATIONS AS SET FORTH IN DECLARATION OF COVENANTS IMPOSING AND IMPLEMENTING THE SUPERIOR TOWN CENTER PUBLIC IMPROVEMENTS FEE RECORDED DECEMBER 22, 2020 UNDER RECEPTION NO. 03844551.
Includes all of the subject property. Not plotted.

GENERAL NOTES:

1. Statute of limitations disclosure required per 13–80–105, C.R.S.:
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.

2. Statement of lineal units required per 38–51–106(1)(l), C.R.S.: Lineal unit of measure used in this survey is U.S. Survey Foot.

3. The boundary lines shown on this survey represent a professional opinion by this surveyor as to where the boundary lines hereby retraced were originally laid out on the ground and subsequently accepted by the affected land owners. The discovery of additional evidence may result in a different opinion.

4. All copyrights to publications by Foresight West Surveying, Inc. are reserved. Additionally, all field books, notes, sketches and electronic files are instruments of service and shall remain the sole property of Foresight West Surveying, Inc. If this survey is deposited with the County in compliance with 38–51–107, C.R.S., Foresight West Surveying, Inc. accepts no liability from proprietary or confidential information disclosed to the public by the contents herein.

5. Preservation of Boundary Monumentation: Any person who knowingly removes, alters or defaces:
1) any public land survey monument (defined by 38–53–103(18), C.R.S. as any land boundary monument established on the ground by a cadastral survey of the United States government and any mineral survey monument established by a United States mineral surveyor and made a part of the United States public land records), or
2) any land survey corner (defined by 38–53–103(6), C.R.S. as any land survey corner the position of which controls the location of the boundaries of a tract or parcel of land), or a restoration of any such monument, even if said person has title to the land on which said monument is located, commits a class 2 misdemeanor punishable by a fine of up to $1,000 and/or 1 year in jail unless, prior to such removal, said person has caused a Colorado professional land surveyor to establish at least two witness corners or reference marks for each such monument removed and has filed or caused to be filed a monument record pursuant to article 53 of title 38, C.R.S. (18–4–508, C.R.S.)

6. Oil, gas, coal, mineral, water, ditch, reservoir, geothermal, avigation, grazing or other rights, as well as development, zoning, lease, fire district or other restrictions, both recorded and unrecorded, may affect this property and not be plottable graphically hereon.

7. The locations of any underground utilities shown hereon are not to be considered all–inclusive and may be inaccurate. Underground utility locations may have been determined from available construction plans and as–built maps, surface markings established by independent locators or utility companies, or from surface features. Underground utilities shown hereon have not been exposed by this firm and may vary in actual location, usage, material, size and/or existence. This firm accepts no liability for inaccurate work by utility locators. Per Title 9, Article 1.5, C.R.S., underground utilities must be marked prior to any digging or drilling by submitting a request to the Utility Notification Center of Colorado. Call (811) at least 72 hours in advance.

8. All users of this survey are hereby notified that this survey in no way constitutes a title search by Foresight West Surveying Inc. for determination of (a)right to title, (b)chain of title/abstract, (c)the historical compatibility of all descriptions of this property with all descriptions of adjoining properties, and (d)easements, rights–of–way and other instruments of record that may impact title to this property. Additionally, unwritten rights to this property may exist which are unknown to this firm. A reasonable effort was made to research the records for this property and the adjoining properties in accordance with the usual and customary standard of care for land surveyors practicing in Colorado.

9. Title Policy Reference: For all information regarding right to title and easements, rights–of–way or other title burdens affecting such right to title to this property, this survey relied upon title commitment issued by Land Title Guarantee Company/Old Republic National Title Insurance Company, Order Number: ABZ70822737, with an effective date of 09/28/2023.

10. Building Setback notice: Due to frequent changes in and differing interpretations of zoning ordinances, the owner is urged to contact the governing municipality(ies) for guidance relating to setback requirements prior to planning future improvements on this property. No zoning report or letter citing setback restrictions was provided.

11. Basis of bearings statement required per 38–51–106(1)(e), C.R.S.:
Bearings are based upon the northeasterly line of Lot 3B, Block 1, Superior Town Center Filing No. 1B Replat No. 3, said line being an arc with a record chord bearing of North 54°18'05" West as shown on said plat. The monuments are described hereon.

12. Elevations are based upon a post–processed static GNSS connection made to NGS Bench Mark W 413 (PID KK1549) utilizing Geoid12B to model the ellipsoid separation. Elevation: 5459.62 (NAVD 88).

13. This parcel lies within Zone X and Special Flood Hazard Zone AE as shown on FEMA FIRM map no. 08013C0583K, revised 8/15/2019. Flood zone limits shown hereon were scaled and are not to be relied upon for accuracy.

14. Measured dimensions shown hereon reflect the results of a least squares adjustment of the field measurements.

15. No evidence of recent earth moving work, building construction or building additions was observed in the process of conducting the field work.

16. No proposed changes in street right of way lines was provided. No evidence of recent street or sidewalk constructions or repairs was observed in the process of conducting the field work.

17. All found and set monuments are fairly close to ground surface unless noted otherwise.

18. Any monuments shown hereon that are not tied to this survey were not used as control corners and are shown for posterity only.

LEGAL DESCRIPTION:

LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING NO. 1B REPLAT NO. 3, ACCORDING TO THE PLAT THEREOF RECORDED DECEMBER 1, 2016 UNDER RECEPTION NO. 03560623, COUNTY OF BOULDER, STATE OF COLORADO

SURVEYOR'S CERTIFICATION:

This certification does not extend to any unnamed persons or legal entities without written recertification expressly naming such persons or legal entities.

To KT DEVELOPMENT LLC, A COLORADO LIMITED LIABILITY COMPANY and LAND TITLE GUARANTEE COMPANY/OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY:

This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2021 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes Items 1, 2, 3, 4, 5, 6(a), 6(b), 8, 11(b), 13, 16 and 17 of Table A thereof. The fieldwork was completed on October 26, 2023.

Pursuant to Colorado Revised Statute 38–51–106 (1)(d) and Colorado State Board of Licensure for Professional Land Surveyors Rule 1.6(B)(2), the undersigned further certifies that this survey was performed under my responsible charge, is based upon my knowledge, information and belief, is in accordance with applicable standards of practice, and this certification is not a guaranty or warranty, either expressed or implied.

Lester J. Ludeman, PLS 25636
Email: lludeman@foresightwest.com
Signature and date through seal:
(Required by Colorado law)



Sheet 1 of 3

Project No. 2023141

Project Description
Lot 3B Superior Town Center 1B

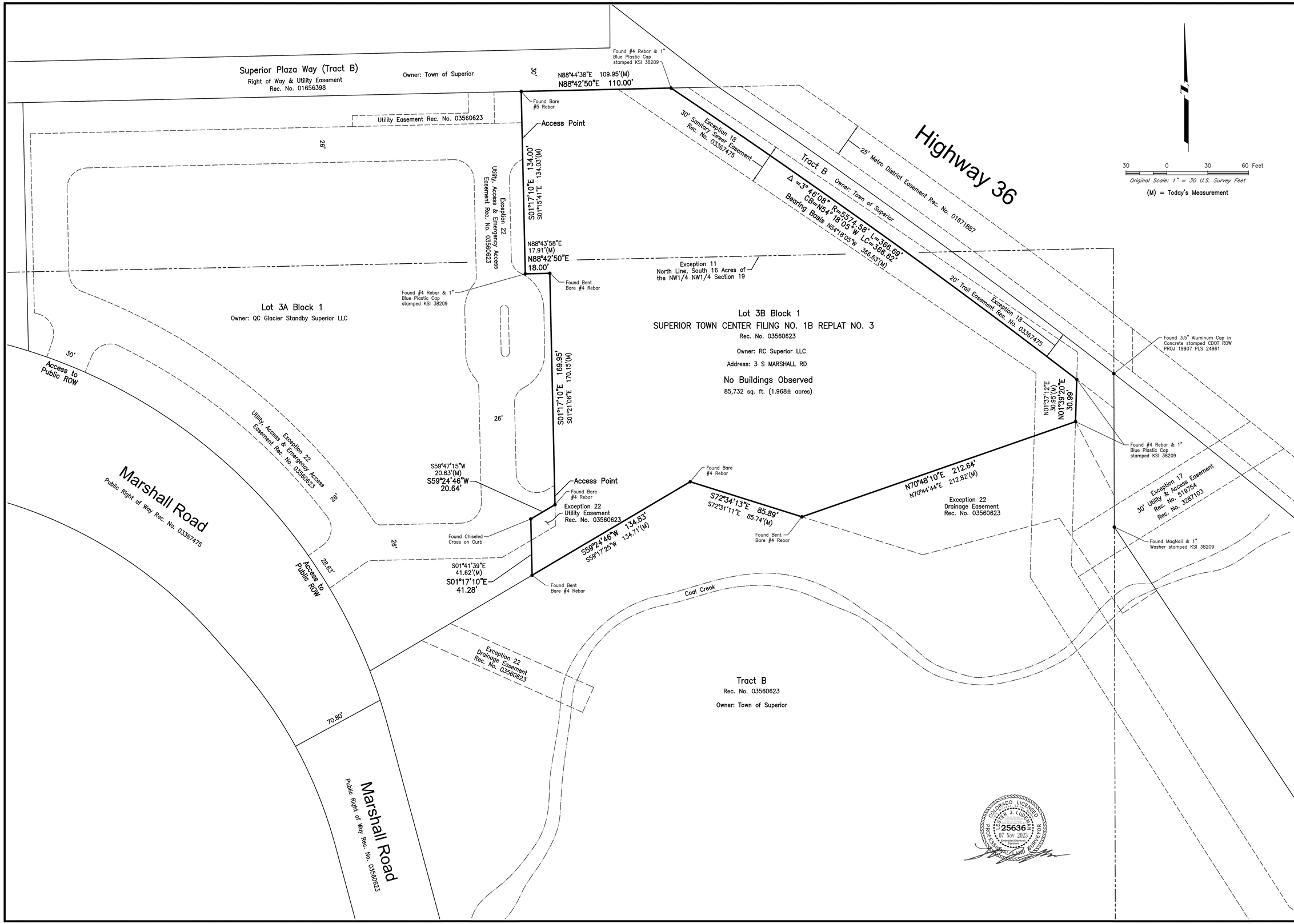
Revisions | By

Horizontal Scale: One Inch = 5000'
Contour Interval: N/A
Surveyed By: KAP
Calculated: LJL
Drawn: LJL
An electronic seal is embedded in the cover page and applies to all attached pages bearing the Foresight West logo

ALTA/NSPS LAND TITLE SURVEY

PART OF THE NORTHWEST QUARTER OF SECTION 19,
TOWNSHIP 1 SOUTH, RANGE 69 WEST OF THE 6th P.M.,
TOWN OF SUPERIOR, BOULDER COUNTY, COLORADO

FWS FORESIGHT WEST SURVEYING INC.
1309 S. Inca Street, Denver, CO 80223 303–504–4440 ForesightWest.com
Boundary Control Construction Oil and Mineral Global Positioning



Sheet 2 of 3

Project No. 2023141

Project Description
Lot 3B Superior Town Center 1B

Revisions

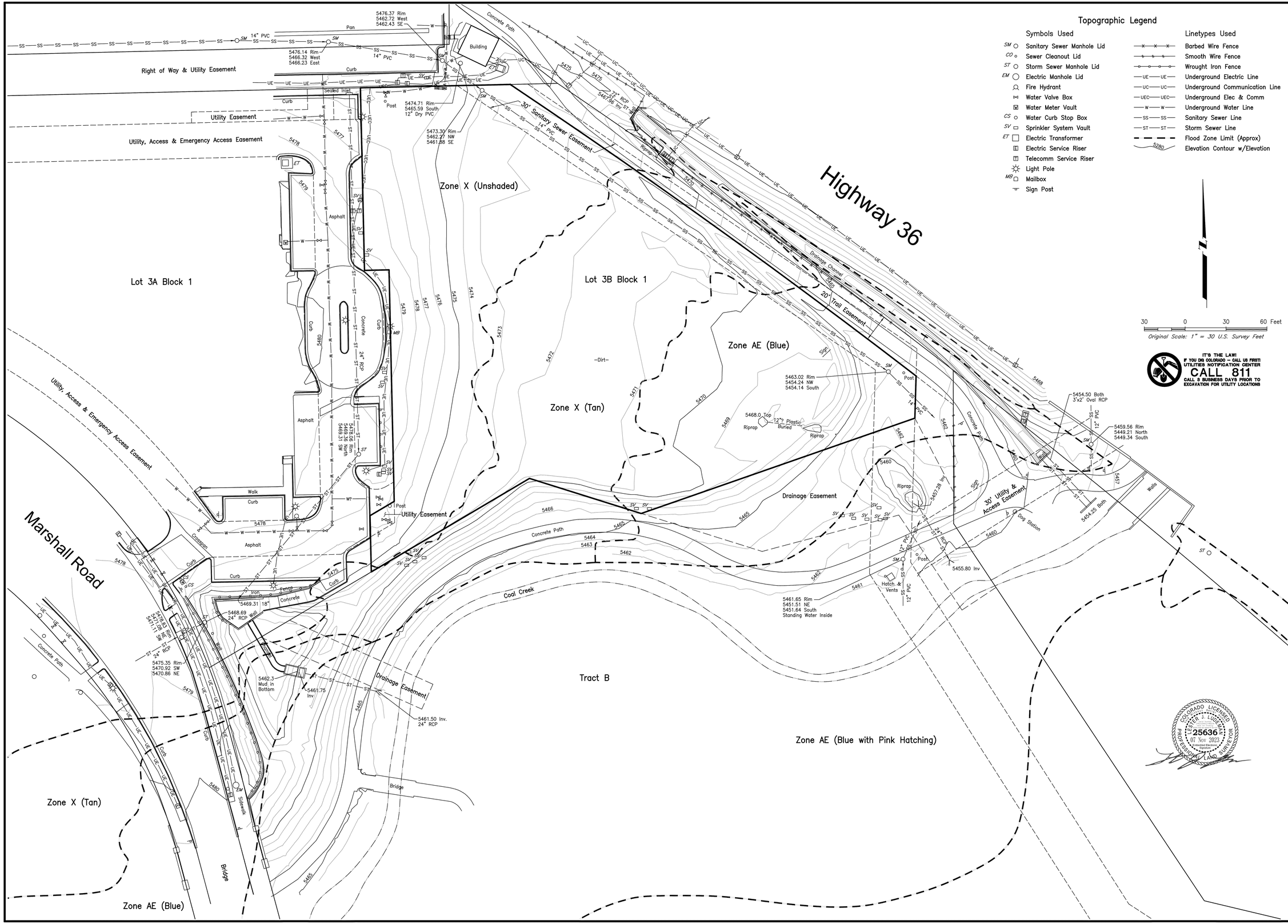
By

Horizontal Scale: One Inch = 30'
Contour Interval: N/A
Surveyed By: KAP
Calculated: LJL
Drawn: LJL
An electronic seal is embedded in the cover page and applies to all attached pages bearing the Foresight West logo

ALTA/NSPS LAND TITLE SURVEY

PART OF THE NORTHWEST QUARTER OF SECTION 19,
TOWNSHIP 1 SOUTH, RANGE 69 WEST OF THE 6th P.M.,
TOWN OF SUPERIOR, BOULDER COUNTY, COLORADO

FWS FORESIGHT WEST SURVEYING INC.
1309 S. Inca Street, Denver, CO 80223 303-504-4440 ForesightWest.com
Boundary Control Construction Oil and Mineral Global Positioning



Sheet 3 of 3

Project No. 2023141

Project Description
Lot 3B Superior Town Center 1B

By	Revisions

Horizontal Scale: One Inch = 30'
Contour Interval: 1 Foot
Surveyed By: KAP
Calculated: LJL
Drawn: LJL
An electronic seal is embedded in the cover page and applies to all attached pages bearing the Foresight West logo

ALTA/NSPS LAND TITLE SURVEY

PART OF THE NORTHWEST QUARTER OF SECTION 19,
TOWNSHIP 1 SOUTH, RANGE 69 WEST OF THE 6th P.M.,
TOWN OF SUPERIOR, BOULDER COUNTY, COLORADO

COLORADO LICENSED PROFESSIONAL LAND SURVEYOR
LESTER J. LUDEMAN
25636
07 Nov 2023
Embedded Electronic Signature

FWS FORESIGHT WEST SURVEYING INC.
1309 S. Inca Street, Denver, CO 80223 303-504-4440 ForesightWest.com
Boundary Control Construction Oil and Mineral Global Positioning

Appendix B – Hydrologic Computations

Runoff Coefficients

Corridor / Design Package: KT Dev - Hotels
System Name: Historic Condition

Computed: AMG Date: 3/29/2024
Checked: KMH Date: 3/29/2024

Sub-Basin Data			Composite C			Sub Area (Pavement)				Sub Area (Roof)				Sub Area(Lawns C Group soils)			
Basin ID	Description	Total Area (ac)	C_5	C_{100}	i	C_5	C_{100}	i	Area (ac)	C_5	C_{100}	i	Area (ac)	C_5	C_{100}	i	Area (ac)
H1	SITE TO COAL CREEK	1.97	0.16	0.20	2.0	0.88	0.93	100	0.000	0.85	0.90	90	0.000	0.16	0.20	2	1.970
Improvements Composite		1.97	0.16	0.20	2.0	0.88	0.93	100	0.000	0.85	0.90	90	0.000	0.16	0.20	2	1.970
COMPOSITE ZONE LOT =		1.97	0.16	0.20	2.0												

Runoff Coefficients

Corridor / Design Package: KT Dev - Hotels
System Name: Developed Condition

Computed: AMG Date: 3/29/2024
Checked: KMH Date: 3/29/2024

Sub-Basin Data			Composite C			Sub Area (Pavement)				Sub Area (Roof)				Sub Area(Lawns C Group soils)			
Basin ID	Description	Total Area (ac)	C_5	C_{100}	i	C_5	C_{100}	i	Area (ac)	C_5	C_{100}	i	Area (ac)	C_5	C_{100}	i	Area (ac)
A1	Everhome Suites Hotel	0.34	0.85	0.90	90.0	0.88	0.93	100	0.000	0.85	0.90	90	0.340	0.16	0.20	2	0.000
A2	NW Landscape Area	0.06	0.25	0.29	14.6	0.88	0.93	100	0.008	0.85	0.90	90	0.000	0.16	0.20	2	0.056
A2.1	NW Landscape Area	0.03	0.35	0.39	28.0	0.88	0.93	100	0.007	0.85	0.90	90	0.000	0.16	0.20	2	0.019
A3	SW Ramp Area	0.04	0.66	0.71	70.2	0.88	0.93	100	0.030	0.85	0.90	90	0.000	0.16	0.20	2	0.013
A4	SW Parking and Drive Aisle	0.10	0.79	0.84	87.6	0.88	0.93	100	0.083	0.85	0.90	90	0.000	0.16	0.20	2	0.012
A5	Parking Lot and SW Drive Aisle	0.13	0.82	0.86	91.2	0.88	0.93	100	0.122	0.85	0.90	90	0.000	0.16	0.20	2	0.012
A6	Parking Lot	0.97	0.85	0.90	96.3	0.88	0.93	100	0.933	0.85	0.90	90	0.000	0.16	0.20	2	0.037
BY-E	Towards Trail and Coal Creek	0.30	0.16	0.20	2.0	0.88	0.93	100	0.000	0.85	0.90	90	0.000	0.16	0.20	2	0.297
Improvements Composite		1.97	0.71	0.76	76.1	0.88	0.93	100	1.184	0.85	0.90	90	0.340	0.16	0.20	2	0.446
COMPOSITE ZONE LOT =		1.97	0.71	0.76	76.1												

Standard Form SF-1 . Time of Concentration

Corridor / Design Package: KT Dev - Hotels
System Name: Developed Condition

Computed: AMG Date: 3/29/2024
Checked: KMH Date: 3/29/2024

SUB-BASIN DATA				INITIAL/OVERLAND FLOW (t_i)			TRAVEL TIME (t_t) Type of Land Surface							Total	Tc CHECK (Urbanized basins)				FINAL Tc (min)
Basin ID	Description	C_5	Area (ac)	Length (ft)	Slope (ft/ft)	t_i (min)	Length (ft)	Slope (ft/ft)	Code	Description	Convey Coef (C_v)	V	t_t (min)	$t_c = t_i + t_t$ (min)	Urban (Yes /No)	Length (ft)	$T_{c\,max}$ (min)	$Tc_{max} > t_c$	
A1	Everhome Suites Hotel	0.85	0.34	100	0.02	3.6	0.0	0.02	6	Paved areas and shallow paved swales	20	2.828	0.00	3.59	Yes	100	0.56	Regional Tc	5.00
A2	NW Landscape Area	0.25	0.06	90	0.02	11.5	0.0	0.02	6	Paved areas and shallow paved swales	20	2.828	0.00	11.55	Yes	90	0.50	Regional Tc	11.55
A2.1	NW Landscape Area	0.35	0.03	90	0.02	10.2	0.0	0.02	6	Paved areas and shallow paved swales	20	2.828	0.00	10.20	Yes	90	0.50	Regional Tc	10.20
A3	SW Ramp Area	0.66	0.04	75	0.02	5.5	0.0	0.01	6	Paved areas and shallow paved swales	20	2	0.00	5.46	Yes	75	0.42	Regional Tc	5.46
A4	SW Parking and Drive Aisle	0.79	0.10	54	0.03	2.9	15.0	0.02	6	Paved areas and shallow paved swales	20	2.828	0.09	2.96	Yes	69	0.38	Regional Tc	5.00
A5	Parking Lot and SW Drive Aisle	0.82	0.13	192	0.03	5.0	0.0	0.01	6	Paved areas and shallow paved swales	20	2	0.00	4.95	Yes	192	1.07	Regional Tc	5.00
A6	Parking Lot	0.85	0.97	244	0.03	4.9	72.0	0.01	6	Paved areas and shallow paved swales	20	2	0.60	5.45	Yes	316	1.76	Regional Tc	5.45
BY-E	Towards Trail and Coal Creek	0.16	0.30	40	0.25	3.7	0.0	0.02	6	Paved areas and shallow paved swales	20	2.828	0.00	3.71	Yes	40	0.22	Regional Tc	5.00

Standard Form SF-2 . Storm Drainage System Design (Rational Method Procedure)

Corridor / Design Package: KT Dev - Hotels
System Name: Developed Condition

Computed: AMG Date: 3/29/2024
Checked: KMH Date: 3/29/2024

Design Storm: Proposed 5-yr P = 1.34 in

LOCATION		DESIGN POINT	DIRECT RUNOFF							TOTAL RUNOFF				STREET		PIPE			TRAVEL TIME			REMARKS
			AREA DESIGN	AREA (AC)	RUNOFF COEFF	t_c (MIN)	C.A. (AC)	IIN / HR	Q (CFS)	t_c (MIN)	SUM (C*A)(AC)	I(IN / HR)	Q(CFS)	SLOPE(%)	STREETFLOW (I	DESIGNFLOW (C	SLOPE(%)	PIPE SIZE(in)	LENGTH(FT)	VELOCITY(FPS)	t_t (MIN	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
A2	NW Landscape Area		A2	0.06	0.25	11.55	0.016	3.42	0.06					--	--	--	--	--	--	--		
A2.1	NW Landscape Area		A2.1	0.03	0.35	10.20	0.009	3.60	0.03					--	--	--	--	--	--	--		
	A2 and A2.1	1								11.55	0.025	3.42	0.09									
A1	Everhome Suites Hotel		A1	0.34	0.85	5.00	0.289	4.55	1.31					--	--	--	--	--	--	--		
		2								11.55	0.314	3.42	1.07									
A3	SW Ramp Area		A3	0.04	0.66	5.46	0.028	4.44	0.13					--	--	--	--	--	--	--		
A4	SW Parking and Drive Aisle		A4	0.10	0.79	5.00	0.075	4.55	0.34					--	--	--	--	--	--	--		
		3								5.46	0.104	4.44	0.46									
A5	Parking Lot and SW Drive Aisle		A5	0.13	0.82	5.00	0.109	4.55	0.50					--	--	--	--	--	--	--		
		4								11.55	0.527	3.42	1.80									
A6	Parking Lot		A6	0.97	0.85	5.45	0.827	4.44	3.67					--	--	--	--	--	--	--		
		5								11.55	1.354	3.42	4.63									
BY-E	Towards Trail and Coal Creek		BY-E	0.30	0.16	5.00	0.048	4.55	0.22													
	BASIN TOTAL								6.26													

Design Storm: Proposed 100-yr P = 2.57 in

LOCATION		DESIGN POINT	DIRECT RUNOFF							TOTAL RUNOFF				STREET		PIPE			TRAVEL TIME			REMARKS
			AREA DESIGN	AREA (AC)	RUNOFF COEFF	t_c (MIN)	C.A. (AC)	IIN / HR	Q (CFS)	t_c (MIN)	SUM (C*A)(AC)	I(IN / HR)	Q(CFS)	SLOPE(%)	STREETFLOW (C	DESIGNFLOW (C	SLOPE(%)	PIPE SIZE(in)	LENGTH(FT)	VELOCITY(FPS)	t_t (MIN	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
A2	NW Landscape Area		A2	0.06	0.29	11.55	0.02	6.56	0.12					--	--	--	--	--	--	--		
A2.1	NW Landscape Area		A2.1	0.03	0.39	10.20	0.01	6.90	0.07					--	--	--	--	--	--	--		
		1								11.55	0.029	3.42	0.10									
A1	Everhome Suites Hotel		A1	0.34	0.90	5.00	0.31	8.72	2.67					--	--	--	--	--	--	--		
		2								11.55	0.335	3.42	1.14									
A3	SW Ramp Area		A3	0.04	0.71	5.46	0.03	8.51	0.26					--	--	--	--	--	--	--		
A4	SW Parking and Drive Aisle		A4	0.10	0.84	5.00	0.08	8.72	0.70					--	--	--	--	--	--	--		
		3								5.46	0.110	4.44	0.49									
A5	Parking Lot and SW Drive Aisle		A5	0.13	0.86	5.00	0.12	8.72	1.01					--	--	--	--	--	--	--		
		4								11.55	0.561	3.42	1.92									
A6	Parking Lot		A6	0.97	0.90	5.45	0.88	8.51	7.45					--	--	--	--	--	--	--		
		5								11.55	1.437	3.42	4.91									
BY-E	Towards Trail and Coal Creek		BY-E	0.30	0.20	5.00	0.06	8.72	0.52					--	--	--	--	--	--	--		
	BASIN TOTAL								12.80													

(1) Basin Description linked to C-Value Sheet
(2) Basin Design Point
(3) Enter the Basin Name from C Value Sheet
(4) Basin Area linked to C-Value Sheet
(5) Composite C linked to C-Value Sheet
(6) Time of Concentration linked to C-Value Sheet
(7) =Column 4 x Column 5
(8) =28.5*P/(10+Column 6)^0.786
(9) =Column 7 x Column 8
(10) =Column 6 + Column 21
(11) Add the Basin Areas (7) to get the combined basin AC
(12) =28.5*P/(10+Column 10)^0.786
(13) Sum of Qs
(14) Additonal Street Overland Flow
(15) Additonal Street Overland Flow
(16) Design Pipe Flow
(17) Pipe Slope
(18) Pipe Size
(19) Additional Flow Length
(20) Velocity
(21) =Column 19 / Column 20 / 60

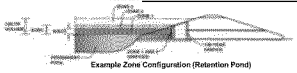
Appendix C – Hydraulic Computations

DETENTION BASIN STAGE-STORAGE TABLE BUILDER

MHFD-Detention, Version 4.06 (July 2022)

Project: Everhome Suites - Superior

Basin ID:



Example Zone Configuration (Retention Pond)

Watershed Information

Selected BMP Type =	EDB	
Watershed Area =	1.97	acres
Watershed Length =	402	ft
Watershed Length to Centroid =	201	ft
Watershed Slope =	0.050	ft/ft
Watershed Imperviousness =	76.10%	percent
Percentage Hydrologic Soil Group A =	18.9%	percent
Percentage Hydrologic Soil Group B =	81.1%	percent
Percentage Hydrologic Soil Groups C/D =	0.0%	percent
Target WQCV Drain Time =	40.0	hours
Location for 1-hr Rainfall Depths =	Superior - Town Hall	

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

			Optional User Overrides
Water Quality Capture Volume (WQCV) =	0.050	acre-feet	acre-feet
Excess Urban Runoff Volume (EURV) =	0.171	acre-feet	acre-feet
2-yr Runoff Volume (P1 = 0.8 in.) =	0.084	acre-feet	inches
5-yr Runoff Volume (P1 = 1.08 in.) =	0.120	acre-feet	inches
10-yr Runoff Volume (P1 = 1.34 in.) =	0.155	acre-feet	inches
25-yr Runoff Volume (P1 = 1.75 in.) =	0.222	acre-feet	inches
50-yr Runoff Volume (P1 = 2.1 in.) =	0.276	acre-feet	inches
100-yr Runoff Volume (P1 = 2.49 in.) =	0.341	acre-feet	inches
500-yr Runoff Volume (P1 = 3.53 in.) =	0.507	acre-feet	inches
Approximate 2-yr Detention Volume =	0.087	acre-feet	
Approximate 5-yr Detention Volume =	0.124	acre-feet	
Approximate 10-yr Detention Volume =	0.163	acre-feet	
Approximate 25-yr Detention Volume =	0.203	acre-feet	
Approximate 50-yr Detention Volume =	0.228	acre-feet	
Approximate 100-yr Detention Volume =	0.257	acre-feet	

Define Zones and Basin Geometry

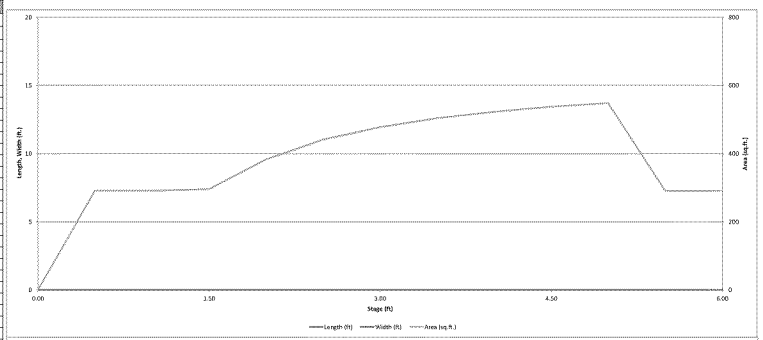
Zone 1 Volume (WQCV) =	0.050	acre-feet
Select Zone 2 Storage Volume (Optional) =		acre-feet
Select Zone 3 Storage Volume (Optional) =		acre-feet
Total Detention Basin Volume =	0.050	acre-feet
Initial Surcharge Volume (ISV) =	user	ft^3
Initial Surcharge Depth (ISD) =	user	ft
Total Available Detention Depth (H_{total}) =	user	ft
Depth of Trickle Channel (H_{TC}) =	user	ft
Slope of Trickle Channel (S_{TC}) =	user	ft/ft
Slopes of Main Basin Sides (S_{main}) =	user	H:V
Basin Length-to-Width Ratio ($R_{L/W}$) =	user	

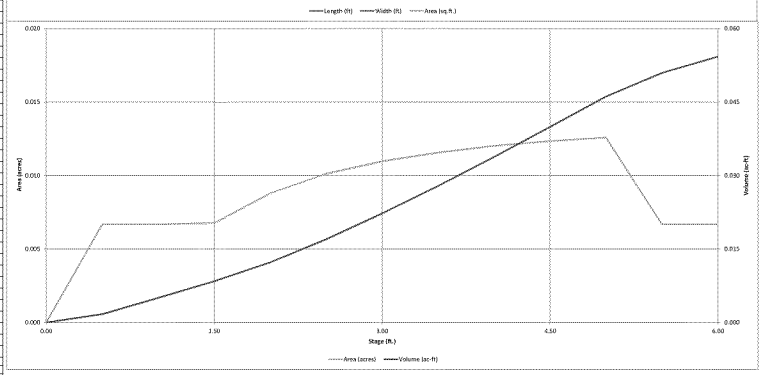
Total detention volume is less than 100-year volume.

Initial Surcharge Area (A_{ISV}) =	user	ft^2
Surcharge Volume Length (L_{ISV}) =	user	ft
Surcharge Volume Width (W_{ISV}) =	user	ft
Depth of Basin Floor (H_{FLOOR}) =	user	ft
Length of Basin Floor (L_{FLOOR}) =	user	ft
Width of Basin Floor (W_{FLOOR}) =	user	ft
Area of Basin Floor (A_{FLOOR}) =	user	ft^2
Volume of Basin Floor (V_{FLOOR}) =	user	ft^3
Depth of Main Basin (H_{MAIN}) =	user	ft
Length of Main Basin (L_{MAIN}) =	user	ft
Width of Main Basin (W_{MAIN}) =	user	ft
Area of Main Basin (A_{MAIN}) =	user	ft^2
Volume of Main Basin (V_{MAIN}) =	user	ft^3
Calculated Total Basin Volume (V_{total}) =	user	acre-feet

Depth Increment = 0.50 ft

Stage - Storage Description	Stage (ft)	Optional Override Stage (ft)	Length (ft)	Width (ft)	Area (ft^2)	Optional Override Area (ft^2)	Area (acre)	Volume (ft^3)	Volume (ac-ft)
Top of Micropool	--	0.00	--	--	--	0	0.000		
5462.50	--	0.50	--	--	--	291	0.007	73	0.002
5463.00	--	1.00	--	--	--	291	0.007	218	0.005
5463.50	--	1.50	--	--	--	295	0.007	365	0.008
5464.00	--	2.00	--	--	--	382	0.009	534	0.012
5464.50	--	2.50	--	--	--	441	0.010	740	0.017
5465.00	--	3.00	--	--	--	477	0.011	969	0.022
5465.50	--	3.50	--	--	--	503	0.012	1,214	0.028
5466.00	--	4.00	--	--	--	523	0.012	1,471	0.034
WQ Elevation	--	4.50	--	--	--	537	0.012	1,736	0.040
5467.00	--	5.00	--	--	--	548	0.013	2,007	0.046
5467.50	--	5.50	--	--	--	291	0.007	2,217	0.051
5468.00	--	6.00	--	--	--	291	0.007	2,362	0.054



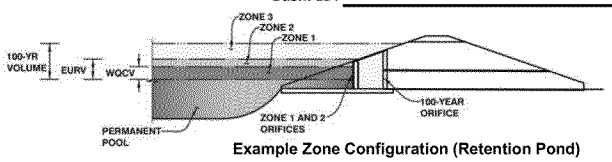


DETENTION BASIN OUTLET STRUCTURE DESIGN

MHFD-Detention, Version 4.06 (July 2022)

Project: **Everhome Suites - Superior**

Basin ID:



Example Zone Configuration (Retention Pond)

	Estimated Stage (ft)	Estimated Volume (ac-ft)	Outlet Type
Zone 1 (WQCV)	5.40	0.050	Orifice Plate
Zone 2			
Zone 3			
Total (all zones)		0.050	

User Input: Orifice at Underdrain Outlet (typically used to drain WQCV in a Filtration BMP)

Underdrain Orifice Invert Depth = ft (distance below the filtration media surface)

Underdrain Orifice Diameter = inches

Calculated Parameters for Underdrain

Underdrain Orifice Area = ft^2

Underdrain Orifice Centroid = feet

User Input: Orifice Plate with one or more orifices or Elliptical Slot Weir (typically used to drain WQCV and/or EURV in a sedimentation BMP)

Centroid of Lowest Orifice = 0.00 ft (relative to basin bottom at Stage = 0 ft)

Depth at top of Zone using Orifice Plate = 5.81 ft (relative to basin bottom at Stage = 0 ft)

Orifice Plate: Orifice Vertical Spacing = 4.00 inches

Orifice Plate: Orifice Area per Row = 0.20 sq. inches (diameter = 1/2 inch)

Calculated Parameters for Plate

WQ Orifice Area per Row = 1.389E-03 ft^2

Elliptical Half-Width = N/A feet

Elliptical Slot Centroid = N/A feet

Elliptical Slot Area = N/A ft^2

User Input: Stage and Total Area of Each Orifice Row (numbered from lowest to highest)

	Row 1 (required)	Row 2 (optional)	Row 3 (optional)	Row 4 (optional)	Row 5 (optional)	Row 6 (optional)	Row 7 (optional)	Row 8 (optional)
Stage of Orifice Centroid (ft)	0.00	0.30	0.60	0.90	1.20	1.50	1.80	2.10
Orifice Area (sq. inches)	0.20	0.20	0.20					

	Row 9 (optional)	Row 10 (optional)	Row 11 (optional)	Row 12 (optional)	Row 13 (optional)	Row 14 (optional)	Row 15 (optional)	Row 16 (optional)
Stage of Orifice Centroid (ft)	2.40	2.70	3.00	3.30	3.60	3.90	4.20	4.50
Orifice Area (sq. inches)								

User Input: Vertical Orifice (Circular or Rectangular)

	Not Selected	Not Selected	
Invert of Vertical Orifice =			ft (relative to basin bottom at Stage = 0 ft)
Depth at top of Zone using Vertical Orifice =			ft (relative to basin bottom at Stage = 0 ft)
Vertical Orifice Diameter =			inches

Calculated Parameters for Vertical Orifice

	Not Selected	Not Selected	
Vertical Orifice Area =			ft^2
Vertical Orifice Centroid =			feet

User Input: Overflow Weir (Dropbox with Flat or Sloped Grate and Outlet Pipe OR Rectangular/Trapezoidal Weir and No Outlet Pipe)

	Not Selected	Not Selected	
Overflow Weir Front Edge Height, Ho =			ft (relative to basin bottom at Stage = 0 ft)
Overflow Weir Front Edge Length =			feet
Overflow Weir Grate Slope =			H:V
Horiz. Length of Weir Sides =			feet
Overflow Grate Type =			
Debris Clogging % =			%

Calculated Parameters for Overflow Weir

	Not Selected	Not Selected	
Height of Grate Upper Edge, H_t =			feet
Overflow Weir Slope Length =			feet
Grate Open Area / 100-yr Orifice Area =			
Overflow Grate Open Area w/o Debris =			ft^2
Overflow Grate Open Area w/ Debris =			ft^2

User Input: Outlet Pipe w/ Flow Restriction Plate (Circular Orifice, Restrictor Plate, or Rectangular Orifice)

	Not Selected	Not Selected	
Depth to Invert of Outlet Pipe =			ft (distance below basin bottom at Stage = 0 ft)
Circular Orifice Diameter =			inches

Calculated Parameters for Outlet Pipe w/ Flow Restriction Plate

	Not Selected	Not Selected	
Outlet Orifice Area =			ft^2
Outlet Orifice Centroid =			feet
Half-Central Angle of Restrictor Plate on Pipe =	N/A	N/A	radians

User Input: Emergency Spillway (Rectangular or Trapezoidal)

Spillway Invert Stage= ft (relative to basin bottom at Stage = 0 ft)

Spillway Crest Length = feet

Spillway End Slopes = H:V

Freeboard above Max Water Surface = feet

Calculated Parameters for Spillway

Spillway Design Flow Depth= feet

Stage at Top of Freeboard = feet

Basin Area at Top of Freeboard = acres

Basin Volume at Top of Freeboard = acre-ft

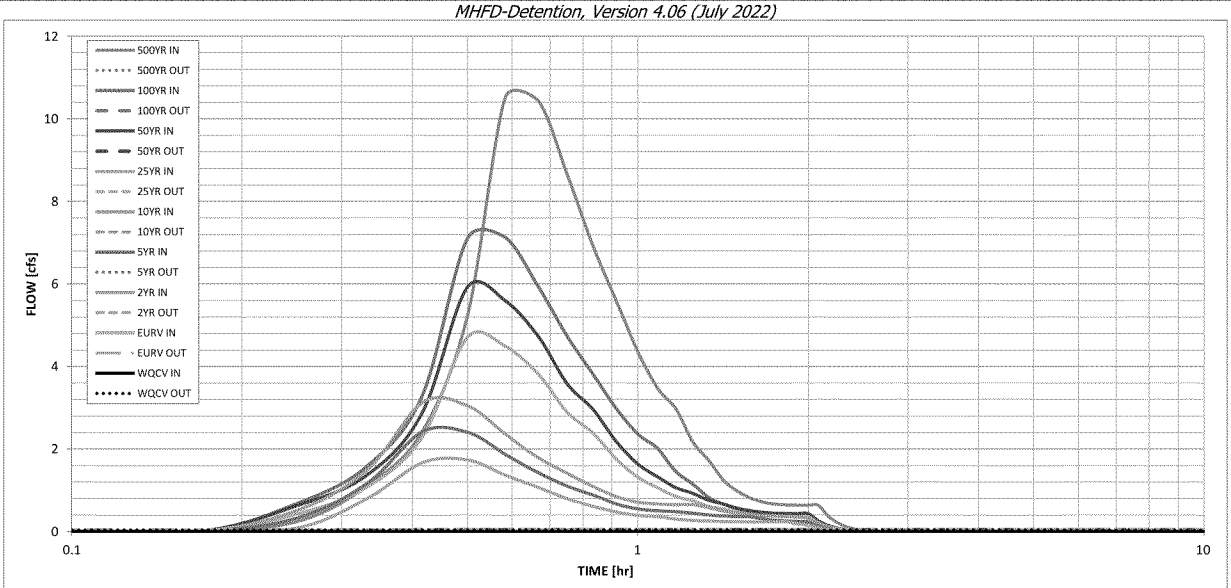
Routed Hydrograph Results

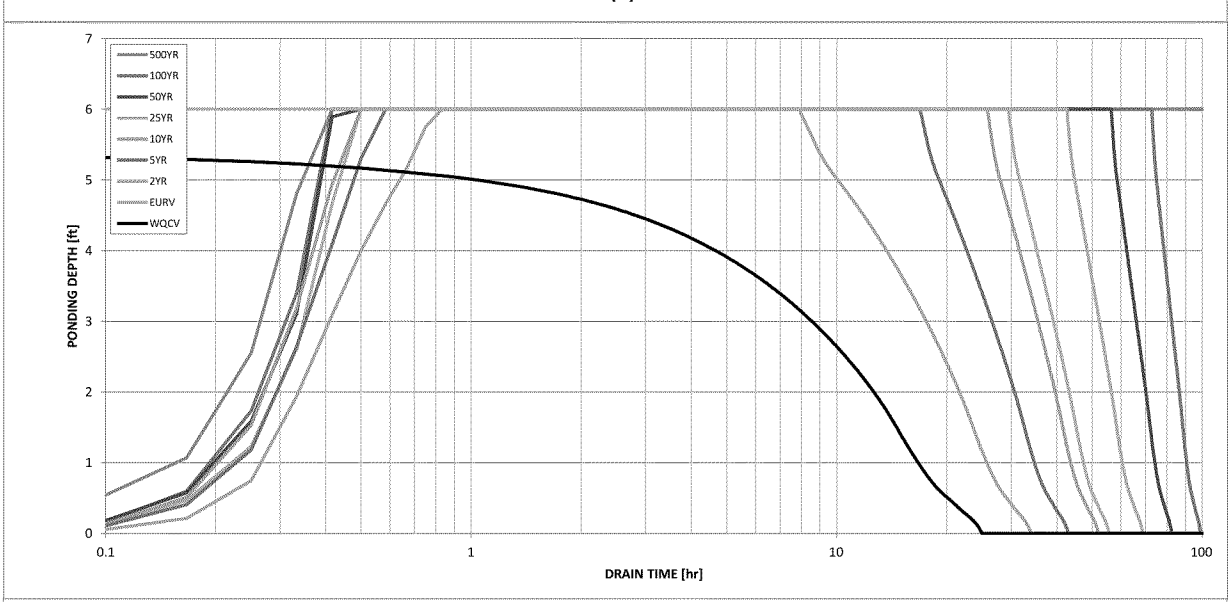
The user can override the default CUHP hydrographs and runoff volumes by entering new values in the Inflow Hydrographs table (Columns W through AF).

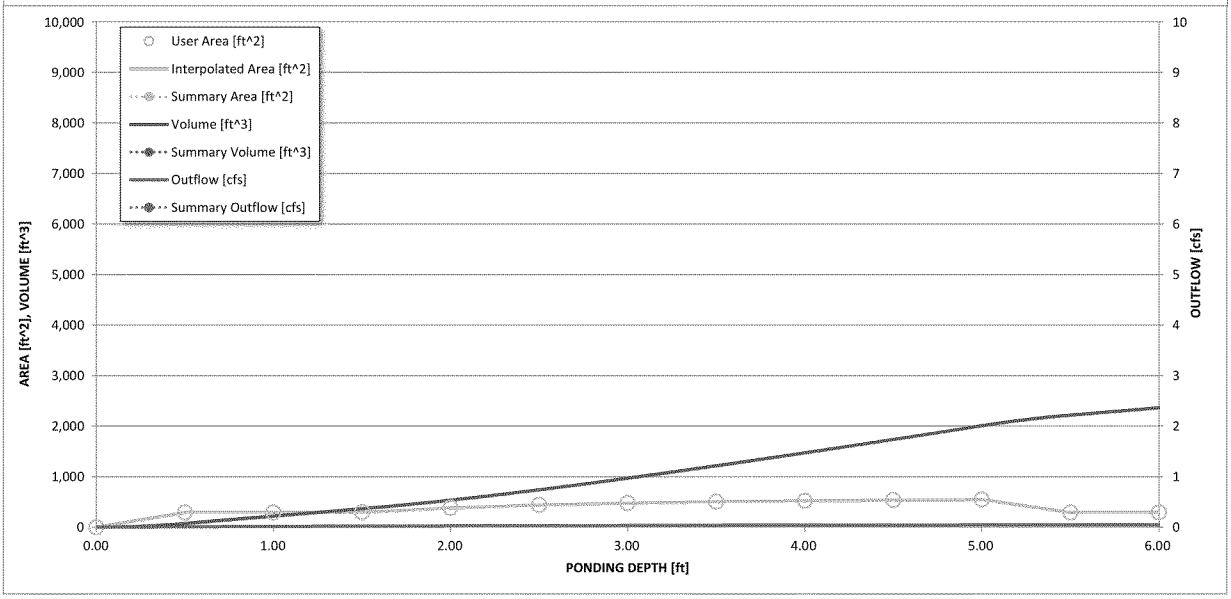
Design Storm Return Period =	WQCV	EURV	2 Year	5 Year	10 Year	25 Year	50 Year	100 Year	500 Year
One-Hour Rainfall Depth (in) =	N/A	N/A	0.80	1.08	1.34	1.75	2.10	2.49	3.53
CUHP Runoff Volume (acre-ft) =	0.050	0.171	0.084	0.120	0.155	0.222	0.276	0.341	0.507
Inflow Hydrograph Volume (acre-ft) =	N/A	N/A	0.084	0.120	0.155	0.222	0.276	0.341	0.507
CUHP Predevelopment Peak Q (cfs) =	N/A	N/A	0.0	0.0	0.2	1.3	2.0	2.9	4.9
OPTIONAL Override Predevelopment Peak Q (cfs) =	N/A	N/A							
Predevelopment Unit Peak Flow, q (cfs/acre) =	N/A	N/A	0.01	0.02	0.11	0.65	1.01	1.45	2.48
Peak Inflow Q (cfs) =	N/A	N/A	1.7	2.4	3.1	4.7	5.9	7.1	10.5
Peak Outflow Q (cfs) =	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ratio Peak Outflow to Predevelopment Q =	N/A	N/A	N/A	1.5	0.2	0.0	0.0	0.0	0.0
Structure Controlling Flow =	Plate	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Max Velocity through Grate 1 (fps) =	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Max Velocity through Grate 2 (fps) =	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Time to Drain 97% of Inflow Volume (hours) =	20	47	28	36	44	59	72	88	>120
Time to Drain 99% of Inflow Volume (hours) =	23	51	31	39	47	63	76	92	>120
Maximum Ponding Depth (ft) =	5.39	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
Area at Maximum Ponding Depth (acres) =	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Maximum Volume Stored (acre-ft) =	0.050	0.054	0.054	0.054	0.054	0.054	0.054	0.054	0.054

DETENTION BASIN OUTLET STRUCTURE DESIGN

MHFD-Detention, Version 4.06 (July 2022)







S-A-V-D Chart Axis Override	X-axis	Left Y-Axis	Right Y-Axis
minimum bound			
maximum bound			

Version 4.05 Released March 2017

INLET MANAGEMENT

Worksheet Protected

INLET NAME	Inlet A4	Inlet A5
Site Type (Urban or Rural)	URBAN	URBAN
Inlet Application (Street or Area)	STREET	STREET
Hydraulic Condition	In Sump	In Sump
Inlet Type	CDOT/Denver 13 Combination	CDOT/Denver 13 Valley Grate

USER-DEFINED INPUT

User-Defined Design Flows

Minor Q_{Known} (cfs)	0.3	0.5
Major Q_{Known} (cfs)	0.7	1.0

Bypass (Carry-Over) Flow from Upstream

Receive Bypass Flow from:	No Bypass Flow Received	No Bypass Flow Received
Minor Bypass Flow Received, Q_b (cfs)	0.0	0.0
Major Bypass Flow Received, Q_b (cfs)	0.0	0.0

Watershed Characteristics

Subcatchment Area (acres)		
Percent Impervious		
NRCS Soil Type		

Watershed Profile

Overland Slope (ft/ft)		
Overland Length (ft)		
Channel Slope (ft/ft)		
Channel Length (ft)		

Minor Storm Rainfall Input

Design Storm Return Period, T_r (years)		
One-Hour Precipitation, P_1 (inches)		

Major Storm Rainfall Input

Design Storm Return Period, T_r (years)		
One-Hour Precipitation, P_1 (inches)		

CALCULATED OUTPUT

Minor Total Design Peak Flow, Q (cfs)	**0.3**	**0.5**
Major Total Design Peak Flow, Q (cfs)	**0.7**	**1.0**
Minor Flow Bypassed Downstream, Q_b (cfs)	N/A	N/A
Major Flow Bypassed Downstream, Q_b (cfs)	N/A	N/A

Minor Storm (Calculated) Analysis of Flow Time

C	N/A	N/A
C_5	N/A	N/A
Overland Flow Velocity, Vi	N/A	N/A
Channel Flow Velocity, Vt	N/A	N/A
Overland Flow Time, Ti	N/A	N/A
Channel Travel Time, Tt	N/A	N/A
Calculated Time of Concentration, T_c	N/A	N/A
Regional T_c	N/A	N/A
Recommended T_c	N/A	N/A
T_c selected by User	N/A	N/A
Design Rainfall Intensity, I	N/A	N/A
Calculated Local Peak Flow, Q_p	N/A	N/A

Major Storm (Calculated) Analysis of Flow Time

C	N/A	N/A
C_5	N/A	N/A
Overland Flow Velocity, Vi	N/A	N/A
Channel Flow Velocity, Vt	N/A	N/A
Overland Flow Time, Ti	N/A	N/A
Channel Travel Time, Tt	N/A	N/A
Calculated Time of Concentration, T_c	N/A	N/A
Regional T_c	N/A	N/A
Recommended T_c	N/A	N/A
T_c selected by User	N/A	N/A
Design Rainfall Intensity, I	N/A	N/A
Calculated Local Peak Flow, Q_p	N/A	N/A

Version 4.05 Released March 2017

INLET MANAGEMENT

Worksheet Protected

INLET NAME	Inlet A6
Site Type (Urban or Rural)	URBAN
Inlet Application (Street or Area)	STREET
Hydraulic Condition	In Sump
Inlet Type	CDOT/Denver 13 Combination

USER-DEFINED INPUT

User-Defined Design Flows

Minor Q_{Known} (cfs)	3.7
Major Q_{Known} (cfs)	7.5

Bypass (Carry-Over) Flow from Upstream

Receive Bypass Flow from:	No Bypass Flow Received
Minor Bypass Flow Received, Q_b (cfs)	0.0
Major Bypass Flow Received, Q_b (cfs)	0.0

Watershed Characteristics

Subcatchment Area (acres)	0.97
Percent Impervious	100
NRCS Soil Type	B

Watershed Profile

Overland Slope (ft/ft)	0.300
Overland Length (ft)	244
Channel Slope (ft/ft)	0.200
Channel Length (ft)	72

Minor Storm Rainfall Input

Design Storm Return Period, T_r (years)	
One-Hour Precipitation, P_1 (inches)	

Major Storm Rainfall Input

Design Storm Return Period, T_r (years)	
One-Hour Precipitation, P_1 (inches)	

CALCULATED OUTPUT

Minor Total Design Peak Flow, Q (cfs)	**3.7**
Major Total Design Peak Flow, Q (cfs)	**7.5**
Minor Flow Bypassed Downstream, Q_b (cfs)	N/A
Major Flow Bypassed Downstream, Q_b (cfs)	N/A

Minor Storm (Calculated) Analysis of Flow Tir

C	N/A
C_5	N/A
Overland Flow Velocity, Vi	N/A
Channel Flow Velocity, Vt	N/A
Overland Flow Time, Ti	N/A
Channel Travel Time, Tt	N/A
Calculated Time of Concentration, T_c	N/A
Regional T_c	N/A
Recommended T_c	N/A
T_c selected by User	N/A
Design Rainfall Intensity, I	N/A
Calculated Local Peak Flow, Q_p	N/A

Major Storm (Calculated) Analysis of Flow Tir

C	N/A
C_5	N/A
Overland Flow Velocity, Vi	N/A
Channel Flow Velocity, Vt	N/A
Overland Flow Time, Ti	N/A
Channel Travel Time, Tt	N/A
Calculated Time of Concentration, T_c	N/A
Regional T_c	N/A
Recommended T_c	N/A
T_c selected by User	N/A
Design Rainfall Intensity, I	N/A
Calculated Local Peak Flow, Q_p	N/A

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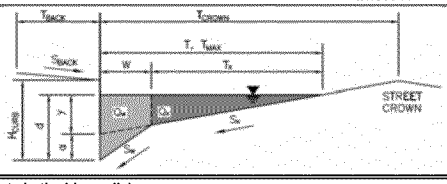
ALLOWABLE CAPACITY FOR ONE-HALF OF STREET (Minor & Major Storm)

(Based on Regulated Criteria for Maximum Allowable Flow Depth and Spread)

Project: Enter Your Project Name Here

Inlet ID: Inlet A4



Gutter Geometry (Enter data in the blue cells)

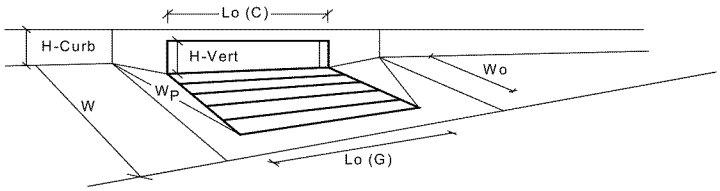
Maximum Allowable Width for Spread Behind Curb	T_{BACK} =	0.5	ft
Side Slope Behind Curb (leave blank for no conveyance credit behind curb)	S_{BACK} =	0.000	ft/ft
Manning's Roughness Behind Curb (typically between 0.012 and 0.020)	n_{BACK} =	0.013	
Height of Curb at Gutter Flow Line	H_{CURB} =	6.00	inches
Distance from Curb Face to Street Crown	T_{CROWN} =	30.0	ft
Gutter Width	W =	2.00	ft
Street Transverse Slope	S_X =	3.000	ft/ft
Gutter Cross Slope (typically 2 inches over 24 inches or 0.083 ft/ft)	S_W =	0.083	ft/ft
Street Longitudinal Slope - Enter 0 for sump condition	S_O =	0.000	ft/ft
Manning's Roughness for Street Section (typically between 0.012 and 0.020)	n_{STREET} =	0.013	

		Minor Storm	Major Storm	
Max. Allowable Spread for Minor & Major Storm	T_{MAX} =	30.0	30.0	ft
Max. Allowable Depth at Gutter Flowline for Minor & Major Storm	d_{MAX} =	6.0	6.0	inches
Check boxes are not applicable in SUMP conditions		☐	☐	

		Minor Storm	Major Storm	
MINOR STORM Allowable Capacity is based on Depth Criterion				
MAJOR STORM Allowable Capacity is based on Depth Criterion	**Q_{allow} =**	**SUMP**	**SUMP**	**cfs**

INLET IN A SUMP OR SAG LOCATION

Version 4.05 Released March 2017



Design Information (Input)	CDOT/Denver 13 Combination		MINOR	MAJOR	
Type of Inlet		Type =	CDOT/Denver 13 Combination		
Local Depression (additional to continuous gutter depression 'a' from above)		a_{local} =	2.00	2.00	inches
Number of Unit Inlets (Grate or Curb Opening)		No =	1	1	
Water Depth at Flowline (outside of local depression)		Ponding Depth =	6.0	6.0	inches
Grate Information			MINOR	MAJOR	☐ Override Depths
Length of a Unit Grate		L_o (G) =	3.00	3.00	feet
Width of a Unit Grate		W_o =	1.73	1.73	feet
Area Opening Ratio for a Grate (typical values 0.15-0.90)		A_{ratio} =	0.43	0.43	
Clogging Factor for a Single Grate (typical value 0.50 - 0.70)		C_f (G) =	0.50	0.50	
Grate Weir Coefficient (typical value 2.15 - 3.60)		C_w (G) =	3.30	3.30	
Grate Orifice Coefficient (typical value 0.60 - 0.80)		C_o (G) =	0.60	0.60	
Curb Opening Information			MINOR	MAJOR	
Length of a Unit Curb Opening		L_o (C) =	3.00	3.00	feet
Height of Vertical Curb Opening in Inches		H_{vert} =	6.50	6.50	inches
Height of Curb Orifice Throat in Inches		H_{throat} =	5.25	5.25	inches
Angle of Throat (see USDCM Figure ST-5)		Theta =	0.00	0.00	degrees
Side Width for Depression Pan (typically the gutter width of 2 feet)		W_p =	2.00	2.00	feet
Clogging Factor for a Single Curb Opening (typical value 0.10)		C_f (C) =	0.10	0.10	
Curb Opening Weir Coefficient (typical value 2.3-3.7)		C_w (C) =	3.70	3.70	
Curb Opening Orifice Coefficient (typical value 0.60 - 0.70)		C_o (C) =	0.66	0.66	
Low Head Performance Reduction (Calculated)			MINOR	MAJOR	
Depth for Grate Midwidth		d_{Grate} =	0.523	0.523	ft
Depth for Curb Opening Weir Equation		d_{Curb} =	0.33	0.33	ft
Combination Inlet Performance Reduction Factor for Long Inlets		$RF_{Combination}$ =	0.94	0.94	
Curb Opening Performance Reduction Factor for Long Inlets		RF_{Curb} =	1.00	1.00	
Grated Inlet Performance Reduction Factor for Long Inlets		RF_{Grate} =	0.94	0.94	
			MINOR	MAJOR	
Total Inlet Interception Capacity (assumes clogged condition)		**Q_a =**	**3.6**	**3.6**	**cfs**
Inlet Capacity IS GOOD for Minor and Major Storms(>Q PEAK)		$Q_{PEAK\ REQUIRED}$ =	0.3	0.7	cfs

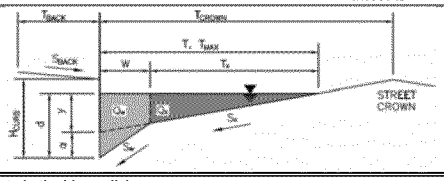
Version 4.05 Released March 2017

ALLOWABLE CAPACITY FOR ONE-HALF OF STREET (Minor & Major Storm)

(Based on Regulated Criteria for Maximum Allowable Flow Depth and Spread)

Project: Enter Your Project Name Here

Inlet ID: Inlet A5



Gutter Geometry (Enter data in the blue cells)

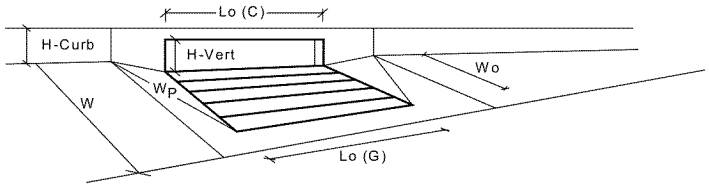
Maximum Allowable Width for Spread Behind Curb	T_{BACK} =	0.5	ft
Side Slope Behind Curb (leave blank for no conveyance credit behind curb)	S_{BACK} =	0.000	ft/ft
Manning's Roughness Behind Curb (typically between 0.012 and 0.020)	n_{BACK} =	0.013	
Height of Curb at Gutter Flow Line	H_{CURB} =	6.00	inches
Distance from Curb Face to Street Crown	T_{CROWN} =	30.0	ft
Gutter Width	W =	2.00	ft
Street Transverse Slope	S_X =	3.000	ft/ft
Gutter Cross Slope (typically 2 inches over 24 inches or 0.083 ft/ft)	S_W =	0.083	ft/ft
Street Longitudinal Slope - Enter 0 for sump condition	S_O =	0.000	ft/ft
Manning's Roughness for Street Section (typically between 0.012 and 0.020)	n_{STREET} =	0.013	

		Minor Storm	Major Storm	
Max. Allowable Spread for Minor & Major Storm	T_{MAX} =	30.0	30.0	ft
Max. Allowable Depth at Gutter Flowline for Minor & Major Storm	d_{MAX} =	6.0	6.0	inches
Check boxes are not applicable in SUMP conditions		☐	☐	

		Minor Storm	Major Storm	
MINOR STORM Allowable Capacity is based on Depth Criterion				
MAJOR STORM Allowable Capacity is based on Depth Criterion	**Q_{allow} =**	**SUMP**	**SUMP**	**cfs**

INLET IN A SUMP OR SAG LOCATION

Version 4.05 Released March 2017



Design Information (Input)		MINOR	MAJOR	
Type of Inlet	Type =	CDOT/Denver 13 Valley Grate		
Local Depression (additional to continuous gutter depression 'a' from above)	a_{local} =	2.00	2.00	inches
Number of Unit Inlets (Grate or Curb Opening)	No =	1	1	
Water Depth at Flowline (outside of local depression)	Ponding Depth =	6.0	6.0	inches
Grate Information		MINOR	MAJOR	☐ Override Depths
Length of a Unit Grate	L_o (G) =	3.00	3.00	feet
Width of a Unit Grate	W_o =	1.73	1.73	feet
Area Opening Ratio for a Grate (typical values 0.15-0.90)	A_{ratio} =	0.43	0.43	
Clogging Factor for a Single Grate (typical value 0.50 - 0.70)	C_f (G) =	0.50	0.50	
Grate Weir Coefficient (typical value 2.15 - 3.60)	C_w (G) =	3.30	3.30	
Grate Orifice Coefficient (typical value 0.60 - 0.80)	C_o (G) =	0.60	0.60	
Curb Opening Information		MINOR	MAJOR	
Length of a Unit Curb Opening	L_o (C) =	N/A	N/A	feet
Height of Vertical Curb Opening in Inches	H_{vert} =	N/A	N/A	inches
Height of Curb Orifice Throat in Inches	H_{throat} =	N/A	N/A	inches
Angle of Throat (see USDCM Figure ST-5)	Theta =	N/A	N/A	degrees
Side Width for Depression Pan (typically the gutter width of 2 feet)	W_p =	N/A	N/A	feet
Clogging Factor for a Single Curb Opening (typical value 0.10)	C_f (C) =	N/A	N/A	
Curb Opening Weir Coefficient (typical value 2.3-3.7)	C_w (C) =	N/A	N/A	
Curb Opening Orifice Coefficient (typical value 0.60 - 0.70)	C_o (C) =	N/A	N/A	
Grate Flow Analysis (Calculated)		MINOR	MAJOR	
Clogging Coefficient for Multiple Units	Coef =	1.00	1.00	
Clogging Factor for Multiple Units	Clog =	0.50	0.50	
Grate Capacity as a Weir (based on Modified HEC22 Method)		MINOR	MAJOR	
Interception without Clogging	Q_{wi} =	5.3	5.3	cfs
Interception with Clogging	Q_{wa} =	2.6	2.6	cfs
Grate Capacity as a Orifice (based on Modified HEC22 Method)		MINOR	MAJOR	
Interception without Clogging	Q_{oi} =	7.8	7.8	cfs
Interception with Clogging	Q_{oa} =	3.9	3.9	cfs
Grate Capacity as Mixed Flow		MINOR	MAJOR	
Interception without Clogging	Q_{mi} =	6.0	6.0	cfs
Interception with Clogging	Q_{ma} =	3.0	3.0	cfs
Resulting Grate Capacity (assumes clogged condition)	**Q_{Grate} =**	**2.6**	**2.6**	**cfs**
Curb Opening Flow Analysis (Calculated)		MINOR	MAJOR	
Clogging Coefficient for Multiple Units	Coef =	N/A	N/A	
Clogging Factor for Multiple Units	Clog =	N/A	N/A	
Curb Opening as a Weir (based on Modified HEC22 Method)		MINOR	MAJOR	
Interception without Clogging	Q_{wi} =	N/A	N/A	cfs
Interception with Clogging	Q_{wa} =	N/A	N/A	cfs
Curb Opening as an Orifice (based on Modified HEC22 Method)		MINOR	MAJOR	
Interception without Clogging	Q_{oi} =	N/A	N/A	cfs
Interception with Clogging	Q_{oa} =	N/A	N/A	cfs
Curb Opening Capacity as Mixed Flow		MINOR	MAJOR	
Interception without Clogging	Q_{mi} =	N/A	N/A	cfs
Interception with Clogging	Q_{ma} =	N/A	N/A	cfs
Resulting Curb Opening Capacity (assumes clogged condition)	**Q_{Curb} =**	**N/A**	**N/A**	**cfs**
Resultant Street Conditions		MINOR	MAJOR	
Total Inlet Length	L =	3.00	3.00	feet
Resultant Street Flow Spread (based on street geometry from above)	T =	2.1	2.1	ft
Resultant Flow Depth at Street Crown	d_{CROWN} =	0.0	0.0	inches
Low Head Performance Reduction (Calculated)		MINOR	MAJOR	
Depth for Grate Midwidth	d_{Grate} =	0.523	0.523	ft
Depth for Curb Opening Weir Equation	d_{Curb} =	N/A	N/A	ft
Combination Inlet Performance Reduction Factor for Long Inlets	$RF_{Combination}$ =	N/A	N/A	
Curb Opening Performance Reduction Factor for Long Inlets	RF_{Curb} =	N/A	N/A	
Grated Inlet Performance Reduction Factor for Long Inlets	RF_{Grate} =	0.94	0.94	
		MINOR	MAJOR	
Total Inlet Interception Capacity (assumes clogged condition)	**Q_a =**	**2.6**	**2.6**	**cfs**
Inlet Capacity IS GOOD for Minor and Major Storms(>Q PEAK)	$Q_{PEAK\ REQUIRED}$ =	0.5	1.0	cfs

Warning 5: The width of unit is greater than the gutter width.

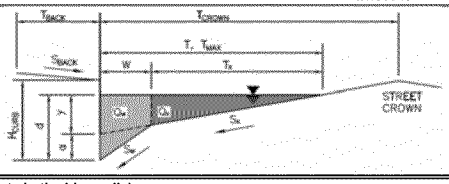
Version 4.05 Released March 2017

ALLOWABLE CAPACITY FOR ONE-HALF OF STREET (Minor & Major Storm)

(Based on Regulated Criteria for Maximum Allowable Flow Depth and Spread)

Project: Enter Your Project Name Here

Inlet ID: Inlet A6



Gutter Geometry (Enter data in the blue cells)

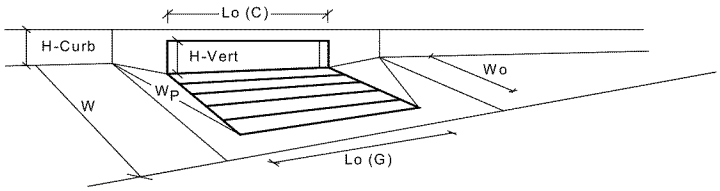
Maximum Allowable Width for Spread Behind Curb	T_{BACK} =	0.5	ft
Side Slope Behind Curb (leave blank for no conveyance credit behind curb)	S_{BACK} =	0.000	ft/ft
Manning's Roughness Behind Curb (typically between 0.012 and 0.020)	n_{BACK} =	0.013	
Height of Curb at Gutter Flow Line	H_{CURB} =	6.00	inches
Distance from Curb Face to Street Crown	T_{CROWN} =	30.0	ft
Gutter Width	W =	2.00	ft
Street Transverse Slope	S_X =	3.000	ft/ft
Gutter Cross Slope (typically 2 inches over 24 inches or 0.083 ft/ft)	S_W =	0.083	ft/ft
Street Longitudinal Slope - Enter 0 for sump condition	S_O =	0.000	ft/ft
Manning's Roughness for Street Section (typically between 0.012 and 0.020)	n_{STREET} =	0.013	

		Minor Storm	Major Storm	
Max. Allowable Spread for Minor & Major Storm	T_{MAX} =	30.0	30.0	ft
Max. Allowable Depth at Gutter Flowline for Minor & Major Storm	d_{MAX} =	6.0	6.0	inches
Check boxes are not applicable in SUMP conditions		☐	☐	

		Minor Storm	Major Storm	
MINOR STORM Allowable Capacity is based on Depth Criterion				
MAJOR STORM Allowable Capacity is based on Depth Criterion	**Q_{allow} =**	**SUMP**	**SUMP**	**cfs**

INLET IN A SUMP OR SAG LOCATION

Version 4.05 Released March 2017



Design Information (Input)	CDOT/Denver 13 Combination		MINOR	MAJOR	
Type of Inlet		Type =	CDOT/Denver 13 Combination		
Local Depression (additional to continuous gutter depression 'a' from above)		a_{local} =	2.00	2.00	inches
Number of Unit Inlets (Grate or Curb Opening)		No =	4	4	
Water Depth at Flowline (outside of local depression)		Ponding Depth =	6.0	6.0	inches
Grate Information			MINOR	MAJOR	Override Depths
Length of a Unit Grate		L_o (G) =	3.00	3.00	feet
Width of a Unit Grate		W_o =	1.73	1.73	feet
Area Opening Ratio for a Grate (typical values 0.15-0.90)		A_{ratio} =	0.43	0.43	
Clogging Factor for a Single Grate (typical value 0.50 - 0.70)		C_f (G) =	0.50	0.50	
Grate Weir Coefficient (typical value 2.15 - 3.60)		C_w (G) =	3.30	3.30	
Grate Orifice Coefficient (typical value 0.60 - 0.80)		C_o (G) =	0.60	0.60	
Curb Opening Information			MINOR	MAJOR	
Length of a Unit Curb Opening		L_o (C) =	3.00	3.00	feet
Height of Vertical Curb Opening in Inches		H_{vert} =	6.50	6.50	inches
Height of Curb Orifice Throat in Inches		H_{throat} =	5.25	5.25	inches
Angle of Throat (see USDCM Figure ST-5)		Theta =	0.00	0.00	degrees
Side Width for Depression Pan (typically the gutter width of 2 feet)		W_p =	2.00	2.00	feet
Clogging Factor for a Single Curb Opening (typical value 0.10)		C_f (C) =	0.10	0.10	
Curb Opening Weir Coefficient (typical value 2.3-3.7)		C_w (C) =	3.70	3.70	
Curb Opening Orifice Coefficient (typical value 0.60 - 0.70)		C_o (C) =	0.66	0.66	
Low Head Performance Reduction (Calculated)			MINOR	MAJOR	
Depth for Grate Midwidth		d_{Grate} =	0.523	0.523	ft
Depth for Curb Opening Weir Equation		d_{Curb} =	0.33	0.33	ft
Combination Inlet Performance Reduction Factor for Long Inlets		$RF_{Combination}$ =	0.57	0.57	
Curb Opening Performance Reduction Factor for Long Inlets		RF_{Curb} =	0.87	0.87	
Grated Inlet Performance Reduction Factor for Long Inlets		RF_{Grate} =	0.57	0.57	
			MINOR	MAJOR	
Total Inlet Interception Capacity (assumes clogged condition)		**Q_a =**	**8.6**	**8.6**	**cfs**
Inlet Capacity IS GOOD for Minor and Major Storms(>Q PEAK)		$Q_{PEAK\ REQUIRED}$ =	3.7	7.5	cfs

Channel Report

Hydraflow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc. Friday, Mar 29 2024

Outfall (18in RCP)

Circular

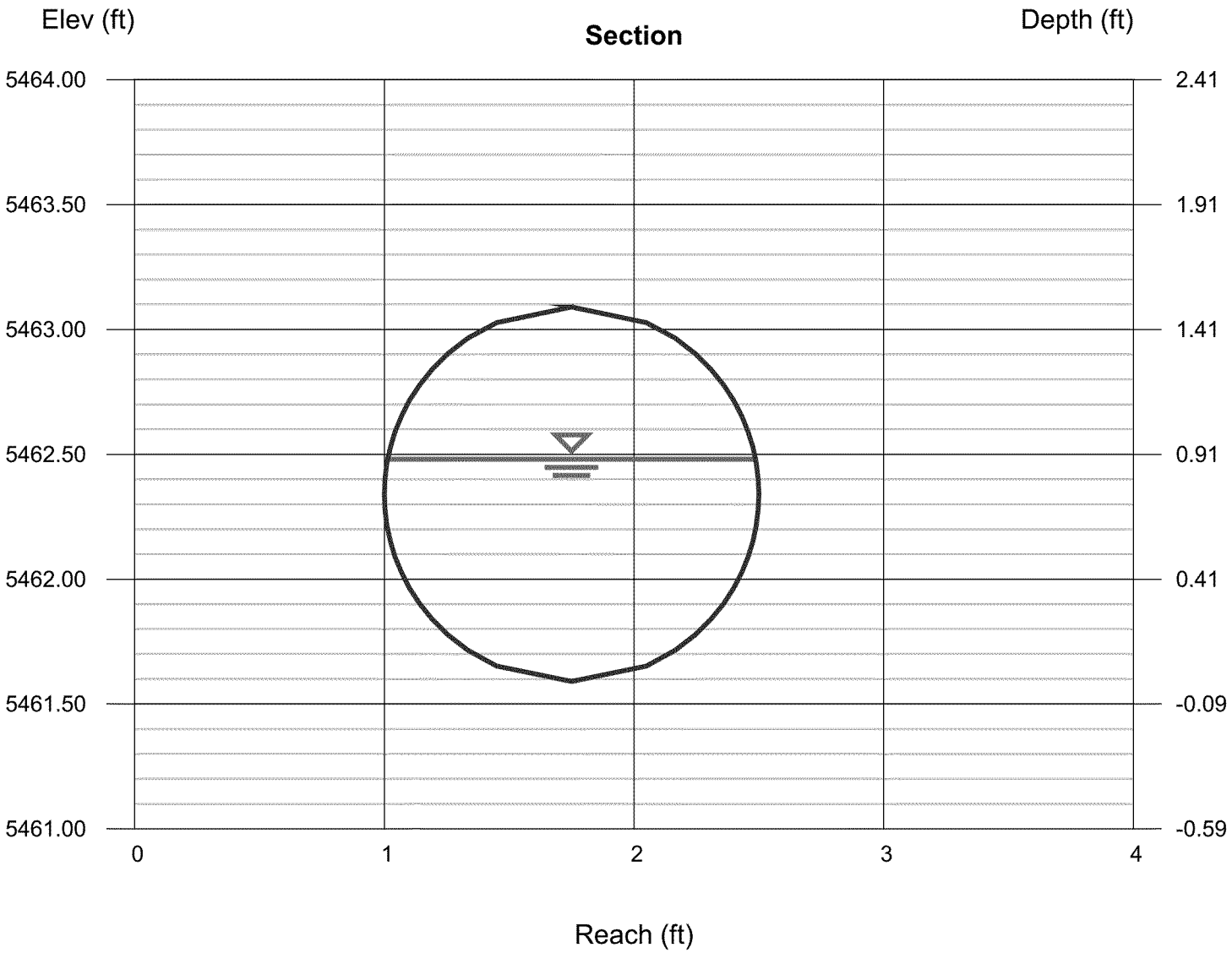
Diameter (ft)	= 1.50
Invert Elev (ft)	= 5461.59
Slope (%)	= 3.40
N-Value	= 0.013

Calculations

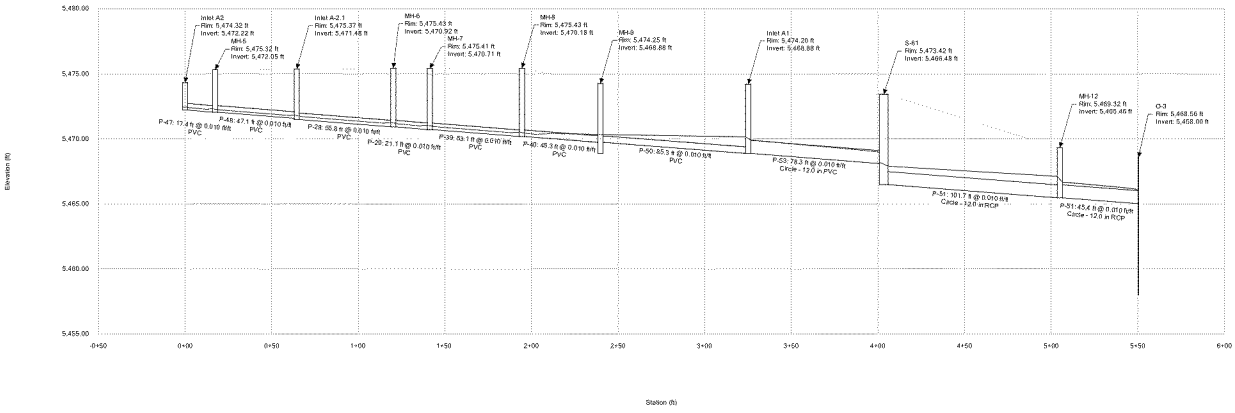
Compute by:	Known Q
Known Q (cfs)	= 12.80

Highlighted

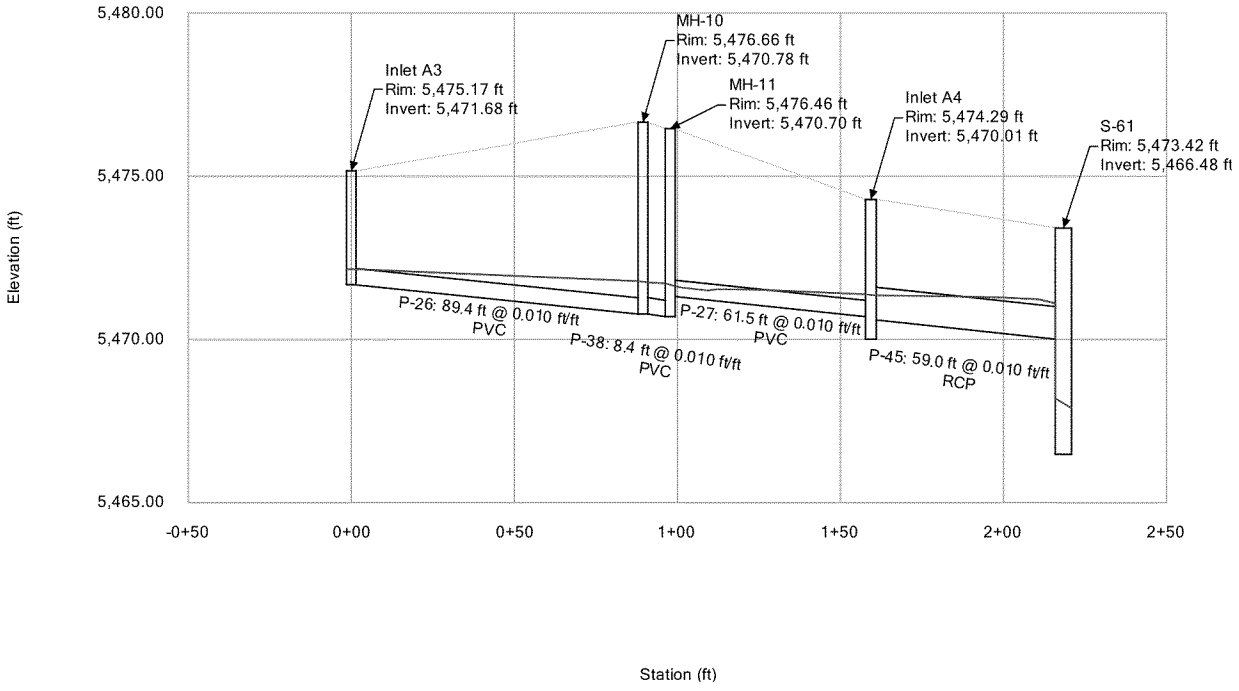
Depth (ft)	= 0.89
Q (cfs)	= 12.80
Area (sqft)	= 1.09
Velocity (ft/s)	= 11.70
Wetted Perim (ft)	= 2.64
Crit Depth, Yc (ft)	= 1.35
Top Width (ft)	= 1.47
EGL (ft)	= 3.02



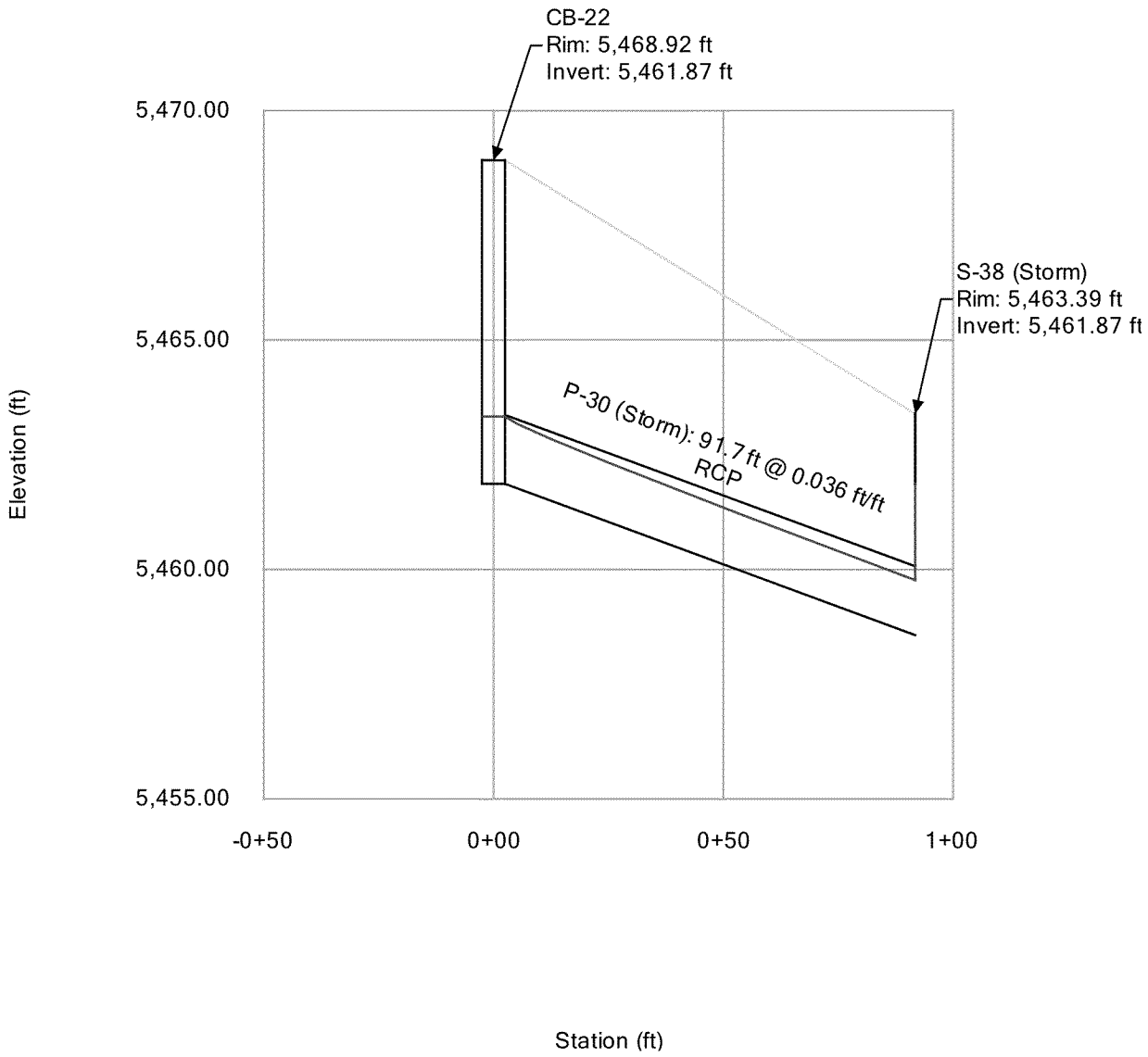
Profile Report
Engineering Profile - Inlet A2 to ADS (Storm Pipe Calcs REV.stsw)

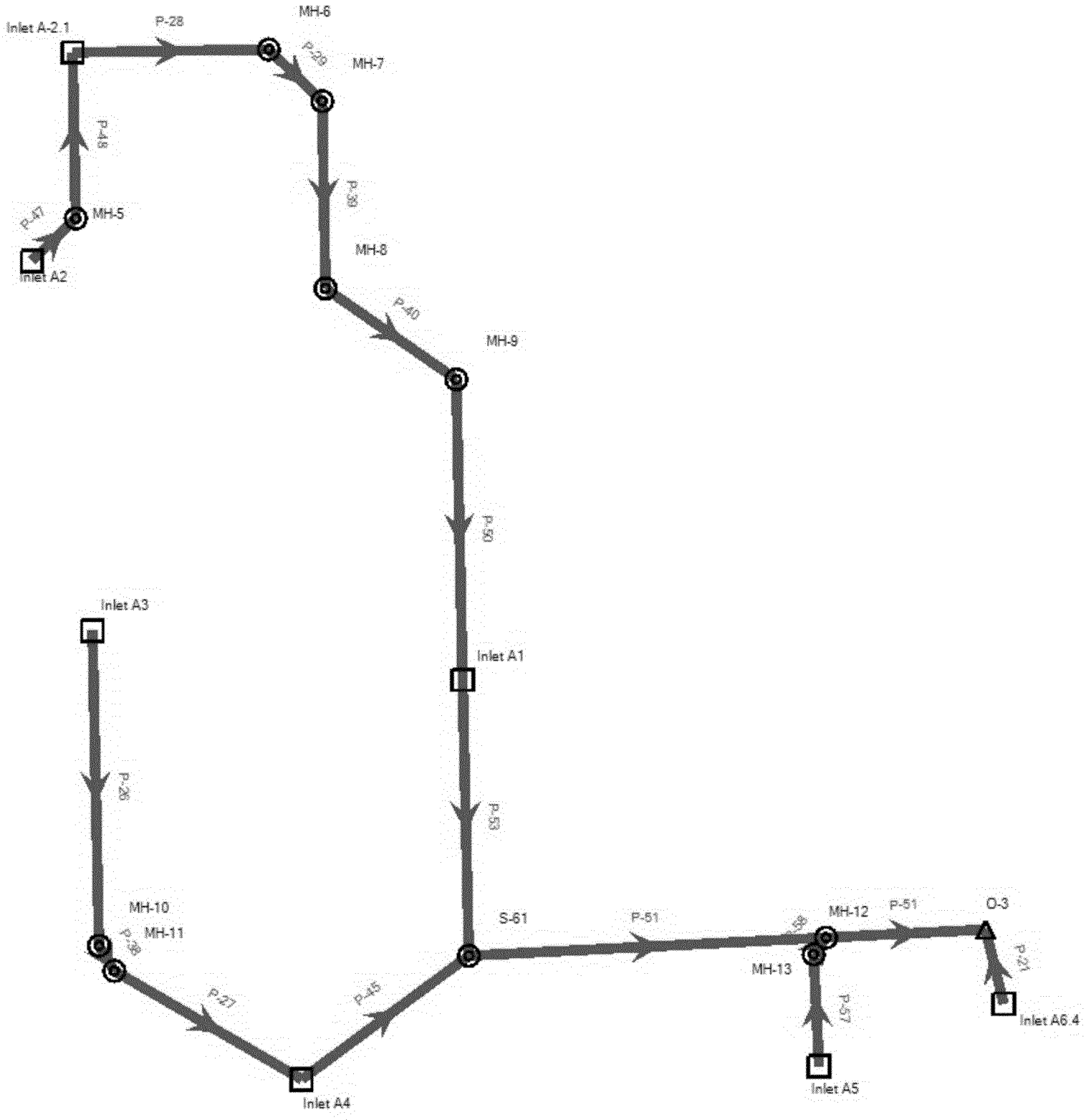


Profile Report
Engineering Profile - Inlet A3 to S-61 (Storm Pipe Calcs REV.stsw)



Profile Report
Engineering Profile - Outfall Pipe (Outfall Calcs.stsw)




Inlet A-2.1
P-28
MH-6
P-29
MH-7
P-46
P-39
P-47
MH-5
Inlet A2
MH-8
P-40
MH-9
P-52
Inlet A3
Inlet A1
P-26
P-53
MH-10
P-48
MH-11
S-61
P-51
MH-12
P-51
O-3
P-27
P-45
MH-13
P-21
P-57
Inlet A6.4
Inlet A5
Inlet A4

Label	-Node- Upstream Downstream	Diameter (in)	Slope (Calculated) (ft/ft)	Flow (cfs)	Length (User Defined) (ft)	Velocity (ft/s)	-EGL- Upstream Downstream (ft)	-Ground- Upstream Downstream (ft)	-HGL- Upstream Downstream (ft)	-Invert- Upstream Downstream (ft)	Section Discharge Capacity (cfs)	Capacity (Design) (cfs)
P-28	Inlet A-2.1	6	0.01	0.28	55.8	3.03	5471.85	5475.37	5471.75	5471.48	0.28	0.61
	MH-6						5471.32	5475.43	5471.25	5470.92	0.61	
P-48	MH-5	6	0.01	0.18	47.1	2.7	5472.34	5475.32	5472.26	5472.05	0.18	0.61
	Inlet A-2.1						5471.88	5475.37	5471.83	5471.48	0.61	
P-26	Inlet A3	6	0.01	0.39	89.4	3.29	5472.22	5475.17	5472.15	5471.68	0.39	0.61
	MH-10						5471.85	5476.66	5471.79	5470.78	0.61	
P-47	Inlet A2	6	0.01	0.18	17.4	2.7	5472.51	5474.32	5472.43	5472.22	0.18	0.61
	MH-5						5472.36	5475.32	5472.31	5472.05	0.61	
P-45	S-61	12	0.01	1.43	59	1.82	5468.23	5473.42	5471.35	5466.48	1.43	3.86
	Inlet A4						5471.44	5474.29	5471.11	5470.01	3.86	
P-27	MH-11	6	0.01	0.39	61.5	3.29	5471.77	5476.46	5471.63	5470.7	0.39	0.61
	Inlet A4						5471.44	5474.29	5471.38	5470.01	0.61	
P-53	Inlet A1	12	0.01	4.26	78.3	5.42	5470.37	5474.2	5469.92	5468.88	4.26	3.86
	S-61						5468.73	5473.42	5468.97	5466.48	3.86	
P-51	S-61	12	0.01	5.69	101.7	4.64	5468.23	5473.42	5467.9	5466.48	5.69	3.56
	MH-12						5467.44	5469.32	5467.11	5465.46	3.56	
P-38	MH-10	6	0.01	0.39	8.4	1.99	5471.81	5476.66	5471.75	5470.78	0.39	0.61
	MH-11						5471.78	5476.46	5471.72	5470.7	0.61	
P-29	MH-6	6	0.01	0.28	21.1	3.03	5471.29	5475.43	5471.19	5470.92	0.28	0.61
	MH-7						5471.11	5475.41	5471.04	5470.71	0.61	
P-39	MH-7	6	0.01	0.28	53.1	3.03	5471.08	5475.41	5470.98	5470.71	0.28	0.61
	MH-8						5470.58	5475.43	5470.51	5470.18	0.61	
P-40	MH-8	6	0.01	0.28	45.3	3.03	5470.56	5475.43	5470.45	5470.18	0.28	0.61
	MH-9						5470.38	5474.25	5470.34	5468.88	0.61	
P-50	MH-9	6	0.01	0.28	85.3	1.43	5470.36	5474.25	5470.32	5468.88	0.28	0.61
	Inlet A1						5470.18	5474.2	5470.14	5468.88	0.61	
P-57	Inlet A5	8	0.01	1.51	31.8	4.33	5468.08	5469.12	5467.78	5465.84	1.51	1.31
	MH-13						5467.65	5469.51	5467.36	5465.52	1.31	
P-21	Inlet A6.4	12	0.012	11.12	21.7	14.16	5470.68	5467.9	5467.57	5464.71	11.12	3.89
	O-3						(N/A)	5468.56	5465.45	5458	3.89	
P-51	MH-12	12	0.01	7.2	45.4	5.87	5467.22	5469.32	5466.67	5465.46	7.2	3.56
	O-3						(N/A)	5468.56	5466.08	5458	3.56	
P-58	MH-13	8	0.01	1.51	5.9	4.33	5467.48	5469.51	5467.19	5465.52	1.51	1.31
	MH-12						5467.44	5469.32	5467.11	5465.46	1.31	

Label	-Node- Upstream Downstream	Diameter (in)	Slope (Calculated) (ft/ft)	Flow (cfs)	Length (User Defined) (ft)	Velocity (ft/s)	-EGL- Upstream Downstream (ft)	-Ground- Upstream Downstream (ft)	-HGL- Upstream Downstream (ft)	-Invert- Upstream Downstream (ft)	Section Discharge Capacity (cfs)	Capacity (Design) (cfs)
P-30 (Storm)	CB-22	18	0.036	19.06	91.7	12.83	5465.16	5468.92	5463.33	5461.87	19.06	19.92
	S-38 (Storm)						(N/A)	5463.39	5459.77	5461.87	19.92	

Low Tail Water Basin and Riprap Design OF-1

Project Name KT Superior

5-Mar-24

Instructions: Refer to Section 3.4.3.2 of Chap 8 Vol 2 in UD Manual. Enter values in blue cells. Green cells are calculated.

100-year design flows

Outlet Pipe Information:

Type of Pipe:	Circular	
Storm Sewer Dia, D =	1.5	ft

Riprap Size:

Velocity =	3.4	ft/s (1)	100 Year
Design Depth, d =	0.34	ft (2)	
Gravity, g =	32.2	ft/s^2	

Eqn: HS-16e

P_d = 4.74 ft/s

Use Figure HS-20c to find the size and type of riprap to use in the outlet protection basin.

Riprap Selection:	**Type L**
Riprap Diameter, D_{50} =	9 inches

Riprap Minimum Thickness:

Eqn: HS-17

Thickness, T = 1.31 ft

Basin Dimensions:

Storm Sewer Dia, D = 1.5 ft

Length is defined as being the greater of the following:

L = 4D =	6	ft	Eqn: HS-18
L = (D)^0.5(V/2) =	2.082066281	ft	Eqn: HS-19
L =	**6**	ft	

Width:

w = width of box culvert	1.5	ft	
W = 4D =	6	ft	Eqn: HS-20 or HS-21

Cutoff Wall:

B = 2.06 ft Eqn: HS-22

(1) Obtain Velocity from Section 3.4.3.1 of Vol 2 in the UD Manual or program such as FlowMaster or StormCad

(2) Obtain flow depth from Section 3.4.3.1 of Vol 2 in the UD Manual or program such as FlowMaster or StormCad

Appendix D – Drainage Plans

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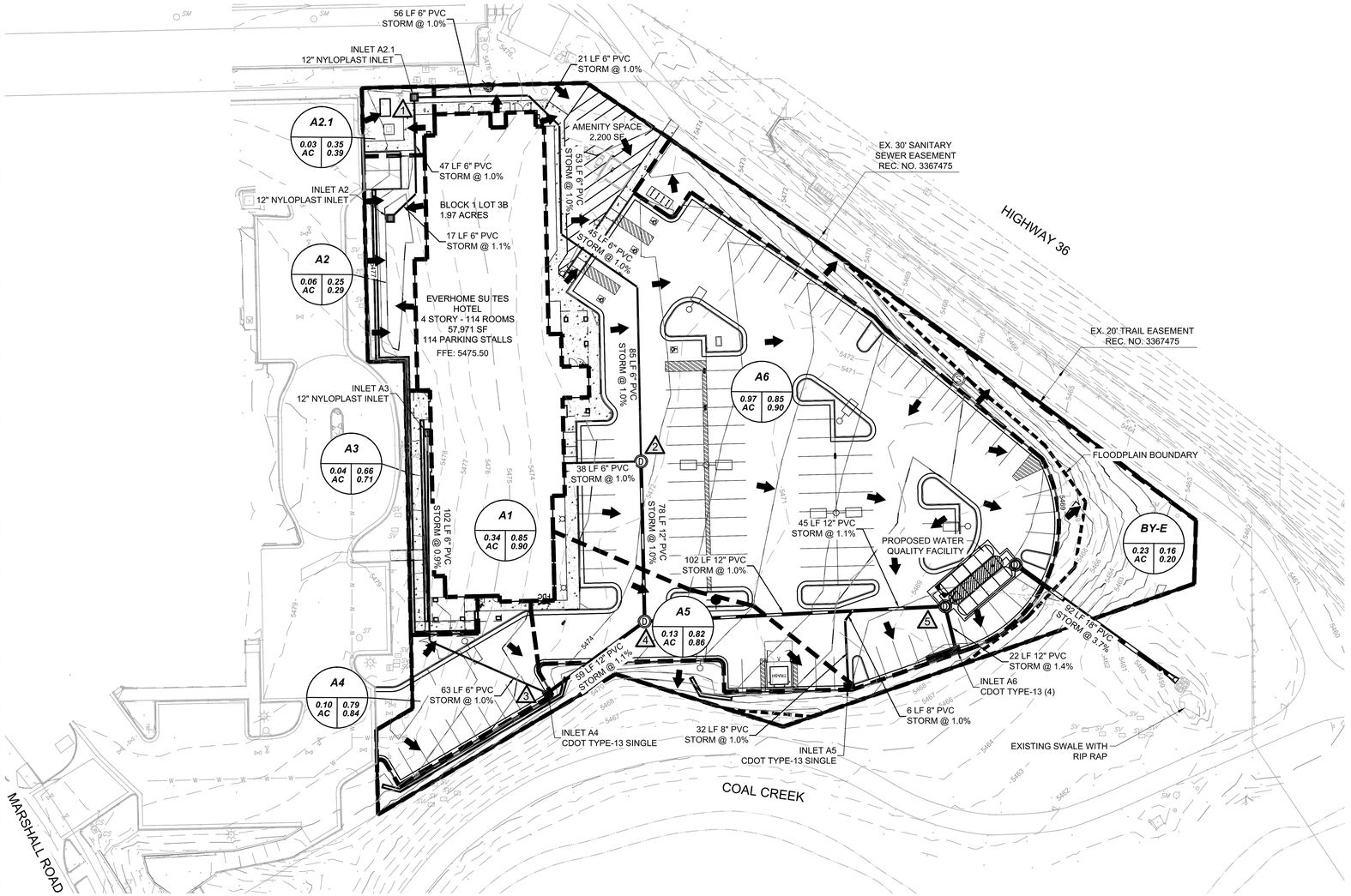
SUPERIOR TOWN CENTER FINAL DEVELOPMENT PLAN FOR
EVERHOME SUITES - SUPERIOR
AT McCASLIN & MARSHALL ROAD

LEGAL DESCRIPTION:

LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING NO. 1B REPLAT NO. 3, ACCORDING TO THE PLAT THEREOF RECORDED DECEMBER 1, 2016 UNDER RECEPTION NO. 03560623, COUNTY OF BOULDER, STATE OF COLORADO



LEGEND

- PROPOSED CONTOURS
- EXISTING CONTOURS
- PROPOSED EASEMENT
- PROPOSED BASIN DELINEATION
- PROPOSED BUILDING SETBACK
- PROPOSED BUILDING
- EXISTING CURB AND GUTTER
- PROPOSED 6" CURB AND GUTTER
- EXISTING STORM SEWER LINE
- PROPOSED STORM SEWER LINE
- PROPOSED STORM MANHOLES
- EXISTING STORM MANHOLES
- PROPOSED STORM INLET/GRATE
- EXISTING STORM INLET
- FLOW ARROW AND GRADE
- FLOODPLAIN LIMIT
- DRAINAGE FLOW ARROW
- DESIGN POINT
- BASIN DESIGNATION
- 5-YEAR RUNOFF COEFFICIENT
- 100-YEAR RUNOFF COEFFICIENT
- BASIN AREA IN ACRES

BASIN SUMMARY

DESIGN POINT	TRIBUTARY BASIN	AREA (AC)	PERCENT IMPERVIOUS	COEFFICIENT C5	COEFFICIENT C100	TOTAL RUNOFF* Q5 (CFS)	TOTAL RUNOFF* Q100 (CFS)
1	A2	0.06	14.6	0.25	0.29	0.06	0.12
	A2.1	0.03	28.0	0.35	0.39	0.03	0.07
2	A1	0.34	90.0	0.85	0.90	1.31	2.67
3	A3	0.04	70.2	0.66	0.71	0.13	0.26
	A4	0.10	87.6	0.79	0.84	0.34	0.70
4	A5	0.13	91.2	0.82	0.86	0.50	1.01
5	A6	0.97	96.3	0.85	0.90	3.67	7.45
	BY-E	0.30	2.0	0.16	0.20	0.22	0.52
Total Proposed Site		1.97	76.1	0.71	0.76	6.26	12.80

PROJECT BENCHMARK

ELEVATIONS ARE BASED UPON A POST-PROCESSED STATIC GNSS CONNECTION MADE TO NGS BENCH MARK W 413 (PID KK1549) UTILIZING GEOID12B TO MODEL THE ELLIPSOID SEPARATION. ELEVATION 5459.62 (NAVD 88).

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

CALL UTILITY NOTIFICATION CENTER OF COLORADO
1-800-922-1987 or 811
CALL 3-BUSINESS DAYS (NOT INCLUDING INITIAL DAY OF CONTACT) IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

N

SCALE IN FEET
0 30 60

IF BAR DOES NOT MEASURE 1 INCH THEN DRAWING IS NOT TO SCALE

No.	REVISION	BY	DATE

PRELIMINARY NOT FOR CONSTRUCTION

EES ENTITLEMENT AND ENGINEERING SOLUTIONS, INC.
3801 E. Florida Avenue, Suite 425
Denver, CO 80210
303-572-7997 www.ees.us.com

FINAL DEVELOPMENT PLAN
EVERHOME SUITES - SUPERIOR
MCCASLIN & MARSHALL RD, SUPERIOR, CO
DRAINAGE PLAN

PROJECT NO:	KTD005.01
DESIGNED BY:	AMG
DRAWN BY:	AMG
DATE:	4/19/24

P2.0

P:\KT DEVELOPMENT\CO, SUPERIOR - MCCASLIN & MARSHALL RD\08 CAD\FDP\P2.0 DRAINAGE PLAN.DWG

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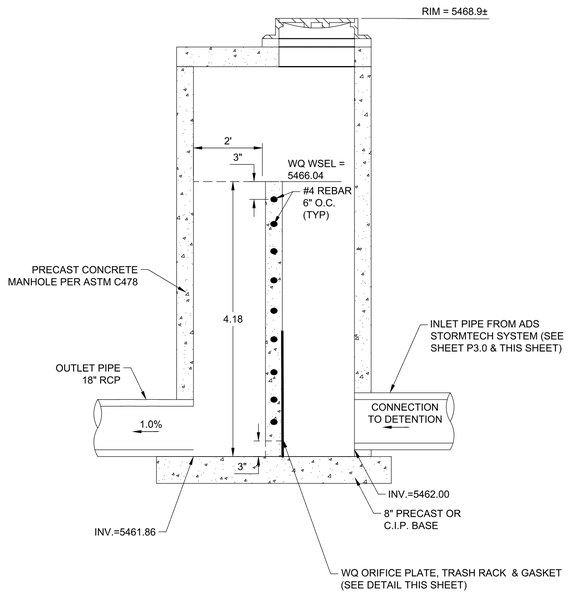
SUPERIOR TOWN CENTER FINAL DEVELOPMENT PLAN FOR

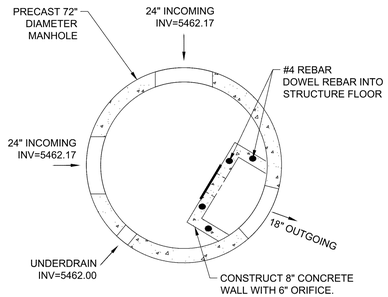
EVERHOME SUITES - SUPERIOR
AT McCASLIN & MARSHALL ROAD

LEGAL DESCRIPTION:

LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING NO. 1B REPLAT NO. 3, ACCORDING TO THE PLAT THEREOF RECORDED DECEMBER 1, 2016 UNDER RECEPTION NO. 03560623, COUNTY OF BOULDER, STATE OF COLORADO

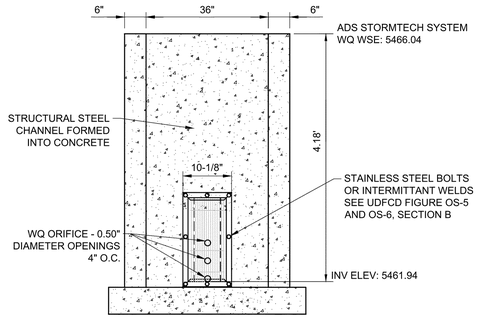


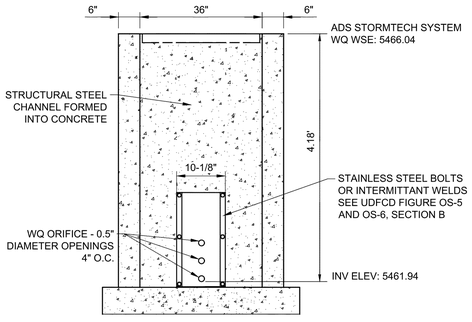
SECTION VIEW



PLAN VIEW

ADS STORMTECH SYSTEM OUTLET STRUCTURE DETAIL





ADS STORMTECH SYSTEM WQ ORIFICE PLATE DETAIL

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CALL 3-BUSINESS DAYS (NOT INCLUDING INITIAL DAY OF CONTACT) IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

P:\KT DEVELOPMENT\CO, SUPERIOR - MCCASLIN & MARSHALL RD\08 CAD\C3D\D1.3 DRAINAGE DETAILS.DWG

No.	REVISION	BY	DATE

PRELIMINARY NOT FOR CONSTRUCTION

EES ENTITLEMENT AND ENGINEERING SOLUTIONS, INC.
3801 E. Florida Avenue, Suite 425
Denver, CO 80210
303-572-7997 www.ees.us.com

FINAL DEVELOPMENT PLAN
EVERHOME SUITES - SUPERIOR
MCCASLIN & MARSHALL RD, SUPERIOR, CO
DRAINAGE PLAN

PROJECT NO:	KTD005.01
DESIGNED BY:	AMG
DRAWN BY:	AMG
DATE:	4/19/24

P2.0

Appendix E – ADS Stormtech Details

PROJECT INFORMATION	
ENGINEERED PRODUCT MANAGER	JEROME MAGSINO 303-349-7555 JEROME.MAGSINO@ADSPIPE.COM
ADS SALES REP	MARK KAELBERER 720-256-8225 MARK.KAELBERER@ADS-PIPE.COM
PROJECT NO.	S401166

Advanced Drainage Systems, Inc.

SiteAssist™
FOR STORMTECH
INSTALLATION INSTRUCTIONS
VISIT OUR APP

EVERHOME SUITES

SUPERIOR, CO, USA

MC-3500 STORMTECH CHAMBER SPECIFICATIONS

1. CHAMBERS SHALL BE STORMTECH MC-3500.
2. CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
3. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45x76 DESIGNATION SS.
4. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
5. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
6. CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
7. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 450 LBS/FT/%. THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
8. ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
   - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
   - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
   - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
9. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF MC-3500 CHAMBER SYSTEM

1. STORMTECH MC-3500 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
2. STORMTECH MC-3500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
3. CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
   - STONESHOOTER LOCATED OFF THE CHAMBER BED.
   - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
   - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
4. THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
5. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
6. MAINTAIN MINIMUM - 6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
7. INLET AND OUTLET MANIFOLDS MUST BE INSERTED A MINIMUM OF 12" (300 mm) INTO CHAMBER END CAPS.
8. EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE MEETING THE AASHTO M43 DESIGNATION OF #3 OR #4.
9. STONE MUST BE PLACED ON THE TOP CENTER OF THE CHAMBER TO ANCHOR THE CHAMBERS IN PLACE AND PRESERVE ROW SPACING.
10. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
11. ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

1. STORMTECH MC-3500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
2. THE USE OF EQUIPMENT OVER MC-3500 CHAMBERS IS LIMITED:
   - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
   - NO RUBBER TIRED LOADER, DUMP TRUCK, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
   - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
3. FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY USING THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

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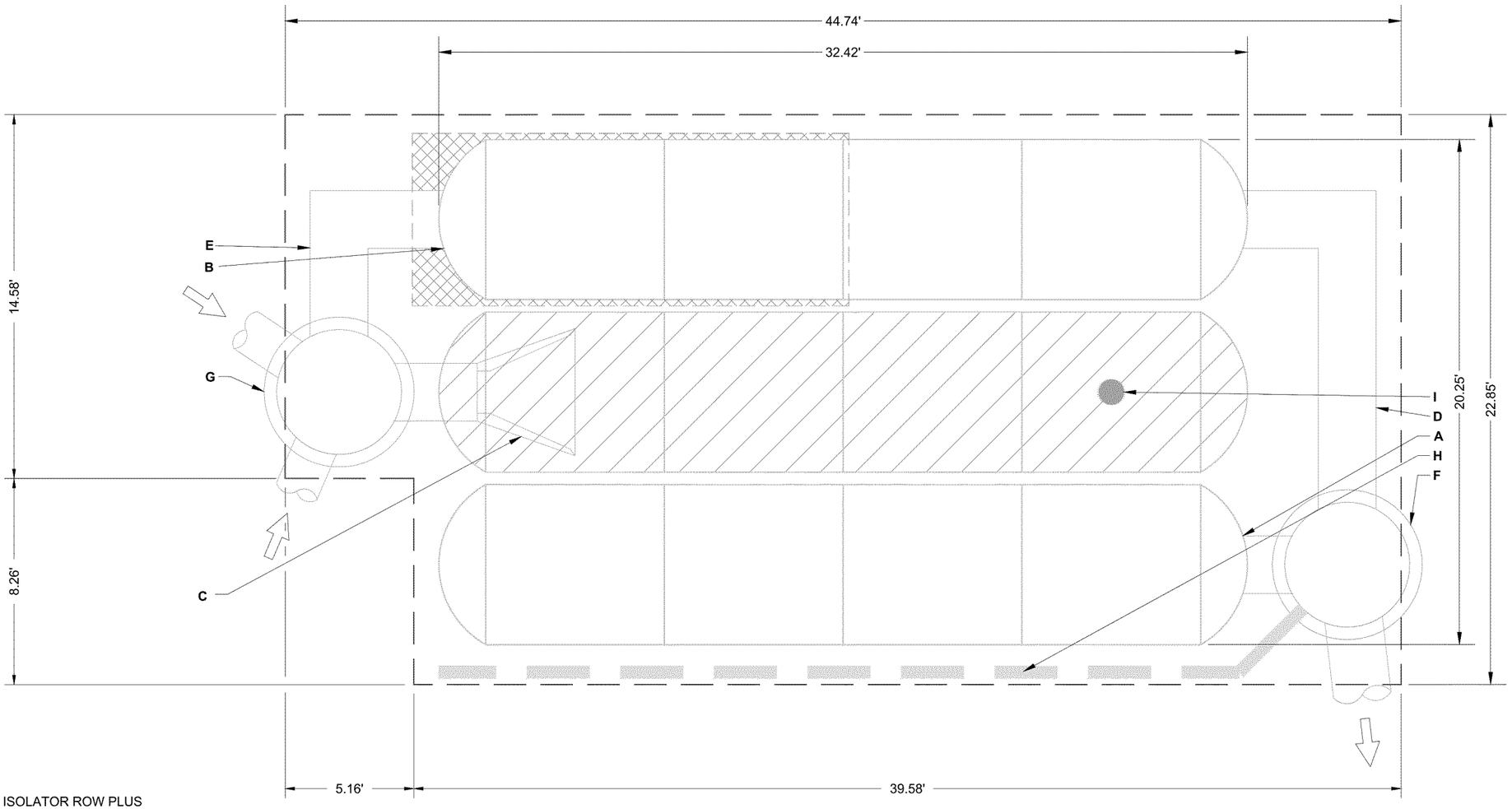
PROPOSED LAYOUT	
12	STORMTECH MC-3500 CHAMBERS
6	STORMTECH MC-3500 END CAPS
12	STONE ABOVE (in)
9	STONE BELOW (in)
40	STONE VOID
979	SYSTEM AREA (SF)
135	SYSTEM PERIMETER (ft)

PROPOSED ELEVATIONS:	
MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED):	5474.50
MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC):	5468.50
MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC):	5468.00
MINIMUM ALLOWABLE GRADE (TOP OF RIGID CONCRETE PAVEMENT):	5468.00
MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT):	5468.00
TOP OF STONE:	5467.50
TOP OF MC-3500 CHAMBER:	5466.50
24" x 24" TOP MANIFOLD INVERT:	5463.96
24" x 24" BOTTOM MANIFOLD INVERT:	5462.92
24" ISOLATOR ROW PLUS INVERT:	5462.92
24" BOTTOM CONNECTION INVERT:	5462.92
BOTTOM OF MC-3500 CHAMBER:	5462.75
UNDERDRAIN INVERT:	5462.00
BOTTOM OF STONE:	5462.00

*INVERT ABOVE BASE OF CHAMBER

PART TYPE	ITEM ON LAYOUT	DESCRIPTION	INVERT*	MAX FLOW
PREFABRICATED END CAP	A	24" BOTTOM CORED END CAP, PART#: MC3500IEPP24BC / TYP OF ALL 24" BOTTOM CONNECTIONS AND ISOLATOR PLUS ROWS	2.06"	
PREFABRICATED END CAP	B	24" TOP CORED END CAP, PART#: MC3500IEPP24TC / TYP OF ALL 24" TOP CONNECTIONS	14.48"	
FLAMP	C	INSTALL FLAMP ON 24" ACCESS PIPE / PART#: MCFLAMP		
MANIFOLD	D	24" x 24" BOTTOM MANIFOLD, ADS N-12	2.06"	
MANIFOLD	E	24" x 24" TOP MANIFOLD, ADS N-12	14.48"	
CONCRETE STRUCTURE	F	OCS (DESIGN BY ENGINEER / PROVIDED BY OTHERS)		14.0 CFS OUT
CONCRETE STRUCTURE	G	(DESIGN BY ENGINEER / PROVIDED BY OTHERS)		8.5 CFS IN
UNDERDRAIN	H	6" ADS N-12 DUAL WALL PERFORATED HDPE UNDERDRAIN		
INSPECTION PORT	I	4" SEE DETAIL		



ISOLATOR ROW PLUS
(SEE DETAIL)

PLACE MINIMUM 17.50' OF ADSPLUS175 WOVEN GEOTEXTILE OVER BEDDING STONE AND UNDERNEATH CHAMBER FEET FOR SCOUR PROTECTION AT ALL CHAMBER INLET ROWS

BED LIMITS

NOTES

- MANIFOLD SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECH NOTE #6.32 FOR MANIFOLD SIZING GUIDANCE.
- DUE TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANIFOLD COMPONENTS IN THE FIELD.
- THIS CHAMBER SYSTEM WAS DESIGNED WITHOUT SITE-SPECIFIC INFORMATION ON SOIL CONDITIONS OR BEARING CAPACITY. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR DETERMINING
THE SUITABILITY OF THE SOIL AND PROVIDING THE BEARING CAPACITY OF THE INSITU SOILS. THE BASE STONE DEPTH MAY BE INCREASED OR DECREASED ONCE THIS INFORMATION IS PROVIDED.

EVERHOME SUITES
SUPERIOR, CO, USA
DATE: 4-15-2024 DRAWN: MAH CHECKED: XXX
PROJECT #: S401166

DATE	DRW	CHK	DESCRIPTION

THIS DRAWING HAS BEEN PREPARED BASED ON INFORMATION PROVIDED TO ADS UNDER THE DIRECTION OF THE SITE DESIGN ENGINEER OR OTHER PROJECT REPRESENTATIVE. THE SITE DESIGN ENGINEER SHALL REVIEW THIS DRAWING PRIOR TO CONSTRUCTION. IT IS THE ULTIMATE RESPONSIBILITY OF THE SITE DESIGN ENGINEER TO ENSURE THAT THE PRODUCT(S) DEPICTED AND ALL ASSOCIATED DETAILS MEET ALL APPLICABLE LAWS, REGULATIONS, AND PROJECT REQUIREMENTS.

StormTech®
Chamber System
888-892-2694 | WWW.STORMTECH.COM

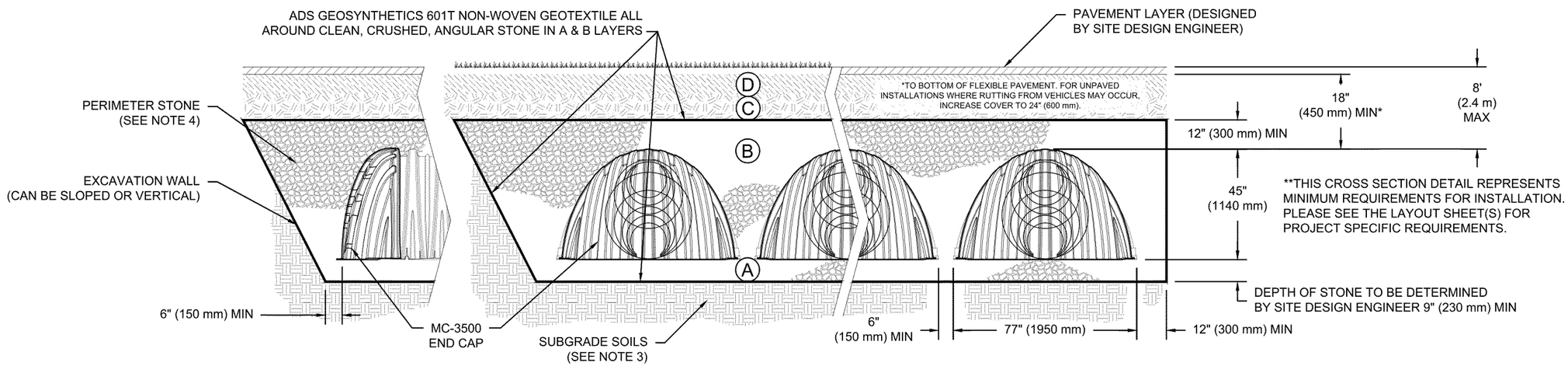
ADS
4640 TRUEMAN BLVD
HILLIARD, OH 43026
1-800-733-7473

0 5 10

ACCEPTABLE FILL MATERIALS: STORMTECH MC-3500 CHAMBER SYSTEMS

MATERIAL LOCATION		DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	**FINAL FILL:** FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	**INITIAL FILL:** FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 24" (600 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145[1] A-1, A-2-4, A-3 OR AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 24" (600 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
B	**EMBEDMENT STONE:** FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE[5]	AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	**FOUNDATION STONE:** FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE[5]	AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE.[2,3]

PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
4. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.
5. WHERE RECYCLED CONCRETE AGGREGATE IS USED IN LAYERS 'A' OR 'B' THE MATERIAL SHOULD ALSO MEET THE ACCEPTABILITY CRITERIA OUTLINED IN TECHNICAL NOTE 6.20 "RECYCLED CONCRETE STRUCTURAL BACKFILL".



NOTES:

1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45x76 DESIGNATION SS.
2. MC-3500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
5. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 450 LBS/FT/%. THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

EVERHOME SUITES
SUPERIOR, CO, USA
DATE: 4-15-2024 | DRAWN: MAH | CHECKED: XXX
PROJECT #: S401166

DATE	DESCRIPTION	CHK	DRW

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888-892-2694 | WWW.STORMTECH.COM

4640 TRUEMAN BLVD
HILLIARD, OH 43026
1-800-733-7473

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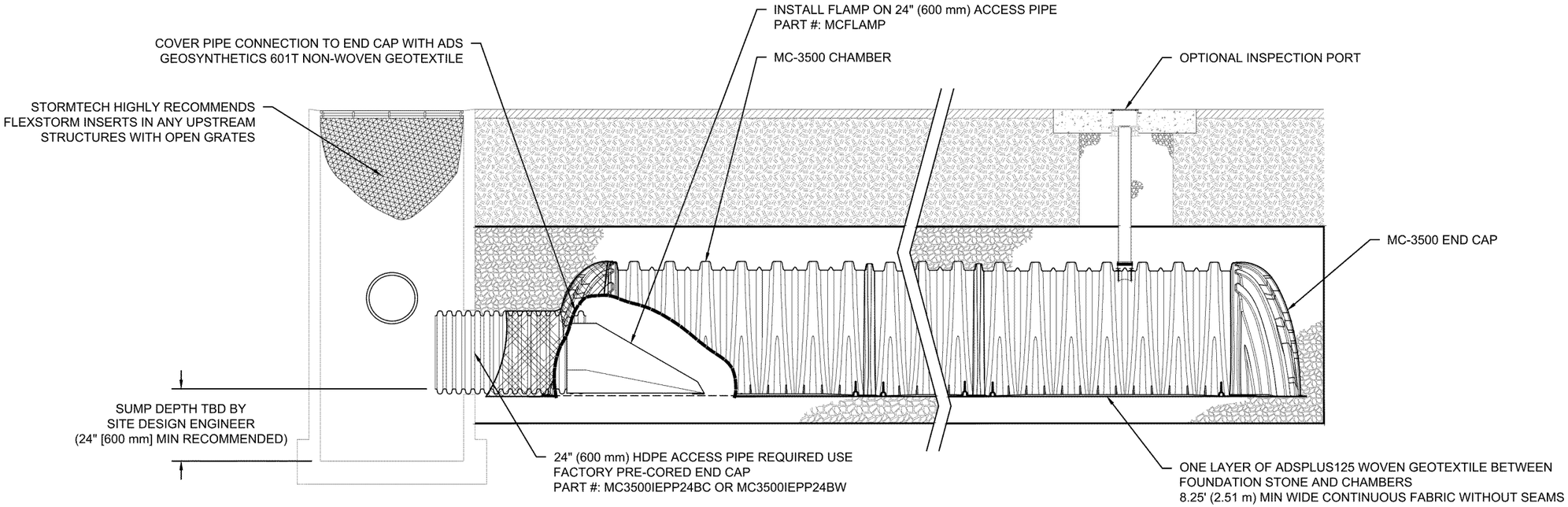


MC-3500 ISOLATOR ROW PLUS DETAIL
NTS

INSPECTION & MAINTENANCE

STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT
- A. INSPECTION PORTS (IF PRESENT)
  - A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
  - A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
  - A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
  - A.4. LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
  - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR PLUS ROWS
  - B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS
  - B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE
    - i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
    - ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
  - B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

STEP 2) CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45" (1.1 m) OR MORE IS PREFERRED
- B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- C. VACUUM STRUCTURE SUMP AS REQUIRED

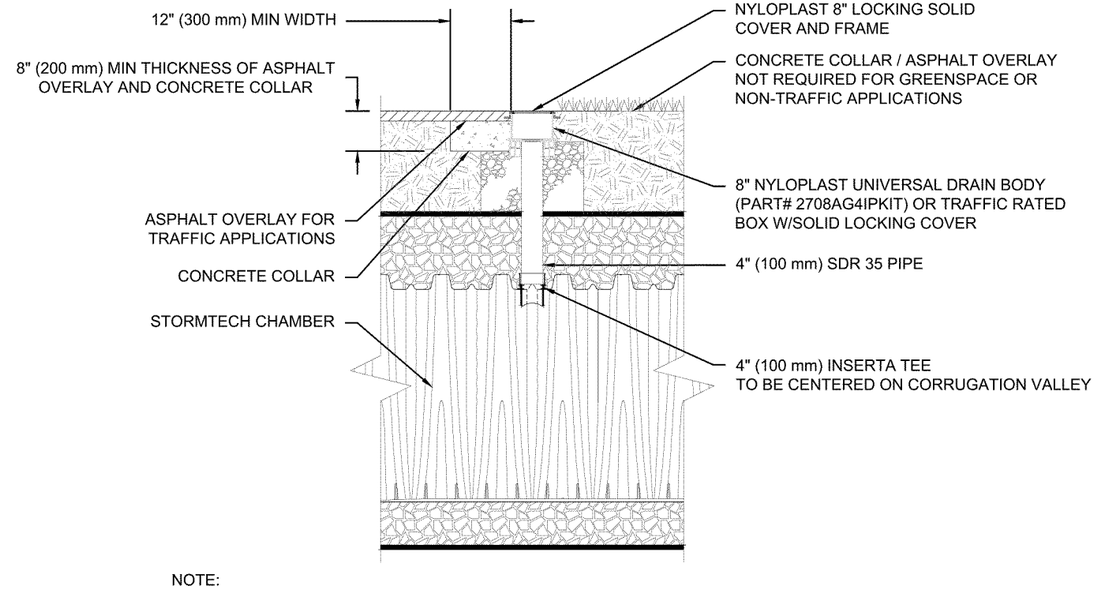
STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.

2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.



NOTE:
INSPECTION PORTS MAY BE CONNECTED THROUGH ANY CHAMBER CORRUGATION VALLEY.

4" PVC INSPECTION PORT DETAIL
(MC SERIES CHAMBER)
NTS

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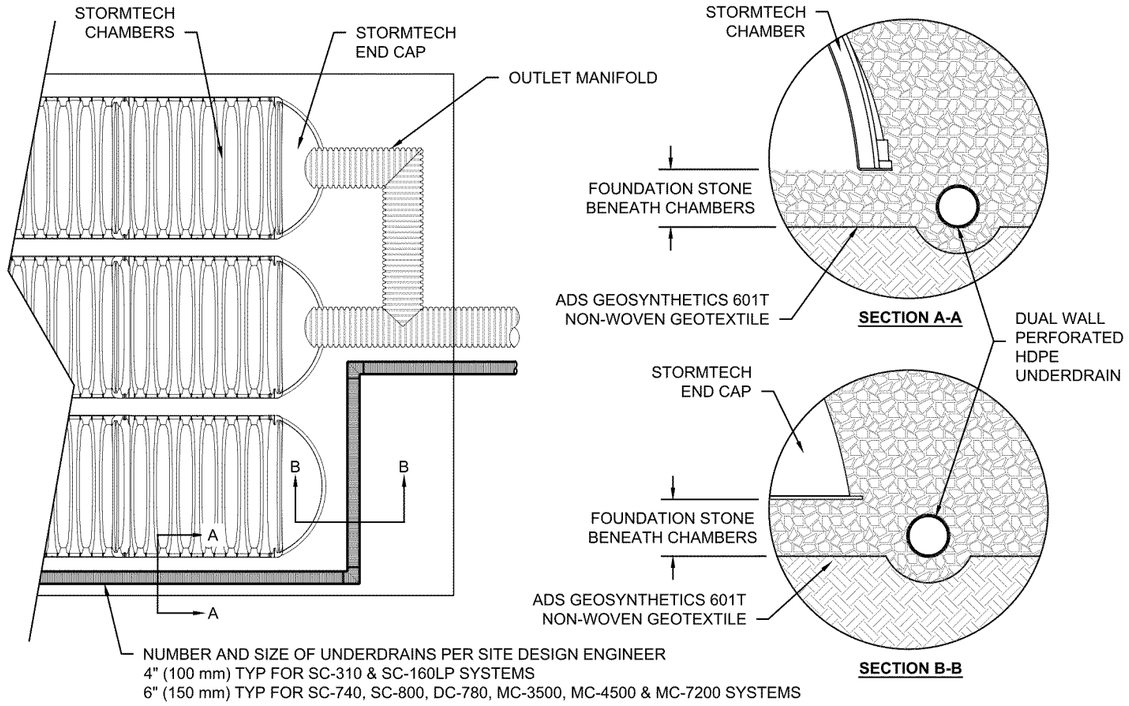
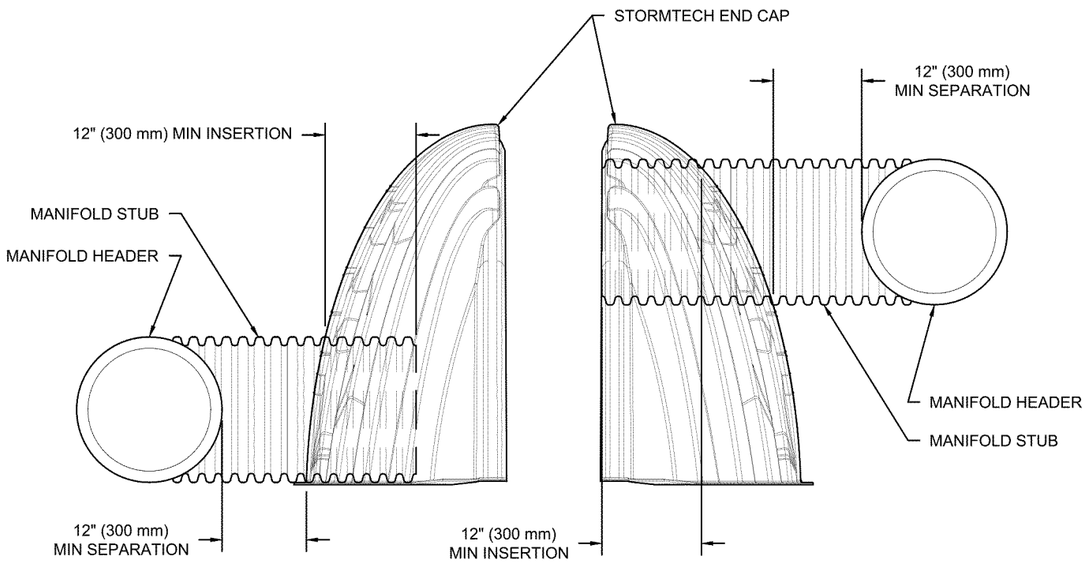
UNDERDRAIN DETAIL

NTS



MC-SERIES END CAP INSERTION DETAIL

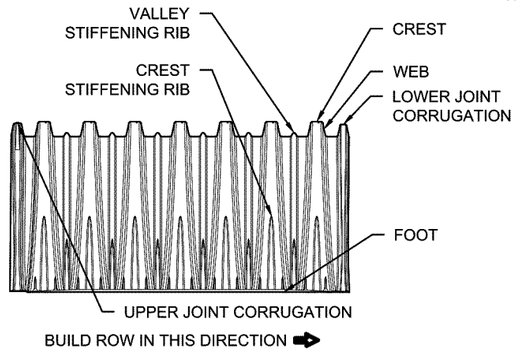
NTS

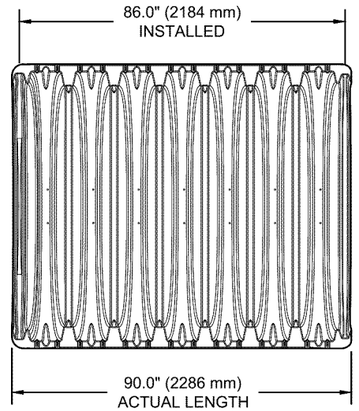


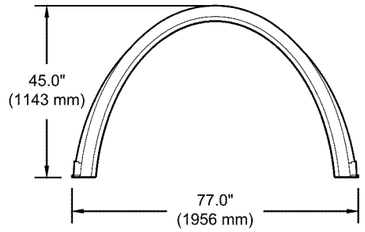
NOTE: MANIFOLD STUB MUST BE LAID HORIZONTAL FOR A PROPER FIT IN END CAP OPENING.

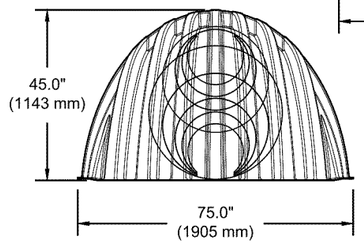
MC-3500 TECHNICAL SPECIFICATION

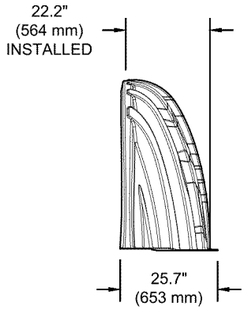
NTS











NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	77.0" X 45.0" X 86.0"	(1956 mm X 1143 mm X 2184 mm)
CHAMBER STORAGE	109.9 CUBIC FEET	(3.11 m³)
MINIMUM INSTALLED STORAGE*	175.0 CUBIC FEET	(4.96 m³)
WEIGHT	134 lbs.	(60.8 kg)

NOMINAL END CAP SPECIFICATIONS

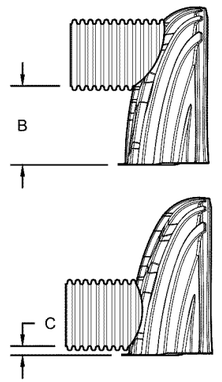
SIZE (W X H X INSTALLED LENGTH)	75.0" X 45.0" X 22.2"	(1905 mm X 1143 mm X 564 mm)
END CAP STORAGE	14.9 CUBIC FEET	(0.42 m³)
MINIMUM INSTALLED STORAGE*	45.1 CUBIC FEET	(1.28 m³)
WEIGHT	49 lbs.	(22.2 kg)

*ASSUMES 12" (305 mm) STONE ABOVE, 9" (229 mm) STONE FOUNDATION, 6" SPACING BETWEEN CHAMBERS, 6" (152 mm) STONE PERIMETER IN FRONT OF END CAPS AND 40% STONE POROSITY

STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"
END CAPS WITH A WELDED CROWN PLATE END WITH "C"
END CAPS WITH A PREFABRICATED WELDED STUB END WITH "W"

PART #	STUB	B	C
MC3500IEPP06T	6" (150 mm)	33.21" (844 mm)	---
MC3500IEPP06B		---	0.66" (17 mm)
MC3500IEPP08T	8" (200 mm)	31.16" (791 mm)	---
MC3500IEPP08B		---	0.81" (21 mm)
MC3500IEPP10T	10" (250 mm)	29.04" (738 mm)	---
MC3500IEPP10B		---	0.93" (24 mm)
MC3500IEPP12T	12" (300 mm)	26.36" (670 mm)	---
MC3500IEPP12B		---	1.35" (34 mm)
MC3500IEPP15T	15" (375 mm)	23.39" (594 mm)	---
MC3500IEPP15B		---	1.50" (38 mm)
MC3500IEPP18TC	18" (450 mm)	20.03" (509 mm)	---
MC3500IEPP18TW			
MC3500IEPP18BC		---	1.77" (45 mm)
MC3500IEPP18BW			
MC3500IEPP24TC	24" (600 mm)	14.48" (368 mm)	---
MC3500IEPP24TW			
MC3500IEPP24BC		---	2.06" (52 mm)
MC3500IEPP24BW			
MC3500IEPP30BC	30" (750 mm)	---	2.75" (70 mm)

NOTE: ALL DIMENSIONS ARE NOMINAL



CUSTOM PRECORED INVERTS ARE AVAILABLE UPON REQUEST. INVENTORIED MANIFOLDS INCLUDE 12-24" (300-600 mm) SIZE ON SIZE AND 15-48" (375-1200 mm) ECCENTRIC MANIFOLDS. CUSTOM INVERT LOCATIONS ON THE MC-3500 END CAP CUT IN THE FIELD ARE NOT RECOMMENDED FOR PIPE SIZES GREATER THAN 10" (250 mm). THE INVERT LOCATION IN COLUMN 'B' ARE THE HIGHEST POSSIBLE FOR THE PIPE SIZE.

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SUPERIOR, CO, USA
DATE: 4-15-2024 DRAWN: MAH CHECKED: XXX
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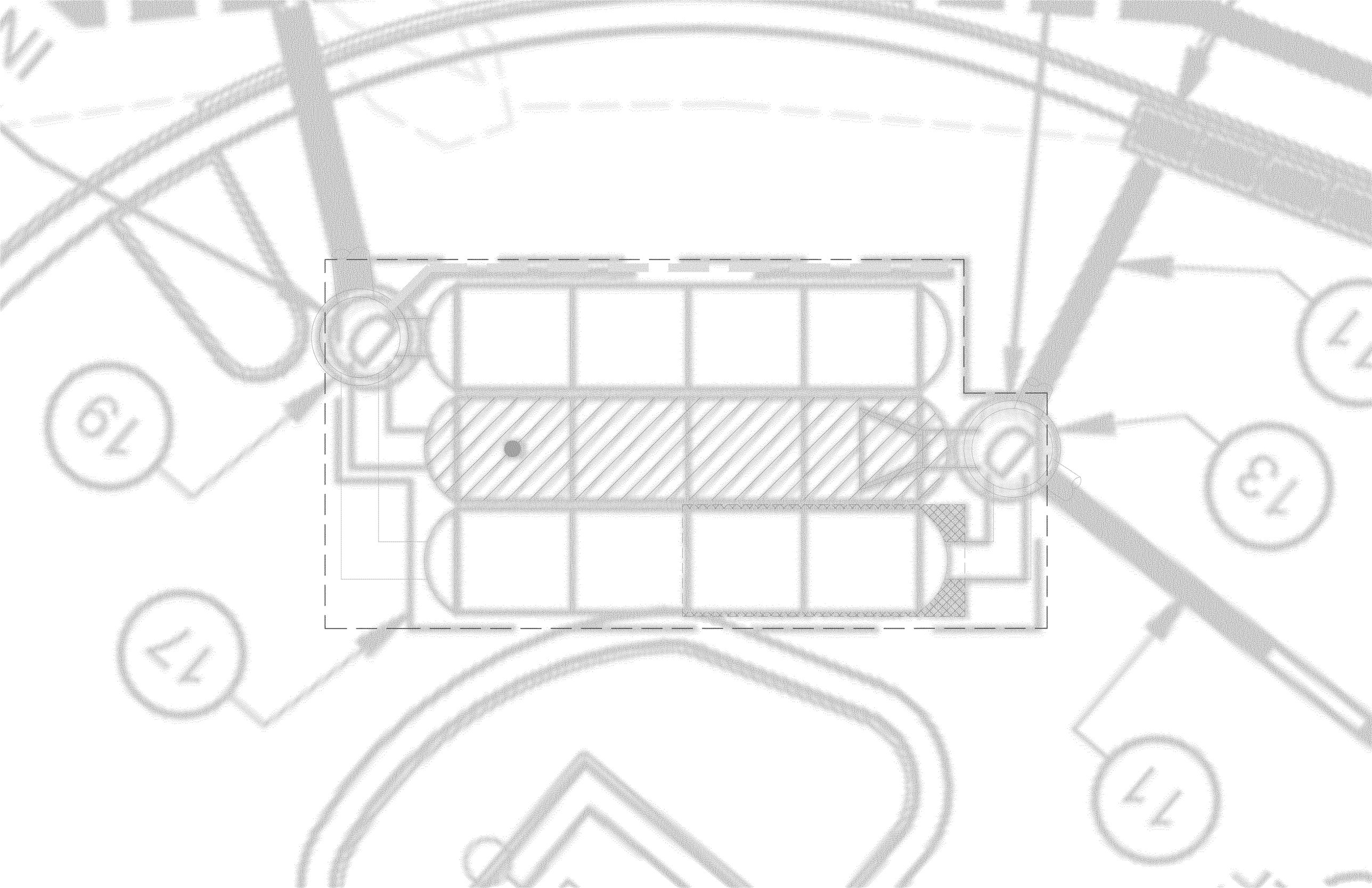

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3801 E. Florida Avenue
Suite 425
Denver, CO 80210
www.ees.us.com
303-572-7997

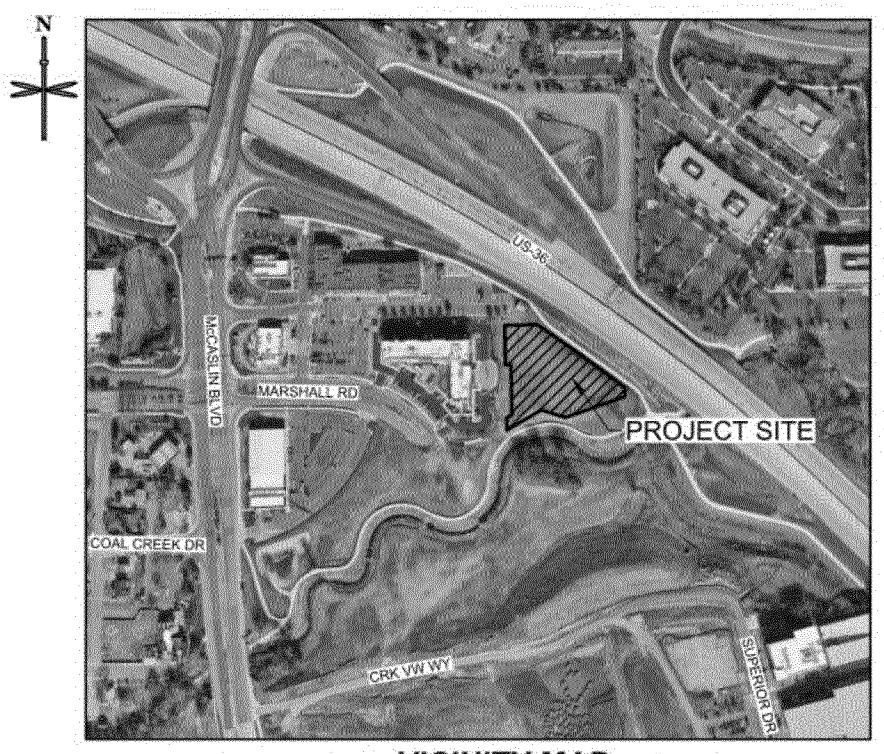
April 15, 2024

Mr. Geoffrey Weathers, Planner
Town of Superior
124 E. Coal Creek Drive
Superior, Colorado 80027

RE: Water Demand Report
Everhome Suites Superior – Development Plan

I. INTRODUCTION, LOCATION, AND METHODOLOGY

This letter is an analysis of water and sewer demands anticipated for the development of a proposed Everhome Suites hotel. The subject property is located in the Town of Superior near the intersection of Marshall Road & McCaslin Blvd. The project lies within the NW ¼ of Section 19, Township 1 South, Range 69 West of the 6th Principal Meridian in the Town of Superior, County of Boulder, State of Colorado. The project site is defined as Lot 3B, Block 1, Superior Town Center Filing No. 1B Replat No.3. More specifically, the project is located at 3 Marshall Road per the Vicinity Map below.



VICINITY MAP
SCALE: 1"=650'

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The proposed development include the construction of a 114-room Everhome Suites extended stay hotel with outdoor amenity area and associated parking, drives, and landscaping. The proposed development will utilized existing water and sanitary sewer mainlines as outlined in the sections below.

This report includes all the base data, method, assumptions and calculations in accordance with the Superior Design Standards and Specifications for the purpose of quantifying the water demanded and sanitary sewerage anticipated to be produced at the time of this letter. Calculations have been prepared in conjunction with the concurrent Development Plan application.

II. EXISTING WATER SYSTEM & CALCULATED DEMAND

The nearest existing water main to the project site is an existing 12" PVC water main located within an utility easement west of the project site on the east side of the neighboring Lot 3A, Block 1 Superior Town Center Filing No. 1B Replat No. 3. A 12" PVC stub is provided to the hotel project site near the southwest corner of the site within the shared access drive. This stub will be utilized for connection of services and fire protection associated with the Everhome Suites Development.

There is also an existing 8" PVC raw water main located parallel to 12" potable line within the neighboring Lot 3A development. An 8" PVC raw water stub is provided to the hotel project site near the southwest corner of the site within the shared access drive. This stub will be utilized for connection of irrigation service associated with the Everhome Suites Development.

The proposed project is proposing a 114-room extended stay hotel with an amenity area and associated parking, drives and landscaping. Based on building plumbing design and fixture calculation (see attached calculations in appendix of this report) the domestic fixed demand is **137 GPM** which required a **2" tap and meter**. The hotel will also be fire sprinklered utilizing a proposed 6" fire service line connection to the building.

III. EXISTING SANITARY SEWER SYSTEM & CALCULATED DEMAND

The nearest existing sanitary sewer main is located along the eastern property line of the hotel site within an existing 30' sanitary sewer easement. The existing main flows from northwest to southeast and is an existing 14" PVC main.

The proposed project is proposing a 114-room extended stay hotel with an amenity area and associated parking, drives and landscaping. The Maximum Day Demand for the sanitary sewer for this site was estimated based on the Town of Superior Design Standards and Specification Section 500 – Sanitary Sewer Facilities. While the hotel is a commercial use, the extended stay hotel functions more as a residential use based on the number of units within the hotel. Based on the design standards it is estimated that the Maximum Day Demand would be **0.06 MGD**. The proposed development will utilize a proposed 6" PVC sanitary service that will connect to the

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existing main on the east side of the site. There is not a restaurant/kitchen element to this hotel and therefore no proposed grease interceptor required as part of this development.

Please contact us with any questions during the review process.

Respectfully,
Entitlement & Engineering Solutions, Inc.

Krysta Houtchens, PE
Associate/Sector Lead

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EXHIBIT A – UTILITY MAP

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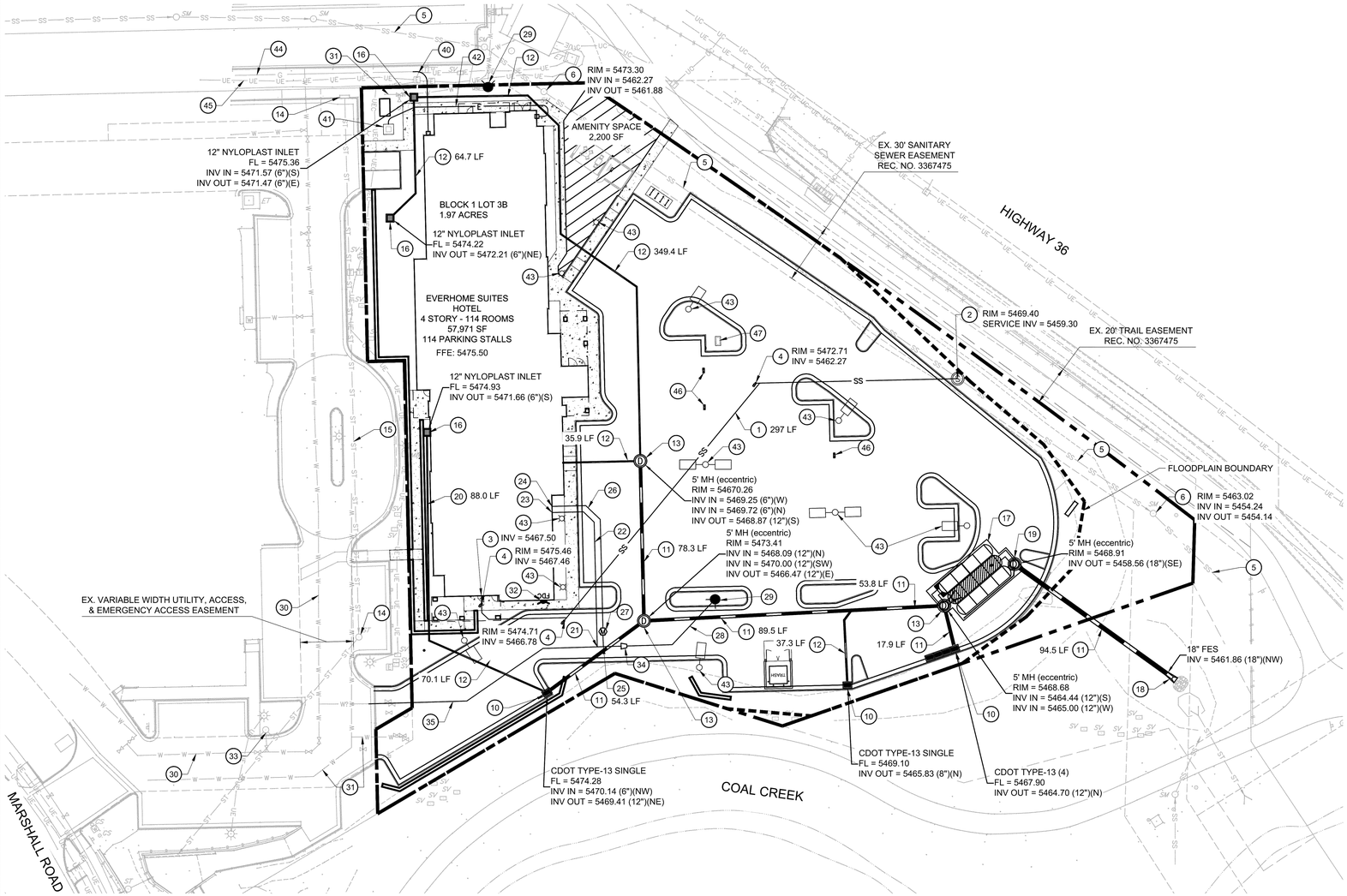
SUPERIOR TOWN CENTER FINAL DEVELOPMENT PLAN FOR
EVERHOME SUITES - SUPERIOR AT McCASLIN & MARSHALL ROAD

LEGAL DESCRIPTION:

LOT 3B, BLOCK 1, SUPERIOR TOWN CENTER FILING NO. 1B REPLAT NO. 3, ACCORDING TO THE PLAT THEREOF RECORDED DECEMBER 1, 2016 UNDER RECEPTION NO. 03560623, COUNTY OF BOULDER, STATE OF COLORADO



UTILITY NOTES:

1. ALL ITEMS IN SCHEDULE ARE PROPOSED UNLESS OTHERWISE NOTED.
2. ALL EXISTING ITEMS IN SCHEDULE ARE TO REMAIN UNLESS OTHERWISE NOTED.

TOWN OF SUPERIOR UTILITY MAINTENANCE STATEMENT

ALL PUBLIC WATER, REUSE WATER, STORM SEWER, AND SANITARY SEWER MAINS AND APPURTENANCES LOCATED IN PUBLIC ROW SHALL BE MAINTAINED BY THE TOWN'S PUBLIC WORKS AND UTILITIES DEPARTMENT. ALL PUBLIC WATER, REUSE WATER, STORM SEWER, SANITARY SEWER MAINS, AND APPURTENANCES UNDER PRIVATE DRIVES ARE LOCATED IN UTILITY EASEMENTS. THE TOWN IS RESPONSIBLE FOR MAINTENANCE OF THESE FACILITIES. THE TOWN IS NOT RESPONSIBLE FOR REPAIR OR REPLACEMENT OF PRIVATE DRIVE, CURB AND GUTTER, OR LANDSCAPING DAMAGED DURING UTILITY REPAIR OR MAINTENANCE.

PROJECT BENCHMARK

ELEVATIONS ARE BASED UPON A POST-PROCESSED STATIC GNSS CONNECTION MADE TO NGS BENCH MARK W 413 (PID KK1549) UTILIZING GEOID12B TO MODEL THE ELLIPSOID SEPARATION. ELEVATION 5459.62 (NAVD 88).

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

CALL UTILITY NOTIFICATION CENTER OF COLORADO
1-800-922-1987 or 811
CALL 3-BUSINESS DAYS (NOT INCLUDING INITIAL DAY OF CONTACT) IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

LEGEND

- PROPOSED EASEMENT
- PROPERTY LINE
- PROPOSED BUILDING
- EXISTING CURB AND GUTTER
- SS — EXISTING SANITARY SEWER
- PROPOSED STORM SEWER LINE
- SS — PROPOSED SANITARY SEWER
- G — PROPOSED GAS LINE
- E — PROPOSED UNDERGROUND ELECTRIC LINE
- PROPOSED WATER LINE
- PROPOSED WATER METER
- FDC — PROPOSED FIRE DEPARTMENT CONNECTION
- PROPOSED FIRE HYDRANT
- FLOODPLAIN LIMIT
- PROPOSED STORM MANHOLES
- EXISTING STORM MANHOLES
- PROPOSED STORM INLET
- CO — PROPOSED CLEANOUT

UTILITY SCHEDULE

SANITARY

1. PROPOSED 6" SANITARY SERVICE @ 2% MINIMUM SLOPE.
2. PROPOSED SANITARY SEWER MANHOLE AT SERVICE CONNECTION TO EXISTING SEWER.
3. PROPOSED 6" SANITARY SERVICE CONNECTION TO BUILDING.
4. PROPOSED SANITARY CLEANOUT.
5. EXISTING 15" PVC SANITARY SEWER MAIN.
6. EXISTING SANITARY SEWER MANHOLE.

STORMWATER

10. PROPOSED TYPE 13 COMBO INLET.
11. PROPOSED 12"-18" RCP STORM SEWER PIPE.
12. PROPOSED 6" PVC STORM SEWER PIPE.
13. PROPOSED 5' STORM MANHOLE.
14. EXISTING STORM SEWER INFRASTRUCTURE
15. EXISTING STORM SEWER PIPE.
16. PROPOSED 12" NYOPLAST AREA INLET.
17. PROPOSED ADS STORMWATER TREATMENT SYSTEM.
18. PROPOSED 18" FLARED END SECTION.
19. PROPOSED OUTLET CONTROL STRUCTURE.
20. PROPOSED DURASLOT SLOTTED DRAIN.

WATER

21. PROPOSED 6" FIRE LINE CONNECTION TO 12" PVC WATER LINE.
22. PROPOSED 6" FIRE LINE SERVICE
23. PROPOSED 6" FIRE LINE CONNECTION TO BUILDING, BACKFLOW PREVENTOR LOCATED INSIDE THE BUILDING.
24. PROPOSED 2" DOMESTIC CONNECTION TO BUILDING. BACKFLOW PREVENTOR LOCATED INSIDE THE BUILDING.
25. PROPOSED 2" DOMESTIC CONNECTION TO 12" PVC WATER LINE.
26. PROPOSED 2" DOMESTIC SERVICE.
27. PROPOSED 2" DOMESTIC WATER METER.
28. PROPOSED 6" FIRE HYDRANT LINE.
29. PROPOSED FIRE HYDRANT.
30. EXISTING WATER MAIN.
31. EXISTING IRRIGATION MAIN.
32. PROPOSED FDC LOCATION.
33. EXISTING FIRE HYDRANT.
34. PROPOSED 12"X6" REDUCER.
35. PROPOSED 12" PVC WATER LINE EXTENSION.

DRY UTILITIES

40. PROPOSED GAS SERVICE, CONTRACTOR TO COORDINATE WITH XCEL ENERGY TO CONFIRM EXISTING GAS MAIN LOCATION.
41. PROPOSED TRANSFORMER LOCATION - GENERAL CONTRACTOR TO FINALIZE LOCATION WITH UTILITY PROVIDER.
42. PROPOSED ELECTRIC SERVICE
43. PROPOSED SITE LIGHTING (REFER TO PHOTOMETRIC PLANS FOR FINAL LOCATION).
44. EXISTING GAS MAIN.
45. EXISTING UNDERGROUND ELECTRIC.
46. PROPOSED EV CHARGING PEDESTAL.
47. PROPOSED EV CHARGING TRANSFORMER AND PANELS.

N

SCALE IN FEET
0 30 60

IF BAR DOES NOT MEASURE 1 INCH THEN DRAWING IS NOT TO SCALE

No.	REVISION	BY	DATE

PRELIMINARY NOT FOR CONSTRUCTION

EES ENTITLEMENT AND ENGINEERING SOLUTIONS, INC.
3801 E. Florida Avenue, Suite 425
Denver, CO 80210
303-572-7997 www.ees.us.com

FINAL DEVELOPMENT PLAN
EVERHOME SUITES - SUPERIOR
MCCASLIN & MARSHALL RD, SUPERIOR, CO

UTILITY PLAN

PROJECT NO:	KTD005.01
DESIGNED BY:	AMG
DRAWN BY:	AMG
DATE:	4/19/24

P3.0

P:\KT DEVELOPMENT\CO, SUPERIOR - MCCASLIN & MARSHALL RD\08 CAD\FDP\P3.0 UTILITY PLAN.DWG

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SOLUTIONS, INC.

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Suite 425
Denver, CO 80210
www.ees.us.com
303-572-7997

EXHIBIT B – WATER AND SEWER DEMAND CALCULATIONS

Water Meter Sizing per AWWA M22, Third Edition

Project: Everhome Suites

Address:

City: Superior State: CO Zip Code:

Type of Occupancy Extended Stay Hotel

Fixture	Fixture Value 60 psi		No. of Fixtures		Fixture Value
Bathtub	8	x	41	=	328
Bedpan Washers	10	x		=	0
Bidet	2	x		=	0
Dental Unit	2	x		=	0
Drinking Fountain – Public	2	x	2	=	4
Kitchen Sink	1.8	x	115	=	207.0
Lavatory	1.5	x	116	=	174.0
Showerhead (Shower Only)	2.5	x	73	=	182.5
Service Sink	4	x	2	=	8
Toilet – Flush Valve	35	x		=	0
– Tank Type	6	x	116	=	696
Urinal – Pedestal Flush Valve	35	x		=	0
– Wall Flush Valve	16	x		=	0
Wash Sink (Each Set of Faucets)	4	x		=	0
Dishwasher	2	x		=	0
Washing Machine	6	x	6	=	36
Hose (50 ft. Wash Down) – ½ in.	5	x	4	=	20
– ⅝ in.	9	x		=	0
– ¾ in. Commercial ClWsh	12	x	4	=	48
			Combined Fixture Total		1,691.5

Water-flow Demand per Fixture Value from Figure 4-2 or 4-3 x Pressure Adjustment Factor = 137.0 gpm

(For Residual Pressures at Fixture Outlet from 60-80 psi, Pressure Adjustment Factor is 1.00 per Table 4-3)

TOTAL FIXED DEMAND = 137 gpm

Meter size chosen = 2.0 in

Turbine Class II meter per Table 6-1

Sanitary Sewer - Required Sewer Capacity
Project: Everhome Suites - Superior
Section: n/a

Proposed Development

Overal Site Area = A = 1.97 Acres
Residential(Hotel) = 114.0 Units

Average Flow

Residential (hotel)
Flow Factor = 100 Gallons per capita per day
Average Flow = (100 GPD)*(114 Units) = **11,400 GPD**

Total Average Daily Demand= Q_A= 11,400 GPD

Peak Factor

Peak Factor = PF = 3.8/(AADF)^0.17 = 3.8/(11,400/1,000,000)^0.17 = 5.497 Use maximum of 5

Maximum Day Demand with Peak Factor

Total Average Daily Demand = 11,400 GPD = 0.0114 MGD
Maximum Day Demand = 0.0114*5 = 0.057 MGD

Maximum Day Demand = 0.06 MGD

TRAFFIC IMPACT STUDY

For

KT Development
Superior, Colorado

Prepared for:

Entitlement and Engineering Solutions, Inc.
3801 E. Florida Avenue, Suite 425
Denver, Colorado 80210

Prepared by:

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Project Engineer:
Zac Trotter, EIT

Engineer in Responsible Charge:
Fred Lantz, PE



23-102008

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APPENDIX C CAPACITY WORKSHEETS

I. Introduction

Project Overview

This traffic impact study is provided as a planning document and addresses the capacity, geometric, and control requirements associated with the development entitled KT Development.

This proposed lodging development consists of a 114-suite hotel. The development is located near the east corner of McCaslin Boulevard and Marshall Road in Superior, Colorado.

Study Area Boundaries

The study area to be examined in this analysis encompasses the intersections of McCaslin Boulevard with the U.S. Highway 36 interchange, Marshall Road, and Main Street and includes proposed site access drives.

Figure 1 illustrates location of the site and study intersections.

Site Description

Land for the development is currently vacant and surrounded by a mix of commercial, residential, recreational, and lodging land uses.

The proposed development is understood to entail the new construction of an all-suites hotel accommodating 114 rooms.

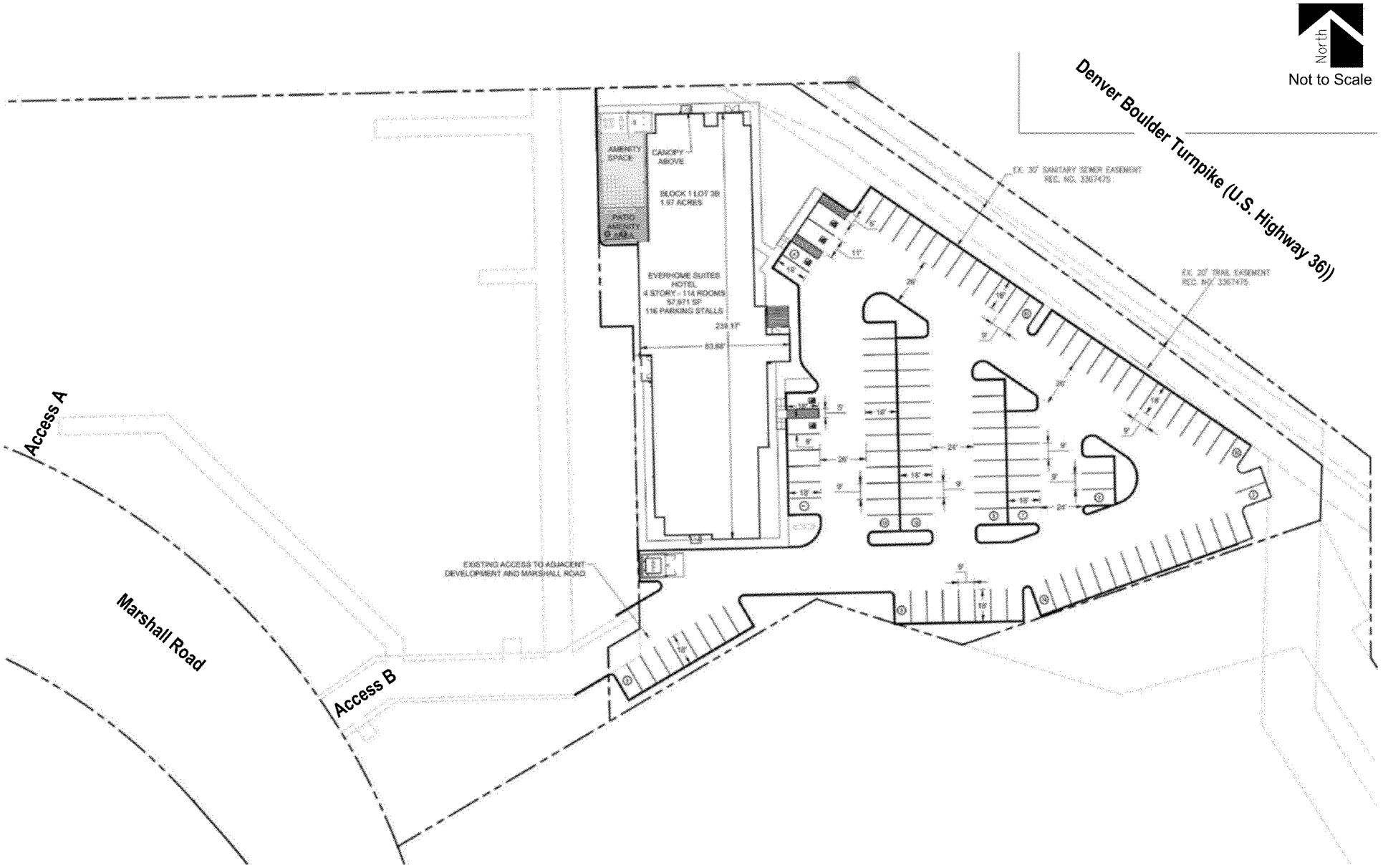
Access to the development is existing and provided via two full-movement access drives onto Marshall Road (referred to as Access A and Access B).

For purposes of this study, it is anticipated that development construction would be completed by end of Year 2025.

General site and access locations are shown on Figure 1.

A conceptual site plan, as prepared by Entitlement and Engineering Solutions, Inc. is shown on Figure 2. This plan is provided for illustrative purposes only.


North
Not to Scale
W Dillon Road
Marshall Road
Sycamore Street
Access B
Access A
Development Site
McCaslin Boulevard
Main Street
Denver Boulder Turnpike (U.S. Highway 36)


North
Not to Scale
Denver Boulder Turnpike (U.S. Highway 36))
Access A
Marshall Road
Access B
AMENITY SPACE
CANOPY ABOVE
PATIO AMENITY
BLOCK 1 LOT 3B
1.97 ACRES
EVERHOME SUITES HOTEL
4 STORY - 114 ROOMS
57,971 SF
116 PARKING STALLS
239.17'
83.68'
EX. 30' SANITARY SEWER EASEMENT REC. NO. 3367475
EX. 20' TRAIL EASEMENT REC. NO. 3367475
EXISTING ACCESS TO ADJACENT DEVELOPMENT AND MARSHALL ROAD

Existing and Committed Surface Transportation Network

Within the study area, Marshall Road is the primary roadway that will accommodate traffic to and from the proposed development. The secondary roadways include McCaslin Boulevard, U.S. Highway 36, and Main Street. A brief description of each roadway, based on the Town's Transportation Plan[1], is provided below:

Marshall Road west of McCaslin Boulevard is generally an east-west state highway having four through lanes (two lanes in each direction) with a combination of shared and exclusive turn lanes at the intersection within the study area. The Colorado Department of Transportation (CDOT) categorizes the adjacent segment of Marshall Road (State Highway 170) as a Non-Rural Arterial (NR-B) and provides a posted speed limit of 35 MPH.

East of McCaslin Boulevard, Marshall Road is generally a north-south collector roadway that provides two to three through lanes with a combination of shared and exclusive turn lanes at the intersections within the study area. Marshall Road provides a posted speed limit of 15 MPH.

McCaslin Boulevard north of Marshall Road is a north-south state highway having six through lanes (three lanes in each direction) with a combination of shared and exclusive turn lanes at the intersections within the study area. CDOT categorizes the adjacent segment of Marshall Road (State Highway 170) as a Non-Rural Arterial (NR-B) and provides a posted speed limit of 35 MPH.

South of Marshall Road, McCaslin Boulevard is a north-south major arterial roadway providing four to six through lanes (two to three in each direction) with a combination of shared and exclusive turn lanes at the intersections within the study area. McCaslin Boulevard continues to provide a posted speed limit of 35 MPH.

Main Street is an east-west collector roadway having two through lanes (one lane in each direction) with a combination of shared and exclusive turn lanes at the intersection within the study area. Main Street provides a posted speed limit of 15 MPH.

U.S. Highway 36 (Denver Boulder Turnpike) at McCaslin Boulevard is an existing diverging diamond interchange with U.S. Highway 36 travel below McCaslin Boulevard. The interchange is within CDOT jurisdiction. Eastbound and westbound on/off ramps have a posted advisory speed limit of 45 MPH. The eastbound interchange ramp has four approach lanes and the westbound interchange ramp has two approach lanes with exclusive turn lanes at McCaslin Boulevard.

[1] Transportation Plan 2014 Update, Town of Superior, February 2014.

The study intersections of McCaslin Boulevard with U.S. Highway 36 eastbound ramp, U.S. Highway 36 westbound ramp, and Marshall Road are signalized. The McCaslin Boulevard intersection with Main Street operates as a roundabout. All other study intersections operate under a stop-controlled condition. A stop-controlled intersection is defined as a roadway intersection where vehicle rights-of-way are controlled by one or more “STOP” signs.

No regional or specific improvements for the above described roadways are known to be planned or committed at this time. The study area roadways appear to be built to their ultimate cross-sections.

II. Existing Traffic Conditions

Morning (AM) and afternoon (PM) peak hour traffic counts were collected at the intersections of McCaslin Boulevard with the U.S. Highway 36 eastbound and westbound on/off ramps and the intersection of Marshall Road and Access A. Counts were collected on October 17, 2023, with AM peak hour counts being collected during the period of 7:00 a.m. to 9:00 a.m. and PM peak hour counts being collected during the period of 4:00 p.m. to 6:00 p.m.

Peak hour traffic counts shown for the intersections of McCaslin Boulevard with Marshall Road and Main Street along with 24-hour traffic volumes on Marshall Road were obtained from the Coal Creek Innovation Park Traffic Impact Analysis[2]. Referenced traffic count data was collected April 5, 2023.

Newly collected and referenced counts representing existing traffic volumes are shown on Figure 3. Existing intersection geometry is shown on Figure 3a. Traffic count data is included for reference in Appendix A.

Existing signal timing parameters for the intersections of McCaslin Boulevard with U.S. Highway 36 eastbound off ramps, U.S. Highway 36 westbound off ramps, and Marshall Road were obtained from the Town of Superior and used throughout this study to the best extent possible in order to remain consistent with existing signal coordination plans. Town signal timing information received is included for reference in Appendix A.

[2] Coal Creek Innovation Park Traffic Impact Analysis, LSC Transportation Consultants, LLC, July 2023.

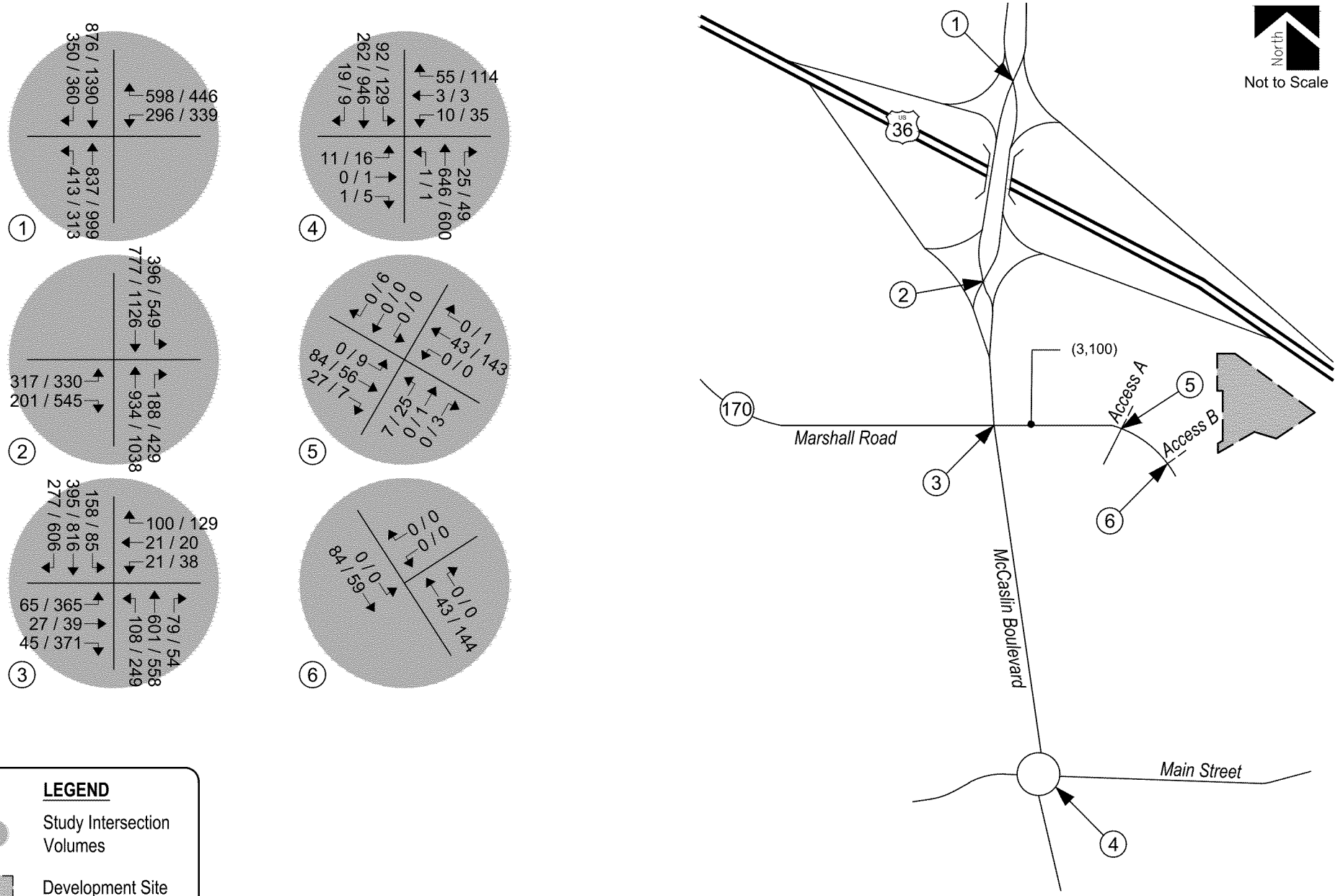


Figure 3
EXISTING TRAFFIC
Volumes
AM / PM Peak Hour
(ADT) : Average Daily Traffic

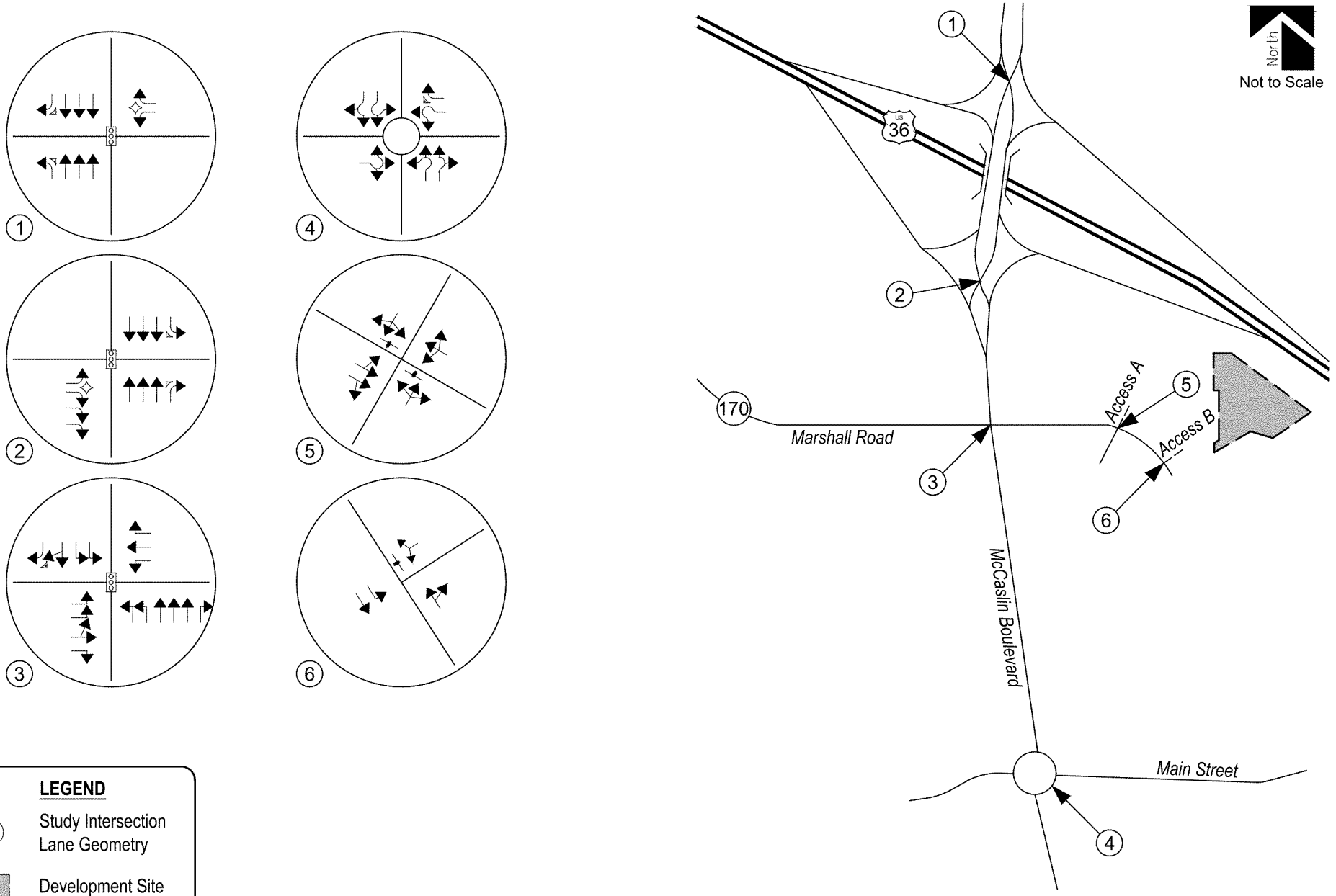


Figure 3a
EXISTING TRAFFIC
Intersection Geometry
AM / PM Peak Hour
(ADT) : Average Daily Traffic

Peak Hour Intersection Levels of Service – Existing Traffic

The Signalized, Unsignalized, and Roundabout Intersection Analysis techniques, as published in the Highway Capacity Manual (HCM), 6th Edition, by the Transportation Research Board and as incorporated into the SYNCHRO computer program, were used to analyze the study intersections for existing and future traffic conditions. These nationally accepted techniques allow for the determination of intersection level of service (LOS) based on the congestion and delay of each traffic movement for Signalized and Unsignalized intersections and based on the volume to capacity ratio and control delay for each approach for Roundabout intersections.

Level of service is a method of measurement used by transportation professionals to quantify a driver's perception of travel conditions that include travel time, number of stops, and total amount of stopped delay experienced on a roadway network. The HCM categorizes level of service into a range from "A" which indicates little, if any, vehicle delay, to "F" which indicates a level of operation considered unacceptable to most drivers. These levels of service grades with brief descriptions of the operating condition, for unsignalized and signalized intersections, are included for reference in Appendix B and have been used throughout this study.

The level of service analyses results for existing conditions are summarized in Table 1.

Intersection capacity worksheets developed for this study are provided in Appendix C.

Table 1 – Intersection Capacity Analysis Summary – Existing Traffic

INTERSECTION LANE GROUPS	LEVEL OF SERVICE AM PEAK HOUR	 PM PEAK HOUR
McCaslin Boulevard / U.S. 36 Eastbound Ramp (Signalized)	C (24.1)	C (23.5)
McCaslin Boulevard / U.S. 36 Eastbound Ramp (Stop-Controlled)		
Eastbound Left	C	C
McCaslin Boulevard / U.S. 36 Westbound Ramp (Signalized)	C (30.4)	C (28.5)
McCaslin Boulevard / U.S. 36 Westbound Ramp (Stop-Controlled)		
Westbound Left	C	D
McCaslin Boulevard / Marshall Road (Signalized)	A (10.0)	B (16.8)
McCaslin Boulevard / Main Street (Roundabout)		
Eastbound Left, Through and Right	A	A
Westbound Left and Through	A	A
Northbound Left and Through	A	A
Northbound Through and Right	A	A
Southbound Left and Through	A	A
Southbound Through and Right	A	A
Marshall Road / Access A (Stop-Controlled)		
Eastbound Left and Through	A	A
Westbound Left, Through and Right	A	A
Northbound Left, Through and Right	A	B
Southbound Left, Through and Right	A	A
Marshall Road / Access B (Stop-Controlled)		
Westbound Left and Right	A	A
Southbound Left	A	A

Key: Signalized Intersection: Level of Service (Control Delay in sec/veh)
Roundabout Intersection: Level of Service
Stop-Controlled Intersection: Level of Service

Existing Traffic Analysis Results

Under existing conditions, operational analysis shows that the signalized intersections of McCaslin Boulevard with U.S. Highway 36 eastbound and westbound ramps have overall operations at LOS C during the morning and the afternoon peak traffic hours.

It is important to note that both on-ramps have a yield-controlled left-turn movement onto McCaslin Boulevard. For purposes of this analysis, said movements were analyzed under stop-control with projected LOS C and D turn movement operations during either peak traffic hour.

Operational analysis shows that the signalized intersection of McCaslin Boulevard and Marshall Road has overall operations at LOS A during the morning peak traffic hour and LOS B during the afternoon peak traffic hour.

The roundabout-controlled intersection of McCaslin Boulevard with Main Street has turning movement operations at LOS A during the morning and the afternoon peak traffic hours.

The unsignalized intersection of Marshall Road with Access A has turn movement operations at LOS A during the morning peak traffic hour and LOS B or better during the afternoon peak traffic hour.

The unsignalized intersection of Marshall Road with Access B has turn movement operations at LOS A during the morning and the afternoon peak traffic hours.

III. Future Traffic Conditions Without Proposed Development

Background traffic is the traffic projected to be on area roadways without consideration of the proposed development. Background traffic includes traffic generated by development of vacant parcels in the area.

To account for projected increases in background traffic for Years 2025 and 2043, a compounded annual growth rate was determined using historical traffic data provided by CDOT's Online Transportation Information System (OTIS) along the adjacent segment of Marshall Road (State Highway 170) which anticipates a 20-year growth rate between one and two percent. Therefore, in order to provide for a conservative analysis, a growth rate of approximately two percent was applied to existing traffic volumes.

To account for projected traffic from adjacent developments not yet built, trip generations from the Coal Creek Innovation Park Traffic Impact Analysis traffic study were added to background traffic volumes.

Pursuant to the area roadway improvements discussed in Section I, Year 2025 and Year 2043 background traffic conditions assume no roadway improvements to accommodate regional transportation demands. Year 2043 assumes existing signal timing parameters for the intersections of McCaslin Boulevard with U.S. Highway 36 eastbound off ramps, U.S. Highway 36 westbound off ramps, and Marshall Road with optimized intersection splits in effort to better long-term intersection performance.

Projected background traffic volumes and intersection geometry for Year 2025 are shown on Figure 4 and Figure 4a, respectively.

Projected background traffic volumes and intersection geometry for Year 2043 are shown on Figure 5 and Figure 5a, respectively.

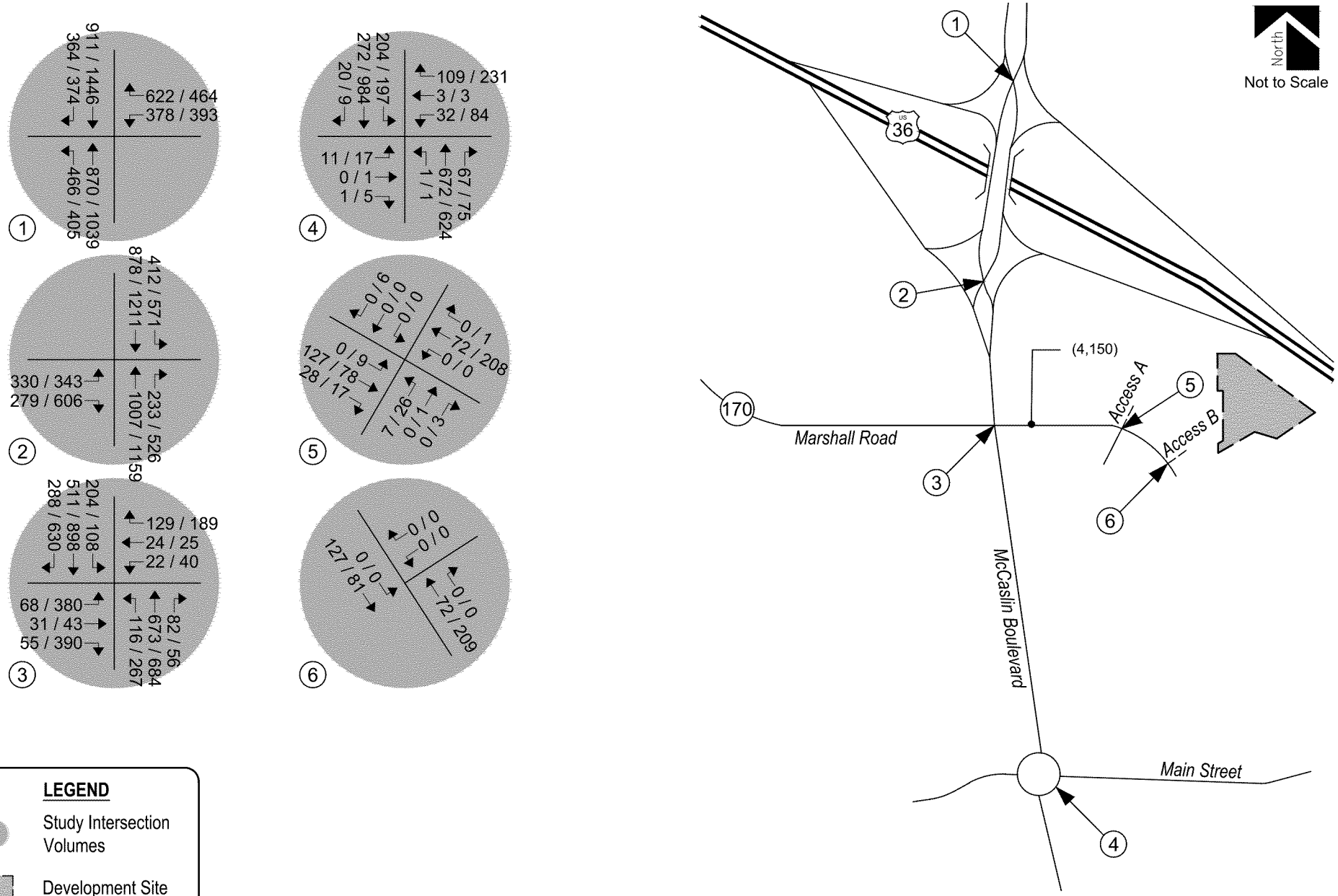


Figure 4
BACKGROUND TRAFFIC - YEAR 2025
Volumes
AM / PM Peak Hour
(ADT) : Average Daily Traffic

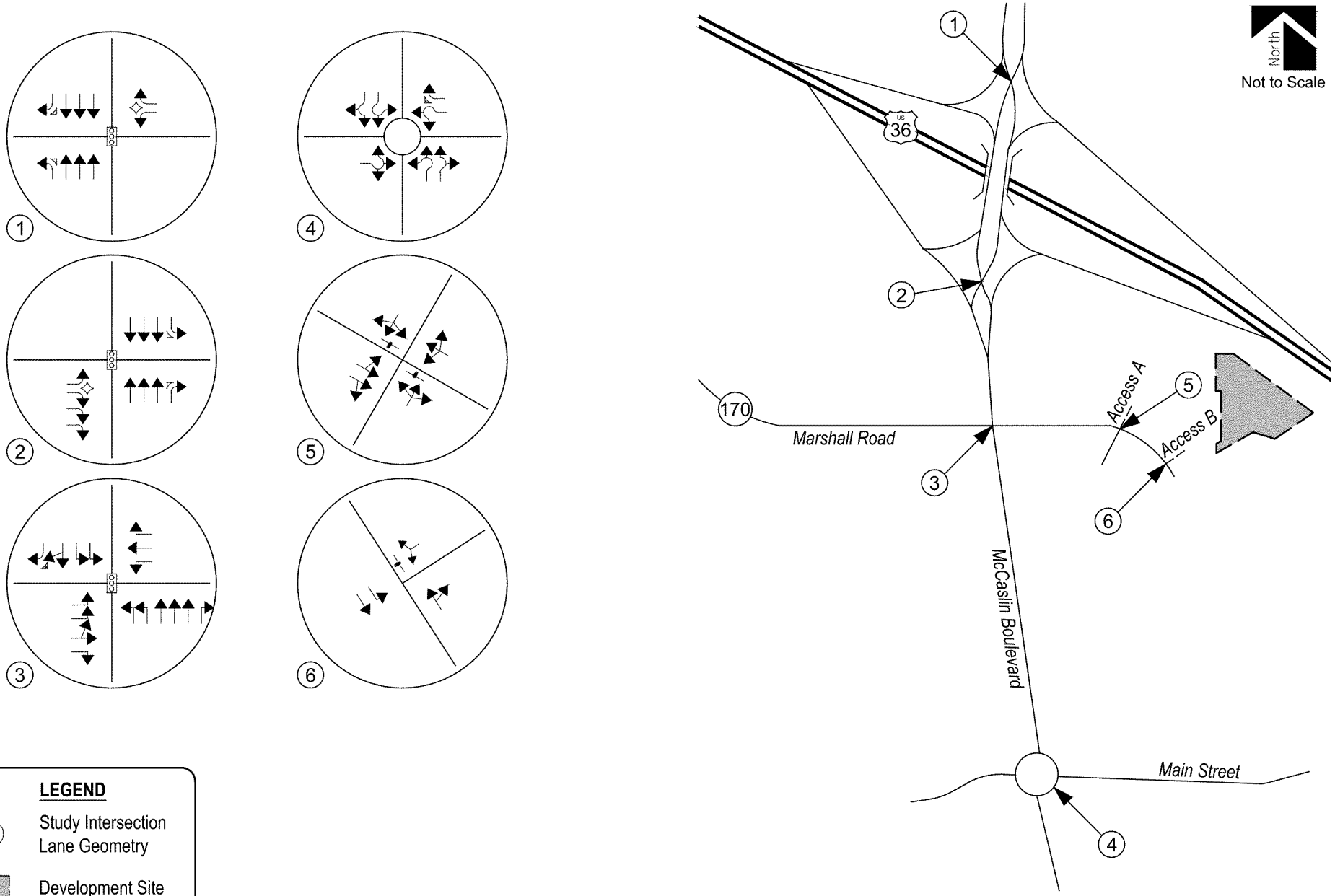


Figure 4a
BACKGROUND TRAFFIC - YEAR 2025
Intersection Geometry
AM / PM Peak Hour
(ADT) : Average Daily Traffic

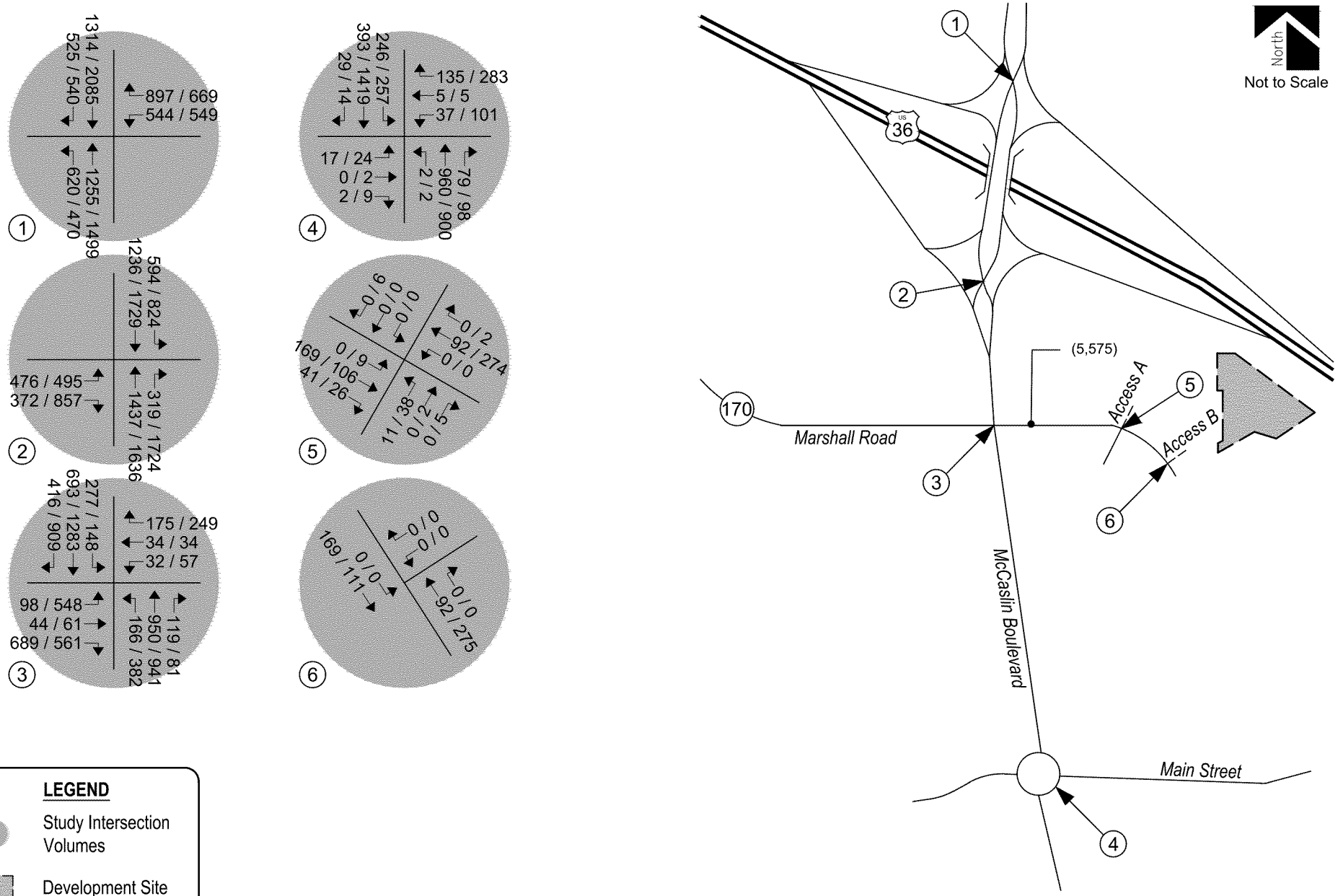


Figure 5
BACKGROUND TRAFFIC - YEAR 2043
Volumes
AM / PM Peak Hour
(ADT) : Average Daily Traffic

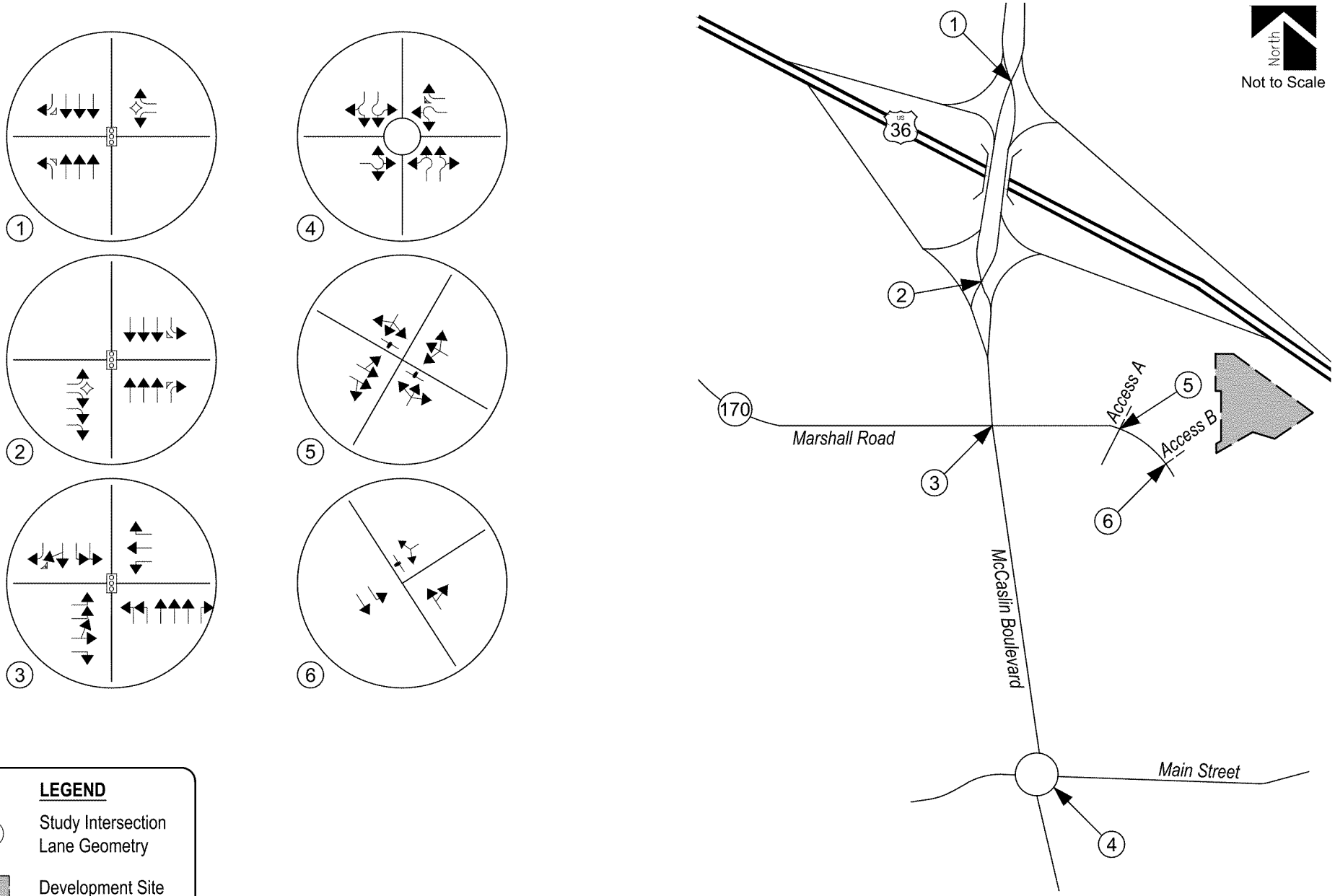


Figure 5a
BACKGROUND TRAFFIC - YEAR 2043
Intersection Geometry
AM / PM Peak Hour
(ADT) : Average Daily Traffic

Peak Hour Intersection Levels of Service – Background Traffic

As with existing traffic conditions, the operations of study intersections were analyzed under background conditions, without the proposed development, using the SYNCHRO computer program.

Background traffic level of service analysis results for Year 2025 are listed in Table 2. Year 2043 operational results are summarized in Table 3.

Definitions of levels of service are given in Appendix B. Intersection capacity worksheets are provided in Appendix C.

Table 2 – Intersection Capacity Analysis Summary – Background Traffic – Year 2025

INTERSECTION	LEVEL OF SERVICE	
LANE GROUPS	AM PEAK HOUR	PM PEAK HOUR
McCaslin Boulevard / U.S. 36 Eastbound Ramp (Signalized)	C (24.1)	C (22.8)
McCaslin Boulevard / U.S. 36 Eastbound Ramp (Stop-Controlled)		
Eastbound Left	C	C
McCaslin Boulevard / U.S. 36 Westbound Ramp (Signalized)	C (30.2)	C (28.7)
McCaslin Boulevard / U.S. 36 Westbound Ramp (Stop-Controlled)		
Westbound Left	C	F
McCaslin Boulevard / Marshall Road (Signalized)	B (11.1)	B (18.0)
McCaslin Boulevard / Main Street (Roundabout)		
Eastbound Left, Through and Right	A	A
Westbound Left and Through	A	A
Northbound Left and Through	A	A
Northbound Through and Right	A	A
Southbound Left and Through	A	A
Southbound Through and Right	A	A
Marshall Road / Access A (Stop-Controlled)		
Eastbound Left and Through	A	A
Westbound Left, Through and Right	A	A
Northbound Left, Through and Right	B	B
Southbound Left, Through and Right	A	A
Marshall Road / Access B (Stop-Controlled)		
Westbound Left and Right	A	A
Southbound Left	A	A

Key: Signalized Intersection: Level of Service (Control Delay in sec/veh)
Roundabout Intersection: Level of Service
Stop-Controlled Intersection: Level of Service

Background Traffic Analysis Results – Year 2025

Year 2025 background traffic analysis indicates that the signalized intersections of McCaslin Boulevard with U.S. Highway 36 eastbound and westbound ramps have overall operations at LOS C during the morning and the afternoon peak traffic hours.

The stop-controlled intersections of McCaslin Boulevard with U.S. Highway 36 eastbound and westbound ramps have turn movement operations at LOS C during the morning and afternoon peak traffic hours. Exceptions would include the westbound left turn movement which operates at LOS F during the PM peak traffic hour. The LOS F operation is attributed to the through traffic volume along McCaslin Boulevard and the stop-controlled nature of analysis technique applied. Considering how the westbound left turn movement operates with yield-controlled, turn movement operations are likely better than that analyzed throughout this study.

Operational analysis shows that the signalized intersection of McCaslin Boulevard and Marshall Road has overall operations at LOS B during the morning and the afternoon peak traffic hours.

The roundabout-controlled intersection of McCaslin Boulevard with Main Street has turning movement operations at LOS A during both the morning and the afternoon peak traffic hours.

The unsignalized intersection of Marshall Road with Access A has turn movement operations at LOS B or better during the morning and the afternoon peak traffic hours.

The unsignalized intersection of Marshall Road with Access B has turn movement operations at LOS A during the morning and the afternoon peak traffic hours.

It is to be noted that it is not uncommon for unsignalized movements to or from an arterial roadway, in urban areas, to operate with noticeable delays during peak traffic hours. It is, however, likely that turn movements will operate better than the results obtained with this HCM Two-Way Stop-Control (TWSC) level of service analysis would indicate, as the HCM analysis may not accurately account for the effect of vehicle platooning and gaps caused by upstream signals. Upstream signal controls along McCaslin Boulevard will tend to create additional gaps in the traffic stream for turning movements at McCaslin Boulevard and will most likely provide mitigation to the LOS F operation projected during the afternoon peak traffic hour.

Table 3 – Intersection Capacity Analysis Summary – Background Traffic – Year 2043

INTERSECTION LANE GROUPS	LEVEL OF SERVICE AM PEAK HOUR	 PM PEAK HOUR
McCaslin Boulevard / U.S. 36 Eastbound Ramp (Signalized)	C (24.1)	C (30.2)
McCaslin Boulevard / U.S. 36 Eastbound Ramp (Stop-Controlled)		
Eastbound Left	F	F
McCaslin Boulevard / U.S. 36 Westbound Ramp (Signalized)	C (21.6)	C (28.1)
McCaslin Boulevard / U.S. 36 Westbound Ramp (Stop-Controlled)		
Westbound Left	F	F
McCaslin Boulevard / Marshall Road (Signalized)	C (29.5)	C (29.0)
McCaslin Boulevard / Main Street (Roundabout)		
Eastbound Left, Through and Right	A	C
Westbound Left and Through	A	A
Northbound Left and Through	B	A
Northbound Through and Right	B	A
Southbound Left and Through	A	B
Southbound Through and Right	A	C
Marshall Road / Access A (Stop-Controlled)		
Eastbound Left and Through	A	B
Westbound Left, Through and Right	A	A
Northbound Left, Through and Right	B	A
Southbound Left, Through and Right	A	A
Marshall Road / Access B (Stop-Controlled)		
Westbound Left and Right	A	A
Southbound Left	A	A

Key: Signalized Intersection: Level of Service (Control Delay in sec/veh)
Roundabout Intersection: Level of Service
Stop-Controlled Intersection: Level of Service

Background Traffic Analysis Results – Year 2043

By Year 2043 and without the proposed development, the study intersections of McCaslin Boulevard with U.S. Highway 36 eastbound and westbound ramps have overall operations at LOS C during the morning and the afternoon peak traffic hours.

The stop-controlled intersections of McCaslin Boulevard with U.S. Highway 36 eastbound and westbound ramps projects left turn operations at LOS F during the morning and afternoon peak traffic hours. The LOS F operations are attributed to the through traffic volume along McCaslin Boulevard and the stop-controlled nature of analysis technique applied. Considering how the westbound left turn movement operates with yield-controlled, turn movement operations are likely better than that analyzed throughout this study.

Operational analysis shows that the signalized intersection of McCaslin Boulevard and Marshall Road anticipates overall operations at LOS C during the morning and the afternoon peak traffic hours.

The roundabout-controlled intersection of McCaslin Boulevard with Main Street predicts turning movement operations at or better than LOS B during the morning peak traffic hour and LOS C or better during the afternoon peak traffic hour.

The unsignalized intersection of Marshall Road with Access A expects turn movement operations at LOS B or better during the morning and the afternoon peak traffic hours.

The unsignalized intersection of Marshall Road with Access B anticipates turn movement operations at LOS A during the morning and afternoon peak traffic hours.

It is again noted that it is not uncommon for unsignalized movements to or from an arterial roadway, in urban areas, to operate with noticeable delays during peak traffic hours. It is, however, likely that turn movements will operate better than the results obtained with this HCM Two-Way Stop-Control (TWSC) level of service analysis would indicate, as the HCM analysis may not accurately account for the effect of vehicle platooning and gaps caused by upstream signals. Upstream signal controls along McCaslin Boulevard will tend to create additional gaps in the traffic stream for turning movements at U.S. Highway 36 eastbound and westbound ramps and will most likely provide mitigation to the LOS F operation projected during both peak traffic hours. It is also emphasized that, for purposes of this analysis, the HCM's TWSC technique was applied to the eastbound and westbound left turn movements for the off-ramps since HCM does not provide a yield-controlled technique.

IV. Proposed Project Traffic

Trip Generation

Standard traffic generation characteristics compiled by the Institute of Transportation Engineers (ITE) in their report entitled Trip Generation Manual, 11th Edition, were applied to the proposed land use in order to estimate average daily traffic (ADT), AM Peak Hour, and PM Peak Hour vehicle trips. A vehicle trip is defined as a one-way vehicle movement from a point of origin to a point of destination.

The ITE land use code 311 (All Suites Hotel) was used for estimating trip generation because of its conservative rates and best fit to the proposed land use description.

Trip generation rates used in this study are presented in Table 4.

Table 4 – Trip Generation Rates

ITE			TRIP GENERATION RATES						
			24	AM PEAK HOUR			PM PEAK HOUR		
CODE	LAND USE	UNIT	HOUR	ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL
311	All Suites Hotel	RMS	4.40	0.18	0.16	0.34	0.18	0.18	0.36

Key: RMS = Rooms.
Note: All data and calculations above are subject to being rounded to nearest value.

Table 5 illustrates projected ADT, AM Peak Hour, and PM Peak Hour traffic volumes likely generated by the proposed development upon build-out.

Table 5 – Trip Generation Summary

ITE			TOTAL TRIPS GENERATED						
			24	AM PEAK HOUR			PM PEAK HOUR		
CODE	LAND USE	SIZE	HOUR	ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL
311	All Suites Hotel	114 RMS	502	21	18	39	20	21	41
		Total:	*502*	*21*	*18*	*39*	*20*	*21*	*41*

Key: RMS = Rooms.
Note: All data and calculations above are subject to being rounded to nearest value.

Upon build-out, Table 5 illustrates that the proposed development has the potential to generate approximately 502 daily vehicle trips with 39 of those occurring during the morning peak hour and 41 during the afternoon peak hour.

Adjustments to Trip Generation Rates

A development of this type is not likely to attract trips from within area land uses nor pass-by or diverted link trips from the adjacent roadway system, therefore no trip reduction was taken in this analysis.

Trip Distribution

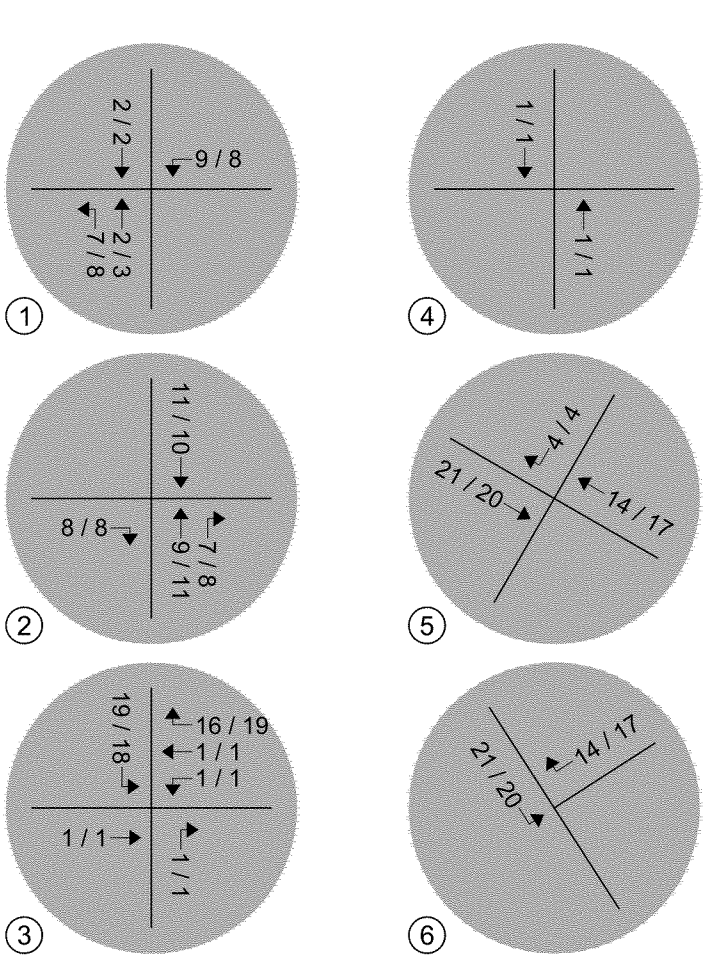
The overall directional distribution of site-generated traffic was determined based on the location of development site within the Town, proposed and existing area land uses, allowed turning movements, and available roadway network.

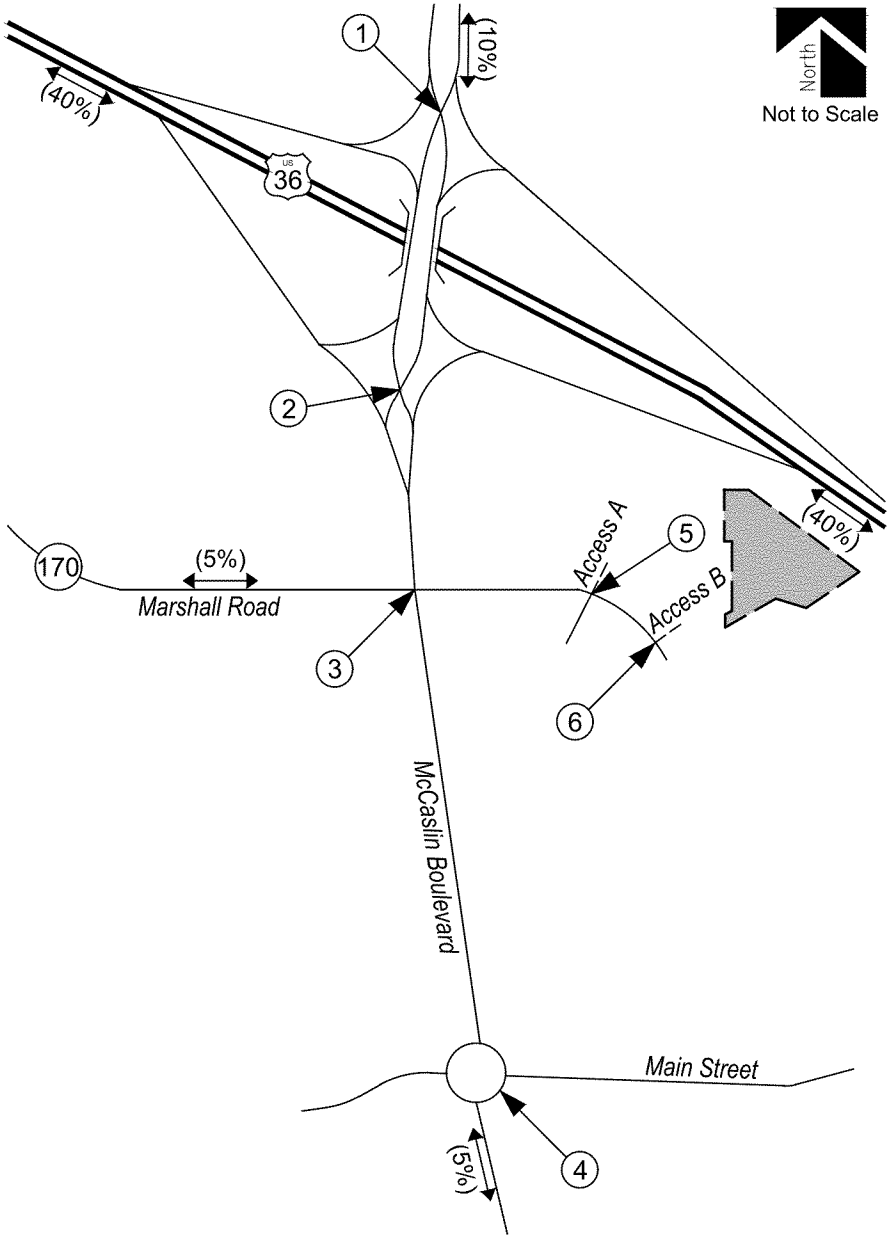
Overall trip distribution patterns for the development are shown on Figure 6.

Trip Assignment

Traffic assignment is how generated and distributed vehicle trips are expected to be loaded onto the available roadway network.

Applying trip distribution patterns to site-generated traffic provides the overall site-generated trip assignments shown on Figure 6.





LEGEND

Study Intersection Volumes

Development Site

Figure 6
SITE DEVELOPMENT DISTRIBUTION
(%) : Overall
SITE-GENERATED TRIPS
AM / PM Peak Hour

V. Future Traffic Conditions With Proposed Developments

Total traffic is the traffic projected to be on area roadways with consideration of the proposed development. Total traffic includes background traffic projections for Years 2025 and 2043 with consideration of site-generated traffic. For analysis purposes, it was assumed that development construction would be completed by end of Year 2025.

Pursuant to area roadway improvement discussions provided in Section III, Year 2025 and Year 2043 total traffic conditions assume no roadway improvements to accommodate regional transportation demands. Roadway improvements associated with site development are expected to be limited to site access and frontage as required by the governing agency.

Projected Year 2025 total traffic volumes and intersection geometry are shown in Figure 7 and Figure 7a, respectively.

Figure 8 and Figure 8a shows projected total traffic volumes and intersection geometry for Year 2043, respectively.

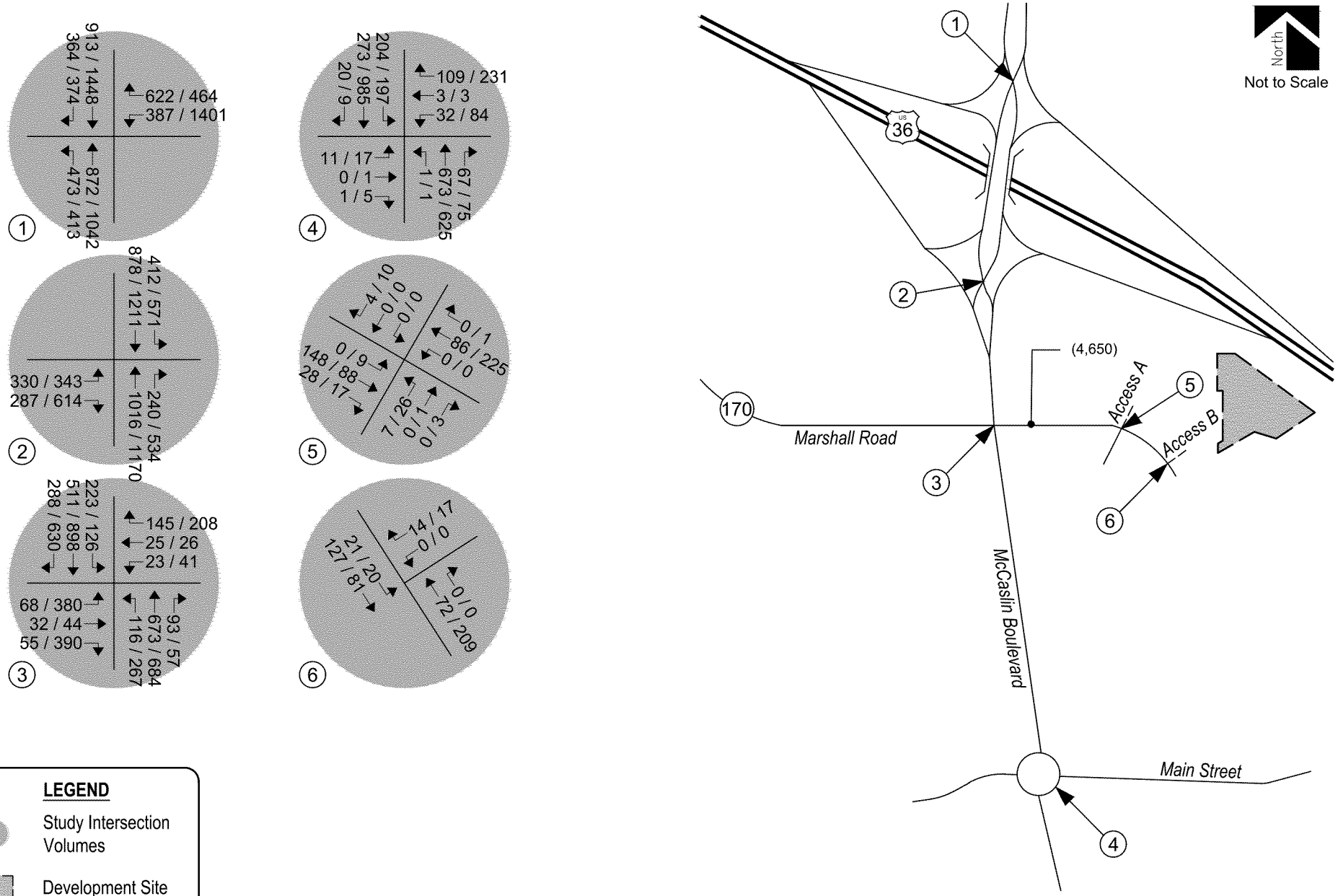


Figure 7
TOTAL TRAFFIC - YEAR 2025
Volumes
AM / PM Peak Hour
(ADT) : Average Daily Traffic

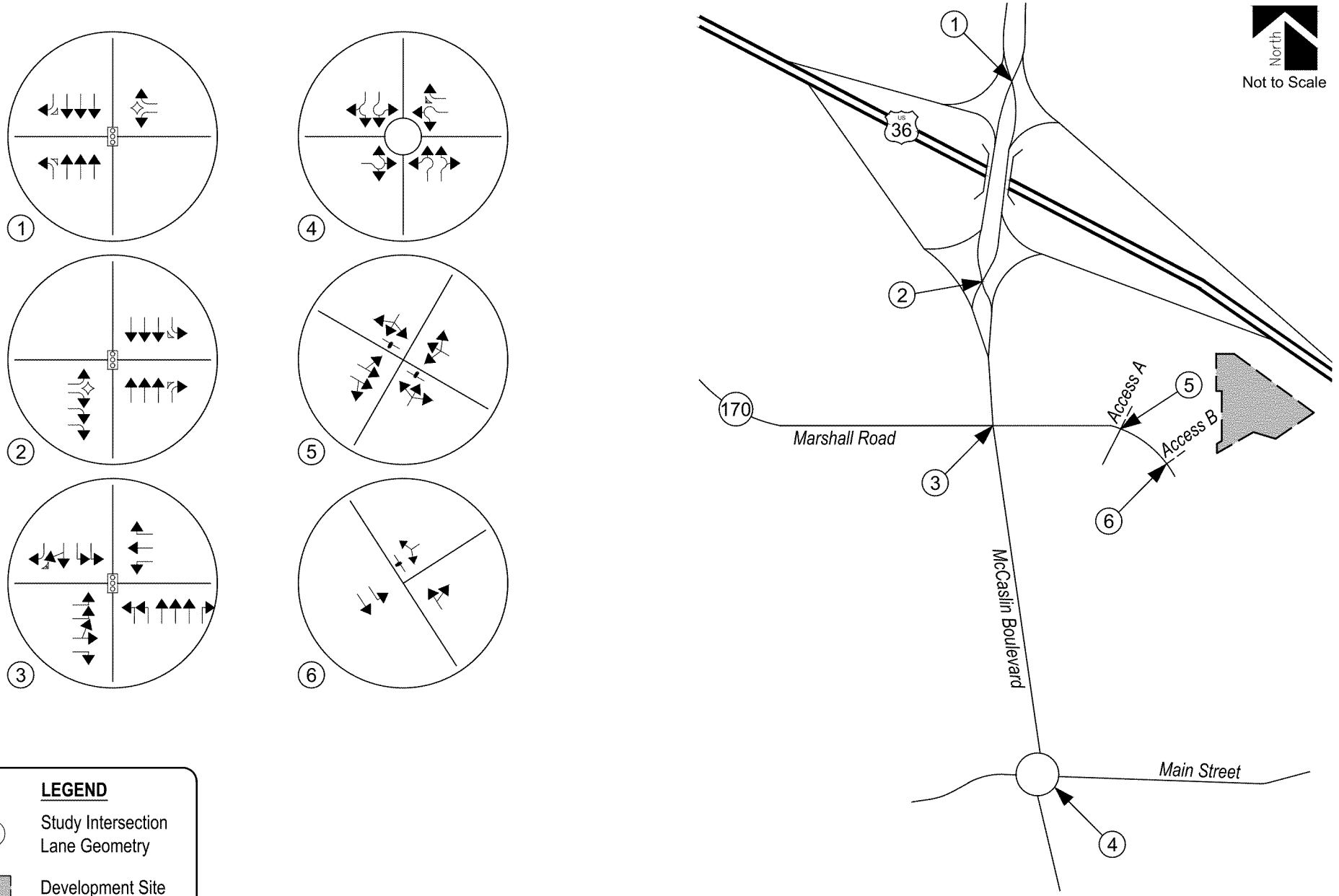


Figure 7a
TOTAL TRAFFIC - YEAR 2025
Intersection Geometry
AM / PM Peak Hour
(ADT) : Average Daily Traffic

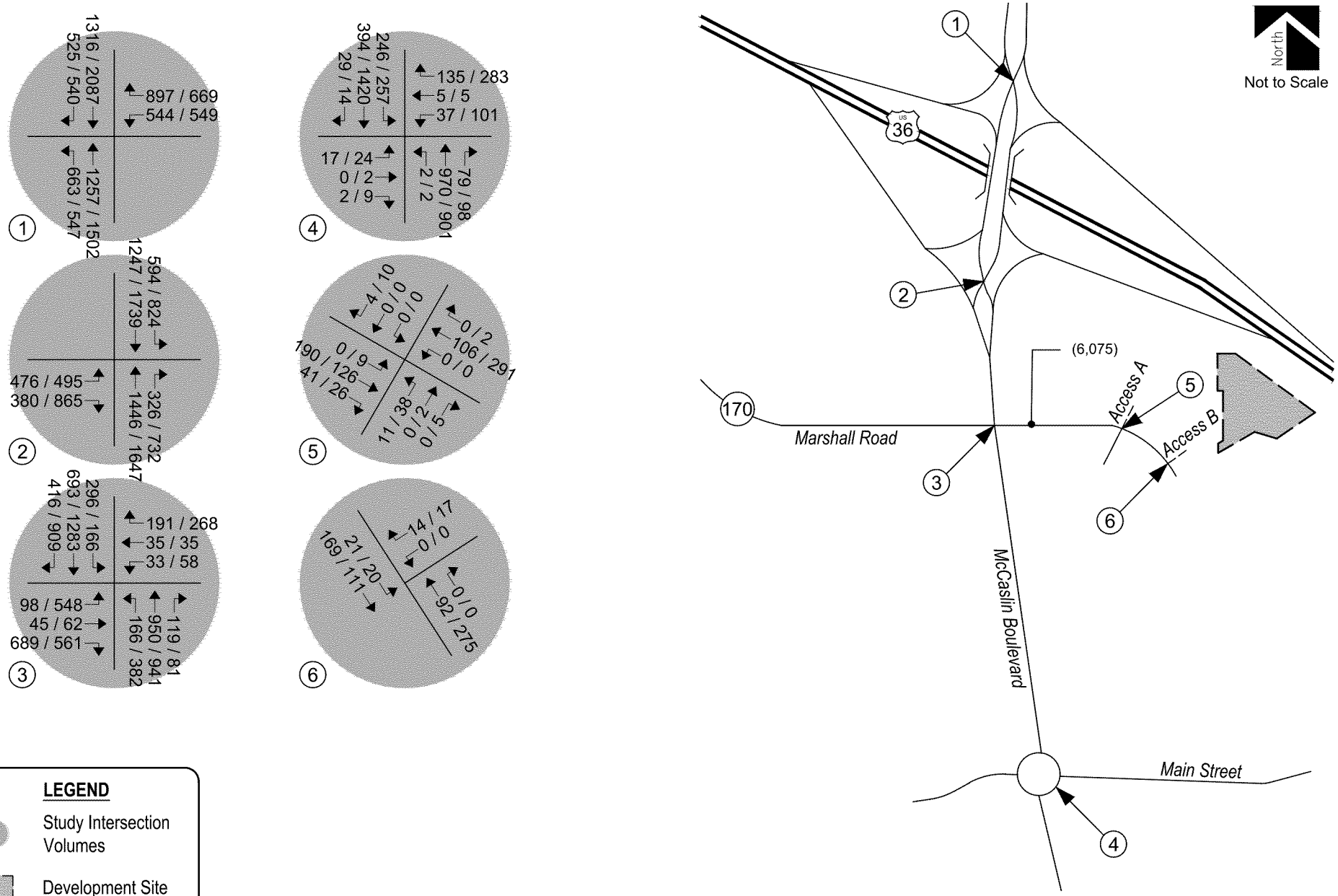


Figure 8
TOTAL TRAFFIC - YEAR 2043
Volumes
AM / PM Peak Hour
(ADT) : Average Daily Traffic

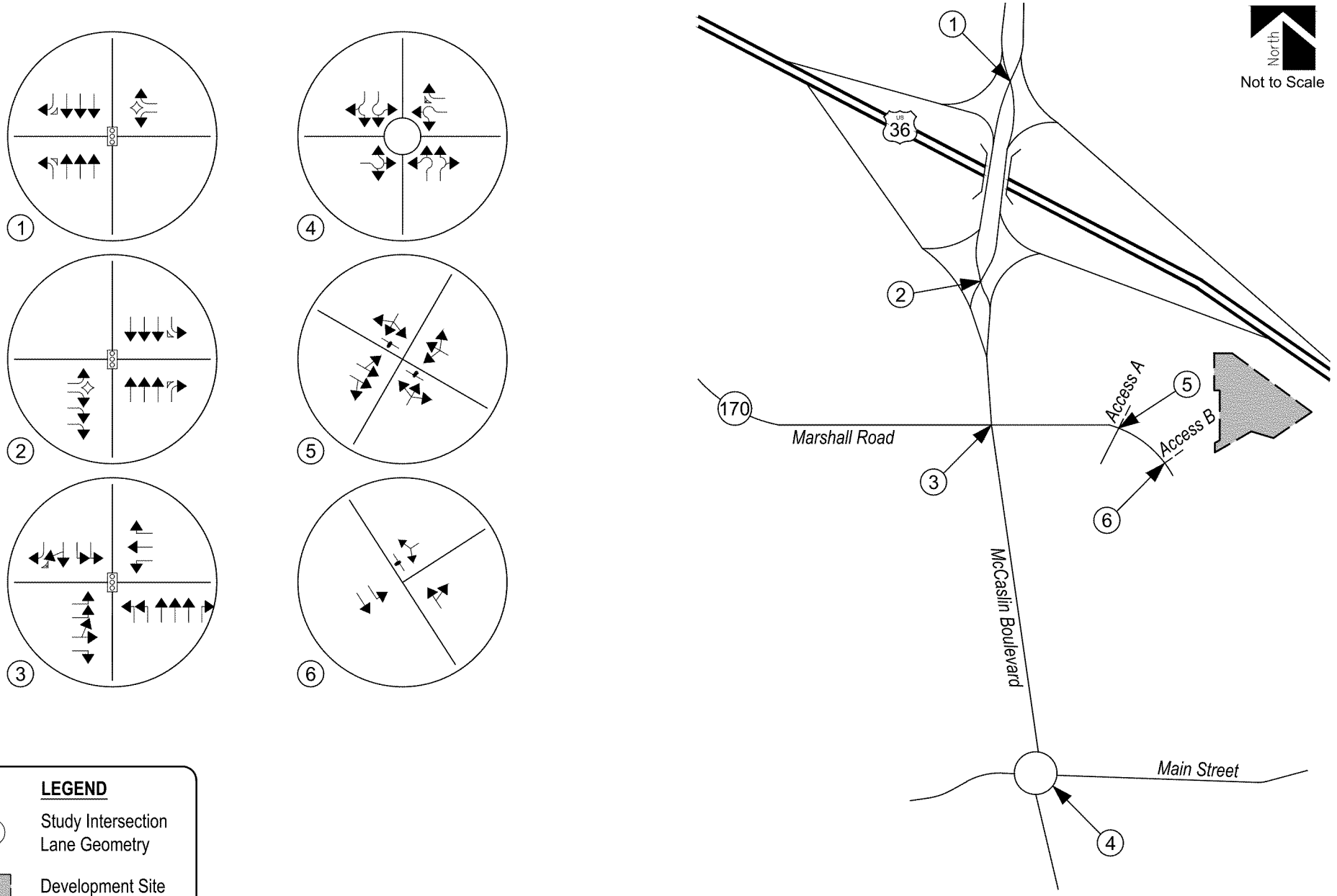


Figure 8a
TOTAL TRAFFIC - YEAR 2043
Intersection Geometry
AM / PM Peak Hour
(ADT) : Average Daily Traffic

VI. Project Impacts

The analyses and procedures described in this study were performed in accordance with the latest HCM and are based upon the worst-case conditions that occur during a typical weekday upon build-out of site development and analyzed land uses. Therefore, study intersections are likely to operate with traffic conditions better than those described within this study, which represent the peak hours of weekday operations only.

Peak Hour Intersection Levels of Service – Total Traffic

As with background traffic, the operations of the study intersections were analyzed under projected total traffic conditions using the SYNCHRO computer program. Total traffic level of service analysis results for Years 2025 and 2043 are summarized in Table 6 and Table 7, respectively.

Definitions of levels of service are given in Appendix B. Intersection capacity worksheets are provided in Appendix C.

Table 6 – Intersection Capacity Analysis Summary – Total Traffic – Year 2025

INTERSECTION LANE GROUPS	LEVEL OF SERVICE AM PEAK HOUR	 PM PEAK HOUR
McCaslin Boulevard / U.S. 36 Eastbound Ramp (Signalized)	C (24.2)	C (22.8)
McCaslin Boulevard / U.S. 36 Eastbound Ramp (Stop-Controlled)		
Eastbound Left	C	D
McCaslin Boulevard / U.S. 36 Westbound Ramp (Signalized)	C (30.3)	C (28.7)
McCaslin Boulevard / U.S. 36 Westbound Ramp (Stop-Controlled)		
Westbound Left	C	F
McCaslin Boulevard / Marshall Road (Signalized)	B (11.3)	B (18.1)
McCaslin Boulevard / Main Street (Roundabout)		
Eastbound Left, Through and Right	A	B
Westbound Left and Through	A	A
Northbound Left and Through	A	A
Northbound Through and Right	A	A
Southbound Left and Through	A	A
Southbound Through and Right	A	A
Marshall Road / Access A (Stop-Controlled)		
Eastbound Left and Through	A	B
Westbound Left, Through and Right	A	A
Northbound Left, Through and Right	B	A
Southbound Left, Through and Right	A	A
Marshall Road / Access B (Stop-Controlled)		
Westbound Left and Right	A	A
Southbound Left	A	A

Key: Signalized Intersection: Level of Service (Control Delay in sec/veh)
Roundabout Intersection: Level of Service
Stop-Controlled Intersection: Level of Service

Table 7 – Intersection Capacity Analysis Summary – Total Traffic – Year 2043

INTERSECTION LANE GROUPS	LEVEL OF SERVICE AM PEAK HOUR	 PM PEAK HOUR
McCaslin Boulevard / U.S. 36 Eastbound Ramp (Signalized)	C (21.7)	C (28.2)
McCaslin Boulevard / U.S. 36 Eastbound Ramp (Stop-Controlled)		
Eastbound Left	F	F
McCaslin Boulevard / U.S. 36 Westbound Ramp (Signalized)	C (24.2)	C (30.4)
McCaslin Boulevard / U.S. 36 Westbound Ramp (Stop-Controlled)		
Westbound Left	F	F
McCaslin Boulevard / Marshall Road (Signalized)	C (30.9)	C (29.8)
McCaslin Boulevard / Main Street (Roundabout)		
Eastbound Left, Through and Right	A	C
Westbound Left and Through	A	A
Northbound Left and Through	B	B
Northbound Through and Right	B	A
Southbound Left and Through	A	B
Southbound Through and Right	A	C
Marshall Road / Access A (Stop-Controlled)		
Eastbound Left and Through	A	B
Westbound Left, Through and Right	A	A
Northbound Left, Through and Right	B	A
Southbound Left, Through and Right	A	A
Marshall Road / Access B (Stop-Controlled)		
Westbound Left and Right	A	B
Southbound Left	A	A

Key: Signalized Intersection: Level of Service (Control Delay in sec/veh)
Roundabout Intersection: Level of Service
Stop-Controlled Intersection: Level of Service

Total Traffic Analysis Results Upon Development Build-Out

Table 7 illustrates how, by Year 2043 and upon development build-out, the signalized intersections of McCaslin Boulevard with U.S. Highway 36 eastbound and westbound ramps have overall operations at LOS C during the morning and the afternoon peak traffic hours.

The stop-controlled intersections of McCaslin Boulevard with U.S. Highway 36 eastbound and westbound ramps are projected to have turning movement operations at LOS F for the morning and afternoon peak traffic hours. The LOS F operations continue to be attributed to the through traffic volume along McCaslin Boulevard and the stop-controlled nature of the analysis technique applied. Considering how the westbound left turn movement operates with yield-control, turn movement operations are likely better than that analyzed throughout this study.

The signalized intersection of McCaslin Boulevard with Marshall Road is projected to have morning peak traffic hour operations at LOS C during the morning and afternoon peak traffic hours.

The roundabout-controlled intersection of McCaslin Boulevard with Main Street is projected to have turning movement operations at LOS B or better for the morning peak traffic hour and LOS C or better for the afternoon peak traffic hour.

The stop-controlled intersection of Marshall Road with Access A is projected to have turning movement operations at LOS B or better for the morning and afternoon peak traffic hours.

The stop-controlled intersection of Marshall Road with Access B is projected to have turning movement operations at LOS A during the morning peak traffic hour and LOS B or better for the afternoon peak traffic hour.

As with background traffic conditions, it is not uncommon for unsignalized movements to or from an arterial roadway, in urban areas, to operate with noticeable delays during peak traffic hours. It is, however, likely that turn movements will operate better than the results obtained with this HCM Two-Way Stop-Control (TWSC) level of service analysis would indicate, as the HCM analysis may not accurately account for the effect of vehicle platooning and gaps caused by upstream signals. Upstream signal controls along McCaslin Boulevard will tend to create additional gaps in the traffic stream for turning movements at U.S. Highway 36 eastbound and westbound ramps and will most likely provide mitigation to the LOS F operation projected during both peak traffic hours. It is again emphasized that, for purposes of this analysis, the HCM's TWSC technique was applied to the eastbound and westbound left turn movements for the off-ramps since HCM does not provide a yield-controlled technique.

These intersection operations are similar to background conditions.

VII. Conclusion

This traffic impact study addressed the capacity, geometric, and control requirements associated with the development entitled KT Development. This proposed lodging development consists of a 114-suite hotel. The proposed development is understood to entail the new construction of an accommodating 114 rooms. The development is located near the east corner of McCaslin Boulevard in Superior, Colorado.

The study area examined in this analysis encompassed McCaslin Boulevard with U.S. Highway 36, Marshall Road, and Main Street and the intersections of Marshall Road with Access A and Access B.

Analysis was conducted for critical AM Peak Hour and PM Peak Hour traffic operations for existing traffic conditions, Year 2025 and Year 2043 background traffic conditions, and Year 2025 and Year 2043 total traffic conditions.

Under existing conditions, operational analysis shows that the signalized intersections within the study area have overall operations at LOS C or better during the morning and the afternoon peak traffic hours. The roundabout-controlled intersection of McCaslin Boulevard with Main Street has turning movement operations at LOS A during the morning and the afternoon peak traffic hours. The stop-controlled intersections within the study area have turn movement operations at or better than LOS D during both the morning and afternoon peak traffic hours.

Year 2025 background traffic analysis indicates that the signalized intersections within the study area continue to operate at LOS C or better during the morning and the afternoon peak traffic hours. The roundabout-controlled intersection of McCaslin Boulevard with Main Street continues to project turning movement operations at LOS A during both the morning and the afternoon peak traffic hours. The stop-controlled intersections within the study area expect turning movement operations at or better than LOS D during either peak traffic hour. Exceptions include the westbound left turn movement of McCaslin Boulevard and U.S. Highway 36 westbound off ramp which operates at LOS F during the PM peak traffic hour and the stop-controlled nature of analysis techniques applied. Considering how the westbound left turn movement operates with yield-control, turn movement operations are likely better than expected.

By Year 2043 and without the proposed development, the signalized intersections anticipate LOS operations at LOS C during either peak traffic hour. The roundabout-controlled intersection of McCaslin Boulevard with Main Street predicts turning movement operations at or better than LOS C during the morning and afternoon peak traffic hours. The stop-controlled intersection within the study area project turning movement operations at or better than LOS C. Exceptions would include the left turn movements onto McCaslin Boulevard from U.S. Highway 36 eastbound and westbound ramps. The LOS F operations are attributed to the through traffic volume along McCaslin Boulevard and the stop-controlled nature of analysis technique applied. Considering how the westbound left turn movement operates with yield-control, turn movement operations are likely better than that analyzed throughout this traffic study.

It is again noted that it is not uncommon for unsignalized movements to or from an arterial roadway, in urban areas, to operate with noticeable delays during peak traffic hours. It is, however, likely that turn movements will operate better than the results obtained with this HCM Two-Way Stop-Control (TWSC) level of service analysis would indicate, as the HCM analysis may not accurately account for the effect of vehicle platooning and gaps caused by upstream signals. The upstream signal controls along McCaslin Boulevard will tend to create additional gaps in the traffic stream for turning movements at U.S. Highway 36 eastbound and westbound ramps and will most likely provide mitigation to the LOS F operation projected during both peak traffic hours. It is also emphasized that, for purposes of this analysis, the HCM's TWSC technique was applied to the eastbound and westbound left turn movement for the off-ramps since HCM does not provide a yield-controlled technique.

Analysis of future traffic conditions indicates that the addition of site-generated traffic is expected to create no negative impact to traffic operations for the existing and surrounding roadway system assumed within this analysis. With all conservative assumptions defined in this analysis, the study intersections are projected to operate at future levels of service comparable to Year 2043 background traffic conditions. Proposed site accesses have long-term operations at LOS B or better during peak traffic periods and upon build-out.

APPENDIX A

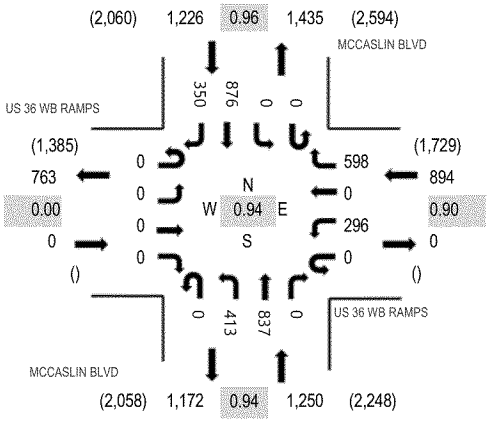
Traffic Count Data
Signal Timing Information

ALL TRAFFIC DATA SERVICES

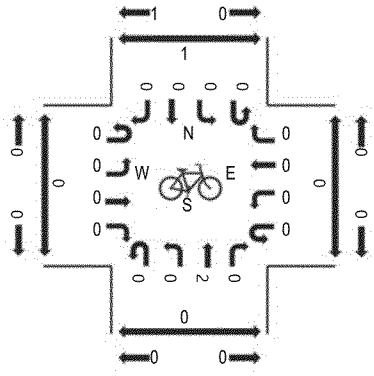
(303) 216-2439
www.alltrafficdata.net

Location: 1 MCCASLIN BLVD & US 36 WB RAMPS AM
Date: Tuesday, October 17, 2023
Peak Hour: 07:45 AM - 08:45 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

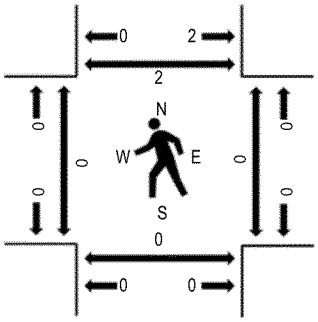
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

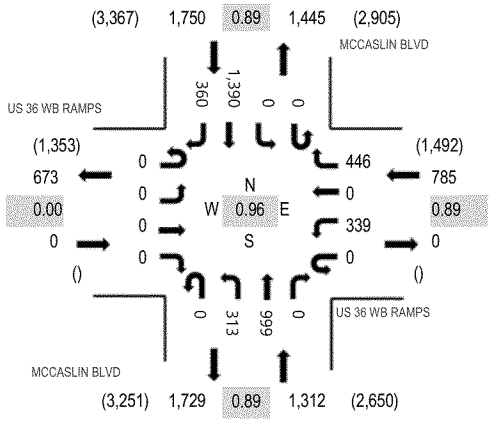
Traffic Counts - Motorized Vehicles

Interval Start Time	US 36 WB RAMPS Eastbound				US 36 WB RAMPS Westbound				MCCASLIN BLVD Northbound				MCCASLIN BLVD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	0	0	0	0	102	0	121	0	60	112	0	0	0	93	46	534	2,736	0	0	0	0
7:15 AM	0	0	0	0	0	78	0	125	0	84	129	0	0	0	132	57	605	3,026	0	0	0	0
7:30 AM	0	0	0	0	0	67	0	121	0	129	189	0	0	0	110	82	698	3,273	0	0	0	1
7:45 AM	0	0	0	0	0	73	0	177	0	114	217	0	0	0	231	87	899	3,370	0	0	0	0
8:00 AM	0	0	0	0	0	69	0	162	0	97	194	0	0	0	207	95	824	3,301	0	0	0	0
8:15 AM	0	0	0	0	0	83	0	147	0	108	195	0	0	0	243	76	852		0	0	0	0
8:30 AM	0	0	0	0	0	71	0	112	0	94	231	0	0	0	195	92	795		0	0	0	2
8:45 AM	0	0	0	0	0	73	0	148	0	81	214	0	0	0	231	83	830		0	0	0	1
Count Total	0	0	0	0	0	616	0	1,113	0	767	1,481	0	0	0	1,442	618	6,037		0	0	0	4
Peak Hour	0	0	0	0	0	296	0	598	0	413	837	0	0	0	876	350	3,370		0	0	0	2

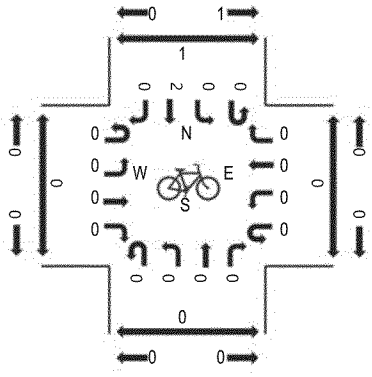
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 1 MCCASLIN BLVD & US 36 WB RAMPS PM
Date: Tuesday, October 17, 2023
Peak Hour: 04:15 PM - 05:15 PM
Peak 15-Minutes: 04:15 PM - 04:30 PM

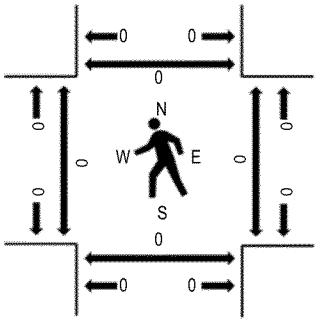
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

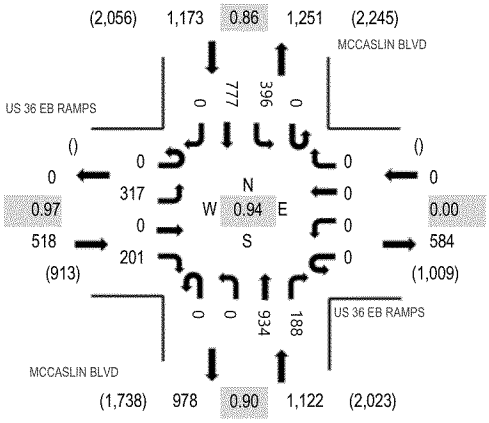
Traffic Counts - Motorized Vehicles

Interval Start Time	US 36 WB RAMPS Eastbound				US 36 WB RAMPS Westbound				MCCASLIN BLVD Northbound				MCCASLIN BLVD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	0	0	0	0	62	0	95	0	84	252	0	0	0	310	101	904	3,767	0	0	0	1
4:15 PM	0	0	0	0	0	83	0	121	0	79	231	0	0	0	385	108	1,007	3,847	0	0	0	0
4:30 PM	0	0	0	0	0	81	0	88	0	84	253	0	0	0	312	84	902	3,807	0	0	0	0
4:45 PM	0	0	0	0	0	98	0	123	0	64	239	0	0	0	354	76	954	3,845	0	0	0	0
5:00 PM	0	0	0	0	0	77	0	114	0	86	276	0	0	0	339	92	984	3,742	0	0	0	0
5:15 PM	0	0	0	0	0	78	0	116	0	78	241	0	0	0	351	103	967		0	0	0	0
5:30 PM	0	0	0	0	0	76	0	94	0	82	303	0	0	0	290	95	940		0	0	0	0
5:45 PM	0	0	0	0	0	67	0	119	0	58	240	0	0	0	288	79	851		0	0	0	0
Count Total	0	0	0	0	0	622	0	870	0	615	2,035	0	0	0	2,629	738	7,509		0	0	0	1
Peak Hour	0	0	0	0	0	339	0	446	0	313	999	0	0	0	1,390	360	3,847		0	0	0	0

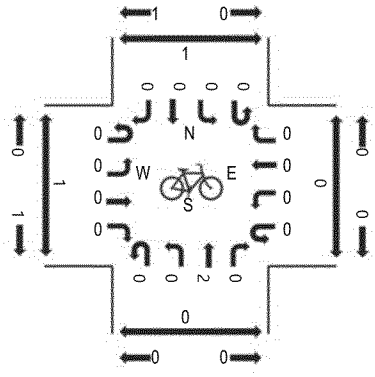
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 2 MCCASLIN BLVD & US 36 EB RAMPS AM
Date: Tuesday, October 17, 2023
Peak Hour: 07:45 AM - 08:45 AM
Peak 15-Minutes: 08:15 AM - 08:30 AM

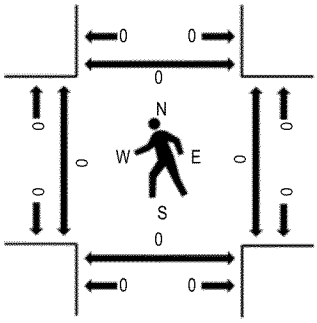
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

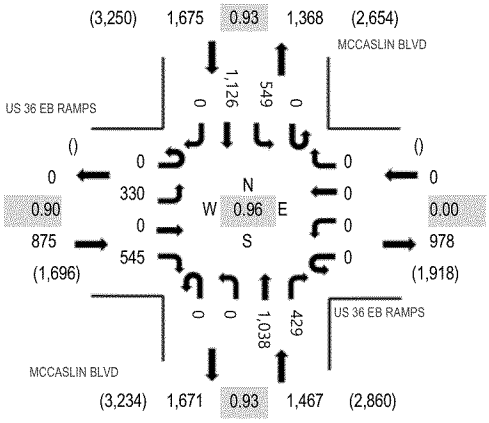
Traffic Counts - Motorized Vehicles

Interval Start Time	US 36 EB RAMPS Eastbound				US 36 EB RAMPS Westbound				MCCASLIN BLVD Northbound				MCCASLIN BLVD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	47	0	26	0	0	0	0	0	0	124	35	0	52	140	0	424	2,196	0	0	0	0
7:15 AM	0	57	0	36	0	0	0	0	0	0	156	33	0	65	147	0	494	2,429	0	0	0	0
7:30 AM	0	71	0	36	0	0	0	0	0	0	248	43	0	54	116	0	568	2,681	0	0	0	0
7:45 AM	0	93	0	36	0	0	0	0	0	0	237	37	0	101	206	0	710	2,813	0	0	0	0
8:00 AM	0	79	0	52	0	0	0	0	0	0	210	49	0	83	184	0	657	2,796	0	0	0	0
8:15 AM	0	73	0	51	0	0	0	0	0	0	232	47	0	123	220	0	746		0	0	0	0
8:30 AM	0	72	0	62	0	0	0	0	0	0	255	55	0	89	167	0	700		0	0	0	0
8:45 AM	0	78	0	44	0	0	0	0	0	0	213	49	0	94	215	0	693		0	0	0	0
Count Total	0	570	0	343	0	0	0	0	0	0	1,675	348	0	661	1,395	0	4,992		0	0	0	0
Peak Hour	0	317	0	201	0	0	0	0	0	0	934	188	0	396	777	0	2,813		0	0	0	0

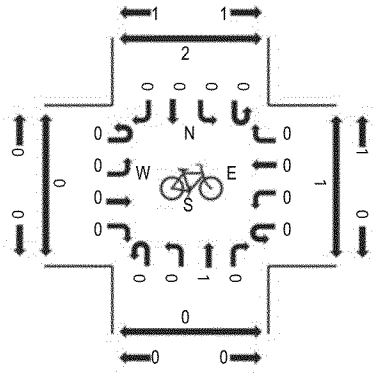
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 2 MCCASLIN BLVD & US 36 EB RAMPS PM
Date: Tuesday, October 17, 2023
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

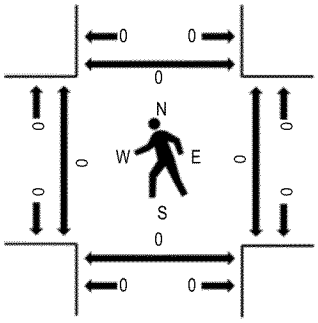
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

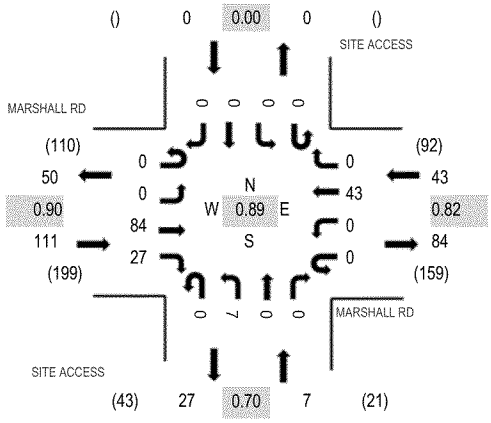
Traffic Counts - Motorized Vehicles

Interval Start Time	US 36 EB RAMPS Eastbound				US 36 EB RAMPS Westbound				MCCASLIN BLVD Northbound				MCCASLIN BLVD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	68	0	147	0	0	0	0	0	0	268	112	0	131	236	0	962	3,921	0	0	0	0
4:15 PM	0	81	0	119	0	0	0	0	0	0	233	90	0	151	312	0	986	4,004	1	0	0	2
4:30 PM	0	66	0	126	0	0	0	0	0	0	270	113	0	139	246	0	960	3,977	1	0	0	2
4:45 PM	0	74	0	113	0	0	0	0	0	0	234	133	0	136	323	0	1,013	4,017	0	0	0	0
5:00 PM	0	75	0	156	0	0	0	0	0	0	281	113	0	160	260	0	1,045	3,885	0	0	0	0
5:15 PM	0	87	0	119	0	0	0	0	0	0	236	82	0	131	304	0	959		0	0	0	0
5:30 PM	0	94	0	157	0	0	0	0	0	0	287	101	0	122	239	0	1,000		0	0	0	0
5:45 PM	0	82	0	132	0	0	0	0	0	0	218	89	0	115	245	0	881		0	0	0	0
Count Total	0	627	0	1,069	0	0	0	0	0	0	2,027	833	0	1,085	2,165	0	7,806		2	0	0	4
Peak Hour	0	330	0	545	0	0	0	0	0	0	1,038	429	0	549	1,126	0	4,017		0	0	0	0

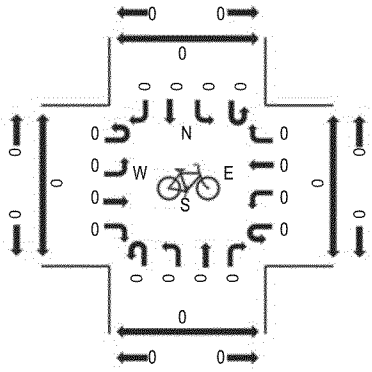
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 3 SITE ACCESS & MARSHALL RD AM
Date: Tuesday, October 17, 2023
Peak Hour: 07:00 AM - 08:00 AM
Peak 15-Minutes: 07:15 AM - 07:30 AM

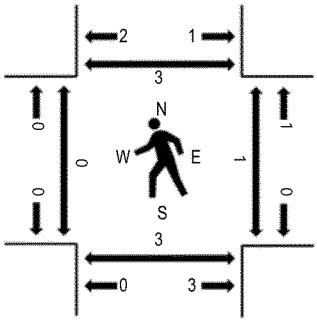
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

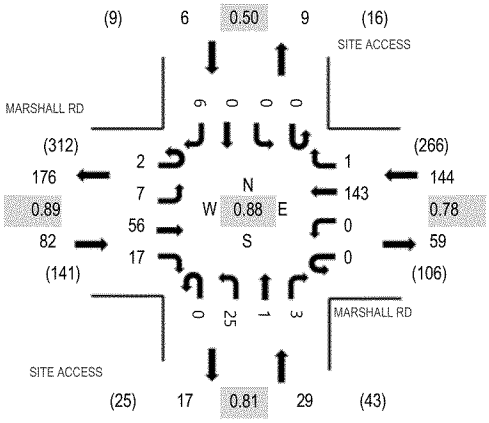
Traffic Counts - Motorized Vehicles

Interval Start Time	MARSHALL RD Eastbound				MARSHALL RD Westbound				SITE ACCESS Northbound				SITE ACCESS Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	0	23	4	0	0	12	0	0	0	0	0	0	0	0	0	39	161	0	0	1	0
7:15 AM	0	0	23	8	0	0	13	0	0	1	0	0	0	0	0	0	45	161	0	0	0	1
7:30 AM	0	0	16	8	0	0	9	0	0	4	0	0	0	0	0	0	37	156	0	1	1	2
7:45 AM	0	0	22	7	0	0	9	0	0	2	0	0	0	0	0	0	40	151	0	0	1	0
8:00 AM	0	0	23	2	0	0	12	0	0	2	0	0	0	0	0	0	39	151	0	0	0	0
8:15 AM	0	0	18	5	0	0	15	0	0	2	0	0	0	0	0	0	40		0	0	0	0
8:30 AM	1	0	12	5	0	0	9	0	0	5	0	0	0	0	0	0	32		0	1	0	1
8:45 AM	0	0	20	2	0	2	11	0	0	3	0	2	0	0	0	0	40		0	0	0	0
Count Total	1	0	157	41	0	2	90	0	0	19	0	2	0	0	0	0	312		0	2	3	4
Peak Hour	0	0	84	27	0	0	43	0	0	7	0	0	0	0	0	0	161		0	1	3	3

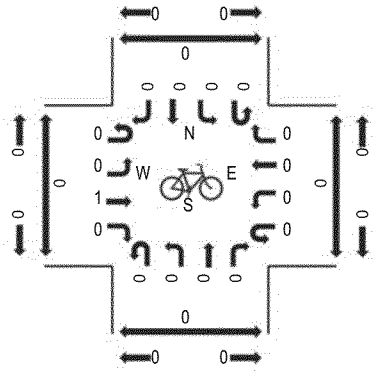
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 3 SITE ACCESS & MARSHALL RD PM
Date: Tuesday, October 17, 2023
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

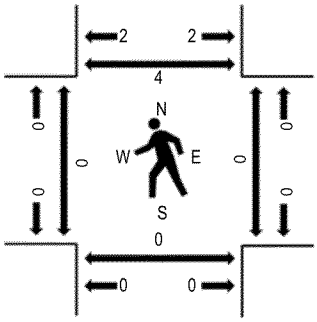
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

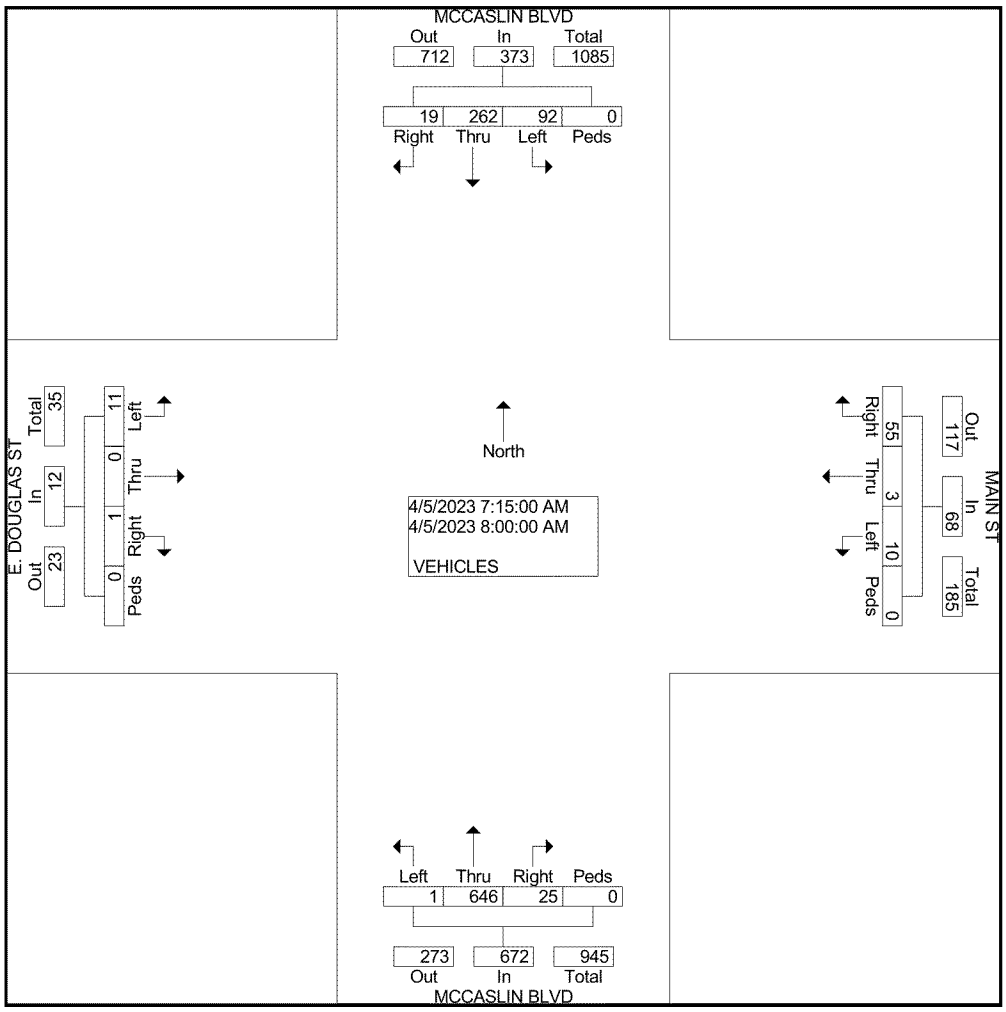
Interval Start Time	MARSHALL RD Eastbound				MARSHALL RD Westbound				SITE ACCESS Northbound				SITE ACCESS Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	1	12	2	0	0	35	1	0	4	0	0	0	0	0	1	56	230	0	0	0	0
4:15 PM	0	3	7	4	0	0	33	0	0	4	0	1	0	0	0	0	52	239	0	0	0	0
4:30 PM	0	5	7	9	0	0	32	1	0	6	0	1	0	0	0	3	64	261	0	0	0	2
4:45 PM	1	1	17	4	0	0	27	0	0	6	0	0	0	0	0	2	58	242	0	0	0	2
5:00 PM	0	0	15	3	0	0	38	0	0	7	0	2	0	0	0	0	65	229	0	0	0	0
5:15 PM	1	1	17	1	0	0	46	0	0	6	1	0	0	0	0	1	74		0	0	0	0
5:30 PM	0	0	11	2	0	0	26	1	0	2	1	1	0	0	0	1	45		0	0	0	1
5:45 PM	2	0	15	0	0	0	26	0	0	1	0	0	0	0	0	1	45		0	0	0	2
Count Total	4	11	101	25	0	0	263	3	0	36	2	5	0	0	0	9	459		0	0	0	7
Peak Hour	2	7	56	17	0	0	143	1	0	25	1	3	0	0	0	6	261		0	0	0	4

COUNTER MEASURES INC.
1889 YORK STREET
DENVER.COLORADO
303-333-7409

N/S STREET: MCCASLIN BLVD
E/W STREET: MAIN ST
CITY: SUPERIOR
COUNTY: BOULDER

File Name : MCCASMAIN
Site Code : 00000005
Start Date : 4/5/2023

	MCCASLIN BLVD Southbound					MAIN ST Westbound					MCCASLIN BLVD Northbound					E. DOUGLAS ST Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 07:15 AM to 08:00 AM - Peak 1 of 1																					
Intersection	07:15 AM																				
Volume	92	262	19	0	373	10	3	55	0	68	1	646	25	0	672	11	0	1	0	12	1125
Percent	24.7	70.2	5.1	0.0		14.7	4.4	80.9	0.0		0.1	96.1	3.7	0.0		91.7	0.0	8.3	0.0		
08:00 Volume	23	81	8	0	112	3	1	20	0	24	1	168	5	0	174	3	0	0	0	3	313
Peak Factor																					0.899
High Int.	08:00 AM					08:00 AM					07:45 AM					07:45 AM					
Volume	23	81	8	0	112	3	1	20	0	24	0	179	9	0	188	4	0	1	0	5	
Peak Factor					0.833					0.708					0.894					0.600	

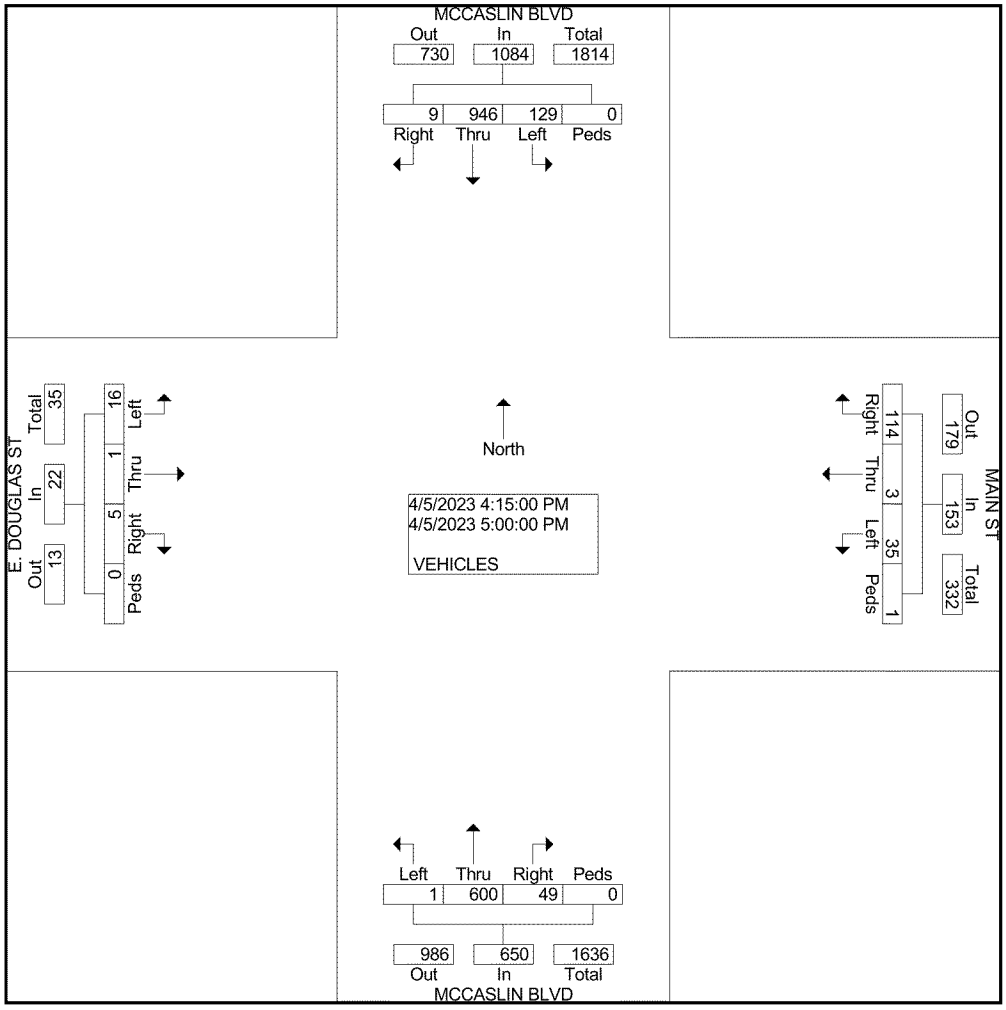


COUNTER MEASURES INC.
1889 YORK STREET
DENVER.COLORADO
303-333-7409

N/S STREET: MCCASLIN BLVD
E/W STREET: MAIN ST
CITY: SUPERIOR
COUNTY: BOULDER

File Name : MCCASMAIN
Site Code : 00000005
Start Date : 4/5/2023
Page No : 3

	MCCASLIN BLVD Southbound					MAIN ST Westbound					MCCASLIN BLVD Northbound					E. DOUGLAS ST Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 04:15 PM to 05:00 PM - Peak 1 of 1																					
Intersection	04:15 PM																				
Volume	129	946	9	0	1084	35	3	114	1	153	1	600	49	0	650	16	1	5	0	22	1909
Percent	11.9	87.3	0.8	0.0		22.9	2.0	74.5	0.7		0.2	92.3	7.5	0.0		72.7	4.5	22.7	0.0		
05:00 Volume	32	241	4	0	277	14	2	41	0	57	0	157	8	0	165	9	0	2	0	11	510
Peak Factor																					0.936
High Int.	04:45 PM					05:00 PM					04:30 PM					05:00 PM					
Volume	48	230	1	0	279	14	2	41	0	57	0	158	7	0	165	9	0	2	0	11	
Peak Factor					0.971					0.671					0.985					0.500	

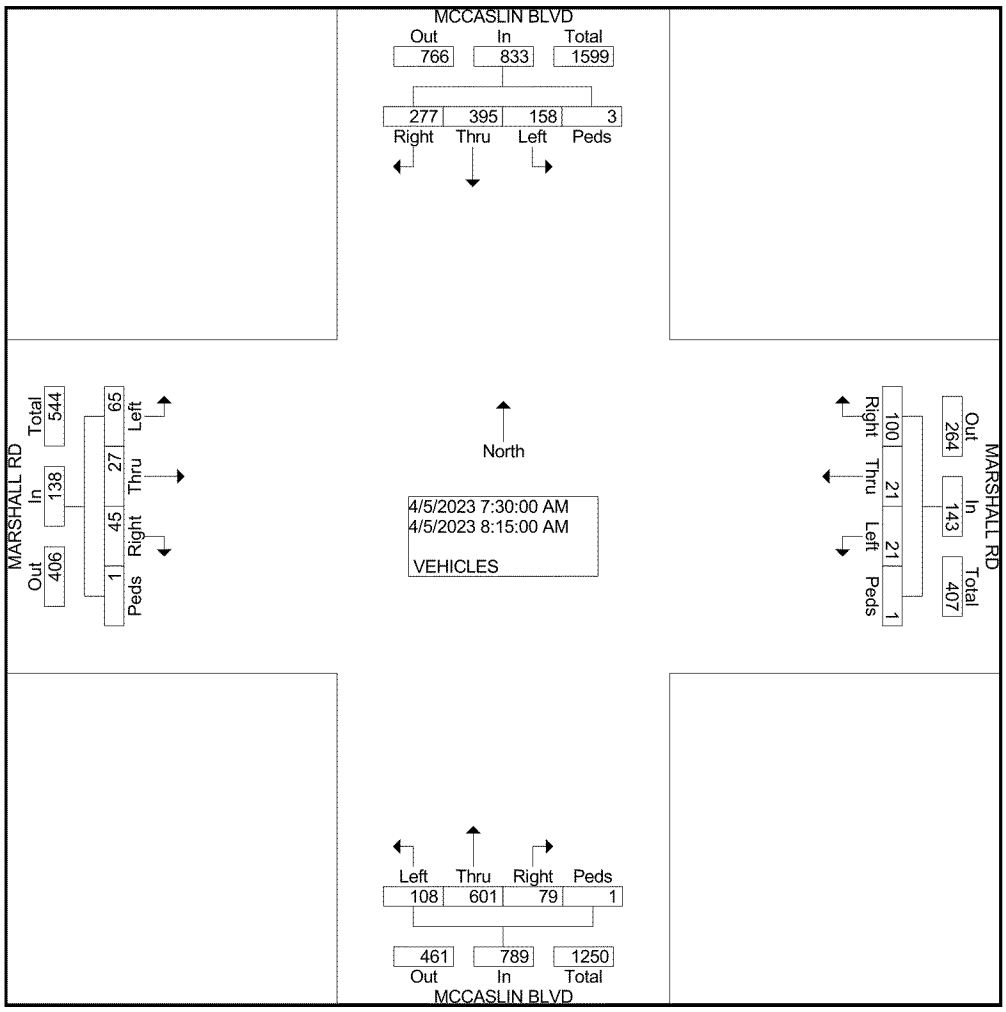


COUNTER MEASURES INC.
1889 YORK STREET
DENVER.COLORADO
303-333-7409

N/S STREET: MCCASLIN BLVD
E/W STREET: MARSHALL RD
CITY: SUPERIOR
COUNTY: BOULDER

File Name : MCCASMARSHALL
Site Code : 00000013
Start Date : 4/5/2023

	MCCASLIN BLVD Southbound					MARSHALL RD Westbound					MCCASLIN BLVD Northbound					MARSHALL RD Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 06:30 AM to 08:15 AM - Peak 1 of 1																					
Intersection	07:30 AM																				
Volume	158	395	277	3	833	21	21	100	1	143	108	601	79	1	789	65	27	45	1	138	1903
Percent	19.0	47.4	33.3	0.4		14.7	14.7	69.9	0.7		13.7	76.2	10.0	0.1		47.1	19.6	32.6	0.7		
07:45 Volume	59	108	84	0	251	10	5	23	0	38	22	160	17	0	199	19	2	5	0	26	514
Peak Factor																					0.926
High Int.	07:45 AM					08:15 AM					08:15 AM					08:15 AM					
Volume	59	108	84	0	251	7	4	40	1	52	27	165	26	0	218	14	5	24	0	43	
Peak Factor					0.830					0.688					0.905					0.802	

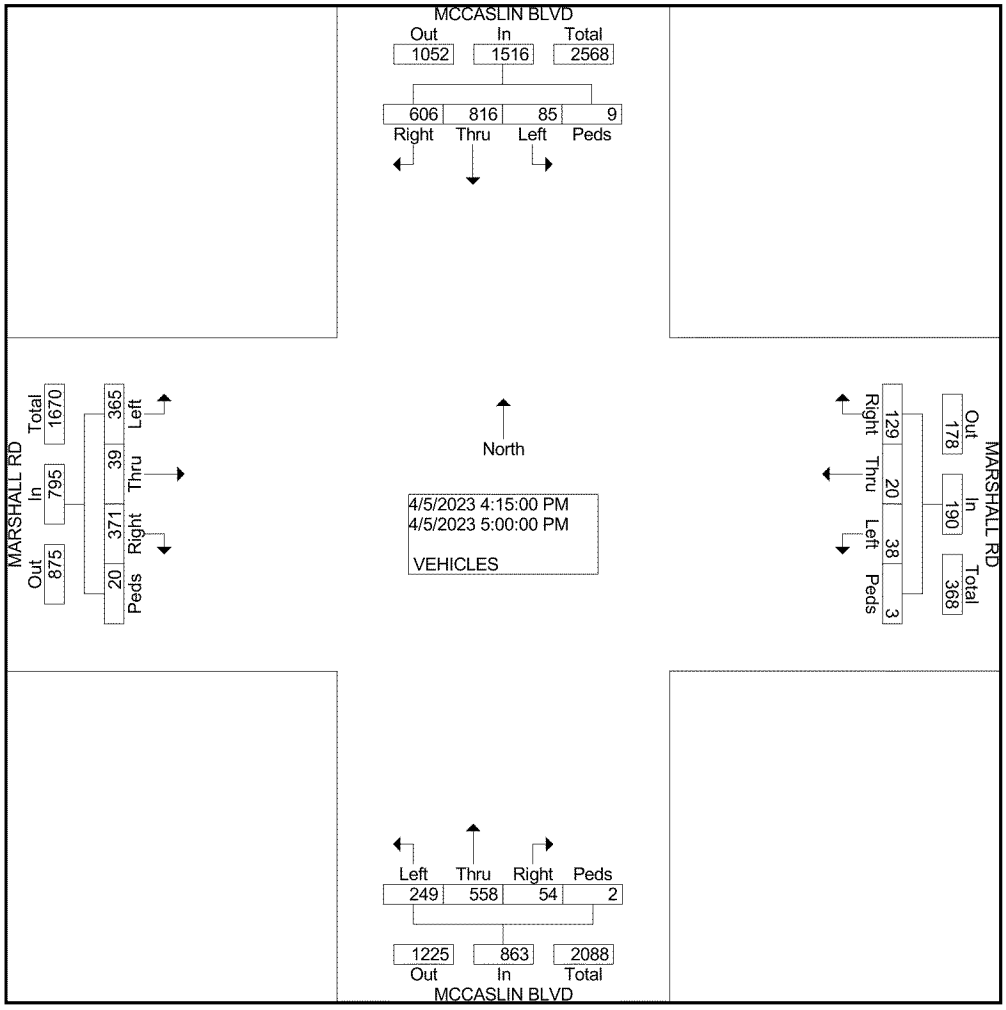


COUNTER MEASURES INC.
1889 YORK STREET
DENVER.COLORADO
303-333-7409

N/S STREET: MCCASLIN BLVD
E/W STREET: MARSHALL RD
CITY: SUPERIOR
COUNTY: BOULDER

File Name : MCCASMARSHALL
Site Code : 00000013
Start Date : 4/5/2023

	MCCASLIN BLVD Southbound					MARSHALL RD Westbound					MCCASLIN BLVD Northbound					MARSHALL RD Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	04:15 PM																				
Volume	85	816	606	9	1516	38	20	129	3	190	249	558	54	2	863	365	39	371	20	795	3364
Percent	5.6	53.8	40.0	0.6		20.0	10.5	67.9	1.6		28.9	64.7	6.3	0.2		45.9	4.9	46.7	2.5		
04:30 Volume	27	202	170	0	399	7	4	28	0	39	68	164	15	0	247	135	10	107	10	262	947
Peak Factor																					0.888
High Int.	04:30 PM					05:00 PM					04:30 PM					04:30 PM					
Volume	27	202	170	0	399	9	4	46	0	59	68	164	15	0	247	135	10	107	10	262	
Peak Factor					0.950					0.805					0.873					0.759	



COUNTER MEASURES INC.
1889 YORK STREET
DENVER,COLORADO 80206
303-333-7409

Location: MARSHALL RD E-O MCCASLIN BLVD
City: SUPERIOR
County: BOULDER
Direction: EAST/WEST

Site Code: 231819
Station ID: 231819

Start Time	18-Apr-23 Tue	EAST	WEST							Total
12:00 AM		*	*							*
01:00		*	*							*
02:00		*	*							*
03:00		*	*							*
04:00		*	*							*
05:00		*	*							*
06:00		*	*							*
07:00		*	*							*
08:00		*	*							*
09:00		**168**	**61**							**229**
10:00		111	42							153
11:00		87	31							118
12:00 PM		67	26							93
01:00		48	28							76
02:00		37	31							68
03:00		49	52							101
04:00		131	87							218
05:00		226	191							417
06:00		**238**	**217**							**455**
07:00		119	87							206
08:00		71	41							112
09:00		41	31							72
10:00		23	19							42
11:00		12	11							23
Total		1428	955							2383
Percent		59.9%	40.1%							
AM Peak	-	09:00	09:00	-	-	-	-	-	-	09:00
Vol.	-	168	61	-	-	-	-	-	-	229
PM Peak	-	18:00	18:00	-	-	-	-	-	-	18:00
Vol.	-	238	217	-	-	-	-	-	-	455

COUNTER MEASURES INC.
1889 YORK STREET
DENVER,COLORADO 80206
303-333-7409

Location: MARSHALL RD E-O MCCASLIN BLVD
City: SUPERIOR
County: BOULDER
Direction: EAST/WEST

Site Code: 231819
Station ID: 231819

Start Time	19-Apr-23 Wed	EAST	WEST							Total
12:00 AM		11	6							17
01:00		6	4							10
02:00		4	3							7
03:00		9	5							14
04:00		22	13							35
05:00		31	21							52
06:00		59	36							95
07:00		81	59							140
08:00		**234**	**123**							**357**
09:00		157	67							224
10:00		*	*							*
11:00		*	*							*
12:00 PM		*	*							*
01:00		*	*							*
02:00		*	*							*
03:00		*	*							*
04:00		*	*							*
05:00		*	*							*
06:00		*	*							*
07:00		*	*							*
08:00		*	*							*
09:00		*	*							*
10:00		*	*							*
11:00		*	*							*
Total		614	337							951
Percent		64.6%	35.4%							
AM Peak	-	08:00	08:00	-	-	-	-	-	-	08:00
Vol.	-	234	123	-	-	-	-	-	-	357
PM Peak	-	-	-	-	-	-	-	-	-	-
Vol.	-	-	-	-	-	-	-	-	-	-
Grand Total		2042	1292							3334
Percent		61.2%	38.8%							
ADT		ADT 1,890		AADT 1,890						

Louisville/Superior

ECONOLITE
CONTROL PRODUCTS, INC.
Solutions that Move the World™

003 - McCaslin Blvd @ US-36 @ N Ramp - Cobalt @ 172.16.8.112 - Econolite Type - Cobalt

Configuration Controller Sequence

Phase Ring Sequence.....(Note: Sequences identical to the prior one are not printed)

	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
	B		B		B		B		B							
Sequence 1																
Ring 1	1	2	3	4	9	10	13	14	.	.	.	.	.	.	.	.
Ring 2	5	6	7	8	11	12	15	16	.	.	.	.	.	.	.	.
Sequence 2																
Ring 1	2	1	3	4	10	9	13	14	.	.	.	.	.	.	.	.
Ring 2	5	6	7	8	11	12	15	16	.	.	.	.	.	.	.	.
Sequence 3																
Ring 1	1	2	4	3	9	10	14	13	.	.	.	.	.	.	.	.
Ring 2	5	6	7	8	11	12	15	16	.	.	.	.	.	.	.	.
Sequence 4																
Ring 1	2	1	4	3	10	9	14	13	.	.	.	.	.	.	.	.
Ring 2	5	6	7	8	11	12	15	16	.	.	.	.	.	.	.	.
Sequence 5																
Ring 1	1	2	3	4	9	10	13	14	.	.	.	.	.	.	.	.
Ring 2	6	5	7	8	12	11	15	16	.	.	.	.	.	.	.	.
Sequence 6																
Ring 1	2	1	3	4	10	9	13	14	.	.	.	.	.	.	.	.
Ring 2	6	5	7	8	12	11	15	16	.	.	.	.	.	.	.	.
Sequence 7																
Ring 1	1	2	4	3	9	10	14	13	.	.	.	.	.	.	.	.
Ring 2	6	5	7	8	12	11	15	16	.	.	.	.	.	.	.	.
Sequence 8																
Ring 1	2	1	4	3	10	9	14	13	.	.	.	.	.	.	.	.
Ring 2	6	5	7	8	12	11	15	16	.	.	.	.	.	.	.	.
Sequence 9																
Ring 1	1	2	3	4	9	10	13	14	.	.	.	.	.	.	.	.
Ring 2	5	6	8	7	11	12	16	15	.	.	.	.	.	.	.	.
Sequence 10																
Ring 1	2	1	3	4	10	9	13	14	.	.	.	.	.	.	.	.
Ring 2	5	6	8	7	11	12	16	15	.	.	.	.	.	.	.	.
Sequence 11																
Ring 1	1	2	4	3	9	10	14	13	.	.	.	.	.	.	.	.
Ring 2	5	6	8	7	11	12	16	15	.	.	.	.	.	.	.	.
Sequence 12																
Ring 1	2	1	4	3	10	9	14	13	.	.	.	.	.	.	.	.
Ring 2	5	6	8	7	11	12	16	15	.	.	.	.	.	.	.	.
Sequence 13																
Ring 1	1	2	3	4	9	10	13	14	.	.	.	.	.	.	.	.
Ring 2	6	5	8	7	12	11	16	15	.	.	.	.	.	.	.	.
Sequence 14																
Ring 1	2	1	3	4	10	9	13	14	.	.	.	.	.	.	.	.
Ring 2	6	5	8	7	12	11	16	15	.	.	.	.	.	.	.	.
Sequence 15																
Ring 1	1	2	4	3	9	10	14	13	.	.	.	.	.	.	.	.
Ring 2	6	5	8	7	12	11	16	15	.	.	.	.	.	.	.	.
Sequence 16																
Ring 1	2	1	4	3	10	9	14	13	.	.	.	.	.	.	.	.
Ring 2	6	5	8	7	12	11	16	15	.	.	.	.	.	.	.	.

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Hardware Alternate Sequence Enable: No

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003 - McCaslin Blvd @ US-36 @ N Ramp - Cobalt @ 172.16.8.112 - Econolite Type - Cobalt

Configuration Port 1 (SDLC)

Port 1 SDLC (MM) 1-4-1

BIU	1	2	3	4	5	6	7	8
Term & Facility								
Detector Rack								

Enable TS2/MMU Type Cabinet: No
Enable MMU Extended Status: No
Enable SDLC Stop Time: No
Enable 3 Critical RFE's Lockup: Yes

MMU Program (MM) 1-4-2

Channel Can Serve With Channel	
Channel 1	**Channel 2**

Color Check Enable (MM) 1-4-3
Enable Color Check: Yes

MMU/LS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Green																
Yellow																
Red																

Secondary Stations/Tests (MM) 1-4-4

ID	1	2	3	4	5	6	7	8	MMU
Term & Facility									

ID	1	2	3	4	5	6	7	8	Diag
Detector Rack									

Enable SDLC Diagnostic Test: No

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Configuration Communications 1 (SDLC)

Ethernet Port Configuration (MM) 1-5-1

DHCP Enable:	No
Controller IP:	172.16.8.112
Subnet Mask:	255.255.252.0
Default Gateway IP:	172.16.11.254
Server IP:	172.16.50.1

NTCIP (MM) 1-5-5

NTCIP Backup Time (Sec):	0
NTCIP UDP Port:	2101
Ethernet Priority:	1
Port 2 Priority (Port C50S for 2070):	4
Port 3A Priority (Port C21S for 2070):	3
Port 3B Priority (Port C22S for 2070):	2

Port Configuration (MM) 1-5-2 to 1-5-4

Port	2 (C50S)	3A (C21S)	3B (C22S)
Comm Module	None	Auto	Auto
Protocol	NTCIP	NTCIP	NTCIP
Enable	No	No	No
Data Rate (BPS)	9600	9600	9600
Data, Parity, Stop	8 N 1	8 N 1	8 N 1
Address	0	0	0
Telemetry Response Delay	0.0	0.0	0.0
Duplex - Half or Full	Half	Full	Full
Flow Control	No	Yes	Yes
Group Address	0	0	0
Single Flag Enable	Yes	Yes	Yes
RTS to CTS Delay	n/a	n/a	0.0
RTS Turn Off Delay	n/a	n/a	0.0
Dropout Time	10	10	10
Early RTS	n/a	n/a	No
Telemetry Mode	n/a	n/a	FSK
ATCS Railroad	0	n/a	n/a
ATCS Railroad Line	0	n/a	n/a
ATCS Group	0	n/a	n/a
Wayside Device	0	n/a	n/a
ATC Device	0	n/a	n/a
Wayside Subnode	0	n/a	n/a
ATC Subnode	0	n/a	n/a

ECPIP (MM) 1-5-6

Controller Address:	0
Expanded System Detector Address:	0

System Detector Assignment

System Detector	Local Detector

Wireless Configuration (MM) 1-5-7

Wireless Channel Number:	1
Wireless Access Code:	327423274

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Configuration Logging / Display

Event Logging (MM) 1-6-1

Critical RFE's (MMU/TF)	Yes	3 Critical Errors Within 24 Hours	Yes
MMU Flash Faults	Yes	Local Flash Fault	Yes
Non-Critical RFE's (Det/Test)	Yes	Detector Errors	Yes
Coordination Errors	Yes	Controller Download	Yes
Preemption Events	Yes	TSP Events	Yes
Power On/Off	Yes	Low Battery	Yes
Access	Yes	Data Change	Yes
Online / Offline	Yes		

Alarm Event	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Enable Logging	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Display Options (MM) 1-7-2

Key Click Enable:	No
Switch to Graphics Mode:	No
LED Mode:	Auto
Display Mode:	Basic
Trans Mode Pop-Up Disable:	No

Sign On (MM) 8-5

Sign On Message Line 1: Solutions that Move the World
Sign On Message Line 2:

Software Modules (MM) 8-7

Application Version: 32.66.10
OS (Boot) Version: 06.07.00

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Logic Processor Page 1

Logic Statement Control (MM) 1-8-1

Logic #	Statement Control

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Logic Processor Page 2

Logic Statements (MM) 1-8-2

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Controller Timing Plan (MM) 2-1
Plan 1 - ""

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Min Green	0	10	0	0	0	0	0	10	0	0	0	0	0	0	0	0
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	20	0	0	0	0	0	29	0	10	0	10	0	10	0	10
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	16	0	0	0	0	0	16	0	0	0	0	0	0	0	0
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	0.0	8.0	0.0	0.0	0.0	0.0	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	0	45	0	0	0	0	0	70	0	0	0	0	0	0	0	0
Max2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	0.0	3.5	0.0	0.0	0.0	0.0	0.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Clear	0.0	3.7	0.0	0.0	0.0	0.0	0.0	5.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	0.0	5.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Plan 2 - ""

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Min Green	0	10	0	0	0	0	0	10	0	0	0	0	0	0	0	0
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	20	0	0	0	0	0	29	0	0	0	0	0	0	0	0
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	16	0	0	0	0	0	16	0	0	0	0	0	0	0	0
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	0.0	8.0	0.0	0.0	0.0	0.0	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	0	45	0	0	0	0	0	50	0	0	0	0	0	0	0	0
Max2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	0.0	3.5	0.0	0.0	0.0	0.0	0.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Clear	0.0	3.7	0.0	0.0	0.0	0.0	0.0	5.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	0.0	5.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Plan 3 - ""

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Min Green	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	10	0	10	0	10	0	10	0	10	0	10	0	10	0	10
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	16	0	16	0	16	0	16	0	16	0	16	0	16	0	16
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35
Max2	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Plan 4 - ""

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Min Green	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	10	0	10	0	10	0	10	0	10	0	10	0	10	0	10
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	16	0	16	0	16	0	16	0	16	0	16	0	16	0	16
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35
Max2	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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Solutions that Move the World™

003 - McCaslin Blvd @ US-36 @ N Ramp - Cobalt @ 172.16.8.112 - Econolite Type - Cobalt

Controller Overlaps
Vehicle Overlaps (MM) 2-2

Overlap	Type	Lag Green	Yellow	Red	Adv. Green

Phases

Overlap	Phase	Included	Protect	Ped Protect	Not Overlap	Modifier	Lag X Phases	Lag 2 Phases	Flash Green

PPLT FYA

Overlap	Protected Phase (Left Turn)	Permissive Phase (Opposing Thru)	Flashing Arrow Output	Flashing Arrow Output CH	Delay Start of FYA	Delay Start of Clearance	Action Plan SF Bit Disable	Ped Protected Enable

Guaranteed Minimum Time Data (MM) 2-4

Phase	Min Green	Walk	Ped Clear	Yellow	Red Clear	Overlap Green
A01	5	0	7	3.0	0.0	5
B02	5	0	7	3.0	0.0	5
C03	5	0	7	3.0	0.0	5
D04	5	0	7	3.0	0.0	5
E05	5	0	7	3.0	0.0	5
F06	5	0	7	3.0	0.0	5
G07	5	0	7	3.0	0.0	5
H08	5	0	7	3.0	0.0	5
I09	5	0	7	3.0	0.0	5
J10	5	0	7	3.0	0.0	5
K11	5	0	7	3.0	0.0	5
L12	5	0	7	3.0	0.0	5
M13	5	0	7	3.0	0.0	5
N14	5	0	7	3.0	0.0	5
O15	5	0	7	3.0	0.0	5
P16	5	0	7	3.0	0.0	5

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003 - McCaslin Blvd @ US-36 @ N Ramp - Cobalt @ 172.16.8.112 - Econolite Type - Cobalt

Controller Pedestrian Overlaps
Vehicle / Pedestrian Overlaps (MM) 2-3

Included	Pedestrian Overlaps

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Controller Start / Flash Data (MM) 2-5

Start Up

Phase	Phase Setting
1	.
2	R
3	.
4	.
5	.
6	.
7	.
8	.
9	.
10	.
11	.
12	.
13	.
14	.
15	.
16	.

Overlap
A
B
C
D

Flash Thru Mon: No
Flash Time: 0
All Red: 6
Power Start Seq: 1
MUTCD Enabled: No
Y->G: n/a

Automatic Flash

Entry
2

Exit
2

Overlap Exit
A
B
C
D

Flash Thru Mon: No
Exit Flash: W
Minimum Flash: 8
Mimimum Recall: No
Cycle Through Phase: No

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Controller Options

Controller Options (MM) 2-6-1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Flashing Grn Ph	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Guar Passage																
Non-Act I		X				X										
Non-Act II				X				X								
Dual Entry																
Cond Service																
Cond Reservice																
Ped Re-Service																
Rest In Walk																
Flashing Walk																
Ped Clr-Yel																
Ped Clr-Red																
IGRN + Veh Ext																

Ped Clear Protect: Off

Unit Red Revert: 2.0

MUTCD 3 Seconds Don't Walk: No

Pre-Timed Mode (MM) 2-7

Enable Pre-Timed Mode: No

Free Input Disables Pre-Timed: No

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Pre-Timed																

Phase Recall Options (MM) 2-8

Plan # 1

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Lock Detector																
Vehicle Recall		X						X								
Ped Recall		X						X								
Max Recall		X						X								
Soft Recall																
No Rest																
Al Calc																

Plan # 2

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Lock Detector	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Vehicle Recall																
Ped Recall		X						X								
Max Recall		X						X								
Soft Recall																
No Rest																
Al Calc																

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Coordination Options

Options (MM) 3-1

Manual Pattern	Auto	ECPI Coord	Yes
System Source	TBC	System Format	STD
Splits In	Seconds	Offsets In	Seconds
Transition	Smooth	Max Select	MAXINH
Dwell / Add Time	0		
Delay Coord Wk-LZ	No	Force Off	Float
Offset Reference	Yellow	Use Ped Time	No
Ped Recall	No	Ped Reservice	No
Local Zero Override	No	FO Added Ini Green	No
Re-sync Count	0	Multisync	No

Auto Perm Minimum Green (Seconds) (MM) 3-4

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Minimum Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Split Demand (MM) 3-5

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Demand 1																
Demand 2																

Demand	1	2
Detector	0	0
Call Time (Sec)	0	0
Cycle Count	0	0

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Coordination Pattern Data
Coordinator Pattern Data (MM) 3-2

Coordinator Pattern # 1

Split Pattern	1	TS2 (Pat-Off)	0-1	Splits In	Seconds
Cycle	120	Std (COS)	9	Offsets In	Seconds
Offset Value	48s	Dwell/Add Time	0		
Actuated Coord	No	Timing Plan	1		
Actuated Walk Rest	No	Sequence	1		
Phase Reservice	No	Action Plan	1		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Splits (Split Pat 1)	0	50	0	0	0	0	0	70	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	50s	70s	0s	0s

Misc. Data

Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X														
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Funciton Outputs																

Coordinator Pattern # 2

Split Pattern	2	TS2 (Pat-Off)	0-2	Splits In	Seconds
Cycle	100	Std (COS)	17	Offsets In	Seconds
Offset Value	65s	Dwell/Add Time	0		
Actuated Coord	No	Timing Plan	2		
Actuated Walk Rest	No	Sequence	1		
Phase Reservice	No	Action Plan	2		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Splits (Split Pat 2)	0	45	0	0	0	0	0	55	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	45s	55s	0s	0s

Misc. Data

Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X														
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Funciton Outputs																

Coordinator Pattern # 3

Split Pattern	3	TS2 (Pat-Off)	0-3	Splits In	Seconds
Cycle	120	Std (COS)	25	Offsets In	Seconds
Offset Value	55s	Dwell/Add Time	0		
Actuated Coord	No	Timing Plan	1		
Actuated Walk Rest	No	Sequence	1		
Phase Reservice	No	Action Plan	3		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Splits (Split Pat 3)	0	52	0	0	0	0	0	68	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	52s	68s	0s	0s

Misc. Data

Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X														
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Funciton Outputs																

Coordinator Pattern # 4

Split Pattern	4	TS2 (Pat-Off)	1-1	Splits In	Seconds
Cycle	80	Std (COS)	33	Offsets In	Seconds
Offset Value	0s	Dwell/Add Time	0		
Actuated Coord	No	Timing Plan	1		
Actuated Walk Rest	No	Sequence	1		
Phase Reservice	No	Action Plan	4		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Splits (Split Pat 4)	0	38	0	0	0	0	0	42	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	38s	42s	0s	0s

Misc. Data

Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase								X								
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Funciton Outputs																

Coordinator Pattern # 5

Split Pattern	5	TS2 (Pat-Off)	1-2	Splits In	Seconds
Cycle	120	Std (COS)	41	Offsets In	Seconds
Offset Value	48s	Dwell/Add Time	0		
Actuated Coord	No	Timing Plan	1		
Actuated Walk Rest	No	Sequence	1		
Phase Reservice	No	Action Plan	5		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Splits (Split Pat 5)	0	58	0	0	0	0	0	62	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	58s	62s	0s	0s

Misc. Data

Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X														
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Funciton Outputs																

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Coordination Split Pattern
Split Pattern Data (MM) 3-3

Split Pattern # 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Split (seconds)	0	50	0	0	0	0	0	70	0	0	0	0	0	0	0	0
Coord Phase		X														
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	50s	70s	0s	0s

Split Pattern # 2

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Split (seconds)	0	45	0	0	0	0	0	55	0	0	0	0	0	0	0	0
Coord Phase		X														
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	45s	55s	0s	0s

Split Pattern # 3

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Split (seconds)	0	52	0	0	0	0	0	68	0	0	0	0	0	0	0	0
Coord Phase		X														
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	52s	68s	0s	0s

Split Pattern # 4

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Split (seconds)	0	38	0	0	0	0	0	42	0	0	0	0	0	0	0	0
Coord Phase								X								
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	38s	42s	0s	0s

Split Pattern # 5

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Split (seconds)	0	58	0	0	0	0	0	62	0	0	0	0	0	0	0	0
Coord Phase		X														
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	58s	62s	0s	0s

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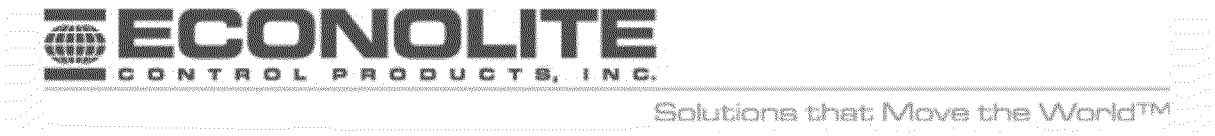

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Preempt Plan

Preempt Plan (MM) 4-1

No Enabled Preempts

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Preempt Preempt Filtering
Enable Preempt Filtering & TSP/SCP (MM) 4-2

Input	Solid	Pulsing
1	...BYPASSED...	...BYPASSED...
2	...BYPASSED...	...BYPASSED...
3	PREEMPTION 3	PREEMPTION 7
4	PREEMPTION 4	PREEMPTION 8
5	PREEMPTION 5	PREEMPTION 9
6	PREEMPTION 6	PREEMPTION 10
7	...BYPASSED...	...BYPASSED...
8	...BYPASSED...	...BYPASSED...
9	...BYPASSED...	...BYPASSED...
10	...BYPASSED...	...BYPASSED...

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Preempt TSP/SCP Plan and Split

TSP / SCP Plan (MM) 4-3

TSP/SCP Plan	Enable Option	Signal Type	Det Lock	Delay Time	Max Presence	PMT Enables Reservice	No Delay in TSP	Action SF Inhibit	Reservice Cycles	Bus Heading
1	No	Solid	No	0	0	No	False	0	0	NB
2	No	Solid	No	0	0	No	False	0	0	SB
3	No	Solid	No	0	0	No	False	0	0	EB
4	No	Solid	No	0	0	No	False	0	0	WB
5	No	Solid	No	0	0	No	False	0	0	.
6	No	Solid	No	0	0	No	False	0	0	.

Mode: TSP
Free Default Pattern: 120
Headway Allowance: 0

TSP/SCP Plan	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

TSP / SCP Split Pattern (MM) 4-4

TSP/SCP Split Pattern	Max Type	Phase															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
4	Max Reduction	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255

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Time Base Clock/Calendar
Clock/Calendar Data (MM) 5-1

Manual Action Plan:	0
SYNC Reference Time:	00:00
SYNC Reference:	Reference Time
Day Light Savings:	No
Time Reset Input Set Time:	3:30:00
Standard Time From GMT:	0

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Time Base Action Plan
Action Plan (MM) 5-2

Action Plan - 1 - "1"

Pattern	1	Override Sys	No
Timing Plan	1	Sequence	1
Veh Detector Plan	1	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																
Spec Func (1-8)																
Aux Func (1-3)																

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

Action Plan - 2 - "2"

Pattern	2	Override Sys	No
Timing Plan	2	Sequence	1
Veh Detector Plan	1	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																
Spec Func (1-8)																
Aux Func (1-3)																

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

Action Plan - 3 - "3"

Pattern	3	Override Sys	No
Timing Plan	1	Sequence	1
Veh Detector Plan	1	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																
Spec Func (1-8)																
Aux Func (1-3)																

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

Action Plan - 4 - "4"

Pattern	4	Override Sys	No
Timing Plan	1	Sequence	1
Veh Detector Plan	1	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																
Spec Func (1-8)																
Aux Func (1-3)																

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

Action Plan - 5 - "5"

Pattern	5	Override Sys	No
Timing Plan	1	Sequence	1
Veh Detector Plan	1	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																
Spec Func (1-8)																
Aux Func (1-3)																

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

Louisville/Superior

ECONOLITE
CONTROL PRODUCTS, INC.
Solutions that Move the World™

003 - McCaslin Blvd @ US-36 @ N Ramp - Cobalt @ 172.16.8.112 - Econolite Type - Cobalt

Time Base Day Plan/Schedule
Day Plan (MM) 5-3

Day Plan #1 - "1"

Event	Action Plan	Start Time
1	1	06:30
2	2	09:00
3	3	15:30
4	2	19:00

Day Plan #2 - "2"

Event	Action Plan	Start Time
1	2	06:30
2	5	10:00
3	2	18:00

Schedule (MM) 5-4

Schedule Number - 1

Day Plan No.: 1

Month	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	X	X	X	X	X	X	X	X	X	X	X	X

Day (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT
		X	X	X	X	X	

Day (DOM)	1	2	3	4	5	6	7	8	9	10	11
	X	X	X	X	X	X	X	X	X	X	X
	12	13	14	15	16	17	18	19	20	21	22
	X	X	X	X	X	X	X	X	X	X	X
	23	24	25	26	27	28	29	30	31		
	X	X	X	X	X	X	X	X	X		

Schedule Number - 2

Day Plan No.: 2

Month	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	X	X	X	X	X	X	X	X	X	X	X	X

Day (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT
	X						X

Day (DOM)	1	2	3	4	5	6	7	8	9	10	11
	X	X	X	X	X	X	X	X	X	X	X
	12	13	14	15	16	17	18	19	20	21	22
	X	X	X	X	X	X	X	X	X	X	X
	23	24	25	26	27	28	29	30	31		
	X	X	X	X	X	X	X	X	X		

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Solutions that Move the World™

003 - McCaslin Blvd @ US-36 @ N Ramp - Cobalt @ 172.16.8.112 - Econolite Type - Cobalt

Time Base Exceptions
Exception Day Program (MM) 5-5

Excep Day	Float/Fixed	Mon/Mon	DOW/DOM	WOM/Year	Day Plan

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ECONOLITE CONTROL PRODUCTS, INC.

Solutions that Move the World™

003 - McCaslin Blvd @ US-36 @ N Ramp - Cobalt @ 172.16.8.112 - Econolite Type - Cobalt

Detectors

Detectors - Pg 1

Veh Det Phase Assignment (MM) 6-1

Vehicle Detector Plan Number - 1

Veh Detector	Called Phase	Type

Vehicle Detector Plan Number - 2

Veh Detector	Called Phase	Type

Vehicle Detector Plan Number - 3

Veh Detector	Called Phase	Type

Vehicle Detector Plan Number - 4

Veh Detector	Called Phase	Type

Vehicle Detector Setup (MM) 6-2

Veh Detector	Type	TS2 Detector	Description
1	S-STANDARD	Yes	
2	S-STANDARD	Yes	
3	S-STANDARD	Yes	
4	S-STANDARD	Yes	
5	S-STANDARD	Yes	
6	S-STANDARD	Yes	
7	S-STANDARD	Yes	
8	S-STANDARD	Yes	
9	S-STANDARD	Yes	
10	S-STANDARD	Yes	
11	S-STANDARD	Yes	
12	S-STANDARD	Yes	
13	S-STANDARD	Yes	
14	S-STANDARD	Yes	
15	S-STANDARD	Yes	
16	S-STANDARD	Yes	
17	S-STANDARD	Yes	
18	S-STANDARD	Yes	
19	S-STANDARD	Yes	
20	S-STANDARD	Yes	
21	S-STANDARD	Yes	
22	S-STANDARD	Yes	
23	S-STANDARD	Yes	
24	S-STANDARD	Yes	
25	S-STANDARD	Yes	
26	S-STANDARD	Yes	
27	S-STANDARD	Yes	
28	S-STANDARD	Yes	
29	S-STANDARD	Yes	
30	S-STANDARD	Yes	
31	S-STANDARD	Yes	
32	S-STANDARD	Yes	
33	S-STANDARD	Yes	
34	S-STANDARD	Yes	
35	S-STANDARD	Yes	
36	S-STANDARD	Yes	
37	S-STANDARD	Yes	
38	S-STANDARD	Yes	
39	S-STANDARD	Yes	
40	S-STANDARD	Yes	
41	S-STANDARD	Yes	
42	S-STANDARD	Yes	
43	S-STANDARD	Yes	
44	S-STANDARD	Yes	
45	S-STANDARD	Yes	
46	S-STANDARD	Yes	
47	S-STANDARD	Yes	
48	S-STANDARD	Yes	
49	S-STANDARD	Yes	
50	S-STANDARD	Yes	
51	S-STANDARD	Yes	
52	S-STANDARD	Yes	
53	S-STANDARD	Yes	
54	S-STANDARD	Yes	
55	S-STANDARD	Yes	
56	S-STANDARD	Yes	
57	S-STANDARD	Yes	
58	S-STANDARD	Yes	
59	S-STANDARD	Yes	
60	S-STANDARD	Yes	
61	S-STANDARD	Yes	
62	S-STANDARD	Yes	

63	S-STANDARD	Yes	
64	S-STANDARD	Yes	

Vehicle Detector Plan Number - 1

Veh Detector	Phase	ECPI Log	Call Option	Delay Time	Ext Option	Extend Time / Passage Time	Queue Lim. / Discon. Time	Use Added Initial	Cross Switch Ph	Lock In	NTCIP Vol.	NTCIP Occ.	Pmt Queue Delay
1	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
2	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
3	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
4	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
5	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
6	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
7	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
8	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
9	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
10	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
11	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
12	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
13	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
14	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
15	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
16	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
17	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
18	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
19	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
20	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
21	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
22	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
23	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
24	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
25	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
26	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
27	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
28	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
29	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
30	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
31	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
32	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
33	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
34	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
35	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
36	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
37	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
38	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
39	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
40	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
41	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
42	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
43	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
44	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
45	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
46	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
47	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
48	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
49	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
50	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
51	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
52	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
53	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
54	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
55	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
56	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
57	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
58	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
59	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
60	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
61	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
62	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
63	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
64	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

Vehicle Detector Plan Number - 2

Veh Detector	Phase	ECPI Log	Call Option	Delay Time	Ext Option	Extend Time / Passage Time	Queue Lim. / Discon. Time	Use Added Initial	Cross Switch Ph	Lock In	NTCIP Vol.	NTCIP Occ.	Pmt Queue Delay
1	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
2	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
3	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
4	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
5	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
6	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
7	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
8	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
9	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
10	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
11	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
12	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
13	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
14	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
15	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
16	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

17	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
18	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
19	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
20	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
21	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
22	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
23	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
24	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
25	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
26	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
27	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
28	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
29	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
30	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
31	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
32	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
33	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
34	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
35	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
36	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
37	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
38	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
39	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
40	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
41	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
42	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
43	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
44	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
45	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
46	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
47	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
48	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
49	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
50	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
51	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
52	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
53	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
54	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
55	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
56	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
57	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
58	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
59	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
60	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
61	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
62	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
63	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
64	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

Vehicle Detector Plan Number - 3

Veh Detector	Phase	ECPI Log	Call Option	Delay Time	Ext Option	Extend Time / Passage Time	Queue Lim. / Discon. Time	Use Added Initial	Cross Switch Ph	Lock In	NTCIP Vol.	NTCIP Occ.	Pmt Queue Delay
1	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
2	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
3	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
4	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
5	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
6	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
7	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
8	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
9	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
10	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
11	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
12	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
13	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
14	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
15	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
16	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
17	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
18	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
19	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
20	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
21	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
22	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
23	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
24	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
25	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
26	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
27	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
28	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
29	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
30	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
31	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
32	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
33	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
34	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
35	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
36	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
37	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
38	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
39	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
40	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

41	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
42	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
43	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
44	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
45	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
46	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
47	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
48	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
49	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
50	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
51	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
52	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
53	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
54	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
55	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
56	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
57	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
58	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
59	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
60	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
61	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
62	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
63	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
64	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

Vehicle Detector Plan Number - 4

Veh Detector	Phase	ECPI Log	Call Option	Delay Time	Ext Option	Extend Time / Passage Time	Queue Lim. / Discon. Time	Use Added Initial	Cross Switch Ph	Lock In	NTCIP Vol.	NTCIP Occ.	Pmt Queue Delay
1	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
2	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
3	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
4	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
5	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
6	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
7	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
8	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
9	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
10	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
11	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
12	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
13	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
14	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
15	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
16	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
17	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
18	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
19	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
20	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
21	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
22	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
23	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
24	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
25	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
26	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
27	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
28	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
29	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
30	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
31	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
32	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
33	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
34	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
35	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
36	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
37	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
38	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
39	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
40	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
41	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
42	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
43	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
44	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
45	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
46	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
47	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
48	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
49	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
50	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
51	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
52	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
53	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
54	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
55	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
56	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
57	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
58	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
59	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
60	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
61	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
62	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
63	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
64	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

Ped Detector Phase Assignment (MM) 6-3

Mode: NTCIP

Called Phase	Detector
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16

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003 - McCaslin Blvd @ US-36 @ N Ramp - Cobalt @ 172.16.8.112 - Econolite Type - Cobalt

Detectors

Detectors - Pg 2

Log - Speed Detector Setup (MM) 6-4

NTCIP Log Period: 60 ECPI Log Period: 0 Length Unit: Inches

Speed Detector	Local Detector	One/Two Detector	Vehicle Length	Trap length	Enable Log
1	0	1	0	0	No
2	0	1	0	0	No
3	0	1	0	0	No
4	0	1	0	0	No
5	0	1	0	0	No
6	0	1	0	0	No
7	0	1	0	0	No
8	0	1	0	0	No
9	0	1	0	0	No
10	0	1	0	0	No
11	0	1	0	0	No
12	0	1	0	0	No
13	0	1	0	0	No
14	0	1	0	0	No
15	0	1	0	0	No
16	0	1	0	0	No

Vehicle Detector Diagnostics (MM) 6-5

Veh Diagnostic Plan Number - 1

Det	Counts	Act	Pres	Multiplier	Failed Time	Failed Call Delay

Veh Diagnostic Plan Number - 2

Det	Counts	Act	Pres	Multiplier	Failed Time	Failed Call Delay

Veh Diagnostic Plan Number - 3

Det	Counts	Act	Pres	Multiplier	Failed Time	Failed Call Delay

Veh Diagnostic Plan Number - 4

Det	Counts	Act	Pres	Multiplier	Failed Time	Failed Call Delay

Pedestrian Detector Diagnostics (MM) 6-6

Ped Diagnostic Plan Number - 1

Det	Counts	Act	Pres	Multiplier
2	0	0	2	1
4	0	0	2	1
6	0	0	2	1
8	0	0	2	1

Ped Diagnostic Plan Number - 2

Det	Counts	Act	Pres	Multiplier

Ped Diagnostic Plan Number - 3

Det	Counts	Act	Pres	Multiplier

Ped Diagnostic Plan Number - 4

Det	Counts	Act	Pres	Multiplier

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Configuration **Controller Sequence**

Phase Ring Sequence.....(Note: Sequences identical to the prior one are not printed)

	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
	B		B		B		B		B							
Sequence 1																
Ring 1	1	2	3	4	9	10	13	14	.	.	.	.	.	.	.	.
Ring 2	5	6	7	8	11	12	15	16	.	.	.	.	.	.	.	.

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Hardware Alternate Sequence Enable: No

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Configuration Port 1 (SDLC)

Port 1 SDLC (MM) 1-4-1

BIU	1	2	3	4	5	6	7	8
Term & Facility								
Detector Rack								

Enable TS2/MMU Type Cabinet: No
Enable MMU Extended Status: No
Enable SDLC Stop Time: No
Enable 3 Critical RFE's Lockup: Yes

MMU Program (MM) 1-4-2

Channel Can Serve With Channel	
Channel 1	**Channel 2**

Color Check Enable (MM) 1-4-3
Enable Color Check: Yes

MMU/LS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Green																
Yellow																
Red																

Secondary Stations/Tests (MM) 1-4-4

ID	1	2	3	4	5	6	7	8	MMU
Term & Facility									

ID	1	2	3	4	5	6	7	8	Diag
Detector Rack									

Enable SDLC Diagnostic Test: No

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Configuration Communications 1 (SDLC)

Ethernet Port Configuration (MM) 1-5-1

DHCP Enable:	No
Controller IP:	172.16.8.111
Subnet Mask:	255.255.252.0
Default Gateway IP:	172.16.11.254
Server IP:	172.16.50.1

NTCIP (MM) 1-5-5

NTCIP Backup Time (Sec):	0
NTCIP UDP Port:	2101
Ethernet Priority:	1
Port 2 Priority (Port C50S for 2070):	4
Port 3A Priority (Port C21S for 2070):	3
Port 3B Priority (Port C22S for 2070):	2

Port Configuration (MM) 1-5-2 to 1-5-4

Port	2 (C50S)	3A (C21S)	3B (C22S)
Comm Module	None	Auto	Auto
Protocol	NTCIP	NTCIP	NTCIP
Enable	Yes	No	No
Data Rate (BPS)	9600	9600	9600
Data, Parity, Stop	8 N 1	8 N 1	8 N 1
Address	1	0	0
Telemetry Response Delay	0.0	0.0	0.0
Duplex - Half or Full	Half	Full	Full
Flow Control	No	Yes	Yes
Group Address	0	0	0
Single Flag Enable	Yes	Yes	Yes
RTS to CTS Delay	n/a	n/a	0.0
RTS Turn Off Delay	n/a	n/a	0.0
Dropout Time	10	10	10
Early RTS	n/a	n/a	No
Telemetry Mode	n/a	n/a	FSK
ATCS Railroad	0	n/a	n/a
ATCS Railroad Line	0	n/a	n/a
ATCS Group	0	n/a	n/a
Wayside Device	0	n/a	n/a
ATC Device	0	n/a	n/a
Wayside Subnode	0	n/a	n/a
ATC Subnode	0	n/a	n/a

ECPIP (MM) 1-5-6

Controller Address:	0
Expanded System Detector Address:	0

System Detector Assignment

System Detector	Local Detector

Wireless Configuration (MM) 1-5-7

Wireless Channel Number:	1
Wireless Access Code:	327423274

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Configuration Logging / Display

Event Logging (MM) 1-6-1

Critical RFE's (MMU/TF)	Yes	3 Critical Errors Within 24 Hours	Yes
MMU Flash Faults	Yes	Local Flash Fault	Yes
Non-Critical RFE's (Det/Test)	Yes	Detector Errors	Yes
Coordination Errors	Yes	Controller Download	Yes
Preemption Events	Yes	TSP Events	Yes
Power On/Off	Yes	Low Battery	Yes
Access	Yes	Data Change	Yes
Online / Offline	Yes		

Alarm Event	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Enable Logging	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Display Options (MM) 1-7-2

Key Click Enable:	No
Switch to Graphics Mode:	Yes
LED Mode:	Auto
Display Mode:	Basic
Trans Mode Pop-Up Disable:	No

Sign On (MM) 8-5

Sign On Message Line 1: Solutions that Move the World
Sign On Message Line 2:

Software Modules (MM) 8-7

Application Version: 32.66.10
OS (Boot) Version: 06.07.00

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Logic Processor Page 1

Logic Statement Control (MM) 1-8-1

Logic #	Statement Control

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Logic Processor Page 2

Logic Statements (MM) 1-8-2

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Controller Timing Plan (MM) 2-1
Plan 1 - ""

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Min Green	0	10	0	10	0	0	0	0	0	0	0	0	0	0	0	0
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	32	0	26	0	0	0	0	0	0	0	0	0	0	0	0
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	17	0	15	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	0.0	8.0	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	0	65	0	55	0	0	0	0	0	0	0	0	0	0	0	0
Max2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	0.0	3.5	0.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Clear	0.0	5.8	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	0.0	5.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	10	0	10	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	8.0	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Plan 2 - ""

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Min Green	0	10	0	10	0	0	0	0	0	0	0	0	0	0	0	0
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	27	0	21	0	0	0	0	0	0	0	0	0	0	0	0
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	17	0	15	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	0.0	8.0	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	0	50	0	50	0	0	0	0	0	0	0	0	0	0	0	0
Max2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	0.0	3.5	0.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Clear	0.0	5.8	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	0.0	5.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	10	0	10	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	8.0	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Plan 3 - ""

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Min Green	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	10	0	10	0	10	0	10	0	10	0	10	0	10	0	10
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	16	0	16	0	16	0	16	0	16	0	16	0	16	0	16
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35
Max2	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Plan 4 - ""

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Min Green	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	10	0	10	0	10	0	10	0	10	0	10	0	10	0	10
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	16	0	16	0	16	0	16	0	16	0	16	0	16	0	16
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35
Max2	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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Controller Overlaps

Vehicle Overlaps (MM) 2-2

Overlap	Type	Lag Green	Yellow	Red	Adv. Green

Phases

Overlap	Phase	Included	Protect	Ped Protect	Not Overlap	Modifier	Lag X Phases	Lag 2 Phases	Flash Green

PPLT FYA

Overlap	Protected Phase (Left Turn)	Permissive Phase (Opposing Thru)	Flashing Arrow Output	Flashing Arrow Output CH	Delay Start of FYA	Delay Start of Clearance	Action Plan SF Bit Disable	Ped Protected Enable

Guaranteed Minimum Time Data (MM) 2-4

Phase	Min Green	Walk	Ped Clear	Yellow	Red Clear	Overlap Green
A01	5	0	7	3.0	0.0	5
B02	5	0	7	3.0	0.0	5
C03	5	0	7	3.0	0.0	5
D04	5	0	7	3.0	0.0	5
E05	5	0	7	3.0	0.0	5
F06	5	0	7	3.0	0.0	5
G07	5	0	7	3.0	0.0	5
H08	5	0	7	3.0	0.0	5
I09	5	0	7	3.0	0.0	5
J10	5	0	7	3.0	0.0	5
K11	5	0	7	3.0	0.0	5
L12	5	0	7	3.0	0.0	5
M13	5	0	7	3.0	0.0	5
N14	5	0	7	3.0	0.0	5
O15	5	0	7	3.0	0.0	5
P16	5	0	7	3.0	0.0	5

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Controller Pedestrian Overlaps
Vehicle / Pedestrian Overlaps (MM) 2-3

Included	Pedestrian Overlaps

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Controller Start / Flash Data (MM) 2-5

Start Up

Phase	Phase Setting
1	.
2	Y
3	.
4	.
5	.
6	.
7	.
8	.
9	.
10	.
11	.
12	.
13	.
14	.
15	.
16	.

Overlap
A
B
C
D

Flash Thru Mon: No
Flash Time: 0
All Red: 6
Power Start Seq: 1
MUTCD Enabled: No
Y->G: n/a

Automatic Flash

Entry
2

Exit
2

Overlap Exit
A
B
C
D

Flash Thru Mon: No
Exit Flash: W
Minimum Flash: 8
Mimimum Recall: No
Cycle Through Phase: No

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Controller Options

Controller Options (MM) 2-6-1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Flashing Grn Ph	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Guar Passage																
Non-Act I		X				X										
Non-Act II				X				X								
Dual Entry																
Cond Service																
Cond Reservice																
Ped Re-Service																
Rest In Walk																
Flashing Walk																
Ped Clr-Yel																
Ped Clr-Red																
IGRN + Veh Ext																

Ped Clear Protect: Off

Unit Red Revert: 2.0

MUTCD 3 Seconds Don't Walk: No

Pre-Timed Mode (MM) 2-7

Enable Pre-Timed Mode: No

Free Input Disables Pre-Timed: No

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Pre-Timed																

Phase Recall Options (MM) 2-8

Plan # 1

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Lock Detector																
Vehicle Recall		X		X												
Ped Recall																
Max Recall		X		X												
Soft Recall																
No Rest																
Al Calc																

Plan # 2

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Lock Detector																
Vehicle Recall		X		X												
Ped Recall																
Max Recall		X		X												
Soft Recall																
No Rest																
Al Calc																

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Coordination Options

Options (MM) 3-1

Manual Pattern	Auto	ECPI Coord	Yes
System Source	TBC	System Format	STD
Splits In	Seconds	Offsets In	Seconds
Transition	Smooth	Max Select	MAXINH
Dwell / Add Time	0		
Delay Coord Wk-LZ	No	Force Off	Float
Offset Reference	Yellow	Use Ped Time	No
Ped Recall	No	Ped Reservice	No
Local Zero Override	No	FO Added Ini Green	No
Re-sync Count	0	Multisync	No

Auto Perm Minimum Green (Seconds) (MM) 3-4

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Minimum Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Split Demand (MM) 3-5

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Demand 1																
Demand 2																

Demand	1	2
Detector	0	0
Call Time (Sec)	0	0
Cycle Count	0	0

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Coordination Pattern Data
Coordinator Pattern Data (MM) 3-2

Coordinator Pattern # 1

Split Pattern	1	TS2 (Pat-Off)	0-1	Splits In	Seconds
Cycle	120	Std (COS)	9	Offsets In	Seconds
Offset Value	46s	Dwell/Add Time	0		
Actuated Coord	No	Timing Plan	1		
Actuated Walk Rest	No	Sequence	1		
Phase Reservice	No	Action Plan	1		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Splits (Split Pat 1)	0	60	0	60	0	0	0	0	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	120s	0s	0s	0s

Misc. Data

Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X														
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Funciton Outputs																

Coordinator Pattern # 2

Split Pattern	2	TS2 (Pat-Off)	0-2	Splits In	Seconds
Cycle	100	Std (COS)	17	Offsets In	Seconds
Offset Value	58s	Dwell/Add Time	0		
Actuated Coord	No	Timing Plan	2		
Actuated Walk Rest	No	Sequence	1		
Phase Reservice	No	Action Plan	2		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Splits (Split Pat 2)	0	55	0	45	0	0	0	0	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	100s	0s	0s	0s

Misc. Data

Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X														
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Funciton Outputs																

Coordinator Pattern # 3

Split Pattern	3	TS2 (Pat-Off)	0-3	Splits In	Seconds
Cycle	120	Std (COS)	25	Offsets In	Seconds
Offset Value	43s	Dwell/Add Time	0		
Actuated Coord	No	Timing Plan	1		
Actuated Walk Rest	No	Sequence	1		
Phase Reservice	No	Action Plan	3		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Splits (Split Pat 3)	0	60	0	60	0	0	0	0	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	120s	0s	0s	0s

Misc. Data

Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X														
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Funciton Outputs																

Coordinator Pattern # 4

Split Pattern	4	TS2 (Pat-Off)	1-1	Splits In	Seconds
Cycle	80	Std (COS)	33	Offsets In	Seconds
Offset Value	0s	Dwell/Add Time	0		
Actuated Coord	No	Timing Plan	1		
Actuated Walk Rest	No	Sequence	1		
Phase Reservice	No	Action Plan	4		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Splits (Split Pat 4)	0	42	0	38	0	0	0	0	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	80s	0s	0s	0s

Misc. Data

Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase				X												
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Funciton Outputs																

Coordinator Pattern # 5

Split Pattern	5	TS2 (Pat-Off)	1-2	Splits In	Seconds
Cycle	120	Std (COS)	41	Offsets In	Seconds
Offset Value	46s	Dwell/Add Time	0		
Actuated Coord	No	Timing Plan	1		
Actuated Walk Rest	No	Sequence	1		
Phase Reservice	No	Action Plan	5		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Splits (Split Pat 5)	0	62	0	58	0	0	0	0	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	120s	0s	0s	0s

Misc. Data

Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X														
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Funciton Outputs																

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Coordination Split Pattern
Split Pattern Data (MM) 3-3

Split Pattern # 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Split (seconds)	0	60	0	60	0	0	0	0	0	0	0	0	0	0	0	0
Coord Phase		X														
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	120s	0s	0s	0s

Split Pattern # 2

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Split (seconds)	0	55	0	45	0	0	0	0	0	0	0	0	0	0	0	0
Coord Phase		X														
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	100s	0s	0s	0s

Split Pattern # 3

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Split (seconds)	0	60	0	60	0	0	0	0	0	0	0	0	0	0	0	0
Coord Phase		X														
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	120s	0s	0s	0s

Split Pattern # 4

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Split (seconds)	0	42	0	38	0	0	0	0	0	0	0	0	0	0	0	0
Coord Phase				X												
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	80s	0s	0s	0s

Split Pattern # 5

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Split (seconds)	0	62	0	58	0	0	0	0	0	0	0	0	0	0	0	0
Coord Phase		X														
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	120s	0s	0s	0s

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Preempt Plan

Preempt Plan (MM) 4-1

Preempt Plan 2

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Overlap	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Trk Clr Veh																
Trk Clr Overlap																
Enable Trailing																
Dwell Veh		X														
Dwell Ped																
Dwell Overlap																
Cycling Veh																
Cycling Ped																
Cycling Overlap																
Exit Phases		X														
Exit Calls																
Special Function																

Enable	Yes	Preempt Override	Yes	Interlock Enable	No
Det Lock	Yes	Delay	0	Inhibit	0
Override Flash	Yes	Duration	10	CLR > GRN	No
Term Ovlp Asap	No	PC Through Yel	No	Terminate Phase	No
Ped Dark	No	Track Clear Rsrv	No	Dwell Flash	Off
Linked Pmt	0	FL Exit Color	Grn	Exit Options	Off
Exit Timing Plan	0	Reservice	0	Fault Type	Hard

Ring	1	2	3	4
Free During Pmt	No	No	No	No

Timing	Walk	Ped Clr	Min Grn	Yellow	Red
Entrance	0	7	5	4.0	1.0
	Min Grn	Ext Grn	Max Grn	Yellow	Red
Track Clear	0	0	0	4.0	1.0
	Min Dwell	Pmt Ext	Max Time	Yellow	Red
Dwell / Cycle-Exit	0	0.0	120	3.5	1.0

Preemption Active Out	On	Preempt Act Dwell	No
Other - Priority Preempt	Off	Non-Priority Pmt	Off
Inhibit Extension Time	0.0	Ped Priority Return	Off
Veh Priority Return	Off	Queue Delay	Off
Conditional Delay	Off		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Veh Pri Return %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Preempt Plan 3

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Overlap	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Trk Clr Veh	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Trk Clr Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Enable Trailing																
Dwell Veh	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Ped																
Dwell Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycling Veh	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycling Ped																
Cycling Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Exit Phases				X												
Exit Calls																
Special Function																

Enable	Yes	Preempt Override	Yes	Interlock Enable	No
Det Lock	Yes	Delay	0	Inhibit	0
Override Flash	Yes	Duration	10	CLR > GRN	No
Term Ovlp Asap	No	PC Through Yel	No	Terminate Phase	No
Ped Dark	No	Track Clear Rsrv	No	Dwell Flash	Off
Linked Pmt	0	FL Exit Color	Grn	Exit Options	Off
Exit Timing Plan	0	Reservice	0	Fault Type	Hard

Ring	1	2	3	4
Free During Pmt	No	No	No	No

Timing	Walk	Ped Clr	Min Grn	Yellow	Red
Entrance	0	7	10	4.0	1.0
	Min Grn	Ext Grn	Max Grn	Yellow	Red
Track Clear	0	0	0	4.0	1.0
	Min Dwell	Pmt Ext	Max Time	Yellow	Red
Dwell / Cycle-Exit	0	0.0	120	3.5	1.0

Preemption Active Out	On	Preempt Act Dwell	No
Other - Priority Preempt	Off	Non-Priority Pmt	Off
Inhibit Extension Time	0.0	Ped Priority Return	Off
Veh Priority Return	Off	Queue Delay	Off
Conditional Delay	Off		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Veh Pri Return %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Preempt Plan 4

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Overlap	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Trk Clr Veh	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Trk Clr Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Enable Trailing																
Dwell Veh	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Ped																
Dwell Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycling Veh	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycling Ped																
Cycling Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Exit Phases		X														
Exit Calls																
Special Function																

Enable	Yes	Preempt Override	Yes	Interlock Enable	No
Det Lock	Yes	Delay	0	Inhibit	0
Override Flash	Yes	Duration	0	CLR > GRN	No
Term Ovlp Asap	No	PC Through Yel	No	Terminate Phase	No
Ped Dark	No	Track Clear Rsrv	No	Dwell Flash	Off
Linked Pmt	0	FL Exit Color	Grn	Exit Options	Off
Exit Timing Plan	0	Reservice	0	Fault Type	Hard

Ring	1	2	3	4
Free During Pmt	No	No	No	No

Timing	Walk	Ped Clr	Min Grn	Yellow	Red
Entrance	0	7	10	4.0	1.0
	Min Grn	**Ext Grn**	**Max Grn**	**Yellow**	**Red**
Track Clear	0	0	0	4.0	1.0
	Min Dwell	**Pmt Ext**	**Max Time**	**Yellow**	**Red**
Dwell / Cycle-Exit	0	0.0	120	3.5	1.0

Preemption Active Out	On	Preempt Act Dwell	No
Other - Priority Preempt	Off	Non-Priority Pmt	Off
Inhibit Extension Time	0.0	Ped Priority Return	Off
Veh Priority Return	Off	Queue Delay	Off
Conditional Delay	Off		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Veh Pri Return %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Preempt Plan 5

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Overlap	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Trk Clr Veh																
Trk Clr Overlap																
Enable Trailing																
Dwell Veh				X												
Dwell Ped																
Dwell Overlap																
Cycling Veh																
Cycling Ped																
Cycling Overlap																
Exit Phases				X												
Exit Calls																
Special Function																

Enable	Yes	Preempt Override	Yes	Interlock Enable	No
Det Lock	Yes	Delay	0	Inhibit	0
Override Flash	Yes	Duration	10	CLR > GRN	No
Term Ovlp Asap	No	PC Through Yel	No	Terminate Phase	No
Ped Dark	No	Track Clear Rsrv	No	Dwell Flash	Off
Linked Pmt	0	FL Exit Color	Grn	Exit Options	Off
Exit Timing Plan	0	Reservice	0	Fault Type	Hard

Ring	1	2	3	4
Free During Pmt	No	No	No	No

Timing	Walk	Ped Clr	Min Grn	Yellow	Red
Entrance	0	7	10	4.0	1.0
	Min Grn	**Ext Grn**	**Max Grn**	**Yellow**	**Red**
Track Clear	0	0	0	4.0	1.0
	Min Dwell	**Pmt Ext**	**Max Time**	**Yellow**	**Red**
Dwell / Cycle-Exit	0	0.0	120	3.5	1.0

Preemption Active Out	On	Preempt Act Dwell	No
Other - Priority Preempt	Off	Non-Priority Pmt	Off
Inhibit Extension Time	0.0	Ped Priority Return	Off
Veh Priority Return	Off	Queue Delay	Off
Conditional Delay	Off		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Veh Pri Return %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Preempt Plan 6

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Overlap	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Trk Clr Veh	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Trk Clr Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Enable Trailing																
Dwell Veh	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dwell Ped																
Dwell Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycling Veh	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cycling Ped																
Cycling Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Exit Phases		X														
Exit Calls																
Special Function																

Enable	Yes	Preempt Override	Yes	Interlock Enable	No
Det Lock	Yes	Delay	0	Inhibit	0
Override Flash	Yes	Duration	10	CLR > GRN	No
Term Ovlp Asap	No	PC Through Yel	No	Terminate Phase	No
Ped Dark	No	Track Clear Rsrv	No	Dwell Flash	Off
Linked Pmt	0	FL Exit Color	Grn	Exit Options	Off
Exit Timing Plan	0	Reservice	0	Fault Type	Hard

Ring	1	2	3	4
Free During Pmt	No	No	No	No

Timing	Walk	Ped Clr	Min Grn	Yellow	Red
Entrance	0	7	10	4.0	1.0
	Min Grn	**Ext Grn**	**Max Grn**	**Yellow**	**Red**
Track Clear	0	0	0	4.0	1.0
	Min Dwell	**Pmt Ext**	**Max Time**	**Yellow**	**Red**
Dwell / Cycle-Exit	0	0.0	120	3.5	1.0

Preemption Active Out	On	Preempt Act Dwell	No
Other - Priority Preempt	Off	Non-Priority Pmt	Off
Inhibit Extension Time	0.0	Ped Priority Return	Off
Veh Priority Return	Off	Queue Delay	Off
Conditional Delay	Off		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Veh Pri Return %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Preempt Preempt Filtering
Enable Preempt Filtering & TSP/SCP (MM) 4-2

Input	Solid	Pulsing
1	...BYPASSED...	...BYPASSED...
2	...BYPASSED...	...BYPASSED...
3	PREEMPTION 3	PREEMPTION 7
4	PREEMPTION 4	PREEMPTION 8
5	PREEMPTION 5	PREEMPTION 9
6	PREEMPTION 6	PREEMPTION 10
7	...BYPASSED...	...BYPASSED...
8	...BYPASSED...	...BYPASSED...
9	...BYPASSED...	...BYPASSED...
10	...BYPASSED...	...BYPASSED...

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Preempt TSP/SCP Plan and Split

TSP / SCP Plan (MM) 4-3

TSP/SCP Plan	Enable Option	Signal Type	Det Lock	Delay Time	Max Presence	PMT Enables Reservice	No Delay in TSP	Action SF Inhibit	Reservice Cycles	Bus Heading
1	No	Solid	No	0	0	No	False	0	0	NB
2	No	Solid	No	0	0	No	False	0	0	SB
3	No	Solid	No	0	0	No	False	0	0	EB
4	No	Solid	No	0	0	No	False	0	0	WB
5	No	Solid	No	0	0	No	False	0	0	.
6	No	Solid	No	0	0	No	False	0	0	.

Mode: TSP
Free Default Pattern: 120
Headway Allowance: 0

TSP/SCP Plan	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

TSP / SCP Split Pattern (MM) 4-4

TSP/SCP Split Pattern	Max Type	Phase															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
4	Max Reduction	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255

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Time Base Clock/Calendar
Clock/Calendar Data (MM) 5-1

Manual Action Plan:	0
SYNC Reference Time:	00:00
SYNC Reference:	Reference Time
Day Light Savings:	No
Time Reset Input Set Time:	3:30:00
Standard Time From GMT:	0

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Time Base Action Plan
Action Plan (MM) 5-2

Action Plan - 1 - "1"

Pattern	1	Override Sys	No
Timing Plan	1	Sequence	1
Veh Detector Plan	1	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																
Spec Func (1-8)																
Aux Func (1-3)																

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

Action Plan - 2 - "2"

Pattern	2	Override Sys	No
Timing Plan	2	Sequence	1
Veh Detector Plan	1	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																
Spec Func (1-8)																
Aux Func (1-3)																

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

Action Plan - 3 - "3"

Pattern	3	Override Sys	No
Timing Plan	1	Sequence	1
Veh Detector Plan	1	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																
Spec Func (1-8)																
Aux Func (1-3)																

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

Action Plan - 4 - "4"

Pattern	4	Override Sys	No
Timing Plan	1	Sequence	1
Veh Detector Plan	1	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																
Spec Func (1-8)																
Aux Func (1-3)																

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

Action Plan - 5 - "5"

Pattern	5	Override Sys	No
Timing Plan	1	Sequence	1
Veh Detector Plan	1	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																
Spec Func (1-8)																
Aux Func (1-3)																

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

Louisville/Superior

ECONOLITE
CONTROL PRODUCTS, INC.
Solutions that Move the World™

002 - McCaslin Blvd @ US-36 @ S Ramp - Cobalt @ 172.16.8.111 - Econolite Type - Cobalt

Time Base Day Plan/Schedule
Day Plan (MM) 5-3

Day Plan #1 - "1"

Event	Action Plan	Start Time
1	1	06:30
2	2	09:00
3	3	15:30
4	2	19:00

Day Plan #2 - "2"

Event	Action Plan	Start Time
1	2	06:30
2	5	10:00
3	2	18:00

Schedule (MM) 5-4

Schedule Number - 1

Day Plan No.: 1

Month	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	X	X	X	X	X	X	X	X	X	X	X	X

Day (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT
		X	X	X	X	X	

Day (DOM)	1	2	3	4	5	6	7	8	9	10	11
	X	X	X	X	X	X	X	X	X	X	X
	12	13	14	15	16	17	18	19	20	21	22
	X	X	X	X	X	X	X	X	X	X	X
	23	24	25	26	27	28	29	30	31		
	X	X	X	X	X	X	X	X	X		

Schedule Number - 2

Day Plan No.: 2

Month	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	X	X	X	X	X	X	X	X	X	X	X	X

Day (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT
	X						X

Day (DOM)	1	2	3	4	5	6	7	8	9	10	11
	X	X	X	X	X	X	X	X	X	X	X
	12	13	14	15	16	17	18	19	20	21	22
	X	X	X	X	X	X	X	X	X	X	X
	23	24	25	26	27	28	29	30	31		
	X	X	X	X	X	X	X	X	X		

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Solutions that Move the World™

002 - McCaslin Blvd @ US-36 @ S Ramp - Cobalt @ 172.16.8.111 - Econolite Type - Cobalt

Time Base Exceptions
Exception Day Program (MM) 5-5

Excep Day	Float/Fixed	Mon/Mon	DOW/DOM	WOM/Year	Day Plan

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ECONOLITE CONTROL PRODUCTS, INC.

Solutions that Move the World™

002 - McCaslin Blvd @ US-36 @ S Ramp - Cobalt @ 172.16.8.111 - Econolite Type - Cobalt

Detectors

Detectors - Pg 1

Veh Det Phase Assignment (MM) 6-1

Vehicle Detector Plan Number - 1

Veh Detector	Called Phase	Type

Vehicle Detector Plan Number - 2

Veh Detector	Called Phase	Type

Vehicle Detector Plan Number - 3

Veh Detector	Called Phase	Type

Vehicle Detector Plan Number - 4

Veh Detector	Called Phase	Type

Vehicle Detector Setup (MM) 6-2

Veh Detector	Type	TS2 Detector	Description
1	S-STANDARD	Yes	
2	S-STANDARD	Yes	
3	S-STANDARD	Yes	
4	S-STANDARD	Yes	
5	S-STANDARD	Yes	
6	S-STANDARD	Yes	
7	S-STANDARD	Yes	
8	S-STANDARD	Yes	
9	S-STANDARD	Yes	
10	S-STANDARD	Yes	
11	S-STANDARD	Yes	
12	S-STANDARD	Yes	
13	S-STANDARD	Yes	
14	S-STANDARD	Yes	
15	S-STANDARD	Yes	
16	S-STANDARD	Yes	
17	S-STANDARD	Yes	
18	S-STANDARD	Yes	
19	S-STANDARD	Yes	
20	S-STANDARD	Yes	
21	S-STANDARD	Yes	
22	S-STANDARD	Yes	
23	S-STANDARD	Yes	
24	S-STANDARD	Yes	
25	S-STANDARD	Yes	
26	S-STANDARD	Yes	
27	S-STANDARD	Yes	
28	S-STANDARD	Yes	
29	S-STANDARD	Yes	
30	S-STANDARD	Yes	
31	S-STANDARD	Yes	
32	S-STANDARD	Yes	
33	S-STANDARD	Yes	
34	S-STANDARD	Yes	
35	S-STANDARD	Yes	
36	S-STANDARD	Yes	
37	S-STANDARD	Yes	
38	S-STANDARD	Yes	
39	S-STANDARD	Yes	
40	S-STANDARD	Yes	
41	S-STANDARD	Yes	
42	S-STANDARD	Yes	
43	S-STANDARD	Yes	
44	S-STANDARD	Yes	
45	S-STANDARD	Yes	
46	S-STANDARD	Yes	
47	S-STANDARD	Yes	
48	S-STANDARD	Yes	
49	S-STANDARD	Yes	
50	S-STANDARD	Yes	
51	S-STANDARD	Yes	
52	S-STANDARD	Yes	
53	S-STANDARD	Yes	
54	S-STANDARD	Yes	
55	S-STANDARD	Yes	
56	S-STANDARD	Yes	
57	S-STANDARD	Yes	
58	S-STANDARD	Yes	
59	S-STANDARD	Yes	
60	S-STANDARD	Yes	
61	S-STANDARD	Yes	
62	S-STANDARD	Yes	

63	S-STANDARD	Yes	
64	S-STANDARD	Yes	

Vehicle Detector Plan Number - 1

Veh Detector	Phase	ECPI Log	Call Option	Delay Time	Ext Option	Extend Time / Passage Time	Queue Lim. / Discon. Time	Use Added Initial	Cross Switch Ph	Lock In	NTCIP Vol.	NTCIP Occ.	Pmt Queue Delay
1	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
2	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
3	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
4	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
5	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
6	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
7	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
8	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
9	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
10	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
11	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
12	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
13	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
14	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
15	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
16	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
17	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
18	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
19	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
20	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
21	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
22	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
23	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
24	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
25	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
26	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
27	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
28	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
29	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
30	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
31	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
32	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
33	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
34	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
35	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
36	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
37	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
38	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
39	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
40	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
41	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
42	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
43	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
44	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
45	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
46	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
47	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
48	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
49	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
50	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
51	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
52	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
53	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
54	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
55	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
56	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
57	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
58	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
59	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
60	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
61	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
62	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
63	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
64	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

Vehicle Detector Plan Number - 2

Veh Detector	Phase	ECPI Log	Call Option	Delay Time	Ext Option	Extend Time / Passage Time	Queue Lim. / Discon. Time	Use Added Initial	Cross Switch Ph	Lock In	NTCIP Vol.	NTCIP Occ.	Pmt Queue Delay
1	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
2	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
3	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
4	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
5	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
6	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
7	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
8	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
9	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
10	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
11	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
12	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
13	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
14	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
15	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
16	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

17	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
18	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
19	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
20	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
21	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
22	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
23	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
24	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
25	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
26	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
27	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
28	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
29	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
30	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
31	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
32	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
33	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
34	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
35	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
36	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
37	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
38	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
39	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
40	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
41	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
42	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
43	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
44	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
45	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
46	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
47	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
48	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
49	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
50	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
51	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
52	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
53	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
54	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
55	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
56	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
57	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
58	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
59	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
60	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
61	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
62	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
63	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
64	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

Vehicle Detector Plan Number - 3

Veh Detector	Phase	ECPI Log	Call Option	Delay Time	Ext Option	Extend Time / Passage Time	Queue Lim. / Discon. Time	Use Added Initial	Cross Switch Ph	Lock In	NTCIP Vol.	NTCIP Occ.	Pmt Queue Delay
1	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
2	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
3	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
4	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
5	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
6	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
7	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
8	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
9	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
10	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
11	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
12	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
13	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
14	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
15	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
16	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
17	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
18	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
19	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
20	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
21	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
22	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
23	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
24	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
25	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
26	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
27	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
28	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
29	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
30	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
31	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
32	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
33	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
34	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
35	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
36	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
37	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
38	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
39	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
40	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

41	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
42	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
43	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
44	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
45	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
46	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
47	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
48	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
49	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
50	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
51	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
52	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
53	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
54	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
55	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
56	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
57	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
58	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
59	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
60	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
61	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
62	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
63	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
64	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

Vehicle Detector Plan Number - 4

Veh Detector	Phase	ECPI Log	Call Option	Delay Time	Ext Option	Extend Time / Passage Time	Queue Lim. / Discon. Time	Use Added Initial	Cross Switch Ph	Lock In	NTCIP Vol.	NTCIP Occ.	Pmt Queue Delay
1	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
2	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
3	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
4	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
5	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
6	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
7	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
8	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
9	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
10	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
11	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
12	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
13	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
14	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
15	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
16	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
17	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
18	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
19	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
20	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
21	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
22	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
23	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
24	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
25	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
26	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
27	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
28	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
29	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
30	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
31	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
32	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
33	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
34	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
35	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
36	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
37	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
38	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
39	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
40	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
41	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
42	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
43	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
44	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
45	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
46	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
47	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
48	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
49	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
50	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
51	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
52	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
53	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
54	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
55	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
56	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
57	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
58	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
59	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
60	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
61	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
62	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
63	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
64	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

Ped Detector Phase Assignment (MM) 6-3

Mode: NTCIP

Called Phase	Detector
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16

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Solutions that Move the World™

002 - McCaslin Blvd @ US-36 @ S Ramp - Cobalt @ 172.16.8.111 - Econolite Type - Cobalt

Detectors

Detectors - Pg 2

Log - Speed Detector Setup (MM) 6-4

NTCIP Log Period: 60 ECPI Log Period: 0 Length Unit: Inches

Speed Detector	Local Detector	One/Two Detector	Vehicle Length	Trap length	Enable Log
1	0	1	0	0	No
2	0	1	0	0	No
3	0	1	0	0	No
4	0	1	0	0	No
5	0	1	0	0	No
6	0	1	0	0	No
7	0	1	0	0	No
8	0	1	0	0	No
9	0	1	0	0	No
10	0	1	0	0	No
11	0	1	0	0	No
12	0	1	0	0	No
13	0	1	0	0	No
14	0	1	0	0	No
15	0	1	0	0	No
16	0	1	0	0	No

Vehicle Detector Diagnostics (MM) 6-5

Veh Diagnostic Plan Number - 1

Det	Counts	Act	Pres	Multiplier	Failed Time	Failed Call Delay

Veh Diagnostic Plan Number - 2

Det	Counts	Act	Pres	Multiplier	Failed Time	Failed Call Delay

Veh Diagnostic Plan Number - 3

Det	Counts	Act	Pres	Multiplier	Failed Time	Failed Call Delay

Veh Diagnostic Plan Number - 4

Det	Counts	Act	Pres	Multiplier	Failed Time	Failed Call Delay

Pedestrian Detector Diagnostics (MM) 6-6

Ped Diagnostic Plan Number - 1

Det	Counts	Act	Pres	Multiplier
2	0	0	2	1
4	0	0	2	1
6	0	0	2	1
8	0	0	2	1

Ped Diagnostic Plan Number - 2

Det	Counts	Act	Pres	Multiplier

Ped Diagnostic Plan Number - 3

Det	Counts	Act	Pres	Multiplier

Ped Diagnostic Plan Number - 4

Det	Counts	Act	Pres	Multiplier

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Solutions that Move the World™

001 - McCaslin Blvd @ Marshall Rd - Cobalt @ 172.16.8.110 - Econolite Type - Cobalt

Configuration **Controller Sequence**

Phase Ring Sequence.....(Note: Sequences identical to the prior one are not printed)

	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
	B		B		B		B		B							
Sequence 1																
Ring 1	2	1	8	4	9	10	13	14	.	.	.	.	.	.	.	.
Ring 2	6	5	3	7	11	12	15	16	.	.	.	.	.	.	.	.
Sequence 2																
Ring 1	1	2	8	4	9	10	13	14	.	.	.	.	.	.	.	.
Ring 2	5	6	3	7	11	12	15	16	.	.	.	.	.	.	.	.
Sequence 3																
Ring 1	1	2	4	8	9	10	13	14	.	.	.	.	.	.	.	.
Ring 2	5	6	3	7	11	12	15	16	.	.	.	.	.	.	.	.
Sequence 4																
Ring 1	2	1	8	4	9	10	13	14	.	.	.	.	.	.	.	.
Ring 2	5	6	3	7	11	12	15	16	.	.	.	.	.	.	.	.
Sequence 5																
Ring 1	2	1	8	4	9	10	13	14	.	.	.	.	.	.	.	.
Ring 2	6	5	3	7	11	12	15	16	.	.	.	.	.	.	.	.

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Hardware Alternate Sequence Enable: No

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Solutions that Move the World™

001 - McCaslin Blvd @ Marshall Rd - Cobalt @ 172.16.8.110 - Econolite Type - Cobalt

Configuration **Port 1 (SDLC)**

Port 1 SDLC (MM) 1-4-1

BIU	1	2	3	4	5	6	7	8
Term & Facility								
Detector Rack			X					

Enable TS2/MMU Type Cabinet: No
Enable MMU Extended Status: No
Enable SDLC Stop Time: No
Enable 3 Critical RFE's Lockup: Yes

MMU Program (MM) 1-4-2

Channel Can Serve With Channel	
Channel 1	**Channel 2**

Color Check Enable (MM) 1-4-3
Enable Color Check: Yes

MMU/LS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Green																
Yellow																
Red																

Secondary Stations/Tests (MM) 1-4-4

ID	1	2	3	4	5	6	7	8	MMU
Term & Facility									

ID	1	2	3	4	5	6	7	8	Diag
Detector Rack									

Enable SDLC Diagnostic Test: No

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Solutions that Move the World™

001 - McCaslin Blvd @ Marshall Rd - Cobalt @ 172.16.8.110 - Econolite Type - Cobalt

Configuration Communications 1 (SDLC)

Ethernet Port Configuration (MM) 1-5-1

DHCP Enable:	No
Controller IP:	172.16.8.110
Subnet Mask:	255.255.252.0
Default Gateway IP:	172.16.11.254
Server IP:	172.16.50.1

NTCIP (MM) 1-5-5

NTCIP Backup Time (Sec):	0
NTCIP UDP Port:	2101
Ethernet Priority:	1
Port 2 Priority (Port C50S for 2070):	4
Port 3A Priority (Port C21S for 2070):	3
Port 3B Priority (Port C22S for 2070):	2

Port Configuration (MM) 1-5-2 to 1-5-4

Port	2 (C50S)	3A (C21S)	3B (C22S)
Comm Module	None	Auto	Auto
Protocol	NTCIP	NTCIP	NTCIP
Enable	No	No	No
Data Rate (BPS)	9600	9600	9600
Data, Parity, Stop	8 N 1	8 N 1	8 N 1
Address	1	0	0
Telemetry Response Delay	0.0	0.0	0.0
Duplex - Half or Full	Half	Full	Full
Flow Control	No	Yes	Yes
Group Address	0	0	0
Single Flag Enable	Yes	Yes	Yes
RTS to CTS Delay	n/a	n/a	0.0
RTS Turn Off Delay	n/a	n/a	0.0
Dropout Time	10	10	10
Early RTS	n/a	n/a	No
Telemetry Mode	n/a	n/a	FSK
ATCS Railroad	0	n/a	n/a
ATCS Railroad Line	0	n/a	n/a
ATCS Group	0	n/a	n/a
Wayside Device	0	n/a	n/a
ATC Device	0	n/a	n/a
Wayside Subnode	0	n/a	n/a
ATC Subnode	0	n/a	n/a

ECPIP (MM) 1-5-6

Controller Address:	1
Expanded System Detector Address:	0

System Detector Assignment

System Detector	Local Detector

Wireless Configuration (MM) 1-5-7

Wireless Channel Number:	1
Wireless Access Code:	327423274

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Solutions that Move the World™

001 - McCaslin Blvd @ Marshall Rd - Cobalt @ 172.16.8.110 - Econolite Type - Cobalt

Configuration Logging / Display

Event Logging (MM) 1-6-1

Critical RFE's (MMU/TF)	Yes	3 Critical Errors Within 24 Hours	Yes
MMU Flash Faults	Yes	Local Flash Fault	Yes
Non-Critical RFE's (Det/Test)	Yes	Detector Errors	Yes
Coordination Errors	Yes	Controller Download	Yes
Preemption Events	Yes	TSP Events	Yes
Power On/Off	Yes	Low Battery	Yes
Access	Yes	Data Change	Yes
Online / Offline	Yes		

Alarm Event	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Enable Logging	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Display Options (MM) 1-7-2

Key Click Enable:	Yes
Switch to Graphics Mode:	No
LED Mode:	Auto
Display Mode:	Advanced
Trans Mode Pop-Up Disable:	No

Sign On (MM) 8-5

Sign On Message Line 1: Solutions that Move the World
Sign On Message Line 2:

Software Modules (MM) 8-7

Application Version: 32.65.30
OS (Boot) Version: 06.07.00

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001 - McCaslin Blvd @ Marshall Rd - Cobalt @ 172.16.8.110 - Econolite Type - Cobalt

Logic Processor Page 1

Logic Statement Control (MM) 1-8-1

Logic #	Statement Control

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Solutions that Move the World™

001 - McCaslin Blvd @ Marshall Rd - Cobalt @ 172.16.8.110 - Econolite Type - Cobalt

Logic Processor Page 2

Logic Statements (MM) 1-8-2

Logic #: 1 - ""

If:

	Peer	T/F	Assignment	#		State
IF	--	F	PED ON PH PED CLR	8	IS	On

Then:

Assignment	#	State
LP SET LOGIC FLAG	1	On

Logic #: 2 - ""

If:

	Peer	T/F	Assignment	#		State
IF	--	F	LP LOGIC FLAG	1	IS	On

Then:

Assignment	#	State
CRD SET FREE		On

Logic #: 3 - ""

If:

	Peer	T/F	Assignment	#		State
IF	--	F	VEH GREEN ON PH	2	IS	On
OR	--	F	VEH GREEN ON PH	6	IS	On

Then:

Assignment	#	State
LP SET LOGIC FLAG	1	Off

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001 - McCaslin Blvd @ Marshall Rd - Cobalt @ 172.16.8.110 - Econolite Type - Cobalt

Controller Timing Plan (MM) 2-1
Plan 1 - ""

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Min Green	3	10	0	5	3	10	0	5	5	5	5	5	5	5	5	5
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	4	0	4	0	4	0	4	0	10	0	10	0	10	0	10
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	16	0	27	0	16	0	27	0	16	0	16	0	16	0	16
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	2.0	3.0	0.0	3.0	2.0	3.0	0.0	2.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	75	75	0	19	75	75	0	11	35	35	35	35	35	35	35	35
Max2	75	75	0	22	75	75	0	11	40	40	40	40	40	40	40	40
Max3	75	75	0	29	75	75	0	14	0	0	0	0	0	0	0	0
DYM Max	0	0	0	35	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.0	4.0	3.0	3.0	3.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	1.0	2.0	0.0	2.0	1.0	2.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Plan 2 - ""

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Min Green	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	10	0	10	0	10	0	10	0	10	0	10	0	10	0	10
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	16	0	16	0	16	0	16	0	16	0	16	0	16	0	16
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35
Max2	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Plan 3 - ""

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Min Green	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	10	0	10	0	10	0	10	0	10	0	10	0	10	0	10
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	16	0	16	0	16	0	16	0	16	0	16	0	16	0	16
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35
Max2	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Plan 4 - ""

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Min Green	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	10	0	10	0	10	0	10	0	10	0	10	0	10	0	10
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	16	0	16	0	16	0	16	0	16	0	16	0	16	0	16
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35
Max2	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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Controller Overlaps
Vehicle Overlaps (MM) 2-2

Overlap	Type	Lag Green	Yellow	Red	Adv. Green

Phases

Overlap	Phase	Included	Protect	Ped Protect	Not Overlap	Modifier	Lag X Phases	Lag 2 Phases	Flash Green

PPLT FYA

Overlap	Protected Phase (Left Turn)	Permissive Phase (Opposing Thru)	Flashing Arrow Output	Flashing Arrow Output CH	Delay Start of FYA	Delay Start of Clearance	Action Plan SF Bit Disable	Ped Protected Enable
A	1	2	Yellow Ped	9	0.0	0.0	1	No
C	5	6	Yellow Ped	11	0.0	0.0	5	No

Guaranteed Minimum Time Data (MM) 2-4

Phase	Min Green	Walk	Ped Clear	Yellow	Red Clear	Overlap Green
A01	5	0	7	3.0	0.0	5
B02	5	0	7	3.0	0.0	5
C03	5	0	7	3.0	0.0	5
D04	5	0	7	3.0	0.0	5
E05	5	0	7	3.0	0.0	5
F06	5	0	7	3.0	0.0	5
G07	5	0	7	3.0	0.0	5
H08	5	0	7	3.0	0.0	5
I09	5	0	7	3.0	0.0	5
J10	5	0	7	3.0	0.0	5
K11	5	0	7	3.0	0.0	5
L12	5	0	7	3.0	0.0	5
M13	5	0	7	3.0	0.0	5
N14	5	0	7	3.0	0.0	5
O15	5	0	7	3.0	0.0	5
P16	5	0	7	3.0	0.0	5

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Controller Pedestrian Overlaps
Vehicle / Pedestrian Overlaps (MM) 2-3

Included	Pedestrian Overlaps

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Controller Start / Flash Data (MM) 2-5

Start Up

Phase	Phase Setting
1	.
2	Y
3	.
4	.
5	.
6	Y
7	.
8	.
9	.
10	.
11	.
12	.
13	.
14	.
15	.
16	.

Overlap
A
B
C
D

Flash Thru Mon: No
Flash Time: 0
All Red: 6
Power Start Seq: 1
MUTCD Enabled: No
Y->G: n/a

Automatic Flash

Entry
2
6

Exit
2
6

Overlap Exit
A
B
C
D

Flash Thru Mon: No
Exit Flash: W
Minimum Flash: 8
Mimimum Recall: No
Cycle Through Phase: No

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Controller Options

Controller Options (MM) 2-6-1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Flashing Grn Ph	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Guar Passage																
Non-Act I		X				X										
Non-Act II																
Dual Entry		X				X										
Cond Service																
Cond Reservice																
Ped Re-Service																
Rest In Walk		X				X										
Flashing Walk																
Ped Clr-Yel																
Ped Clr-Red																
IGRN + Veh Ext																

Ped Clear Protect: Off

Unit Red Revert: 2.0

MUTCD 3 Seconds Don't Walk: No

Pre-Timed Mode (MM) 2-7

Enable Pre-Timed Mode: No

Free Input Disables Pre-Timed: No

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Pre-Timed																

Phase Recall Options (MM) 2-8

Plan # 1

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Lock Detector																
Vehicle Recall																
Ped Recall		X				X										
Max Recall	X	X				X										
Soft Recall																
No Rest																
AI Calc																

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Coordination Options

Options (MM) 3-1

Manual Pattern	Auto	ECPI Coord	Yes
System Source	TBC	System Format	STD
Splits In	Seconds	Offsets In	Seconds
Transition	Smooth	Max Select	MAXINH
Dwell / Add Time	0		
Delay Coord Wk-LZ	No	Force Off	Float
Offset Reference	Yellow	Use Ped Time	No
Ped Recall	No	Ped Reservice	No
Local Zero Override	No	FO Added Ini Green	No
Re-sync Count	0	Multisync	No

Auto Perm Minimum Green (Seconds) (MM) 3-4

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Minimum Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Split Demand (MM) 3-5

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Demand 1																
Demand 2																

Demand	1	2
Detector	0	0
Call Time (Sec)	0	0
Cycle Count	0	0

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Coordination Pattern Data
Coordinator Pattern Data (MM) 3-2

Coordinator Pattern # 1

Split Pattern	1	TS2 (Pat-Off)	0-1	Splits In	Seconds
Cycle	120	Std (COS)	9	Offsets In	Seconds
Offset Value	64s	Dwell/Add Time	0		
Actuated Coord	No	Timing Plan	1		
Actuated Walk Rest	No	Sequence	4		
Phase Reservice	No	Action Plan	1		
Max Select	MAX 1	Force Off	Float		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Splits (Split Pat 1)	15	48	0	27	20	43	0	30	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	120s	63s	0s	0s

Misc. Data

Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X				X										
Vehicle Recall		X				X										
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Funciton Outputs																

Coordinator Pattern # 2

Split Pattern	2	TS2 (Pat-Off)	0-2	Splits In	Seconds
Cycle	100	Std (COS)	10	Offsets In	Seconds
Offset Value	74s	Dwell/Add Time	0		
Actuated Coord	No	Timing Plan	1		
Actuated Walk Rest	No	Sequence	4		
Phase Reservice	No	Action Plan	2		
Max Select	MAX 2	Force Off	Float		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Splits (Split Pat 2)	15	37	0	30	15	37	0	18	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	100s	52s	0s	0s

Misc. Data

Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X				X										
Vehicle Recall		X				X										
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Funciton Outputs																

Coordinator Pattern # 3

Split Pattern	3	TS2 (Pat-Off)	0-3	Splits In	Seconds
Cycle	120	Std (COS)	11	Offsets In	Seconds
Offset Value	70s	Dwell/Add Time	0		
Actuated Coord	No	Timing Plan	1		
Actuated Walk Rest	No	Sequence	4		
Phase Reservice	No	Action Plan	3		
Max Select	MAX 3	Force Off	Float		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Splits (Split Pat 3)	15	49	0	28	15	49	0	28	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	120s	64s	0s	0s

Misc. Data

Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X				X										
Vehicle Recall		X				X										
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Funciton Outputs																

Coordinator Pattern # 4

Split Pattern	4	TS2 (Pat-Off)	1-1	Splits In	Seconds
Cycle	100	Std (COS)	12	Offsets In	Seconds
Offset Value	24s	Dwell/Add Time	0		
Actuated Coord	No	Timing Plan	1		
Actuated Walk Rest	No	Sequence	2		
Phase Reservice	No	Action Plan	4		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Splits (Split Pat 4)	10	34	0	37	10	34	0	19	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	100s	44s	0s	0s

Misc. Data

Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X				X										
Vehicle Recall		X				X										
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Funciton Outputs																

Coordinator Pattern # 5

Split Pattern	5	TS2 (Pat-Off)	1-2	Splits In	Seconds
Cycle	100	Std (COS)	13	Offsets In	Seconds
Offset Value	15s	Dwell/Add Time	0		
Actuated Coord	No	Timing Plan	1		
Actuated Walk Rest	No	Sequence	1		
Phase Reservice	No	Action Plan	5		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Splits (Split Pat 5)	15	45	0	25	15	45	0	15	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	100s	60s	0s	0s

Misc. Data

Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X				X										
Vehicle Recall		X				X										
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Funciton Outputs																

Coordinator Pattern # 6

Split Pattern	6	TS2 (Pat-Off)	1-3	Splits In	Seconds
Cycle	80	Std (COS)	14	Offsets In	Seconds
Offset Value	24s	Dwell/Add Time	0		
Actuated Coord	No	Timing Plan	1		
Actuated Walk Rest	No	Sequence	3		
Phase Reservice	No	Action Plan	5		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Splits (Split Pat 6)	0	34	0	30	0	34	0	16	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	80s	34s	0s	0s

Misc. Data

Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X				X										
Vehicle Recall		X				X										
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Funciton Outputs																

Coordinator Pattern # 7

Split Pattern	7	TS2 (Pat-Off)	2-1	Splits In	Seconds
Cycle	120	Std (COS)	0	Offsets In	Seconds
Offset Value	24s	Dwell/Add Time	0		
Actuated Coord	No	Timing Plan	1		
Actuated Walk Rest	No	Sequence	4		
Phase Reservice	No	Action Plan	7		
Max Select	MAX 3	Force Off	Float		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Splits (Split Pat 7)	18	31	0	40	18	31	0	31	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	120s	49s	0s	0s

Misc. Data

Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X				X										
Vehicle Recall		X				X										
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Funciton Outputs																

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Coordination Split Pattern
Split Pattern Data (MM) 3-3

Split Pattern # 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Split (seconds)	15	48	0	27	20	43	0	30	0	0	0	0	0	0	0	0
Coord Phase		X				X										
Vehicle Recall		X				X										
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	120s	63s	0s	0s

Split Pattern # 2

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Split (seconds)	15	37	0	30	15	37	0	18	0	0	0	0	0	0	0	0
Coord Phase		X				X										
Vehicle Recall		X				X										
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	100s	52s	0s	0s

Split Pattern # 3

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Split (seconds)	15	49	0	28	15	49	0	28	0	0	0	0	0	0	0	0
Coord Phase		X				X										
Vehicle Recall		X				X										
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	120s	64s	0s	0s

Split Pattern # 4

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Split (seconds)	10	34	0	37	10	34	0	19	0	0	0	0	0	0	0	0
Coord Phase		X				X										
Vehicle Recall		X				X										
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	100s	44s	0s	0s

Split Pattern # 5

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Split (seconds)	15	45	0	25	15	45	0	15	0	0	0	0	0	0	0	0
Coord Phase		X				X										
Vehicle Recall		X				X										
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	100s	60s	0s	0s

Split Pattern # 6

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Split (seconds)	0	34	0	30	0	34	0	16	0	0	0	0	0	0	0	0
Coord Phase		X				X										
Vehicle Recall		X				X										
Pedestrian Recall																
Recall to Max. Time																

Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	80s	34s	0s	0s

Split Pattern # 7

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Split (seconds)	18	31	0	40	18	31	0	31	0	0	0	0	0	0	0	0
Coord Phase		X				X										
Vehicle Recall		X				X										
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	120s	49s	0s	0s

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Preempt Plan

Preempt Plan (MM) 4-1

No Enabled Preempts

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Preempt Preempt Filtering
Enable Preempt Filtering & TSP/SCP (MM) 4-2

Input	Solid	Pulsing
1	...BYPASSED...	...BYPASSED...
2	...BYPASSED...	...BYPASSED...
3	PREEMPTION 3	PREEMPTION 7
4	PREEMPTION 4	PREEMPTION 8
5	PREEMPTION 5	PREEMPTION 9
6	PREEMPTION 6	PREEMPTION 10
7	...BYPASSED...	...BYPASSED...
8	...BYPASSED...	...BYPASSED...
9	...BYPASSED...	...BYPASSED...
10	...BYPASSED...	...BYPASSED...

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Preempt TSP/SCP Plan and Split

TSP / SCP Plan (MM) 4-3

TSP/SCP Plan	Enable Option	Signal Type	Det Lock	Delay Time	Max Presence	PMT Enables Reservice	No Delay in TSP	Action SF Inhibit	Reservice Cycles	Bus Heading
1	No	Solid	No	0	0	No	False	0	0	NB
2	No	Solid	No	0	0	No	False	0	0	SB
3	No	Solid	No	0	0	No	False	0	0	EB
4	No	Solid	No	0	0	No	False	0	0	WB
5	No	Solid	No	0	0	No	False	0	0	.
6	No	Solid	No	0	0	No	False	0	0	.

Mode: TSP
Free Default Pattern: 120
Headway Allowance: 100

TSP/SCP Plan	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

TSP / SCP Split Pattern (MM) 4-4

TSP/SCP Split Pattern	Max Type	Phase															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
4	Max Reduction	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255	255

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Time Base Clock/Calendar
Clock/Calendar Data (MM) 5-1

Manual Action Plan:	0
SYNC Reference Time:	00:00
SYNC Reference:	Reference Time
Day Light Savings:	No
Time Reset Input Set Time:	3:30:00
Standard Time From GMT:	0

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Time Base Action Plan
Action Plan (MM) 5-2

Action Plan - 1 - "1"

Pattern	1	Override Sys	Yes
Timing Plan	1	Sequence	4
Veh Detector Plan	1	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	1
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																
Spec Func (1-8)	X				X											
Aux Func (1-3)																

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	E	E	E	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

Action Plan - 2 - "2"

Pattern	2	Override Sys	Yes
Timing Plan	1	Sequence	4
Veh Detector Plan	1	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	1
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																

Spec Func (1-8)	X				X			

Aux Func (1-3)			

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	E	E	E	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

Action Plan - 3 - "3"

Pattern	3	Override Sys	Yes
Timing Plan	1	Sequence	4
Veh Detector Plan	1	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	1
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																

Spec Func (1-8)	X				X			

Aux Func (1-3)			

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	E	E	E	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

Action Plan - 4 - "4"

Pattern	4	Override Sys	Yes
Timing Plan	1	Sequence	2
Veh Detector Plan	1	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																
Spec Func (1-8)																
Aux Func (1-3)																

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

Action Plan - 5 - "5"

Pattern	5	Override Sys	Yes
Timing Plan	1	Sequence	1
Veh Detector Plan	1	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	0
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																
Spec Func (1-8)																
Aux Func (1-3)																

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

Action Plan - 6 - "6"

Pattern	6	Override Sys	Yes
Timing Plan	1	Sequence	3
Veh Detector Plan	1	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	1
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit	X				X											

Spec Func (1-8)								
Aux Func (1-3)								

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

Action Plan - 7 - "7"

Pattern	7	Override Sys	Yes
Timing Plan	1	Sequence	4
Veh Detector Plan	1	Det Log	None
Flash	No	Red Rest	No
Veh Det Diag Plan	0	Ped Det Diag Plan	1
Dimming Enable	No	Pmt Veh Priority Ret	No
Pmt Ped Priority Ret	No	Pmt Queue Delay	No
Pmt Cond Delay	No		

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ped Recall																
Walk 2																
Veh Ext 2																
Veh Recall																
Max Recall																
Max 2																
Max 3																
CS Inhibit																
Omit																

Spec Func (1-8)	X				X											
Aux Func (1-3)																

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LP 1-15	E	E	E	.	.	.	.	.	.	.	.	.	.	.	.
LP 16-30	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 31-45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 46-60	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 61-75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 76-90	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
LP 91-100	.	.	.	.	.	.	.	.	.	.					

Louisville/Superior

ECONOLITE CONTROL PRODUCTS, INC.

Solutions that Move the World™

001 - McCaslin Blvd @ Marshall Rd - Cobalt @ 172.16.8.110 - Econolite Type - Cobalt

Time Base Day Plan/Schedule
Day Plan (MM) 5-3

Day Plan #1 - "1"

Event	Action Plan	Start Time
1	1	06:30
2	2	09:00
3	3	15:30
4	2	19:00
5	6	22:00

Day Plan #2 - "2"

Event	Action Plan	Start Time
1	2	06:30
2	7	10:00
3	2	18:00
4	6	22:00

Schedule (MM) 5-4

Schedule Number - 1

Day Plan No.: 1

Month	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	X	X	X	X	X	X	X	X	X	X	X	X

Day (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT
		X	X	X	X	X	

Day (DOM)	1	2	3	4	5	6	7	8	9	10	11
	X	X	X	X	X	X	X	X	X	X	X
	12	13	14	15	16	17	18	19	20	21	22
	X	X	X	X	X	X	X	X	X	X	X
	23	24	25	26	27	28	29	30	31		
	X	X	X	X	X	X	X	X	X		

Schedule Number - 2

Day Plan No.: 2

Month	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	X	X	X	X	X	X	X	X	X	X	X	X

Day (DOW)	SUN	MON	TUE	WED	THU	FRI	SAT
	X						X

Day (DOM)	1	2	3	4	5	6	7	8	9	10	11
	X	X	X	X	X	X	X	X	X	X	X
	12	13	14	15	16	17	18	19	20	21	22
	X	X	X	X	X	X	X	X	X	X	X
	23	24	25	26	27	28	29	30	31		
	X	X	X	X	X	X	X	X	X		

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ECONOLITE CONTROL PRODUCTS, INC.

Solutions that Move the World™

001 - McCaslin Blvd @ Marshall Rd - Cobalt @ 172.16.8.110 - Econolite Type - Cobalt

Time Base Exceptions
Exception Day Program (MM) 5-5

Excep Day	Float/Fixed	Mon/Mon	DOW/DOM	WOM/Year	Day Plan
1	FIXED	11	22	2018	2
2	FIXED	11	23	2018	2
3	FIXED	12	21	2018	2
4	FIXED	12	24	2018	2
5	FIXED	12	28	2018	2
6	FIXED	12	31	2018	2

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ECONOLITE CONTROL PRODUCTS, INC.

Solutions that Move the World™

001 - McCaslin Blvd @ Marshall Rd - Cobalt @ 172.16.8.110 - Econolite Type - Cobalt

Detectors

Detectors - Pg 1

Veh Det Phase Assignment (MM) 6-1

Vehicle Detector Plan Number - 1

Veh Detector	Called Phase	Type

Vehicle Detector Plan Number - 2

Veh Detector	Called Phase	Type

Vehicle Detector Plan Number - 3

Veh Detector	Called Phase	Type

Vehicle Detector Plan Number - 4

Veh Detector	Called Phase	Type

Vehicle Detector Setup (MM) 6-2

Veh Detector	Type	TS2 Detector	Description
1	S-STANDARD	Yes	
2	S-STANDARD	Yes	
3	S-STANDARD	Yes	
4	S-STANDARD	Yes	
5	S-STANDARD	Yes	
6	S-STANDARD	Yes	
7	S-STANDARD	Yes	
8	S-STANDARD	Yes	
9	S-STANDARD	Yes	
10	S-STANDARD	Yes	
11	S-STANDARD	Yes	
12	S-STANDARD	Yes	
13	S-STANDARD	Yes	
14	S-STANDARD	Yes	
15	S-STANDARD	Yes	
16	S-STANDARD	Yes	
17	S-STANDARD	Yes	
18	S-STANDARD	Yes	
19	S-STANDARD	Yes	
20	S-STANDARD	Yes	
21	S-STANDARD	Yes	
22	S-STANDARD	Yes	
23	S-STANDARD	Yes	
24	S-STANDARD	Yes	
25	S-STANDARD	Yes	
26	S-STANDARD	Yes	
27	S-STANDARD	Yes	
28	S-STANDARD	Yes	
29	S-STANDARD	Yes	
30	S-STANDARD	Yes	
31	S-STANDARD	Yes	
32	S-STANDARD	Yes	
33	S-STANDARD	Yes	
34	S-STANDARD	Yes	
35	S-STANDARD	Yes	
36	S-STANDARD	Yes	
37	S-STANDARD	Yes	
38	S-STANDARD	Yes	
39	S-STANDARD	Yes	
40	S-STANDARD	Yes	
41	S-STANDARD	Yes	
42	S-STANDARD	Yes	
43	S-STANDARD	Yes	
44	S-STANDARD	Yes	
45	S-STANDARD	Yes	
46	S-STANDARD	Yes	
47	S-STANDARD	Yes	
48	S-STANDARD	Yes	
49	S-STANDARD	Yes	
50	S-STANDARD	Yes	
51	S-STANDARD	Yes	
52	S-STANDARD	Yes	
53	S-STANDARD	Yes	
54	S-STANDARD	Yes	
55	S-STANDARD	Yes	
56	S-STANDARD	Yes	
57	S-STANDARD	Yes	
58	S-STANDARD	Yes	
59	S-STANDARD	Yes	
60	S-STANDARD	Yes	
61	S-STANDARD	Yes	
62	S-STANDARD	Yes	

63	S-STANDARD	Yes	
64	S-STANDARD	Yes	

Vehicle Detector Plan Number - 1

Veh Detector	Phase	ECPI Log	Call Option	Delay Time	Ext Option	Extend Time / Passage Time	Queue Lim. / Discon. Time	Use Added Initial	Cross Switch Ph	Lock In	NTCIP Vol.	NTCIP Occ.	Pmt Queue Delay
1	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
2	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
3	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
4	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
5	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
6	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
7	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
8	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
9	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
10	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
11	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
12	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
13	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
14	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
15	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
16	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
17	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
18	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
19	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
20	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
21	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
22	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
23	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
24	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
25	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
26	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
27	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
28	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
29	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
30	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
31	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
32	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
33	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
34	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
35	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
36	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
37	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
38	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
39	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
40	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
41	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
42	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
43	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
44	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
45	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
46	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
47	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
48	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
49	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
50	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
51	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
52	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
53	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
54	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
55	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
56	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
57	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
58	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
59	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
60	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
61	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
62	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
63	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
64	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

Vehicle Detector Plan Number - 2

Veh Detector	Phase	ECPI Log	Call Option	Delay Time	Ext Option	Extend Time / Passage Time	Queue Lim. / Discon. Time	Use Added Initial	Cross Switch Ph	Lock In	NTCIP Vol.	NTCIP Occ.	Pmt Queue Delay
1	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
2	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
3	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
4	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
5	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
6	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
7	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
8	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
9	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
10	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
11	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
12	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
13	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
14	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
15	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
16	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

17	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
18	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
19	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
20	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
21	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
22	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
23	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
24	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
25	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
26	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
27	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
28	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
29	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
30	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
31	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
32	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
33	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
34	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
35	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
36	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
37	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
38	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
39	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
40	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
41	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
42	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
43	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
44	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
45	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
46	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
47	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
48	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
49	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
50	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
51	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
52	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
53	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
54	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
55	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
56	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
57	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
58	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
59	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
60	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
61	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
62	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
63	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
64	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

Vehicle Detector Plan Number - 3

Veh Detector	Phase	ECPI Log	Call Option	Delay Time	Ext Option	Extend Time / Passage Time	Queue Lim. / Discon. Time	Use Added Initial	Cross Switch Ph	Lock In	NTCIP Vol.	NTCIP Occ.	Pmt Queue Delay
1	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
2	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
3	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
4	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
5	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
6	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
7	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
8	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
9	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
10	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
11	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
12	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
13	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
14	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
15	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
16	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
17	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
18	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
19	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
20	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
21	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
22	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
23	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
24	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
25	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
26	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
27	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
28	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
29	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
30	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
31	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
32	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
33	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
34	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
35	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
36	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
37	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
38	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
39	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
40	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

41	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
42	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
43	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
44	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
45	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
46	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
47	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
48	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
49	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
50	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
51	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
52	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
53	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
54	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
55	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
56	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
57	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
58	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
59	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
60	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
61	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
62	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
63	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
64	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

Vehicle Detector Plan Number - 4

Veh Detector	Phase	ECPI Log	Call Option	Delay Time	Ext Option	Extend Time / Passage Time	Queue Lim. / Discon. Time	Use Added Initial	Cross Switch Ph	Lock In	NTCIP Vol.	NTCIP Occ.	Pmt Queue Delay
1	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
2	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
3	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
4	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
5	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
6	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
7	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
8	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
9	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
10	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
11	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
12	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
13	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
14	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
15	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
16	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
17	1	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
18	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
19	3	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
20	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
21	5	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
22	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
23	7	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
24	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
25	2	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
26	4	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
27	6	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
28	8	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
29	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
30	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
31	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
32	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
33	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
34	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
35	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
36	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
37	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
38	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
39	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
40	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
41	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
42	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
43	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
44	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
45	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
46	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
47	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
48	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
49	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
50	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
51	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
52	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
53	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
54	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
55	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
56	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
57	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
58	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
59	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
60	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
61	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
62	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
63	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No
64	0	No	Yes	0.0	Passage	0.0	0	No	0	None	No	No	No

Ped Detector Phase Assignment (MM) 6-3

Mode: NTCIP

Called Phase	Detector
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16

Louisville/Superior

ECONOLITE CONTROL PRODUCTS, INC.

Solutions that Move the World™

001 - McCaslin Blvd @ Marshall Rd - Cobalt @ 172.16.8.110 - Econolite Type - Cobalt

Detectors

Detectors - Pg 2

Log - Speed Detector Setup (MM) 6-4

NTCIP Log Period: 60 ECPI Log Period: 0 Length Unit: Inches

Speed Detector	Local Detector	One/Two Detector	Vehicle Length	Trap length	Enable Log
1	0	1	0	0	No
2	0	1	0	0	No
3	0	1	0	0	No
4	0	1	0	0	No
5	0	1	0	0	No
6	0	1	0	0	No
7	0	1	0	0	No
8	0	1	0	0	No
9	0	1	0	0	No
10	0	1	0	0	No
11	0	1	0	0	No
12	0	1	0	0	No
13	0	1	0	0	No
14	0	1	0	0	No
15	0	1	0	0	No
16	0	1	0	0	No

Vehicle Detector Diagnostics (MM) 6-5

Veh Diagnostic Plan Number - 1

Det	Counts	Act	Pres	Multiplier	Failed Time	Failed Call Delay

Veh Diagnostic Plan Number - 2

Det	Counts	Act	Pres	Multiplier	Failed Time	Failed Call Delay

Veh Diagnostic Plan Number - 3

Det	Counts	Act	Pres	Multiplier	Failed Time	Failed Call Delay

Veh Diagnostic Plan Number - 4

Det	Counts	Act	Pres	Multiplier	Failed Time	Failed Call Delay

Pedestrian Detector Diagnostics (MM) 6-6

Ped Diagnostic Plan Number - 1

Det	Counts	Act	Pres	Multiplier
4	0	0	15	1
8	0	0	15	1

Ped Diagnostic Plan Number - 2

Det	Counts	Act	Pres	Multiplier

Ped Diagnostic Plan Number - 3

Det	Counts	Act	Pres	Multiplier

Ped Diagnostic Plan Number - 4

Det	Counts	Act	Pres	Multiplier

APPENDIX B

Level of Service Definitions

The following information is referenced from the Highway Capacity Manual: A Guide for Multimodal Mobility Analysis, 6th Edition, Transportation Research Board, 2016: Chapter 19 – Signalized Intersections.

Motorized Vehicle Level of Service (LOS) for Signalized Intersections

Levels of service are defined to represent reasonable ranges in control delay.

LOS A Describes operations with a control delay of 10 s/veh or less and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is exceptionally favorable or the cycle length is very short. If it is due to favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.

LOS B Describes operations with control delay between 10 and 20 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is highly favorable or the cycle length is short. More vehicles stop than with LOS A.

LOS C Describes operations with control delay between 20 and 35 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when progression is favorable or the cycle length is moderate. Individual *cycle failures* (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear at this level. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.

LOS D Describes operations with control delay between 35 and 55 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high and either progression is ineffective or the cycle length is long. Many vehicles stop and individual cycle failures are noticeable.

LOS E Describes operations with control delay between 55 and 80 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent.

LOS F Describes operations with control delay exceeding 80 s/veh or a volume-to-capacity ratio greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.

Control Delay (s/veh)	LOS by Volume-to-Capacity Ratio[a]	
	$v/c \leq 1.0$	$v/c > 1.0$
≤ 10	A	F
> 10 – 20	B	F
> 20 – 35	C	F
> 35 – 55	D	F
> 55 – 80	E	F
> 80	F	F

Note: [a] For approach-based and intersectionwide assessments, LOS is defined solely by control delay.

The following information is referenced from the Highway Capacity Manual: A Guide for Multimodal Mobility Analysis, 6th Edition, Transportation Research Board, 2016: Chapter 20 – Two-Way Stop-Controlled Intersections, Chapter 21 – All-Way Stop-Controlled Intersections, and Chapter 22 - Roundabouts.

Motorized Vehicle Level of Service (LOS) for Unsignalized & Roundabout Intersections

LOS is a quantitative stratification of performance measure(s) representing quality of service. Quality of service describes how well a transportation facility or service operates from a traveler's perspective. LOS is measured on an A – F scale, with LOS A representing the best operating conditions from a traveler's perspective.

Control Delay (s/veh)	LOS by Volume-to-Capacity Ratio[a]	
	$v/c \leq 1.0$	$v/c > 1.0$
0 – 10	A	F
> 10 – 15	B	F
> 15 – 25	C	F
> 25 – 35	D	F
> 35 – 50	E	F
> 50	F	F

Note: The LOS criteria apply to each lane on a given approach and to each approach on the minor street. LOS is not calculated for major-street approaches or for the intersection as a whole.

[a] For approaches and intersectionwide assessment, LOS is defined solely by control delay.

APPENDIX C

Capacity Worksheets



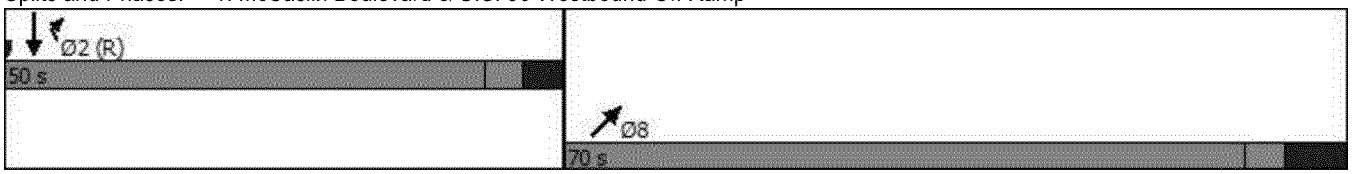
Lane Group	SBT	NWR2	NET
Lane Configurations			
Traffic Volume (vph)	876	598	837
Future Volume (vph)	876	598	837
Satd. Flow (prot)	5085	3610	5085
Flt Permitted			
Satd. Flow (perm)	5085	3610	5085
Satd. Flow (RTOR)		229	
Lane Group Flow (vph)	952	650	910
Turn Type	NA	Prot	NA
Protected Phases	2	2	8
Permitted Phases		2	
Detector Phase	2	2	8
Switch Phase			
Minimum Initial (s)	10.0	10.0	10.0
Minimum Split (s)	17.2	17.2	19.3
Total Split (s)	50.0	50.0	70.0
Total Split (%)	41.7%	41.7%	58.3%
Yellow Time (s)	3.5	3.5	3.5
All-Red Time (s)	3.7	3.7	5.8
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	7.2	7.2	9.3
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	C-Max	C-Max	None
Act Effct Green (s)	74.1	74.1	29.4
Actuated g/C Ratio	0.62	0.62	0.24
v/c Ratio	0.30	0.28	0.73
Control Delay	11.6	7.3	66.6
Queue Delay	0.0	0.0	0.0
Total Delay	11.6	7.3	66.6
LOS	B	A	E
Approach Delay	11.6		66.6
Approach LOS	B		E
Queue Length 50th (ft)	119	58	225
Queue Length 95th (ft)	167	96	216
Internal Link Dist (ft)	259		447
Turn Bay Length (ft)			
Base Capacity (vph)	3139	2316	2572
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.30	0.28	0.35

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 48 (40%), Referenced to phase 2:SBT, Start of Green
Natural Cycle: 40
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.73

Intersection Signal Delay: 30.4	Intersection LOS: C
Intersection Capacity Utilization Err%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 1: McCaslin Boulevard & U.S. 36 Westbound Off Ramp



Intersection	
Int Delay, s/veh	4.2

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations				↑↑↑	↰	
Traffic Vol, veh/h	0	0	0	876	296	0
Future Vol, veh/h	0	0	0	876	296	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	952	322	0

Major/Minor	Major2		Minor1	
Conflicting Flow All	-	-	381	-
Stage 1	-	-	0	-
Stage 2	-	-	381	-
Critical Hdwy	-	-	5.74	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	6.04	-
Follow-up Hdwy	-	-	3.82	-
Pot Cap-1 Maneuver	0	-	624	0
Stage 1	0	-	-	0
Stage 2	0	-	605	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	624	-
Mov Cap-2 Maneuver	-	-	624	-
Stage 1	-	-	-	-
Stage 2	-	-	605	-

Approach	SB	SW
HCM Control Delay, s	0	16.7
HCM LOS		C

Minor Lane/Major Mvmt	SBT	SWLn1
Capacity (veh/h)	-	624
HCM Lane V/C Ratio	-	0.516
HCM Control Delay (s)	-	16.7
HCM Lane LOS	-	C
HCM 95th %tile Q(veh)	-	3



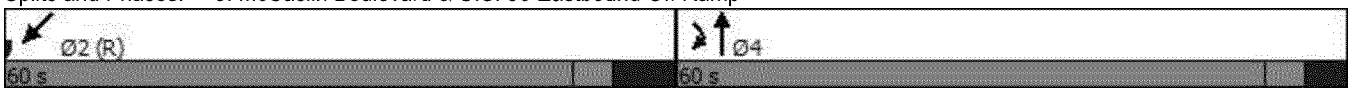
Lane Group	NBT	SER2	SWT
Lane Configurations			
Traffic Volume (vph)	934	201	777
Future Volume (vph)	934	201	777
Satd. Flow (prot)	5085	3610	5085
Flt Permitted			
Satd. Flow (perm)	5085	3610	5085
Satd. Flow (RTOR)		173	
Lane Group Flow (vph)	1015	218	845
Turn Type	NA	Prot	NA
Protected Phases	4	4	2
Permitted Phases		4	
Detector Phase	4	4	2
Switch Phase			
Minimum Initial (s)	10.0	10.0	10.0
Minimum Split (s)	17.5	17.5	19.3
Total Split (s)	60.0	60.0	60.0
Total Split (%)	50.0%	50.0%	50.0%
Yellow Time (s)	3.5	3.5	3.5
All-Red Time (s)	4.0	4.0	5.8
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	9.3
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	None	None	C-Max
Act Effct Green (s)	32.9	32.9	70.3
Actuated g/C Ratio	0.27	0.27	0.59
v/c Ratio	0.73	0.20	0.28
Control Delay	42.4	8.1	6.3
Queue Delay	0.0	0.0	0.0
Total Delay	42.4	8.1	6.3
LOS	D	A	A
Approach Delay	42.4		6.3
Approach LOS	D		A
Queue Length 50th (ft)	263	11	42
Queue Length 95th (ft)	286	33	56
Internal Link Dist (ft)	90		532
Turn Bay Length (ft)			
Base Capacity (vph)	2224	1676	2978
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.46	0.13	0.28

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 46 (38%), Referenced to phase 2:SWT, Start of Green
Natural Cycle: 40
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.73

Intersection Signal Delay: 24.1	Intersection LOS: C
Intersection Capacity Utilization Err%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 3: McCaslin Boulevard & U.S. 36 Eastbound Off Ramp



Intersection	
Int Delay, s/veh	4.7

Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↑↑↑			↰	
Traffic Vol, veh/h	0	934	0	0	317	0
Future Vol, veh/h	0	934	0	0	317	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1015	0	0	345	0

Major/Minor	Major1		Minor2	
Conflicting Flow All	-	0	406	-
Stage 1	-	-	0	-
Stage 2	-	-	406	-
Critical Hdwy	-	-	5.74	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	6.04	-
Follow-up Hdwy	-	-	3.82	-
Pot Cap-1 Maneuver	0	-	607	0
Stage 1	0	-	-	0
Stage 2	0	-	587	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	607	-
Mov Cap-2 Maneuver	-	-	607	-
Stage 1	-	-	-	-
Stage 2	-	-	587	-

Approach	NB	NE
HCM Control Delay, s	0	18.4
HCM LOS		C

Minor Lane/Major Mvmt	NELn1	NBT
Capacity (veh/h)	607	-
HCM Lane V/C Ratio	0.568	-
HCM Control Delay (s)	18.4	-
HCM Lane LOS	C	-
HCM 95th %tile Q(veh)	3.6	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	65	27	45	21	21	100	108	601	79	158	395	277
Future Volume (vph)	65	27	45	21	21	100	108	601	79	158	395	277
Satd. Flow (prot)	3221	1678	1583	1770	1863	1583	3433	5085	1583	1770	5085	1583
Flt Permitted	0.950	0.990		0.950			0.493			0.380		
Satd. Flow (perm)	3221	1678	1583	1770	1863	1583	1782	5085	1583	708	5085	1583
Satd. Flow (RTOR)			145			136			127			301
Lane Group Flow (vph)	64	36	49	23	23	109	117	653	86	172	429	301
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Free
Protected Phases	8	8		4	4		1	6		5	2	
Permitted Phases			8			4	6		6	2		Free
Detector Phase	8	8	8	4	4	4	1	6	6	5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.0	10.0	10.0	3.0	10.0	
Minimum Split (s)	9.0	9.0	9.0	10.0	10.0	10.0	9.0	16.0	16.0	9.0	16.0	
Total Split (s)	30.0	30.0	30.0	27.0	27.0	27.0	15.0	43.0	43.0	20.0	48.0	
Total Split (%)	25.0%	25.0%	25.0%	22.5%	22.5%	22.5%	12.5%	35.8%	35.8%	16.7%	40.0%	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	4.0	3.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	2.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	5.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	8.1	8.1	8.1	7.1	7.1	7.1	87.5	79.1	79.1	91.8	81.2	120.0
Actuated g/C Ratio	0.07	0.07	0.07	0.06	0.06	0.06	0.73	0.66	0.66	0.76	0.68	1.00
v/c Ratio	0.29	0.32	0.20	0.22	0.21	0.49	0.08	0.19	0.08	0.28	0.12	0.19
Control Delay	55.9	59.9	1.9	58.1	57.5	12.4	4.1	9.1	0.7	5.1	7.7	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.9	59.9	1.9	58.1	57.5	12.4	4.1	9.1	0.7	5.1	7.7	0.3
LOS	E	E	A	E	E	B	A	A	A	A	A	A
Approach Delay		39.1			25.9			7.6			4.7	
Approach LOS		D			C			A			A	
Queue Length 50th (ft)	26	29	0	17	17	0	9	69	0	29	41	0
Queue Length 95th (ft)	50	67	0	44	44	35	20	106	8	58	64	0
Internal Link Dist (ft)		518			407			580			291	
Turn Bay Length (ft)			260	170		170	180		170	230		170
Base Capacity (vph)	697	363	456	324	341	401	1516	3351	1086	694	3441	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.10	0.11	0.07	0.07	0.27	0.08	0.19	0.08	0.25	0.12	0.19

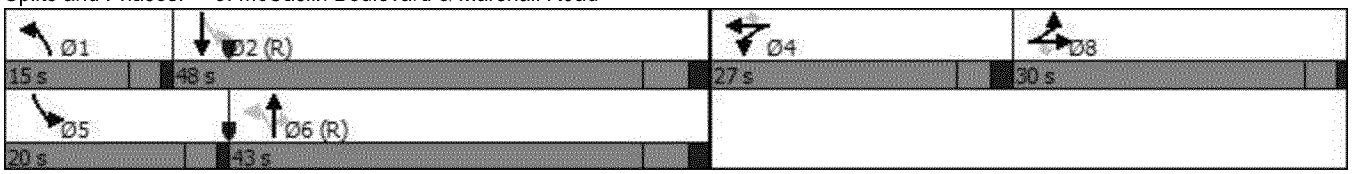
Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 64 (53%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 45
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.49

Intersection Signal Delay: 10.0	Intersection LOS: A
Intersection Capacity Utilization 40.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 5: McCaslin Boulevard & Marshall Road



Intersection	
Intersection Delay, s/veh	4.8
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	13	74	730	406
Demand Flow Rate, veh/h	13	75	745	414
Vehicles Circulating, veh/h	404	729	114	15
Vehicles Exiting, veh/h	25	130	303	728
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	3.7	0.9	5.7	3.9
Approach LOS	A	A	A	A

Lane	Left	Left	Bypass	Left	Right	Left	Right
Designated Moves	LTR	LT	R	LT	TR	LT	TR
Assumed Moves	LTR	LT	R	LT	TR	LT	TR
RT Channelized			Free				
Lane Util	1.000	1.000		0.470	0.530	0.471	0.529
Follow-Up Headway, s	2.535	2.535		2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.328	61	4.645	4.328	4.645	4.328
Entry Flow, veh/h	13	14	1938	350	395	195	219
Cap Entry Lane, veh/h	1007	764	0.980	1215	1289	1331	1402
Entry HV Adj Factor	1.000	0.996	60	0.980	0.979	0.979	0.983
Flow Entry, veh/h	13	14	1900	343	387	191	215
Cap Entry, veh/h	1007	761	0.032	1191	1262	1304	1379
V/C Ratio	0.013	0.018	0.0	0.288	0.306	0.146	0.156
Control Delay, s/veh	3.7	4.9	A	5.7	5.6	4.0	3.9
LOS	A	A	0	A	A	A	A
95th %tile Queue, veh	0	0		1	1	1	1

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	84	27	0	43	0	7	0	0	0	0	0
Future Vol, veh/h	0	84	27	0	43	0	7	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	91	29	0	47	0	8	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	47	0	0	120	0	0	153	153	60	93	167	47
Stage 1	-	-	-	-	-	-	106	106	-	47	47	-
Stage 2	-	-	-	-	-	-	47	47	-	46	120	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.53	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	1560	-	-	1467	-	-	807	738	993	886	725	1022
Stage 1	-	-	-	-	-	-	889	807	-	966	855	-
Stage 2	-	-	-	-	-	-	966	855	-	962	796	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1560	-	-	1467	-	-	807	738	993	886	725	1022
Mov Cap-2 Maneuver	-	-	-	-	-	-	807	738	-	886	725	-
Stage 1	-	-	-	-	-	-	889	807	-	966	855	-
Stage 2	-	-	-	-	-	-	966	855	-	962	796	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	9.5	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	807	1560	-	-	1467	-	-	-
HCM Lane V/C Ratio	0.009	-	-	-	-	-	-	-
HCM Control Delay (s)	9.5	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	43	0	0	84
Future Vol, veh/h	0	0	43	0	0	84
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	47	0	0	91

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	138	47	0	0	47	0
Stage 1	47	-	-	-	-	-
Stage 2	91	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	855	1022	-	-	1560	-
Stage 1	975	-	-	-	-	-
Stage 2	933	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	855	1022	-	-	1560	-
Mov Cap-2 Maneuver	855	-	-	-	-	-
Stage 1	975	-	-	-	-	-
Stage 2	933	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1560	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-



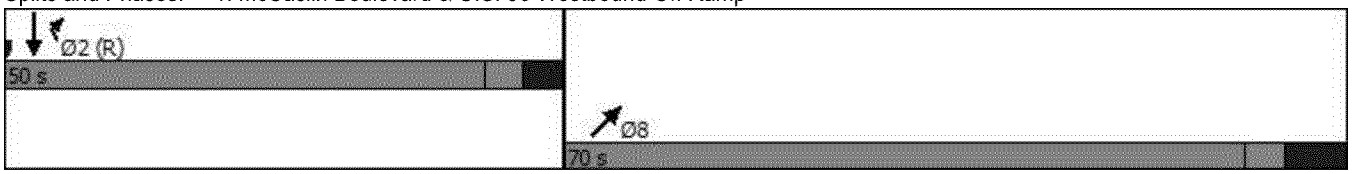
Lane Group	SBT	NWR2	NET
Lane Configurations			
Traffic Volume (vph)	1390	446	999
Future Volume (vph)	1390	446	999
Satd. Flow (prot)	5085	3610	5085
Flt Permitted			
Satd. Flow (perm)	5085	3610	5085
Satd. Flow (RTOR)		141	
Lane Group Flow (vph)	1511	485	1086
Turn Type	NA	Prot	NA
Protected Phases	2	2	8
Permitted Phases		2	
Detector Phase	2	2	8
Switch Phase			
Minimum Initial (s)	10.0	10.0	10.0
Minimum Split (s)	17.2	17.2	19.3
Total Split (s)	50.0	50.0	70.0
Total Split (%)	41.7%	41.7%	58.3%
Yellow Time (s)	3.5	3.5	3.5
All-Red Time (s)	3.7	3.7	5.8
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	7.2	7.2	9.3
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	C-Max	C-Max	None
Act Effct Green (s)	69.1	69.1	34.4
Actuated g/C Ratio	0.58	0.58	0.29
v/c Ratio	0.52	0.23	0.75
Control Delay	16.8	9.5	53.3
Queue Delay	0.0	0.0	0.0
Total Delay	16.8	9.5	53.3
LOS	B	A	D
Approach Delay	16.8		53.3
Approach LOS	B		D
Queue Length 50th (ft)	243	51	228
Queue Length 95th (ft)	330	87	207
Internal Link Dist (ft)	259		447
Turn Bay Length (ft)			
Base Capacity (vph)	2928	2139	2572
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.52	0.23	0.42

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 48 (40%), Referenced to phase 2:SBT, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 28.5	Intersection LOS: C
Intersection Capacity Utilization Err%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 1: McCaslin Boulevard & U.S. 36 Westbound Off Ramp



Intersection	
Int Delay, s/veh	6.3

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations				↑↑↑	↰	
Traffic Vol, veh/h	0	0	0	1390	339	0
Future Vol, veh/h	0	0	0	1390	339	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	1511	368	0

Major/Minor	Major2		Minor1	
Conflicting Flow All	-	-	604	-
Stage 1	-	-	0	-
Stage 2	-	-	604	-
Critical Hdwy	-	-	5.74	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	6.04	-
Follow-up Hdwy	-	-	3.82	-
Pot Cap-1 Maneuver	0	-	487	0
Stage 1	0	-	-	0
Stage 2	0	-	463	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	487	-
Mov Cap-2 Maneuver	-	-	487	-
Stage 1	-	-	-	-
Stage 2	-	-	463	-

Approach	SB	SW
HCM Control Delay, s	0	31.9
HCM LOS		D

Minor Lane/Major Mvmt	SBT	SWLn1
Capacity (veh/h)	-	487
HCM Lane V/C Ratio	-	0.757
HCM Control Delay (s)	-	31.9
HCM Lane LOS	-	D
HCM 95th %tile Q(veh)	-	6.5



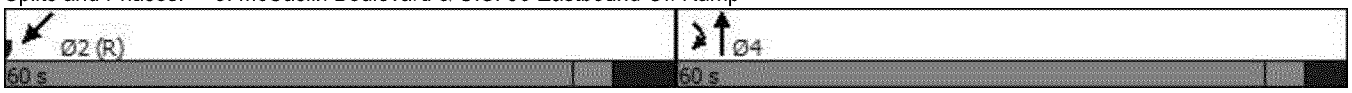
Lane Group	NBT	SER2	SWT
Lane Configurations			
Traffic Volume (vph)	1038	545	1126
Future Volume (vph)	1038	545	1126
Satd. Flow (prot)	5085	3610	5085
Flt Permitted			
Satd. Flow (perm)	5085	3610	5085
Satd. Flow (RTOR)		57	
Lane Group Flow (vph)	1128	592	1224
Turn Type	NA	Prot	NA
Protected Phases	4	4	2
Permitted Phases		4	
Detector Phase	4	4	2
Switch Phase			
Minimum Initial (s)	10.0	10.0	10.0
Minimum Split (s)	17.5	17.5	19.3
Total Split (s)	60.0	60.0	60.0
Total Split (%)	50.0%	50.0%	50.0%
Yellow Time (s)	3.5	3.5	3.5
All-Red Time (s)	4.0	4.0	5.8
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	9.3
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	None	None	C-Max
Act Effct Green (s)	38.5	38.5	64.7
Actuated g/C Ratio	0.32	0.32	0.54
v/c Ratio	0.69	0.49	0.45
Control Delay	37.5	30.3	7.2
Queue Delay	0.0	0.0	0.0
Total Delay	37.5	30.3	7.2
LOS	D	C	A
Approach Delay	37.5		7.2
Approach LOS	D		A
Queue Length 50th (ft)	279	146	60
Queue Length 95th (ft)	293	170	75
Internal Link Dist (ft)	90		532
Turn Bay Length (ft)			
Base Capacity (vph)	2224	1611	2741
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.51	0.37	0.45

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 46 (38%), Referenced to phase 2:SWT, Start of Green
Natural Cycle: 45
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.69

Intersection Signal Delay: 23.5	Intersection LOS: C
Intersection Capacity Utilization Err%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 3: McCaslin Boulevard & U.S. 36 Eastbound Off Ramp



Intersection	
Int Delay, s/veh	5

Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↑↑↑			↰	
Traffic Vol, veh/h	0	1038	0	0	330	0
Future Vol, veh/h	0	1038	0	0	330	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1128	0	0	359	0

Major/Minor	Major1		Minor2	
Conflicting Flow All	-	0	451	-
Stage 1	-	-	0	-
Stage 2	-	-	451	-
Critical Hdwy	-	-	5.74	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	6.04	-
Follow-up Hdwy	-	-	3.82	-
Pot Cap-1 Maneuver	0	-	578	0
Stage 1	0	-	-	0
Stage 2	0	-	556	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	578	-
Mov Cap-2 Maneuver	-	-	578	-
Stage 1	-	-	-	-
Stage 2	-	-	556	-

Approach	NB	NE
HCM Control Delay, s	0	20.9
HCM LOS		C

Minor Lane/Major Mvmt	NELn1	NBT
Capacity (veh/h)	578	-
HCM Lane V/C Ratio	0.621	-
HCM Control Delay (s)	20.9	-
HCM Lane LOS	C	-
HCM 95th %tile Q(veh)	4.2	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	365	39	371	38	20	129	249	558	154	85	816	606
Future Volume (vph)	365	39	371	38	20	129	249	558	154	85	816	606
Satd. Flow (prot)	3221	1636	1583	1770	1863	1583	3433	5085	1583	1770	5085	1583
Flt Permitted	0.950	0.965		0.950			0.275			0.409		
Satd. Flow (perm)	3221	1636	1583	1770	1863	1583	994	5085	1583	762	5085	1583
Satd. Flow (RTOR)			403			140			167			474
Lane Group Flow (vph)	290	149	403	41	22	140	271	607	167	92	887	659
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Free
Protected Phases	8	8		4	4		1	6		5	2	
Permitted Phases			8			4	6		6	2		Free
Detector Phase	8	8	8	4	4	4	1	6	6	5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.0	10.0	10.0	3.0	10.0	
Minimum Split (s)	9.0	9.0	9.0	10.0	10.0	10.0	9.0	16.0	16.0	9.0	16.0	
Total Split (s)	30.0	30.0	30.0	27.0	27.0	27.0	15.0	43.0	43.0	20.0	48.0	
Total Split (%)	25.0%	25.0%	25.0%	22.5%	22.5%	22.5%	12.5%	35.8%	35.8%	16.7%	40.0%	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	4.0	3.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	2.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	5.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	17.9	17.9	17.9	8.5	8.5	8.5	77.8	66.8	66.8	75.5	65.6	120.0
Actuated g/C Ratio	0.15	0.15	0.15	0.07	0.07	0.07	0.65	0.56	0.56	0.63	0.55	1.00
v/c Ratio	0.61	0.61	0.70	0.33	0.17	0.58	0.33	0.21	0.17	0.17	0.32	0.42
Control Delay	52.5	57.9	11.1	59.2	54.0	18.4	9.1	14.9	3.2	9.2	16.6	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.5	57.9	11.1	59.2	54.0	18.4	9.1	14.9	3.2	9.2	16.6	0.8
LOS	D	E	B	E	D	B	A	B	A	A	B	A
Approach Delay		33.6			30.5			11.5			9.8	
Approach LOS		C			C			B			A	
Queue Length 50th (ft)	117	120	0	31	16	0	34	80	0	22	128	0
Queue Length 95th (ft)	154	184	89	66	42	61	67	134	39	54	205	0
Internal Link Dist (ft)		518			407			580			291	
Turn Bay Length (ft)			260	170		170	180		170	230		170
Base Capacity (vph)	697	354	658	324	341	404	887	2831	955	646	2781	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.42	0.61	0.13	0.06	0.35	0.31	0.21	0.17	0.14	0.32	0.42

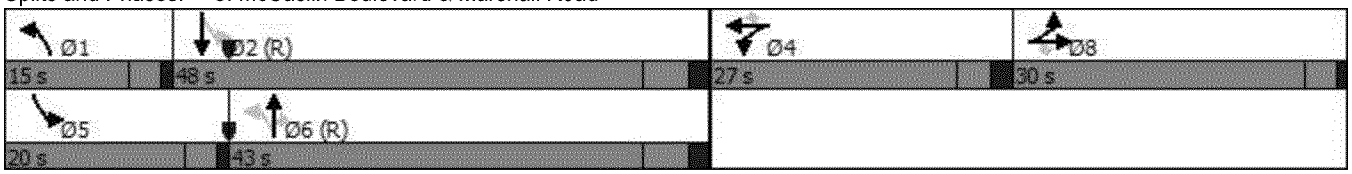
Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 64 (53%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 50
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.70

Intersection Signal Delay: 16.8	Intersection LOS: B
Intersection Capacity Utilization 55.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 5: McCaslin Boulevard & Marshall Road



Intersection	
Intersection Delay, s/veh	6.3
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	23	165	706	1178
Demand Flow Rate, veh/h	23	168	720	1202
Vehicles Circulating, veh/h	1231	683	161	43
Vehicles Exiting, veh/h	14	198	1093	682
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	7.8	1.3	5.9	7.3
Approach LOS	A	A	A	A

Lane	Left	Left	Bypass	Left	Right	Left	Right
Designated Moves	LTR	LT	R	LT	TR	LT	TR
Assumed Moves	LTR	LT	R	LT	TR	LT	TR
RT Channelized			Free				
Lane Util	1.000	1.000		0.469	0.531	0.470	0.530
Follow-Up Headway, s	2.535	2.535		2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.328	126	4.645	4.328	4.645	4.328
Entry Flow, veh/h	23	42	1938	338	382	565	637
Cap Entry Lane, veh/h	499	795	0.980	1164	1238	1297	1369
Entry HV Adj Factor	0.999	0.975	124	0.982	0.979	0.980	0.980
Flow Entry, veh/h	23	41	1900	332	374	554	625
Cap Entry, veh/h	498	775	0.065	1143	1213	1272	1342
V/C Ratio	0.046	0.053	0.0	0.290	0.308	0.435	0.465
Control Delay, s/veh	7.8	5.2	A	5.9	5.8	7.2	7.3
LOS	A	A	0	A	A	A	A
95th %tile Queue, veh	0	0		1	1	2	3

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	9	56	17	0	143	1	25	1	3	0	0	6
Future Vol, veh/h	9	56	17	0	143	1	25	1	3	0	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	61	18	0	155	1	27	1	3	0	0	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	156	0	0	79	0	0	249	246	40	207	255	156
Stage 1	-	-	-	-	-	-	90	90	-	156	156	-
Stage 2	-	-	-	-	-	-	159	156	-	51	99	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.53	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	1423	-	-	1518	-	-	694	656	1023	741	648	889
Stage 1	-	-	-	-	-	-	908	820	-	846	768	-
Stage 2	-	-	-	-	-	-	843	768	-	956	813	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1423	-	-	1518	-	-	685	651	1023	734	643	889
Mov Cap-2 Maneuver	-	-	-	-	-	-	685	651	-	734	643	-
Stage 1	-	-	-	-	-	-	902	814	-	840	768	-
Stage 2	-	-	-	-	-	-	837	768	-	945	807	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	0	10.3	9.1
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	708	1423	-	-	1518	-	-	889
HCM Lane V/C Ratio	0.045	0.007	-	-	-	-	-	0.007
HCM Control Delay (s)	10.3	7.5	0	-	0	-	-	9.1
HCM Lane LOS	B	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	144	0	0	59
Future Vol, veh/h	0	0	144	0	0	59
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	157	0	0	64

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	221	157	0	0	157	0
Stage 1	157	-	-	-	-	-
Stage 2	64	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	767	889	-	-	1423	-
Stage 1	871	-	-	-	-	-
Stage 2	959	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	767	889	-	-	1423	-
Mov Cap-2 Maneuver	767	-	-	-	-	-
Stage 1	871	-	-	-	-	-
Stage 2	959	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1423	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

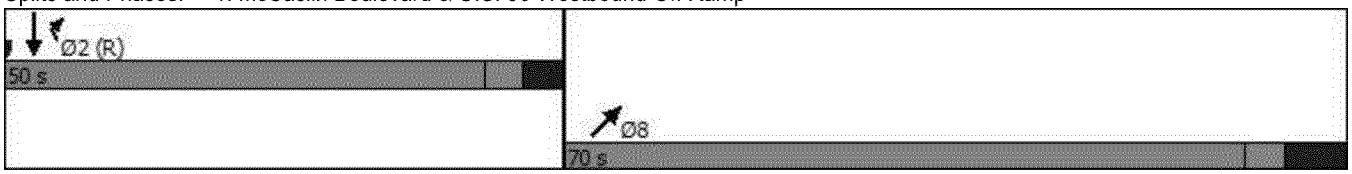
Lane Group	SBT	NWR2	NET
Lane Configurations			
Traffic Volume (vph)	911	622	870
Future Volume (vph)	911	622	870
Satd. Flow (prot)	5085	3610	5085
Flt Permitted			
Satd. Flow (perm)	5085	3610	5085
Satd. Flow (RTOR)		208	
Lane Group Flow (vph)	990	676	946
Turn Type	NA	Prot	NA
Protected Phases	2	2	8
Permitted Phases		2	
Detector Phase	2	2	8
Switch Phase			
Minimum Initial (s)	10.0	10.0	10.0
Minimum Split (s)	17.2	17.2	19.3
Total Split (s)	50.0	50.0	70.0
Total Split (%)	41.7%	41.7%	58.3%
Yellow Time (s)	3.5	3.5	3.5
All-Red Time (s)	3.7	3.7	5.8
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	7.2	7.2	9.3
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	C-Max	C-Max	None
Act Effct Green (s)	73.1	73.1	30.4
Actuated g/C Ratio	0.61	0.61	0.25
v/c Ratio	0.32	0.30	0.74
Control Delay	12.2	8.3	64.8
Queue Delay	0.0	0.0	0.0
Total Delay	12.2	8.3	64.8
LOS	B	A	E
Approach Delay	12.2		64.8
Approach LOS	B		E
Queue Length 50th (ft)	128	67	229
Queue Length 95th (ft)	178	109	221
Internal Link Dist (ft)	259		447
Turn Bay Length (ft)			
Base Capacity (vph)	3099	2281	2572
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.32	0.30	0.37

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 48 (40%), Referenced to phase 2:SBT, Start of Green
Natural Cycle: 40
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.74

Intersection Signal Delay: 30.2	Intersection LOS: C
Intersection Capacity Utilization Err%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 1: McCaslin Boulevard & U.S. 36 Westbound Off Ramp



Intersection	
Int Delay, s/veh	6.4

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations				↑↑↑	↰	
Traffic Vol, veh/h	0	0	0	911	378	0
Future Vol, veh/h	0	0	0	911	378	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	990	411	0

Major/Minor	Major2		Minor1	
Conflicting Flow All	-	-	396	-
Stage 1	-	-	0	-
Stage 2	-	-	396	-
Critical Hdwy	-	-	5.74	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	6.04	-
Follow-up Hdwy	-	-	3.82	-
Pot Cap-1 Maneuver	0	-	614	0
Stage 1	0	-	-	0
Stage 2	0	-	594	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	614	-
Mov Cap-2 Maneuver	-	-	614	-
Stage 1	-	-	-	-
Stage 2	-	-	594	-

Approach	SB	SW
HCM Control Delay, s	0	21.9
HCM LOS		C

Minor Lane/Major Mvmt	SBT	SWLn1
Capacity (veh/h)	-	614
HCM Lane V/C Ratio	-	0.669
HCM Control Delay (s)	-	21.9
HCM Lane LOS	-	C
HCM 95th %tile Q(veh)	-	5.1



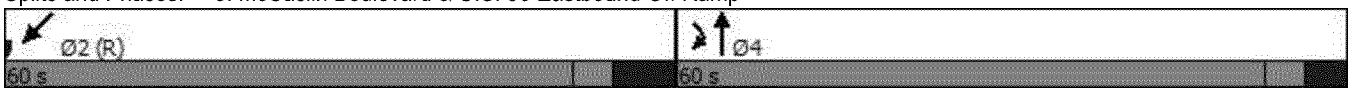
Lane Group	NBT	SER2	SWT
Lane Configurations			
Traffic Volume (vph)	1007	279	878
Future Volume (vph)	1007	279	878
Satd. Flow (prot)	5085	3610	5085
Flt Permitted			
Satd. Flow (perm)	5085	3610	5085
Satd. Flow (RTOR)		121	
Lane Group Flow (vph)	1095	303	954
Turn Type	NA	Prot	NA
Protected Phases	4	4	2
Permitted Phases		4	
Detector Phase	4	4	2
Switch Phase			
Minimum Initial (s)	10.0	10.0	10.0
Minimum Split (s)	17.5	17.5	19.3
Total Split (s)	60.0	60.0	60.0
Total Split (%)	50.0%	50.0%	50.0%
Yellow Time (s)	3.5	3.5	3.5
All-Red Time (s)	4.0	4.0	5.8
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	9.3
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	None	None	C-Max
Act Effct Green (s)	35.8	35.8	67.4
Actuated g/C Ratio	0.30	0.30	0.56
v/c Ratio	0.72	0.26	0.33
Control Delay	40.2	18.5	7.4
Queue Delay	0.0	0.0	0.0
Total Delay	40.2	18.5	7.4
LOS	D	B	A
Approach Delay	40.2		7.4
Approach LOS	D		A
Queue Length 50th (ft)	277	45	54
Queue Length 95th (ft)	300	68	71
Internal Link Dist (ft)	90		532
Turn Bay Length (ft)			
Base Capacity (vph)	2224	1647	2856
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.49	0.18	0.33

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 46 (38%), Referenced to phase 2:SWT, Start of Green
Natural Cycle: 45
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.72

Intersection Signal Delay: 24.1	Intersection LOS: C
Intersection Capacity Utilization Err%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 3: McCaslin Boulevard & U.S. 36 Eastbound Off Ramp



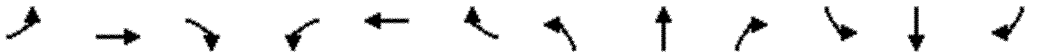
Intersection	
Int Delay, s/veh	5

Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↑↑↑			↰	
Traffic Vol, veh/h	0	1007	0	0	330	0
Future Vol, veh/h	0	1007	0	0	330	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1095	0	0	359	0

Major/Minor	Major1		Minor2	
Conflicting Flow All	-	0	438	-
Stage 1	-	-	0	-
Stage 2	-	-	438	-
Critical Hdwy	-	-	5.74	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	6.04	-
Follow-up Hdwy	-	-	3.82	-
Pot Cap-1 Maneuver	0	-	586	0
Stage 1	0	-	-	0
Stage 2	0	-	565	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	586	-
Mov Cap-2 Maneuver	-	-	586	-
Stage 1	-	-	-	-
Stage 2	-	-	565	-

Approach	NB	NE
HCM Control Delay, s	0	20.4
HCM LOS		C

Minor Lane/Major Mvmt	NELn1	NBT
Capacity (veh/h)	586	-
HCM Lane V/C Ratio	0.612	-
HCM Control Delay (s)	20.4	-
HCM Lane LOS	C	-
HCM 95th %tile Q(veh)	4.1	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	68	31	55	22	24	129	116	673	82	204	511	288
Future Volume (vph)	68	31	55	22	24	129	116	673	82	204	511	288
Satd. Flow (prot)	3221	1682	1583	1770	1863	1583	3433	5085	1583	1770	5085	1583
Flt Permitted	0.950	0.992		0.950			0.434			0.340		
Satd. Flow (perm)	3221	1682	1583	1770	1863	1583	1568	5085	1583	633	5085	1583
Satd. Flow (RTOR)			145			140			127			313
Lane Group Flow (vph)	67	41	60	24	26	140	126	732	89	222	555	313
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Free
Protected Phases	8	8		4	4		1	6		5	2	
Permitted Phases			8			4	6		6	2		Free
Detector Phase	8	8	8	4	4	4	1	6	6	5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.0	10.0	10.0	3.0	10.0	
Minimum Split (s)	9.0	9.0	9.0	10.0	10.0	10.0	9.0	16.0	16.0	9.0	16.0	
Total Split (s)	30.0	30.0	30.0	27.0	27.0	27.0	15.0	43.0	43.0	20.0	48.0	
Total Split (%)	25.0%	25.0%	25.0%	22.5%	22.5%	22.5%	12.5%	35.8%	35.8%	16.7%	40.0%	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	4.0	3.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	2.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	5.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	8.5	8.5	8.5	7.8	7.8	7.8	85.5	76.9	76.9	91.5	80.1	120.0
Actuated g/C Ratio	0.07	0.07	0.07	0.06	0.06	0.06	0.71	0.64	0.64	0.76	0.67	1.00
v/c Ratio	0.30	0.35	0.24	0.21	0.21	0.60	0.10	0.22	0.08	0.39	0.16	0.20
Control Delay	55.5	60.4	2.3	56.1	56.0	19.5	4.7	10.5	1.0	6.5	8.5	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.5	60.4	2.3	56.1	56.0	19.5	4.7	10.5	1.0	6.5	8.5	0.3
LOS	E	E	A	E	E	B	A	B	A	A	A	A
Approach Delay		37.7			29.2			8.9			5.7	
Approach LOS		D			C			A			A	
Queue Length 50th (ft)	27	34	0	18	20	0	10	82	0	40	55	0
Queue Length 95th (ft)	51	73	0	45	48	61	23	136	11	83	90	0
Internal Link Dist (ft)		518			407			580			291	
Turn Bay Length (ft)			260	170		170	180		170	230		170
Base Capacity (vph)	697	364	456	324	341	404	1343	3256	1059	640	3392	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.11	0.13	0.07	0.08	0.35	0.09	0.22	0.08	0.35	0.16	0.20

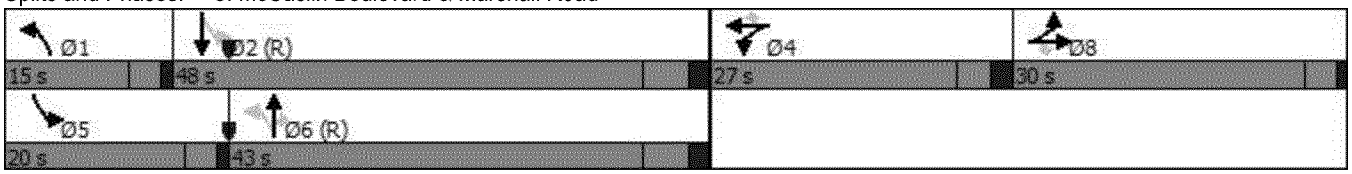
Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 64 (53%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 45
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.60

Intersection Signal Delay: 11.1	Intersection LOS: B
Intersection Capacity Utilization 44.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 5: McCaslin Boulevard & Marshall Road



Intersection	
Intersection Delay, s/veh	5.5
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	13	156	804	540
Demand Flow Rate, veh/h	13	159	820	550
Vehicles Circulating, veh/h	564	758	238	40
Vehicles Exiting, veh/h	26	300	339	757
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.2	1.3	7.0	4.5
Approach LOS	A	A	A	A

Lane	Left	Left	Bypass	Left	Right	Left	Right
Designated Moves	LTR	LT	R	LT	TR	LT	TR
Assumed Moves	LTR	LT	R	LT	TR	LT	TR
RT Channelized			Free				
Lane Util	1.000	1.000		0.470	0.530	0.469	0.531
Follow-Up Headway, s	2.535	2.535		2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.328	120	4.645	4.328	4.645	4.328
Entry Flow, veh/h	13	39	1938	385	435	258	292
Cap Entry Lane, veh/h	879	746	0.980	1084	1160	1301	1373
Entry HV Adj Factor	1.000	0.973	118	0.982	0.980	0.984	0.980
Flow Entry, veh/h	13	38	1900	378	426	254	286
Cap Entry, veh/h	879	725	0.062	1065	1137	1280	1346
V/C Ratio	0.015	0.052	0.0	0.355	0.375	0.198	0.213
Control Delay, s/veh	4.2	5.5	A	7.0	6.9	4.5	4.5
LOS	A	A	0	A	A	A	A
95th %tile Queue, veh	0	0		2	2	1	1

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	127	28	0	72	0	7	0	0	0	0	0
Future Vol, veh/h	0	127	28	0	72	0	7	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	138	30	0	78	0	8	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	78	0	0	168	0	0	231	231	84	147	246	78
Stage 1	-	-	-	-	-	-	153	153	-	78	78	-
Stage 2	-	-	-	-	-	-	78	78	-	69	168	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.53	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	1519	-	-	1408	-	-	714	668	959	814	656	982
Stage 1	-	-	-	-	-	-	835	770	-	930	830	-
Stage 2	-	-	-	-	-	-	930	830	-	933	759	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1519	-	-	1408	-	-	714	668	959	814	656	982
Mov Cap-2 Maneuver	-	-	-	-	-	-	714	668	-	814	656	-
Stage 1	-	-	-	-	-	-	835	770	-	930	830	-
Stage 2	-	-	-	-	-	-	930	830	-	933	759	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	10.1	0
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	714	1519	-	-	1408	-	-	-
HCM Lane V/C Ratio	0.011	-	-	-	-	-	-	-
HCM Control Delay (s)	10.1	0	-	-	0	-	-	0
HCM Lane LOS	B	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	72	0	0	127
Future Vol, veh/h	0	0	72	0	0	127
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	78	0	0	138

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	216	78	0	0	78	0
Stage 1	78	-	-	-	-	-
Stage 2	138	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	772	983	-	-	1520	-
Stage 1	945	-	-	-	-	-
Stage 2	889	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	772	983	-	-	1520	-
Mov Cap-2 Maneuver	772	-	-	-	-	-
Stage 1	945	-	-	-	-	-
Stage 2	889	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1520	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

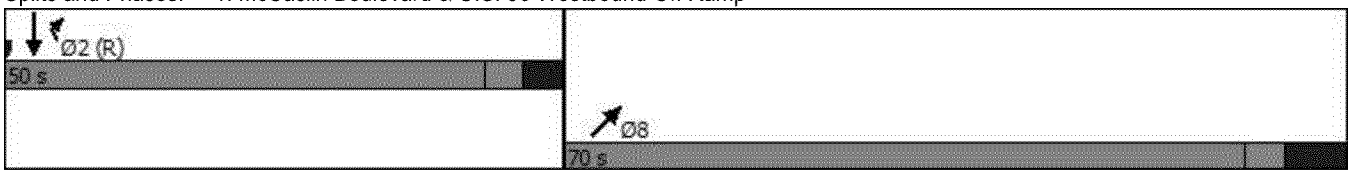
Lane Group	SBT	NWR2	NET
Lane Configurations			
Traffic Volume (vph)	1446	464	1039
Future Volume (vph)	1446	464	1039
Satd. Flow (prot)	5085	3610	5085
Flt Permitted			
Satd. Flow (perm)	5085	3610	5085
Satd. Flow (RTOR)		125	
Lane Group Flow (vph)	1572	504	1129
Turn Type	NA	Prot	NA
Protected Phases	2	2	8
Permitted Phases		2	
Detector Phase	2	2	8
Switch Phase			
Minimum Initial (s)	10.0	10.0	10.0
Minimum Split (s)	17.2	17.2	19.3
Total Split (s)	50.0	50.0	70.0
Total Split (%)	41.7%	41.7%	58.3%
Yellow Time (s)	3.5	3.5	3.5
All-Red Time (s)	3.7	3.7	5.8
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	7.2	7.2	9.3
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	C-Max	C-Max	None
Act Effct Green (s)	67.9	67.9	35.6
Actuated g/C Ratio	0.57	0.57	0.30
v/c Ratio	0.55	0.24	0.75
Control Delay	18.0	10.6	51.7
Queue Delay	0.0	0.0	0.0
Total Delay	18.0	10.6	51.7
LOS	B	B	D
Approach Delay	18.0		51.7
Approach LOS	B		D
Queue Length 50th (ft)	269	60	228
Queue Length 95th (ft)	356	97	217
Internal Link Dist (ft)	259		447
Turn Bay Length (ft)			
Base Capacity (vph)	2876	2096	2572
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.55	0.24	0.44

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 48 (40%), Referenced to phase 2:SBT, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 28.7	Intersection LOS: C
Intersection Capacity Utilization Err%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 1: McCaslin Boulevard & U.S. 36 Westbound Off Ramp



Intersection	
Int Delay, s/veh	10.7

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations				↑↑↑	↰	
Traffic Vol, veh/h	0	0	0	1446	393	0
Future Vol, veh/h	0	0	0	1446	393	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	1572	427	0

Major/Minor	Major2		Minor1	
Conflicting Flow All	-	-	629	-
Stage 1	-	-	0	-
Stage 2	-	-	629	-
Critical Hdwy	-	-	5.74	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	6.04	-
Follow-up Hdwy	-	-	3.82	-
Pot Cap-1 Maneuver	0	-	474	0
Stage 1	0	-	-	0
Stage 2	0	-	450	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	474	-
Mov Cap-2 Maneuver	-	-	474	-
Stage 1	-	-	-	-
Stage 2	-	-	450	-

Approach	SB	SW
HCM Control Delay, s	0	50.2
HCM LOS		F

Minor Lane/Major Mvmt	SBT	SWLn1
Capacity (veh/h)	-	474
HCM Lane V/C Ratio	-	0.901
HCM Control Delay (s)	-	50.2
HCM Lane LOS	-	F
HCM 95th %tile Q(veh)	-	10.1



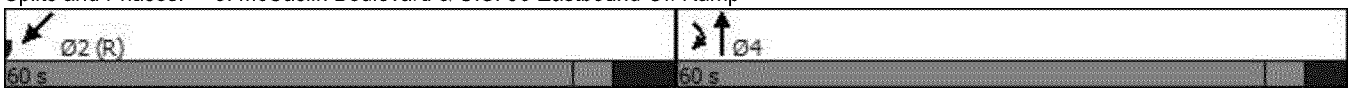
Lane Group	NBT	SER2	SWT
Lane Configurations			
Traffic Volume (vph)	1159	606	1211
Future Volume (vph)	1159	606	1211
Satd. Flow (prot)	5085	3610	5085
Flt Permitted			
Satd. Flow (perm)	5085	3610	5085
Satd. Flow (RTOR)		57	
Lane Group Flow (vph)	1260	659	1316
Turn Type	NA	Prot	NA
Protected Phases	4	4	2
Permitted Phases		4	
Detector Phase	4	4	2
Switch Phase			
Minimum Initial (s)	10.0	10.0	10.0
Minimum Split (s)	17.5	17.5	19.3
Total Split (s)	60.0	60.0	60.0
Total Split (%)	50.0%	50.0%	50.0%
Yellow Time (s)	3.5	3.5	3.5
All-Red Time (s)	4.0	4.0	5.8
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	9.3
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	None	None	C-Max
Act Effct Green (s)	43.1	43.1	60.1
Actuated g/C Ratio	0.36	0.36	0.50
v/c Ratio	0.69	0.50	0.52
Control Delay	34.5	27.8	9.0
Queue Delay	0.0	0.0	0.0
Total Delay	34.5	27.8	9.0
LOS	C	C	A
Approach Delay	34.5		9.0
Approach LOS	C		A
Queue Length 50th (ft)	302	157	71
Queue Length 95th (ft)	310	178	88
Internal Link Dist (ft)	90		532
Turn Bay Length (ft)			
Base Capacity (vph)	2224	1611	2548
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.57	0.41	0.52

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 46 (38%), Referenced to phase 2:SWT, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.69

Intersection Signal Delay: 22.8	Intersection LOS: C
Intersection Capacity Utilization Err%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 3: McCaslin Boulevard & U.S. 36 Eastbound Off Ramp



Intersection	
Int Delay, s/veh	5.6

Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↑↑↑			↰	
Traffic Vol, veh/h	0	1159	0	0	343	0
Future Vol, veh/h	0	1159	0	0	343	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1260	0	0	373	0

Major/Minor	Major1		Minor2	
Conflicting Flow All	-	0	504	-
Stage 1	-	-	0	-
Stage 2	-	-	504	-
Critical Hdwy	-	-	5.74	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	6.04	-
Follow-up Hdwy	-	-	3.82	-
Pot Cap-1 Maneuver	0	-	545	0
Stage 1	0	-	-	0
Stage 2	0	-	522	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	545	-
Mov Cap-2 Maneuver	-	-	545	-
Stage 1	-	-	-	-
Stage 2	-	-	522	-

Approach	NB	NE
HCM Control Delay, s	0	24.7
HCM LOS		C

Minor Lane/Major Mvmt	NELn1	NBT
Capacity (veh/h)	545	-
HCM Lane V/C Ratio	0.684	-
HCM Control Delay (s)	24.7	-
HCM Lane LOS	C	-
HCM 95th %tile Q(veh)	5.2	-

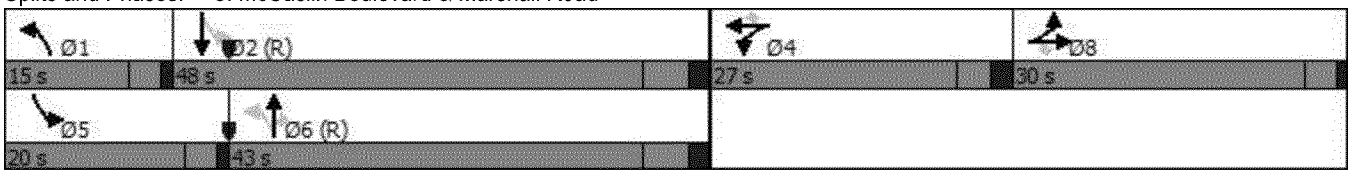
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	380	43	390	40	25	189	267	68	56	108	898	630
Future Volume (vph)	380	43	390	40	25	189	267	68	56	108	898	630
Satd. Flow (prot)	3221	1637	1583	1770	1863	1583	3433	5085	1583	1770	5085	1583
Flt Permitted	0.950	0.966		0.950			0.244			0.704		
Satd. Flow (perm)	3221	1637	1583	1770	1863	1583	882	5085	1583	1311	5085	1583
Satd. Flow (RTOR)			424			205			127			448
Lane Group Flow (vph)	306	154	424	43	27	205	290	74	61	117	976	685
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Free
Protected Phases	8	8		4	4		1	6		5	2	
Permitted Phases			8			4	6		6	2		Free
Detector Phase	8	8	8	4	4	4	1	6	6	5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.0	10.0	10.0	3.0	10.0	
Minimum Split (s)	9.0	9.0	9.0	10.0	10.0	10.0	9.0	16.0	16.0	9.0	16.0	
Total Split (s)	30.0	30.0	30.0	27.0	27.0	27.0	15.0	43.0	43.0	20.0	48.0	
Total Split (%)	25.0%	25.0%	25.0%	22.5%	22.5%	22.5%	12.5%	35.8%	35.8%	16.7%	40.0%	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	4.0	3.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	2.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	5.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	18.3	18.3	18.3	8.9	8.9	8.9	76.6	65.2	65.2	75.0	64.4	120.0
Actuated g/C Ratio	0.15	0.15	0.15	0.07	0.07	0.07	0.64	0.54	0.54	0.62	0.54	1.00
v/c Ratio	0.62	0.62	0.71	0.33	0.20	0.67	0.38	0.03	0.07	0.14	0.36	0.43
Control Delay	52.7	57.6	11.0	58.1	53.8	18.1	10.0	15.6	0.1	9.3	17.9	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.7	57.6	11.0	58.1	53.8	18.1	10.0	15.6	0.1	9.3	17.9	0.9
LOS	D	E	B	E	D	B	B	B	A	A	B	A
Approach Delay		33.5			27.8			9.6			10.8	
Approach LOS		C			C			A			B	
Queue Length 50th (ft)	124	125	0	32	20	0	37	9	0	29	147	0
Queue Length 95th (ft)	162	189	91	67	48	72	74	23	0	70	240	0
Internal Link Dist (ft)		518			407			580			291	
Turn Bay Length (ft)			260	170		170	180		170	230		170
Base Capacity (vph)	697	354	675	324	341	457	816	2762	917	931	2728	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.44	0.63	0.13	0.08	0.45	0.36	0.03	0.07	0.13	0.36	0.43

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 64 (53%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 18.0	Intersection LOS: B
Intersection Capacity Utilization 58.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 5: McCaslin Boulevard & Marshall Road



Intersection	
Intersection Delay, s/veh	7.0
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	24	345	761	1294
Demand Flow Rate, veh/h	24	352	777	1319
Vehicles Circulating, veh/h	1402	711	237	97
Vehicles Exiting, veh/h	14	303	1189	710
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	9.1	1.6	6.7	8.6
Approach LOS	A	A	A	A

Lane	Left	Left	Bypass	Left	Right	Left	Right
Designated Moves	LTR	LT	R	LT	TR	LT	TR
Assumed Moves	LTR	LT	R	LT	TR	LT	TR
RT Channelized			Free				
Lane Util	1.000	1.000		0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.535	2.535		2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.328	256	4.645	4.328	4.645	4.328
Entry Flow, veh/h	24	96	1938	365	412	620	699
Cap Entry Lane, veh/h	431	776	0.980	1085	1161	1235	1308
Entry HV Adj Factor	0.999	0.979	251	0.980	0.980	0.981	0.981
Flow Entry, veh/h	24	94	1900	358	404	608	686
Cap Entry, veh/h	431	759	0.132	1064	1137	1211	1283
V/C Ratio	0.056	0.124	0.0	0.336	0.355	0.502	0.535
Control Delay, s/veh	9.1	6.0	A	6.8	6.7	8.4	8.7
LOS	A	A	0	A	A	A	A
95th %tile Queue, veh	0	0		1	2	3	3

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	9	78	17	0	208	1	26	1	3	0	0	6
Future Vol, veh/h	9	78	17	0	208	1	26	1	3	0	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	85	18	0	226	1	28	1	3	0	0	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	227	0	0	103	0	0	344	341	52	290	350	227
Stage 1	-	-	-	-	-	-	114	114	-	227	227	-
Stage 2	-	-	-	-	-	-	230	227	-	63	123	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.53	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	1340	-	-	1488	-	-	598	580	1005	651	574	812
Stage 1	-	-	-	-	-	-	879	801	-	775	716	-
Stage 2	-	-	-	-	-	-	772	716	-	941	794	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1340	-	-	1488	-	-	590	575	1005	644	569	812
Mov Cap-2 Maneuver	-	-	-	-	-	-	590	575	-	644	569	-
Stage 1	-	-	-	-	-	-	872	795	-	769	716	-
Stage 2	-	-	-	-	-	-	766	716	-	929	788	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	0	11.2	9.5
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	615	1340	-	-	1488	-	-	812
HCM Lane V/C Ratio	0.053	0.007	-	-	-	-	-	0.008
HCM Control Delay (s)	11.2	7.7	0	-	0	-	-	9.5
HCM Lane LOS	B	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	209	0	0	81
Future Vol, veh/h	0	0	209	0	0	81
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	227	0	0	88

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	315	227	0	0	227	0
Stage 1	227	-	-	-	-	-
Stage 2	88	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	678	812	-	-	1341	-
Stage 1	811	-	-	-	-	-
Stage 2	935	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	678	812	-	-	1341	-
Mov Cap-2 Maneuver	678	-	-	-	-	-
Stage 1	811	-	-	-	-	-
Stage 2	935	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1341	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-



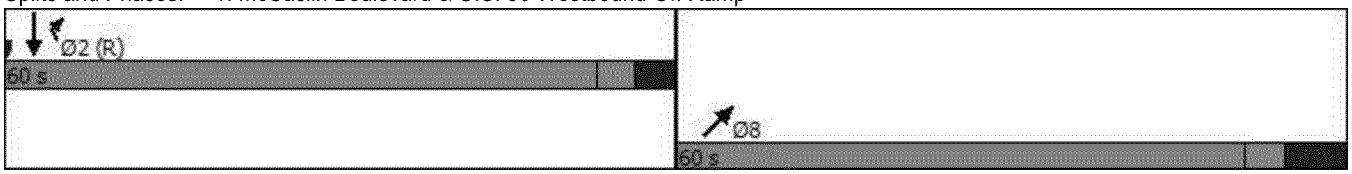
Lane Group	SBT	NWR2	NET
Lane Configurations			
Traffic Volume (vph)	1314	897	1255
Future Volume (vph)	1314	897	1255
Satd. Flow (prot)	5085	3610	5085
Flt Permitted			
Satd. Flow (perm)	5085	3610	5085
Satd. Flow (RTOR)		57	
Lane Group Flow (vph)	1428	975	1364
Turn Type	NA	Prot	NA
Protected Phases	2	2	8
Permitted Phases		2	
Detector Phase	2	2	8
Switch Phase			
Minimum Initial (s)	10.0	10.0	10.0
Minimum Split (s)	17.2	17.2	19.3
Total Split (s)	60.0	60.0	60.0
Total Split (%)	50.0%	50.0%	50.0%
Yellow Time (s)	3.5	3.5	3.5
All-Red Time (s)	3.7	3.7	5.8
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	7.2	7.2	9.3
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	C-Max	C-Max	None
Act Effct Green (s)	62.5	62.5	41.0
Actuated g/C Ratio	0.52	0.52	0.34
v/c Ratio	0.54	0.51	0.78
Control Delay	20.8	19.5	24.0
Queue Delay	0.0	0.0	0.0
Total Delay	20.8	19.5	24.0
LOS	C	B	C
Approach Delay	20.8		24.0
Approach LOS	C		C
Queue Length 50th (ft)	261	196	143
Queue Length 95th (ft)	342	275	143
Internal Link Dist (ft)	259		447
Turn Bay Length (ft)			
Base Capacity (vph)	2646	1906	2148
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.54	0.51	0.64

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 48 (40%), Referenced to phase 2:SBT, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.78

Intersection Signal Delay: 21.6	Intersection LOS: C
Intersection Capacity Utilization Err%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 1: McCaslin Boulevard & U.S. 36 Westbound Off Ramp



Intersection	
Int Delay, s/veh	35.7

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations				↑↑↑	↰	
Traffic Vol, veh/h	0	0	0	1314	544	0
Future Vol, veh/h	0	0	0	1314	544	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	1428	591	0

Major/Minor	Major2		Minor1	
Conflicting Flow All	-	-	571	-
Stage 1	-	-	0	-
Stage 2	-	-	571	-
Critical Hdwy	-	-	5.74	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	6.04	-
Follow-up Hdwy	-	-	3.82	-
Pot Cap-1 Maneuver	0	-	~ 506	0
Stage 1	0	-	-	0
Stage 2	0	-	~ 482	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	~ 506	-
Mov Cap-2 Maneuver	-	-	~ 506	-
Stage 1	-	-	-	-
Stage 2	-	-	~ 482	-

Approach	SB	SW
HCM Control Delay, s	0	122
HCM LOS		F

Minor Lane/Major Mvmt	SBT	SWLn1
Capacity (veh/h)	-	506
HCM Lane V/C Ratio	-	1.169
HCM Control Delay (s)	-	122
HCM Lane LOS	-	F
HCM 95th %tile Q(veh)	-	21.1

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



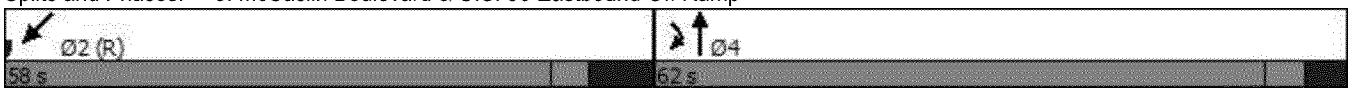
Lane Group	NBT	SER2	SWT
Lane Configurations			
Traffic Volume (vph)	1437	372	1236
Future Volume (vph)	1437	372	1236
Satd. Flow (prot)	5085	3610	5085
Flt Permitted			
Satd. Flow (perm)	5085	3610	5085
Satd. Flow (RTOR)		57	
Lane Group Flow (vph)	1562	404	1343
Turn Type	NA	Prot	NA
Protected Phases	4	4	2
Permitted Phases		4	
Detector Phase	4	4	2
Switch Phase			
Minimum Initial (s)	10.0	10.0	10.0
Minimum Split (s)	17.5	17.5	19.3
Total Split (s)	62.0	62.0	58.0
Total Split (%)	51.7%	51.7%	48.3%
Yellow Time (s)	3.5	3.5	3.5
All-Red Time (s)	4.0	4.0	5.8
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	9.3
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	None	None	C-Max
Act Effct Green (s)	48.9	48.9	54.3
Actuated g/C Ratio	0.41	0.41	0.45
v/c Ratio	0.75	0.27	0.58
Control Delay	32.7	19.9	15.4
Queue Delay	0.0	0.0	0.0
Total Delay	32.7	19.9	15.4
LOS	C	B	B
Approach Delay	32.7		15.4
Approach LOS	C		B
Queue Length 50th (ft)	369	75	125
Queue Length 95th (ft)	395	98	148
Internal Link Dist (ft)	90		532
Turn Bay Length (ft)			
Base Capacity (vph)	2309	1670	2300
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.68	0.24	0.58

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 46 (38%), Referenced to phase 2:SWT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 24.1	Intersection LOS: C
Intersection Capacity Utilization Err%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 3: McCaslin Boulevard & U.S. 36 Eastbound Off Ramp



Intersection	
Int Delay, s/veh	23.9

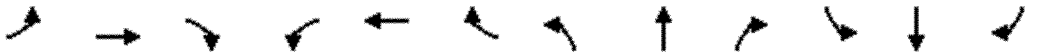
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↑↑↑			↰	
Traffic Vol, veh/h	0	1437	0	0	476	0
Future Vol, veh/h	0	1437	0	0	476	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1562	0	0	517	0

Major/Minor	Major1		Minor2	
Conflicting Flow All	-	0	625	-
Stage 1	-	-	0	-
Stage 2	-	-	625	-
Critical Hdwy	-	-	5.74	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	6.04	-
Follow-up Hdwy	-	-	3.82	-
Pot Cap-1 Maneuver	0	-	~ 476	0
Stage 1	0	-	-	0
Stage 2	0	-	~ 452	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	~ 476	-
Mov Cap-2 Maneuver	-	-	~ 476	-
Stage 1	-	-	-	-
Stage 2	-	-	~ 452	-

Approach	NB	NE
HCM Control Delay, s	0	96
HCM LOS		F

Minor Lane/Major Mvmt	NELn1	NBT
Capacity (veh/h)	476	-
HCM Lane V/C Ratio	1.087	-
HCM Control Delay (s)	96	-
HCM Lane LOS	F	-
HCM 95th %tile Q(veh)	16.8	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	98	44	689	32	34	175	106	950	119	277	693	416
Future Volume (vph)	98	44	689	32	34	175	106	950	119	277	693	416
Satd. Flow (prot)	3221	1680	1583	1770	1863	1583	3433	5085	1583	1770	5085	1583
Flt Permitted	0.950	0.991		0.950			0.354			0.135		
Satd. Flow (perm)	3221	1680	1583	1770	1863	1583	1279	5085	1583	251	5085	1583
Satd. Flow (RTOR)			467			190			127			383
Lane Group Flow (vph)	96	59	749	35	37	190	115	1033	129	301	753	452
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Free
Protected Phases	8	8		4	4		1	6		5	2	
Permitted Phases			8			4	6		6	2		Free
Detector Phase	8	8	8	4	4	4	1	6	6	5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.0	10.0	10.0	3.0	10.0	
Minimum Split (s)	9.0	9.0	9.0	10.0	10.0	10.0	9.0	16.0	16.0	9.0	16.0	
Total Split (s)	30.0	30.0	30.0	27.0	27.0	27.0	15.0	43.0	43.0	20.0	48.0	
Total Split (%)	25.0%	25.0%	25.0%	22.5%	22.5%	22.5%	12.5%	35.8%	35.8%	16.7%	40.0%	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	4.0	3.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	2.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	5.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	39.5	39.5	39.5	8.5	8.5	8.5	46.6	37.0	37.0	59.0	45.4	120.0
Actuated g/C Ratio	0.33	0.33	0.33	0.07	0.07	0.07	0.39	0.31	0.31	0.49	0.38	1.00
v/c Ratio	0.09	0.11	0.90	0.28	0.28	0.66	0.18	0.66	0.22	0.93	0.39	0.29
Control Delay	29.2	30.0	29.5	57.1	56.9	18.7	17.4	38.5	6.5	60.7	28.1	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.2	30.0	29.5	57.1	56.9	18.7	17.4	38.5	6.5	60.7	28.1	0.5
LOS	C	C	C	E	E	B	B	D	A	E	C	A
Approach Delay		29.5			29.2			33.3			26.3	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	28	34	238	26	28	0	23	253	1	157	154	0
Queue Length 95th (ft)	53	74	#535	58	61	69	39	304	46	#327	194	0
Internal Link Dist (ft)		518			407			580			291	
Turn Bay Length (ft)			260	170		170	180		170	230		170
Base Capacity (vph)	1060	553	834	324	341	445	730	1567	575	325	1923	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.11	0.90	0.11	0.11	0.43	0.16	0.66	0.22	0.93	0.39	0.29

Intersection Summary

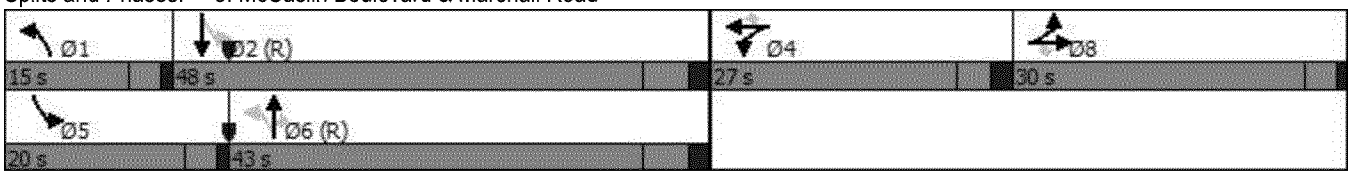
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 64 (53%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.93

Intersection Signal Delay: 29.5	Intersection LOS: C
Intersection Capacity Utilization 72.7%	ICU Level of Service C
Analysis Period (min) 15	

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: McCaslin Boulevard & Marshall Road



Intersection	
Intersection Delay, s/veh	7.6
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	20	192	1141	726
Demand Flow Rate, veh/h	20	196	1164	741
Vehicles Circulating, veh/h	749	1094	290	48
Vehicles Exiting, veh/h	40	360	479	1092
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	5.1	1.8	10.1	5.2
Approach LOS	A	A	B	A

Lane	Left	Left	Bypass	Left	Right	Left	Right
Designated Moves	LTR	LT	R	LT	TR	LT	TR
Assumed Moves	LTR	LT	R	LT	TR	LT	TR
RT Channelized			Free				
Lane Util	1.000	1.000		0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.535	2.535		2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.328	150	4.645	4.328	4.645	4.328
Entry Flow, veh/h	20	46	1938	547	617	348	393
Cap Entry Lane, veh/h	751	560	0.980	1034	1110	1292	1363
Entry HV Adj Factor	1.000	0.976	147	0.980	0.980	0.981	0.980
Flow Entry, veh/h	20	45	1900	536	605	341	385
Cap Entry, veh/h	751	547	0.077	1013	1088	1267	1336
V/C Ratio	0.027	0.082	0.0	0.529	0.556	0.269	0.288
Control Delay, s/veh	5.1	7.6	A	10.1	10.2	5.2	5.2
LOS	A	A	0	B	B	A	A
95th %tile Queue, veh	0	0		3	4	1	1

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	169	41	0	92	0	11	0	0	0	0	0
Future Vol, veh/h	0	169	41	0	92	0	11	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	184	45	0	100	0	12	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	100	0	0	229	0	0	307	307	115	192	329	100
Stage 1	-	-	-	-	-	-	207	207	-	100	100	-
Stage 2	-	-	-	-	-	-	100	100	-	92	229	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.53	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	1492	-	-	1338	-	-	634	606	916	759	589	955
Stage 1	-	-	-	-	-	-	776	730	-	906	812	-
Stage 2	-	-	-	-	-	-	906	812	-	905	714	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1492	-	-	1338	-	-	634	606	916	759	589	955
Mov Cap-2 Maneuver	-	-	-	-	-	-	634	606	-	759	589	-
Stage 1	-	-	-	-	-	-	776	730	-	906	812	-
Stage 2	-	-	-	-	-	-	906	812	-	905	714	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	10.8	0
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	634	1492	-	-	1338	-	-	-
HCM Lane V/C Ratio	0.019	-	-	-	-	-	-	-
HCM Control Delay (s)	10.8	0	-	-	0	-	-	0
HCM Lane LOS	B	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	92	0	0	169
Future Vol, veh/h	0	0	92	0	0	169
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	100	0	0	184

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	284	100	0	0	100	0
Stage 1	100	-	-	-	-	-
Stage 2	184	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	706	956	-	-	1493	-
Stage 1	924	-	-	-	-	-
Stage 2	848	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	706	956	-	-	1493	-
Mov Cap-2 Maneuver	706	-	-	-	-	-
Stage 1	924	-	-	-	-	-
Stage 2	848	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1493	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

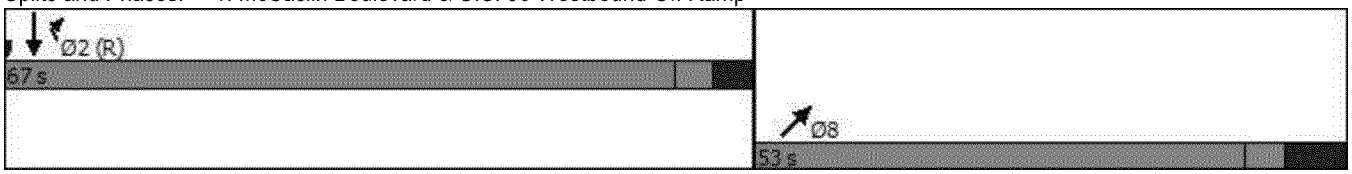
Lane Group	SBT	NWR2	NET
Lane Configurations			
Traffic Volume (vph)	2085	669	1499
Future Volume (vph)	2085	669	1499
Satd. Flow (prot)	5085	3610	5085
Flt Permitted			
Satd. Flow (perm)	5085	3610	5085
Satd. Flow (RTOR)		57	
Lane Group Flow (vph)	2266	727	1629
Turn Type	NA	Prot	NA
Protected Phases	2	2	8
Permitted Phases		2	
Detector Phase	2	2	8
Switch Phase			
Minimum Initial (s)	10.0	10.0	10.0
Minimum Split (s)	17.2	17.2	19.3
Total Split (s)	67.0	67.0	53.0
Total Split (%)	55.8%	55.8%	44.2%
Yellow Time (s)	3.5	3.5	3.5
All-Red Time (s)	3.7	3.7	5.8
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	7.2	7.2	9.3
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	C-Max	C-Max	None
Act Effct Green (s)	60.5	60.5	43.0
Actuated g/C Ratio	0.50	0.50	0.36
v/c Ratio	0.88	0.39	0.89
Control Delay	32.1	17.7	27.1
Queue Delay	0.0	0.0	0.0
Total Delay	32.1	17.7	27.1
LOS	C	B	C
Approach Delay	32.1		27.1
Approach LOS	C		C
Queue Length 50th (ft)	563	137	162
Queue Length 95th (ft)	640	176	269
Internal Link Dist (ft)	259		447
Turn Bay Length (ft)			
Base Capacity (vph)	2563	1847	1851
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.88	0.39	0.88

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 48 (40%), Referenced to phase 2:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.89

Intersection Signal Delay: 28.1	Intersection LOS: C
Intersection Capacity Utilization Err%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 1: McCaslin Boulevard & U.S. 36 Westbound Off Ramp



Intersection	
Int Delay, s/veh	76

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations				↑↑↑	↰	
Traffic Vol, veh/h	0	0	0	2085	549	0
Future Vol, veh/h	0	0	0	2085	549	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	2266	597	0

Major/Minor	Major2		Minor1	
Conflicting Flow All	-	-	906	-
Stage 1	-	-	0	-
Stage 2	-	-	906	-
Critical Hdwy	-	-	5.74	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	6.04	-
Follow-up Hdwy	-	-	3.82	-
Pot Cap-1 Maneuver	0	-	~ 346	0
Stage 1	0	-	-	0
Stage 2	0	-	~ 321	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	~ 346	-
Mov Cap-2 Maneuver	-	-	~ 346	-
Stage 1	-	-	-	-
Stage 2	-	-	~ 321	-

Approach	SB	SW
HCM Control Delay, s	0	$ 364.6
HCM LOS		F

Minor Lane/Major Mvmt	SBT	SWLn1
Capacity (veh/h)	-	346
HCM Lane V/C Ratio	-	1.725
HCM Control Delay (s)	-	$ 364.6
HCM Lane LOS	-	F
HCM 95th %tile Q(veh)	-	37.3

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



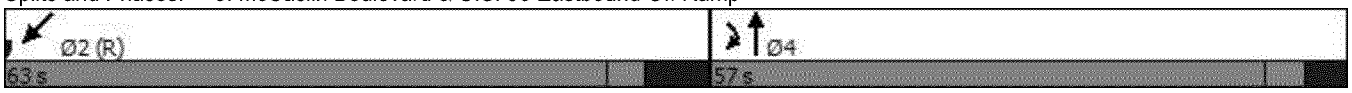
Lane Group	NBT	SER2	SWT
Lane Configurations			
Traffic Volume (vph)	1636	857	1729
Future Volume (vph)	1636	857	1729
Satd. Flow (prot)	5085	3610	5085
Flt Permitted			
Satd. Flow (perm)	5085	3610	5085
Satd. Flow (RTOR)		57	
Lane Group Flow (vph)	1778	932	1879
Turn Type	NA	Prot	NA
Protected Phases	4	4	2
Permitted Phases		4	
Detector Phase	4	4	2
Switch Phase			
Minimum Initial (s)	10.0	10.0	10.0
Minimum Split (s)	17.5	17.5	19.3
Total Split (s)	57.0	57.0	63.0
Total Split (%)	47.5%	47.5%	52.5%
Yellow Time (s)	3.5	3.5	3.5
All-Red Time (s)	4.0	4.0	5.8
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	9.3
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	None	None	C-Max
Act Effct Green (s)	49.5	49.5	53.7
Actuated g/C Ratio	0.41	0.41	0.45
v/c Ratio	0.85	0.61	0.83
Control Delay	36.7	27.9	25.3
Queue Delay	0.0	0.0	0.0
Total Delay	36.7	27.9	25.3
LOS	D	C	C
Approach Delay	36.7		25.3
Approach LOS	D		C
Queue Length 50th (ft)	449	230	235
Queue Length 95th (ft)	515	288	295
Internal Link Dist (ft)	90		532
Turn Bay Length (ft)			
Base Capacity (vph)	2097	1522	2275
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.85	0.61	0.83

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 46 (38%), Referenced to phase 2:SWT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 30.2	Intersection LOS: C
Intersection Capacity Utilization Err%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 3: McCaslin Boulevard & U.S. 36 Eastbound Off Ramp



Intersection	
Int Delay, s/veh	36.3

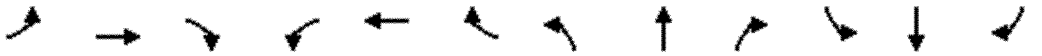
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↑↑↑			↰	
Traffic Vol, veh/h	0	1636	0	0	495	0
Future Vol, veh/h	0	1636	0	0	495	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1778	0	0	538	0

Major/Minor	Major1		Minor2	
Conflicting Flow All	-	0	711	-
Stage 1	-	-	0	-
Stage 2	-	-	711	-
Critical Hdwy	-	-	5.74	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	6.04	-
Follow-up Hdwy	-	-	3.82	-
Pot Cap-1 Maneuver	0	-	~ 432	0
Stage 1	0	-	-	0
Stage 2	0	-	~ 407	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	~ 432	-
Mov Cap-2 Maneuver	-	-	~ 432	-
Stage 1	-	-	-	-
Stage 2	-	-	~ 407	-

Approach	NB	NE
HCM Control Delay, s	0	156.4
HCM LOS		F

Minor Lane/Major Mvmt	NELn1	NBT
Capacity (veh/h)	432	-
HCM Lane V/C Ratio	1.245	-
HCM Control Delay (s)	156.4	-
HCM Lane LOS	F	-
HCM 95th %tile Q(veh)	22.3	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	548	61	561	57	34	249	382	941	81	148	1283	909
Future Volume (vph)	548	61	561	57	34	249	382	941	81	148	1283	909
Satd. Flow (prot)	3221	1637	1583	1770	1863	1583	3433	5085	1583	1770	5085	1583
Flt Permitted	0.950	0.966		0.950			0.094			0.203		
Satd. Flow (perm)	3221	1637	1583	1770	1863	1583	340	5085	1583	378	5085	1583
Satd. Flow (RTOR)			391			189			127			452
Lane Group Flow (vph)	441	221	610	62	37	271	415	1023	88	161	1395	988
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Free
Protected Phases	8	8		4	4		1	6		5	2	
Permitted Phases			8			4	6		6	2		Free
Detector Phase	8	8	8	4	4	4	1	6	6	5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.0	10.0	10.0	3.0	10.0	
Minimum Split (s)	9.0	9.0	9.0	10.0	10.0	10.0	9.0	16.0	16.0	9.0	16.0	
Total Split (s)	30.0	30.0	30.0	27.0	27.0	27.0	15.0	43.0	43.0	20.0	48.0	
Total Split (%)	25.0%	25.0%	25.0%	22.5%	22.5%	22.5%	12.5%	35.8%	35.8%	16.7%	40.0%	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	4.0	3.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	2.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	5.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	27.6	27.6	27.6	13.0	13.0	13.0	62.8	49.2	49.2	61.3	48.1	120.0
Actuated g/C Ratio	0.23	0.23	0.23	0.11	0.11	0.11	0.52	0.41	0.41	0.51	0.40	1.00
v/c Ratio	0.60	0.59	0.92	0.32	0.18	0.80	0.84	0.49	0.12	0.50	0.68	0.62
Control Delay	44.6	47.7	35.8	51.4	47.6	33.5	41.8	29.5	2.1	21.0	33.3	1.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.6	47.7	35.8	51.4	47.6	33.5	41.8	29.5	2.1	21.0	33.3	1.9
LOS	D	D	D	D	D	C	D	C	A	C	C	A
Approach Delay		40.9			37.9			31.3			20.3	
Approach LOS		D			D			C			C	
Queue Length 50th (ft)	154	154	170	45	27	61	111	233	0	67	352	0
Queue Length 95th (ft)	230	267	#433	82	56	147	#224	299	16	110	411	0
Internal Link Dist (ft)		518			407			580			291	
Turn Bay Length (ft)			260	170		170	180		170	230		170
Base Capacity (vph)	786	399	682	324	341	444	495	2083	723	392	2038	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.55	0.89	0.19	0.11	0.61	0.84	0.49	0.12	0.41	0.68	0.62

Intersection Summary

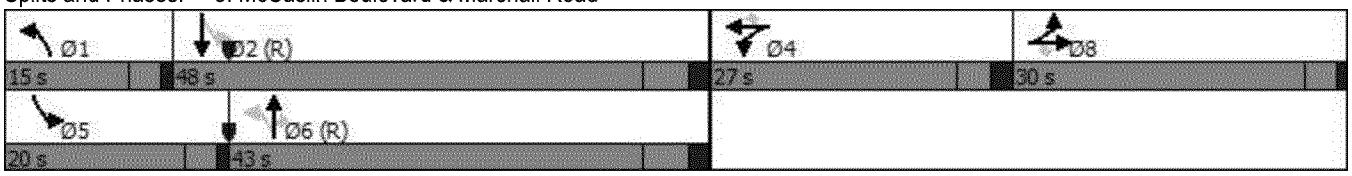
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 64 (53%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.92

Intersection Signal Delay: 29.0	Intersection LOS: C
Intersection Capacity Utilization 76.2%	ICU Level of Service D
Analysis Period (min) 15	

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: McCaslin Boulevard & Marshall Road



Intersection	
Intersection Delay, s/veh	11.9
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	1	1	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	38	423	1087	1836
Demand Flow Rate, veh/h	39	431	1109	1873
Vehicles Circulating, veh/h	1970	1027	314	119
Vehicles Exiting, veh/h	22	396	1695	1025
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	17.0	2.4	10.0	15.0
Approach LOS	C	A	A	C

Lane	Left	Left	Bypass	Left	Right	Left	Right
Designated Moves	LTR	LT	R	LT	TR	LT	TR
Assumed Moves	LTR	LT	R	LT	TR	LT	TR
RT Channelized			Free				
Lane Util	1.000	1.000		0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.535	2.535		2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.328	314	4.645	4.328	4.645	4.328
Entry Flow, veh/h	39	117	1938	521	588	880	993
Cap Entry Lane, veh/h	266	593	0.980	1011	1087	1210	1283
Entry HV Adj Factor	0.973	0.982	308	0.981	0.980	0.981	0.980
Flow Entry, veh/h	38	115	1900	511	576	863	973
Cap Entry, veh/h	259	582	0.162	992	1066	1186	1258
V/C Ratio	0.147	0.197	0.0	0.515	0.541	0.727	0.774
Control Delay, s/veh	17.0	8.7	A	10.0	10.0	14.3	15.7
LOS	C	A	1	A	A	B	C
95th %tile Queue, veh	1	1		3	3	7	8

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	9	106	26	0	274	1	38	2	5	0	0	6
Future Vol, veh/h	9	106	26	0	274	1	38	2	5	0	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	115	28	0	298	1	41	2	5	0	0	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	299	0	0	143	0	0	451	448	72	378	462	299
Stage 1	-	-	-	-	-	-	149	149	-	299	299	-
Stage 2	-	-	-	-	-	-	302	299	-	79	163	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.53	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	1261	-	-	1438	-	-	505	505	976	567	496	740
Stage 1	-	-	-	-	-	-	839	773	-	709	666	-
Stage 2	-	-	-	-	-	-	706	666	-	921	763	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1261	-	-	1438	-	-	497	500	976	558	492	740
Mov Cap-2 Maneuver	-	-	-	-	-	-	497	500	-	558	492	-
Stage 1	-	-	-	-	-	-	831	766	-	703	666	-
Stage 2	-	-	-	-	-	-	700	666	-	905	756	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0	12.5	9.9
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	526	1261	-	-	1438	-	-	740
HCM Lane V/C Ratio	0.093	0.008	-	-	-	-	-	0.009
HCM Control Delay (s)	12.5	7.9	0	-	0	-	-	9.9
HCM Lane LOS	B	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	275	0	0	111
Future Vol, veh/h	0	0	275	0	0	111
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	299	0	0	121

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	420	299	0	0	299	0
Stage 1	299	-	-	-	-	-
Stage 2	121	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	590	741	-	-	1262	-
Stage 1	752	-	-	-	-	-
Stage 2	904	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	590	741	-	-	1262	-
Mov Cap-2 Maneuver	590	-	-	-	-	-
Stage 1	752	-	-	-	-	-
Stage 2	904	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1262	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

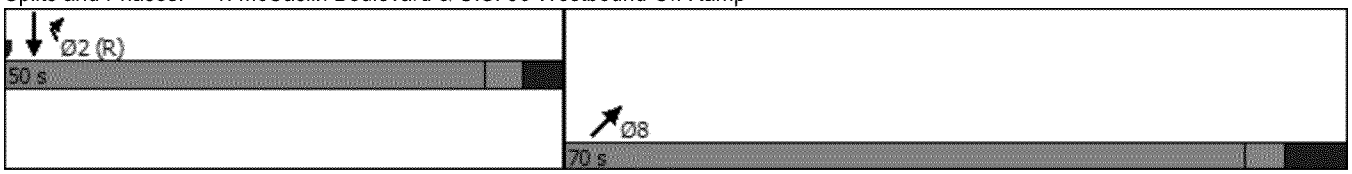
Lane Group	SBT	NWR2	NET
Lane Configurations			
Traffic Volume (vph)	913	622	872
Future Volume (vph)	913	622	872
Satd. Flow (prot)	5085	3610	5085
Flt Permitted			
Satd. Flow (perm)	5085	3610	5085
Satd. Flow (RTOR)		207	
Lane Group Flow (vph)	992	676	948
Turn Type	NA	Prot	NA
Protected Phases	2	2	8
Permitted Phases		2	
Detector Phase	2	2	8
Switch Phase			
Minimum Initial (s)	10.0	10.0	10.0
Minimum Split (s)	17.2	17.2	19.3
Total Split (s)	50.0	50.0	70.0
Total Split (%)	41.7%	41.7%	58.3%
Yellow Time (s)	3.5	3.5	3.5
All-Red Time (s)	3.7	3.7	5.8
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	7.2	7.2	9.3
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	C-Max	C-Max	None
Act Effct Green (s)	73.1	73.1	30.4
Actuated g/C Ratio	0.61	0.61	0.25
v/c Ratio	0.32	0.30	0.74
Control Delay	12.2	8.3	64.8
Queue Delay	0.0	0.0	0.0
Total Delay	12.2	8.3	64.8
LOS	B	A	E
Approach Delay	12.2		64.8
Approach LOS	B		E
Queue Length 50th (ft)	128	67	229
Queue Length 95th (ft)	178	109	221
Internal Link Dist (ft)	259		447
Turn Bay Length (ft)			
Base Capacity (vph)	3096	2279	2572
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.32	0.30	0.37

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 48 (40%), Referenced to phase 2:SBT, Start of Green
Natural Cycle: 40
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.74

Intersection Signal Delay: 30.3	Intersection LOS: C
Intersection Capacity Utilization Err%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 1: McCaslin Boulevard & U.S. 36 Westbound Off Ramp



Intersection	
Int Delay, s/veh	6.8

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations				↑↑↑	↰	
Traffic Vol, veh/h	0	0	0	913	387	0
Future Vol, veh/h	0	0	0	913	387	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	992	421	0

Major/Minor	Major2		Minor1	
Conflicting Flow All	-	-	397	-
Stage 1	-	-	0	-
Stage 2	-	-	397	-
Critical Hdwy	-	-	5.74	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	6.04	-
Follow-up Hdwy	-	-	3.82	-
Pot Cap-1 Maneuver	0	-	613	0
Stage 1	0	-	-	0
Stage 2	0	-	593	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	613	-
Mov Cap-2 Maneuver	-	-	613	-
Stage 1	-	-	-	-
Stage 2	-	-	593	-

Approach	SB	SW
HCM Control Delay, s	0	22.7
HCM LOS		C

Minor Lane/Major Mvmt	SBT	SWLn1
Capacity (veh/h)	-	613
HCM Lane V/C Ratio	-	0.686
HCM Control Delay (s)	-	22.7
HCM Lane LOS	-	C
HCM 95th %tile Q(veh)	-	5.4



Lane Group	NBT	SER2	SWT
Lane Configurations			
Traffic Volume (vph)	1016	287	889
Future Volume (vph)	1016	287	889
Satd. Flow (prot)	5085	3610	5085
Flt Permitted			
Satd. Flow (perm)	5085	3610	5085
Satd. Flow (RTOR)		116	
Lane Group Flow (vph)	1104	312	966
Turn Type	NA	Prot	NA
Protected Phases	4	4	2
Permitted Phases		4	
Detector Phase	4	4	2
Switch Phase			
Minimum Initial (s)	10.0	10.0	10.0
Minimum Split (s)	17.5	17.5	19.3
Total Split (s)	60.0	60.0	60.0
Total Split (%)	50.0%	50.0%	50.0%
Yellow Time (s)	3.5	3.5	3.5
All-Red Time (s)	4.0	4.0	5.8
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	9.3
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	None	None	C-Max
Act Effct Green (s)	36.0	36.0	67.2
Actuated g/C Ratio	0.30	0.30	0.56
v/c Ratio	0.72	0.27	0.34
Control Delay	40.1	19.3	7.6
Queue Delay	0.0	0.0	0.0
Total Delay	40.1	19.3	7.6
LOS	D	B	A
Approach Delay	40.1		7.6
Approach LOS	D		A
Queue Length 50th (ft)	279	49	56
Queue Length 95th (ft)	301	72	72
Internal Link Dist (ft)	90		532
Turn Bay Length (ft)			
Base Capacity (vph)	2224	1644	2847
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.50	0.19	0.34

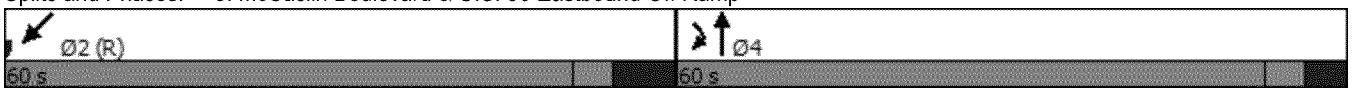
Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 46 (38%), Referenced to phase 2:SWT, Start of Green
Natural Cycle: 45
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.72

Intersection Signal Delay: 24.2	Intersection LOS: C
Intersection Capacity Utilization Err%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 3: McCaslin Boulevard & U.S. 36 Eastbound Off Ramp



Intersection	
Int Delay, s/veh	5

Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↑↑↑			↰	
Traffic Vol, veh/h	0	1016	0	0	330	0
Future Vol, veh/h	0	1016	0	0	330	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1104	0	0	359	0

Major/Minor	Major1		Minor2	
Conflicting Flow All	-	0	442	-
Stage 1	-	-	0	-
Stage 2	-	-	442	-
Critical Hdwy	-	-	5.74	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	6.04	-
Follow-up Hdwy	-	-	3.82	-
Pot Cap-1 Maneuver	0	-	584	0
Stage 1	0	-	-	0
Stage 2	0	-	562	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	584	-
Mov Cap-2 Maneuver	-	-	584	-
Stage 1	-	-	-	-
Stage 2	-	-	562	-

Approach	NB	NE
HCM Control Delay, s	0	20.5
HCM LOS		C

Minor Lane/Major Mvmt	NELn1	NBT
Capacity (veh/h)	584	-
HCM Lane V/C Ratio	0.614	-
HCM Control Delay (s)	20.5	-
HCM Lane LOS	C	-
HCM 95th %tile Q(veh)	4.2	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	68	32	55	23	25	145	116	673	83	223	511	288
Future Volume (vph)	68	32	55	23	25	145	116	673	83	223	511	288
Satd. Flow (prot)	3221	1682	1583	1770	1863	1583	3433	5085	1583	1770	5085	1583
Flt Permitted	0.950	0.992		0.950			0.434			0.337		
Satd. Flow (perm)	3221	1682	1583	1770	1863	1583	1568	5085	1583	628	5085	1583
Satd. Flow (RTOR)			145			158			127			313
Lane Group Flow (vph)	67	42	60	25	27	158	126	732	90	242	555	313
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Free
Protected Phases	8	8		4	4		1	6		5	2	
Permitted Phases			8			4	6		6	2		Free
Detector Phase	8	8	8	4	4	4	1	6	6	5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.0	10.0	10.0	3.0	10.0	
Minimum Split (s)	9.0	9.0	9.0	10.0	10.0	10.0	9.0	16.0	16.0	9.0	16.0	
Total Split (s)	30.0	30.0	30.0	27.0	27.0	27.0	15.0	43.0	43.0	20.0	48.0	
Total Split (%)	25.0%	25.0%	25.0%	22.5%	22.5%	22.5%	12.5%	35.8%	35.8%	16.7%	40.0%	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	4.0	3.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	2.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	5.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	8.5	8.5	8.5	8.0	8.0	8.0	84.8	76.1	76.1	91.4	79.8	120.0
Actuated g/C Ratio	0.07	0.07	0.07	0.07	0.07	0.07	0.71	0.63	0.63	0.76	0.66	1.00
v/c Ratio	0.29	0.35	0.24	0.21	0.22	0.63	0.10	0.23	0.09	0.42	0.16	0.20
Control Delay	55.4	60.5	2.3	55.9	55.8	19.3	4.8	10.9	1.1	6.9	8.7	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.4	60.5	2.3	55.9	55.8	19.3	4.8	10.9	1.1	6.9	8.7	0.3
LOS	E	E	A	E	E	B	A	B	A	A	A	A
Approach Delay		37.8			28.4			9.2			5.9	
Approach LOS		D			C			A			A	
Queue Length 50th (ft)	27	35	0	19	20	0	10	83	0	44	55	0
Queue Length 95th (ft)	51	74	0	46	49	64	24	140	11	93	91	0
Internal Link Dist (ft)		518			407			580			291	
Turn Bay Length (ft)			260	170		170	180		170	230		170
Base Capacity (vph)	697	364	456	324	341	419	1334	3226	1050	636	3381	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.12	0.13	0.08	0.08	0.38	0.09	0.23	0.09	0.38	0.16	0.20

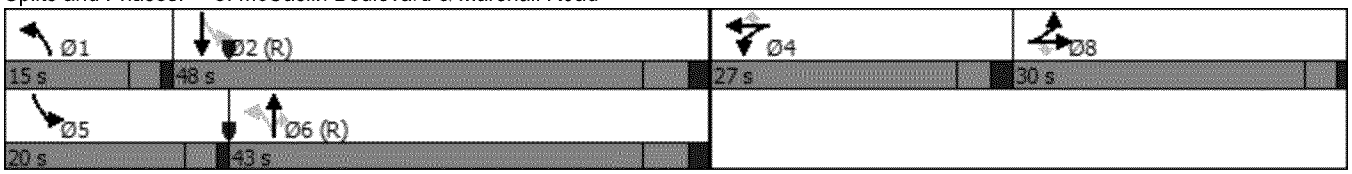
Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 64 (53%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 45
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.63

Intersection Signal Delay: 11.3	Intersection LOS: B
Intersection Capacity Utilization 45.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 5: McCaslin Boulevard & Marshall Road



Intersection	
Intersection Delay, s/veh	5.5
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	13	156	806	541
Demand Flow Rate, veh/h	13	159	822	551
Vehicles Circulating, veh/h	565	760	238	40
Vehicles Exiting, veh/h	26	300	340	759
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.2	1.3	7.0	4.5
Approach LOS	A	A	A	A

Lane	Left	Left	Bypass	Left	Right	Left	Right
Designated Moves	LTR	LT	R	LT	TR	LT	TR
Assumed Moves	LTR	LT	R	LT	TR	LT	TR
RT Channelized			Free				
Lane Util	1.000	1.000		0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.535	2.535		2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.328	120	4.645	4.328	4.645	4.328
Entry Flow, veh/h	13	39	1938	386	436	259	292
Cap Entry Lane, veh/h	878	744	0.980	1084	1160	1301	1373
Entry HV Adj Factor	1.000	0.973	118	0.982	0.980	0.982	0.982
Flow Entry, veh/h	13	38	1900	379	427	254	287
Cap Entry, veh/h	878	724	0.062	1065	1137	1277	1348
V/C Ratio	0.015	0.052	0.0	0.356	0.376	0.199	0.213
Control Delay, s/veh	4.2	5.5	A	7.0	6.9	4.5	4.5
LOS	A	A	0	A	A	A	A
95th %tile Queue, veh	0	0		2	2	1	1

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	148	28	0	86	0	7	0	0	0	0	4
Future Vol, veh/h	0	148	28	0	86	0	7	0	0	0	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	161	30	0	93	0	8	0	0	0	0	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	93	0	0	191	0	0	271	269	96	174	284	93
Stage 1	-	-	-	-	-	-	176	176	-	93	93	-
Stage 2	-	-	-	-	-	-	95	93	-	81	191	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.53	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	1500	-	-	1381	-	-	671	637	942	781	624	964
Stage 1	-	-	-	-	-	-	809	753	-	913	818	-
Stage 2	-	-	-	-	-	-	911	818	-	919	742	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1500	-	-	1381	-	-	668	637	942	781	624	964
Mov Cap-2 Maneuver	-	-	-	-	-	-	668	637	-	781	624	-
Stage 1	-	-	-	-	-	-	809	753	-	913	818	-
Stage 2	-	-	-	-	-	-	907	818	-	919	742	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	10.5	8.8
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	668	1500	-	-	1381	-	-	964
HCM Lane V/C Ratio	0.011	-	-	-	-	-	-	0.005
HCM Control Delay (s)	10.5	0	-	-	0	-	-	8.8
HCM Lane LOS	B	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	1.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	14	72	0	21	127
Future Vol, veh/h	0	14	72	0	21	127
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	15	78	0	23	138

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	262	78	0	0	78	0
Stage 1	78	-	-	-	-	-
Stage 2	184	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	727	983	-	-	1520	-
Stage 1	945	-	-	-	-	-
Stage 2	848	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	716	983	-	-	1520	-
Mov Cap-2 Maneuver	716	-	-	-	-	-
Stage 1	945	-	-	-	-	-
Stage 2	835	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.7	0	1.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	983	1520	-
HCM Lane V/C Ratio	-	-	0.015	0.015	-
HCM Control Delay (s)	-	-	8.7	7.4	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

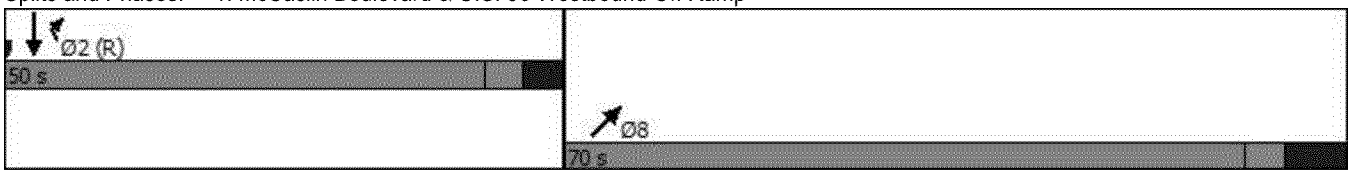
Lane Group	SBT	NWR2	NET
Lane Configurations			
Traffic Volume (vph)	1448	464	1042
Future Volume (vph)	1448	464	1042
Satd. Flow (prot)	5085	3610	5085
Flt Permitted			
Satd. Flow (perm)	5085	3610	5085
Satd. Flow (RTOR)		124	
Lane Group Flow (vph)	1574	504	1133
Turn Type	NA	Prot	NA
Protected Phases	2	2	8
Permitted Phases		2	
Detector Phase	2	2	8
Switch Phase			
Minimum Initial (s)	10.0	10.0	10.0
Minimum Split (s)	17.2	17.2	19.3
Total Split (s)	50.0	50.0	70.0
Total Split (%)	41.7%	41.7%	58.3%
Yellow Time (s)	3.5	3.5	3.5
All-Red Time (s)	3.7	3.7	5.8
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	7.2	7.2	9.3
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	C-Max	C-Max	None
Act Effct Green (s)	67.8	67.8	35.7
Actuated g/C Ratio	0.56	0.56	0.30
v/c Ratio	0.55	0.24	0.75
Control Delay	18.0	10.6	51.6
Queue Delay	0.0	0.0	0.0
Total Delay	18.0	10.6	51.6
LOS	B	B	D
Approach Delay	18.0		51.6
Approach LOS	B		D
Queue Length 50th (ft)	269	60	229
Queue Length 95th (ft)	357	97	218
Internal Link Dist (ft)	259		447
Turn Bay Length (ft)			
Base Capacity (vph)	2872	2092	2572
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.55	0.24	0.44

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 48 (40%), Referenced to phase 2:SBT, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 28.7	Intersection LOS: C
Intersection Capacity Utilization Err%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 1: McCaslin Boulevard & U.S. 36 Westbound Off Ramp



Intersection	
Int Delay, s/veh	11.7

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations				↑↑↑	↰	
Traffic Vol, veh/h	0	0	0	1448	401	0
Future Vol, veh/h	0	0	0	1448	401	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	1574	436	0

Major/Minor	Major2		Minor1	
Conflicting Flow All	-	-	630	-
Stage 1	-	-	0	-
Stage 2	-	-	630	-
Critical Hdwy	-	-	5.74	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	6.04	-
Follow-up Hdwy	-	-	3.82	-
Pot Cap-1 Maneuver	0	-	473	0
Stage 1	0	-	-	0
Stage 2	0	-	449	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	473	-
Mov Cap-2 Maneuver	-	-	473	-
Stage 1	-	-	-	-
Stage 2	-	-	449	-

Approach	SB	SW
HCM Control Delay, s	0	53.8
HCM LOS		F

Minor Lane/Major Mvmt	SBT	SWLn1
Capacity (veh/h)	-	473
HCM Lane V/C Ratio	-	0.922
HCM Control Delay (s)	-	53.8
HCM Lane LOS	-	F
HCM 95th %tile Q(veh)	-	10.7



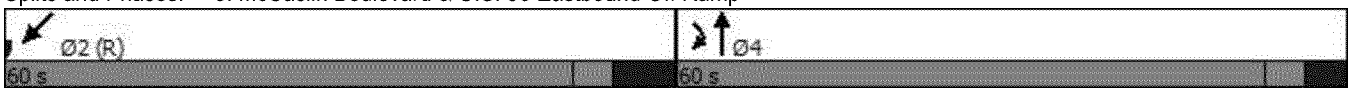
Lane Group	NBT	SER2	SWT
Lane Configurations			
Traffic Volume (vph)	1170	614	1221
Future Volume (vph)	1170	614	1221
Satd. Flow (prot)	5085	3610	5085
Flt Permitted			
Satd. Flow (perm)	5085	3610	5085
Satd. Flow (RTOR)		57	
Lane Group Flow (vph)	1272	667	1327
Turn Type	NA	Prot	NA
Protected Phases	4	4	2
Permitted Phases		4	
Detector Phase	4	4	2
Switch Phase			
Minimum Initial (s)	10.0	10.0	10.0
Minimum Split (s)	17.5	17.5	19.3
Total Split (s)	60.0	60.0	60.0
Total Split (%)	50.0%	50.0%	50.0%
Yellow Time (s)	3.5	3.5	3.5
All-Red Time (s)	4.0	4.0	5.8
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	9.3
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	None	None	C-Max
Act Effct Green (s)	43.3	43.3	59.9
Actuated g/C Ratio	0.36	0.36	0.50
v/c Ratio	0.69	0.50	0.52
Control Delay	34.4	27.7	9.2
Queue Delay	0.0	0.0	0.0
Total Delay	34.4	27.7	9.2
LOS	C	C	A
Approach Delay	34.4		9.2
Approach LOS	C		A
Queue Length 50th (ft)	304	159	72
Queue Length 95th (ft)	313	180	93
Internal Link Dist (ft)	90		532
Turn Bay Length (ft)			
Base Capacity (vph)	2224	1611	2537
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.57	0.41	0.52

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 46 (38%), Referenced to phase 2:SWT, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.69

Intersection Signal Delay: 22.8	Intersection LOS: C
Intersection Capacity Utilization Err%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 3: McCaslin Boulevard & U.S. 36 Eastbound Off Ramp



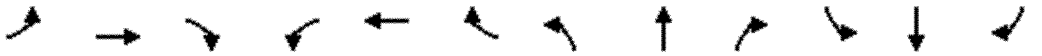
Intersection	
Int Delay, s/veh	5.7

Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↑↑↑			↰	
Traffic Vol, veh/h	0	1170	0	0	343	0
Future Vol, veh/h	0	1170	0	0	343	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1272	0	0	373	0

Major/Minor	Major1		Minor2	
Conflicting Flow All	-	0	509	-
Stage 1	-	-	0	-
Stage 2	-	-	509	-
Critical Hdwy	-	-	5.74	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	6.04	-
Follow-up Hdwy	-	-	3.82	-
Pot Cap-1 Maneuver	0	-	542	0
Stage 1	0	-	-	0
Stage 2	0	-	519	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	542	-
Mov Cap-2 Maneuver	-	-	542	-
Stage 1	-	-	-	-
Stage 2	-	-	519	-

Approach	NB	NE
HCM Control Delay, s	0	25
HCM LOS		D

Minor Lane/Major Mvmt	NELn1	NBT
Capacity (veh/h)	542	-
HCM Lane V/C Ratio	0.688	-
HCM Control Delay (s)	25	-
HCM Lane LOS	D	-
HCM 95th %tile Q(veh)	5.3	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	380	44	390	41	26	208	267	68	57	126	898	630
Future Volume (vph)	380	44	390	41	26	208	267	68	57	126	898	630
Satd. Flow (prot)	3221	1639	1583	1770	1863	1583	3433	5085	1583	1770	5085	1583
Flt Permitted	0.950	0.967		0.950			0.246			0.704		
Satd. Flow (perm)	3221	1639	1583	1770	1863	1583	889	5085	1583	1311	5085	1583
Satd. Flow (RTOR)			424			226			127			448
Lane Group Flow (vph)	306	155	424	45	28	226	290	74	62	137	976	685
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Free
Protected Phases	8	8		4	4		1	6		5	2	
Permitted Phases			8			4	6		6	2		Free
Detector Phase	8	8	8	4	4	4	1	6	6	5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.0	10.0	10.0	3.0	10.0	
Minimum Split (s)	9.0	9.0	9.0	10.0	10.0	10.0	9.0	16.0	16.0	9.0	16.0	
Total Split (s)	30.0	30.0	30.0	27.0	27.0	27.0	15.0	43.0	43.0	20.0	48.0	
Total Split (%)	25.0%	25.0%	25.0%	22.5%	22.5%	22.5%	12.5%	35.8%	35.8%	16.7%	40.0%	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	4.0	3.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	2.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	5.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	18.3	18.3	18.3	9.1	9.1	9.1	75.8	64.4	64.4	75.4	64.2	120.0
Actuated g/C Ratio	0.15	0.15	0.15	0.08	0.08	0.08	0.63	0.54	0.54	0.63	0.54	1.00
v/c Ratio	0.62	0.62	0.71	0.34	0.20	0.69	0.38	0.03	0.07	0.16	0.36	0.43
Control Delay	52.7	57.7	11.0	58.0	53.6	17.9	10.2	16.1	0.1	9.5	18.0	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.7	57.7	11.0	58.0	53.6	17.9	10.2	16.1	0.1	9.5	18.0	0.9
LOS	D	E	B	E	D	B	B	B	A	A	B	A
Approach Delay		33.6			27.3			9.7			10.8	
Approach LOS		C			C			A			B	
Queue Length 50th (ft)	124	126	0	34	21	0	37	9	0	34	147	0
Queue Length 95th (ft)	162	190	91	69	49	74	75	23	0	81	242	0
Internal Link Dist (ft)		518			407			580			291	
Turn Bay Length (ft)			260	170		170	180		170	230		170
Base Capacity (vph)	697	355	675	324	341	474	815	2730	908	929	2720	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.44	0.63	0.14	0.08	0.48	0.36	0.03	0.07	0.15	0.36	0.43

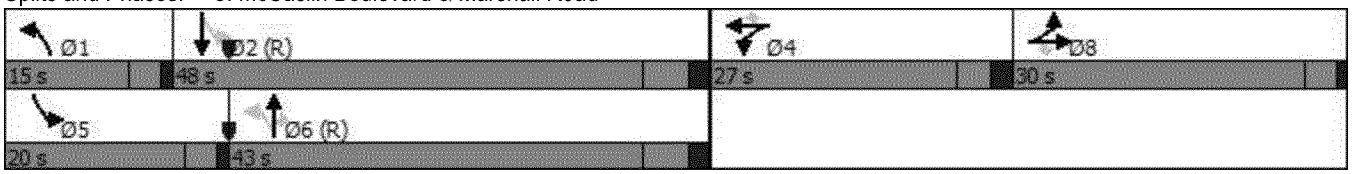
Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 64 (53%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 18.1	Intersection LOS: B
Intersection Capacity Utilization 58.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 5: McCaslin Boulevard & Marshall Road



Intersection	
Intersection Delay, s/veh	7.0
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	24	345	762	1295
Demand Flow Rate, veh/h	24	352	778	1320
Vehicles Circulating, veh/h	1403	712	237	97
Vehicles Exiting, veh/h	14	303	1190	711
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	9.1	1.6	6.7	8.6
Approach LOS	A	A	A	A

Lane	Left	Left	Bypass	Left	Right	Left	Right
Designated Moves	LTR	LT	R	LT	TR	LT	TR
Assumed Moves	LTR	LT	R	LT	TR	LT	TR
RT Channelized			Free				
Lane Util	1.000	1.000		0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.535	2.535		2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.328	256	4.645	4.328	4.645	4.328
Entry Flow, veh/h	24	96	1938	366	412	620	700
Cap Entry Lane, veh/h	431	775	0.980	1085	1161	1235	1308
Entry HV Adj Factor	0.999	0.979	251	0.979	0.981	0.981	0.980
Flow Entry, veh/h	24	94	1900	358	404	608	686
Cap Entry, veh/h	430	759	0.132	1063	1139	1212	1282
V/C Ratio	0.056	0.124	0.0	0.337	0.355	0.502	0.535
Control Delay, s/veh	9.1	6.0	A	6.8	6.7	8.4	8.7
LOS	A	A	0	A	A	A	A
95th %tile Queue, veh	0	0		2	2	3	3

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	9	88	17	0	225	1	26	1	3	0	0	10
Future Vol, veh/h	9	88	17	0	225	1	26	1	3	0	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	96	18	0	245	1	28	1	3	0	0	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	246	0	0	114	0	0	376	371	57	315	380	246
Stage 1	-	-	-	-	-	-	125	125	-	246	246	-
Stage 2	-	-	-	-	-	-	251	246	-	69	134	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.53	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	1319	-	-	1474	-	-	569	558	998	626	552	792
Stage 1	-	-	-	-	-	-	866	792	-	757	702	-
Stage 2	-	-	-	-	-	-	752	702	-	933	785	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1319	-	-	1474	-	-	558	554	998	619	548	792
Mov Cap-2 Maneuver	-	-	-	-	-	-	558	554	-	619	548	-
Stage 1	-	-	-	-	-	-	859	786	-	751	702	-
Stage 2	-	-	-	-	-	-	742	702	-	921	779	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0	11.5	9.6
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	584	1319	-	-	1474	-	-	792
HCM Lane V/C Ratio	0.056	0.007	-	-	-	-	-	0.014
HCM Control Delay (s)	11.5	7.8	0	-	0	-	-	9.6
HCM Lane LOS	B	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	17	209	0	20	81
Future Vol, veh/h	0	17	209	0	20	81
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	18	227	0	22	88

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	359	227	0	0	227	0
Stage 1	227	-	-	-	-	-
Stage 2	132	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	640	812	-	-	1341	-
Stage 1	811	-	-	-	-	-
Stage 2	894	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	630	812	-	-	1341	-
Mov Cap-2 Maneuver	630	-	-	-	-	-
Stage 1	811	-	-	-	-	-
Stage 2	880	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.5	0	1.5
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	812	1341	-
HCM Lane V/C Ratio	-	-	0.023	0.016	-
HCM Control Delay (s)	-	-	9.5	7.7	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-

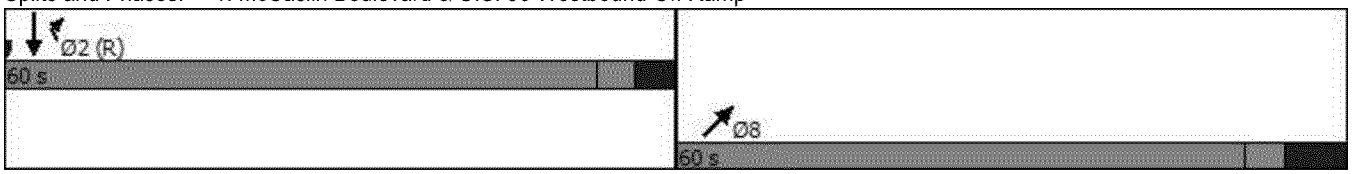
Lane Group	SBT	NWR2	NET
Lane Configurations			
Traffic Volume (vph)	1316	897	1257
Future Volume (vph)	1316	897	1257
Satd. Flow (prot)	5085	3610	5085
Flt Permitted			
Satd. Flow (perm)	5085	3610	5085
Satd. Flow (RTOR)		57	
Lane Group Flow (vph)	1430	975	1366
Turn Type	NA	Prot	NA
Protected Phases	2	2	8
Permitted Phases		2	
Detector Phase	2	2	8
Switch Phase			
Minimum Initial (s)	10.0	10.0	10.0
Minimum Split (s)	17.2	17.2	19.3
Total Split (s)	60.0	60.0	60.0
Total Split (%)	50.0%	50.0%	50.0%
Yellow Time (s)	3.5	3.5	3.5
All-Red Time (s)	3.7	3.7	5.8
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	7.2	7.2	9.3
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	C-Max	C-Max	None
Act Effct Green (s)	62.4	62.4	41.1
Actuated g/C Ratio	0.52	0.52	0.34
v/c Ratio	0.54	0.51	0.79
Control Delay	20.9	19.5	24.1
Queue Delay	0.0	0.0	0.0
Total Delay	20.9	19.5	24.1
LOS	C	B	C
Approach Delay	20.9		24.1
Approach LOS	C		C
Queue Length 50th (ft)	262	196	144
Queue Length 95th (ft)	344	275	143
Internal Link Dist (ft)	259		447
Turn Bay Length (ft)			
Base Capacity (vph)	2645	1905	2148
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.54	0.51	0.64

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 48 (40%), Referenced to phase 2:SBT, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.79

Intersection Signal Delay: 21.7	Intersection LOS: C
Intersection Capacity Utilization Err%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 1: McCaslin Boulevard & U.S. 36 Westbound Off Ramp



Intersection	
Int Delay, s/veh	38.5

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations				↑↑↑	↰	
Traffic Vol, veh/h	0	0	0	1316	553	0
Future Vol, veh/h	0	0	0	1316	553	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	1430	601	0

Major/Minor	Major2		Minor1	
Conflicting Flow All	-	-	572	-
Stage 1	-	-	0	-
Stage 2	-	-	572	-
Critical Hdwy	-	-	5.74	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	6.04	-
Follow-up Hdwy	-	-	3.82	-
Pot Cap-1 Maneuver	0	-	~ 505	0
Stage 1	0	-	-	0
Stage 2	0	-	~ 482	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	~ 505	-
Mov Cap-2 Maneuver	-	-	~ 505	-
Stage 1	-	-	-	-
Stage 2	-	-	~ 482	-

Approach	SB	SW
HCM Control Delay, s	0	130.1
HCM LOS		F

Minor Lane/Major Mvmt	SBT	SWLn1
Capacity (veh/h)	-	505
HCM Lane V/C Ratio	-	1.19
HCM Control Delay (s)	-	130.1
HCM Lane LOS	-	F
HCM 95th %tile Q(veh)	-	22.2

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



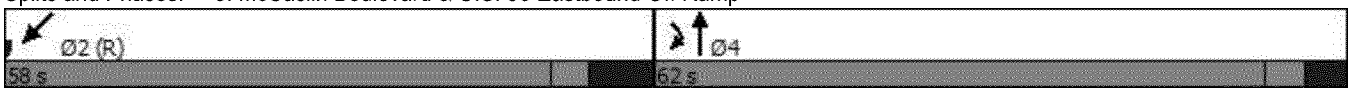
Lane Group	NBT	SER2	SWT
Lane Configurations			
Traffic Volume (vph)	1446	380	1247
Future Volume (vph)	1446	380	1247
Satd. Flow (prot)	5085	3610	5085
Flt Permitted			
Satd. Flow (perm)	5085	3610	5085
Satd. Flow (RTOR)		57	
Lane Group Flow (vph)	1572	413	1355
Turn Type	NA	Prot	NA
Protected Phases	4	4	2
Permitted Phases		4	
Detector Phase	4	4	2
Switch Phase			
Minimum Initial (s)	10.0	10.0	10.0
Minimum Split (s)	17.5	17.5	19.3
Total Split (s)	62.0	62.0	58.0
Total Split (%)	51.7%	51.7%	48.3%
Yellow Time (s)	3.5	3.5	3.5
All-Red Time (s)	4.0	4.0	5.8
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	9.3
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	None	None	C-Max
Act Effct Green (s)	49.0	49.0	54.2
Actuated g/C Ratio	0.41	0.41	0.45
v/c Ratio	0.76	0.27	0.59
Control Delay	32.7	20.0	15.5
Queue Delay	0.0	0.0	0.0
Total Delay	32.7	20.0	15.5
LOS	C	C	B
Approach Delay	32.7		15.5
Approach LOS	C		B
Queue Length 50th (ft)	372	77	127
Queue Length 95th (ft)	398	100	150
Internal Link Dist (ft)	90		532
Turn Bay Length (ft)			
Base Capacity (vph)	2309	1670	2295
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.68	0.25	0.59

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 46 (38%), Referenced to phase 2:SWT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 24.2	Intersection LOS: C
Intersection Capacity Utilization Err%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 3: McCaslin Boulevard & U.S. 36 Eastbound Off Ramp



Intersection	
Int Delay, s/veh	24.2

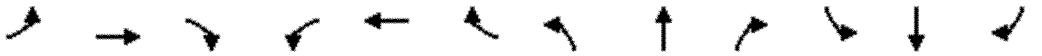
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↑↑↑			↰	
Traffic Vol, veh/h	0	1446	0	0	476	0
Future Vol, veh/h	0	1446	0	0	476	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1572	0	0	517	0

Major/Minor	Major1		Minor2	
Conflicting Flow All	-	0	629	-
Stage 1	-	-	0	-
Stage 2	-	-	629	-
Critical Hdwy	-	-	5.74	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	6.04	-
Follow-up Hdwy	-	-	3.82	-
Pot Cap-1 Maneuver	0	-	~ 474	0
Stage 1	0	-	-	0
Stage 2	0	-	~ 450	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	~ 474	-
Mov Cap-2 Maneuver	-	-	~ 474	-
Stage 1	-	-	-	-
Stage 2	-	-	~ 450	-

Approach	NB	NE
HCM Control Delay, s	0	97.7
HCM LOS		F

Minor Lane/Major Mvmt	NELn1	NBT
Capacity (veh/h)	474	-
HCM Lane V/C Ratio	1.092	-
HCM Control Delay (s)	97.7	-
HCM Lane LOS	F	-
HCM 95th %tile Q(veh)	16.9	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	98	45	689	33	35	191	106	950	120	296	693	416
Future Volume (vph)	98	45	689	33	35	191	106	950	120	296	693	416
Satd. Flow (prot)	3221	1680	1583	1770	1863	1583	3433	5085	1583	1770	5085	1583
Flt Permitted	0.950	0.991		0.950			0.354			0.135		
Satd. Flow (perm)	3221	1680	1583	1770	1863	1583	1279	5085	1583	251	5085	1583
Satd. Flow (RTOR)			465			208			127			383
Lane Group Flow (vph)	96	60	749	36	38	208	115	1033	130	322	753	452
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Free
Protected Phases	8	8		4	4		1	6		5	2	
Permitted Phases			8			4	6		6	2		Free
Detector Phase	8	8	8	4	4	4	1	6	6	5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.0	10.0	10.0	3.0	10.0	
Minimum Split (s)	9.0	9.0	9.0	10.0	10.0	10.0	9.0	16.0	16.0	9.0	16.0	
Total Split (s)	30.0	30.0	30.0	27.0	27.0	27.0	15.0	43.0	43.0	20.0	48.0	
Total Split (%)	25.0%	25.0%	25.0%	22.5%	22.5%	22.5%	12.5%	35.8%	35.8%	16.7%	40.0%	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	4.0	3.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	2.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	5.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	39.4	39.4	39.4	8.6	8.6	8.6	46.6	37.0	37.0	59.0	45.4	120.0
Actuated g/C Ratio	0.33	0.33	0.33	0.07	0.07	0.07	0.39	0.31	0.31	0.49	0.38	1.00
v/c Ratio	0.09	0.11	0.90	0.28	0.29	0.68	0.18	0.66	0.23	0.99	0.39	0.29
Control Delay	29.3	30.2	30.0	57.0	56.7	18.5	17.4	38.5	6.6	75.8	28.1	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.3	30.2	30.0	57.0	56.7	18.5	17.4	38.5	6.6	75.8	28.1	0.5
LOS	C	C	C	E	E	B	B	D	A	E	C	A
Approach Delay		30.0			28.6			33.3			30.0	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	28	35	240	27	29	0	23	253	2	176	154	0
Queue Length 95th (ft)	53	76	#540	59	62	72	39	304	47	#368	194	0
Internal Link Dist (ft)		518			407			580			291	
Turn Bay Length (ft)			260	170		170	180		170	230		170
Base Capacity (vph)	1056	551	831	324	341	460	730	1567	575	325	1923	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.11	0.90	0.11	0.11	0.45	0.16	0.66	0.23	0.99	0.39	0.29

Intersection Summary

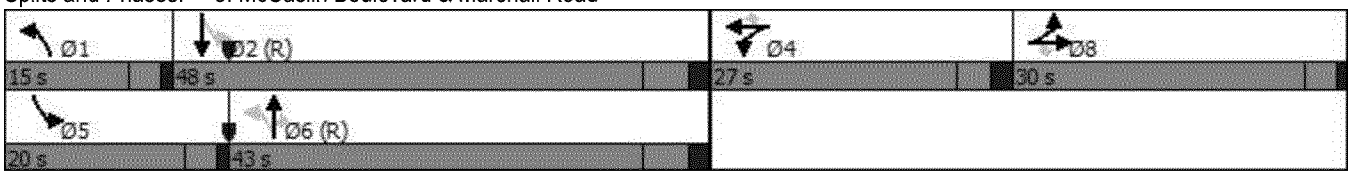
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 64 (53%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.99

Intersection Signal Delay: 30.9	Intersection LOS: C
Intersection Capacity Utilization 72.7%	ICU Level of Service C
Analysis Period (min) 15	

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: McCaslin Boulevard & Marshall Road



Intersection	
Intersection Delay, s/veh	7.6
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	20	192	1142	727
Demand Flow Rate, veh/h	20	196	1165	742
Vehicles Circulating, veh/h	750	1095	290	48
Vehicles Exiting, veh/h	40	360	480	1093
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	5.1	1.8	10.1	5.2
Approach LOS	A	A	B	A

Lane	Left	Left	Bypass	Left	Right	Left	Right
Designated Moves	LTR	LT	R	LT	TR	LT	TR
Assumed Moves	LTR	LT	R	LT	TR	LT	TR
RT Channelized			Free				
Lane Util	1.000	1.000		0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.535	2.535		2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.328	150	4.645	4.328	4.645	4.328
Entry Flow, veh/h	20	46	1938	548	617	349	393
Cap Entry Lane, veh/h	751	560	0.980	1034	1110	1292	1363
Entry HV Adj Factor	1.000	0.976	147	0.979	0.981	0.980	0.981
Flow Entry, veh/h	20	45	1900	537	605	342	386
Cap Entry, veh/h	751	546	0.077	1012	1089	1265	1337
V/C Ratio	0.027	0.082	0.0	0.530	0.556	0.270	0.288
Control Delay, s/veh	5.1	7.6	A	10.1	10.1	5.2	5.2
LOS	A	A	0	B	B	A	A
95th %tile Queue, veh	0	0		3	4	1	1

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	190	41	0	106	0	11	0	0	0	0	4
Future Vol, veh/h	0	190	41	0	106	0	11	0	0	0	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	207	45	0	115	0	12	0	0	0	0	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	115	0	0	252	0	0	347	345	126	219	367	115
Stage 1	-	-	-	-	-	-	230	230	-	115	115	-
Stage 2	-	-	-	-	-	-	117	115	-	104	252	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.53	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	1473	-	-	1312	-	-	595	577	901	728	561	937
Stage 1	-	-	-	-	-	-	753	713	-	889	800	-
Stage 2	-	-	-	-	-	-	887	800	-	891	698	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1473	-	-	1312	-	-	592	577	901	728	561	937
Mov Cap-2 Maneuver	-	-	-	-	-	-	592	577	-	728	561	-
Stage 1	-	-	-	-	-	-	753	713	-	889	800	-
Stage 2	-	-	-	-	-	-	883	800	-	891	698	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	11.2	8.9
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	592	1473	-	-	1312	-	-	937
HCM Lane V/C Ratio	0.02	-	-	-	-	-	-	0.005
HCM Control Delay (s)	11.2	0	-	-	0	-	-	8.9
HCM Lane LOS	B	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	0.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	14	92	0	21	169
Future Vol, veh/h	0	14	92	0	21	169
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	15	100	0	23	184

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	330	100	0	0	100	0
Stage 1	100	-	-	-	-	-
Stage 2	230	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	665	956	-	-	1493	-
Stage 1	924	-	-	-	-	-
Stage 2	808	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	655	956	-	-	1493	-
Mov Cap-2 Maneuver	655	-	-	-	-	-
Stage 1	924	-	-	-	-	-
Stage 2	796	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.8	0	0.8
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	956	1493	-
HCM Lane V/C Ratio	-	-	0.016	0.015	-
HCM Control Delay (s)	-	-	8.8	7.4	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

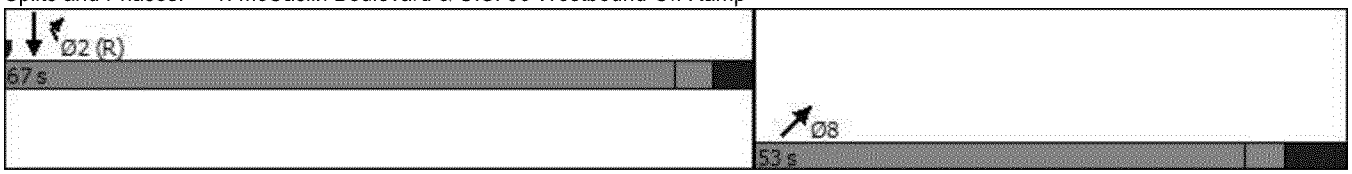
Lane Group	SBT	NWR2	NET
Lane Configurations			
Traffic Volume (vph)	2087	669	1502
Future Volume (vph)	2087	669	1502
Satd. Flow (prot)	5085	3610	5085
Flt Permitted			
Satd. Flow (perm)	5085	3610	5085
Satd. Flow (RTOR)		57	
Lane Group Flow (vph)	2268	727	1633
Turn Type	NA	Prot	NA
Protected Phases	2	2	8
Permitted Phases		2	
Detector Phase	2	2	8
Switch Phase			
Minimum Initial (s)	10.0	10.0	10.0
Minimum Split (s)	17.2	17.2	19.3
Total Split (s)	67.0	67.0	53.0
Total Split (%)	55.8%	55.8%	44.2%
Yellow Time (s)	3.5	3.5	3.5
All-Red Time (s)	3.7	3.7	5.8
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	7.2	7.2	9.3
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	C-Max	C-Max	None
Act Effct Green (s)	60.5	60.5	43.0
Actuated g/C Ratio	0.50	0.50	0.36
v/c Ratio	0.88	0.39	0.90
Control Delay	32.1	17.7	27.4
Queue Delay	0.0	0.0	0.0
Total Delay	32.1	17.7	27.4
LOS	C	B	C
Approach Delay	32.1		27.4
Approach LOS	C		C
Queue Length 50th (ft)	564	137	164
Queue Length 95th (ft)	640	176	275
Internal Link Dist (ft)	259		447
Turn Bay Length (ft)			
Base Capacity (vph)	2563	1847	1851
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.88	0.39	0.88

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 48 (40%), Referenced to phase 2:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.90

Intersection Signal Delay: 28.2	Intersection LOS: C
Intersection Capacity Utilization Err%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 1: McCaslin Boulevard & U.S. 36 Westbound Off Ramp



Intersection	
Int Delay, s/veh	79.1

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations				↑↑↑	↰	
Traffic Vol, veh/h	0	0	0	2087	557	0
Future Vol, veh/h	0	0	0	2087	557	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	2268	605	0

Major/Minor	Major2		Minor1	
Conflicting Flow All	-	-	907	-
Stage 1	-	-	0	-
Stage 2	-	-	907	-
Critical Hdwy	-	-	5.74	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	6.04	-
Follow-up Hdwy	-	-	3.82	-
Pot Cap-1 Maneuver	0	-	~ 346	0
Stage 1	0	-	-	0
Stage 2	0	-	~ 320	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	~ 346	-
Mov Cap-2 Maneuver	-	-	~ 346	-
Stage 1	-	-	-	-
Stage 2	-	-	~ 320	-

Approach	SB	SW
HCM Control Delay, s	0	$ 375.6
HCM LOS		F

Minor Lane/Major Mvmt	SBT	SWLn1
Capacity (veh/h)	-	346
HCM Lane V/C Ratio	-	1.75
HCM Control Delay (s)	-	$ 375.6
HCM Lane LOS	-	F
HCM 95th %tile Q(veh)	-	38.4

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



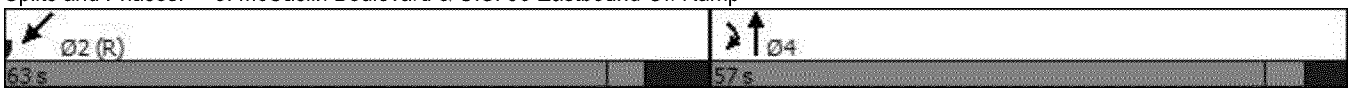
Lane Group	NBT	SER2	SWT
Lane Configurations			
Traffic Volume (vph)	1647	865	1739
Future Volume (vph)	1647	865	1739
Satd. Flow (prot)	5085	3610	5085
Flt Permitted			
Satd. Flow (perm)	5085	3610	5085
Satd. Flow (RTOR)		57	
Lane Group Flow (vph)	1790	940	1890
Turn Type	NA	Prot	NA
Protected Phases	4	4	2
Permitted Phases		4	
Detector Phase	4	4	2
Switch Phase			
Minimum Initial (s)	10.0	10.0	10.0
Minimum Split (s)	17.5	17.5	19.3
Total Split (s)	57.0	57.0	63.0
Total Split (%)	47.5%	47.5%	52.5%
Yellow Time (s)	3.5	3.5	3.5
All-Red Time (s)	4.0	4.0	5.8
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	9.3
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	None	None	C-Max
Act Effct Green (s)	49.5	49.5	53.7
Actuated g/C Ratio	0.41	0.41	0.45
v/c Ratio	0.85	0.62	0.83
Control Delay	37.0	28.1	25.4
Queue Delay	0.0	0.0	0.0
Total Delay	37.0	28.1	25.4
LOS	D	C	C
Approach Delay	37.0		25.4
Approach LOS	D		C
Queue Length 50th (ft)	453	233	238
Queue Length 95th (ft)	520	290	297
Internal Link Dist (ft)	90		532
Turn Bay Length (ft)			
Base Capacity (vph)	2097	1522	2275
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.85	0.62	0.83

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 46 (38%), Referenced to phase 2:SWT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 30.4	Intersection LOS: C
Intersection Capacity Utilization Err%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 3: McCaslin Boulevard & U.S. 36 Eastbound Off Ramp



Intersection	
Int Delay, s/veh	36.7

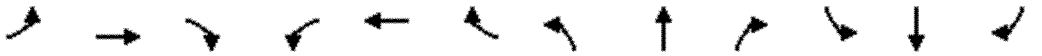
Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations		↑↑↑			↰	
Traffic Vol, veh/h	0	1647	0	0	495	0
Future Vol, veh/h	0	1647	0	0	495	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1790	0	0	538	0

Major/Minor	Major1		Minor2	
Conflicting Flow All	-	0	716	-
Stage 1	-	-	0	-
Stage 2	-	-	716	-
Critical Hdwy	-	-	5.74	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	6.04	-
Follow-up Hdwy	-	-	3.82	-
Pot Cap-1 Maneuver	0	-	~ 430	0
Stage 1	0	-	-	0
Stage 2	0	-	~ 405	0
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	~ 430	-
Mov Cap-2 Maneuver	-	-	~ 430	-
Stage 1	-	-	-	-
Stage 2	-	-	~ 405	-

Approach	NB	NE
HCM Control Delay, s	0	158.8
HCM LOS		F

Minor Lane/Major Mvmt	NELn1	NBT
Capacity (veh/h)	430	-
HCM Lane V/C Ratio	1.251	-
HCM Control Delay (s)	158.8	-
HCM Lane LOS	F	-
HCM 95th %tile Q(veh)	22.5	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	548	62	561	58	35	268	382	941	82	166	1283	909
Future Volume (vph)	548	62	561	58	35	268	382	941	82	166	1283	909
Satd. Flow (prot)	3221	1637	1583	1770	1863	1583	3433	5085	1583	1770	5085	1583
Flt Permitted	0.950	0.966		0.950			0.095			0.196		
Satd. Flow (perm)	3221	1637	1583	1770	1863	1583	343	5085	1583	365	5085	1583
Satd. Flow (RTOR)			389			189			127			452
Lane Group Flow (vph)	441	222	610	63	38	291	415	1023	89	180	1395	988
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Free
Protected Phases	8	8		4	4		1	6		5	2	
Permitted Phases			8			4	6		6	2		Free
Detector Phase	8	8	8	4	4	4	1	6	6	5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	3.0	10.0	10.0	3.0	10.0	
Minimum Split (s)	9.0	9.0	9.0	10.0	10.0	10.0	9.0	16.0	16.0	9.0	16.0	
Total Split (s)	30.0	30.0	30.0	27.0	27.0	27.0	15.0	43.0	43.0	20.0	48.0	
Total Split (%)	25.0%	25.0%	25.0%	22.5%	22.5%	22.5%	12.5%	35.8%	35.8%	16.7%	40.0%	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	4.0	3.0	4.0	
All-Red Time (s)	1.0	1.0	1.0	2.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	5.0	5.0	5.0	4.0	6.0	6.0	4.0	6.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	27.2	27.2	27.2	14.0	14.0	14.0	61.5	47.8	47.8	61.4	47.6	120.0
Actuated g/C Ratio	0.23	0.23	0.23	0.12	0.12	0.12	0.51	0.40	0.40	0.51	0.40	1.00
v/c Ratio	0.60	0.60	0.93	0.31	0.18	0.83	0.85	0.50	0.13	0.55	0.69	0.62
Control Delay	45.2	48.6	37.2	49.8	46.4	37.4	43.6	30.5	2.2	22.5	33.7	1.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.2	48.6	37.2	49.8	46.4	37.4	43.6	30.5	2.2	22.5	33.7	1.9
LOS	D	D	D	D	D	D	D	C	A	C	C	A
Approach Delay		42.0			40.3			32.4			20.6	
Approach LOS		D			D			C			C	
Queue Length 50th (ft)	156	157	174	45	27	77	114	239	0	77	352	0
Queue Length 95th (ft)	230	267	#436	84	57	171	#224	301	16	122	411	0
Internal Link Dist (ft)		518			407			580			291	
Turn Bay Length (ft)			260	170		170	180		170	230		170
Base Capacity (vph)	773	393	675	324	341	444	488	2027	707	384	2018	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.56	0.90	0.19	0.11	0.66	0.85	0.50	0.13	0.47	0.69	0.62

Intersection Summary

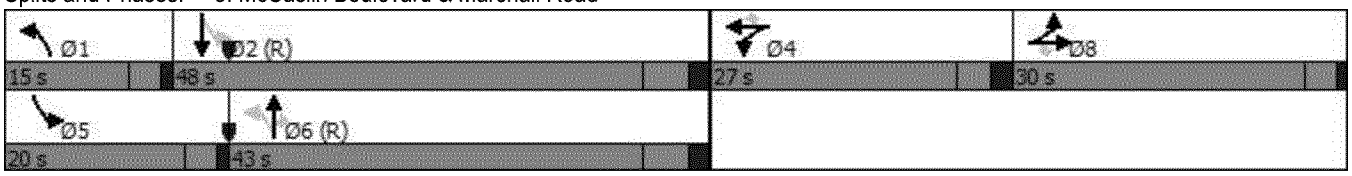
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 64 (53%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.93

Intersection Signal Delay: 29.8	Intersection LOS: C
Intersection Capacity Utilization 76.2%	ICU Level of Service D
Analysis Period (min) 15	

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: McCaslin Boulevard & Marshall Road



Intersection	
Intersection Delay, s/veh	11.9
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	1	1	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	38	423	1088	1837
Demand Flow Rate, veh/h	39	431	1110	1874
Vehicles Circulating, veh/h	1971	1028	314	119
Vehicles Exiting, veh/h	22	396	1696	1026
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	17.0	2.4	10.0	15.1
Approach LOS	C	A	A	C

Lane	Left	Left	Bypass	Left	Right	Left	Right
Designated Moves	LTR	LT	R	LT	TR	LT	TR
Assumed Moves	LTR	LT	R	LT	TR	LT	TR
RT Channelized			Free				
Lane Util	1.000	1.000		0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.535	2.535		2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.328	314	4.645	4.328	4.645	4.328
Entry Flow, veh/h	39	117	1938	522	588	881	993
Cap Entry Lane, veh/h	266	593	0.980	1011	1087	1210	1283
Entry HV Adj Factor	0.973	0.982	308	0.980	0.981	0.980	0.981
Flow Entry, veh/h	38	115	1900	512	577	863	974
Cap Entry, veh/h	259	582	0.162	991	1067	1186	1259
V/C Ratio	0.147	0.197	0.0	0.516	0.541	0.728	0.774
Control Delay, s/veh	17.0	8.7	A	10.0	10.0	14.3	15.7
LOS	C	A	1	B	A	B	C
95th %tile Queue, veh	1	1		3	3	7	8

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	9	126	26	0	291	1	38	2	5	0	0	10
Future Vol, veh/h	9	126	26	0	291	1	38	2	5	0	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	137	28	0	316	1	41	2	5	0	0	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	317	0	0	165	0	0	493	488	83	407	502	317
Stage 1	-	-	-	-	-	-	171	171	-	317	317	-
Stage 2	-	-	-	-	-	-	322	317	-	90	185	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.53	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	1241	-	-	1412	-	-	472	479	960	541	471	723
Stage 1	-	-	-	-	-	-	815	757	-	693	654	-
Stage 2	-	-	-	-	-	-	689	654	-	908	746	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1241	-	-	1412	-	-	462	475	960	532	467	723
Mov Cap-2 Maneuver	-	-	-	-	-	-	462	475	-	532	467	-
Stage 1	-	-	-	-	-	-	808	750	-	687	654	-
Stage 2	-	-	-	-	-	-	679	654	-	892	739	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0	13.1	10.1
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	491	1241	-	-	1412	-	-	723
HCM Lane V/C Ratio	0.1	0.008	-	-	-	-	-	0.015
HCM Control Delay (s)	13.1	7.9	0	-	0	-	-	10.1
HCM Lane LOS	B	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	17	275	0	20	111
Future Vol, veh/h	0	17	275	0	20	111
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	18	299	0	22	121

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	464	299	0	0	299	0
Stage 1	299	-	-	-	-	-
Stage 2	165	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	556	741	-	-	1262	-
Stage 1	752	-	-	-	-	-
Stage 2	864	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	547	741	-	-	1262	-
Mov Cap-2 Maneuver	547	-	-	-	-	-
Stage 1	752	-	-	-	-	-
Stage 2	849	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10	0	1.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	741	1262	-
HCM Lane V/C Ratio	-	-	0.025	0.017	-
HCM Control Delay (s)	-	-	10	7.9	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0.1	-

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PHASE I ENVIRONMENTAL SITE ASSESSMENT
1.97-ACRE PARCEL
3 SOUTH MARSHALL ROAD
SUPERIOR, BOULDER COUNTY, COLORADO

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Project No. 23-1-644

November 1, 2023

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EXECUTIVE SUMMARY

A summary of the findings of the Phase I Environmental Site Assessment of the approximate 1.97-acre parcel located at 3 South Marshall Road in Superior, Boulder County, Colorado, the subject property, is provided below. Details of the assessment of the subject property have not been included or fully developed in this summary, and the report must be read in its entirety for a comprehensive understanding of the items contained herein.

FINDING	IDENTIFIED	NOT IDENTIFIED
Recognized Environmental Condition	☐	☒
Controlled Recognized Environmental Condition	☐	☒
Historical Recognized Environmental Condition	☐	☒
Significant Data Gaps	☒	☐
De minimis conditions	☐	☒

A completed user questionnaire and owner interview was not provided. The lack of historical information regarding the subject property uses is considered a significant data gap.

1.0 INTRODUCTION

This report presents the results of the Phase I Environmental Site Assessment (ESA) conducted by Kumar & Associates, Inc. (K+A) for the purpose of identifying recognized environmental conditions in connection with the approximate 1.97-acre parcel located at 3 South Marshall Road in Superior, Boulder County, Colorado, (including buildings and other fixtures and improvements located on the subject property at the time of the reconnaissance) referred to as the "subject property". A site vicinity diagram is included in the attachments as Figure 2, and references to documentation used to prepare this report are included in the applicable sections. Qualifications of the Environmental Professional are presented in Appendix F.

1.1 Scope of Services

This Phase I ESA was performed in accordance with our proposal and consistent with the procedures included in ASTM E1527-13 and E1527-21 *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* and United States Environmental Protection Agency *All Appropriate Inquiries Final Rule* 40 CFR Part 312. The purpose of the assessment is to identify recognized environmental conditions in connection with the subject property and to satisfy one of the requirements to qualify for the innocent landowner defense to Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) liability. ASTM E1527-21 defines the following terms as:

Recognized Environmental Condition (REC)

> "(1) the presence of hazardous substances or petroleum products in, on, or at the subject property due to a release into the environment; (2) the likely presence of hazardous substances or petroleum products in, on, or at the subject property due to a release or likely release to the environment; or (3) the presence of hazardous substances or petroleum products in, on, or at the subject property under conditions that pose a material threat of a future release to the environment."

Controlled Recognized Environmental Condition (CREC)

> "recognized environmental condition affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities with hazardous substances or petroleum products allowed to remain in place subject to implementation of required controls (for example, activity and use limitations or other property use limitations)."

Historical Recognized Environmental Condition (HREC)

> "a previous release of hazardous substances or petroleum products affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities and meeting unrestricted use criteria established by the applicable regulatory authority or authorities without subjecting the subject property to any controls (for example, activity and use limitations or other property use limitations)."

De Minimis Condition

> "a condition related to a release that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies."

This purpose was undertaken through user-provided information, regulatory database review, historical records review, interviews, including local government inquiries, as applicable, and a visual non-invasive reconnaissance of the subject property and adjoining properties. The nature and/or movement of hazardous substances or petroleum products in any form, including, for example, solid and liquid at the surface or subsurface, and vapor in the subsurface at the subject property was not evaluated by obtaining samples and conducting laboratory analysis. It is possible that a sampling and analysis program or excavation of soil could change the conclusions presented in this report. Limitations, ASTM deviations, and significant data gaps (if identified) are evident from reviewing the applicable scope of services and the report text.

ASTM E1527-21 defines "migrate/migration" as "the movement of hazardous substances or petroleum products in any form, including, for example, solid and liquid at the surface or subsurface, and vapor in the subsurface." This report includes an evaluation of vapor migration in connection with the subject property.

1.2 Limitations, ASTM Deviations, and Significant Data Gaps

Reasonable attempts were made to obtain information within the scope and time constraints set forth by the client; however, in some instances, information requested is not, or was not, received by the issuance date of the report. Consideration of such information is beyond the scope of this assessment. Information obtained for this Phase I ESA was received from several sources that are believed to be reliable; nonetheless, the authenticity or reliability of these sources cannot be and is not warranted hereunder. This Phase I ESA was further limited by the following:

- A completed user questionnaire and owner interview was not provided. The lack of historical information regarding the subject property uses is considered a significant data gap.

An evaluation of the significance of limitations and missing information with respect to our findings has been conducted, and where appropriate, significant data gaps are identified and discussed in the text of the report. However, it should be recognized that an evaluation of significant data gaps is based on the information available at the time of report issuance, and an evaluation of information received after the report issuance date may result in an alteration of our findings, conclusions, or opinions. We have no obligation to provide information obtained or discovered by us after the issuance date of the report, or to perform any additional services, regardless of whether the information would affect any conclusions, recommendations, or opinions in the report. This disclaimer specifically applies to any information that has not been provided by the client.

This report represents K+A's service to the client as of the report date and constitutes our final document; its text may not be altered after final issuance. Findings in this report are based on current utilization of the subject property, information derived from the reconnaissance, and from other activities described herein; such information is subject to change. Certain indicators of the presence of hazardous substances or petroleum products may have been latent, inaccessible, unobservable, or not present during the reconnaissance and may subsequently become observable (such as after site renovation or development). Furthermore, these services are not to be construed as legal interpretation or advice.

1.3 Reliance

This Phase I ESA report was prepared for the exclusive use and reliance of the client, KT Development, which is a "user" of the ESA as defined by ASTM. Use or reliance by any other party is prohibited without the written authorization of KT Development and K+A.

Reliance on the Phase I ESA by the client and all authorized parties will be subject to the terms, conditions, and limitations stated in the proposal, Phase I ESA report, and K+A's agreement for services. The limitation of liability defined in the agreement for services is the aggregate limit of K+A's liability to the client and all relying parties.

The continued viability of this report is subject to Sections 4.6 and 4.8 of ASTM E1527-21. If the Phase I ESA will be relied on by a user (third party) different than the one(s) for whom the Phase I ESA was originally prepared, the third party must also satisfy the user's responsibilities in Section 6 of ASTM E1527-21.

1.4 User Responsibilities and Provided Information

The following information was requested from Entitlement and Engineering Solutions representative Mary Kasal, the user of this ESA.

1.4.1 User's Specialized Knowledge or Experience

Specialized knowledge of RECs in connection with the site was requested from the client. This information has not been received as of the issuance date of the report, and unless notified otherwise, we assume the client is evaluating this information outside the context of this report.

1.4.2 User's Actual Knowledge of Environmental Liens or Activity and Use Limitations

Actual knowledge of any environmental liens or AULs encumbering the site or in connection with the site was requested from the client. This information has not been received as of the issuance date of the report, and unless notified otherwise, we assume the client is evaluating this information outside the context of this report.

1.4.3 Valuation Reduction for Environmental Issues

Knowledge of any property value reduction for environmental issues in connection with the site was requested from the client. This information has not been received as of the issuance date of the report, and unless notified otherwise, we assume the client is evaluating this information outside the context of this report.

1.4.4 Commonly Known or Reasonably Ascertainable Information

Commonly known or reasonably ascertainable information concerning RECs in connection with the site was requested from the client. This information has not been received as of the issuance date of the report, and unless notified otherwise, we assume the client is evaluating this information outside the context of this report.

1.4.5 Obvious Indicators of Contamination

Information concerning obvious indicators of contamination in connection with the site was requested from the client. This information has not been received as of the issuance date of the report, and unless notified otherwise, we assume the client is evaluating this information outside the context of this report.

1.4.6 Reason for Performing the Phase I ESA

Information concerning the reasons for performing the Phase I ESA was requested from the client. It is assumed that the user wishes to qualify for a landowner liability protection (LLP) to CERCLA liability and to understand potential environmental conditions that could materially impact the operation of a facility associated with the subject property.

2.0 PHYSICAL SETTING

K+A reviewed the current United States Geological Survey (USGS) 7.5-minute topographic map and other reasonably ascertainable physical setting sources to obtain information concerning the

geologic, hydrogeologic, hydrologic, and topographic characteristic of the subject property. An excerpt of the topographic map reviewed as a source of the subject property's physical setting is included as Figure 1.

Physical Setting

Physical Setting		Source
Site Address(s) or Location	3 South Marshall Road, Superior, Boulder County, Colorado 80301	User Provided
Parcel Identification Number (s)	1157519242002	Boulder County Assessor's Records
Land Area	Approximately 1.97 acres	
Latitude / Longitude	39.955455, -105.162171 (approximate center)	Google Maps
Topography		
Elevation	Approximately 5,470 feet above mean sea level – National Geodetic Vertical Datum	USGS Topographic Map, Louisville, Colorado Quadrangle Published 1965 Photorevised 1994
Gradient	Sloping to the southeast	
Closest Surface Water	Coal Creek is located on the south adjoining property	
Hydrogeology		
Aquifer Description	Area of Unconsolidated Alluvial Deposits	Depth to the Water Table (1976-1977) in the Boulder-Fort Collins-Greeley Area, Front Range Urban Corridor, Colorado 1979
Estimated Depth to Groundwater	Depth to water table is 5 to 10 feet below land surface.	
Hydrogeologic Gradient	Mimics the surface topographic gradient to the southeast. However, groundwater flow direction is influenced by factors such as underground structures, seasonal fluctuations, and soil and bedrock properties. Intrusive measurement of groundwater flow is outside the scope of this Phase I ESA.	

3.0 SUBJECT PROPERTY RECONNAISSANCE

The purpose of the site reconnaissance is to collect information and make observations to help identify recognized environmental conditions in connection with the subject property. This section of the report summarizes physically observed characteristics of the subject property identified during the reconnaissance. The subject property and accessible interior areas of structures, if any, located on the subject property were visually observed to the extent not obstructed by bodies of water, adjacent buildings, pavement, or other obstacles. A site and vicinity diagram is included as Appendix A – Figure 2. Property reconnaissance photographs are provided in Appendix C.

3.1 Subject Property Occupants and Operations

The subject property consists of approximately 1.97 acres of undeveloped land defined by Marshall Road and adjoining properties. Geotechnical soil borings were observed along the western border of the property during the site reconnaissance.

General Subject Property Improvements

Reconnaissance Details	
K+A Personnel	Nancy Otterstrom
Date	October 18, 2023
Site Escort	None
Weather Conditions	Clear, 75° F, calm winds
Improvements	
Number of Structures	None
Potable Water	Not applicable
Sewage Disposal	
Electricity	
Natural Gas / Propane	
Roads	None

3.2 Interior and Exterior Observations

Characteristics observed during the property reconnaissance or reported to K+A by persons knowledgeable of the current conditions of the subject property are indicated with an "**X**" in the following table. Characteristics not observed or reported are indicated with a "**-**". Observed or reported characteristics are discussed following the table.

Subject Property Characteristics

Characteristic	Observed / Reported	*De Minimis* Condition	REC	HREC
Emergency generators	-	-	-	-
Aboveground storage tanks	-	-	-	-
Underground storage tanks	-	-	-	-
Drums, Totes, and Intermediate Bulk Containers	-	-	-	-
Automobile Repair	-	-	-	-
PCB-Containing Items	-	-	-	-
Drains and sumps	-	-	-	-
Water/Wastewater	-	-	-	-
Trash, debris, or other waste materials	-	-	-	-
Strong, pungent, or noxious odors	-	-	-	-
Other processes or equipment	-	-	-	-
Unidentified substance containers	-	-	-	-
Hazardous substances and petroleum products in connection with identified uses	-	-	-	-

Subject Property Characteristics

Characteristic	Observed / Reported	*De Minimis* Condition	REC	HREC
Hazardous substances and petroleum products not in connection with identified uses	-	-	-	-
Elevators	-	-	-	-
Air compressors	-	-	-	-
Hydraulic lifts	-	-	-	-
Dry cleaning	-	-	-	-
Photo processing	-	-	-	-
Laboratory hoods or incinerators	-	-	-	-
Floor drains	-	-	-	-
Stains or Corrosion on floors, walls, or ceiling (except water staining)	-	-	-	-
Septic systems or cesspools	-	-	-	-
Oil/water separators	-	-	-	-
Pipeline markers	-	-	-	-
Stained soil or pavement	-	-	-	-
Stressed vegetation	-	-	-	-
Construction/demolition debris or dumped fill dirt	-	-	-	-
Other dumping or disposal areas	-	-	-	-
Surface water discoloration, odor, sheen, or free-floating product	-	-	-	-
Pools or sumps containing liquids likely to contain hazardous substances or petroleum products	-	-	-	-
Surface water containing liquids likely to contain hazardous substances or petroleum products	-	-	-	-
Pits, ponds, or lagoons	-	-	-	-
Quarries or pits	-	-	-	-
Wells	-	-	-	-

3.3 Subject Property Reconnaissance Summary

The current characteristics observed during the reconnaissance are not considered recognized environmental conditions in connection with the subject property.

4.0 ADJOINING PROPERTIES

The area surrounding the subject property generally consists of a walking trail and Coal Creek, commercial properties and US Highway 36. Adjoining properties are summarized in the following table.

Adjoining Properties

Direction	Identified Use	Address
Northwest ↖	Utility building and paved parking lot	100 Superior Plaza Way
North ↑		
Northeast ↗	Walking path, followed by a drainage culvert and US Highway 36	Not applicable
East →		
Southeast ↘		
South ↓	Coal Creek Trail followed by Coal Creek	Not applicable
Southwest ↙		
West ←	Paved parking lot surrounding a vacant lot	1 South Marshall Road

The current adjoining land uses are not considered recognized environmental conditions in connection with the subject property.

5.0 HISTORICAL RESEARCH

The objective of compiling and analyzing historical property information and developing a history of the previous uses of the subject property, adjoining properties, and surrounding area is to help identify the likelihood of past uses having led to recognized environmental conditions in connection with the subject property.

5.1 Historical Sources

K+A reviewed reasonably ascertainable historical sources with the objective of identifying obvious uses of the subject property and adjoining properties from the present back to the subject property's first developed use, or back to 1940, whichever was earlier. Standard historical sources include: topographic maps; aerial photographs; local street directories; fire insurance maps; property tax files; land title records; building department records, interviews; and zoning/land use records. Data failure may occur if standard historical sources that are reasonably ascertainable and likely to be useful have been reviewed and all obvious uses of the subject property have not been identified at five-year intervals back to first use or 1940, whichever is earlier. If data failure represents a significant data gap, its impact on the ability of the Environmental Professional to identify recognized environmental conditions will be discussed in Section 5.2 – *Historical Use Summary*.

5.1.1 USGS Topographic Maps

USGS topographic maps were reviewed to identify the likelihood of past uses having led to recognized environmental conditions in connection with the subject property.

- Louisville, Colorado: published 1942 from **1938-1939** survey (1:31,680)
- Louisville, Colorado: published 1942 from 1938-1939 survey, revised 1950 from **1950** survey (1:24,000)
- Louisville, Colorado: published 1957 from **1954-1955** aerials (1:24,000)
- Louisville, Colorado: published 1965 from **1964** aerials (1:24,000)
- Louisville, Colorado: published 1965 from 1964 aerials, revised 1971 from **1971** aerials (1:24,000)
- Louisville, Colorado: published 1965 from 1964 aerials, revised 1979 from **1978** aerials (1:24,000)
- Louisville, Colorado: published 1965 from 1964 aerials, revised 1994 from **1988-1990** aerials (1:24,000)

Historical USGS Topographic Maps

Direction	Identified Use
Subject ⊕	Undeveloped land (1938-1939, 1950, 1954-1955, 1964, 1971, 1978, and 1988-1990)
Northwest ↖	Undeveloped land (1938-1939, 1950, 1954-1955, 1964, 1971, 1978, and 1988-1990)
North \	
Northeast ↗	Undeveloped land (1938-1939 and 1950)
East →	Developed with the Denver Boulder Turnpike (1954-1955 and 1964)
Southeast ↘	Developed with US Highway 36 (1971, 1978, and 1988-1990)
South \	Undeveloped land, followed by Coal Creek (1938-1939, 1950, 1954-1955, 1964, 1971, 1978, and 1988-1990)
Southwest ↙	
West ←	Undeveloped land (1938-1939, 1950, 1954-1955, 1964, 1971, 1978, and 1988-1990)

5.1.2 Aerial Photographs

Reasonably ascertainable historical aerial photographs obtained from Environmental Risk information Services (ERIS) (originally sourced by the USGS, Agricultural Stabilization and Conservation Service [ASCS], Army Mapping Services [AMS], the United States Department of Agriculture [USDA], the National Aeronautics and Space Administration [NASA], and Maxar Technologies [Maxar]) were reviewed at approximate 5 to 10-year intervals to identify the likelihood of past uses having led to recognized environmental conditions in connection with the subject property. Evaluation of the photographs may be limited by sufficient resolution to allow identification of development and activities of areas encompassing the subject property. The source and date of each photograph and a summary of the review are included in this section.

- ASCS: 1937 and 1941
- AMS: 1953

- USGS: 1963, 1971, 1978, 1983, 1988, and 1999
- NASA: 1992
- USDA: 2004, 2005, 2006, 2009, 2011, 2013, 2015, 2017, 2019, and 2021
- Maxar: 2023

Historical Aerial Photographs

Direction	Identified Use
Subject ⊕	Undeveloped and/or agricultural land (1937, 1941, 1953, 1963, 1971, 1978, 1983, 1988, 1992, 1999, 2004, 2005, 2006, 2009, 2011, and 2013) Appears graded and utilized for vehicle parking for adjoining construction activities (2015) Undeveloped/graded land (2017, 2019, 2021, and 2023)
Northwest ↖	Undeveloped and/or agricultural land with a dirt path leading to the east (1937 and 1941) Undeveloped and/or agricultural land (1953, 1963, 1971, and 1978) Appears graded for development (1983, 1988, and 1992)
North \	Appears developed with the current utility building, followed by graded land (1999) Appears developed with its current configuration, a utility building and paved parking for a multi-tenant commercial building further west (2004, 2005, 2006, 2009, 2011, 2013, 2015, 2017, 2019, 2021, and 2023)
Northeast ↗	Developed with a dirt path and one small structure on the north, followed by undeveloped and/or agricultural land (1937 and 1941)
East →	Developed with a multi-lane highway (1953, 1963, 1971, 1978, 1983, 1988, 1992, 1999, 2004, 2005, 2006, 2009, 2011, and 2013) Appears graded for highway improvements, with a small structure on the southern portion of the property (2015)
Southeast ↘	Appears developed with its current configuration, a walking trail, followed by a drainage culvert and US Highway 36 (2017, 2019, 2021, and 2023)
South \	Undeveloped land, followed by Coal Creek (1937, 1941, 1953, 1963, 1971, 1978, 1983, 1988, 1992, and 1999)
Southwest ↙	Appears developed with a walking trail, followed by Coal Creek (2004, 2005, 2006, 2009, 2011, 2013, 2015, 2017, 2019, 2021, and 2023)
West ←	Undeveloped and/or agricultural land (1937, 1941, 1953, 1963, 1971, 1978, 1983, 1988, 1992, and 1999) Appears developed with a commercial structure on the north, followed by undeveloped land (2004, 2005, 2006, 2009, 2011, and 2013) Appears developed with a commercial structure on the north, followed by a gravel parking lot on the south (2015) Appears undeveloped (2017) Appears developed with a commercial structure surrounded by paved parking (2019 and 2021) Appears developed with paved parking surrounding a vacant lot (2023)

5.1.3 Local Street Directories

Historical street directories, published by various companies and provided by Environmental Risk Information Services, were reviewed. Selected years were reviewed at approximate five-year intervals, if the information is practically reviewable from the street directory source.

Historical Street Directories

Direction	Identified Use
Subject ⌖	**3 South Marshall Road** No listing (1970-71, 1975, 1980, 1985, 1989-90, 1996, 2000, 2003, 2008, 2012, 2016, 2020, and 2022)
Northwest ↖	**100 Superior Plaza Way** No listing (1970-71, 1975, 1980, 1985, 1989-90, and 1996) Superior Liquor Market (2000, 2003, and 2008) Softbank Venture Capital (2003, 2008, and 2012) Old Chicago (2003, 2008, 2012, 2016, 2020, and 2022) Old Chicago-Superior (2008) Veripost Inc (2008) Newmerix Corp (2008 and 2012) Npulse Software Inc (2008 and 2012) Super Joe Specialty Coffee (2008 and 2012) Lawrence Kelly Md (2012) Latis Networks Inc (2012 and 2016) Still Secure (2012, 2016, 2020, and 2022) Superior Liquor (2012, 2016, 2020, and 2022) ATM (2016) Edward Jones (2016, 2020, and 2022) Pro Skate (2016, 2020, and 2022) Return Path Inc (2020 and 2022)
North ↑	
Northeast ↗	**No address identified**
East →	
Southeast ↘	
South ↓	**No address identified**
Southwest ↙	
West ←	**1 South Marshall Road** No listing (1970-71, 1975, 1980, 1985, 1989-90, 1996, 2000, 2003, 2008, 2012, 2016, and 2022) Element Boulder Superior (2020)

5.1.4 Fire Insurance Maps

Collections of historical fire insurance maps produced by the Sanborn Map Company were searched to identify the likelihood of past uses having led to recognized environmental conditions in connection with the subject property. Map coverage for the subject property was not available.

5.1.5 Property Tax Files

Based on a review of information obtained from Boulder County Assessor's records, the subject property is currently owned by RC Superior, LLC.

5.1.6 Land Title Records

K+A was not contracted to obtain a chain of title for the subject property and was not provided one by the user. Therefore, review of recorded land title records was not included as part of the scope of services for this Phase I ESA.

5.1.7 Building Department Records

Records obtained from the Boulder County Assessor were reviewed for information concerning improvements to the subject property and adjoining properties.

Building Department Records

Direction	Current Building Description	Year Built	Use / Notes
Subject ⊕	None	N/A	Not provided
Northwest ↖	Utility building and parking lot	~1999	Merchandising Improvements
North \			
Northeast ↗	None	N/A	Not available
East →			
Southeast ↘			
South \	None	N/A	Not available
Southwest ↙			
West ←	None	N/A	Not provided

5.1.8 Interviews

A historical interview was requested from the current site owner. As of the issuance of this report, a response has not been received.

5.2 Historical Use Summary

The following summary is based on a review of historical information.

- Subject Property – undeveloped land since at least 1937. Grading was observed in 2015, during which the subject property was utilized as vehicle parking for adjoining construction activities. By 2017, these activities had ceased and the property appeared as undeveloped land.
- Northwest / North – undeveloped land from at least 1937 until approximately 1983, when grading/ground disturbance of the property was observed. The current utility building appeared complete by 1999, with the paved parking lot completed by 2004. The paved lot is associated with a multi-tenant commercial structure located further west. Tenants of the property have included various consultants, retailers, medical offices, and restaurants.

- Northeast / East / Southeast – Developed with one small structure as early as 1937, with the remainder of the property undeveloped. The structure remained through at least 1941. By 1953, the Denver Boulder Turnpike was constructed, which was later renamed US Highway 36. In 2015, widening and improvements to the highway were observed, which appear complete by 2017.
- South / Southwest – undeveloped land followed by Coal Creek since at least 1937. The current walking trail was complete by 2004.
- West – undeveloped land from at least 1937 until approximately 2004, when a commercial structure was built on the northern portion of the property. The structure remained through at least 2015. City directories did not indicate the tenant of the property during this time. The land was razed in 2017, and by 2019, a new structure surrounded by paved parking has been constructed. The structure remained through at least 2021; however, it is currently a vacant lot. The paved parking lot surrounding the former structure remains through present day. The former tenant of the property was Element Boulder Superior.

Recognized environmental conditions in connection with the subject property were not identified through review of historical information.

6.0 ENVIRONMENTAL REGULATORY RECORDS

Environmental Risk Information Services (ERIS) provided primary regulatory database information. If supplemental information was obtained from others sources, those sources will be described in the text of the following sections. The information described in this report is subject to the accuracy of the data provided by ERIS and other sources, which depends significantly on the date at which time the information was updated by applicable regulatory agencies. Because of the inability of the database provider to geographically locate properties due to inadequate addresses, information concerning facilities identified in the orphan summary of the database report may not be practically reviewable.

When used to describe a listed facility's location, the terms upgradient, cross-gradient, and downgradient refer to the topographic gradient of the listed facility in relation to the subject property. It is generally assumed that groundwater mimics the surface topographic gradient. However, groundwater flow direction is influenced by factors such as underground structures, seasonal fluctuations, and soil and bedrock properties.

K+A completed the regulatory records review on October 18, 2023.

6.1 Federal, State, and Tribal Databases

Facility listings identified on federal, state, or tribal databases within the ASTM-specified approximate minimum search distances are listed below. Database descriptions, sources, regulatory agency information, and reporting frequency are included in the database report presented in Appendix D.

Standard Environmental Record Sources

Database	Description	Search Distance* (miles)	Number of Listings
Federal			
NPL	National Priority List – The United States Environmental Protection Agency list of hazardous waste sites eligible for long-term remedial action financed under the federal Superfund program. The NPL is intended primarily to guide the EPA in determining which sites warrant further investigation.	1.0	0
Delisted NPL	Sites deleted from the NPL based on criteria established by the National Oil and Hazardous Substances Pollution Contingency Plan	0.5	0
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System – US EPA list of potentially hazardous waste sites that are either on, proposed to, or being assessed for inclusion on the NPL	0.5	0
CERCLIS NFRAP	CERCLA sites that have been assessed with no further remedial action planned and determined not to be a potential NPL site	0.5	0
SEMS	The U.S. Environmental Protection Agency's (EPA) Superfund Program has deployed the Superfund Enterprise Management System (SEMS), which integrates multiple legacy systems into a comprehensive tracking and reporting tool. This inventory contains active sites evaluated by the Superfund program that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL.	0.5	0
SEMS Archive	SEMS Archived site Inventory displays site and location information at sites archived from SEMS, which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time.	0.5	0
RCRA CORRACTS	Resource Conservation and Recovery Act – US EPA list of hazardous waste handlers with RCRA corrective action activity	1.0	1
RCRA TSD	Sites that generate, transport, store, treat, and/or dispose of hazardous waste as defined by RCRA	0.5	0
RCRA Generators	Generators are listed as either large (LQG – generate ≥1,000 kg/month of non-acutely hazardous waste or ≥1 kg/month of acutely hazardous waste), small (SQG – generate 100-1,000 kg/month of non-acutely hazardous waste), or conditionally exempt (CESQG – generate <100 kg/month of non-acutely hazardous waste or <1 kg/month of acutely hazardous waste).	subject property and adjoining properties	0

Standard Environmental Record Sources

Database	Description	Search Distance* (miles)	Number of Listings
IC / EC	Institutional controls or engineering controls – US EPA list of sites with various forms of IC (e.g. groundwater use, construction, deed, or property use restrictions, post remediation care requirements) or EC (e.g. caps, building foundations, liners, or treatment methods to create pathway elimination for regulated substances to enter environmental media) in place	subject property only	0
ERNS	Emergency Response Notification System – National Response Center list of reported releases of oil and hazardous substances	subject property only	0
State and/or Tribal			
NPL	State-equivalent and/or tribal-equivalent list of NPL sites	1.0	0
CERCLIS	State-equivalent and/or tribal-equivalent list of CERCLIS sites	0.5	0
SWF / LF	Solid waste facilities and landfills – Colorado Department of Public Health and Environment (CDPHE) and/or tribal list of disposal sites, which may include active or inactive facilities or open dumps that failed to meet RCRA Subtitle D criteria	0.5	1
LST	Leaking storage tank – Colorado Department of Labor and Employment (CDLE) Division of Oil and Public Safety (OPS) and/or tribal list of leaking underground storage tank (LUST) or leaking aboveground storage tank (LAST) sites	0.5	3
RST	Regulated storage tank – OPS and/or tribal list of regulated underground storage tank (UST) or aboveground storage tank (AST) sites	subject property and adjoining properties	0
IC / EC	CDPHE and/or tribal-equivalent list of IC / EC sites	subject property only	0
VCP	Voluntary Cleanup Program – CDPHE and/or tribal-equivalent list of sites in programs that encourage voluntary cleanup and determine cleanup responsibilities in planning the reuse of property	0.5	0
Brownfields	US EPA list of sites addressed by Cooperative Agreement Recipients or Targeted Brownfields Assessments	0.5	0

* – Approximate minimum search distance measured from the nearest site boundary

In addition to the previously described ASTM-specified standard environmental record sources and search distances, K+A reviewed other federal, state/tribal, local, and proprietary databases. A list of the additional reviewed databases is included in the database report presented in Appendix D.

Information presented in the database report and/or otherwise obtained by K+A for select listings are included in the following table.

Facility Listings

Name and Location	Estimated Distance / Direction / Gradient	Database Listing	REC	HREC	CREC
Element by Westin /Element Boulder Superior 1 South Marshall Road	West adjoining / cross-gradient	FINDS/FRS / ALT FUELS / PDES	-	-	-
Westbound Highway 36 Just East of Superior	East adjoining / cross-gradient	SPILLS	-	-	-

Element by Westin /Element Boulder Superior

The western adjoining property was identified as a Facility Registry Service/Facility Index (FINDS/FRS), Alternative Fuels (ALT FUELS), and Pollution Discharge Elimination System (PDES) site in the regulatory database report. Both the FINDS/FRS and PDES regulatory listings are related to a terminated water discharge permit for construction activities. No complaints or violations have been reported on the EPA's Enforcement and Compliance History Online (ECHO) database. The ALT FUELS listing is related to an electric charging station at the hotel, which was listed as temporarily unavailable. An anticipated open date for the charging station was not listed in the database, and a vacant lot was observed on the property during the site reconnaissance. Based on its regulatory status, the facility listings are not considered recognized environmental conditions in connection with the subject property.

Westbound Highway 36 Just East of Superior

The eastern adjoining property was identified as a Spills (SPILLS) site in the regulatory database report. According to the database report, a spill of cesium 137, americium, and beryllium occurred on August 10, 1998, when an RTD bus missed construction cones in the area and struck a survey density meter, impacting the land surface. No impacts to air, surface or groundwater were noted in the report, and the meter was transported back to the subcontractor facility for repair. No evacuation or cleanup activities were noted in the report. Based on the date of the release and lack of clean-up activities noted, the database listing is not considered a recognized environmental condition in connection with the subject property.

Remaining Database Listings

Based on regulatory status, distance, and topographic location, the remaining facility listings are not considered recognized environmental conditions in connection with the subject property.

6.1.1 Vapor Encroachment Screening

A vapor encroachment screening was conducted to evaluate the presence or likely presence of vapors from contaminants of concern (COCs) in the vadose zone of the subject property caused by the release of vapors from contaminated soil and/or groundwater either on or near the subject property.

Based on information obtained from the Phase I ESA, known or suspected contaminated properties were not identified within one third of a mile or one tenth of a mile for petroleum hydrocarbon COCs, the default areas of concern. As such, a vapor encroachment condition was not identified for the subject property.

6.2 Interviews with State and/or Local Government Officials

To enhance and supplement the previously described standard environmental record sources, local and/or additional state/tribal records were reviewed when such additional records are reasonably ascertainable, sufficiently useful, accurate, and complete.

6.2.1 Colorado Department of Public Health and Environment

The Colorado Department of Public Health and Environment (CDPHE) was contacted regarding environmental records that would help identify the likelihood of conditions contributing to recognized environmental conditions in connection with the subject property. Ms. Pearl Campos stated that they did not have records for the subject property.

6.2.2 Local Health Department

The Boulder County Health Department was contacted regarding environmental records that would help identify the likelihood of conditions contributing to recognized environmental conditions in connection with the subject property. At the issuance of this report, a reply from the department had not been received. If information is received that is material to a revision of the findings of this report, an addendum will be issued.

6.2.3 Fire Department

Mountain View Fire Protection District (MVFPD) was contacted regarding environmental records that would help identify the likelihood of conditions contributing to recognized environmental conditions in connection with the subject property. At the issuance of this report, a reply from the department had not been received. If information is received that is material to a revision of the findings of this report, an addendum will be issued.

6.2.3 Colorado Oil and Gas Conservation Commission

The Colorado Oil and Gas Conservation Commission (COGCC) online database was searched for the presence of oil and gas wells on or adjoining the subject property. According to the COGCC records, no oil and gas wells were identified on or within 500 feet of the subject property.

6.3 Regulatory Records Summary

The review of environmental records identified five (5) regulatory listings within the ASTM-specified approximate minimum search distances. Based on regulatory status, distance, and/or topographic location, the facility listings are not considered recognized environmental conditions in connection with the subject property.

7.0 FINDINGS AND OPINIONS

Kumar & Associates, Inc. has performed a Phase I Environmental Site Assessment consistent with the procedures included in United States Environmental Protection Agency, *All Appropriate Inquiries Final Rule*, 40 CFR Part 312 and ASTM E1527-13 and E1527-21 *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.* The Phase I ESA was conducted under the supervision or responsible charge of Nancy Otterstrom, Environmental Professional.

A summary of the findings of the Phase I ESA is provided below. Details of the assessment of the subject property have not been included or fully developed in this summary, and the report must be read in its entirety for a comprehensive understanding of the items contained herein.

- The purpose of the assessment was to identify recognized environmental conditions in connection with the approximate 1.97-acre parcel located at 3 South Marshall Road in Superior, Boulder County, Colorado, (including buildings and other fixtures and improvements located on the site at the time of the reconnaissance) referred to as the "subject property".
- The subject property consists of approximately 1.97 acres of undeveloped land defined by Marshall Road and adjoining properties.
- The current characteristics observed during the reconnaissance are not considered recognized environmental conditions in connection with the subject property.
- The subject property is bordered by the following adjoining properties:
  - Northwest / North – utility building and paved parking
  - Northeast / East / Southeast – US Highway 36
  - South / Southwest – Coal Creek Trail followed by Coal Creek
  - West – a paved parking lot surrounding vacant land

  The current adjoining land uses are not considered recognized environmental conditions in connection with the subject property.
- The following summary is based on a review of historical information.
  - Subject Property – undeveloped land since at least 1937. Grading was observed in 2015, during which the subject property was utilized as vehicle parking for adjoining construction activities. By 2017, these activities had ceased and the property appeared as undeveloped land.
  - Northwest / North – undeveloped land from at least 1937 until approximately 1983, when grading/ground disturbance of the property was observed. The current utility building appeared complete by 1999, with the paved parking lot completed by 2004. The paved lot is associated with a multi-tenant commercial structure located further west. Tenants of the property have included various consultants, retailers, medical offices, and restaurants.

- Northeast / East / Southeast – Developed with one small structure as early as 1937, with the remainder of the property undeveloped. The structure remained through at least 1941. By 1953, the Denver Boulder Turnpike was constructed, which was later renamed US Highway 36. In 2015, widening and improvements to the highway were observed, which appear complete by 2017.
- South / Southwest – undeveloped land followed by Coal Creek since at least 1937. The current walking trail was complete by 2004.
- West – undeveloped land from at least 1937 until approximately 2004, when a commercial structure was built on the northern portion of the property. The structure remained through at least 2015. City directories did not indicate the tenant of the property during this time. The land was razed in 2017, and by 2019, a new structure surrounded by paved parking has been constructed. The structure remained through at least 2021; however, it is currently a vacant lot. The paved parking lot surrounding the former structure remains through present day. The former tenant of the property was Element Boulder Superior.

Recognized environmental conditions in connection with the subject property were not identified through review of historical information.

- The review of environmental records identified five (5) regulatory listings within the ASTM-specified approximate minimum search distances. Based on regulatory status, distance, and/or topographic location, the facility listings are not considered recognized environmental conditions in connection with the subject property.

8.0 CONCLUSIONS

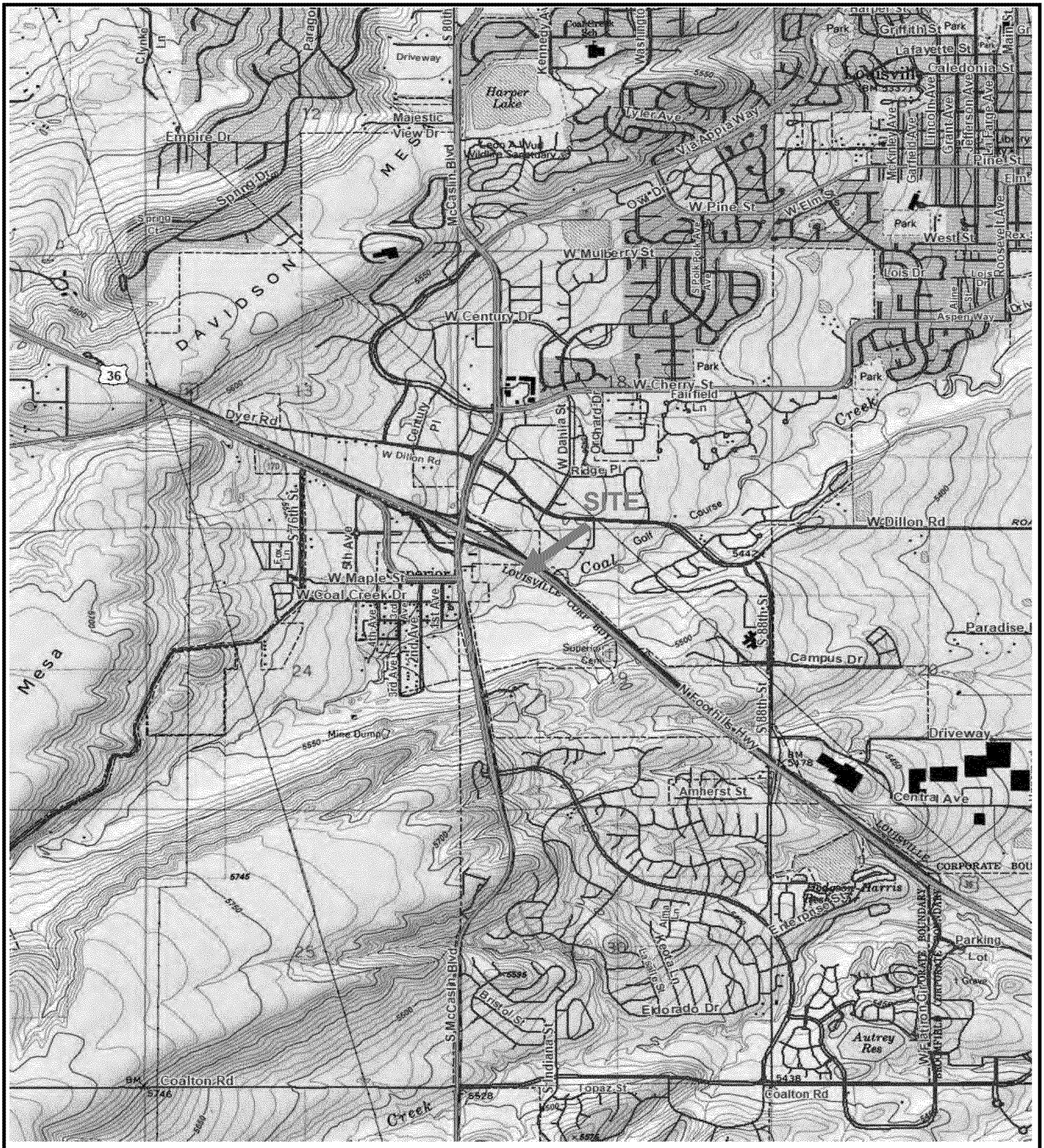
We have performed a Phase I ESA in conformance with the scope and limitations of ASTM Practice E1527-13 and E1527-21 of the approximate 1.97-acre parcel located at 3 South Marshall Road, in Superior, Boulder County, Colorado, the subject property. Any exceptions to, or deletions from, this practice are described in Section 1.0 of this report. This assessment has revealed no recognized environmental conditions, controlled recognized environmental conditions, or historical recognized environmental conditions in connection with the subject property.

A completed user questionnaire and owner interview was not provided. The lack of historical information regarding the subject property uses is considered a significant data gap.

9.0 ENVIRONMENTAL PROFESSIONAL STATEMENT

I, Nancy Otterstrom, declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in §312.10 of 40 CFR 312, and I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed the all appropriate inquires in conformance with the standards and practices set forth in 40 CFR Part 312.

APPENDIX A
FIGURES


SITE
Louisville
Superior
DAVIDSON MESA
Harper Lake
Mine Dump
Coal Creek
Creek
W Dillon Rd
W Cherry St
W Pine St
W Elm St
W Mulberry St
W Century Dr
Dyer Rd
Coalton Rd
Campus Dr
Amherst St
Central Ave
Eldorado Dr
Bristol St
Topaz St
Autrey Res
Parking Lot
Driveway
Park
Golf Course
Fairfield Ln
Ridge Pl
Aspen Way
Lois Dr
Tyler Ave
Via Appia Way
Empire Dr
Majestic View Dr
Spring Dr
W Maple St
W Coal Creek Dr
Louisville Cemetery
Paradise
CORPORATE BOUNDARY
Kennedy Ave
Washington Ave
Griffith St
Lafayette St
Caledonia St
Pine St
Elm St
West St
Lois Dr
Aspen Way
Fairfield Ln
Ridge Pl
Orchard Dr
Century Pl
W Dillon Rd
W Maple St
W Coal Creek Dr
Campus Dr
Amherst St
Central Ave
Eldorado Dr
Bristol St
Topaz St
Coalton Rd
Parking Lot
Autrey Res
Harper Lake
Mine Dump



Approximate Site Boundary

Source:
Google Earth (Google)

Image Date: **May 4, 2023**

Scale: **1" ≈ 200'**

The base aerial photograph depicts conditions at the time the image was recorded; which may differ from conditions at the time of the site reconnaissance.

1.97-Acre Parcel
3 Marshall Road, Superior, Boulder County, Colorado

Appendix A - Figure 2

Kumar & Associates Project No. 23-1-644

Site and Vicinity Diagram

APPENDIX B
HISTORICAL DOCUMENTATION

HISTORICAL AERIALS

Project Property: 1.97-Acres
Marshall Road and Coal Creek
Superior CO 80027

Project No: 23-1-644

Requested By: Kumar & Associates, Inc.

Order No: 23100400478

Date Completed: October 06,2023

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Date	Source	Scale	Comments
2023	MAXAR TECHNOLOGIES	1" = 500'	
2021	United States Department of Agriculture	1" = 500'	
2019	United States Department of Agriculture	1" = 500'	
2017	United States Department of Agriculture	1" = 500'	
2015	United States Department of Agriculture	1" = 500'	
2013	United States Department of Agriculture	1" = 500'	
2011	United States Department of Agriculture	1" = 500'	
2009	United States Department of Agriculture	1" = 500'	
2006	United States Department of Agriculture	1" = 500'	
2005	United States Department of Agriculture	1" = 500'	
2004	United States Department of Agriculture	1" = 500'	
1999	United States Geological Survey	1" = 500'	
1992	National Aeronautics And Space Admin	1" = 500'	
1988	United States Geological Survey	1" = 500'	
1983	United States Geological Survey	1" = 500'	
1978	United States Geological Survey	1" = 500'	
1971	United States Geological Survey	1" = 500'	
1963	United States Geological Survey	1" = 500'	
1953	Army Mapping Service	1" = 500'	
1941	Agricultural Stabilization & Conserv. Service	1" = 500'	
1937	Agricultural Stabilization & Conserv. Service	1" = 500'	



Year: 2023
Source: MAXAR
Scale: 1" = 500'
Comment:

Address: Marshall Road and Coal Creek, Superior, CO
Approx Center: -105.1621161,39.95544221

Order No: 23100400478

ERIS



Year: 2021
Source: USDA
Scale: 1" = 500'
Comment:

Address: Marshall Road and Coal Creek, Superior, CO
Approx Center: -105.1621161,39.95544221

Order No: 23100400478

ERIS



Year: 2019
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Scale: 1" = 500'
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Approx Center: -105.1621161,39.95544221

Order No: 23100400478

ERIS



Year: 2017
Source: USDA
Scale: 1" = 500'
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Approx Center: -105.1621161,39.95544221

Order No: 23100400478

ERIS



Year: 2015
Source: USDA
Scale: 1" = 500'
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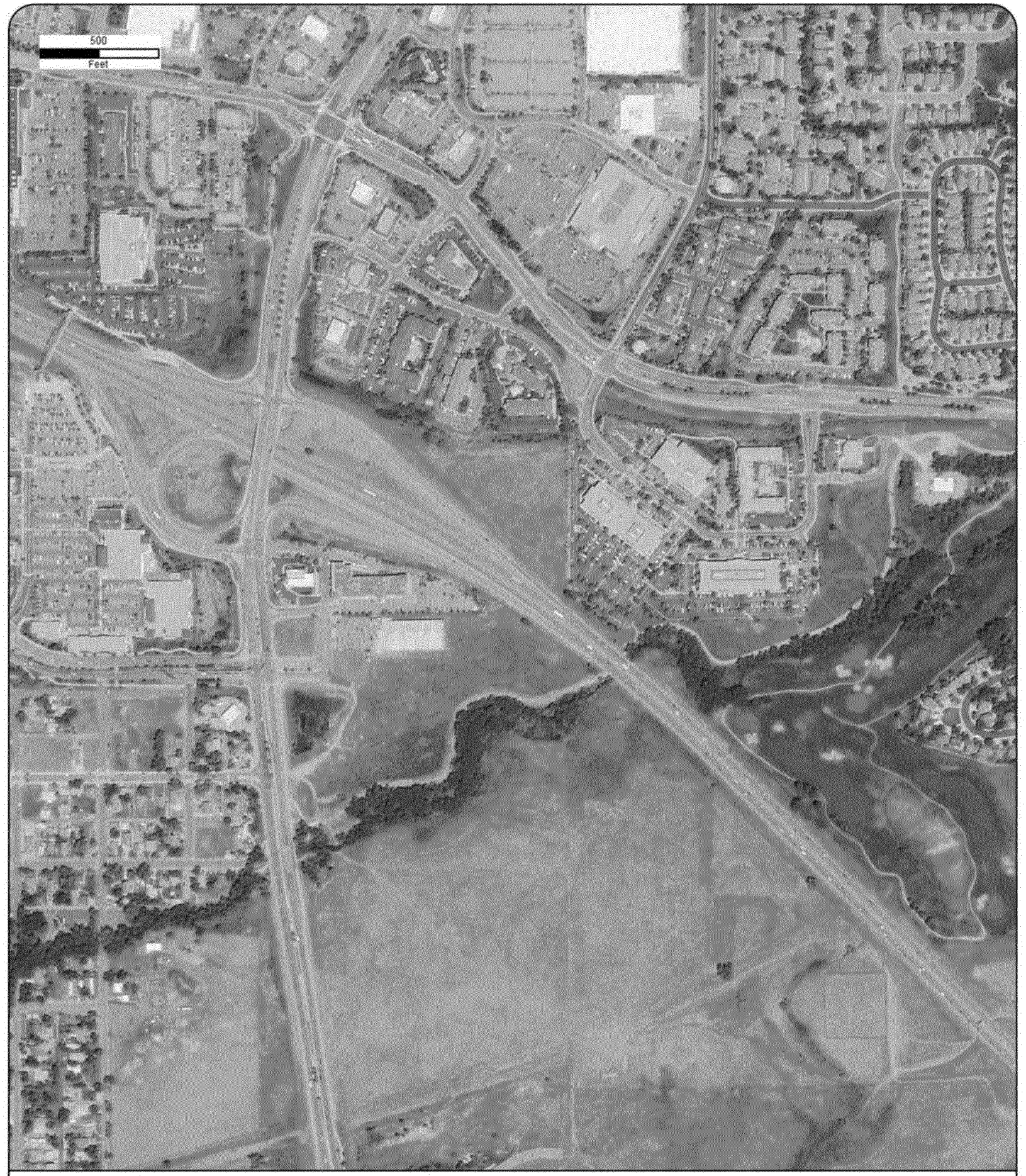
Order No: 23100400478

ERIS



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Source: USDA
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Order No: 23100400478

ERIS



Year: 2011
Source: USDA
Scale: 1" = 500'
Comment:

Address: Marshall Road and Coal Creek, Superior, CO
Approx Center: -105.1621161,39.95544221

Order No: 23100400478

ERIS



Year: 2009
Source: USDA
Scale: 1" = 500'
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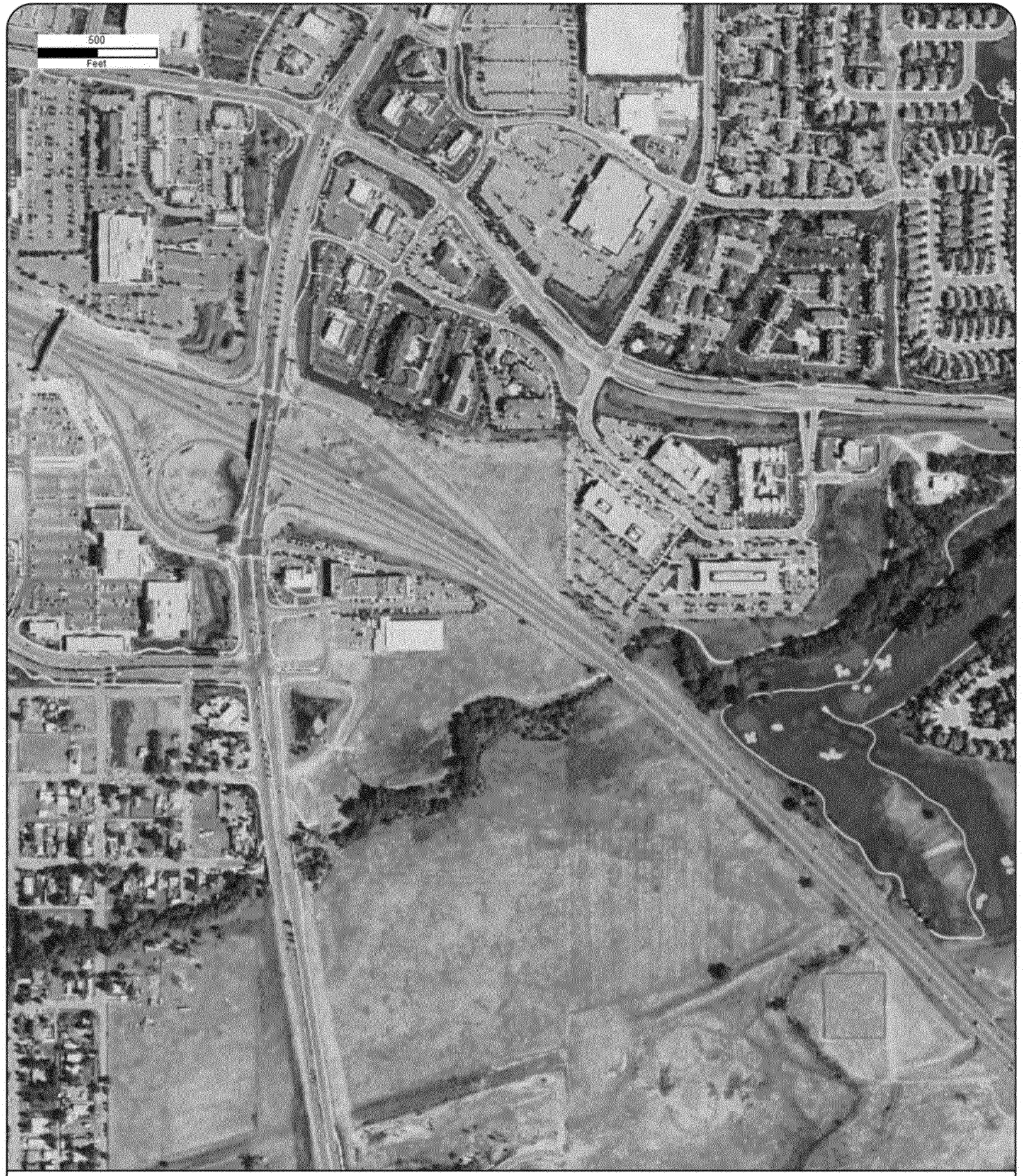
Order No: 23100400478

ERIS



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Source: USDA
Scale: 1" = 500'
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Order No: 23100400478

ERIS



Year: 2005
Source: USDA
Scale: 1" = 500'
Comment:

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Approx Center: -105.1621161,39.95544221

Order No: 23100400478

ERIS



Year: 2004
Source: USDA
Scale: 1" = 500'
Comment:

Address: Marshall Road and Coal Creek, Superior, CO
Approx Center: -105.1621161,39.95544221

Order No: 23100400478

ERIS



Year: 1999
Source: USGS
Scale: 1" = 500'
Comment:

Address: Marshall Road and Coal Creek, Superior, CO
Approx Center: -105.1621161,39.95544221

Order No: 23100400478

ERIS



Year: 1992
Source: NASA
Scale: 1" = 500'
Comment:

Address: Marshall Road and Coal Creek, Superior, CO
Approx Center: -105.1621161,39.95544221

Order No: 23100400478

ERIS



Year: 1988
Source: USGS
Scale: 1" = 500'
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Approx Center: -105.1621161,39.95544221

Order No: 23100400478

ERIS



Year: 1983
Source: USGS
Scale: 1" = 500'
Comment:

Address: Marshall Road and Coal Creek, Superior, CO
Approx Center: -105.1621161,39.95544221

Order No: 23100400478

ERIS



Year: 1978
Source: USGS
Scale: 1" = 500'
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Approx Center: -105.1621161,39.95544221

Order No: 23100400478

ERIS



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Source: USGS
Scale: 1" = 500'
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Order No: 23100400478

ERIS



Year: 1963
Source: USGS
Scale: 1" = 500'
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Approx Center: -105.1621161,39.95544221

Order No: 23100400478

ERIS



Year: 1953
Source: AMS
Scale: 1" = 500'
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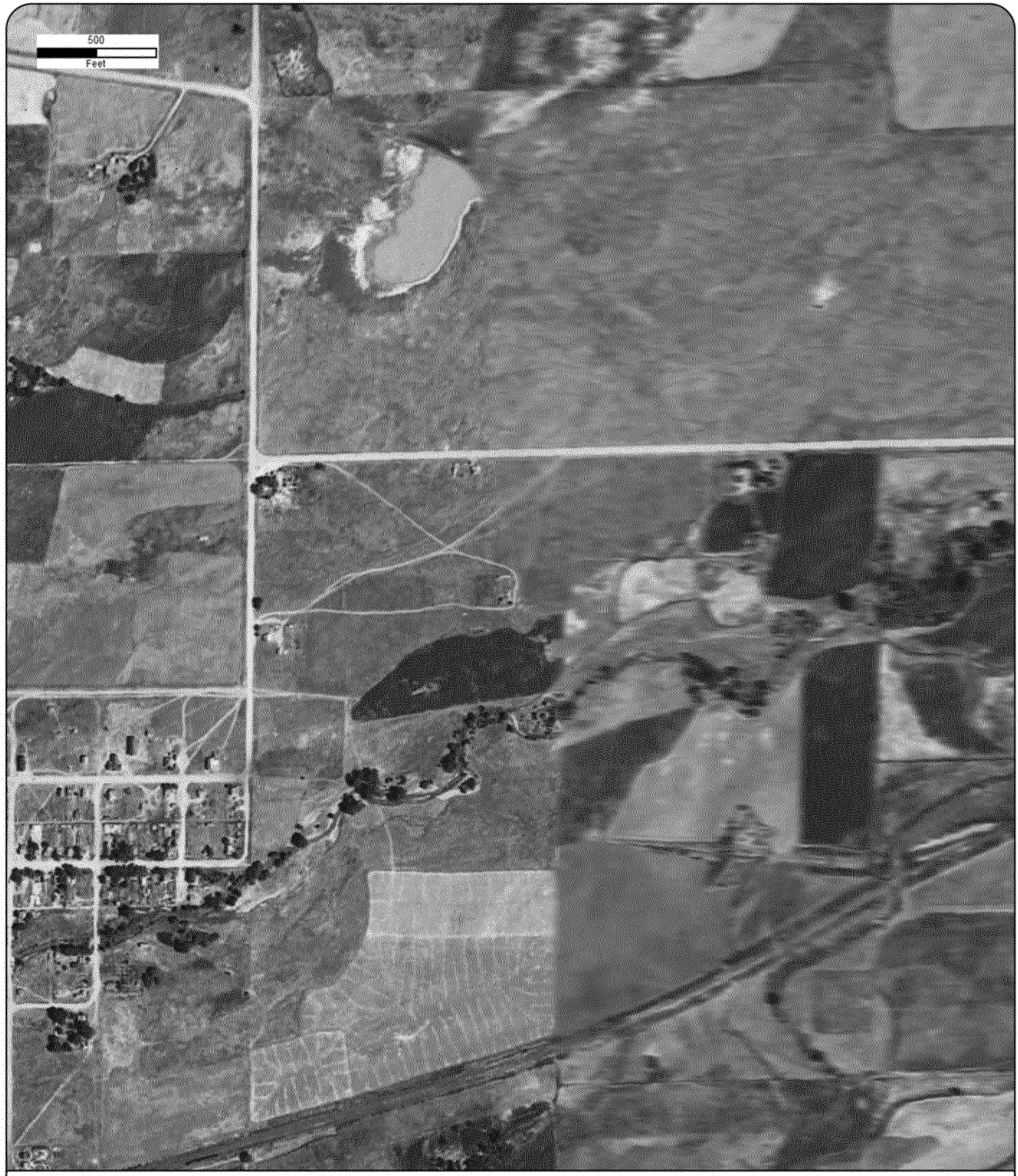
Approx Center: -105.1621161,39.95544221

Order No: 23100400478

ERIS



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Approx Center: -105.1621161,39.95544221

Order No: 23100400478

ERIS



Year: 1937
Source: ASCS
Scale: 1" = 500'
Comment:

Address: Marshall Road and Coal Creek, Superior, CO
Approx Center: -105.1621161,39.95544221

Order No: 23100400478

ERIS

APPENDIX C
PROPERTY RECONNAISSANCE PHOTOGRAPHS



View of typical site conditions. View to the east.



View of typical site conditions. View to the southeast.



View of a geotechnical boring near the northwest corner of the property. View to the east.



View of typical site conditions. View to the southwest.



View of typical site conditions. View to the northwest.



View of northwesterly adjoining paved parking lot. View to the northwest.



View of northerly adjoining utility building. View to the north.



View of the northeasterly, easterly, and southeasterly adjoining walking trail, followed by a drainage culvert and US Highway 36. View to the northeast.



View of the northeasterly, easterly, and southeasterly adjoining walking trail, followed by a drainage culvert and US Highway 36. View to the southeast.



View of the southerly and southwesterly adjoining Coal Creek Trail, followed by Coal Creek. View to the southeast.



View of westerly adjoining vacant lot surrounded by paved parking. View to the northwest.



View along the northern border of the subject site, shared with paved parking lot and a utility building. View to the east.



View along the eastern border of the subject site, shared with walking trail, followed by a drainage culvert and US Highway 36. View to the south.



View along the southern border of the subject site, shared with Coal Creek Trail, followed by Coal Creek. View to the west.



View along the western border of the subject site, shared with vacant lot surrounded by paved parking. View to the north.

APPENDIX D
REGULATORY DATABASE INFORMATION

DATABASE REPORT

Project Property:	*1.97-Acres* *Marshall Road and Coal Creek* *Superior CO 80027*
Project No:	*23-1-644*
Report Type:	*Database Report*
Order No:	*23100400478*
Requested by:	*Kumar & Associates, Inc.*
Date Completed:	*October 5, 2023*

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Executive Summary

Property Information:

Project Property:		*1.97-Acres* *Marshall Road and Coal Creek Superior CO 80027*
Project No:		*23-1-644*
Coordinates:		
	Latitude:	*39.95544221*
	Longitude:	*-105.1621161*
	UTM Northing:	*4,422,824.34*
	UTM Easting:	*486,152.83*
	UTM Zone:	*UTM Zone 13S*
Elevation:		*5,467 FT*

Order Information:

Order No:	*23100400478*
Date Requested:	*October 4, 2023*
Requested by:	*Kumar & Associates, Inc.*
Report Type:	*Database Report*

Historicals/Products:

Aerial Photographs	*Historical Aerials (with Project Boundaries)*
City Directory Search	*CD - 2 Street Search*
ERIS Xplorer	*ERIS Xplorer*
Excel Add-On	*Excel Add-On*
Fire Insurance Maps	*US Fire Insurance Maps*
Physical Setting Report (PSR)	*Physical Setting Report (PSR)*

Executive Summary: Report Summary

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
Standard Environmental Records								
Federal								
NPL	Y	1	0	0	0	0	0	0
PROPOSED NPL	Y	1	0	0	0	0	0	0
DELETED NPL	Y	0.5	0	0	0	0	-	0
SEMS	Y	0.5	0	0	0	0	-	0
ODI	Y	0.5	0	0	0	0	-	0
SEMS ARCHIVE	Y	0.5	0	0	0	0	-	0
CERCLIS	Y	0.5	0	0	0	0	-	0
IODI	Y	0.5	0	0	0	0	-	0
CERCLIS NFRAP	Y	0.5	0	0	0	0	-	0
CERCLIS LIENS	Y	PO	0	-	-	-	-	0
RCRA CORRACTS	Y	1	0	0	0	0	**1**	**1**
RCRA TSD	Y	0.5	0	0	0	0	-	0
RCRA LQG	Y	0.25	0	0	0	-	-	0
RCRA SQG	Y	0.25	0	0	0	-	-	0
RCRA VSQG	Y	0.25	0	0	0	-	-	0
RCRA NON GEN	Y	0.25	0	0	0	-	-	0
RCRA CONTROLS	Y	0.5	0	0	0	0	-	0
FED ENG	Y	0.5	0	0	0	0	-	0
FED INST	Y	0.5	0	0	0	0	-	0
LUCIS	Y	0.5	0	0	0	0	-	0
NPL IC	Y	0.5	0	0	0	0	-	0
ERNS 1982 TO 1986	Y	PO	0	-	-	-	-	0
ERNS 1987 TO 1989	Y	PO	0	-	-	-	-	0
ERNS	Y	PO	0	-	-	-	-	0
FED BROWNFIELDS	Y	0.5	0	0	0	0	-	0
FEMA UST	Y	0.25	0	0	0	-	-	0
FRP	Y	0.25	0	0	0	-	-	0

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
DELISTED FRP	Y	0.25	0	0	0	-	-	0
HIST GAS STATIONS	Y	0.25	0	0	0	-	-	0
REFN	Y	0.25	0	0	0	-	-	0
BULK TERMINAL	Y	0.25	0	0	0	-	-	0
SEMS LIEN	Y	PO	0	-	-	-	-	0
SUPERFUND ROD	Y	1	0	0	0	0	0	0
DOE FUSRAP	Y	1	0	0	0	0	0	0
State								
LANDFILL METHANE	Y	0.5	0	0	0	0	-	0
COVENANTS	Y	0.5	0	0	0	0	-	0
SUPERFUND NRD	Y	1	0	0	0	0	0	0
SHWS	Y	1	0	0	0	0	0	0
DELISTED SHWS	Y	1	0	0	0	0	0	0
SWF/LF	Y	0.5	0	0	**1**	0	-	**1**
HIST LF	Y	0.5	0	0	0	0	-	0
HIST LANDFILLS	Y	0.5	0	0	0	0	-	0
RECYCLING	Y	0.5	0	0	0	0	-	0
LST	Y	0.5	0	0	**1**	**2**	-	**3**
LUST TRUST	Y	0.5	0	0	0	**1**	-	**1**
DELISTED LST	Y	0.5	0	0	0	0	-	0
UST	Y	0.25	0	0	**1**	-	-	**1**
AST	Y	0.25	0	0	0	-	-	0
TANKS	Y	0.25	0	0	0	-	-	0
DTNK	Y	0.25	0	0	0	-	-	0
AUL	Y	0.5	0	0	0	0	-	0
VCP	Y	0.5	0	0	0	0	-	0
BROWNFIELDS	Y	0.5	0	0	0	0	-	0
Tribal								
INDIAN LUST	Y	0.5	0	0	0	0	-	0
INDIAN UST	Y	0.25	0	0	0	-	-	0
DELISTED INDIAN LST	Y	0.5	0	0	0	0	-	0
DELISTED INDIAN UST	Y	0.25	0	0	0	-	-	0
County	***No County databases were selected to be included in the search.***							

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
Additional Environmental Records								
Federal								
FINDS/FRS	Y	PO	0	**1**	-	-	-	**1**
TRIS	Y	PO	0	-	-	-	-	0
PFAS NPL	Y	0.5	0	0	0	0	-	0
PFAS FED SITES	Y	0.5	0	0	0	0	-	0
PFAS SSEHRI	Y	0.5	0	0	0	0	-	0
ERNS PFAS	Y	0.5	0	0	0	0	-	0
PFAS NPDES	Y	0.5	0	0	0	0	-	0
PFAS TRI	Y	0.5	0	0	0	0	-	0
PFAS WATER	Y	0.5	0	0	0	0	-	0
PFAS TSCA	Y	0.5	0	0	0	0	-	0
PFAS E-MANIFEST	Y	0.5	0	0	0	0	-	0
PFAS IND	Y	0.5	0	0	0	0	-	0
HMIRS	Y	0.125	0	0	-	-	-	0
NCDL	Y	0.125	0	0	-	-	-	0
TSCA	Y	0.125	0	0	-	-	-	0
HIST TSCA	Y	0.125	0	0	-	-	-	0
FTTS ADMIN	Y	PO	0	-	-	-	-	0
FTTS INSP	Y	PO	0	-	-	-	-	0
PRP	Y	PO	0	-	-	-	-	0
SCRD DRYCLEANER	Y	0.5	0	0	0	0	-	0
ICIS	Y	PO	0	-	-	-	-	0
FED DRYCLEANERS	Y	0.25	0	0	0	-	-	0
DELISTED FED DRY	Y	0.25	0	0	0	-	-	0
FUDS	Y	1	0	0	0	0	0	0
FUDS MRS	Y	1	0	0	0	0	0	0
FORMER NIKE	Y	1	0	0	0	0	0	0
PIPELINE INCIDENT	Y	PO	0	-	-	-	-	0
MLTS	Y	PO	0	-	-	-	-	0
HIST MLTS	Y	PO	0	-	-	-	-	0
MINES	Y	0.25	0	0	0	-	-	0
SMCRA	Y	1	0	0	0	0	0	0
MRDS	Y	1	0	0	0	**1**	0	**1**
LM SITES	Y	1	0	0	0	0	0	0

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
ALT FUELS	Y	0.25	0	**3**	**6**	-	-	**9**
CONSENT DECREES	Y	0.25	0	0	0	-	-	0
AFS	Y	PO	0	-	-	-	-	0
SSTS	Y	0.25	0	0	0	-	-	0
PCBT	Y	0.5	0	0	0	0	-	0
PCB	Y	0.5	0	0	0	0	-	0
State								
SPILLS	Y	0.125	0	**1**	-	-	-	**1**
OG SPILLS	Y	0.125	0	0	-	-	-	0
DRYCLEANERS	Y	0.25	0	0	0	-	-	0
DELISTED DRYCLEANERS	Y	0.25	0	0	0	-	-	0
AIR PERMITS	Y	0.125	0	**1**	-	-	-	**1**
PFAS	Y	0.5	0	0	0	0	-	0
ASBESTOS	Y	0.125	0	0	-	-	-	0
HAZ GEN	Y	0.125	0	0	-	-	-	0
PDES	Y	PO	0	**1**	-	-	-	**1**
HAZ TSD	Y	0.5	0	0	0	0	-	0
HAZ CORRACT	Y	1	0	0	0	0	0	0
UMTRA	Y	0.5	0	0	0	0	-	0
Tribal	***No Tribal additional environmental record sources available for this State.***							
County	***No County additional environmental databases were selected to be included in the search.***							
	Total:		0	**7**	**9**	**4**	**1**	**21**

**** PO – Property Only***
**** 'Property and adjoining properties' database search radii are set at 0.25 miles.***

Executive Summary: Site Report Summary - Project Property

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number

No records found in the selected databases for the project property.

Executive Summary: Site Report Summary - Surrounding Properties

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
1	FINDS/FRS	ELEMENT BY WESTIN SUPERIOR CO	1 S MARSHALL RD SUPERIOR CO 80027 ***Registry ID:*** 110070152559	W	0.02 / 92.13	13	20
1	ALT FUELS	Element Boulder Superior	1 S Marshall Rd Superior CO 80027 ***ID:*** 167442	W	0.02 / 92.13	13	20
1	PDES	Element Hotel	1 S Marshall Rd Superior CO 80027	W	0.02 / 92.13	13	21
2	ALT FUELS	TOS SUPERIOR PLAZA	Superior Plaza Way Superior CO 80027 ***ID:*** 224741	WNW	0.06 / 313.57	12	22
3	SPILLS		WB HWY 36 JUST E. OF MCCASLIN BLVD. BOULDER CO ***Case No:*** CO98-262	NW	0.06 / 315.70	12	23
3	AIR PERMITS	CASTLE ROCK CON-G6205	US 36 AT MCCASLIN BLVD MCCASLIN PLANTSITE SUPERIOR AREA CO 80027	NW	0.06 / 315.70	12	24
4	ALT FUELS	Superior, CO - Tesla Supercharger	2 South Marshall Road Superior CO 80027 ***ID:*** 167423	W	0.12 / 619.30	11	31
5	ALT FUELS	CABLELABS EV STATION 4	858 Coal Creek Cir Louisville CO 80027 ***ID:*** 182581	NE	0.13 / 685.53	-7	31
5	ALT FUELS	CABLELABS EV STATION 3	858 Coal Creek Cir Louisville CO 80027 ***ID:*** 182619	NE	0.13 / 685.53	-7	32
5	ALT FUELS	CABLELABS EV STATION 2	858 Coal Creek Cir Louisville CO 80027 ***ID:*** 182618	NE	0.13 / 685.53	-7	33
5	ALT FUELS	CABLELABS EV STATION 1	858 Coal Creek Cir Louisville CO 80027 ***ID:*** 182634	NE	0.13 / 685.53	-7	34
6	UST	My Goods Market #6529	191 S McCaslin Blvd Louisville 80027 CO ***Facility ID:*** 6779 ***Tank Tag | Tank Status:*** 6779-1 | Currently In Use, 6779-2 | Currently In Use	W	0.18 / 972.33	24	34

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
6	LST	My Goods Market #6529	191 S McCaslin Blvd Louisville 80027 CO ***Facility ID:*** 6779 ***Event ID*** **	** ***Status:*** 6007	Closed	W	0.18 / 972.33	24	37
7	ALT FUELS	TOS TOWN HALL1	Park Pl Superior CO 80027 ***ID:*** 87935		WSW	0.21 / 1,090.85	19	38
8	SWF/LF	TOWN OF SUPERIOR PUBLIC WORKS	124 E. Coal Creek Rd. Superior CO 80027		WSW	0.21 / 1,100.37	21	39
8	ALT FUELS	Town of Superior - Town Hall	124 E Coal Creek Dr Superior CO 80027 ***ID:*** 38523		WSW	0.21 / 1,100.37	21	39
9	MRDS	JENKINS	BOULDER COUNTY LOUISVILLE CO 80027 ***Dep ID:*** 10165874		W	0.29 / 1,526.27	33	40
10	LST	CDOT Superior	7979 Marshall Rd Louisville 80027 CO ***Facility ID:*** 7679 ***Event ID*** **	** ***Status:*** 518	Closed	WNW	0.38 / 2,021.23	40	41
10	LUST TRUST	CDOT Superior	7979 Marshall Rd Louisville CO 80027 ***Facility ID*** **|** ***Event ID*** **|** ***Release Date:*** 7679	518	5/12/1992	WNW	0.38 / 2,021.23	40	42
11	LST	My Goods Market #6526	520 S McCaslin Blvd Louisville 80027 CO ***Facility ID:*** 6701 ***Event ID*** **	** ***Status:*** Closed		N	0.48 / 2,510.63	7	42
12	RCRA CORRACTS	CONTINENTAL CLEANERS	305 MCCASLIN BLVD LOUISVILLE CO 80027 ***EPA Handler ID:*** COR000012211		N	0.77 / 4,074.24	6	43

Executive Summary: Summary by Data Source

Standard

Federal

RCRA CORRACTS - RCRA CORRACTS-Corrective Action

A search of the RCRA CORRACTS database, dated Jul 10, 2023 has found that there are 1 RCRA CORRACTS site(s) within approximately 1.00 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
CONTINENTAL CLEANERS	305 MCCASLIN BLVD LOUISVILLE CO 80027 ***EPA Handler ID**: COR000012211*	N	0.77 / 4,074.24	12

State

SWF/LF - Solid Waste Facilities and Landfills

A search of the SWF/LF database, dated May 4, 2023 has found that there are 1 SWF/LF site(s) within approximately 0.50 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
TOWN OF SUPERIOR PUBLIC WORKS	124 E. Coal Creek Rd. Superior CO 80027	WSW	0.21 / 1,100.37	8

LST - Leaking Storage Tanks

A search of the LST database, dated Jun 1, 2023 has found that there are 3 LST site(s) within approximately 0.50 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
My Goods Market #6529	191 S McCaslin Blvd Louisville 80027 CO ***Facility ID**: 6779* ***Event ID**	**Status**: 6007 | Closed*	W	0.18 / 972.33	6
CDOT Superior	7979 Marshall Rd Louisville 80027 CO ***Facility ID**: 7679* ***Event ID**	**Status**: 518 | Closed*	WNW	0.38 / 2,021.23	10
My Goods Market #6526	520 S McCaslin Blvd Louisville 80027 CO ***Facility ID**: 6701* ***Event ID**	**Status**: Closed*	N	0.48 / 2,510.63	11

LUST TRUST - LUST Trust Sites

A search of the LUST TRUST database, dated Jun 1, 2023 has found that there are 1 LUST TRUST site(s) within approximately 0.50

miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
CDOT Superior	7979 Marshall Rd Louisville CO 80027	WNW	0.38 / 2,021.23	10
	Facility ID **|** ***Event ID*** **|** ***Release Date***: *7679 | 518 | 5/12/1992*			

UST - Underground Storage Tanks

A search of the UST database, dated Jun 1, 2023 has found that there are 1 UST site(s) within approximately 0.25 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
My Goods Market #6529	191 S McCaslin Blvd Louisville 80027 CO	W	0.18 / 972.33	6
	Facility ID: *6779* ***Tank Tag*** **|** ***Tank Status***: *6779-1 | Currently In Use, 6779-2 | Currently In Use*			

Non Standard

Federal

FINDS/FRS - Facility Registry Service/Facility Index

A search of the FINDS/FRS database, dated Mar 2, 2023 has found that there are 1 FINDS/FRS site(s) within approximately 0.02 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
ELEMENT BY WESTIN SUPERIOR CO	1 S MARSHALL RD SUPERIOR CO 80027	W	0.02 / 92.13	1
	Registry ID: *110070152559*			

MRDS - Mineral Resource Data System

A search of the MRDS database, dated Mar 15, 2016 has found that there are 1 MRDS site(s) within approximately 1.00 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
JENKINS	BOULDER COUNTY LOUISVILLE CO 80027	W	0.29 / 1,526.27	9
	Dep ID: *10165874*			

ALT FUELS - Alternative Fueling Stations

A search of the ALT FUELS database, dated Aug 30, 2023 has found that there are 9 ALT FUELS site(s) within approximately 0.25 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Element Boulder Superior	1 S Marshall Rd Superior CO 80027	W	0.02 / 92.13	1
	ID: *167442*			

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
TOS SUPERIOR PLAZA	Superior Plaza Way Superior CO 80027 ***ID**: 224741*	WNW	0.06 / 313.57	2
Superior, CO - Tesla Supercharger	2 South Marshall Road Superior CO 80027 ***ID**: 167423*	W	0.12 / 619.30	4
TOS TOWN HALL1	Park Pl Superior CO 80027 ***ID**: 87935*	WSW	0.21 / 1,090.85	7
Town of Superior - Town Hall	124 E Coal Creek Dr Superior CO 80027 ***ID**: 38523*	WSW	0.21 / 1,100.37	8

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
CABLELABS EV STATION 3	858 Coal Creek Cir Louisville CO 80027 ***ID**: 182619*	NE	0.13 / 685.53	5
CABLELABS EV STATION 4	858 Coal Creek Cir Louisville CO 80027 ***ID**: 182581*	NE	0.13 / 685.53	5
CABLELABS EV STATION 1	858 Coal Creek Cir Louisville CO 80027 ***ID**: 182634*	NE	0.13 / 685.53	5
CABLELABS EV STATION 2	858 Coal Creek Cir Louisville CO 80027 ***ID**: 182618*	NE	0.13 / 685.53	5

State

SPILLS - Spills

A search of the SPILLS database, dated Apr 8, 2022 has found that there are 1 SPILLS site(s) within approximately 0.12 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
	WB HWY 36 JUST E. OF MCCASLIN BLVD. BOULDER CO ***Case No**: CO98-262*	NW	0.06 / 315.70	3

AIR PERMITS - Air Pollution Control Division Permitted Facilities

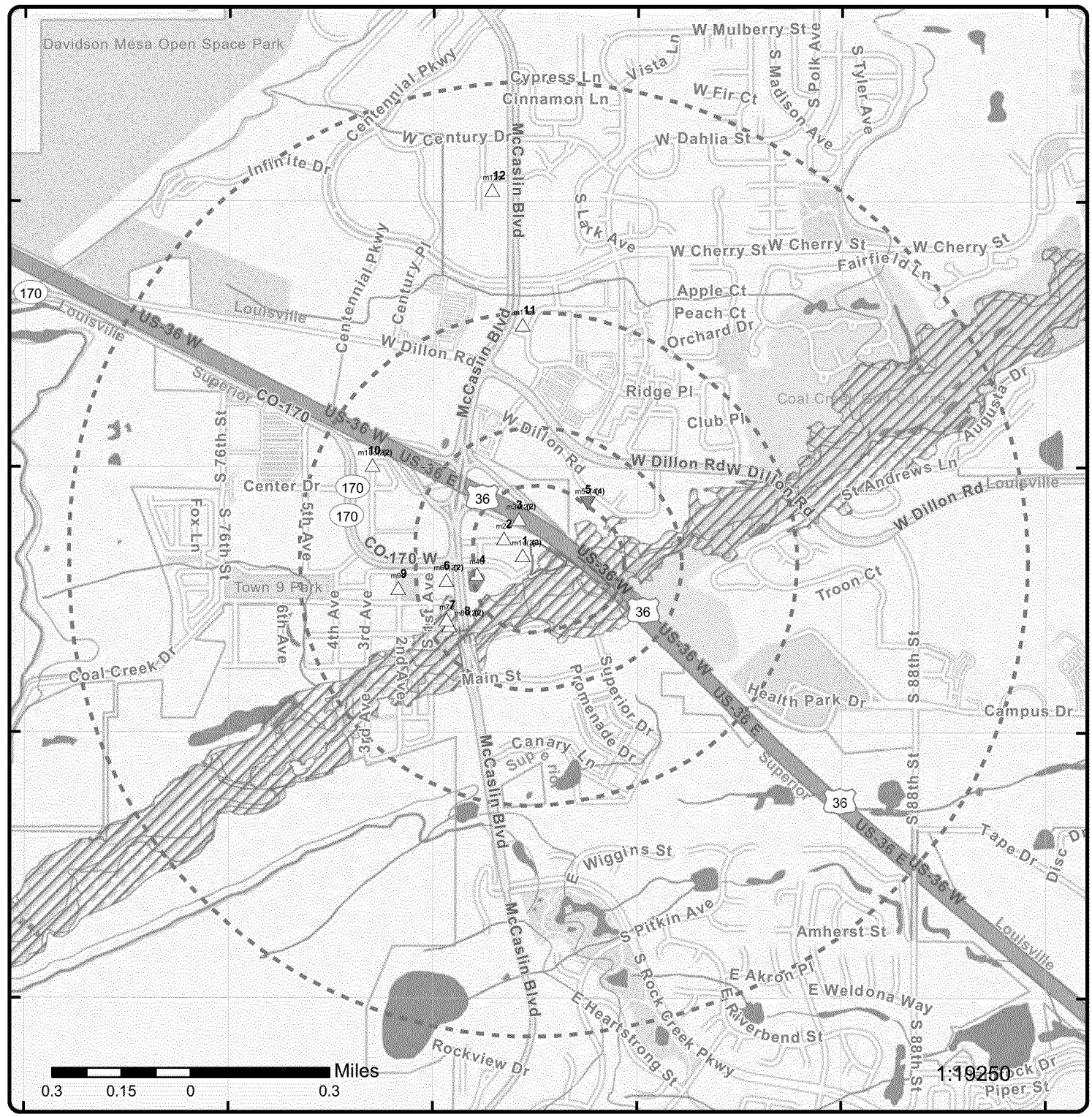
A search of the AIR PERMITS database, dated Feb 13, 2023 has found that there are 1 AIR PERMITS site(s) within approximately 0.12 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
CASTLE ROCK CON- G6205	US 36 AT MCCASLIN BLVD MCCASLIN PLANTSITE SUPERIOR AREA CO 80027	NW	0.06 / 315.70	3

PDES - Permitted Facilities Listing

A search of the PDES database, dated May 1, 2023 has found that there are 1 PDES site(s) within approximately 0.02 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Element Hotel	1 S Marshall Rd Superior CO 80027	W	0.02 / 92.13	1



Map: 1.0 Mile Radius

Order Number: 23100400478

Address: Marshall Road and Coal Creek, Superior, CO

- Project Property
- Buffer Outline
- Sites with Higher Elevation
- Sites with Same Elevation
- Sites with Lower Elevation
- Sites with Unknown Elevation
- Areas with Higher Elevation
- Areas with Same Elevation
- Areas with Lower Elevation
- Areas with Unknown Elevation
- Freeways; Highways
- Traffic Circle; Ramp
- Major & Minor Arterial
- Traffic Circle; Ramp
- Local Road
- Rail
- State
- Country
- National Wetland
- Indian Reserve Land
- Plume
- 100 Year Flood Zone
- 500 Year Flood Zone
- FWS Special Designation Areas
- National Priorities List (Active, Delisted, Proposed, Institutional Control)

Source: © 2021 ESRI StreetMap Premium

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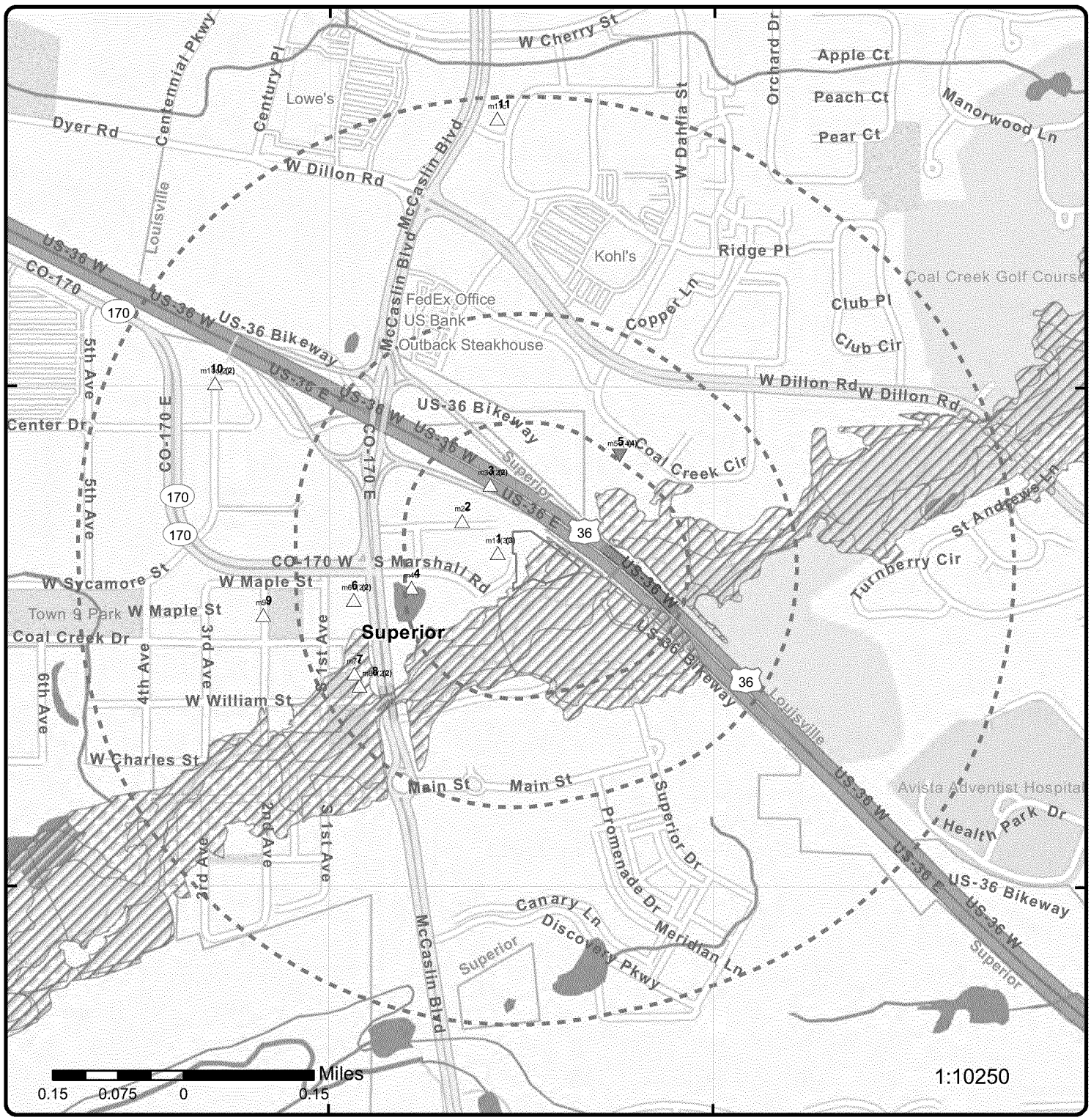

Map: 0.5 Mile Radius

Order Number: 23100400478

Address: Marshall Road and Coal Creek, Superior, CO

- Project Property
- Buffer Outline
- Sites with Higher Elevation
- Sites with Same Elevation
- Sites with Lower Elevation
- Sites with Unknown Elevation
- Areas with Higher Elevation
- Areas with Same Elevation
- Areas with Lower Elevation
- Areas with Unknown Elevation
- Freeways; Highways
- Traffic Circle; Ramp
- Major & Minor Arterial
- Traffic Circle; Ramp
- Local Road
- Rail
- State
- Country
- National Wetland
- Indian Reserve Land
- Plume
- 100 Year Flood Zone
- 500 Year Flood Zone
- FWS Special Designation Areas
- National Priorities List (Active, Delisted, Proposed, Institutional Control)

Source: © 2021 ESRI StreetMap Premium

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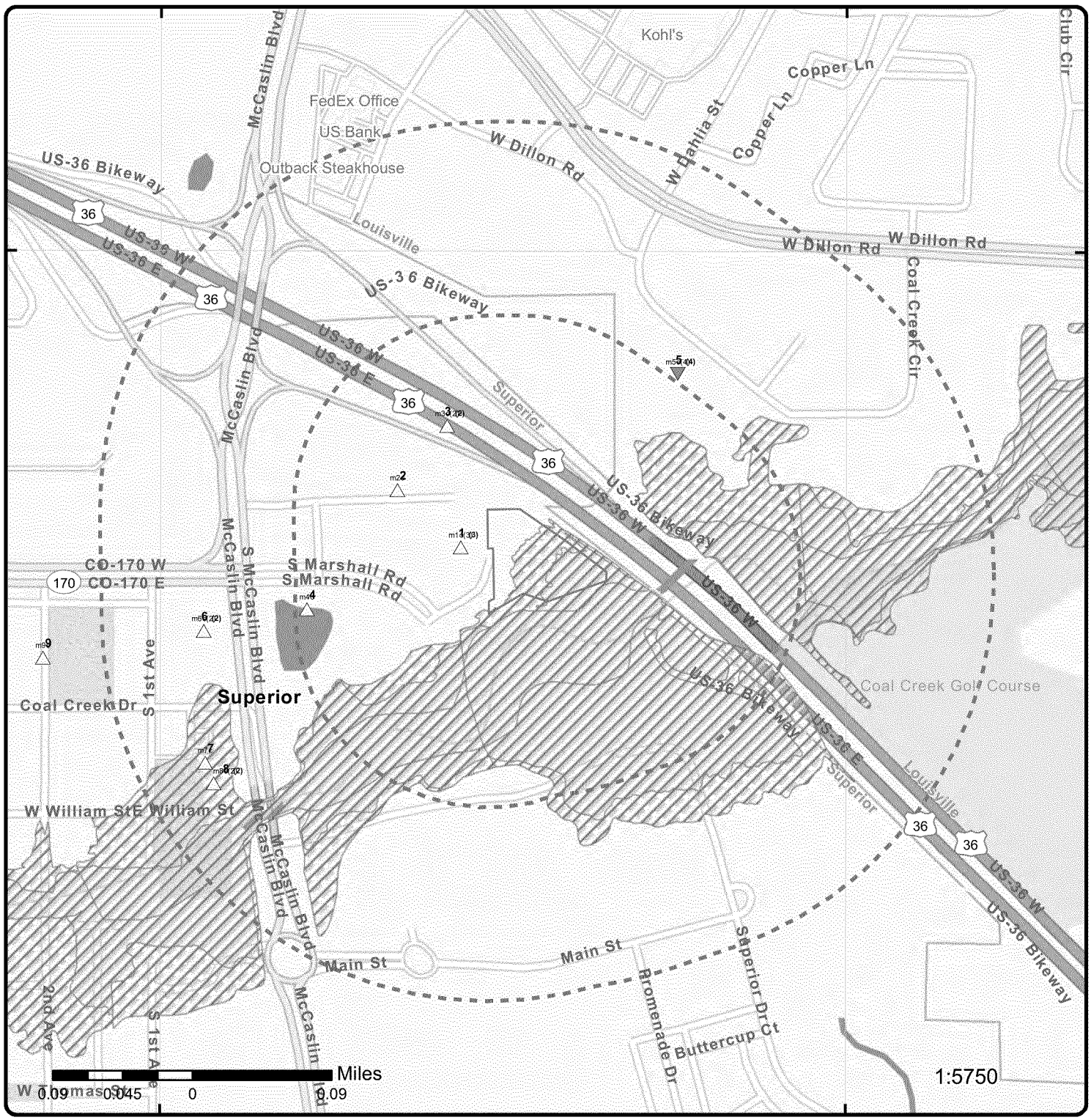

Map: 0.25 Mile Radius

Order Number: 23100400478

Address: Marshall Road and Coal Creek, Superior, CO

- Project Property
- Buffer Outline
- Sites with Higher Elevation
- Sites with Same Elevation
- Sites with Lower Elevation
- Sites with Unknown Elevation
- Areas with Higher Elevation
- Areas with Same Elevation
- Areas with Lower Elevation
- Areas with Unknown Elevation
- Freeways; Highways
- Traffic Circle; Ramp
- Major & Minor Arterial
- Traffic Circle; Ramp
- Local Road
- Rail
- State
- Country
- National Wetland
- Indian Reserve Land
- Plume
- 100 Year Flood Zone
- 500 Year Flood Zone
- FWS Special Designation Areas
- National Priorities List (Active, Delisted, Proposed, Institutional Control)

Source: © 2021 ESRI StreetMap Premium

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Aerial **Year: 2023**

Order Number: 23100400478

Address: Marshall Road and Coal Creek, Superior, CO

Source: ESRI World Imagery

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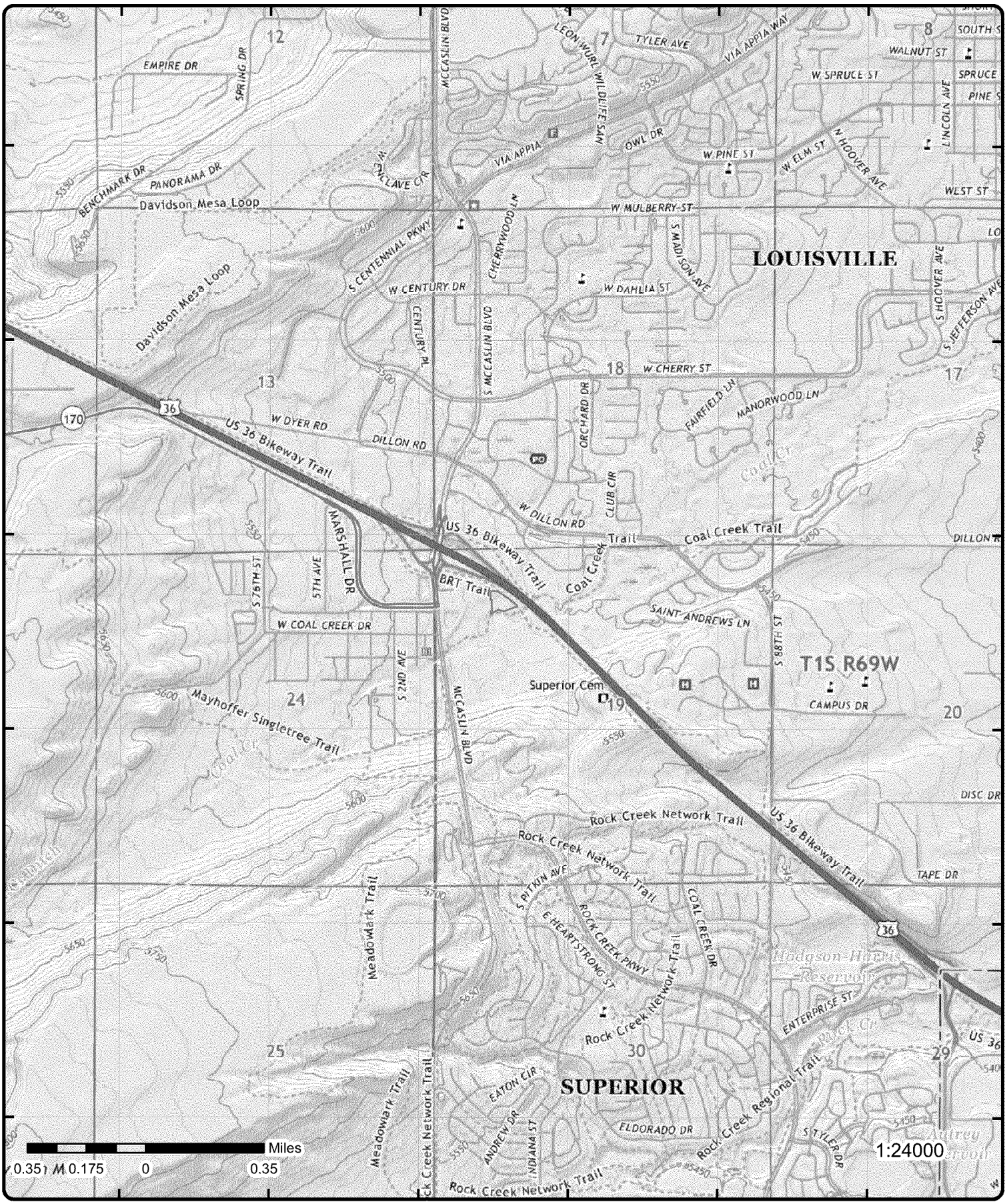

Topographic Map **Year: 2019**

Order Number: 23100400478

Address: Marshall Road and Coal Creek, CO

Quadrangle(s): Lafayette CO, Louisville CO

Source: USGS Topographic Map

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Detail Report

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
1	1 of 3	W	0.02 / 92.13	5,479.48 / 13	ELEMENT BY WESTIN SUPERIOR CO 1 S MARSHALL RD SUPERIOR CO 80027	FINDS/FRS

Registry ID:	110070152559
FIPS Code:	CO013
HUC Code:	10190005
Site Type Name:	STATIONARY
Location Description:	
Supplemental Location:	
Create Date:	05-JAN-18
Update Date:	
Interest Types:	ICIS-NPDES NON-MAJOR
SIC Codes:	7011
SIC Code Descriptions:	HOTELS AND MOTELS
NAICS Codes:	
NAICS Code Descriptions:	
Conveyor:	ICIS
Federal Facility Code:	
Federal Agency Name:	
Tribal Land Code:	
Tribal Land Name:	
Congressional Dist No:	02
Census Block Code:	080130606002001
EPA Region Code:	08
County Name:	BOULDER
US/Mexico Border Ind:	
Latitude:	39.955673
Longitude:	-105.163398
Reference Point:	CENTER OF A FACILITY OR STATION
Coord Collection Method:	GPS - UNSPECIFIED
Accuracy Value:	
Datum:	NAD83
Source:	
Facility Detail Rprt URL:	https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110070152559
Data Source:	Facility Registry Service - Single File
Program Acronyms:	

NPDES:COR03S013, NPDES:COR404533, NPDES:COR416327

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
1	2 of 3	W	0.02 / 92.13	5,479.48 / 13	Element Boulder Superior 1 S Marshall Rd Superior CO 80027	ALT FUELS

ID:	167442	**CNG Dispenser No:**	
Fuel Type Code:	ELEC: Electric	**CNG Site Renew Src:**	
Station Phone:	720-750-5757	**CNG Tot Compr Cap:**	
Expected Date:	2023-11-23	**CNG Storage Cap:**	
BD Blends:		**CNG Fill Type Code:**	
NG PSI:		**CNG PSI:**	
Federal Agency ID:		**CNG Vehicle Class:**	
Open Date:	2020-10-05	**LNG Site Renew Src:**	
Hydrogen is Retail:		**LNG Vehicle Class:**	
Federal Agency:		**LPG Nozzle Types:**	
Facility Type:	HOTEL	**Hydrogen Pressures:**	
Dt Last Confirmed:	2022-12-13	**Hydrogen Standards:**	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Updated at:	2023-02-14 15:54:11 UTC	**Latitude:**	39.955912
Access Code:	public	**Longitude:**	-105.16309
Access Detail Code:			
Groups with Access Code:	TEMPORARILY UNAVAILABLE (Public)		
Groups with Access Code Fr:	TEMPORAIREMENT SUSPENDU (Public)		
Fed Agency Name:			
Hydrogen Status Link:			
E85 Other Ethanol Blends:			
NPS Unit Name:			
Cards Accepted:			
CNG Statn Sells Renewable Na:			
LNG Statn Sells Renewable Na:			
Maximum Vehicle Class:	LD		
RD Blended With Biodiesel:			
RD Blends:			
RD Blends French:			
RD Maximum Biodiesel Level:			
Status:	Temporarily unavailable: The station is temporarily unavailable. See the "Expected Date" field for an anticipated open date.		
Owner Type Desc:	Privately owned		
E85 Blender Pump Desc:			
NG Fill Type Desc:			
NG Vehicle Class Desc:			
Geocode Status Desc:	The location is from a real GPS readout at the station.		
Group with Access Desc:	Temporarily unavailable. See the "Expected Date" field for an anticipated open date.(Publicly available to all customers.)		
LPG Primary Desc:			
Intersection Directions:			
Access Days Time:	24 hours daily; for customer use only; see front desk for access		
Restricted Access:	true		

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
1	3 of 3	W	0.02 / 92.13	5,479.48 / 13	**Element Hotel** **1 S Marshall Rd** **Superior CO 80027**	PDES

Permit ID:	COE010031	**SW Constr Activity:**	
Permit Status:	Effective	**SW Constr End Date:**	
Permit Sector:	Public and private utilities	**Permit SIC 1:**	782
Previous Permit ID:		**Permit SIC 2:**	
Regulation ID:		**Permit SIC 3:**	
Facility Name:	Element Hotel	**Permit SIC 4:**	
Facility Address:	1 S Marshall Rd	**Permittee:**	Elemental Hotel
Facility Address 2:		**Former Permittee:**	
Facility City:	Superior	**Activity Desc:**	
Facility State:	CO	**Issue Date:**	5/12/2021
Facility ZIP:	80027	**Effective Date:**	5/12/2021
Facility County:	Boulder	**Expiration Date:**	
Facility Latitude:	39.955287	**Permit Sector1:**	
Facility Longitude:	-105.162483	**Permit Sector2:**	
Facility SIC Code:		**Use category:**	Landscape irrigation-Unrestricted access
Facility Type:		**Termination Date:**	
Water Category:	2	**Issuing Org Type:**	
Immediate Water:		**App Received Date:**	4/20/2021
Receiving Water:		**Ct Status Start Date:**	
Stream Segment:		**Ct Status End Date:**	
Fee Category:	00-00	**Ct Status Reason:**	
Add Fee Category 1:		**Workplan Year:**	
Add Fee Category 2:		**UDF3:**	
Add Fee Category 3:			
General Permit Tye:	COE-Reuse user		
Compliance Tracking Status:			
SW Constr Start Date:			
Reuse Treater:	Superior Metropolitan District No 1		
Facility Class First:			
Facility Description:			
Fac Horizontal Coll. Method:			
Facility ICIS Ownership Type:			

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Associated Pot W: Superior Metropolitan District No 1
SW Constr Total Acres:
Reuse Treater ID: COE010000
SW Constr Disturb Acres:
Facility Class Second:
Facility Reference Point:
Major Minor: Minor
Major River Basin:
Total App on Average Flow No:
Total App Design Flow No:
Apprvd for Eltrnc Sub:

Facility Contact

Facility Contact Org: Elemental Hotel
Facility Contact First Name: Nick
Facility Contact Last Name: Evans
Facility Contact Title: Mgr
Facility Contact Address: 1 S Marshall Rd
Facility Contact City: Superior
Facility Contact State: CO
Facility Contact ZIP code: 80027
Facility Contact Phone: 720-750-5757
Facility Contact Email: nickolasevans@interstatehotels.com

Legal

Legal First Name: Nick
Legal Last Name: Evans
Legal Title: Mgr
Legal Address: 1 S Marshall Rd
Legal City: Superior
Legal State: CO
Legal ZIP Code: 80027
Legal Phone: 720-750-5757
Legal Email: nickolasevans@interstatehotels.com
Legal Country: USA

2	1 of 1	WNW	0.06 / 313.57	5,478.63 / 12	TOS SUPERIOR PLAZA Superior Plaza Way Superior CO 80027	ALT FUELS

ID: 224741
Fuel Type Code: ELEC: Electric
Station Phone: 888-758-4389
Expected Date:
BD Blends:
NG PSI:
Federal Agency ID:
Open Date: 2022-08-03
Hydrogen is Retail:
Federal Agency:
Facility Type:
Dt Last Confirmed: 2023-08-30
Updated at: 2023-08-30 00:48:14 UTC
Access Code: public
Access Detail Code:
Groups with Access Code: Public
Groups with Access Code Fr: Public
Fed Agency Name:
Hydrogen Status Link:
E85 Other Ethanol Blends:
NPS Unit Name:
Cards Accepted:
CNG Statn Sells Renewable Na:
LNG Statn Sells Renewable Na:

CNG Dispenser No:
CNG Site Renew Src:
CNG Tot Compr Cap:
CNG Storage Cap:
CNG Fill Type Code:
CNG PSI:
CNG Vehicle Class:
LNG Site Renew Src:
LNG Vehicle Class:
LPG Nozzle Types:
Hydrogen Pressures:
Hydrogen Standards:
Latitude: 39.956098
Longitude: -105.163786

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Maximum Vehicle Class:	
RD Blended With Biodiesel:	
RD Blends:	
RD Blends French:	
RD Maximum Biodiesel Level:	
Status:	Open: The station is open.
Owner Type Desc:	
E85 Blender Pump Desc:	
NG Fill Type Desc:	
NG Vehicle Class Desc:	
Geocode Status Desc:	The location is from a real GPS readout at the station.
Group with Access Desc:	Publicly available to all customers.
LPG Primary Desc:	
Intersection Directions:	
Access Days Time:	24 hours daily
Restricted Access:	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	1 of 2	NW	0.06 / 315.70	5,478.23 / 12	WB HWY 36 JUST E. OF MCCASLIN BLVD. BOULDER CO	SPILLS

Case No:	CO98-262	**H2O Unit Measure 2:**	
Main ID:		**Quantity 3:**	0
NRC No:		**Unit Measure 3:**	U
Dt of Spl or Rel:	8/10/1998	**H2O quantity 3:**	0
Event Time:	11:32:00 PM	**H2O Unit Measure 3:**	
1st Rep Event Dt:	8/10/1998	**Cause:**	T
Date Reported:	8/11/1998	**Death:**	0
Time Reported:	8:58:00 AM	**Injury:**	0
Date Entered:	8/25/1998	**Evacuation:**	
Time Entered:	11:29:54 AM	**Evacuation No:**	0
Land:	TRUE	**PRP City:**	
Air:	FALSE	**PRP County:**	
Surface Water:	FALSE	**PRP State:**	
Ground Water:	FALSE	**PRP Zip:**	
Material Type:	HAZARDOUS	**PRP Phone:**	-
Quantity 1:	0	**PRP Extension:**	
Unit Measure 1:	U	**Mile Marker:**	
H2O Quantity 1:	0	**Who Took Report:**	JONES, JANET
H2O Unit Measure 1:		**Fixed Facility:**	FALSE
Material 2:	BERYLLIUM	**Event County:**	BOULDER
Quantity 2:	0	**Latitude:**	0
Unit Measure 2:	U	**Longitude:**	0
H2O Quantity 2:	0		

Source Desc:	
Source:	H
Source Type:	COMMERCIAL BUS
Medium:	LAND
Waterway:	
Material 1:	CESIUM 137
Material 3:	AMERICIUM
PRP:	
PRP Contact:	
PRP Street:	
PRP Fax:	
Responder 1:	
Responder 2:	
Responder 3:	
Response Comments:	CDOT & RTD SURVEYED AREA. METER WAS TRANSPORTED BACK TO GROUND ENG (SUB-CONTRACTOR FOR CDOT). BUS IS PARKED @ 1900 31ST ST. GROUND ENG USED A MONITORING INSTRUMENT TO SURVEY THE AREA.
Notified Name:	
Additional Comments:	
Comments:	RTD BUS MISSED CONES IN CONSTRUCTION AREA AND RAN OVER A SURVEY DENSITY METERCONTAINING CESIUM 137,
Cause Info:	BUS RAN OVER SURVEY METER **Note: Many records provided by the department have a truncated [Cause

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Info] field.

Action:

3	2 of 2	NW	0.06 / 315.70	5,478.23 / 12	CASTLE ROCK CON- G6205 US 36 AT MCCASLIN BLVD MCCASLIN PLANTSITE SUPERIOR AREA CO 80027	AIR PERMITS

APCD Site ID:	777-3509	**Sip Status Co:**	FALSE
Site ID:	3509	**Sip Status O3:**	FALSE
Fed Facility ID:	15319811	**Site Cont Company:**	
County:	PORTABLE SOURCE	**Descriptn Category:**	PC
Addr County Name:	BOULDER	**Site First Name:**	RALPH
Address Type:	PORTABLE	**Site Full Name:**	RALPH BELL
Air Program:	B	**Site Last Name:**	BELL
Air Acid Precip:		**Site Title:**	
Class Apen Exempt:		**Site Phone:**	(303)688-6611
Class CFC:		**Site Fax:**	
Class Condensate :		**No Employees:**	0.0
Class Fesop:		**Site Geocode Date:**	10-Dec-2014 15:00:39
Class Mact:		**Pt Lin Are:**	P
Class Neshap:		**Src Scale:**	2
Class Non Fed Rpt:		**Verification:**	
NSPS Federal:		**NAICS Prime:**	212321
Class NSPS State:		**NAICS Second:**	
Class NSR:		**Sic Prime:**	1442
Class PSD:		**Sic Second:**	
Sip Fed Jd:		**Site Operat Stat:**	O
Class Sip Federal:	B	**Owner Cust:**	9920106830
Air Title:		**Method Code:**	I2
Class Tribal:		**Site Lat:**	395728.3226
CMS Category:		**Site Long:**	1050952.1385
CMS Frequency:	0	**UTM Horiz:**	485.951
Cpts Bogus Ind:	FALSE	**UTM Vert:**	4423.093
Govt Fac Classifi:	0	**UTM Zone:**	13.0
Hap Classifi:	NONE	**Vert Dat:**	1
NAA NSR Classifi:	NONE	**Vert Meas:**	1671.16
Op Classification:	NONE	**Vert Meas Acc:**	8.0
Property Area:	0.0	**Vert Meth Coll:**	OT
PSD Classifi:	NONE	**Site Horiz Dat:**	2
City FIPS Code:		**Acc Units:**	METERS
State FIPS:	08	**Accuracy:**	50.0
County FIPS:	777	**Date Coll:**	10-Dec-2014 15:00:39
Addr County FIPS:	013		

Permit App: CASTLE ROCK CON- G6205
SIC Sec Desc:
Site Email:
SIC Pri Desc: MINING AND QUARRYING OF NONMETALLIC MINERALS - Construction Sand and Gravel
Site Description: PORTABLE DIESEL GENERATOR
Site LL Description: Elevation source: National Elevaton Dataset 1/3 Arc Second

Sip Prog1:		**Sip Prog3 Area:**	
Sip Prog1 Area:		**Sip Prog4:**	
Sip Prog2:		**Sip Prog4 Area:**	
Sip Prog2 Area:		**Sip Prog5:**	
Sip Prog3:			

Site Owner

Owner Bill Cycle:	3	**Mail Fax:**	(303)688-6685
Owner Description:	CONSTRUCTION	**Mail Full Name:**	RALPH BELL
Mail Addr 1:	6374 S RACINE CIRCLE	**Mail First Name:**	RALPH
Mail Addr 2:		**Mail Last Name:**	BELL
Mail Type:	STREET	**Mail Phone:**	(303)688-6611
Mail City:	CENTENNIAL	**Mail Province:**	
Mail City Cd:		**Mail State:**	08

Mail Company:		**Mail Title:**	
Mail Country Cd:		**Mail Zip:**	80111
Owner Name:	CASTLE ROCK CONSTRUCTION CO. OF COLO. LLC		
Owner Mail Email:	rbell@crccllc.com		

Site Pollutant

Site ID:	3509	**Pk Co:**	
State FIPS:	08	**Pk Co Mc:**	Z
County FIPS:	777	**Pk Co Re:**	
Data Year:	2010	**Pk Co Re Mc:**	Z
Inventory Year:	2023	**Pk Co Re Units:**	PD
Inventory Year 2:	23	**Pk Co Unc:**	
Pollutant Code:	PM10	**Pk Co Units:**	PD
Is Colorado Hap:	FALSE	**Pk O3:**	
Is Criteria:	TRUE	**Pk O3 Mc:**	Z
Is EPCRA Only:	FALSE	**Pk O3 Re:**	
Is Hap:	FALSE	**Pk O3 Re Mc:**	Z
NEI Pollutant ID:	PM10-PRI	**Pk O3 Re Units:**	PD
Ozone Depleting:	FALSE	**Pk O3 Unc:**	
Estim:	0.072003	**Pk O3 Units:**	PD
Estim Mc:	Z	**EMIS Pot:**	
Estim Unc:	0.072003	**Pot Mc:**	
Estim Units:	TY	**Pot Unc:**	
Limit1:		**Pot Unc Mc:**	
Limit1 Mc:		**Pot Unc Units:**	
Limit1 Units:		**Pot Units:**	
Limit2:		**Re Estim:**	0.0
Limit2 Mc:		**Re Estim Mc:**	Z
Limit2 Units:		**Re ESTIM Units:**	TY
Pollutant Name:	PARTICULATE MATTER < 10 UM		

Site Pollutant

Site ID:	3509	**Pk Co:**	
State FIPS:	08	**Pk Co Mc:**	Z
County FIPS:	777	**Pk Co Re:**	
Data Year:	2010	**Pk Co Re Mc:**	Z
Inventory Year:	2023	**Pk Co Re Units:**	PD
Inventory Year 2:	23	**Pk Co Unc:**	
Pollutant Code:	PT	**Pk Co Units:**	PD
Is Colorado Hap:	FALSE	**Pk O3:**	
Is Criteria:	TRUE	**Pk O3 Mc:**	Z
Is EPCRA Only:	FALSE	**Pk O3 Re:**	
Is Hap:	FALSE	**Pk O3 Re Mc:**	Z
NEI Pollutant ID:		**Pk O3 Re Units:**	PD
Ozone Depleting:	FALSE	**Pk O3 Unc:**	
Estim:	0.072003	**Pk O3 Units:**	PD
Estim Mc:	Z	**EMIS Pot:**	
Estim Unc:	0.072003	**Pot Mc:**	
Estim Units:	TY	**Pot Unc:**	
Limit1:		**Pot Unc Mc:**	
Limit1 Mc:		**Pot Unc Units:**	
Limit1 Units:		**Pot Units:**	
Limit2:		**Re Estim:**	0.0
Limit2 Mc:		**Re Estim Mc:**	Z
Limit2 Units:		**Re ESTIM Units:**	TY
Pollutant Name:	TOTAL PARTICULATE MATTER		

Site Pollutant

Site ID:	3509	**Pk Co:**	
State FIPS:	08	**Pk Co Mc:**	Z
County FIPS:	777	**Pk Co Re:**	
Data Year:	2010	**Pk Co Re Mc:**	Z

Inventory Year:	2023	**Pk Co Re Units:**	PD
Inventory Year 2:	23	**Pk Co Unc:**	
Pollutant Code:	PM2.5	**Pk Co Units:**	PD
Is Colorado Hap:	FALSE	**Pk O3:**	
Is Criteria:	TRUE	**Pk O3 Mc:**	Z
Is EPCRA Only:	FALSE	**Pk O3 Re:**	
Is Hap:	FALSE	**Pk O3 Re Mc:**	Z
NEI Pollutant ID:	PM25-PRI	**Pk O3 Re Units:**	PD
Ozone Depleting:	FALSE	**Pk O3 Unc:**	
Estim:	0.072003	**Pk O3 Units:**	PD
Estim Mc:	Z	**EMIS Pot:**	
Estim Unc:	0.072003	**Pot Mc:**	
Estim Units:	TY	**Pot Unc:**	
Limit1:		**Pot Unc Mc:**	
Limit1 Mc:		**Pot Unc Units:**	
Limit1 Units:		**Pot Units:**	
Limit2:		**Re Estim:**	0.0
Limit2 Mc:		**Re Estim Mc:**	Z
Limit2 Units:		**Re ESTIM Units:**	TY
Pollutant Name:	PARTICULATE MATTER < 2.5 UM		

Site Pollutant

Site ID:	3509	**Pk Co:**	
State FIPS:	08	**Pk Co Mc:**	Z
County FIPS:	777	**Pk Co Re:**	
Data Year:	2010	**Pk Co Re Mc:**	Z
Inventory Year:	2023	**Pk Co Re Units:**	PD
Inventory Year 2:	23	**Pk Co Unc:**	
Pollutant Code:	VOC	**Pk Co Units:**	PD
Is Colorado Hap:	FALSE	**Pk O3:**	
Is Criteria:	TRUE	**Pk O3 Mc:**	Z
Is EPCRA Only:	FALSE	**Pk O3 Re:**	
Is Hap:	FALSE	**Pk O3 Re Mc:**	Z
NEI Pollutant ID:	VOC	**Pk O3 Re Units:**	PD
Ozone Depleting:	FALSE	**Pk O3 Unc:**	
Estim:	0.032999	**Pk O3 Units:**	PD
Estim Mc:	Z	**EMIS Pot:**	
Estim Unc:	0.032999	**Pot Mc:**	
Estim Units:	TY	**Pot Unc:**	
Limit1:		**Pot Unc Mc:**	
Limit1 Mc:		**Pot Unc Units:**	
Limit1 Units:		**Pot Units:**	
Limit2:		**Re Estim:**	0.0
Limit2 Mc:		**Re Estim Mc:**	Z
Limit2 Units:		**Re ESTIM Units:**	TY
Pollutant Name:	VOLATILE ORGANIC COMPOUNDS		

Site Pollutant

Site ID:	3509	**Pk Co:**	
State FIPS:	08	**Pk Co Mc:**	Z
County FIPS:	777	**Pk Co Re:**	
Data Year:	2010	**Pk Co Re Mc:**	Z
Inventory Year:	2023	**Pk Co Re Units:**	PD
Inventory Year 2:	23	**Pk Co Unc:**	
Pollutant Code:	SO2	**Pk Co Units:**	PD
Is Colorado Hap:	FALSE	**Pk O3:**	
Is Criteria:	TRUE	**Pk O3 Mc:**	Z
Is EPCRA Only:	FALSE	**Pk O3 Re:**	
Is Hap:	FALSE	**Pk O3 Re Mc:**	Z
NEI Pollutant ID:	SO2	**Pk O3 Re Units:**	PD
Ozone Depleting:	FALSE	**Pk O3 Unc:**	
Estim:	0.273157	**Pk O3 Units:**	PD
Estim Mc:	Z	**EMIS Pot:**	
Estim Unc:	0.273157	**Pot Mc:**	
Estim Units:	TY	**Pot Unc:**	

Limit1:		***Pot Unc Mc:***	
Limit1 Mc:		***Pot Unc Units:***	
Limit1 Units:		***Pot Units:***	
Limit2:		***Re Estim:***	0.0
Limit2 Mc:		***Re Estim Mc:***	Z
Limit2 Units:		***Re ESTIM Units:***	TY
Pollutant Name:	SULFUR DIOXIDE		

Site Pollutant

Site ID:	3509	***Pk Co:***	
State FIPS:	08	***Pk Co Mc:***	Z
County FIPS:	777	***Pk Co Re:***	
Data Year:	2010	***Pk Co Re Mc:***	Z
Inventory Year:	2023	***Pk Co Re Units:***	PD
Inventory Year 2:	23	***Pk Co Unc:***	
Pollutant Code:	CO	***Pk Co Units:***	PD
Is Colorado Hap:	FALSE	***Pk O3:***	
Is Criteria:	TRUE	***Pk O3 Mc:***	Z
Is EPCRA Only:	FALSE	***Pk O3 Re:***	
Is Hap:	FALSE	***Pk O3 Re Mc:***	Z
NEI Pollutant ID:	CO	***Pk O3 Re Units:***	PD
Ozone Depleting:	FALSE	***Pk O3 Unc:***	
Estim:	0.619846	***Pk O3 Units:***	PD
Estim Mc:	Z	***EMIS Pot:***	
Estim Unc:	0.619846	***Pot Mc:***	
Estim Units:	TY	***Pot Unc:***	
Limit1:		***Pot Unc Mc:***	
Limit1 Mc:		***Pot Unc Units:***	
Limit1 Units:		***Pot Units:***	
Limit2:		***Re Estim:***	0.0
Limit2 Mc:		***Re Estim Mc:***	Z
Limit2 Units:		***Re ESTIM Units:***	TY
Pollutant Name:	CARBON MONOXIDE		

Site Pollutant

Site ID:	3509	***Pk Co:***	
State FIPS:	08	***Pk Co Mc:***	Z
County FIPS:	777	***Pk Co Re:***	
Data Year:	2010	***Pk Co Re Mc:***	Z
Inventory Year:	2023	***Pk Co Re Units:***	PD
Inventory Year 2:	23	***Pk Co Unc:***	
Pollutant Code:	NOX	***Pk Co Units:***	PD
Is Colorado Hap:	FALSE	***Pk O3:***	
Is Criteria:	TRUE	***Pk O3 Mc:***	Z
Is EPCRA Only:	FALSE	***Pk O3 Re:***	
Is Hap:	FALSE	***Pk O3 Re Mc:***	Z
NEI Pollutant ID:	NOX	***Pk O3 Re Units:***	PD
Ozone Depleting:	FALSE	***Pk O3 Unc:***	
Estim:	2.646031	***Pk O3 Units:***	PD
Estim Mc:	Z	***EMIS Pot:***	
Estim Unc:	2.646031	***Pot Mc:***	
Estim Units:	TY	***Pot Unc:***	
Limit1:		***Pot Unc Mc:***	
Limit1 Mc:		***Pot Unc Units:***	
Limit1 Units:		***Pot Units:***	
Limit2:		***Re Estim:***	0.0
Limit2 Mc:		***Re Estim Mc:***	Z
Limit2 Units:		***Re ESTIM Units:***	TY
Pollutant Name:	NITROGEN OXIDES		

Stack

Site ID:	3509	***Plume Height:***	30

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Stack ID:	001	**Rough Terrain Ind:**	
State FIPS:	08	**Diameter:**	0.5
County FIPS:	777	**Diameter Meter:**	0.15
Data Year:	2010	**Geo Origin:**	plant
Inventory Year:	2023	**Height:**	12.0
Inventory Year 2:	23	**Height Meter:**	4.0
Apcd Stack ID:	777-3509-S001	**Horiz Dat:**	2
Cem Recorder Flag:		**Lining Code:**	
Distance:		**Acc Units:**	4
Exit Gas Flow Rate:	1925.0	**Accuracy:**	50.0
Exit Gas Temp:	883.0	**Method Code:**	I2
Exit Gas Kelvin:	746.0	**Pt Lin Area:**	P
Gas Velocity:	163.39999389648438	**Src Scale:**	2
Gas Meters Sec:	49.8	**Latitude:**	395728.3226
Bldg Height:	0	**Longitude:**	1050952.1385
Bldg Length:	0	**Type Code:**	W
Bldg Width:	0	**UTM Horiz:**	485.951
Stack Height:	0	**UTM Vert:**	4423.093
NEI Em Rls Pt Typ:	5	**Vert Meas:**	1671.16
NEI Exit Gas Flow:	32.0	**UTM Zone:**	13.0
NEI Horiz Mc:	019	**X Coord:**	-105.16448291666667
NEI Ref Pt Code:	105	**Y Coord:**	39.95786738888889
Emission Release Desc:	CATERPILLAR DIESEL ENGINE		
Description:	Elevation source: National Elevaton Dataset 1/3 Arc Second		
Description Category:	PC		
Stack Type:	A VERTICAL STACK WITH A WEATHER CAP OR SIMILAR OBSTRUC. IN EXHAUST STREAM		

Stack Pollutant

Site ID:	3509	**Pk Co:**	
Stack ID:	001	**Pk Co Mc:**	Z
State Fips:	08	**Pk Co Re:**	
County Fip:	777	**Pk Co Re Mc:**	Z
Data Year:	2010	**Pk Co Re Units:**	PD
Inventory Year:	2023	**Pk Co Unc:**	
Inventory Year 2:	23	**Pk Co Units:**	PD
Pollutant Code:	CO	**Pk O3:**	
Is Colorado Hap:	FALSE	**Pk O3 Mc:**	Z
Is Criteria:	TRUE	**Pk O3 Re:**	
Is Epcra Only:	FALSE	**Pk O3 Re Mc:**	Z
Is Hap:	FALSE	**Pk O3 Re Units:**	PD
Ozone Depleting:	FALSE	**Pk O3 Unc:**	
Estim:	0.619846	**Pk O3 Units:**	PD
Estim Mc:	Z	**Pot:**	
Estim Unc:	0.619846	**Pot Mc:**	
Estim Units:	TY	**Pot Unc:**	
Limit1:		**Pot Unc Mc:**	
Limit1 Mc:		**Pot Unc Units:**	
Limit1 Units:		**Pot Units:**	
Limit2:		**Re Estim:**	0.0
Limit2 Mc:		**Re Estim Mc:**	Z
Limit2 Units:		**Re Estim Units:**	TY
Pollutant Name:	CARBON MONOXIDE		

Stack Pollutant

Site ID:	3509	**Pk Co:**	
Stack ID:	001	**Pk Co Mc:**	Z
State Fips:	08	**Pk Co Re:**	
County Fip:	777	**Pk Co Re Mc:**	Z
Data Year:	2010	**Pk Co Re Units:**	PD
Inventory Year:	2023	**Pk Co Unc:**	
Inventory Year 2:	23	**Pk Co Units:**	PD
Pollutant Code:	PM2.5	**Pk O3:**	
Is Colorado Hap:	FALSE	**Pk O3 Mc:**	Z
Is Criteria:	TRUE	**Pk O3 Re:**	
Is Epcra Only:	FALSE	**Pk O3 Re Mc:**	Z

Is Hap:	FALSE	**Pk O3 Re Units:**	PD
Ozone Depleting:	FALSE	**Pk O3 Unc:**	
Estim:	0.072003	**Pk O3 Units:**	PD
Estim Mc:	Z	**Pot:**	
Estim Unc:	0.072003	**Pot Mc:**	
Estim Units:	TY	**Pot Unc:**	
Limit1:		**Pot Unc Mc:**	
Limit1 Mc:		**Pot Unc Units:**	
Limit1 Units:		**Pot Units:**	
Limit2:		**Re Estim:**	0.0
Limit2 Mc:		**Re Estim Mc:**	Z
Limit2 Units:		**Re Estim Units:**	TY
Pollutant Name:	PARTICULATE MATTER < 2.5 UM		

Stack Pollutant

Site ID:	3509	**Pk Co:**	
Stack ID:	001	**Pk Co Mc:**	Z
State Fips:	08	**Pk Co Re:**	
County Fip:	777	**Pk Co Re Mc:**	Z
Data Year:	2010	**Pk Co Re Units:**	PD
Inventory Year:	2023	**Pk Co Unc:**	
Inventory Year 2:	23	**Pk Co Units:**	PD
Pollutant Code:	PT	**Pk O3:**	
Is Colorado Hap:	FALSE	**Pk O3 Mc:**	Z
Is Criteria:	TRUE	**Pk O3 Re:**	
Is Epcra Only:	FALSE	**Pk O3 Re Mc:**	Z
Is Hap:	FALSE	**Pk O3 Re Units:**	PD
Ozone Depleting:	FALSE	**Pk O3 Unc:**	
Estim:	0.072003	**Pk O3 Units:**	PD
Estim Mc:	Z	**Pot:**	
Estim Unc:	0.072003	**Pot Mc:**	
Estim Units:	TY	**Pot Unc:**	
Limit1:		**Pot Unc Mc:**	
Limit1 Mc:		**Pot Unc Units:**	
Limit1 Units:		**Pot Units:**	
Limit2:		**Re Estim:**	0.0
Limit2 Mc:		**Re Estim Mc:**	Z
Limit2 Units:		**Re Estim Units:**	TY
Pollutant Name:	TOTAL PARTICULATE MATTER		

Stack Pollutant

Site ID:	3509	**Pk Co:**	
Stack ID:	001	**Pk Co Mc:**	Z
State Fips:	08	**Pk Co Re:**	
County Fip:	777	**Pk Co Re Mc:**	Z
Data Year:	2010	**Pk Co Re Units:**	PD
Inventory Year:	2023	**Pk Co Unc:**	
Inventory Year 2:	23	**Pk Co Units:**	PD
Pollutant Code:	NOX	**Pk O3:**	
Is Colorado Hap:	FALSE	**Pk O3 Mc:**	Z
Is Criteria:	TRUE	**Pk O3 Re:**	
Is Epcra Only:	FALSE	**Pk O3 Re Mc:**	Z
Is Hap:	FALSE	**Pk O3 Re Units:**	PD
Ozone Depleting:	FALSE	**Pk O3 Unc:**	
Estim:	2.646031	**Pk O3 Units:**	PD
Estim Mc:	Z	**Pot:**	
Estim Unc:	2.646031	**Pot Mc:**	
Estim Units:	TY	**Pot Unc:**	
Limit1:		**Pot Unc Mc:**	
Limit1 Mc:		**Pot Unc Units:**	
Limit1 Units:		**Pot Units:**	
Limit2:		**Re Estim:**	0.0
Limit2 Mc:		**Re Estim Mc:**	Z
Limit2 Units:		**Re Estim Units:**	TY
Pollutant Name:	NITROGEN OXIDES		

Stack Pollutant

Site ID:	3509	***Pk Co:***	
Stack ID:	001	***Pk Co Mc:***	Z
State Fips:	08	***Pk Co Re:***	
County Fip:	777	***Pk Co Re Mc:***	Z
Data Year:	2010	***Pk Co Re Units:***	PD
Inventory Year:	2023	***Pk Co Unc:***	
Inventory Year 2:	23	***Pk Co Units:***	PD
Pollutant Code:	PM10	***Pk O3:***	
Is Colorado Hap:	FALSE	***Pk O3 Mc:***	Z
Is Criteria:	TRUE	***Pk O3 Re:***	
Is Epcra Only:	FALSE	***Pk O3 Re Mc:***	Z
Is Hap:	FALSE	***Pk O3 Re Units:***	PD
Ozone Depleting:	FALSE	***Pk O3 Unc:***	
Estim:	0.072003	***Pk O3 Units:***	PD
Estim Mc:	Z	***Pot:***	
Estim Unc:	0.072003	***Pot Mc:***	
Estim Units:	TY	***Pot Unc:***	
Limit1:		***Pot Unc Mc:***	
Limit1 Mc:		***Pot Unc Units:***	
Limit1 Units:		***Pot Units:***	
Limit2:		***Re Estim:***	0.0
Limit2 Mc:		***Re Estim Mc:***	Z
Limit2 Units:		***Re Estim Units:***	TY
Pollutant Name:	PARTICULATE MATTER < 10 UM		

Stack Pollutant

Site ID:	3509	***Pk Co:***	
Stack ID:	001	***Pk Co Mc:***	Z
State Fips:	08	***Pk Co Re:***	
County Fip:	777	***Pk Co Re Mc:***	Z
Data Year:	2010	***Pk Co Re Units:***	PD
Inventory Year:	2023	***Pk Co Unc:***	
Inventory Year 2:	23	***Pk Co Units:***	PD
Pollutant Code:	VOC	***Pk O3:***	
Is Colorado Hap:	FALSE	***Pk O3 Mc:***	Z
Is Criteria:	TRUE	***Pk O3 Re:***	
Is Epcra Only:	FALSE	***Pk O3 Re Mc:***	Z
Is Hap:	FALSE	***Pk O3 Re Units:***	PD
Ozone Depleting:	FALSE	***Pk O3 Unc:***	
Estim:	0.032999	***Pk O3 Units:***	PD
Estim Mc:	Z	***Pot:***	
Estim Unc:	0.032999	***Pot Mc:***	
Estim Units:	TY	***Pot Unc:***	
Limit1:		***Pot Unc Mc:***	
Limit1 Mc:		***Pot Unc Units:***	
Limit1 Units:		***Pot Units:***	
Limit2:		***Re Estim:***	0.0
Limit2 Mc:		***Re Estim Mc:***	Z
Limit2 Units:		***Re Estim Units:***	TY
Pollutant Name:	VOLATILE ORGANIC COMPOUNDS		

Stack Pollutant

Site ID:	3509	***Pk Co:***	
Stack ID:	001	***Pk Co Mc:***	Z
State Fips:	08	***Pk Co Re:***	
County Fip:	777	***Pk Co Re Mc:***	Z
Data Year:	2010	***Pk Co Re Units:***	PD
Inventory Year:	2023	***Pk Co Unc:***	
Inventory Year 2:	23	***Pk Co Units:***	PD
Pollutant Code:	SO2	***Pk O3:***	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Is Colorado Hap:	FALSE	**Pk O3 Mc:**	Z		
Is Criteria:	TRUE	**Pk O3 Re:**			
Is Epcra Only:	FALSE	**Pk O3 Re Mc:**	Z		
Is Hap:	FALSE	**Pk O3 Re Units:**	PD		
Ozone Depleting:	FALSE	**Pk O3 Unc:**			
Estim:	0.273157	**Pk O3 Units:**	PD		
Estim Mc:	Z	**Pot:**			
Estim Unc:	0.273157	**Pot Mc:**			
Estim Units:	TY	**Pot Unc:**			
Limit1:		**Pot Unc Mc:**			
Limit1 Mc:		**Pot Unc Units:**			
Limit1 Units:		**Pot Units:**			
Limit2:		**Re Estim:**	0.0		
Limit2 Mc:		**Re Estim Mc:**	Z		
Limit2 Units:		**Re Estim Units:**	TY		
Pollutant Name:	SULFUR DIOXIDE				

4	*1 of 1*	*W*	*0.12 / 619.30*	*5,477.62 / 11*	***Superior, CO - Tesla Supercharger*** ***2 South Marshall Road*** ***Superior CO 80027***	*ALT FUELS*

ID:	167423	**CNG Dispenser No:**	
Fuel Type Code:	ELEC: Electric	**CNG Site Renew Src:**	
Station Phone:	877-798-3752	**CNG Tot Compr Cap:**	
Expected Date:		**CNG Storage Cap:**	
BD Blends:		**CNG Fill Type Code:**	
NG PSI:		**CNG PSI:**	
Federal Agency ID:		**CNG Vehicle Class:**	
Open Date:	2020-10-05	**LNG Site Renew Src:**	
Hydrogen is Retail:		**LNG Vehicle Class:**	
Federal Agency:		**LPG Nozzle Types:**	
Facility Type:	CAR_DEALER	**Hydrogen Pressures:**	
Dt Last Confirmed:	2023-07-01	**Hydrogen Standards:**	
Updated at:	2023-07-14 19:41:28 UTC	**Latitude:**	39.954889
Access Code:	public	**Longitude:**	-105.164646
Access Detail Code:			
Groups with Access Code:	Public		
Groups with Access Code Fr:	Public		
Fed Agency Name:			
Hydrogen Status Link:			
E85 Other Ethanol Blends:			
NPS Unit Name:			
Cards Accepted:			
CNG Statn Sells Renewable Na:			
LNG Statn Sells Renewable Na:			
Maximum Vehicle Class:			
RD Blended With Biodiesel:			
RD Blends:			
RD Blends French:			
RD Maximum Biodiesel Level:			
Status:	Open: The station is open.		
Owner Type Desc:	Privately owned		
E85 Blender Pump Desc:			
NG Fill Type Desc:			
NG Vehicle Class Desc:			
Geocode Status Desc:	The location is from a real GPS readout at the station.		
Group with Access Desc:	Publicly available to all customers.		
LPG Primary Desc:			
Intersection Directions:			
Access Days Time:	24 hours daily		
Restricted Access:			

5	*1 of 4*	*NE*	*0.13 / 685.53*	*5,459.40 / -7*	***CABLELABS EV STATION 4*** ***858 Coal Creek Cir*** ***Louisville CO 80027***	*ALT FUELS*

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

ID:	182581	**CNG Dispenser No:**	
Fuel Type Code:	ELEC: Electric	**CNG Site Renew Src:**	
Station Phone:	888-758-4389	**CNG Tot Compr Cap:**	
Expected Date:		**CNG Storage Cap:**	
BD Blends:		**CNG Fill Type Code:**	
NG PSI:		**CNG PSI:**	
Federal Agency ID:		**CNG Vehicle Class:**	
Open Date:	2021-01-27	**LNG Site Renew Src:**	
Hydrogen is Retail:		**LNG Vehicle Class:**	
Federal Agency:		**LPG Nozzle Types:**	
Facility Type:		**Hydrogen Pressures:**	
Dt Last Confirmed:	2023-08-30	**Hydrogen Standards:**	
Updated at:	2023-08-30 00:09:20 UTC	**Latitude:**	39.956533
Access Code:	public	**Longitude:**	-105.160335
Access Detail Code:			
Groups with Access Code:	Public		
Groups with Access Code Fr:	Public		
Fed Agency Name:			
Hydrogen Status Link:			
E85 Other Ethanol Blends:			
NPS Unit Name:			
Cards Accepted:			
CNG Statn Sells Renewable Na:			
LNG Statn Sells Renewable Na:			
Maximum Vehicle Class:			
RD Blended With Biodiesel:			
RD Blends:			
RD Blends French:			
RD Maximum Biodiesel Level:			
Status:	Open: The station is open.		
Owner Type Desc:			
E85 Blender Pump Desc:			
NG Fill Type Desc:			
NG Vehicle Class Desc:			
Geocode Status Desc:	The location is from a real GPS readout at the station.		
Group with Access Desc:	Publicly available to all customers.		
LPG Primary Desc:			
Intersection Directions:			
Access Days Time:	Mon 5:00pm - 12:00am; Tue 5:00pm - 12:00am; Wed 5:00pm - 12:00am; Thu 5:00pm - 12:00am; Fri 5:00pm - 12:00am; Sat 12:00am - 12:00am; Sun 12:00am - 12:00am		
Restricted Access:			

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
5	2 of 4	NE	0.13 / 685.53	5,459.40 / -7	CABLELABS EV STATION 3 858 Coal Creek Cir Louisville CO 80027	ALT FUELS

ID:	182619	**CNG Dispenser No:**	
Fuel Type Code:	ELEC: Electric	**CNG Site Renew Src:**	
Station Phone:	888-758-4389	**CNG Tot Compr Cap:**	
Expected Date:		**CNG Storage Cap:**	
BD Blends:		**CNG Fill Type Code:**	
NG PSI:		**CNG PSI:**	
Federal Agency ID:		**CNG Vehicle Class:**	
Open Date:	2021-01-27	**LNG Site Renew Src:**	
Hydrogen is Retail:		**LNG Vehicle Class:**	
Federal Agency:		**LPG Nozzle Types:**	
Facility Type:		**Hydrogen Pressures:**	
Dt Last Confirmed:	2023-08-30	**Hydrogen Standards:**	
Updated at:	2023-08-30 00:09:45 UTC	**Latitude:**	39.956499
Access Code:	public	**Longitude:**	-105.160425
Access Detail Code:			
Groups with Access Code:	Public		
Groups with Access Code Fr:	Public		
Fed Agency Name:			
Hydrogen Status Link:			
E85 Other Ethanol Blends:			
NPS Unit Name:			

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Cards Accepted:
CNG Statn Sells Renewable Na:
LNG Statn Sells Renewable Na:
Maximum Vehicle Class:
RD Blended With Biodiesel:
RD Blends:
RD Blends French:
RD Maximum Biodiesel Level:
Status: Open: The station is open.
Owner Type Desc:
E85 Blender Pump Desc:
NG Fill Type Desc:
NG Vehicle Class Desc:
Geocode Status Desc: The location is from a real GPS readout at the station.
Group with Access Desc: Publicly available to all customers.
LPG Primary Desc:
Intersection Directions:
Access Days Time: Mon 5:00pm - 12:00am; Tue 5:00pm - 12:00am; Wed 5:00pm - 12:00am; Thu 5:00pm - 12:00am; Fri 5:00pm - 12:00am; Sat 12:00am - 12:00am; Sun 12:00am - 12:00am
Restricted Access:

5	*3 of 4*	*NE*	*0.13 / 685.53*	*5,459.40 / -7*	***CABLELABS EV STATION 2*** ***858 Coal Creek Cir*** ***Louisville CO 80027***	*ALT FUELS*

ID: 182618
Fuel Type Code: ELEC: Electric
Station Phone: 888-758-4389
Expected Date:
BD Blends:
NG PSI:
Federal Agency ID:
Open Date: 2021-01-27
Hydrogen is Retail:
Federal Agency:
Facility Type:
Dt Last Confirmed: 2023-08-30
Updated at: 2023-08-30 00:09:44 UTC
Access Code: public
Access Detail Code:
Groups with Access Code: Public
Groups with Access Code Fr: Public
Fed Agency Name:
Hydrogen Status Link:
E85 Other Ethanol Blends:
NPS Unit Name:
Cards Accepted:
CNG Statn Sells Renewable Na:
LNG Statn Sells Renewable Na:
Maximum Vehicle Class:
RD Blended With Biodiesel:
RD Blends:
RD Blends French:
RD Maximum Biodiesel Level:
CNG Dispenser No:
CNG Site Renew Src:
CNG Tot Compr Cap:
CNG Storage Cap:
CNG Fill Type Code:
CNG PSI:
CNG Vehicle Class:
LNG Site Renew Src:
LNG Vehicle Class:
LPG Nozzle Types:
Hydrogen Pressures:
Hydrogen Standards:
Latitude: 39.956457
Longitude: -105.160404

Status: Open: The station is open.
Owner Type Desc:
E85 Blender Pump Desc:
NG Fill Type Desc:
NG Vehicle Class Desc:
Geocode Status Desc: The location is from a real GPS readout at the station.
Group with Access Desc: Publicly available to all customers.
LPG Primary Desc:
Intersection Directions:
Access Days Time: Mon 5:00pm - 12:00am; Tue 5:00pm - 12:00am; Wed 5:00pm - 12:00am; Thu 5:00pm - 12:00am; Fri 5:00pm - 12:00am; Sat 12:00am - 12:00am; Sun 12:00am - 12:00am
Restricted Access:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
5	4 of 4	NE	0.13 / 685.53	5,459.40 / -7	CABLELABS EV STATION 1 858 Coal Creek Cir Louisville CO 80027	ALT FUELS

ID:	182634	**CNG Dispenser No:**	
Fuel Type Code:	ELEC: Electric	**CNG Site Renew Src:**	
Station Phone:	888-758-4389	**CNG Tot Compr Cap:**	
Expected Date:		**CNG Storage Cap:**	
BD Blends:		**CNG Fill Type Code:**	
NG PSI:		**CNG PSI:**	
Federal Agency ID:		**CNG Vehicle Class:**	
Open Date:	2021-01-27	**LNG Site Renew Src:**	
Hydrogen is Retail:		**LNG Vehicle Class:**	
Federal Agency:		**LPG Nozzle Types:**	
Facility Type:		**Hydrogen Pressures:**	
Dt Last Confirmed:	2023-08-30	**Hydrogen Standards:**	
Updated at:	2023-08-30 00:10:01 UTC	**Latitude:**	39.956428
Access Code:	public	**Longitude:**	-105.160471
Access Detail Code:			
Groups with Access Code:	Public		
Groups with Access Code Fr:	Public		
Fed Agency Name:			
Hydrogen Status Link:			
E85 Other Ethanol Blends:			
NPS Unit Name:			
Cards Accepted:			
CNG Statn Sells Renewable Na:			
LNG Statn Sells Renewable Na:			
Maximum Vehicle Class:			
RD Blended With Biodiesel:			
RD Blends:			
RD Blends French:			
RD Maximum Biodiesel Level:			
Status:	Open: The station is open.		
Owner Type Desc:			
E85 Blender Pump Desc:			
NG Fill Type Desc:			
NG Vehicle Class Desc:			
Geocode Status Desc:	The location is from a real GPS readout at the station.		
Group with Access Desc:	Publicly available to all customers.		
LPG Primary Desc:			
Intersection Directions:			
Access Days Time:	Mon 5:00pm - 12:00am; Tue 5:00pm - 12:00am; Wed 5:00pm - 12:00am; Thu 5:00pm - 12:00am; Fri 5:00pm - 12:00am; Sat 12:00am - 12:00am; Sun 12:00am - 12:00am		
Restricted Access:			

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
6	1 of 2	W	0.18 / 972.33	5,490.84 / 24	My Goods Market #6529 191 S McCaslin Blvd Louisville 80027 CO	UST

Facility ID:	6779	**Fac Name (COSTIS):**	My Goods Market #6529
FacilityName(OPS):	My Goods Market #6529	**Address (COSTIS):**	191 S McCaslin Blvd Louisville 80027
FacilityType(OPS):	Retail	**County (COSTIS):**	Boulder
Fac Category (OPS):	Retail Gas Station	**Latitude (CDLE):**	39.969254
Address (OPS):	191 S McCaslin Blvd	**Longitude (CDLE):**	-105.164289
City (OPS):	Louisville	**Fac Type (CDLE):**	Retail
Zip Code (OPS):	80027	**FacCategry(CDLE):**	Retail Gas Station
County (OPS):	Boulder	**State (OPS):**	CO
LatLong (OPS):	39.969254, -105.164289	**City (CDLE):**	Louisville
FacName (CDLE):	My Goods Market #6529	**Zip (CDLE):**	80027
Address (CDLE):	191 S McCaslin Blvd	**County (CDLE):**	Boulder
State (CDLE):			
Data Source(s):	Colorado Storage Tank Information System (COSTIS) (As of October, 2021); Colorado Department of Labor and Employment (CDLE); Oil & Public Safety(OPS) Regulated Storage Tanks		

Facility Information (CDLE)

Count of Tank Tag:	2	***Accnt Holdr Name:***	Apro LLC DBA United Pacific
No. Dispensers:	24	***Type:***	Retail
Owner ID:	OWNR-22690		

Owner Information (CDLE)

Contact Name:	Apro LLC DBA United Pacific	***Middle Init:***	
First Name:			
Company Name:	Apro LLC DBA United Pacific		
Last Name:	Apro LLC DBA United Pacific		
Address:	4130 Cover St, Long Beach, CA 90808		
Comment:	aka; CF United LLC		

UST Tanks (COSTIS) (As of October 2021)

Tank ID:	18041	***Owner ID:***	22690
Tank Tag:	'6779-2	***Tank Owner:***	
Tank Type Desc:	UST	***County:***	Boulder
Tank Count:	46668	***Product Name:***	Unleaded Premium (PUL)
Capacity:	15000		
Facility Owner:	Apro LLC DBA United Pacific		
Facility Name Address:	My Goods Market #6529 191 S McCaslin Blvd Louisville 80027		

Tank ID:	18040	***Owner ID:***	22690
Tank Tag:	'6779-1	***Tank Owner:***	
Tank Type Desc:	UST	***County:***	Boulder
Tank Count:	46668	***Product Name:***	Unleaded Regular (RUL)
Capacity:	15000		
Facility Owner:	Apro LLC DBA United Pacific		
Facility Name Address:	My Goods Market #6529 191 S McCaslin Blvd Louisville 80027		

UST Tanks 1 (CDLE)

Tank Tag:	6779-1	***Overfill Preven:***	FV: Fill Tube Valve
Tank Type:	UST	***Product Type/Name:***	Unleaded Regular (RUL)
Tank Status:	Currently In Use	***Piping Wall Type:***	None
Capacity:	15000	***Tank Wall Type:***	
Install Date:	1/1/1995	***Piping System:***	
Date Closed:		***Piping Type:***	UG: Underground
Tank Material:	FRP: Fiberglass Reinforced Plastic		
Piping Material:	FRP: Fiberglass Reinforced Plastic		

UST Tanks 2 (CDLE)

Closure Meth ID:		***No Fee:***	No
Unregulated:	FALSE	***Anch Method Desc:***	
Last Used Date:		***Pipe Reld Meth1 ID:***	L5: Annual Tightness Testing
Del Prohib Date:		***Pipe Reldet Date:***	
Spill Protected:		***Backfill Mat Desc:***	
Spl Container Size:	5	***Bfill DrtCvr Amt:***	0
Spl Protection Dt:		***Manifold:***	No
Spl Container Mfg:	OPW	***Registration Date:***	7/30/2021
Spl Container Mdel:	1-2100	***Compartment:***	FALSE
Tank Reld Meth1 ID:		***Cpmet:***	Yes
Tank Lining Date:		***Invault:***	FALSE
CP Test Date:			

UST Tanks 1 (CDLE)

Tank Tag:	6779-2	**Overfill Preven:**	FV: Fill Tube Valve
Tank Type:	UST	**Product Type/Name:**	Unleaded Premium (PUL)
Tank Status:	Currently In Use	**Piping Wall Type:**	None
Capacity:	15000	**Tank Wall Type:**	
Install Date:	1/3/1995	**Piping System:**	
Date Closed:		**Piping Type:**	UG: Underground
Tank Material:	FRP: Fiberglass Reinforced Plastic		
Piping Material:	FRP: Fiberglass Reinforced Plastic		

UST Tanks 2 (CDLE)

Closure Meth ID:		**No Fee:**	No
Unregulated:	FALSE	**Anch Method Desc:**	
Last Used Date:		**Pipe Reld Meth1 ID:**	L5: Annual Tightness Testing
Del Prohib Date:		**Pipe Reldet Date:**	
Spill Protected:		**Backfill Mat Desc:**	
Spl Container Size:	5	**Bfill DrtCvr Amt:**	0
Spl Protection Dt:		**Manifold:**	No
Spl Container Mfg:	OPW	**Registration Date:**	7/30/2021
Spl Container Mdel:	1-2100	**Compartment:**	FALSE
Tank Reld Meth1 ID:		**Cpmet:**	Yes
Tank Lining Date:		**Invault:**	FALSE
CP Test Date:			

Oil & Public Safety Regulated Storage Tanks (COSTIS)

Tank Tag:	6779-1	**Leak Detector Type:**	E: Electronic
Tank Status:	Currently In Use	**Capacity Gallons :**	15000
Tank Type:	UST	**Product:**	Unleaded Regular (RUL)
Tank Name:	TNK-013060	**Piping Type:**	UG: Underground
Installation Date:	1/1/1995	**Piping System:**	
Closure Date:		**Piping Material:**	FRP: Fiberglass Reinforced Plastic
Tank Material:	FRP: Fiberglass Reinforced Plastic	**Piping Wall Type:**	None
Tank Wall Type:		**Address:**	191 S McCaslin Blvd
Facility Name:	My Goods Market #6529	**City:**	Louisville
Facility Type:	Retail	**County:**	Boulder
Facility Category:	Retail Gas Station	**ZIP Code:**	80027
Overfill Preven:	FV: Fill Tube Valve		
Tank Corsn Protection Meth:	Fiberglass (n/a)		
Tank Rel Detn Mthd Primary:	T1: ATG .2/.1gph Mthly Mntrg		
Tank Rel Detn Mthd Secondary:	T2: Inter Mntrg w/ Sensor		
Piping Corsn Protection (PCP):	Non-metallic		
PCP at Tank:	No Electrolyte Contact (n/a)		
PCP at Dispenser:	No Electrolyte Contact (n/a)		
Piping Rel Detn Mthd Primary:	L5: Annual Tightness Testing		
Piping Rel Detn Mthd Secondary:			

Tank Tag:	6779-2	**Leak Detector Type:**	E: Electronic
Tank Status:	Currently In Use	**Capacity Gallons :**	15000
Tank Type:	UST	**Product:**	Unleaded Premium (PUL)
Tank Name:	TNK-013061	**Piping Type:**	UG: Underground
Installation Date:	1/3/1995	**Piping System:**	
Closure Date:		**Piping Material:**	FRP: Fiberglass Reinforced Plastic
Tank Material:	FRP: Fiberglass Reinforced Plastic	**Piping Wall Type:**	None
Tank Wall Type:		**Address:**	191 S McCaslin Blvd
Facility Name:	My Goods Market #6529	**City:**	Louisville
Facility Type:	Retail	**County:**	Boulder
Facility Category:	Retail Gas Station	**ZIP Code:**	80027
Overfill Preven:	FV: Fill Tube Valve		
Tank Corsn Protection Meth:	Fiberglass (n/a)		
Tank Rel Detn Mthd Primary:	T1: ATG .2/.1gph Mthly Mntrg		
Tank Rel Detn Mthd Secondary:	T2: Inter Mntrg w/ Sensor		
Piping Corsn Protection (PCP):	Non-metallic		
PCP at Tank:	No Electrolyte Contact (n/a)		
PCP at Dispenser:	No Electrolyte Contact (n/a)		
Piping Rel Detn Mthd Primary:	L5: Annual Tightness Testing		

Piping Rel Detn Mthd Secondary:

UST Owner (COSTIS) (As of October 2021)

Owner ID:	22690	***Address1:***	4130 Cover St
First Name:		***City:***	Long Beach
Middle Init:		***State:***	CA
Last Name:	Apro LLC DBA United Pacific	***County:***	Los Angeles
Full Name:		***Zip Code:***	90808

Oil & Public Safety Regulated Storage Tank Details

No of Tanks: 2

Facility Contact Details (CDLE)

Contact ID:	0033h00000mtbFQ	***Role:***	Release Detection Records
Costis ID:	FACCON-6779-43476-32-29087	***Fac Contact Name:***	FCON-020202
Active:	FALSE	***Contact Last Name:***	Convenience Retailers LLC
Contact ID:	0033h00000mtbFQ	***Role:***	Facility Owner
Costis ID:	FACOWN-6779-43476-Jan 30 2009 12:00AM	***Fac Contact Name:***	FCON-020201
Active:	FALSE	***Contact Last Name:***	Convenience Retailers LLC
Contact ID:	0033h00000lKygC	***Role:***	Facility Owner
Costis ID:	FACOWN-6779-37282-Nov 28 2003 11:30AM	***Fac Contact Name:***	FCON-006608
Active:	FALSE	***Contact Last Name:***	ConocoPhillips Company
Contact ID:	0033h00000lKyz2	***Role:***	A/B Operator
Costis ID:	ABOP-6779-7436	***Fac Contact Name:***	FCON-008822
Active:	TRUE	***Contact Last Name:***	David Dhien
Contact ID:	0033h00000lKyfx	***Role:***	Facility Owner
Costis ID:	FACOWN-6779-1545-Mar 20 1997 12:00AM	***Fac Contact Name:***	FCON-006564
Active:	FALSE	***Contact Last Name:***	ConocoPhillips
Contact ID:	0033h00000lKwtS	***Role:***	Facility Owner
Costis ID:	FACOWN-6779-48718-Jun 9 2015 2:02PM	***Fac Contact Name:***	FCON-000550
Active:	TRUE	***Contact Last Name:***	Apro LLC DBA United Pacific

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6	***2 of 2***	***W***	***0.18 / 972.33***	***5,490.84 / 24***	***My Goods Market #6529 191 S McCaslin Blvd Louisville 80027 CO***	***LST***

Facility ID:	6779	***Fac Name(CDLE):***	My Goods Market #6529
Event ID:		***Address(CDLE):***	191 S McCaslin Blvd
Facility Name(OPS):	My Goods Market #6529	***Fac Type(CDLE):***	Retail
Facility Type(OPS):	Retail	***Fac Category(CDLE):***	Retail Gas Station
Fac Category(OPS):	Retail Gas Station	***City(CDLE):***	Louisville
Address(OPS):	191 S McCaslin Blvd	***Zip(CDLE):***	80027
City(OPS):	Louisville	***County(CDLE):***	Boulder
Zip Code(OPS):	80027	***State(CDLE):***	
County(OPS):	Boulder	***Latitude(CDLE):***	39.969254
State(OPS):	CO	***Longitude(CDLE):***	-105.164289
Lat Long(OPS):	39.969254, -105.164289		
Fac Name(COSTIS):	My Goods Market #6529		
Address (COSTIS):	191 S McCaslin Blvd Louisville 80027		
County (COSTIS):	Boulder		
Original Source:	Colorado Storage Tank Information System (COSTIS) (As of October, 2021); Colorado Department of Labor and Employment (CDLE); Oil & Public Safety(OPS) Regulated Storage Tanks; OPS Petroleum Release Events in Colorado - Petroleum Release Events		

Owner ID: 22690

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Owner Name:

Events (CDLE)

Event ID:	6007	**Proj. Closure Date:**	
Alt Event ID:		**Category:**	
Status:	Closed	**Sardonyx ID:**	
UST Tank Count:	2	**MTBE Classifica:**	
AST Tank Count:	0	**Sum of Reimbur Amt:**	
Source of Release:		**Reviewer Full Name:**	Craig Workman
Cause of Release:		**Logged On:**	10/21/1997
Confirm Rel Dt:	8/21/1997	**Logged By:**	
Site Name:	My Goods Market #6529		
Loc Addr:			
Loc Addr2:			
Loc Addr3:			
Aka Name:			
Aka Loc Addr:			

Facility (CDLE)

Owner Costis ID:	OWNR-22690	**Type:**	Retail
No of Active Tanks:	2	**Facility Owner:**	Apro LLC DBA United Pacific
No of Metred Prod:	24		

Events (COSTIS) (As of October 2021)

Event ID:	6007	**Log Date:**	10/21/1997
Process Status Name:	Closed		
Site Name:	Conoco #6447		
Facility Name:			
Address:	191 S McCaslin Blvd Louisville CO 80027		
Loc Address:	191 Mccaslin Blvd Superior 80027		
Loc City:	Superior		
Loc County:	Boulder		

OPS Regulated Storage Tanks

No of Tanks: 2

OPS Petroleum Release Events in Colorado - Petroleum Release Events

Event ID:	6007	**Phone:**	(303) 318-4357
Release No:	REL-001202	**City:**	Louisville
Status:	Closed	**Zip:**	80027
Release Date:	8/21/1997	**State:**	CO
Closure Date:		**County:**	Boulder
NFA Type:	Administrative	**Latitude:**	39.969254
Release Cause:		**Longitude:**	-105.164289
Reimbursement Total:		**Latitude Longitude:**	39.969254, -105.164289
Contact:	Craig Workman		
Release Source:			
Site Name:	My Goods Market #6529		
Address:	191 S McCaslin Blvd		
Email:	cdle_ops_public_record_center@state.co.us		
Link :	https://socgov18.force.com/s/release/a183h000003KVZM		

7	1 of 1	WSW	0.21 / 1,090.85	5,485.82 / 19	TOS TOWN HALL1 Park Pl Superior CO 80027	ALT FUELS

ID: 87935 **CNG Dispenser No:**

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Fuel Type Code:	ELEC: Electric	**CNG Site Renew Src:**	
Station Phone:	888-758-4389	**CNG Tot Compr Cap:**	
Expected Date:		**CNG Storage Cap:**	
BD Blends:		**CNG Fill Type Code:**	
NG PSI:		**CNG PSI:**	
Federal Agency ID:		**CNG Vehicle Class:**	
Open Date:	2017-10-07	**LNG Site Renew Src:**	
Hydrogen is Retail:		**LNG Vehicle Class:**	
Federal Agency:		**LPG Nozzle Types:**	
Facility Type:		**Hydrogen Pressures:**	
Dt Last Confirmed:	2023-08-30	**Hydrogen Standards:**	
Updated at:	2023-08-30 00:10:59 UTC	**Latitude:**	39.953549
Access Code:	public	**Longitude:**	-105.166117
Access Detail Code:			
Groups with Access Code:	Public		
Groups with Access Code Fr:	Public		
Fed Agency Name:			
Hydrogen Status Link:			
E85 Other Ethanol Blends:			
NPS Unit Name:			
Cards Accepted:			
CNG Statn Sells Renewable Na:			
LNG Statn Sells Renewable Na:			
Maximum Vehicle Class:			
RD Blended With Biodiesel:			
RD Blends:			
RD Blends French:			
RD Maximum Biodiesel Level:			
Status:	Open: The station is open.		
Owner Type Desc:			
E85 Blender Pump Desc:			
NG Fill Type Desc:			
NG Vehicle Class Desc:			
Geocode Status Desc:	The location is from a real GPS readout at the station.		
Group with Access Desc:	Publicly available to all customers.		
LPG Primary Desc:			
Intersection Directions:			
Access Days Time:	24 hours daily		
Restricted Access:			

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
8	1 of 2	WSW	0.21 / 1,100.37	5,487.54 / 21	**TOWN OF SUPERIOR PUBLIC WORKS** **124 E. Coal Creek Rd.** **Superior CO 80027**	SWF/LF

Loc ID:	BLD6
Cert of Reg ID:	

Facility Map Info (REST)

Location ID:	BLD 1418
FID:	1960
Primary AC:	
Facility Name:	TOWN OF SUPERIOR PUBLIC WORKS
Address:	124 E. Coal Creek Rd.
City:	Superior
Zip:	80027
County Name:	BOULDER
Latitude:	39.954002
Longitude:	-105.166145
Y:	39.95400200000176
X:	-105.16614500000236

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
8	2 of 2	WSW	0.21 / 1,100.37	5,487.54 / 21	**Town of Superior - Town Hall** **124 E Coal Creek Dr**	ALT FUELS

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
					Superior CO 80027	

ID:	38523	**CNG Dispenser No:**	
Fuel Type Code:	ELEC: Electric	**CNG Site Renew Src:**	
Station Phone:	303-499-3675	**CNG Tot Compr Cap:**	
Expected Date:		**CNG Storage Cap:**	
BD Blends:		**CNG Fill Type Code:**	
NG PSI:		**CNG PSI:**	
Federal Agency ID:		**CNG Vehicle Class:**	
Open Date:	2020-07-01	**LNG Site Renew Src:**	
Hydrogen is Retail:		**LNG Vehicle Class:**	
Federal Agency:		**LPG Nozzle Types:**	
Facility Type:	MUNI_GOV	**Hydrogen Pressures:**	
Dt Last Confirmed:	2022-11-10	**Hydrogen Standards:**	
Updated at:	2023-02-14 15:54:11 UTC	**Latitude:**	39.953798
Access Code:	public	**Longitude:**	-105.166116
Access Detail Code:			
Groups with Access Code:	Public		
Groups with Access Code Fr:	Public		
Fed Agency Name:			
Hydrogen Status Link:			
E85 Other Ethanol Blends:			
NPS Unit Name:			
Cards Accepted:			
CNG Statn Sells Renewable Na:			
LNG Statn Sells Renewable Na:			
Maximum Vehicle Class:	LD		
RD Blended With Biodiesel:			
RD Blends:			
RD Blends French:			
RD Maximum Biodiesel Level:			
Status:	Open: The station is open.		
Owner Type Desc:	Local government owned		
E85 Blender Pump Desc:			
NG Fill Type Desc:			
NG Vehicle Class Desc:			
Geocode Status Desc:	Premise (building name, property name, shopping center, etc.) level accuracy.		
Group with Access Desc:	Publicly available to all customers.		
LPG Primary Desc:			
Intersection Directions:	McCaslin and E Coal Creek Drive		
Access Days Time:	24 hours daily		
Restricted Access:	false		

9	1 of 1	W	0.29 / 1,526.27	5,500.09 / 33	JENKINS BOULDER COUNTY LOUISVILLE CO 80027	MRDS

Dep ID:	10165874	**I1:**	83
Dev Status:	PRODUCER	**Latitude:**	39.954529
Code List:	SDG	**Longitude:**	-105.168091
Url:	http://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10165874		

Commodity

I1:	26	**Line:**	1
Code:	SDG	**Inserted By:**	MAS migration
Commodity:	Sand and Gravel, Cons	**Insert Date:**	29-OCT-2002 09:00:24
Commodity Type:	Non-metallic	**Updated By:**	USGS
Commodity Group:	Sand and Gravel	**Update Date:**	29-OCT-2002 09:01:38
Importance:	Primary		

Names

I1:	15	**Inserted By:**	MAS migration

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Status:	Current	**Insert Date:**	29-OCT-02
Site Name:	Jenkins	**Updated By:**	USGS
Line:	1	**Update Date:**	29-OCT-02

10 **1 of 2** **WNW** **0.38 / 2,021.23** **5,506.55 / 40** **CDOT Superior**
7979 Marshall Rd Louisville 80027 CO **LST**

Facility ID:	7679	**Fac Name(CDLE):**	CDOT Superior
Event ID:		**Address(CDLE):**	7979 Marshall Rd
Facility Name(OPS):	CDOT Superior	**Fac Type(CDLE):**	Non-Retail
Facility Type(OPS):	Non-Retail	**Fac Category(CDLE):**	State/Local Government
Fac Category(OPS):	State/Local Government	**City(CDLE):**	Louisville
Address(OPS):	7979 Marshall Rd	**Zip(CDLE):**	80027
City(OPS):	Louisville	**County(CDLE):**	Boulder
Zip Code(OPS):	80027	**State(CDLE):**	
County(OPS):	Boulder	**Latitude(CDLE):**	39.962239
State(OPS):	CO	**Longitude(CDLE):**	-105.178105
Lat Long(OPS):	39.962239, -105.178105		
Fac Name(COSTIS):	CDOT Superior		
Address (COSTIS):	7979 Marshall Rd Louisville 80027		
County (COSTIS):	Boulder		
Original Source:	Colorado Storage Tank Information System (COSTIS) (As of October, 2021); Colorado Department of Labor and Employment (CDLE); Oil & Public Safety(OPS) Regulated Storage Tanks; OPS Petroleum Release Events in Colorado - Petroleum Release Events		
Owner ID:	1046		
Owner Name:			

Events (CDLE)

Event ID:	518	**Proj. Closure Date:**	
Alt Event ID:	6420-1	**Category:**	
Status:	Closed	**Sardonyx ID:**	
UST Tank Count:	3	**MTBE Classifica:**	
AST Tank Count:	0	**Sum of Reimbur Amt:**	9193.83
Source of Release:		**Reviewer Full Name:**	Edgar Ethington
Cause of Release:		**Logged On:**	5/12/1992
Confirm Rel Dt:	5/12/1992	**Logged By:**	
Site Name:	CDOT Superior		
Loc Addr:			
Loc Addr2:			
Loc Addr3:			
Aka Name:			
Aka Loc Addr:			

Reimbursement Application (CDLE)

Rap ID:	RAP-6584	**Eligibil Type Desc:**	Tank Owner/Operator
Protest ID:		**Rap Payee Type ID:**	
Rap Status:	Paid	**Reimbursement Req:**	19993.57
Application Type:	Original	**Total Reimburse:**	19993.57
User Group Name:		**Max Amt Reduction:**	
FPR Date:	6/20/2003	**PSTC Date:**	6/20/2003
Protest Amount:			
Payee:	CDOT		
Spec Cond:			
Note:	Colorado Department of Labor and Employment (CDLE)		

Corrective Action Plan (CDLE)

Action Plan No:	ACTP-027781
Release No:	REL-003220
Status:	Approved

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Facility (CDLE)

Owner Costis ID:	OWNR-1046	***Type:***	Non-Retail
No of Active Tanks:	0	***Facility Owner:***	CDOT- Region 4 Business Office
No of Metred Prod:	0		

Events (COSTIS) (As of October 2021)

Event ID:	518	***Log Date:***	5/12/1992
Process Status Name:	Closed		
Site Name:	CDOT Superior		
Facility Name:			
Address:	7979 Marshall Rd Louisville CO 80027		
Loc Address:	7979 Marshall Dr Boulder 80303		
Loc City:	Boulder		
Loc County:	Boulder		

Reimbursement Application (COSTIS) (As of October 2021)

RAP ID:	6584	***Event ID:***	518
Facility ID:	7679	***PSTC Date:***	6/20/2003
Payee Name:	CDOT		

OPS Regulated Storage Tanks

No of Tanks:	0

OPS Petroleum Release Events in Colorado - Petroleum Release Events

Event ID:	518	***Phone:***	(303) 318-4357
Release No:	REL-003220	***City:***	Louisville
Status:	Closed	***Zip:***	80027
Release Date:	5/12/1992	***State:***	CO
Closure Date:	1/19/1995	***County:***	Boulder
NFA Type:	Pre-RBCA	***Latitude:***	39.962239
Release Cause:		***Longitude:***	-105.178105
Reimbursement Total:		***Latitude Longitude:***	39.962239, -105.178105
Contact:	Edgar Ethington		
Release Source:			
Site Name:	CDOT Superior		
Address:	7979 Marshall Rd		
Email:	cdle_ops_public_record_center@state.co.us		
Link :	https://socgov18.force.com/s/release/a183h000003KW5u		

10	***2 of 2***	***WNW***	***0.38 / 2,021.23***	***5,506.55 / 40***	***CDOT Superior 7979 Marshall Rd Louisville CO 80027***	***LUST TRUST***

Facility ID:	7679	***Event ID:***	518
TtlAmtAppvdForReim :	19993.57	***Release Date:***	5/12/1992
County:	Boulder		

11	***1 of 1***	***N***	***0.48 / 2,510.63***	***5,473.72 / 7***	***My Goods Market #6526 520 S McCaslin Blvd Louisville 80027 CO***	***LST***

Facility ID:	6701	***Fac Name(CDLE):***	My Goods Market #6526
Event ID:		***Address(CDLE):***	520 S McCaslin Blvd

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Facility Name(OPS):	My Goods Market #6526	**Fac Type(CDLE):**	Retail
Facility Type(OPS):	Retail	**Fac Category(CDLE):**	Retail Gas Station
Fac Category(OPS):	Retail Gas Station	**City(CDLE):**	Louisville
Address(OPS):	520 S McCaslin Blvd	**Zip(CDLE):**	80027
City(OPS):	Louisville	**County(CDLE):**	Boulder
Zip Code(OPS):	80027	**State(CDLE):**	
County(OPS):	Boulder	**Latitude(CDLE):**	39.962837
State(OPS):	CO	**Longitude(CDLE):**	-105.163052
Lat Long(OPS):	39.962837, -105.163052		

Fac Name(COSTIS): My Goods Market #6526
Address (COSTIS): 520 S McCaslin Blvd
Louisville 80027
County (COSTIS): Boulder
Original Source: Colorado Storage Tank Information System (COSTIS) (As of October, 2021); Colorado Department of Labor and Employment (CDLE); Oil & Public Safety(OPS) Regulated Storage Tanks

Owner ID: 22690
Owner Name:

Events (CDLE)

Event ID:		**Proj. Closure Date:**	
Alt Event ID:		**Category:**	
Status:	Closed	**Sardonyx ID:**	
UST Tank Count:	2	**MTBE Classifica:**	
AST Tank Count:	0	**Sum of Reimbur Amt:**	
Source of Release:		**Reviewer Full Name:**	
Cause of Release:		**Logged On:**	10/18/2016
Confirm Rel Dt:	10/14/2016	**Logged By:**	

Site Name: My Goods Market #6526
Loc Addr:
Loc Addr2:
Loc Addr3:
Aka Name:
Aka Loc Addr:

Facility (CDLE)

Owner Costis ID:	OWNR-22690	**Type:**	Retail
No of Active Tanks:	2	**Facility Owner:**	Apro LLC DBA United Pacific
No of Metred Prod:	36		

OPS Regulated Storage Tanks

No of Tanks: 2

12	*1 of 1*	*N*	*0.77 / 4,074.24*	*5,472.53 / 6*	***CONTINENTAL CLEANERS 305 MCCASLIN BLVD LOUISVILLE CO 80027***	*RCRA CORRACTS*

EPA Handler ID: COR000012211
Gen Status Universe: No Report
Contact Name: RANDY G ELLIS
Contact Address: 305 , MCCASLIN BLVD , , LOUISVILLE , CO, 80027 , US
Contact Phone No and Ext: 303-926-9120
Contact Email:
Contact Country: US
County Name: BOULDER
EPA Region: 08
Land Type: Private
Receive Date: 20160216
Location Latitude:
Location Longitude:

Event/Area Details

Area Name:	ENTIRE FACILITY
Event Code:	CA150
Corrective Action Event Descri:	INVESTIGATION WORKPLAN APPROVED
Actual Date of Event:	20181203
Orig Sched Event Date:	
New Sched Event Date:	
Best Date:	20181203
Groundwater Release Indicator:	
Soil Release Indicator:	Yes
Air Release Indicator:	
Surface Waste Release Ind:	
Event Responsible Agency:	S

Area Name:	ENTIRE FACILITY
Event Code:	CA200
Corrective Action Event Descri:	INVESTIGATION COMPLETE
Actual Date of Event:	20181203
Orig Sched Event Date:	
New Sched Event Date:	
Best Date:	20181203
Groundwater Release Indicator:	
Soil Release Indicator:	Yes
Air Release Indicator:	
Surface Waste Release Ind:	
Event Responsible Agency:	S

Area Name:	ENTIRE FACILITY
Event Code:	CA400
Corrective Action Event Descri:	REMEDY DECISION
Actual Date of Event:	20181203
Orig Sched Event Date:	
New Sched Event Date:	
Best Date:	20181203
Groundwater Release Indicator:	
Soil Release Indicator:	Yes
Air Release Indicator:	
Surface Waste Release Ind:	
Event Responsible Agency:	S

Area Name:	ENTIRE FACILITY
Event Code:	CA550NR
Corrective Action Event Descri:	REMEDY CONSTRUCTION-NO REMEDY CONSTRUCTED
Actual Date of Event:	20181203
Orig Sched Event Date:	
New Sched Event Date:	
Best Date:	20181203
Groundwater Release Indicator:	
Soil Release Indicator:	Yes
Air Release Indicator:	
Surface Waste Release Ind:	
Event Responsible Agency:	S

Area Name:	ENTIRE FACILITY
Event Code:	CA900NC
Corrective Action Event Descri:	CA PERFORMANCE STANDARDS ATTAINED - NO CONTROLS NECESSARY
Actual Date of Event:	20181203
Orig Sched Event Date:	
New Sched Event Date:	
Best Date:	20181203
Groundwater Release Indicator:	
Soil Release Indicator:	Yes
Air Release Indicator:	
Surface Waste Release Ind:	
Event Responsible Agency:	S

Area Name:	ENTIRE FACILITY
Event Code:	CA999NF

Corrective Action Event Descri:	CA PROCESS IS TERMINATED-NO FURTHER ACTION
Actual Date of Event:	20181203
Orig Sched Event Date:	
New Sched Event Date:	
Best Date:	20181203
Groundwater Release Indicator:	
Soil Release Indicator:	Yes
Air Release Indicator:	
Surface Waste Release Ind:	
Event Responsible Agency:	S

Area Name:	ENTIRE FACILITY
Event Code:	CA060
Corrective Action Event Descri:	NOTICE OF CONTAMINATION
Actual Date of Event:	20181016
Orig Sched Event Date:	
New Sched Event Date:	
Best Date:	20181016
Groundwater Release Indicator:	
Soil Release Indicator:	Yes
Air Release Indicator:	
Surface Waste Release Ind:	
Event Responsible Agency:	S

Area Name:	ENTIRE FACILITY
Event Code:	CA100
Corrective Action Event Descri:	INVESTIGATION IMPOSITION
Actual Date of Event:	20181016
Orig Sched Event Date:	
New Sched Event Date:	
Best Date:	20181016
Groundwater Release Indicator:	
Soil Release Indicator:	Yes
Air Release Indicator:	
Surface Waste Release Ind:	
Event Responsible Agency:	S

Violation/Evaluation Summary

Note: NO VIOLATIONS: All of the compliance records associated with this facility (EPA ID) indicate NO VIOLATIONS; Compliance Monitoring and Enforcement table dated Jul, 2023.

Evaluation Details

Evaluation Start Date:	20181203
Evaluation Type Description:	FOCUSED COMPLIANCE INSPECTION
Violation Short Description:	
Return to Compliance Date:	
Evaluation Agency:	State

Evaluation Start Date:	20150209
Evaluation Type Description:	FACILITY SELF DISCLOSURE
Violation Short Description:	
Return to Compliance Date:	
Evaluation Agency:	State

Evaluation Start Date:	20140228
Evaluation Type Description:	FACILITY SELF DISCLOSURE
Violation Short Description:	
Return to Compliance Date:	
Evaluation Agency:	State

Evaluation Start Date:	20130209
Evaluation Type Description:	FACILITY SELF DISCLOSURE
Violation Short Description:	
Return to Compliance Date:	
Evaluation Agency:	State

Evaluation Start Date: 20120229
Evaluation Type Description: FACILITY SELF DISCLOSURE
Violation Short Description:
Return to Compliance Date:
Evaluation Agency: State

Evaluation Start Date: 20111021
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Violation Short Description:
Return to Compliance Date:
Evaluation Agency: State

Evaluation Start Date: 20110218
Evaluation Type Description: FACILITY SELF DISCLOSURE
Violation Short Description:
Return to Compliance Date:
Evaluation Agency: State

Evaluation Start Date: 20100201
Evaluation Type Description: FACILITY SELF DISCLOSURE
Violation Short Description:
Return to Compliance Date:
Evaluation Agency: State

Evaluation Start Date: 20091204
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Violation Short Description:
Return to Compliance Date:
Evaluation Agency: State

Evaluation Start Date: 20090428
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Violation Short Description:
Return to Compliance Date:
Evaluation Agency: State

Evaluation Start Date: 20080116
Evaluation Type Description: FACILITY SELF DISCLOSURE
Violation Short Description:
Return to Compliance Date:
Evaluation Agency: State

Evaluation Start Date: 20060301
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Violation Short Description:
Return to Compliance Date:
Evaluation Agency: State

Handler Summary

Importer Activity: No
Mixed Waste Generator: No
Transporter Activity: No
Transfer Facility: No
Onsite Burner: No
Smelting, Melting and Refining: No
Underground Injection Control: No
Commercial TSD: No
Used Oil Transporter: No
Used Oil Transfer Facility: No
Used Oil Processor: No
Used Oil Refiner: No
Used Oil Burner: No
Used Oil Market Burner: No
Used Oil Spec Marketer: No

Hazardous Waste Handler Details

Sequence No: 1
Receive Date: 19981215
Handler Name: CONTINENTAL CLEANERS
Federal Waste Generator Code: 3
Generator Code Description: Very Small Quantity Generator
Source Type: Notification

Waste Code Details

Hazardous Waste Code: D039
Waste Code Description: TETRACHLOROETHYLENE

Hazardous Waste Code: F002
Waste Code Description: THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2, TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Hazardous Waste Handler Details

Sequence No: 2
Receive Date: 20090109
Handler Name: CONTINENTAL CLEANERS
Federal Waste Generator Code: 3
Generator Code Description: Very Small Quantity Generator
Source Type: Notification

Waste Code Details

Hazardous Waste Code: D039
Waste Code Description: TETRACHLOROETHYLENE

Hazardous Waste Code: F002
Waste Code Description: THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2, TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Hazardous Waste Handler Details

Sequence No: 3
Receive Date: 20160216
Handler Name: CONTINENTAL CLEANERS
Federal Waste Generator Code: N
Generator Code Description: Not a Generator, Verified
Source Type: Notification

Waste Code Details

Hazardous Waste Code: D039
Waste Code Description: TETRACHLOROETHYLENE

Owner/Operator Details

Owner/Operator Ind:	Current Owner	***Street No:***	
Type:	Private	***Street 1:***	305 MCCASLIN BLVD
Name:	RANDY ELLIS	***Street 2:***	
Date Became Current:		***City:***	LOUISVILLE
Date Ended Current:		***State:***	CO
Phone:	303-926-9120	***Country:***	
Source Type:	Notification	***Zip Code:***	80027

Owner/Operator Ind:	Current Operator	***Street No:***	305
Type:	Private	***Street 1:***	MCCASLIN BLVD
Name:	CONTINENTAL CLEANERS	***Street 2:***	
Date Became Current:	20090109	***City:***	LOUISVILLE
Date Ended Current:		***State:***	CO
Phone:	303-926-9120	***Country:***	US
Source Type:	Notification	***Zip Code:***	80027

Owner/Operator Ind:	Current Owner	***Street No:***	305
Type:	Private	***Street 1:***	MCCASLIN BLVD
Name:	RANDY ELLIS	***Street 2:***	
Date Became Current:	20090109	***City:***	LOUISVILLE
Date Ended Current:		***State:***	CO
Phone:	303-926-9120	***Country:***	US
Source Type:	Notification	***Zip Code:***	80027

Historical Handler Details

Receive Dt:	20090109
Generator Code Description:	Very Small Quantity Generator
Handler Name:	CONTINENTAL CLEANERS

Receive Dt:	19981215
Generator Code Description:	Very Small Quantity Generator
Handler Name:	CONTINENTAL CLEANERS

Unplottable Summary

Total: 0 Unplottable sites

DB	Company Name/Site Name	Address	City	Zip	ERIS ID

No unplottable records were found that may be relevant for the search criteria.

Unplottable Report

No unplottable records were found that may be relevant for the search criteria.

Appendix: Database Descriptions

Environmental Risk Information Services (ERIS) can search the following databases. The extent of historical information varies with each database and current information is determined by what is publicly available to ERIS at the time of update. ERIS updates databases as set out in ASTM Standard E1527-13 and E1527-21, Section 8.1.8 Sources of Standard Source Information:

"Government information from nongovernmental sources may be considered current if the source updates the information at least every 90 days, or, for information that is updated less frequently than quarterly by the government agency, within 90 days of the date the government agency makes the information available to the public."

Standard Environmental Record Sources

Federal

National Priority List: NPL

Sites on the United States Environmental Protection Agency (EPA)'s National Priorities List of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under the Superfund program. The NPL, which EPA is required to update at least once a year, is based primarily on the score a site receives from EPA's Hazard Ranking System. A site must be on the NPL to receive money from the Superfund Trust Fund for remedial action. Sites are represented by boundaries where available in the EPA Superfund Site Boundaries maintained by the Shared Enterprise Geodata and Services (SEGS). Site boundaries represent the footprint of a whole site, the sum of all of the Operable Units and the current understanding of the full extent of contamination; for Federal Facility sites, the total site polygon may be the Facility boundary. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: May 25, 2023

National Priority List - Proposed: PROPOSED NPL

Sites proposed by the United States Environmental Protection Agency (EPA), the state agency, or concerned citizens for addition to the National Priorities List (NPL) due to contamination by hazardous waste and identified by the EPA as a candidate for cleanup because it poses a risk to human health and/or the environment. Sites are represented by boundaries where available in the EPA Superfund Site Boundaries maintained by the Shared Enterprise Geodata and Services (SEGS). Site boundaries represent the footprint of a whole site, the sum of all of the Operable Units and the current understanding of the full extent of contamination; for Federal Facility sites, the total site polygon may be the Facility boundary. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: May 25, 2023

Deleted NPL: DELETED NPL

Sites deleted from the United States Environmental Protection Agency (EPA)'s National Priorities List. The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate. Sites are represented by boundaries where available in the EPA Superfund Site Boundaries maintained by the Shared Enterprise Geodata and Services (SEGS). Site boundaries represent the footprint of a whole site, the sum of all of the Operable Units and the current understanding of the full extent of contamination; for Federal Facility sites, the total site polygon may be the Facility boundary. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: May 25, 2023

SEMS List 8R Active Site Inventory: SEMS

The U.S. Environmental Protection Agency's (EPA) Superfund Program has deployed the Superfund Enterprise Management System (SEMS), which integrates multiple legacy systems into a comprehensive tracking and reporting tool. This inventory contains active sites evaluated by the Superfund program that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The Active Site Inventory Report displays site and location information at active SEMS sites. An active site is one at which site assessment, removal, remedial, enforcement, cost recovery, or oversight activities are being planned or conducted. This data includes SEMS sites from the List 8R Active file as well as applicable sites from the SEMS GIS/REST file layer obtained from EPA's Facility Registry Service.

Government Publication Date: Jul 26, 2023

Inventory of Open Dumps, June 1985: ODI

The Resource Conservation and Recovery Act (RCRA) provides for publication of an inventory of open dumps. The Act defines "open dumps" as facilities which do not comply with EPA's "Criteria for Classification of Solid Waste Disposal Facilities and Practices" (40 CFR 257).

Government Publication Date: Jun 1985

SEMS List 8R Archive Sites: SEMS ARCHIVE

The U.S. Environmental Protection Agency's (EPA) Superfund Enterprise Management System (SEMS) Archived Site Inventory displays site and location information at sites archived from SEMS. An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time. This data includes sites from the List 8R Archived site file.

Government Publication Date: Jul 26, 2023

Comprehensive Environmental Response, Compensation and Liability Information System - CERCLIS: CERCLIS

Superfund is a program administered by the United States Environmental Protection Agency (EPA) to locate, investigate, and clean up the worst hazardous waste sites throughout the United States. CERCLIS is a database of potential and confirmed hazardous waste sites at which the EPA Superfund program has some involvement. It contains sites that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The EPA administers the Superfund program in cooperation with individual states and tribal governments; this database is made available by the EPA.

Government Publication Date: Oct 25, 2013

EPA Report on the Status of Open Dumps on Indian Lands: IODI

Public Law 103-399, The Indian Lands Open Dump Cleanup Act of 1994, enacted October 22, 1994, identified congressional concerns that solid waste open dump sites located on American Indian or Alaska Native (AI/AN) lands threaten the health and safety of residents of those lands and contiguous areas. The purpose of the Act is to identify the location of open dumps on Indian lands, assess the relative health and environment hazards posed by those sites, and provide financial and technical assistance to Indian tribal governments to close such dumps in compliance with Federal standards and regulations or standards promulgated by Indian Tribal governments or Alaska Native entities.

Government Publication Date: Dec 31, 1998

CERCLIS - No Further Remedial Action Planned: CERCLIS NFRAP

An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time. The Archive designation means that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL). This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Government Publication Date: Oct 25, 2013

CERCLIS Liens: CERCLIS LIENS

A Federal Superfund lien exists at any property where EPA has incurred Superfund costs to address contamination ("Superfund site") and has provided notice of liability to the property owner. A Federal CERCLA ("Superfund") lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. This database is made available by the United States Environmental Protection Agency (EPA). This database was provided by the United States Environmental Protection Agency (EPA). Refer to SEMS LIEN as the current data source for Superfund Liens.

Government Publication Date: Jan 30, 2014

RCRA CORRACTS-Corrective Action: RCRA CORRACTS

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. At these sites, the Corrective Action Program ensures that cleanups occur. EPA and state regulators work with facilities and communities to design remedies based on the contamination, geology, and anticipated use unique to each site.

Government Publication Date: Jul 10, 2023

RCRA non-CORRACTS TSD Facilities: RCRA TSD

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. This database includes Non-Corrective Action sites listed as treatment, storage and/or disposal facilities of hazardous waste as defined by RCRA.

Government Publication Date: Jul 10, 2023

RCRA Generator List: RCRA LQG

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Large Quantity Generators (LQGs) generate 1,000 kilograms per month or more of hazardous waste or more than one kilogram per month of acutely hazardous waste.

Government Publication Date: Jul 10, 2023

RCRA Small Quantity Generators List: RCRA SQG

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Small Quantity Generators (SQGs) generate more than 100 kilograms, but less than 1,000 kilograms, of hazardous waste per month.

Government Publication Date: Jul 10, 2023

RCRA Very Small Quantity Generators List: RCRA VSQG

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Very Small Quantity Generators (VSQG) generate 100 kilograms or less per month of hazardous waste, or one kilogram or less per month of acutely hazardous waste. Additionally, VSQG may not accumulate more than 1,000 kilograms of hazardous waste at any time.

Government Publication Date: Jul 10, 2023

RCRA Non-Generators: RCRA NON GEN

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Non-Generators do not presently generate hazardous waste.

Government Publication Date: Jul 10, 2023

RCRA Sites with Controls: RCRA CONTROLS

List of Resource Conservation and Recovery Act (RCRA) facilities with institutional controls in place. RCRA gives the U.S. Environmental Protection Agency (EPA) the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances.

Government Publication Date: Jul 10, 2023

Federal Engineering Controls-ECs: FED ENG

This list of Engineering controls (ECs) is provided by the United States Environmental Protection Agency (EPA). ECs encompass a variety of engineered and constructed physical barriers (e.g., soil capping, sub-surface venting systems, mitigation barriers, fences) to contain and/or prevent exposure to contamination on a property. The EC listing includes remedy component data from Superfund decision documents issued in fiscal years 1982-2021 for applicable sites on the final or deleted on the National Priorities List (NPL); and sites with a Superfund Alternative Approach (SAA) Agreement in place. The only sites included that are not on the NPL; proposed for NPL; or removed from proposed NPL, are those with an SAA Agreement in place.

Government Publication Date: Aug 23, 2023

Federal Institutional Controls- ICs: FED INST

This list of Institutional controls (ICs) is provided by the United States Environmental Protection Agency (EPA). ICs are non-engineered instruments, such as administrative and legal controls, that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy. Although it is EPA's expectation that treatment or engineering controls will be used to address principal threat wastes and that groundwater will be returned to its beneficial use whenever practicable, ICs play an important role in site remedies because they reduce exposure to contamination by limiting land or resource use and guide human behavior at a site. The IC listing includes remedy component data from Superfund decision documents issued in fiscal years 1982-2021 for applicable sites on the final or deleted on the National Priorities List (NPL); and sites with a Superfund Alternative Approach (SAA) Agreement in place. The only sites included that are not on the NPL; proposed for NPL; or removed from proposed NPL, are those with an SAA Agreement in place.

Government Publication Date: Aug 23, 2023

Land Use Control Information System: LUCIS

The LUCIS database is maintained by the U.S. Department of the Navy and contains information for former Base Realignment and Closure (BRAC) properties across the United States.

Government Publication Date: Sep 1, 2006

Institutional Control Boundaries at NPL sites: NPL IC

Boundaries of Institutional Control areas at sites on the United States Environmental Protection Agency (EPA)'s National Priorities List, or Proposed or Deleted, made available by the EPA's Shared Enterprise Geodata and Services (SEGS). United States Environmental Protection Agency (EPA)'s National Priorities List of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under the Superfund program. Institutional controls are non-engineered instruments such as administrative and legal controls that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy.

Government Publication Date: May 25, 2023

Emergency Response Notification System: ERNS 1982 TO 1986

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories.

Government Publication Date: 1982-1986

Emergency Response Notification System: ERNS 1987 TO 1989

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories.

Government Publication Date: 1987-1989

Emergency Response Notification System: ERNS

Database of oil and hazardous substances spill reports made available by the United States Coast Guard National Response Center (NRC). The NRC fields initial reports for pollution and railroad incidents and forwards that information to appropriate federal/state agencies for response. These data contain initial incident data that has not been validated or investigated by a federal/state response agency.

Government Publication Date: Apr 3, 2023

The Assessment, Cleanup and Redevelopment Exchange System (ACRES) Brownfield Database: FED BROWNFIELDS

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties protects the environment, reduces blight, and takes development pressures off greenspaces and working lands. This data is provided by the United States Environmental Protection Agency (EPA) and includes Brownfield sites from the Cleanups in My Community (CIMC) web application.

Government Publication Date: Sep 13, 2022

FEMA Underground Storage Tank Listing: FEMA UST

The Federal Emergency Management Agency (FEMA) of the Department of Homeland Security maintains a list of FEMA owned underground storage tanks.

Government Publication Date: Dec 31, 2017

Facility Response Plan: FRP

This listing contains facilities that have submitted Facility Response Plans (FRPs) to the U.S. Environmental Protection Agency (EPA). Facilities that could reasonably be expected to cause "substantial harm" to the environment by discharging oil into or on navigable waters are required to prepare and submit FRPs. Harm is determined based on total oil storage capacity, secondary containment and age of tanks, oil transfer activities, history of discharges, proximity to a public drinking water intake or sensitive environments. This listing includes FRP facilities from an applicable EPA FOIA file and Homeland Infrastructure Foundation-Level Data (HIFLD) data file.

Government Publication Date: May 2, 2023

Delisted Facility Response Plans: DELISTED FRP

Facilities that once appeared in - and have since been removed from - the list of facilities that have submitted Facility Response Plans (FRP) to EPA. Facilities that could reasonably be expected to cause "substantial harm" to the environment by discharging oil into or on navigable waters are required to prepare and submit Facility Response Plans (FRPs). Harm is determined based on total oil storage capacity, secondary containment and age of tanks, oil transfer activities, history of discharges, proximity to a public drinking water intake or sensitive environments.

Government Publication Date: May 2, 2023

Historical Gas Stations: HIST GAS STATIONS

This historic directory of service stations is provided by the Cities Service Company. The directory includes Cities Service filling stations that were located throughout the United States in 1930.

Government Publication Date: Jul 1, 1930

Petroleum Refineries: REFN

List of petroleum refineries from the U.S. Energy Information Administration (EIA) Refinery Capacity Report. Includes operating and idle petroleum refineries (including new refineries under construction) and refineries shut down during the previous year located in the 50 States, the District of Columbia, Puerto Rico, the Virgin Islands, Guam, and other U.S. possessions. Survey locations adjusted using public data.

Government Publication Date: Mar 9, 2023

Petroleum Product and Crude Oil Rail Terminals: BULK TERMINAL

List of petroleum product and crude oil rail terminals made available by the U.S. Energy Information Administration (EIA). Includes operable bulk petroleum product terminals located in the 50 States and the District of Columbia with a total bulk shell storage capacity of 50,000 barrels or more, and/or the ability to receive volumes from tanker, barge, or pipeline; also rail terminals handling the loading and unloading of crude oil that were active between 2017 and 2018. Petroleum product terminals comes from the EIA-815 Bulk Terminal and Blender Report, which includes working, shell in operation, and shell idle for several major product groupings. Survey locations adjusted using public data.

Government Publication Date: Jun 29, 2022

LIEN on Property: SEMS LIEN

The U.S. Environmental Protection Agency's (EPA) Superfund Enterprise Management System (SEMS) provides Lien details on applicable properties, such as the Superfund lien on property activity, the lien property information, and the parties associated with the lien.

Government Publication Date: Jul 26, 2023

Superfund Decision Documents: SUPERFUND ROD

This database contains a list of decision documents for Superfund sites. Decision documents serve to provide the reasoning for the choice of (or) changes to a Superfund Site cleanup plan. The decision documents include completed Records of Decision (ROD), ROD Amendments, Explanations of Significant Differences (ESD) for active and archived sites stored in the Superfund Enterprise Management System (SEMS), along with other associated memos and files. This information is maintained and made available by the U.S. Environmental Protection Agency.

Government Publication Date: May 25, 2023

Formerly Utilized Sites Remedial Action Program: DOE FUSRAP

The U.S. Department of Energy (DOE) established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from the Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations. The DOE Office of Legacy Management (LM) established long-term surveillance and maintenance (LTS&M) requirements for remediated FUSRAP sites. DOE evaluates the final site conditions of a remediated site on the basis of risk for different future uses. DOE then confirms that LTS&M requirements will maintain protectiveness.

Government Publication Date: Mar 4, 2017

State

Methane Gas Study Sites: LANDFILL METHANE

This Investigation of Methane Gas Hazards report was prepared by the Denver Office of Emergency Preparedness in 1981. The purpose of this study was to assess the actual and potential generation, migration, explosive and related problems associated with specified landfills, and to identify existing and potential problems, suggested strategies to prevent, abate, and control such problems and recommend investigative and monitoring functions as may be deemed necessary. The Colorado Department of Health selected eight landfills as priorities due to population density and potential hazards to population and property.

Government Publication Date: Jan 2, 1981

Environmental Covenants and Use Restrictions: COVENANTS

Boundaries of environmental covenant/environmental use restriction sites made available by the Colorado Deparment of Public Health & Environment (CDPHE). CPDHE has the authority to approve requests to restrict the future use of a property using an enforceable agreement called an environmental covenant. Land use restrictions may be used to ensure the cleanup remedy adequately protects human health and the environment when a contaminated site isn't cleaned up completely.

Government Publication Date: Apr 20, 2023

Superfund National Priorities List and Natural Resource Damages sites: SUPERFUND NRD

Boundaries of Superfund National Priorities List sites and Natural Resource Damages sites in Colorado made available by the Colorado Department of Public Health and Environment (CDPHE).

Government Publication Date: Apr 14, 2023

Superfund Sites: SHWS

A list of Superfund sites in Colorado made available by the Colorado Department of Public Health and Environment (CDPHE). In Colorado, the cleanup of Superfund sites is overseen by the CDPHE or the Environmental Protection Agency (EPA). This list includes active Superfund sites, deleted sites, proposed sites, and natural resource damage sites.

Government Publication Date: Jun 29, 2022

Delisted Superfund Sites: DELISTED SHWS

Sites which once appeared on - but have since been removed from - the list of Superfund sites in Colorado made available by the Colorado Department of Public Health and Environment (CDPHE). In Colorado, the cleanup of Superfund sites is overseen by the CDPHE or the Environmental Protection Agency (EPA).

Government Publication Date: Jun 29, 2022

Solid Waste Facilities and Landfills: SWF/LF

The Colorado Department of Public Health and Environment (CDPHE) regulates the management and disposal of solid waste, landfill facilities, waste tire registrants, and waste tire haulers. Solid waste and landfills data is provided by the CDPHE's Hazardous Materials and Waste Management Division's Solid Waste Report and the Environmental Sites Search Map Application. Waste tire data is made available by the CDPHE.

Government Publication Date: May 4, 2023

Historical Solid Waste (Closed or Abandoned Landfills): HIST LF

In the early 1980s the Hazardous Materials Waste Management Division of the Colorado Department of Public Health and Environment (CDPHE) conducted a survey of staff members and local agencies. The information gathered was compiled in 1984 for sites that were known or thought to have waste issues. The information is not complete and generally not very definitive or verifiable. This data became the Solid Waste Historical Data. The data is not maintained and has not been since the late 1980s.

Government Publication Date: 1984

Tri-County Historic Landfills: HIST LANDFILLS

A list of historical landfills made available by the Tri-County Health Department (TCHD). The TCHD serves Adams, Arapahoe, and Douglas Counties.

Government Publication Date: Jun 1, 2022

Registered Recycling Facilities: RECYCLING

This list of registered recycling facilities in Colorado is maintained by the Colorado Department of Public Health & Environment (CDPHE). This list includes primarily processing facilities for recyclable materials, such as material recovery facilities, industrial recycling operations, and recyclable material end user sites. Collection centers/drop-off locations are not included unless the site is also processing recyclable materials (separating, sorting, dismantling, grinding, baling, etc.).

Government Publication Date: Mar 13, 2023

Leaking Storage Tanks: LST

A list of leaking storage tank locations from the Colorado Storage Tank Information System (COSTIS) database, including those which have applied for reimbursement from the Petroleum Storage Tank Fund. This list is made available by the Division of Oil and Public Safety (OPS) of the Colorado Department of Labor and Employment (CDLE) and includes data compiled from applicable FOIA files, COSTIS files and other OPS datasets. Classified military tanks are excluded from this data.

Government Publication Date: Jun 1, 2023

LUST Trust Sites: LUST TRUST

The Division of Oil and Public Safety of the Colorado Department of Labor and Employment (CDLE) manages a Petroleum Storage Tank Fund (The Fund) that receives and processes applications to the Fund for reimbursement of costs related to assessment and cleanup of petroleum contaminated sites. Classified military tanks are excluded from this data.

Government Publication Date: Jun 1, 2023

Delisted Leaking Storage Tanks: DELISTED LST

This database contains a list of leaking storage tank sites and their Funds for reimbursement of costs related to assessment and cleanup that were removed from the Colorado Department of Labor and Employment (CDLE) database.

Government Publication Date: Jun 1, 2023

Underground Storage Tanks: UST

A list of underground storage tanks from the Colorado Storage Tank Information System (COSTIS) database. This database is made available by the Division of Oil and Public Safety (OPS) of the Colorado Department of Labor and Employment (CDLE). Data is compiled from applicable FOIA files, COSTIS files and other OPS datasets. Classified military tanks are excluded from this data.

Government Publication Date: Jun 1, 2023

Aboveground Storage Tanks: AST

A list of aboveground storage tanks from the Colorado Storage Tank Information System (COSTIS) database. This list is made available by the Division of Oil and Public Safety (OPS) of the Colorado Department of Labor and Employment (CDLE). Data is compiled from applicable FOIA files, COSTIS files and other OPS datasets. Classified military tanks are excluded from this data.

Government Publication Date: Jun 1, 2023

Storage Tank Information System (COSTIS): TANKS

This storage tank listing is provided by the Colorado Department of Labor and Employment, Division of Oil and Public Safety (OPS). The OPS manages the Colorado Storage Tank Information System (COSTIS) database which stores information on these facilities. This tank data includes facilities with liquefied petroleum gas, liquefied natural gas, and compressed natural gas tanks which are not classified as either underground storage tanks or aboveground storage tanks. Data is compiled from applicable FOIA files, COSTIS files and other OPS datasets. Classified military tanks are excluded from this data.

Government Publication Date: Jun 1, 2023

Delisted Storage Tanks: DTNK

This database contains a list of closed storage tank sites that were removed from the Division of Oil and Public Safety of the Colorado Department of Labor and Employment (CDLE) Tank Information System.

Government Publication Date: Jun 1, 2023

Environmental Covenants and Environmental Use Restrictions List: AUL

The Colorado Department of Public Health and Environment (CDPHE) maintains a list of sites that have environmental covenants and use restrictions in place. Land use restrictions may be used to ensure the cleanup remedy adequately protects human health and the environment when a contaminated site is not cleaned up completely.

Government Publication Date: Apr 20, 2023

Voluntary Cleanup and Redevelopment Program Sites: VCP

The Voluntary Cleanup and Redevelopment Program (VCUP) of the Colorado Department of Public Health and Environment (CDPHE) was created in 1994 with the objective to facilitate the redevelopment and transfer of contaminated properties. This VCUP site listing includes applicable active and inactive sites from the CDPHE Voluntary Cleanup Open Records data file and map layer.

Government Publication Date: Aug 2, 2023

Brownfield Sites: BROWNFIELDS

A list of Brownfields Program sites from the Hazardous Materials and Waste Management Division and the Colorado Environmental Records Search Interactive Map made available by the Colorado Department of Public Health and Environment (CDPHE). Sites which go untouched because of their real or perceived contamination can be rehabilitated using the CDPHE Brownfields Program.

Government Publication Date: Apr 3, 2023

Tribal

Leaking Underground Storage Tanks on Tribal/Indian Lands: INDIAN LUST

This list of leaking underground storage tanks (LUSTs) on Tribal/Indian Lands in Region 8, which includes Colorado, is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Apr 20, 2023

Underground Storage Tanks on Tribal/Indian Lands: INDIAN UST

This list of underground storage tanks (USTs) on Tribal/Indian Lands in Region 8, which includes Colorado, is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Apr 20, 2023

Delisted Tribal Leaking Storage Tanks: DELISTED INDIAN LST

Leaking Underground Storage Tank (LUST) facilities which once appeared on - and have since been removed from - the Regional Tribal/Indian LUST lists made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Apr 26, 2023

Delisted Tribal Underground Storage Tanks: DELISTED INDIAN UST

Underground Storage Tank (UST) facilities which once appeared on - and have since been removed from - the Regional Tribal/Indian UST lists made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Apr 26, 2023

County

No County databases were selected to be included in the search.

Additional Environmental Record Sources

Federal

Facility Registry Service/Facility Index: FINDS/FRS

The Facility Registry Service (FRS) is a centrally managed database that identifies facilities, sites, or places subject to environmental regulations or of environmental interest. FRS creates high-quality, accurate, and authoritative facility identification records through rigorous verification and management procedures that incorporate information from program national systems, state master facility records, and data collected from EPA's Central Data Exchange registrations and data management personnel. This list is made available by the U.S. Environmental Protection Agency (EPA).

Government Publication Date: Mar 2, 2023

Toxics Release Inventory (TRI) Program: TRIS

The U.S. Environmental Protection Agency's Toxics Release Inventory (TRI) is a database containing data on disposal or other releases of toxic chemicals from U.S. facilities and information about how facilities manage those chemicals through recycling, energy recovery, and treatment. There are currently 770 individually listed chemicals and 33 chemical categories covered by the TRI Program. Facilities that manufacture, process or otherwise use these chemicals in amounts above established levels must submit annual reporting forms for each chemical. Note that the TRI chemical list does not include all toxic chemicals used in the U.S. One of TRI's primary purposes is to inform communities about toxic chemical releases to the environment.

Government Publication Date: Oct 19, 2022

PFOA/PFOS Contaminated Sites: PFAS NPL

This list of Superfund Sites with Per- and Polyfluoroalkyl Substances (PFAS) detections is made available by the U.S. Environmental Protection Agency (EPA) in their PFAS Analytic Tools data, previously the list was obtained by EPA FOIA requests. EPA's Office of Land and Emergency Management and EPA Regional Offices maintain what is known about site investigations, contamination, and remedial actions under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) where PFAS is present in the environment. Limitations: Detections of PFAS at National Priorities List (NPL) sites do not mean that people are at risk from PFAS, are exposed to PFAS, or that the site is the source of the PFAS. The information in the Superfund NPL and Superfund Alternative Agreement (SAA) PFAS detection site list is years old and may not be accurate today. Site information such as site name, site ID, and location has been confirmed for accuracy; however, PFAS-related information such as media sampled, drinking water being above the health advisory, or mitigation efforts has not been verified. For Federal Facilities data, the other Federal agencies (OFA) are the lead agency for their data and provided them to EPA.

Government Publication Date: Sep 14, 2023

Federal Agency Locations with Known or Suspected PFAS Detections: PFAS FED SITES

List of Federal agency locations with known or suspected detections of Per- and Polyfluoroalkyl Substances (PFAS), made available by the U.S. Environmental Protection Agency (EPA) in their PFAS Analytic Tools data. EPA outlines that these data are gathered from several federal entities, such as the Federal Superfund program, Department of Defense (DOD), National Aeronautics and Space Administration, Department of Transportation, and Department of Energy. The dates this data was extracted for the PFAS Analytic Tools range from March 2022 to April 2023. Sites on this list do not necessarily reflect the source/s of PFAS contamination and detections do not indicate level of risk or human exposure at the site. Agricultural notifications in this data are limited to DOD sites only. At this time, the EPA is aware that this list is not comprehensive of all Federal agencies.

Government Publication Date: Apr 24, 2023

SSEHRI PFAS Contamination Sites: PFAS SSEHRI

This PFAS Contamination Site Tracker database is compiled by the Social Science Environmental Health Research Institute (SSEHRI) at Northeastern University. According to the SSEHRI, the database records qualitative and quantitative data from each known site of PFAS contamination, including timeline of discovery, sources, levels, health impacts, community response, and government response. The goal of this database is to compile information and support public understanding of the rapidly unfolding issue of PFAS contamination. All data presented was extracted from government websites, news articles, or publicly available documents, and this is cited in the tracker. Locations for the Known PFAS Contamination Sites are sourced from the PFAS Sites and Community Resources Map, credited to the Northeastern University's PFAS Project Lab, Silent Spring Institute, and the PFAS-REACH team. Disclaimer: The source conveys the data undergoes regular updates as new information becomes available, some sites may be missing and/or contain information that is incorrect or outdated, as well as their information represents all contamination sites SSEHRI is aware of, not all possible contamination sites. This data is not intended to be used for legal purposes. Access the following source link for the most current information: https://pfasproject.com/pfas-sites-and-community-resources/

Government Publication Date: Oct 9, 2022

National Response Center PFAS Spills: ERNS PFAS

This Per- and Poly-Fluoroalkyl Substances (PFAS) Spills dataset is made available via the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools. The National Response Center (NRC), operated by the U.S. Coast Guard, serves as an emergency call center that fields initial reports for pollution and railroad incidents and forwards that information to appropriate federal/state agencies for response. Response center calls from 1990 to the most recent complete calendar year where there was indication of Aqueous Film Forming Foam (AFFF) usage are included in this dataset. NRC calls may reference AFFF usage in the "Material Involved" or "Incident Description" fields. Limitations: The data from the NRC website contain initial incident data that has not been validated or investigated by a federal/state response agency. Keyword searches may misidentify some incident reports that do not contain PFAS. This dataset should also not be considered to be exhaustive of all PFAS spills/release incidents.

Government Publication Date: Apr 15, 2023

PFAS NPDES Discharge Monitoring: PFAS NPDES

This list of National Pollutant Discharge Elimination System (NPDES) permitted facilities with required monitoring for Per- and Polyfluoroalkyl (PFAS) Substances is made available via the U.S. Environmental Protection Agency (EPA)'s PFAS Analytic Tools. Any point-source wastewater discharger to waters of the United States must have a NPDES permit, which defines a set of parameters for pollutants and monitoring to ensure that the discharge does not degrade water quality or impair human health. This list includes NPDES permitted facilities associated with permits that monitor for Per- and Polyfluoroalkyl Substances (PFAS), limited to the years 2007 - present. EPA further advises the following regarding these data: currently, fewer than half of states have required PFAS monitoring for at least one of their permittees, and fewer states have established PFAS effluent limits for permittees. For states that may have required monitoring, some reporting and data transfer issues may exist on a state-by-state basis.

Government Publication Date: May 1, 2023

Perfluorinated Alkyl Substances (PFAS) from Toxic Release Inventory: PFAS TRI

List of Toxics Release Inventory (TRI) facilities at which the reported chemical is a per- or polyfluoroalkyl (PFAS) substance included in the U.S. Environmental Protection Agency's (EPA) consolidated PFAS Master List of PFAS Substances. Encompasses Toxics Release Inventory records included in the EPA PFAS Analytic Tools. The EPA's TRI database currently tracks information on disposal or releases of 770 individually listed toxic chemicals and 33 chemical categories from thousands of U.S. facilities and details about how facilities manage those chemicals through recycling, energy recovery, and treatment.

Government Publication Date: Oct 19, 2022

Perfluorinated Alkyl Substances (PFAS) Water Quality: PFAS WATER

The Water Quality Portal (WQP) is a cooperative service sponsored by the United States Geological Survey (USGS), the Environmental Protection Agency (EPA), and the National Water Quality Monitoring Council (NWQMC). This listing includes records from the Water Quality Portal where the characteristic (environmental measurement) is in the Environmental Protection Agency (EPA)'s consolidated Master List of PFAS Substances.

Government Publication Date: Jul 20, 2020

PFAS TSCA Manufacture and Import Facilities: PFAS TSCA

The U.S. Environmental Protection Agency (EPA) issued the Chemical Data Reporting (CDR) Rule under the Toxic Substances Control Act (TSCA) and requires chemical manufacturers and facilities that manufacture or import chemical substances to report data to EPA. This list is specific only to TSCA Manufacture and Import Facilities with reported per- and poly-fluoroalkyl (PFAS) substances. Data file is sourced from EPA's PFAS Analytic Tools TSCA dataset which includes CDR/Inventory Update Reporting data from 1998 up to 2020. Disclaimer: This data file includes production and importation data for chemicals identified in EPA's CompTox Chemicals Dashboard list of PFAS without explicit structures and list of PFAS structures in DSSTox. Note that some regulations have specific chemical structure requirements that define PFAS differently than the lists in EPA's CompTox Chemicals Dashboard. Reporting information on manufactured or imported chemical substance amounts should not be compared between facilities, as some companies claim Chemical Data Reporting Rule data fields for PFAS information as Confidential Business Information.

Government Publication Date: Jan 5, 2023

PFAS Waste Transfers from RCRA e-Manifest : PFAS E-MANIFEST

This Per- and Poly-Fluoroalkyl Substances (PFAS) Waste Transfers dataset is made available via the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools. Every shipment of hazardous waste in the U.S. must be accompanied by a shipment manifest, which is a critical component of the cradle-to-grave tracking of wastes mandated by the Resource Conservation and Recovery Act (RCRA). According to the EPA, currently no Federal Waste Code exists for any PFAS compounds. To work around the lack of PFAS waste codes in the RCRA database, EPA developed the PFAS Transfers dataset by mining e-Manifest records containing at least one of these common PFAS keywords: • PFAS • PFOA • PFOS • PERFL • AFFF • GENX • GEN-X (plus the Vermont state-specific waste codes). Limitations: Amount or concentration of PFAS being transferred cannot be determined from the manifest information. Keyword searches may misidentify some manifest records that do not contain PFAS. This dataset should also not be considered to be exhaustive of all PFAS waste transfers.

Government Publication Date: Apr 9, 2023

PFAS Industry Sectors: PFAS IND

This Per- and Poly-Fluoroalkyl Substances (PFAS) Industry Sectors dataset is made available via the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools. The EPA developed the dataset from various sources that show which industries may be handling PFAS including: EPA's Enforcement and Compliance History Online (ECHO) records restricted to potential PFAS-handling industry sectors; ECHO records for Fire Training Sites identified where fire-fighting foam may have been used in training exercises; and 14 CFR Part 139 Airports compiled from historic and current records from the FAA Airport Data and Information Portal. Since July 2006, all certificated Part 139 Airports are required to have fire-fighting foam onsite that meet certain military specifications, which to date have been fluorinated (Aqueous Film Forming Foam). Limitations: Inclusion in this dataset does not indicate that PFAS are being manufactured, processed, used, or released by the facility. Listed facilities potentially handle PFAS based on their industrial profile, but are unconfirmed by the EPA. Keyword searches in ECHO for Fire Training sites may misidentify some facilities and should not be considered to be an exhaustive list of fire training facilities in the U.S.

Government Publication Date: Apr 16, 2023

Hazardous Materials Information Reporting System: HMIRS

US DOT - Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA) Incidents Reports Database taken from Hazmat Intelligence Portal, U.S. Department of Transportation.

Government Publication Date: Sep 1, 2020

National Clandestine Drug Labs: NCDL

The U.S. Department of Justice ("the Department"), Drug Enforcement Administration (DEA), provides this data as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy.

Government Publication Date: Jul 26, 2023

Toxic Substances Control Act: TSCA

The Environmental Protection Agency (EPA) is amending the Toxic Substances Control Act (TSCA) section 8(a) Inventory Update Reporting (IUR) rule and changing its name to the Chemical Data Reporting (CDR) rule.

The CDR enables EPA to collect and publish information on the manufacturing, processing, and use of commercial chemical substances and mixtures (referred to hereafter as chemical substances) on the TSCA Chemical Substance Inventory (TSCA Inventory). This includes current information on chemical substance production volumes, manufacturing sites, and how the chemical substances are used. This information helps the Agency determine whether people or the environment are potentially exposed to reported chemical substances. EPA publishes submitted CDR data that is not Confidential Business Information (CBI).

Government Publication Date: Apr 11, 2019

Hist TSCA: HIST TSCA

The Environmental Protection Agency (EPA) is amending the Toxic Substances Control Act (TSCA) section 8(a) Inventory Update Reporting (IUR) rule and changing its name to the Chemical Data Reporting (CDR) rule.

The 2006 IUR data summary report includes information about chemicals manufactured or imported in quantities of 25,000 pounds or more at a single site during calendar year 2005. In addition to the basic manufacturing information collected in previous reporting cycles, the 2006 cycle is the first time EPA collected information to characterize exposure during manufacturing, processing and use of organic chemicals. The 2006 cycle also is the first time manufacturers of inorganic chemicals were required to report basic manufacturing information.

Government Publication Date: Dec 31, 2006

FTTS Administrative Case Listing: FTTS ADMIN

An administrative case listing from the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA) and Toxic Substances Control Act (TSCA), together known as FTTS. This database was obtained from the Environmental Protection Agency's (EPA) National Compliance Database (NCDB). The FTTS and NCDB was shut down in 2006.

Government Publication Date: Jan 19, 2007

FTTS Inspection Case Listing: FTTS INSP

An inspection case listing from the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA) and Toxic Substances Control Act (TSCA), together known as FTTS. This database was obtained from the Environmental Protection Agency's (EPA) National Compliance Database (NCDB). The FTTS and NCDB was shut down in 2006.

Government Publication Date: Jan 19, 2007

Potentially Responsible Parties List: PRP

Early in the site cleanup process, the U.S. Environmental Protection Agency (EPA) conducts a search to find the Potentially Responsible Parties (PRPs). The EPA looks for evidence to determine liability by matching wastes found at the site with parties that may have contributed wastes to the site. This listing contains PRPs, Noticed Parties, at sites in the EPA's Superfund Enterprise Management System (SEMS).

Government Publication Date: Aug 23, 2023

State Coalition for Remediation of Drycleaners Listing: SCRD DRYCLEANER

The State Coalition for Remediation of Drycleaners (SCRD) was established in 1998, with support from the U.S. Environmental Protection Agency (EPA) Office of Superfund Remediation and Technology Innovation. Coalition members are states with mandated programs and funding for drycleaner site remediation. Current members are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin. Since 2017, the SCRD no longer maintains this data, refer to applicable state source data where available.

Government Publication Date: Nov 08, 2017

Integrated Compliance Information System (ICIS): ICIS

The Integrated Compliance Information System (ICIS) database contains integrated enforcement and compliance information across most of U.S. Environmental Protection Agency's (EPA) programs. The vision for ICIS is to replace EPA's independent databases that contain enforcement data with a single repository for that information. Currently, ICIS contains all Federal Administrative and Judicial enforcement actions and a subset of the Permit Compliance System (PCS), which supports the National Pollutant Discharge Elimination System (NPDES). This information is maintained by the EPA Headquarters and at the Regional offices. A future release of ICIS will completely replace PCS and will integrate that information with Federal actions already in the system. ICIS also has the capability to track other activities that support compliance and enforcement programs, including incident tracking, compliance assistance, and compliance monitoring.

Government Publication Date: Jan 21, 2023

Drycleaner Facilities: FED DRYCLEANERS

A list of drycleaner facilities from Enforcement and Compliance History Online (ECHO) data as made available by the U.S. Environmental Protection Agency (EPA), sourced from the ECHO Exporter file. The EPA tracks facilities that possess NAIC and SIC codes that classify businesses as drycleaner establishments.

Government Publication Date: Apr 15, 2023

Delisted Drycleaner Facilities: DELISTED FED DRY

List of sites removed from the list of Drycleaner Facilities (sites in the EPA's Integrated Compliance Information System (ICIS) with NAIC or SIC codes identifying the business as a drycleaner establishment).

Government Publication Date: Apr 15, 2023

Formerly Used Defense Sites: FUDS

Formerly Used Defense Sites (FUDS) are properties that were formerly owned by, leased to, or otherwise possessed by and under the jurisdiction of the Secretary of Defense prior to October 1986, where the Department of Defense (DOD) is responsible for an environmental restoration. The FUDS Annual Report to Congress (ARC) is published by the U.S. Army Corps of Engineers (USACE). This data is compiled from the USACE's Geospatial FUDS data layers and Homeland Infrastructure Foundation-Level Data (HIFLD) FUDS dataset.

Government Publication Date: Jul 12, 2022

FUDS Munitions Response Sites: FUDS MRS

Boundaries of Munitions Response Sites (MRS), published with the Formerly Used Defense Sites (FUDS) Annual Report to Congress (ARC) by the U.S. Army Corps of Engineers (USACE). An MRS is a discrete location within a Munitions response area (MRA) that is known to require a munitions response. An MRA means any area on a defense site that is known or suspected to contain unexploded ordnance (UXO), discarded military munitions (DMM), or munitions constituents (MC). This data is compiled from the USACE's Geospatial MRS data layers and Homeland Infrastructure Foundation-Level Data (HIFLD) MRS dataset.

Government Publication Date: Jul 12, 2022

Former Military Nike Missile Sites: FORMER NIKE

This information was taken from report DRXTH-AS-IA-83A016 (Historical Overview of the Nike Missile System, 12/1984) which was performed by Environmental Science and Engineering, Inc. for the U.S. Army Toxic and Hazardous Materials Agency Assessment Division. The Nike system was deployed between 1954 and the mid-1970's. Among the substances used or stored on Nike sites were liquid missile fuel (JP-4); starter fluids (UDKH, aniline, and furfuryl alcohol); oxidizer (IRFNA); hydrocarbons (motor oil, hydraulic fluid, diesel fuel, gasoline, heating oil); solvents (carbon tetrachloride, trichloroethylene, trichloroethane, stoddard solvent); and battery electrolyte. The quantities of material a disposed of and procedures for disposal are not documented in published reports. Virtually all information concerning the potential for contamination at Nike sites is confined to personnel who were assigned to Nike sites. During deactivation most hardware was shipped to depot-level supply points. There were reportedly instances where excess materials were disposed of on or near the site itself at closure. There was reportedly no routine site decontamination.

Government Publication Date: Dec 2, 1984

PHMSA Pipeline Safety Flagged Incidents: PIPELINE INCIDENT

A list of flagged pipeline incidents made available by the U.S. Department of Transportation (US DOT) Pipeline and Hazardous Materials Safety Administration (PHMSA). PHMSA regulations require incident and accident reports for five different pipeline system types.

Government Publication Date: Dec 30, 2022

Material Licensing Tracking System (MLTS): MLTS

A list of sites that store radioactive material subject to the Nuclear Regulatory Commission (NRC) licensing requirements. This list is maintained by the NRC. As of September 2016, the NRC no longer releases location information for sites. Site locations were last received in July 2016.

Government Publication Date: May 11, 2021

Historic Material Licensing Tracking System (MLTS) sites: HIST MLTS

A historic list of sites that have inactive licenses and/or removed from the Material Licensing Tracking System (MLTS). In some cases, a site is removed from the MLTS when the state becomes an "Agreement State". An Agreement State is a State that has signed an agreement with the Nuclear Regulatory Commission (NRC) authorizing the State to regulate certain uses of radioactive materials within the State.

Government Publication Date: Jan 31, 2010

Mines Master Index File: MINES

The Master Index File (MIF) is provided by the United States Department of Labor, Mine Safety and Health Administration (MSHA). This file, which was originally created in the 1970's, contained many Mine-IDs that were invalid. MSHA removes invalid IDs from the MIF upon discovery. MSHA applicable data includes the following: all Coal and Metal/Non-Metal mines under MSHA's jurisdiction since 1/1/1970; mine addresses for all mines in the database except for Abandoned mines prior to 1998 from MSHA's legacy system (addresses may or may not correspond with the physical location of the mine itself); violations that have been assessed penalties as a result of MSHA inspections beginning on 1/1/2000; and violations issued as a result of MSHA inspections conducted beginning on 1/1/2000.

Government Publication Date: May 1, 2023

Surface Mining Control and Reclamation Act Sites: SMCRA

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by the Office of Surface Mining Reclamation and Enforcement (OSMRE) to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). This inventory contains information on the type and extent of Abandoned Mine Land (AML) impacts, as well as information on the cost associated with the reclamation of those problems. The data is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed. Disclaimer: Per the OSMRE, States and tribes who enter their data into eAMLIS (AML Inventory System) may truncate their latitude and longitude so the precise location of usually dangerous AMLs is not revealed in an effort to protect the public from searching for these AMLs, most of which are on private property. If more precise location information is needed, please contact the applicable state/tribe of interest.

Government Publication Date: Jun 13, 2023

Mineral Resource Data System: MRDS

The Mineral Resource Data System (MRDS) is a collection of reports describing metallic and nonmetallic mineral resources throughout the world. Included are deposit name, location, commodity, deposit description, geologic characteristics, production, reserves, resources, and references. This database contains the records previously provided in the Mineral Resource Data System (MRDS) of USGS and the Mineral Availability System/Mineral Industry Locator System (MAS/MILS) originated in the U.S. Bureau of Mines, which is now part of USGS. The USGS has ceased systematic updates of the MRDS database with their focus more recently on deposits of critical minerals while providing a well-documented baseline of historical mine locations from USGS topographic maps.

Government Publication Date: Mar 15, 2016

DOE Legacy Management Sites: LM SITES

The U.S. Department of Energy (DOE) Office of Legacy Management (LM) currently manages radioactive and chemical waste, environmental contamination, and hazardous material at over 100 sites across the U.S. The LM manages sites with diverse regulatory drivers (statutes or programs that direct cleanup and management requirements at DOE sites) or as part of internal DOE or congressionally-recognized programs, such as but not limited to: Formerly Utilized Sites Remedial Action Program (FUSRAP), Uranium Mill Tailings Radiation Control Act (UMTRCA Title I, Tile II), Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Resource Conservation and Recovery Act (RCRA), Decontamination and Decommissioning (D&D), Nuclear Waste Policy Act (NWPA). This site listing includes data exported from the DOE Office of LM's Geospatial Environmental Mapping System (GEMS). GEMS Data disclaimer: The DOE Office of LM makes no representation or warranty, expressed or implied, regarding the use, accuracy, availability, or completeness of the data presented herein.

Government Publication Date: May 25, 2023

Alternative Fueling Stations: ALT FUELS

This list of alternative fueling stations is sourced from the Alternative Fuels Data Center (AFDC). The U.S. Department of Energy's Office of Energy Efficiency & Renewable Energy launched the AFDC in 1991 as a repository for alternative fuel vehicle performance data, which provides a wealth of information and data on alternative and renewable fuels, advanced vehicles, fuel-saving strategies, and emerging transportation technologies. The data includes Biodiesel (B20 and above), Compressed Natural Gas (CNG), Electric, Ethanol (E85), Hydrogen, Liquefied Natural Gas (LNG), Propane (LPG), and Renewable Diesel (R20 and above) fuel type locations.

Government Publication Date: Aug 30, 2023

Superfunds Consent Decrees: CONSENT DECREES

This list of Superfund consent decrees is provided by the Department of Justice, Environment & Natural Resources Division (ENRD) through a Freedom of Information Act (FOIA) applicable file. This listing includes Consent Decrees for CERCLA or Superfund Sites filed and/or as proposed within the ENRD's Case Management System (CMS) since 2010. CMS may not reflect the latest developments in a case nor can the agency guarantee the accuracy of the data. ENRD Disclaimer: Congress excluded three discrete categories of law enforcement and national security records from the requirements of the FOIA; response is limited to those records that are subject to the requirements of the FOIA; however, this should not be taken as an indication that excluded records do, or do not, exist.

Government Publication Date: Apr 19, 2023

Air Facility System: AFS

This EPA retired Air Facility System (AFS) dataset contains emissions, compliance, and enforcement data on stationary sources of air pollution. Regulated sources cover a wide spectrum; from large industrial facilities to relatively small operations such as dry cleaners. AFS does not contain data on facilities that are solely asbestos demolition and/or renovation contractors, or landfills. ECHO Clean Air Act data from AFS are frozen and reflect data as of October 17, 2014; the EPA retired this system for Clean Air Act stationary sources and transitioned to ICIS-Air.

Government Publication Date: Oct 17, 2014

Registered Pesticide Establishments: SSTS

This national list of active EPA-registered foreign and domestic pesticide and/or device-producing establishments is based on data from the Section Seven Tracking System (SSTS). The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) Section 7 requires that each producing establishment must place its EPA establishment number on the label or immediate container of each pesticide, active ingredient or device produced. An EPA establishment number on a pesticide product label identifies the EPA registered location where the product was produced. The list of establishments is made available by the U.S. Environmental Protection Agency (EPA).

Government Publication Date: Mar 1, 2023

Polychlorinated Biphenyl (PCB) Transformers: PCBT

Locations of Transformers Containing Polychlorinated Biphenyls (PCBs) registered with the United States Environmental Protection Agency. PCB transformer owners must register their transformer(s) with EPA. Although not required, PCB transformer owners who have removed and properly disposed of a registered PCB transformer may notify EPA to have their PCB transformer de-registered. Data made available by EPA.

Government Publication Date: Oct 15, 2019

Polychlorinated Biphenyl (PCB) Notifiers: PCB

Facilities included in the national list of facilities that have notified the United States Environmental Protection Agency (EPA) of Polychlorinated Biphenyl (PCB) activities. Any company or person storing, transporting or disposing of PCBs or conducting PCB research and development must notify the EPA and receive an identification number.

Government Publication Date: Mar 20, 2023

State

Spills: SPILLS

A list of hazardous material spills and releases (including Meth Labs) that were reported to the Colorado Department of Public Health and Environment (CDPHE).

Government Publication Date: Apr 8, 2022

Colorado Oil and Gas Conservation Commission Spills: OG SPILLS

A list of spills made available by the Colorado Oil and Gas Conservation Commission (COGCC).

Government Publication Date: Aug 8, 2023

Dry Cleaning Facilities: DRYCLEANERS

A list of dry cleaners provided by the Colorado Department of Public Health and Environment (CDPHE) Hazardous Waste Compliance Assurance Unit and Stationary Sources Program.

Government Publication Date: Aug 3, 2023

Delisted Dry Cleaning Facilities: DELISTED DRYCLEANERS

List of sites removed from the drycleaners database made available by the Department of Public Health & Environment.

Government Publication Date: Aug 3, 2023

Air Pollution Control Division Permitted Facilities: AIR PERMITS

This list of Air Pollution Control Division Permitted Facilities is maintained by the Colorado Department of Public Health and Environment. The Stationary Sources Program evaluates and develops air permits for stationary sources in Colorado. The program inspects sources to determine compliance with air regulations and permit conditions and maintains an inventory of air pollution emissions throughout the state.

Government Publication Date: Feb 13, 2023

Per- and Polyfluoroalkyl Substances (PFAS): PFAS

A list of facilities that reported storing or using AFFF or Class B firefighting foam, other PFAS chemicals, have reported PFAS passthrough, or have detectable limits of PFAS in their discharge.

Government Publication Date: Dec 8, 2020

Asbestos Abatement and Demolition Projects: ASBESTOS

A list of Asbestos Abatement and Demolition Projects made available by the Colorado Department of Public Health and Environment (CDPHE), Air Pollution Control Division.

Government Publication Date: Dec 28, 2017

Hazardous Waste Sites- Generator: HAZ GEN

A list of hazardous waste generators.This list is made available by the Colorado Department of Public Health and Environment (CDPHE).

Government Publication Date: Jun 30, 2003

Permitted Facilities Listing: PDES

A list of permitted facilities tracked by the Water Quality Control Division of the Department of Public Health & Environment (DPHE). This list is the state version of the NPDES (National Pollution Discharge Elimination System).

Government Publication Date: May 1, 2023

Hazardous Waste Sites- Treatment, Storage & Disposal: HAZ TSD

A list of facilities that treat, store, dispose, or recycle hazardous waste on-site. This list is made available by the Colorado Department of Public Health and Environment (CDPHE).

Government Publication Date: Jun 30, 2003

Hazardous Waste Sites- Corrective Action: HAZ CORRACT

A list of hazardous waste generators with corrective actions. This list is made available by the Colorado Department of Public Health and Environment (CDPHE).

Government Publication Date: Jun 30, 2003

Uranium Mill Tailings Sites: UMTRA

This list of former uranium mill sites in Colorado, with cleanup authorized by the Uranium Mill Tailings Remedial Action (UMTRA) program, was provided by the Colorado Department of Public Health and Environment. Because much of the cleanup is complete, the focus has shifted to primarily "Post-UMTRA issues," or the discovery of new uranium mill tailings material by private citizens, utility companies or local governments.

Government Publication Date: Sep 26, 2022

Tribal

No Tribal additional environmental record sources available for this State.

County

No County additional environmental databases were selected to be included in the search.

Definitions

Database Descriptions: This section provides a detailed explanation for each database including: source, information available, time coverage, and acronyms used. They are listed in alphabetic order.

Detail Report: This is the section of the report which provides the most detail for each individual record. Records are summarized by location, starting with the project property followed by records in closest proximity.

Distance: The distance value is the distance between plotted points, not necessarily the distance between the sites' boundaries. All values are an approximation.

Direction: The direction value is the compass direction of the site in respect to the project property and/or center point of the report.

Elevation: The elevation value is taken from the location at which the records for the site address have been plotted. All values are an approximation. Source: Google Elevation API.

Executive Summary: This portion of the report is divided into 3 sections:

'Report Summary'- Displays a chart indicating how many records fall on the project property and, within the report search radii.

'Site Report Summary'-Project Property'- This section lists all the records which fall on the project property. For more details, see the 'Detail Report' section.

'Site Report Summary-Surrounding Properties'- This section summarizes all records on adjacent properties, listing them in order of proximity from the project property. For more details, see the 'Detail Report' section.

Map Key: The map key number is assigned according to closest proximity from the project property. Map Key numbers always start at #1. The project property will always have a map key of '1' if records are available. If there is a number in brackets beside the main number, this will indicate the number of records on that specific property. If there is no number in brackets, there is only one record for that property.

The symbol and colour used indicates 'elevation': the red inverted triangle will dictate 'ERIS Sites with Lower Elevation', the yellow triangle will dictate 'ERIS Sites with Higher Elevation' and the orange square will dictate 'ERIS Sites with Same Elevation.'

Unplottables: These are records that could not be mapped due to various reasons, including limited geographic information. These records may or may not be in your study area, and are included as reference.

APPENDIX E
RECORDS OF COMMUNICATIONS

COLORADO
Hazardous Materials & Waste Management Division
Department of Public Health & Environment

*Each environmental division maintains separate records. This form is **only** for radiation, remediation, solid waste and hazardous waste records review requests. You must contact the Air Pollution Control Division and the Water Quality Control Division individually to review their records.

Requestor Name * Nancy Otterstrom

Company Name Kumar & Associates **Address** * 2390 North Lipan Street

City * Denver **State** * CO **Zip** * 80223

Telephone Number * 7203189453

Email * notterstrom@kumarusa.com **Date (mm/dd/yyyy)** * 10/16/2023

Site 1 Name * Vacant lot **Site 2 Name** Element By Westin

Address * 3 South Marshall Road **Address** 3 South Marshall Road

City/State/Zip * Superior, CO **City/State/Zip** Superior, CO

Notes * Any haz mat records please

Notes Any haz mat records please

Site 3 Name WB Hwy 36 Just East of McCaslin Blvd. **Site 4 Name**

Address WB Hwy 36 Just East of McCaslin Blvd. **Address**

City/State/Zip Superior, CO **City/State/Zip**

Notes SPILL records please

Notes

Per Colorado law 24-72 and Department policy
The Department shall charge $.25 per page for all documents copied when the number of pages produced exceeds 25.

If researching, retrieving, and producing records requires more than one hour of staff time, the department shall charge $30 per hour for all staff time associated with locating and producing records for a requester. The department may charge the actual per-box retrieval fees for retrieving responsive records that are stored offsite by a vendor.

Large document requests may be sent to the state’s contracted vendor, who will provide a cost estimate to the requester.

From: robb.farquhar@state.co.us on behalf of cdphe_cora_hmwmd - CDPHE, CDPHE
To: Nancy Otterstrom
Subject: Re: Records review Request Nancy Otterstrom notterstrom@kumarusa.com
Date: Tuesday, October 17, 2023 7:18:35 AM

Nancy,

Our system only recognizes addresses, if you can supply a valid address for the 2nd request that would be helpful.
3 South Marshall Rd, Superior, CO - No records found
WB Hwy 36 Just East of McCaslin Blvd. Superior, CO - No records found

Robb

On Mon, Oct 16, 2023 at 1:31 PM Formsite <noreply@fs20.formsite.com> wrote:

> A new request has been submitted. Please copy the respondent's email from the subject line.
>
> View this result: #20770579
>
> This email was sent to cdphe_cora_hmwmd@state.co.us as a result of a form being completed.
> Click here to report unwanted email.



--
You can search records via the OnBase Public Access Viewer. See User Guides for tips on searching here: HMWMD User Guides

Or, use our interactive map

Visit the HMWMD Records page for additional information on HMWMD programs and records procedures.

APPENDIX F
QUALIFICATIONS OF THE ENVIRONMENTAL PROFESSIONAL

Nancy Otterstrom

Environmental Services Manager

Education

B.S. Biology with Environmental Science Focus, Chemistry Minor, Roosevelt University, 2003

Professional Certifications:

- EPA/AHERA and Colorado - Asbestos Air Monitoring Specialist #18031 (AQCC, Regulation 8)
- EPA/AHERA and Colorado - Asbestos Building Inspector #18031
- NIOSH 582-E – Sampling and Evaluating Airborne Asbestos Dust
- Certified X-Ray Fluorescence Lead-analyzer (XRF)
- Certified Lead Inspector #17668
- OSHA 40-hour HAZWOPR
- CPR Trained
- Colorado Class A/B Storage Tank Operator

Qualifications Summary

Ms. Otterstrom has over **15 years' total experience** working on various environmental projects on residential, commercial, municipal, and government projects. She has acquired diverse knowledge working with clients ranging from individual home owners to private contractors to regulatory agencies, in dealing with varying types of environmental contaminations and cleanup procedures. She has also acquired managerial and directorial experience in multiple, deadline-oriented office environments.

Professional Experience

- **Phase I Environmental Site Assessments (ESAs):** Performed more than 100 Phase I ESAs for developers, financial institutions, governmental agencies, municipalities, various commercial clients, and individuals. These assessments included proposal writing, client interaction, data collection and management, report production, and regulatory review and follow-up communication. Various clients included the FDIC, JC Penney, Starbucks, KeyBank, Wal-Mart, Century Communities, KB Home Colorado, and CVS Pharmacy.

- **Phase II ESAs/Limited Site Investigations:** Performed numerous Phase II ESAs/Limited Site Investigations as a result of findings of the Phase I ESAs. These projects included subsurface investigations of the potentially impacted sites for soil, groundwater, and vapor. Typical project scopes included subcontractor management, field screening of soils, installation of soil borings, groundwater monitoring wells, and vapor points, sample collection, data management, report production, and regulatory communication. Often, these projects would lead to underground storage tank removals and advanced remedial actions.

- **Soil Vapor:** Performed soil-vapor probe installation and monitoring for the City and County of Broomfield, KB Home of Colorado, and various residential and commercial clients. Duties include hand-auguring vapor probes to five feet below ground surface, installation of probes, completion of mount, and monitoring with landfill gas meters for the presence of methane and various landfill gases.

- **Asbestos Building Inspector** for various commercial clients, such as JC Penney, restoration companies, and financial institutions. Projects included sample collection, data management, report production, and client follow-up during pre-abatement preparation. In addition to the inspection process, daily tasks included public and traffic control, maintenance staff education, and serving as liaison for the client with the appropriate regulatory agencies.

- **Lead Inspector** for Denver Public Schools, restoration companies, and various individuals. As with asbestos inspections, lead inspections included collection of samples (utilizing an X-ray Fluorescence machine), data management, report writing, and regulatory/client reporting.

- **Air monitoring specialist** at the CU Boulder Campus, various residential projects, and commercial buildings. Project details included daily air monitoring, visual inspections, employee safety checks, and final air clearance sampling.

- **Certified Class A/B Storage Tank Operator:** Performed monthly and yearly underground storage tank inspections for various clients in the Denver Metro area, such as Standard Fence Company and US Transport. Inspections included reviewing regulatory paperwork and testing, Automatic Tank Gauge assessment, visual inspection and documentation of findings.

Grant Miller

Environmental Scientist/Geologist

Education

B.S Geology, Colorado State University, Fort Collins, 2013

A.A.S. Mechanical AutoCAD/Drafting, Pikes Peak Community College, Colorado Springs, 2010

Professional Certifications:

- OSHA 40-hour HAZWOPER

Qualifications Summary

Mr. Miller has **9 years of experience** in environmental and geotechnical subsurface exploration drilling industry. He is experienced in performing Phase I and II Environmental Site Assessments, subsurface investigations, soils classification, and remediation oversight.

Mr. Miller also has extensive experience in managing field operations, conducting water quality investigations, groundwater and soil investigations and remediation, sample collection, and data evaluation. Mr. Miller is an experienced AutoCAD/GIS technician who has provided support for projects such as surface and groundwater modeling, landfill surveys, and various field mapping projects.

Professional Experience

- **Phase I Environmental Site Assessments –** performed numerous assessments involving undeveloped, commercial, and industrial properties throughout the United States. Project experience includes convenience stations, automotive service stations, commercial shopping malls, cellphone tower sites, wood treating facilities, and manufacturing facilities. His tasks included records research, site reconnaissance, and report preparation.

- **Phase II Environmental Site Assessments –** experienced in proposing, planning, implementing, and reporting for Phase II Environmental Site Assessments throughout the United States. Projects included subcontractor management, subsurface investigations, installation of soil borings, groundwater monitoring wells, and soil vapor points.

- **Environmental Investigations –** responsibilities include, but are not limited to, site characterizations, Corrective Action Plan implementation such as the installation, operation, and maintenance of various types of soil and groundwater remediation systems; collection of soil and groundwater samples, well gauging, pilot testing, soil studies, performance of aqueous and non-aqueous phase liquids recovery and in-situ remedial injection programs. Additionally, he has performed oversight of UST removals and soil excavation throughout Colorado.

- **QA/QC Oversight –** provided quality assurance and quality control and oversight for the construction of a hazardous waste landfill in Beatty, Nevada. Duties included the construction quality assurance plan preparation, geosynthetic installation QA/QC oversight, conducting landfill surveys using AutoCAD for the closure of landfill cells.

AMENDED AND RESTATED
RECIPROCAL EASEMENT AGREEMENT

THIS AMENDED AND RESTATED RECIPROCAL EASEMENT AGREEMENT (the **"Easement")** is entered into this __ day of _____, 2024, by **RC SUPERIOR LLC, a** Delaware limited liability company **("RC Superior"),** and **QC GLACIER STANDBY SUPERIOR LLC,** a Nevada limited liability company **("Glacier").** RC Superior and Glacier are sometimes referred to herein individually as a **"Party"** and collectively as the **"Parties."**

For Ten and No/l00ths Dollars ($10.00) paid by each to the other and other good and valuable consideration, the adequacy of which each Party hereto acknowledges by its signature below, the Parties hereby covenant and agree as follows:

1. **RC Superior ADA Easement**. Glacier hereby grants to RC Superior, its successors and assigns, a permanent, non-exclusive easement (the "**RC Superior ADA Easement**") in, to, through, on, over, under and across the real property owned by Glacier as described in Exhibit A attached hereto and incorporated herein (the "**Glacier Property**"), in any area depicted as the "**ADA Route Easement**") on Exhibit B attached hereto and incorporated by this reference (the "**RC Superior ADA Easement Area**") for the purpose of constructing, maintaining and use by RC Superior of a pedestrian access in compliance with the Town of Superior, Colorado (the "**Town**") requirements to and from the property owned by RC Superior described in Exhibit C attached hereto and incorporated herein by this reference (the "**RC Superior Property**"). The RC Superior Easement Area may be modified with the other Party's written consent, and at such requesting Party's cost, which consent shall not be unreasonably withheld if such revision complies with the then applicable Town, federal and other governmental regulations and do not result in a material increase in the non-requesting property owner's share of the costs of maintenance of the RC Superior ADA Easement Area. Upon any modification of the RC Superior ADA Easement Area in accordance with this Section 1, the requesting Party shall be responsible for restoring the Glacier Property to its prior condition. Glacier, for itself and its successors and assigns, reserves the right to use and occupy the RC Superior ADA Easement Area for pedestrian access to and from the Glacier Property and all other properties encumbered by that certain Master Declaration of Covenants, Conditions and Restrictions for Superior Town Center recorded April 14, 2015, at reception No. 03439339 and First Amendment in connection therewith recorded October 18, 2021, at reception No. 0392159 in the records of Boulder County Clerk and Recorder's Office (the **"Records"**); as it may be amended from time to time (collectively, the **"Declaration"**) and for any and all purposes not inconsistent with the purposes set forth hereunder.

2. **Construction and Maintenance of the RC Superior ADA Easement Area**. RC Superior agrees to construct and maintain the RC Superior ADA Easement Area at its cost and expense until the commencement by Glacier of its development of the Glacier Property, at which time, Glacier shall reimburse RC Superior for fifty percent (50%) of the costs of maintenance by RC Superior of the RC Superior ADA Easement Area from that date forward. Such reimbursement shall be made in full by Glacier within thirty (30) days of delivery of an invoice therefor by RC Superior to Glacier at the address set forth above below (or at such other address provided to RC Superior by Glacier in advance).

3. **RC Superior Signage Access Easement**. Glacier hereby grants to RC Superior, its successors and assigns, a permanent, non-exclusive easement (the "**RC Superior Signage Easement**") in, to, from, through, on, over, under and across the Glacier Property to the area depicted as the "**Sign Easement**" on Exhibit D-1 attached hereto and incorporated by this reference (the "**RC Superior Signage Easement Area**") for the purpose of

installing and maintaining by RC Superior of a sign on the Glacier Property (the "**RC Superior Sign**") on the existing signage structure shown in Exhibit D-1 attached hereto and incorporated herein as Exhibit D-1 (the "**Glacier Signage Structure**"). RC Superior will maintain the RC Superior Sign at its sole cost and will share the cost of maintaining the Glacier Signage Structure with Glacier by reimbursing Glacier for fifty percent (50%) of the costs of maintenance by Glacier of the Signage Structure from the date of installation by RC Superior of the RC Superior Sign forward. Such reimbursement shall be made in full by RC Superior within thirty (30) days of delivery of an invoice therefor by Glacier to RC Superior at the address set forth above below (or at such other address provided to Glacier by RC Superior in advance). Upon completion of any repairs, maintenance or replacement work, RC Superior shall restore the surface of the RC Superior Signage Easement Area to its prior condition

4. **Glacier Signage Access Easement**. RC Superior grants to Glacier, its successors and assigns, a permanent, non-exclusive easement (the "**Glacier Signage Easement**") in, to, from, through, on, over, under and across the RC Superior Property to the area depicted as the "**Sign Easement**" on Exhibit D-2 attached hereto and incorporated by this reference (the "**Glacier Signage Easement Area**") for the purpose of constructing, installing and maintaining by RC Superior of a sign on the RC Superior Property (the "**Glacier Sign**"). Glacier will maintain the Glacier Sign at its sole cost and expense. Upon completion of any repairs, maintenance or replacement work, Glacier shall restore the surface of the Glacier Signage Easement Area to its prior condition.

5. **RC Superior Permanent Access Easement.** Glacier hereby grants to RC Superior, its successors and assigns, a permanent, non-exclusive easement in, to, through, on, over, under, and across the real property owned by Glacier, in any area depicted as the "RC Superior Access Easement Area" on Exhibit E attached hereto and incorporated herein by this reference (the **"RC Superior Permanent Access Easement Area**") for the purpose of vehicular and pedestrian access to and from the RC Superior Property.

6. **No Rights Granted to Other Properties.** The foregoing access easements shall not benefit any properties other than the RC Superior Property and the Glacier Property as shown in Exhibits B, D-1, D-2 and E attached hereto and incorporated herein by reference.

7. **Utility Easements.** The Parties hereby grant unto each other, their successors and assigns. including private and public utility companies to whom specific easements are granted, a blanket easement upon, under and across the RC Superior Property and the Glacier Property for the installation. use, maintenance, repair and replacement of private and public utility facilities and services, including, but not limited to, gas, electric; water, sanitary sewer, storm sewer, telecommunications, and similar services providing services to either the RC Superior Property or the Glacier Property (collectively "**Utility Services**"). The easements for Utility Services described in this Section 7 are referred to as the "Utility Easements"). Notwithstanding the foregoing blanket easement, the actual location of facilities to provide Utility Services shall first be approved by the owner of the property upon which such facilities are to be constructed (the **"Consenting Owner**"), which consent will not be unreasonably withheld, conditioned or delayed as along as such do not materially interfere with the Consenting Owner's use of its property and any additional easement agreements do not materially limit the Consenting Owner's right to use its property. Any repairs, maintenance, or replacement of any facilities to provide Utility Services on the Consenting Owner's property shall be performed at the expense of the to be owner of the facilities providing Utility Services or the owner of the property served by such utilities. Upon completion of any such repairs, maintenance or replacement work, the party performing such work shall restore the surface of the Consenting Owner's property to its prior condition.

8. **Prior Easement Terminated.** This Easement amends and supersedes in its entirety that certain Reciprocal Easement Agreement entered into by RC Superior and Glacier, recorded on February 2, 2017 at reception No. 03572997 (the "**Prior Easement**"). All grants of easements given by either Party under the Prior Easement are hereby terminated as of the date of this Easement.

9. **Binding Effect**. The RC Superior ADA Easement, the RC Superior Signage Easement, the Glacier Signage Easement, the Utility Easements and the RC Superior Permanent Access Easement (collectively, the "**Easements**") and the respective rights, privileges, obligations and burdens associated with the Easements shall be deemed to be with the RC Superior Property and Glacier Property and be binding upon and inure to the benefit of RC Superior, Glacier, and their respective successors, assigns, members, managers. employees, customers, licensees, invitees, guests, contractors, agents, tenants, and the principals. officers, directors, employees, customers, licensees, invitees, guests, contractors, and agents of such tenants and all subsequent owners of the RC Superior Property and the Glacier Property. The Easements shall not merge with fee title.

10. **Indemnity.** By signing below, each Party hereby agrees to indemnify, defend and hold harmless the other, as well as each Party's respective successors, assigns, respective officers, directors, principals, partners, employees, and agents from and against any liabilities, damages, losses, costs, causes of action, or claims of any kind. whatsoever arising out of the use of the foregoing Easements by such beneficiaries or their principals, partners, officers, directors, employees, customers, invitees. guests, contractors, agents, or tenants, or such tenants' principals, officers, directors, partners, employees, customers, invitees, guests, contractors. or agents and/or all those acting by or on behalf of the indemnifying Party.

11. **Lender's Consent and Subordination.** WESTERN ALLIANCE BANK, an Arizona corporation f/k/a TORREY PINES BANK (**"WAB")** is the beneficiary under that certain Deed of Trust, Assignment of Rents, Security Agreement and Fixture Filing, dated October 31, 2013, by Borrower, as trustor, for the benefit of Lender, as beneficiary, recorded on November 1, 2013, at Reception No. 03350989, records of Boulder County, Colorado, as amended by that certain Amendment to Deed of Trust, Assignment of Rents, Security Agreement and Fixture Filing, dated as of October 29, 2015, by Borrower, as trustor, for the benefit of Lender. as beneficiary, recorded on October 30, 2015, at Reception No. 03482744 in the records of Boulder County, Colorado, and that certain Second Amendment to Deed of Trust. Assignment of Rents, Security Agreement and Fixture Filing by Borrower, as trustor, for the benefit of Lender, as beneficiary, recorded on August 30, 2016, at Reception No. 03540378 in the records of Boulder County, Colorado (as amended., the **"Deed of Trust"**). By its signature below, WAB hereby consents to this Easement and acknowledges and agrees that the Deed of Trust and the loan secured by the Deed of Trust are subordinate to this Easement. All of the provisions contained in this Easement shall be binding on and for the benefit of any person who acquires title to the Glacier Property by foreclosure, trustee's sale, deed in lieu of foreclosure. exercise of power of sale or other involuntary transfer.

12. **Governing Law**. This Easement shall be construed and enforced in accordance with the laws of the State of Colorado.

13. **No Partnership**. None of the terms or provisions of this Easement shall be deemed to create a partnership between the Parties in their respective businesses or otherwise, nor shall it cause them to be considered joint venturers or members of any joint enterprise.

14. **Severability.** If any provision of this Easement is held to be illegal, invalid or unenforceable under present or future laws, then the legality, validity and enforceability of the remaining provisions of this Easement shall not be affected thereby; and in lieu of each such illegal, invalid or unenforceable provision, there shall be added automatically as a part of this Easement a provision as similar in terms to such illegal. invalid or unenforceable provision as may be possible and which shall be legal, valid and enforceable.

15. **Counterparts.** This Easement may be executed and delivered in any number of original counterparts, each of which, when so executed and delivered, shall be deemed to be an original and all of which shall constitute one and the same instrument.

16. **No Dedication.** The Easements granted hereby shall not be deemed to be a gift or dedication of any portion of the RC Superior Property or of the Glacier Property to or for the general public or for any public purposes whatsoever, it being the intention of the Parties that this Easement shall **be** strictly limited to and for the purposes herein expressed.

17. **Captions.** The headings and captions used in this Easement are included for convenience only and shall be irrelevant to the construction of any provision of this Easement.

18. **Amendment.** The provisions of this Easement may be abrogated, modified, rescinded, terminated or amended in whole or in part only by the Parties hereto, consented to by WAB, by a written instrument duly executed and recorded in the real property records of the County of Boulder, State of Colorado.

19. **Recording.** This Easement shall be recorded by RC Superior in the real property records of the Clerk and Recorder of the County of Boulder, State of Colorado.

20. **Additional Documents**. The Parties agree to execute and deliver all other documents reasonably necessary to effectuate the terms and provisions of this Easement.

21. **Entire Agreement**. This Easement and the exhibits hereto contain all of the representations and the entire agreement between the Parties with respect to the subject matter hereof. Any prior correspondence, memoranda or agreements between the Parties or any of them with respect to the subject matter hereof, including without the Prior Easement, are merged herein and replaced by this Easement.

(Signatures on following pages)

EXECUTED as of the date and year first set forth above,

GLACIER:

QC Glacier Standby Superior LLC, a
Nevada limited liability company

By: _____
Name: _____
Title: _____
Address: _____

State of _____
County of _____

The foregoing Amended and Restated Reciprocal Easement Agreement was acknowledged before me this _____ day of _____, 2024 by _____, as _____ ____of QC Glacier Standby Superior LLC, a Nevada limited liability company.

WITNESS my hand and official seal.

My commission expires: _____

_____
Notary Public

(Signature and Notary Blocks for RC Superior and WAB on following pages)

EXECUTED as of the date and year first set forth above,

RC SUPERIOR:

RC SUPERIOR, LLC,
a Delaware limited liability company

By: Superior Town Center ASLI VII Holdings, LLC, a Delaware limited liability company,
its sole Member

By: Avanti Strategic Land Investors VII, L.L.L.P., a Delaware limited liability limited partnership,
Its: sole Member

By: Avanti Properties Group II, L.L.L.P.,
a Delaware limited liability limited partnership, Its:
Managing Partner

By: Avanti Management Corporation, a Florida corporation,
its sole General Partner
By: _____
Name: _____
Title: _____
Address: _____

State of _____
County of _____

The foregoing Amended and Restated Reciprocal Easement Agreement was acknowledged before me this _____ day of _____, 2024 by _____, as _____ of Avanti Management Corporation, the sole general partner of Avanti Properties Group II, L.L.L.P., Managing general partner of Avanti Strategic Land Investors VII, L.L.L.P., the sole member of Superior Town Center ASLI VII Holdings, LLC, the sole member of RC Superior LLC, a Delaware limited liability company.

WITNESS my hand and official seal.

My commission expires: _____

_____
Notary Public

(Signature and Notary Block for WAB on following page)

EXECUTED as of the date and year first set forth above,

WAB:
WESTERN ALLIANCE BANK,
an Arizona corporation

By: _____
Name: _____
Title: _____

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of _____
County of _____

On _____, 2024 before me, _____, Notary Public, personally appeared _____ who proved to me on the basis of satisfactory evidence to the person whose name is subscribed to the within instrument acknowledged to me that they executed the same in their authorized capacity and by their signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of _____ the foregoing paragraph is true and correct.

WITNESS my hand and official seal.
Signature: _____(Seal)

EXHIBIT A

LEGAL DESCRIPTION OF GLACIER PROPERTY

Lot 3A, Block 1, Superior Town Center Filing No. 1B Replat No. 3, accordingly to the plat thereof recorded December 1, 2016, under Reception No. 03560623, County of boulder, State of Colorado.

EXHIBIT B

DEPICTION OF RC SUPERIOR ADA EASEMENT AREA

(see attached)

Exhibit B

Legal Description

A parcel of land, being part of Lot 3A, Block 1, Superior Town Center Filing No. 1B Replat No. 3, recorded December 1, 2016 in the office of the Boulder County Clerk and Recorder at Reception No. 03560623, lying in the Northwest Quarter of Section 19, Township 1 South, Range 69 West of the 6th Principal Meridian, Town of Superior, County of Boulder, State of Colorado, more particularly described as follows:

Commencing at the southeast corner of said Lot 3A;
Thence North 01°17'10" West along the easterly line of said Lot 3A, a distance of 41.28 feet;
Thence North 59°24'46" East continuing along said easterly line, a distance of 20.64 feet;
Thence North 01°17'10" West continuing along said easterly line, a distance of 71.53 feet to the Point of Beginning;

Thence South 87°58'24" West, a distance of 34.69 feet;
Thence South 63°46'39" West, a distance of 18.63 feet;
Thence South 89°02'32" West, a distance of 22.82 feet;
Thence South 00°33'21" East, a distance of 56.73 feet;
Thence South 88°40'47" West, a distance of 69.29 feet;
Thence North 37°06'20" West, a distance of 8.55 feet;
Thence South 53°19'52" West, a distance of 53.43 feet to the southwesterly line of said Lot 3A;

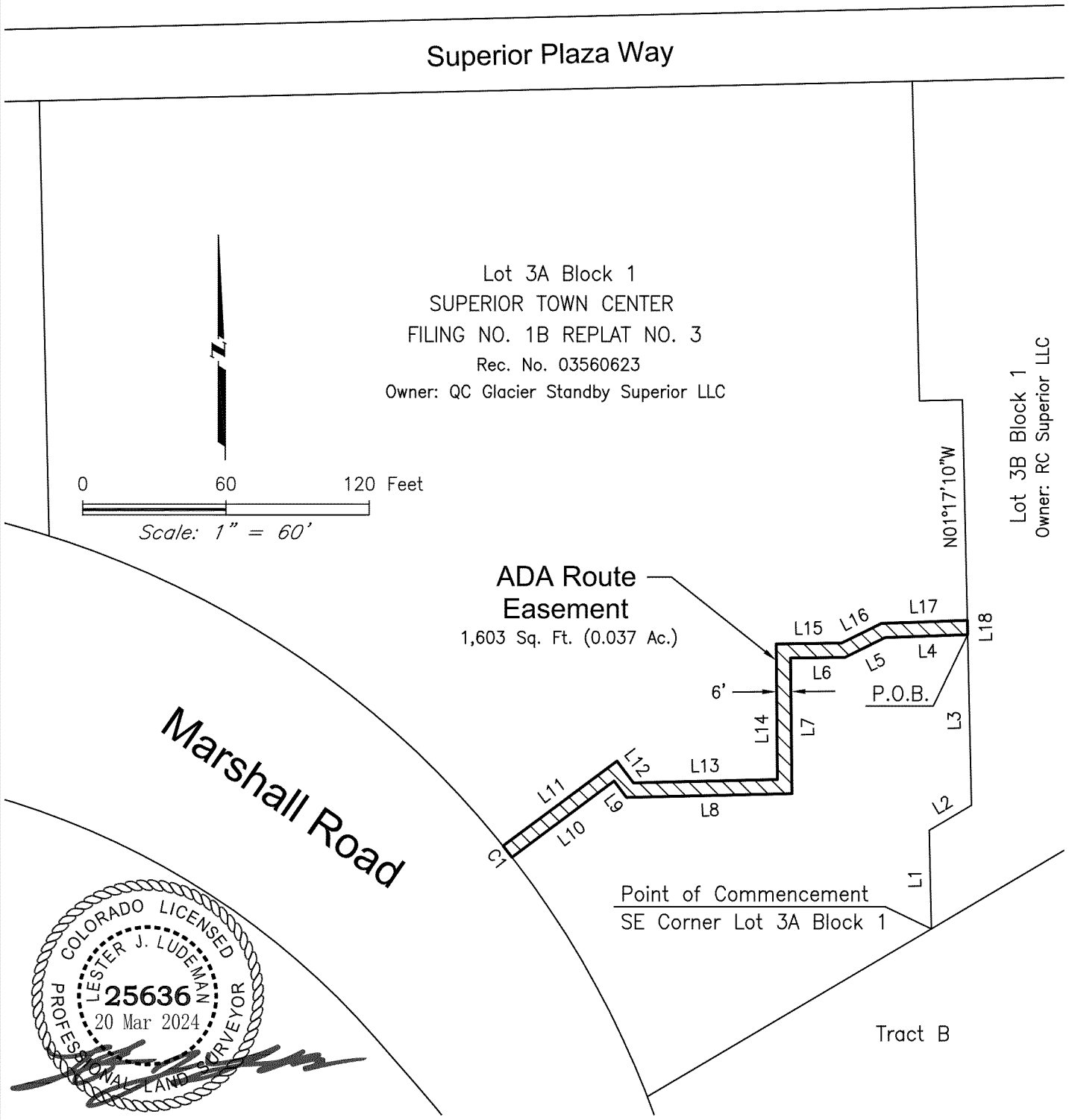
Thence along said southwesterly line along the arc of a curve to the left having a radius of 395.50 feet and a central angle of 00°52'10", an arc distance of 6.00 feet (chord bears North 38°17'02" West, 6.00 feet);
Thence North 53°19'52" East, a distance of 59.55 feet;
Thence South 37°06'20" East, a distance of 11.44 feet;
Thence North 88°40'47" East, a distance of 60.30 feet;
Thence North 00°33'21" West, a distance of 56.77 feet;
Thence North 89°02'32" East, a distance of 27.43 feet;
Thence North 63°46'39" East, a distance of 18.57 feet;
Thence North 87°58'24" East, a distance of 36.05 feet to the easterly line of said Lot 3A;
Thence South 01°17'10" East, a distance of 6.00 feet to the Point of Beginning,

containing 1,603 Square Feet, or 0.037 Acre, more or less.



Prepared March 20, 2024 by L.J. Ludeman
1309 S. Inca Street, Denver, CO 80223

Exhibit B



FWS FORESIGHT WEST SURVEYING INC.
1309 S. Inca Street, Denver, CO 80223
(303) 504-4440

This illustration does not represent a monumented land survey and is only intended to depict the accompanying description.

Exhibit B

Line	Bearing	Distance
L1	N01°17'10"W	41.28'
L2	N59°24'46"E	20.64'
L3	N01°17'10"W	71.53'
L4	S87°58'24"W	34.69'
L5	S63°46'39"W	18.63'
L6	S89°02'32"W	22.82'
L7	S00°33'21"E	56.73'
L8	S88°40'47"W	69.29'
L9	N37°06'20"W	8.55'
L10	S53°19'52"W	53.43'
L11	N53°19'52"E	59.55'
L12	S37°06'20"E	11.44'
L13	N88°40'47"E	60.30'
L14	N00°33'21"W	56.77'
L15	N89°02'32"E	27.43'
L16	N63°46'39"E	18.57'
L17	N87°58'24"E	36.05'
L18	S01°17'10"E	6.00'

Curve	Delta Angle	Radius	Arc Distance	Chord Bearing	Chord
C1	0°52'10"	395.50'	6.00'	N38°17'02"W	6.00'



FWS FORESIGHT WEST SURVEYING INC.
1309 S. Inca Street, Denver, CO 80223
(303) 504-4440

This illustration does not represent a monumented land survey and is only intended to depict the accompanying description.

EXHIBIT C

LEGAL DESCRIPTION OF RC SUPERIOR PROPERTY

Lot 3B, Block 1, Superior Town Center Filing No. lB Replat No. 3, according to the plat thereof recorded December l, 2016, under Reception No. 03560623, County of Boulder, State of Colorado.

EXHIBIT D-1

DEPICTION OF RC SUPERIOR SIGNAGE EASEMENT AREA

(see attached)

Exhibit D -1

Legal Description

A parcel of land, being part of Lot 3A, Block 1, Superior Town Center Filing No. 1B Replat No. 3, recorded December 1, 2016 in the office of the Boulder County Clerk and Recorder at Reception No. 03560623, lying in the Northwest Quarter of Section 19, Township 1 South, Range 69 West of the 6th Principal Meridian, Town of Superior, County of Boulder, State of Colorado, more particularly described as follows:

Commencing at the southeast corner of said Lot 3A;
Thence North 76°50'32" West, a distance of 152.59 feet to the True Point of Beginning;

Thence South 53°49'40" West, a distance of 8.00 feet;

Thence North 36°10'20" West, a distance of 5.00 feet;

Thence North 53°49'40" East, a distance of 8.00 feet;

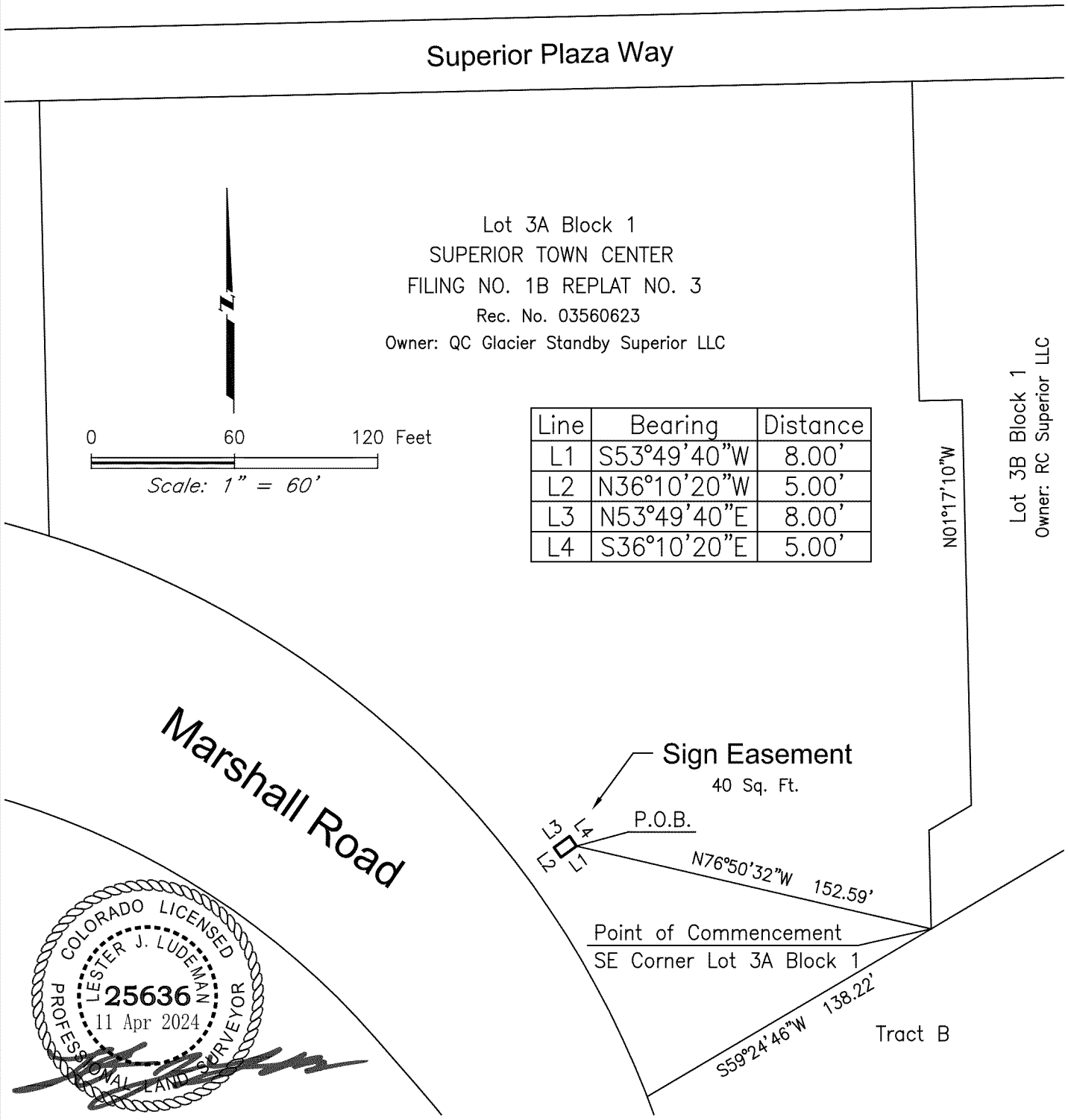
Thence South 36°10'20" East, a distance of 5.00 feet to the Point of Beginning,

containing 40 Square Feet, or 0.001 Acres, more or less.

Prepared April 11, 2024 by L.J. Ludeman
1309 S. Inca Street, Denver, CO 80223



Exhibit D-1



COLORADO LICENSED
LESTER J. LUDEMAN
25636
11 Apr 2024
PROFESSIONAL LAND SURVEYOR

FWS FORESIGHT WEST SURVEYING INC.
1309 S. Inca Street, Denver, CO 80223
(303) 504-4440

This illustration does not represent a monumented land survey and is only intended to depict the accompanying description.

EXHIBIT D-2

DEPICTION OF GLACIER SIGNAGE EASEMENT AREA

(see attached)

Legal Description

A parcel of land, being part of Lot 3B, Block 1, Superior Town Center Filing No. 1B Replat No. 3, recorded December 1, 2016 in the office of the Boulder County Clerk and Recorder at Reception No. 03560623, lying in the Northwest Quarter of Section 19, Township 1 South, Range 69 West of the 6th Principal Meridian, Town of Superior, County of Boulder, State of Colorado, more particularly described as follows:

Commencing at the southeast corner of said Lot 3B;
Thence North 54°24'05" West, a distance of 36.18 feet to the True Point of Beginning;

Thence North 88°20'40" West, a distance of 32.59 feet;

Thence along the arc of a curve to the left having a radius of 69.49 feet and a central angle of 19°20'39", an arc distance of 23.46 feet (chord bears North 03°26'57" West, 23.35 feet);

Thence South 74°00'33" East, a distance of 35.78 feet;

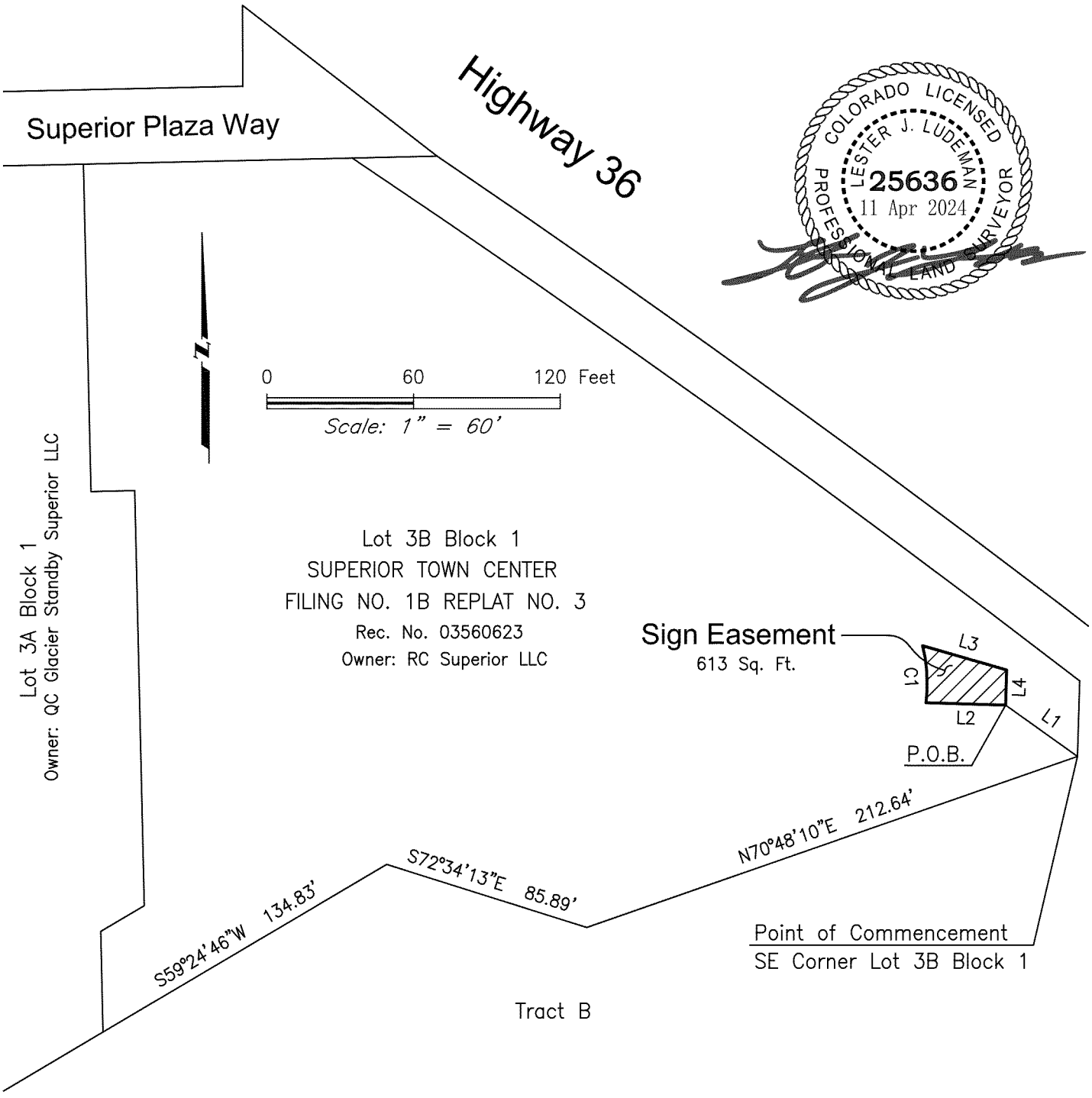
Thence South 01°39'20" West, a distance of 14.40 feet to the Point of Beginning,

containing 613 Square Feet, or 0.014 Acres, more or less.

Prepared April 11, 2024 by L.J. Ludeman
1309 S. Inca Street, Denver, CO 80223



Exhibit D-2

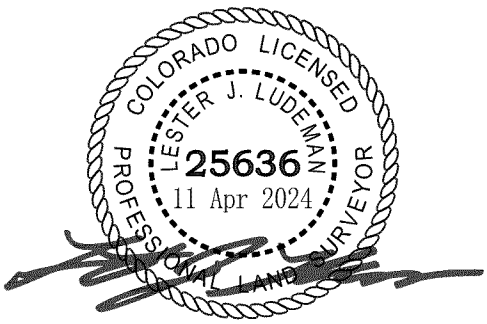


FWS FORESIGHT WEST SURVEYING INC.
1309 S. Inca Street, Denver, CO 80223
(303) 504-4440

This illustration does not represent a monumented land survey and is only intended to depict the accompanying description.

Line	Bearing	Distance
L1	N54°24'05"W	36.18'
L2	N88°20'40"W	32.59'
L3	S74°00'33"E	35.78'
L4	S01°39'20"W	14.40'

Curve	Delta Angle	Radius	Arc Distance	Chord Bearing	Chord
C1	19°20'39"	69.49'	23.46'	N03°26'57"W	23.35'



FWS FORESIGHT WEST SURVEYING INC.
1309 S. Inca Street, Denver, CO 80223
(303) 504-4440

This illustration does not represent a monumented land survey and is only intended to depict the accompanying description.

EXHIBIT E

DEPICTION OF RC SUPERIOR PERMANENT ACCESS EASEMENT AREA

(see attached)

EXHIBIT E RC SUPERIOR PERMANENT ACCESS EASEMENT

Final Subdivision Plat of
Superior Town Center Filing No. 1B Replat No. 3

A Subdivision Plat of Lot 3, Block 1, Tract A and Tract B of Superior Town Center Filing No. 1B and Superlot 1 of Superior Town Center Filing No. 1B Replat No. 2,
Situate in the Northwest Quarter of Section 19, Township 1 South, Range 69 West of the 6th P.M., Town of Superior, County of Boulder, State of Colorado

LINE TABLE		
LINE	BEARING	LENGTH
L1	S41°12'07"E	27.22'
L2	N61°22'32"E	70.80'
L3	S00°09'03"E	112.62'
L4	N15°03'34"W	73.00'
L5	S74°56'26"W	70.00'
L6	S15°03'34"E	40.00'
L7	S74°56'26"W	70.00'
L8	S74°32'39"W	54.00'
L9	N85°26'47"W	177.40'
L10	N04°41'56"W	102.76'
L11	N15°03'36"W	4.68'
L12	S26°25'08"E	48.24'
L13	N88°42'50"E	7.22'
L14	S46°17'10"E	21.87'
L15	S88°42'50"W	20.62'
L16	N15°03'34"W	77.22'
L17	N74°56'26"E	70.00'
L18	S15°03'34"E	117.22'
L19	S72°34'13"E	85.89'
L20	N01°39'20"E	30.99'

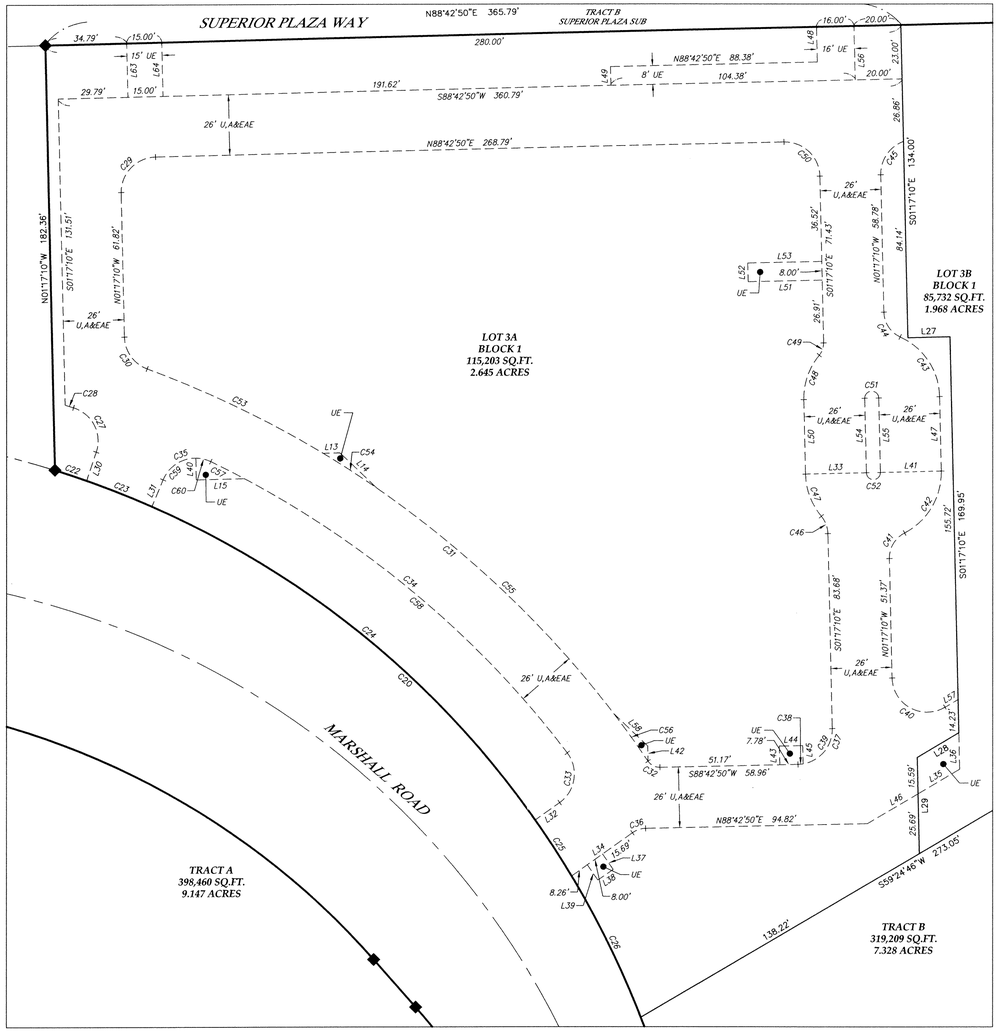
LINE TABLE		
LINE	BEARING	LENGTH
L21	S72°34'13"E	93.00'
L22	N75°05'12"E	103.78'
L23	S33°36'24"E	83.74'
L24	N56°23'36"E	30.00'
L25	N27°35'36"W	61.27'
L26	S15°03'34"E	117.22'
L27	N88°42'50"E	18.00'
L28	S59°24'46"W	20.64'
L29	S01°17'10"E	41.28'
L30	S18°42'52"W	12.92'
L31	N22°33'37"E	12.40'
L32	S54°29'42"W	12.85'
L33	N88°42'50"E	26.00'
L34	N54°29'42"E	31.95'
L35	N59°24'46"E	20.64'
L36	N01°17'10"W	15.59'
L37	S34°28'58"E	8.08'
L38	S55°31'02"W	8.00'
L39	N34°28'58"W	7.94'
L40	N01°17'10"W	9.32'

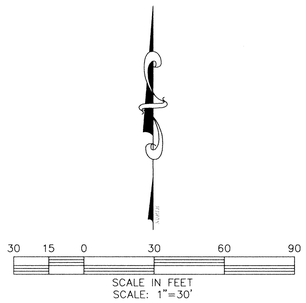
LINE TABLE		
LINE	BEARING	LENGTH
L41	N88°42'50"E	26.00'
L42	S00°54'25"E	6.43'
L43	N01°17'10"W	8.00'
L44	N88°42'50"E	10.00'
L45	S01°17'10"E	7.84'
L46	N59°24'46"E	25.11'
L47	N01°17'10"W	32.00'
L48	N01°17'10"W	15.00'
L49	N01°17'10"W	8.00'
L50	S01°17'10"E	32.00'
L51	S88°42'50"W	31.64'
L52	N01°17'10"W	8.00'
L53	N88°42'50"E	31.64'
L54	N01°17'10"W	32.00'
L55	S01°17'10"E	32.00'
L56	N01°17'10"W	23.00'
L57	S59°24'46"W	6.49'
L58	S46°17'10"E	20.03'
L59	S20°50'36"E	30.16'
L60	S65°57'09"E	115.24'

LINE TABLE		
LINE	BEARING	LENGTH
L61	S24°02'51"W	20.00'
L62	N65°57'09"W	129.43'
L63	S01°17'10"E	23.00'
L64	N01°17'10"W	23.00'

CURVE TABLE					
CURVE	LENGTH	RADIUS	DELTA	CHORD	CH BEARING
C1	82.42'	50.00'	94°27'04"	73.40'	N42°24'27"E
C2	285.32'	332.50'	49°09'57"	276.65'	S65°47'02"E
C3	73.00'	332.50'	12°34'47"	72.86'	S34°54'51"E
C4	378.09'	395.50'	54°46'25"	363.86'	N45°11'26"W
C5	358.66'	5594.58'	3°40'23"	358.60'	S54°03'32"E
C6	137.72'	1110.00'	7°06'32"	137.64'	S79°38'51"W
C7	224.76'	730.00'	17°38'26"	223.87'	S74°22'54"W
C8	60.28'	50.00'	69°04'40"	56.70'	S19°28'44"W
C9	75.70'	89.50'	48°27'32"	73.46'	N61°13'01"W
C10	42.32'	279.50'	8°40'34"	42.28'	N32°38'57"W
C11	92.00'	979.50'	5°22'53"	91.96'	N25°37'14"W
C12	78.72'	332.50'	13°33'52"	78.53'	N21°50'32"W
C13	34.78'	352.83'	5°38'53"	34.77'	N17°52'46"W
C14	18.94'	395.50'	2°44'37"	18.94'	N16°25'55"W
C15	201.79'	494.54'	23°22'45"	200.40'	N70°41'31"E
C16	56.72'	67.00'	48°30'26"	55.04'	S72°39'45"E
C17	152.79'	417.00'	20°59'38"	151.94'	N72°35'13"E
C18	55.06'	63.91'	49°21'33"	53.37'	S79°31'51"E
C19	366.69'	5574.58'	3°46'08"	366.62'	N54°18'05"W
C20	355.42'	395.50'	51°29'22"	343.58'	N46°49'57"W
C21	22.67'	395.50'	3°17'03"	22.67'	N19°26'45"W
C22	14.29'	395.50'	2°04'12"	14.29'	N71°32'32"W
C23	30.08'	395.50'	4°21'27"	30.07'	N68°19'42"W
C24	214.80'	395.50'	31°07'07"	212.17'	N50°35'26"W
C25	28.63'	395.50'	4°08'54"	28.63'	N32°57'25"W
C26	67.61'	395.50'	9°47'42"	67.53'	N25°59'07"W
C27	23.92'	15.00'	91°21'01"	21.46'	S26°57'39"E
C28	3.76'	423.50'	0°30'32"	3.76'	S72°53'26"E
C29	23.56'	15.00'	90°00'00"	21.21'	N43°42'50"E
C30	17.84'	15.00'	68°09'08"	16.81'	N35°21'44"W
C31	277.01'	449.50'	35°18'35"	272.65'	N51°47'00"W

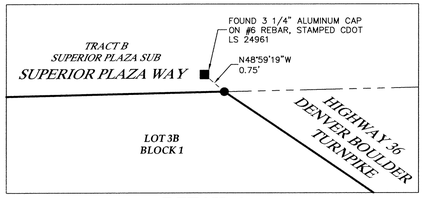
CURVE TABLE					
CURVE	LENGTH	RADIUS	DELTA	CHORD	CH BEARING
C32	5.99'	6.00'	57°09'27"	5.74'	N62°42'26"W
C33	23.99'	15.00'	91°38'44"	21.52'	S08°40'20"W
C34	199.09'	423.50'	26°56'05"	197.26'	N50°37'04"W
C35	24.44'	15.00'	93°21'17"	21.83'	N69°14'15"E
C36	5.97'	10.00'	34°13'08"	5.88'	N71°36'16"E
C37	23.56'	15.00'	90°00'00"	21.21'	S43°42'50"W
C38	2.23'	15.00'	8°30'01"	2.22'	S84°27'50"W
C39	21.34'	15.00'	81°29'59"	19.58'	S39°27'50"W
C40	31.23'	15.00'	119°18'04"	25.89'	S60°56'12"W
C41	13.40'	12.00'	63°57'30"	12.71'	N30°41'35"E
C42	32.37'	29.00'	63°57'30"	30.72'	N30°41'35"E
C43	32.37'	29.00'	63°57'30"	30.72'	N33°15'55"W
C44	13.40'	12.00'	63°57'30"	12.71'	N33°15'55"W
C45	18.46'	15.00'	70°31'44"	17.32'	N33°58'42"E
C46	8.10'	12.00'	38°41'41"	7.95'	S20°38'00"E
C47	19.59'	29.00'	38°41'41"	19.22'	S20°38'00"E
C48	20.66'	29.00'	40°49'15"	20.23'	S19°07'28"W
C49	5.70'	8.00'	40°49'24"	5.58'	S19°07'23"W
C50	23.56'	15.00'	90°00'00"	21.21'	S46°17'10"E
C51	9.42'	3.00'	180°00'00"	6.00'	N88°42'50"E
C52	9.42'	3.00'	180°00'00"	6.00'	N88°42'50"E
C53	83.77'	449.50'	10°40'40"	83.65'	N64°05'58"W
C54	27.46'	449.50'	3°30'00"	27.45'	N57°00'37"W
C55	140.81'	449.50'	17°56'55"	140.24'	N46°17'10"W
C56	24.97'	449.50'	3°10'59"	24.97'	N35°43'12"W
C57	16.18'	423.50'	2°11'19"	16.18'	S62°59'27"E
C58	182.91'	423.50'	24°44'45"	181.49'	S49°31'24"E
C59	17.80'	15.00'	68°00'29"	16.78'	N56°33'52"E
C60	6.64'	15.00'	25°20'48"	6.58'	S76°45'30"E
C61	54.73'	52.40'	59°50'26"	52.27'	S75°08'23"E
C62	74.11'	94.00'	45°10'10"	72.20'	N37°38'39"W



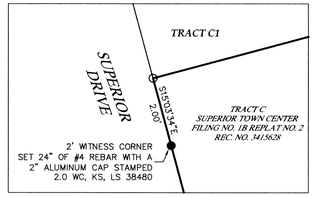


LEGEND

- EASEMENT LINE
- SECTION LINE
- RIGHT-OF-WAY LINE
- PROPERTY LINE
- CENTERLINE
- UE UTILITY EASEMENT
- U,A&EAE UTILITY, ACCESS AND EMERGENCY ACCESS EASEMENT
- FOUND ALIQUOT CORNER AS DESCRIBED
- FOUND MONUMENT AS DESCRIBED
- FOUND #4 REBAR WITH GREEN PLASTIC CAP LS 34995
- SET 24" OF #4 REBAR WITH A YELLOW PLASTIC CAP STAMPED KS, LS 38480
- SET MAG NAIL WITH BRASS TAG STAMPED LS 38480
- CALCULATED POSITION



DETAIL A
(NOT TO SCALE)



DETAIL B
(NOT TO SCALE)

BASIS OF BEARINGS AND LINEAL UNIT DEFINITION

Assuming the West line of the Southwest Quarter of the Northwest Quarter of said Section 19, monumented at the West Quarter Corner by a 2" Aluminum Pipe with a 2.5" Aluminum Cap stamped "Frank R. Drexel and 2149", to bear North 01°14'50" West, being a Grid Bearing of the Colorado State Plane Coordinate System, North Zone, North American Datum 1983/2011, a distance of 1316.98 feet, with all bearings herein relative thereto.

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

Ronnie L. Edwards
11-16-16

Ronnie L. Edwards – On Behalf Of King Surveyors
Colorado Licensed Professional
Land Surveyor #38480

KING SURVEYORS
650 E. Garden Drive | Windsor, Colorado 80550
phone: (970) 686-5011 | email: info@KingSurveyors.com

DATE: 7/27/2016
FILE NAME: 20160677SUB
SCALE: 1"=30'
DRAWN BY: CSK
CHECKED BY: RLE

REVISIONS: COGO CHECKED TJ DATE: 11/3/16

SUPERIOR TOWN CENTER FILING NO. 1B
REPLAT NO. 3
FOR
TOWN OF SUPERIOR
124 E. COAL CREEK DRIVE SUPERIOR, CO 80027

PROJECT #: 20160677

3

SHEET 3 OF 3

R719-129 3/3

Affidavit of Written Notice and Site Posting

Town of Superior
124 E. Coal Creek Drive
Superior, CO 80027

RE: PROPERTY WRITTEN NOTICE AND SIGN POSTING

Case No(s): FDP-2024-03

Property Name (if applicable): Everhome Suite - Superior

Property Location: Lot 3B, Block 1, Superior Town Center Filing 1B Replat No. 3
Marshall Road, Superior CO 80027

Hearing Date: Planning Commission – July 2, 2024 &
Board of Trustees – July 8, 2024

Before Planning Commission: August 1, 2024
Before Town Board: August 7, 2024

This letter is to certify that written notice was postmarked for the above case(s) on or before June 18th 2024, and a sign giving notice of a public hearing was posted for the above case(s) on or before June 14, 2024.

Signature of applicant/Representative:

Krysta Houtchens

Date: 06/18/2024

Print
Name: Krysta Houtchens – K2 Civil Consultants Inc.
Address: 3801 E. Florida Ave., Suite 425
Denver, CO 80210



HWY 36 Sign Posting



Marshall Rd Sign Posting

3 Marshall Road – Everhome Suites
FDP-2024-03
Superior, CO
Planning Commission – 6:00PM
July 2, 2024



EVERHOME SUITES

EXTENDED STAY BY CHOICE HOTELS

Our Agenda

- Introductions
- Everhome Suites Overview
- Proposed Site and Existing Surrounding Uses
- Questions?

EVERHOME SUITES™
EXTENDED STAY BY CHOICE HOTELS

Who We Are

- **Choice Hotels**
  - 80 Years of Industry Experience
- **Everhome Suites**
  - Newest Brand to Choice Hotel’s Portfolio
- **Extended Stay Market Segment**
  - Consistent Local Economy Support
- **Franchise Model**
  - Operations and Training Support
  - New Construction

EVERHOME SUITES™
EXTENDED STAY BY CHOICE HOTELS

What We Offer

- **Apartment-Style Accommodations:**
  - Spacious studio and one-bedroom layouts with distinct areas for work and leisure.
  - Customizable spaces

- **Pet-Friendly:**
  - Accommodations include options for guests traveling with pets.

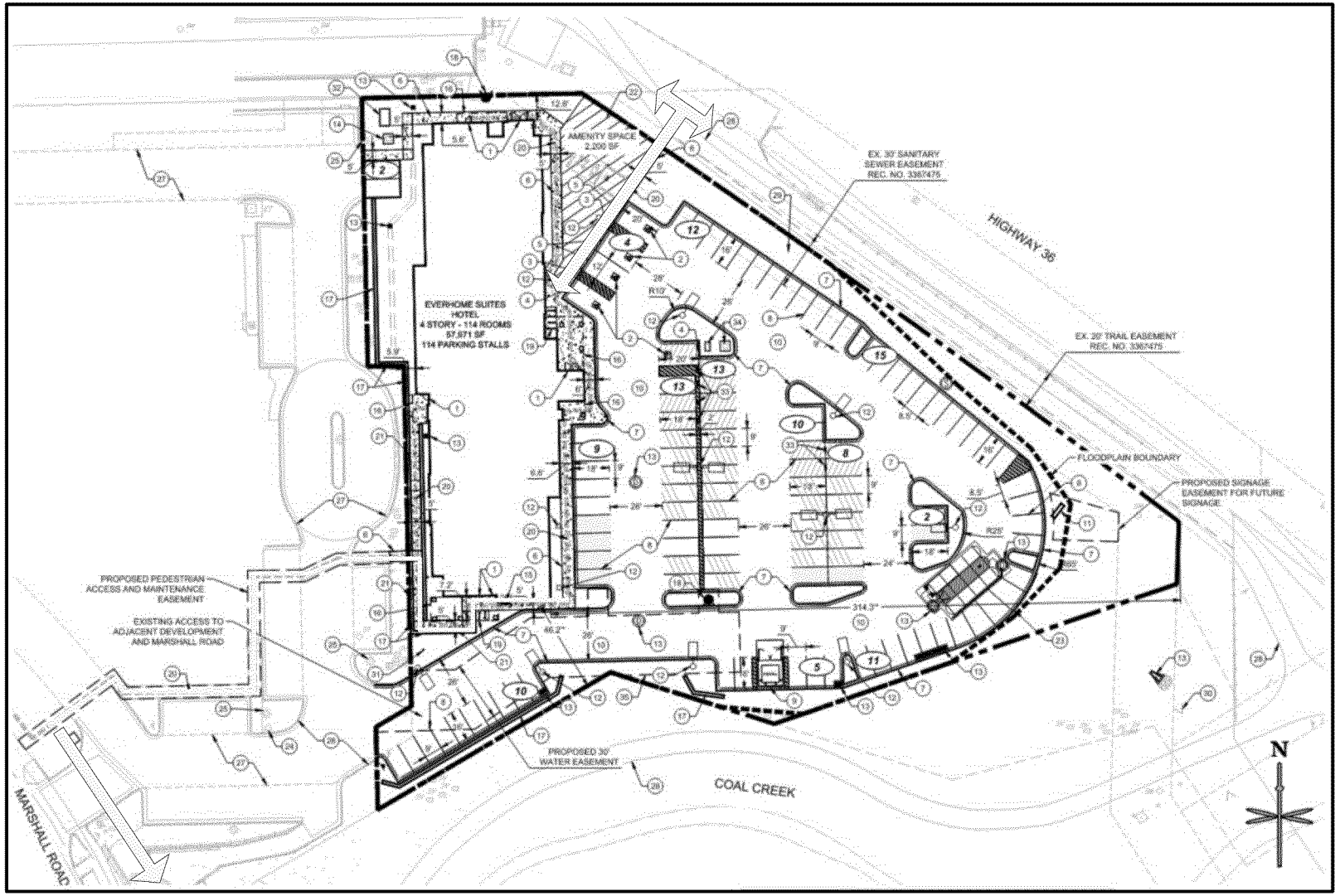
- **Fully Equipped Kitchens:**
  - Full-sized refrigerators, dishwashers, stovetops, microwaves, and complete sets of flatware and cookware.

- **Sophisticated Public Spaces:**
  - Multipurpose lobby areas and well-equipped fitness centers.
  - Guest laundry facilities and 24/7 self-service marketplaces offering a range of breakfast items.

- **Recreational Amenities:**
  - Outdoor games, grills, and seating areas.

EVERHOME SUITES™
EXTENDED STAY BY CHOICE HOTELS

Proposed Site Plan



EVERHOME SUITES™
EXTENDED STAY BY CHOICE HOTELS

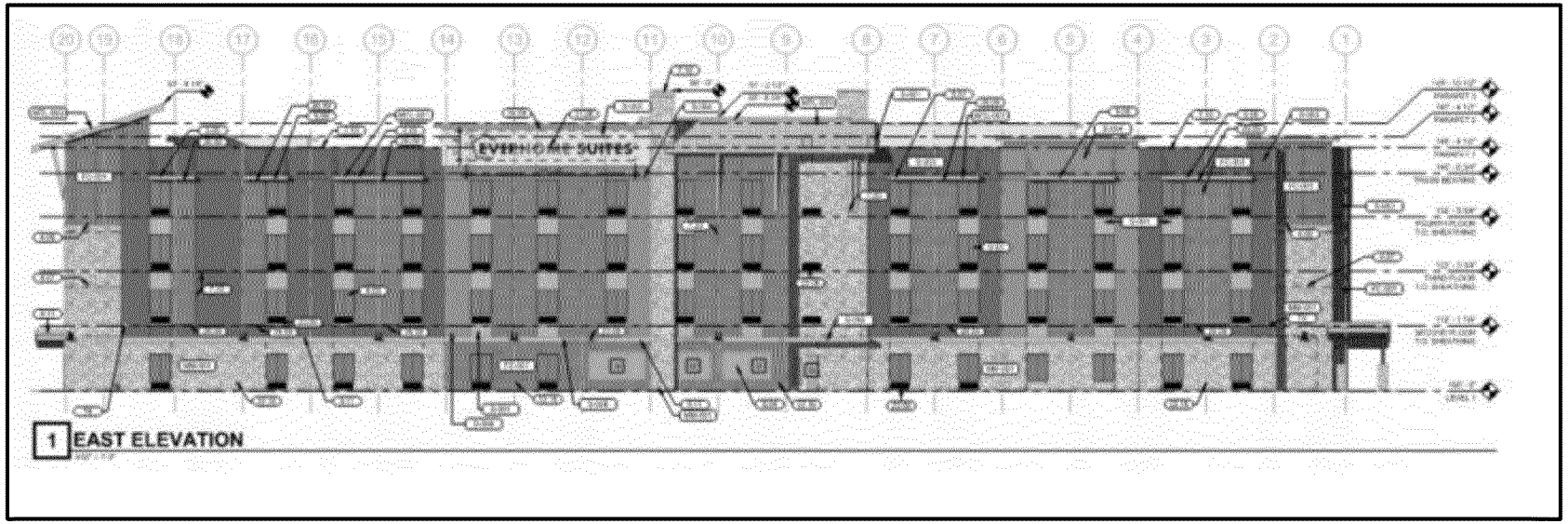
Existing vs. Proposed Site





EVERHOME SUITES™
EXTENDED STAY BY CHOICE HOTELS

Proposed Rendering





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Additional Renderings





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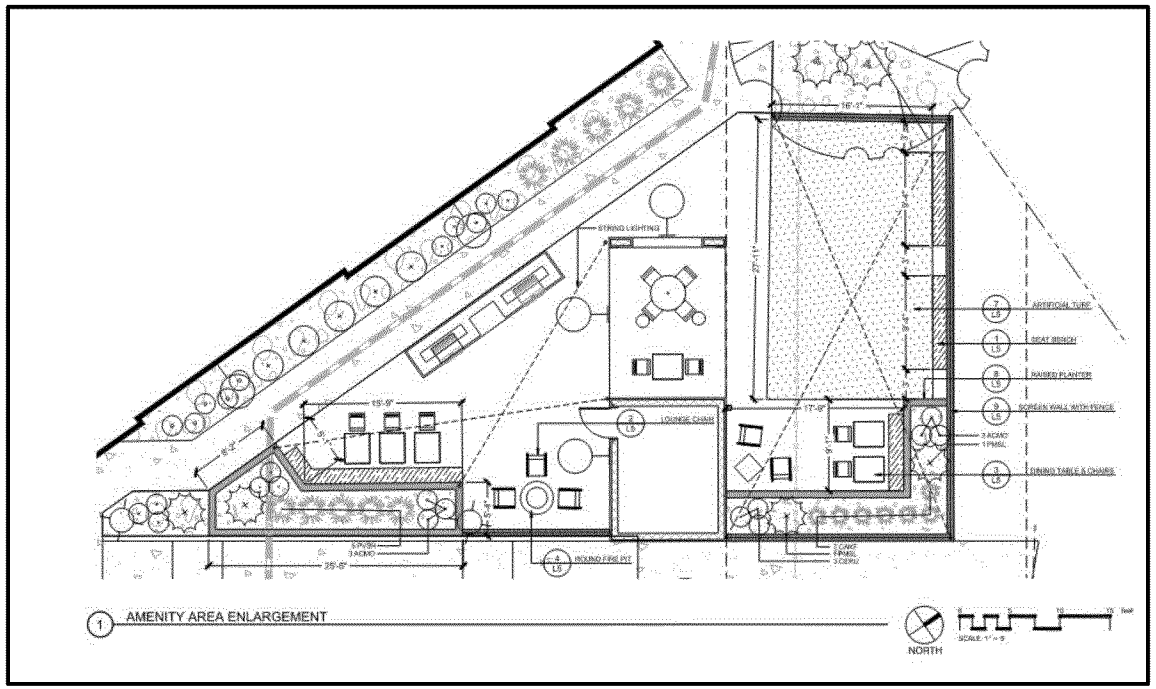
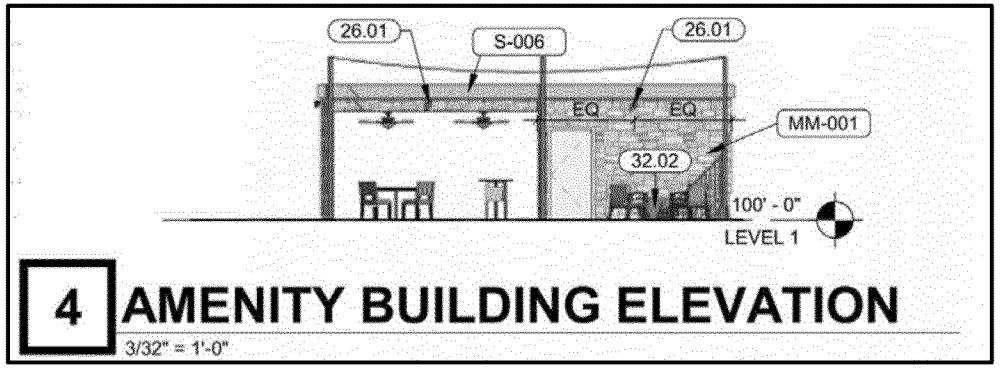
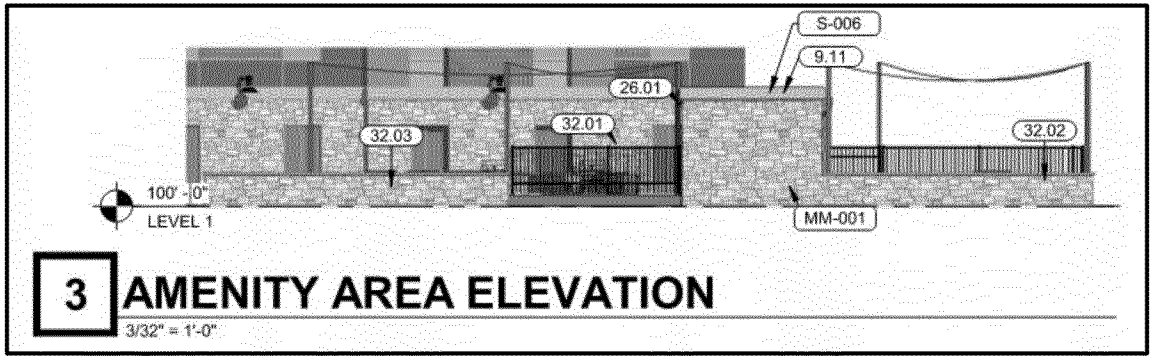
Proposed Amenity Area







EVERHOME SUITES™
EXTENDED STAY BY CHOICE HOTELS

Existing Development



100 Superior Plaza Way – Multi-Tenant Commercial



100 McCaslin Blvd – Multi-Tenant Commercial



90 McCaslin Blvd – Brakes Plus



2 Marshall Road – Tesla Service Center

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HOME
IS
WHERE
THE
HEART
IS



Questions?

EVERHOME SUITES™
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Thank You.

EVERHOME SUITES™

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