HATCH
DESIGN
ARCHITECTURE

200 w. 36th st., boise, idaho 83714 • phone 208.475.3204 • fax 208.475.3205 • email info@hatchda.com

Narrative in Support of Stor-It

February 10, 2026

Valley County
Planning And Zoning
700 South Main Street
Cascade, ID 83611

RE: Design Review and Scenic Route application for Stor-It Self Storage - McCall
379 Elo Rd and TBD Elo Rd, McCall, ID 83638

Dear Planning Staff,

The following information is intended to address the email from Cynda Herrick dated 1/28/2026.

1. **General Project Description:**

This project is an expansion of the Stor-It facility located at 379 Elo Rd. in McCall's area of impact. There is an existing self-storage facility on the western adjacent parcel of the proposed development. The eastern parcel will consist of an approximately 148,171 sq ft expansion of the existing self-storage facility. This site is buffered from view along Hwy 55 using a large berm and natural landscaping.

There is a proposed pathway along Elo Rd from Hwy 55 to S. Samson Trail. The trail would also have a section along Samson Trail between the North and South boundary of the proposed project. These additions would fill in some of the desired sections of pathway mentioned in the master pathway plan. A 50' wide buffer along S. Samson trail will be proposed to preserve the natural landscape and further screen the facility.

In lieu of the previously proposed fire station, the applicant is open to discussion to dedicate land to a use that would best benefit Valley County.

Overall Site Amenities:

- Landscape buffers, featuring native plantings and an extension of the greenbelt pathway system along Elo Rd. and Samson Trail.
- Proposed County facility.
- Large drive aisles for vehicle maneuvering
- Adequate open space for snow storage.
- 5 standard parking stalls and 1 ADA parking stall for the office, single living quarters above office, and restroom.

Data and Numbers:

- Prior approvals:
  - PUD 22-04 (Valley County BOCC approved 01/06/2025)
  - CUP 22-04 (Valley County BOCC approved 01/06/2025)
- Property Size: 786,607 sq ft (18.1 acres)
- Proposed storage buildings: 10
- Proposed storage units: 51 covered RV spaces and 577 storage units
- New building footprints: Storage - 148,171 sq ft
- Existing building footprints: 73,900 sq ft

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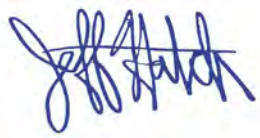
- Total Lot Coverage: 29%
- Road, driveway and common parking areas: 31% (199,184 sq ft)
- Landscaping/Open Space: 40% (316,459 sq ft)

2. **The applicant and development team:**
   - Owner/Developer: Stor-it Self Storage, LLC
   - Architect: Hatch Design Architecture – Jeff Hatch
   - Engineer / Surveyor: The Land Group – Jim Gute
   - Landscape Architect: The Land Group – Jim Gute
   - Legal Counsel – Landon Brown, Hawley Troxell

3. **Prior Approvals and Current Applications:**
   - PUD 22-04 (Valley County BOCC approved 01/06/2025)
   - CUP 22-04 (Valley County BOCC approved 01/06/2025)
   - McCall Design Review
   - McCall Scenic Route Review
   - Design Review and Scenic Route Review Appeal to the County

Please contact our office with any questions you may have in reviewing the application materials.

Sincerely,



Jeff Hatch, AIA LEED AP
HATCH DESIGN ARCHITECTURE

SITE RECAP

PROJECT SITE:
TOTAL PROPERTY SIZE: 786,607 SF (18.06 ACRES)

EXISTING BUILDING FOOTPRINTS: 68,970 SF

TOTAL LOT COVERAGE: 29% (231,157 SF)

LANDSCAPING/OPEN SPACE: 40% (316,459 SF)

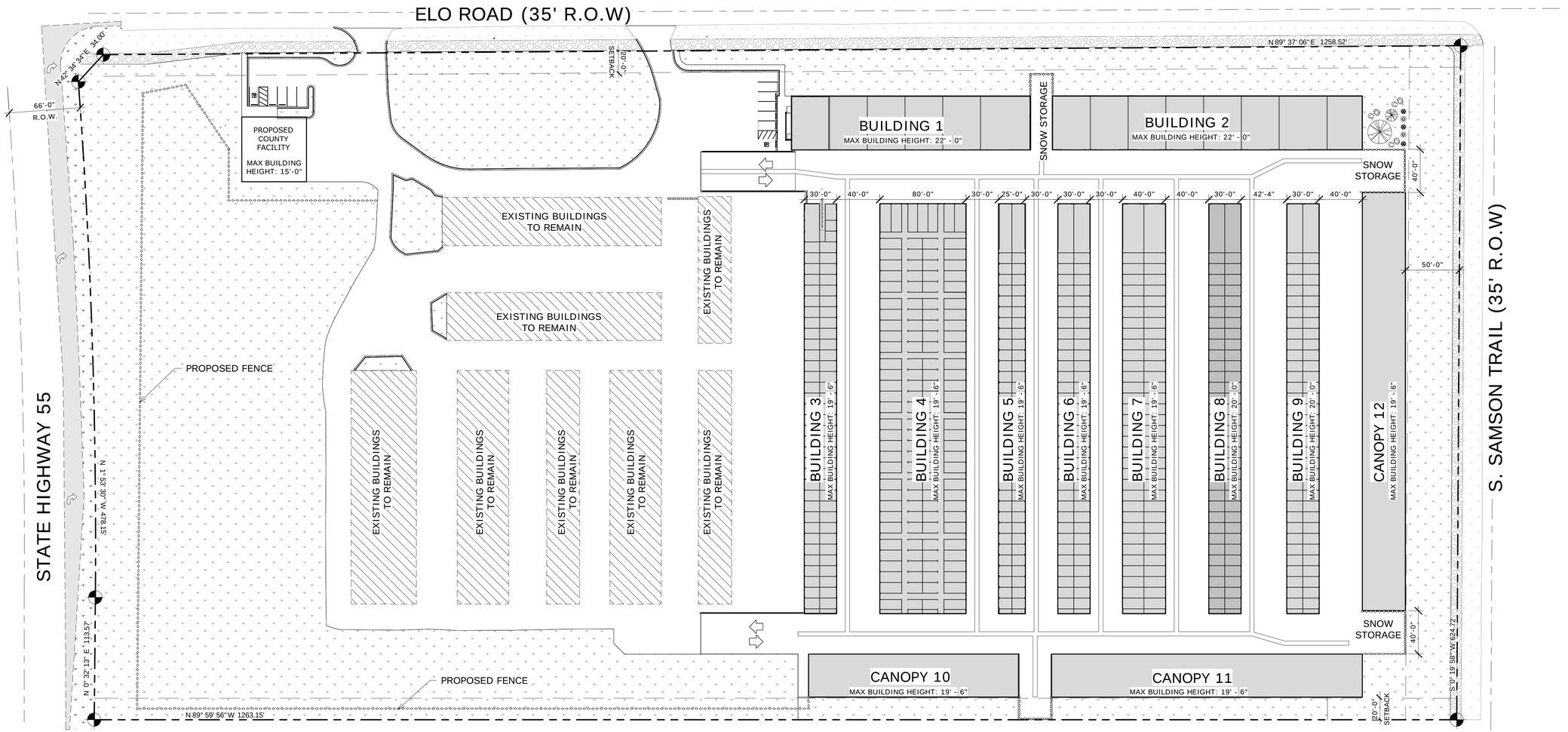
ZONING: RE

SETBACKS:
ELO ROAD SETBACK = 20'-0"
S. SAMPSON TRAIL SETBACK = 120'-0"
REAR SETBACK = 20'-0"

PARKING:
STANDARD: 10 PARKING SPACES
ADA: 2 PARKING SPACES
RV: 50 PARKING SPACES

BUILDING AREA RECAP

BUILDING 1	11,100 SF
BUILDING 2	12,750 SF
BUILDING 3	11,281 SF
BUILDING 4	30,400 SF
BUILDING 5	9,500 SF
BUILDING 6	11,400 SF
BUILDING 7	15,200 SF
BUILDING 8	11,400 SF
BUILDING 9	11,400 SF
CANOPY 10	7,800 SF
CANOPY 11	10,260 SF
CANOPY 12	17,080 SF
TOTAL:	159,571 SF



SITE PLAN
SCALE: 1" = 50'-0"

HATCH DESIGN ARCHITECTURE
200 W. 36TH ST.
BOISE, IDAHO 83714
OFFICE: (208) 475-3204
FAX: (208) 475 475-3205

NOT FOR CONSTRUCTION

NEW SELF STORAGE EXPANSION:

STOR-IT SELF STORAGE

379 ELO RD, McCALL, ID

DELTA	DATE	DESCRIPTION - COMMENTS

DATE:	APRIL 2022
DRAWN BY:	WE
CHECKED BY:	JLH
JOB NUMBER:	MKT

SHEET TITLE
SITE PLAN

SHEET NUMBER
A-1.0

8/29/2025 10:31:14 AM

Sheet Notes:

A. WHEREVER CONCRETE FLATWORK ABUTS BUILDINGS OR COLUMNS IT SHALL HAVE AN EXPANSION JOINT.

B. PROVIDE JOINTS AS SHOWN ON PLANS. JOINTS ARE AN INTEGRAL PART OF THE DESIGN AND SHALL NOT VARY FROM PATTERNS AND LOCATIONS SHOWN. CONTRACTOR SHALL REMOVE ANY FLATWORK THAT DOES NOT CONFORM TO THE DESIGN.

C. TRANSITION OF CURVES TO OTHER CURVES AND CURVES TO TANGENTS SHALL BE SMOOTH AND CONTINUOUS.

D. LONGITUDINAL SLOPE OF ALL SIDEWALKS SHALL NOT EXCEED 5%. CROSS SLOPE OF SIDEWALKS AND PEDESTRIAN RAMPS SHALL NOT EXCEED 2%. SLOPES WITHIN PEDESTRIAN RAMPS SHALL NOT EXCEED 12:1 SLOPE IN ANY DIRECTION. FLATWORK ADJACENT TO THE BUILDING SHALL NOT EXCEED 2.0% CROSS SLOPE OR HAVE CROSS SLOPE LESS THAN 1.0%.

Keynotes:

(#) CALLOUT NUMBERS COORDINATED TO NUMBERED NOTES BELOW.

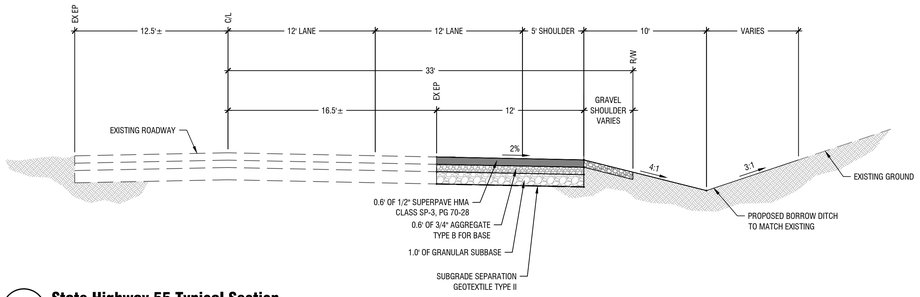
1. EXISTING UNDERGROUND POWER UTILITY AND ASSOCIATED APPURTENANCES - RETAIN AND PROTECT
2. EXISTING WATER UTILITY - RETAIN AND PROTECT
3. EXISTING ASPHALT - RETAIN AND PROTECT.
4. EXISTING LANDSCAPE - RETAIN AND PROTECT.
5. EXISTING ACCESS GATE AND RELATED APPURTENANCES - RETAIN AND PROTECT.
6. ROADSIDE SWALE.
7. ACCESSIBLE PARKING STALL AND LOADING AREA PER ADA GUIDELINES.
8. PARKING STALL WHITE PAINTED MARKING.
9. CONCRETE WHEEL STOP.
10. PROPOSED STORM DRAIN UTILITY.
11. PROPOSED SEWER UTILITY AND ASSOCIATED APPURTENANCES.
12. CAST IN PLACE CONCRETE RETAINING WALL WITH 42" GUARDRAIL. COLOR TO MATCH EXISTING SITE RAILING.

Line Legend:

- 6-IN VERTICAL CURB AND GUTTER
- REVERSE CURB AND GUTTER
- VALLEY GUTTER
- PROPOSED WROUGHT IRON FENCE
- X — X EXISTING WROUGHT IRON FENCE
- EXISTING STORAGE BUILDING

Material Legend

- ASPHALT PAVEMENT
- CONCRETE FLATWORK
- ROADWAY GRAVEL SHOULDER
- SNOW STORAGE
- 10-FT WIDE GRAVEL PATHWAY



1 State Highway 55 Typical Section

Scale: NTS

Project Calculations:

SITE ADDRESS: 379 ELO ROAD

SITE PARCEL NO: RP18N03E217205

CURRENT ZONING: RE

LOT SIZE:
- OVERALL LOT SIZE: 786,700 SF (18.06 AC)
- DEVELOPMENT AREA: 481,810 SF (11.06 AC)

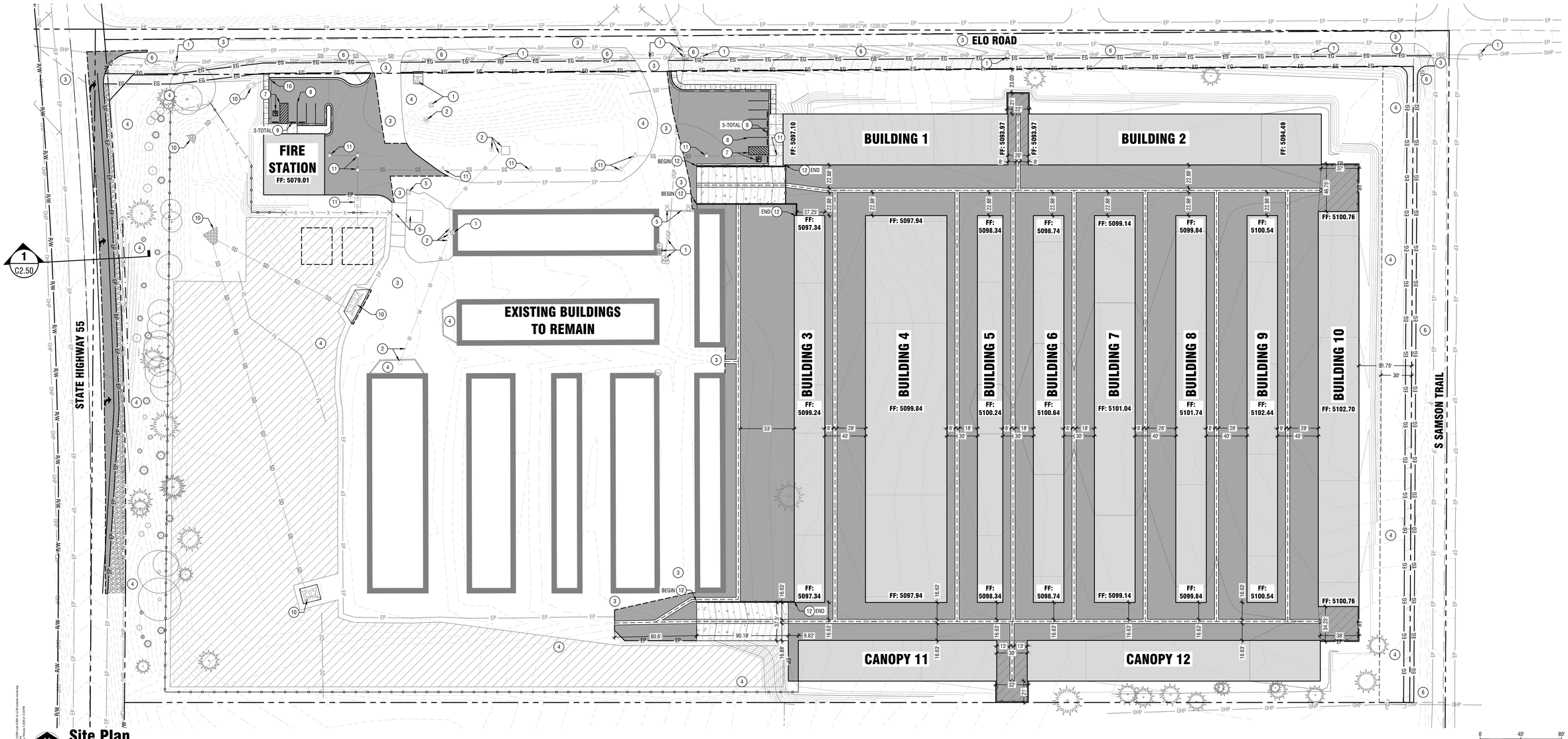
SETBACKS:
- ELO/SIMPSON TRAIL: 30'
- SIDES: 5'
- BACK: 5'

PROPERTY FRONTAGE: 640' (STATE HIGHWAY 55)
1,330' (ELO ROAD)
640' (SIMPSON TRAIL)

LOT COVERAGE CALCULATION
- EXISTING: 21%
- POST DEVELOPMENT: 67%

SNOW STORAGE
- REQUIRED: 96,610 SF (33% OF PARKING, SIDEWALK, AND DRIVEWAY AREAS)
- PROVIDED: 100,905 SF

Vicinity Map:



Site Plan

Horizontal Scale: 1" = 40'

0 40' 80'

STOR-IT SELF STORAGE EXPANSION

AVEST LP

379 Elo Road
McCall, Idaho 83638

Revisions
1.

NOT FOR CONSTRUCTION

Project No.: 122991
Date of Issuance: 02.05.2026
Project Milestone:

Site Plan

C1.00

THE LAND GROUP

Landscape Notes:

A. CONTRACTOR SHALL REPORT TO LANDSCAPE ARCHITECT ALL CONDITIONS WHICH IMPAIR AND/OR PREVENT THE PROPER EXECUTION OF THIS WORK, PRIOR TO BEGINNING WORK.

B. FINISH GRADES TO BE SMOOTH AND EVEN GRADIENTS WITH POSITIVE DRAINAGE IN ACCORDANCE WITH SITE GRADING PLAN. REMOVE RIDGES AND FILL DEPRESSIONS, AS REQUIRED TO MEET FINISH GRADES. PLACE 4" OF PERMABARK ROCK MULCH OVER SUBGRADE SOIL TO ACHIEVE FINISH GRADE. FINISH GRADE RELATED TO ADJACENT SITE ELEMENTS SHALL BE:
- B.A. 1-INCH BELOW TOP OF ADJACENT PAVEMENT, VALVE BOX, VAULT, ETC.
- B.B. 3-INCHES BELOW TOP OF CURB UNLESS NOTED OTHERWISE.

C. ALL PLANTING BEDS SHALL HAVE A MINIMUM OF 18" OF TOPSOIL, LAWN AREAS A MINIMUM OF 12" OF TOPSOIL. SPREAD, COMPACT AND FINE GRADE TOPSOIL TO A SMOOTH AND UNIFORM GRADE.

D. RE-USE EXISTING SURFACE TOPSOIL WHERE POSSIBLE. VERIFY SUITABILITY OF SURFACE SOIL TO PRODUCE TOPSOIL MEETING REQUIREMENTS AND AMEND WHEN NECESSARY. TOPSOIL SHALL BE A LOOSE, FRIABLE, SANDY LOAM, CLEAN AND FREE OF TOXIC MATERIALS, NOXIOUS WEEDS, WEED SEEDS, ROCKS, GRASS OR OTHER FOREIGN MATERIAL AND A PH OF 5.5 TO 7.0. IF ON-SITE TOPSOIL DOES NOT MEET THESE MINIMUM STANDARDS, CONTRACTORS ARE RESPONSIBLE TO EITHER: A) PROVIDE APPROVED IMPORTED TOPSOIL, OR B.) IMPROVE ON-SITE TOPSOIL WITH METHODS APPROVED BY LANDSCAPE ARCHITECT. SUPPLEMENT WITH IMPORTED TOPSOIL WHEN QUANTITIES ARE INSUFFICIENT. CLEAN TOPSOIL OF ROOTS, PLANTS, SODS, STONES, CLAY LUMPS AND OTHER EXTRANEOUS MATERIALS HARMFUL TO PLANT GROWTH.

E. IF IMPORTED TOPSOIL FROM OFF-SITE SOURCES IS REQUIRED, PROVIDE NEW TOPSOIL THAT IS FERTILE, FRIABLE, NATURAL LOAM, SURFACE SOIL, REASONABLY FREE OF SUBSOIL, CLAY LUMPS, BRUSH, WEEDS AND OTHER LITTER, AND FREE OF ROOTS, STUMPS, STONES LARGER THAN 2 INCHES IN ANY DIMENSION, AND OTHER EXTRANEOUS OR TOXIC MATTER HARMFUL TO PLANT GROWTH.

F. OBTAIN TOPSOIL FROM LOCAL SOURCES OR FROM AREAS HAVING SIMILAR SOIL CHARACTERISTICS TO THAT FOUND AT PROJECT SITE. OBTAIN TOPSOIL ONLY FROM NATURALLY, WELL-DRAINED SITES WHERE TOPSOIL OCCURS IN A DEPTH OF NOT LESS THAN 4 INCHES.

G. ALL LANDSCAPE AREAS SHALL BE WEED FREE AT THE TIME OF LANDSCAPE INSTALLATION.REMOVE ALL ROOTS, WEEDS, ROCKS AND FOREIGN MATERIAL ON THE SURFACE.

H. NEW TREE PLANTING, SEE SHEET L1.50. CONTRACTOR SHALL STAKE ALL TREES DEEMED NECESSARY, I.E..... FROM BEING BLOWN OVER, PLANTED WITH LOOSE ROOT BALL, ETC. CONTRACTOR'S OPTION.

I. NEW SHRUB PLANTING. SEE SHEET L1.50.

J. ALL PLANT MATERIAL SHALL CONFORM TO THE AMERICAN NURSERYMAN STANDARDS FOR TYPE AND SIZE SHOWN. PLANTS WILL BE REJECTED IF NOT IN A SOUND AND HEALTHY CONDITION.

K. ALL PLANT MATERIAL SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR BEGINNING AT THE DATE OF SUBSTANTIAL COMPLETION. REPLACE ALL PLANT MATERIAL FOUND DEAD OR NOT IN A HEALTHY CONDITION IMMEDIATELY WITH THE SAME SIZE AND SPECIES AT NO COST TO THE OWNER.

L. TREE PIT BACKFILL PLANTING MIX: BLEND TOPSOIL AND SOIL AMENDMENTS AND FERTILIZER FOR TREE PIT BACKFILL AT THE FOLLOWING RATES. BLEND AMENDMENTS THOROUGHLY WITH SOIL BACKFILL. TREE PITS SHALL BE 5'x5'x1.5' (37.5 CF/ 1.5 CY).
- L.A. APPLICATION RATES:
  - L.A.A. HUMIC ACID: 25 LBS PER TREE PIT
  - L.A.B. COMMERCIAL GRADE COMPOST - 10 CUBIC FEET PER TREE PIT
  - L.A.C. PLANTING TABLET FERTILIZER - 4 TABLETS PER TREE PIT
  - L.A.D. CALCIFIED DIATOMACEOUS EARTH - 75 LBS PER TREE PIT

M. SHRUB PIT BACKFILL PLANTING MIX: BLEND TOPSOIL AND SOIL AMENDMENTS AND FERTILIZER FOR SHRUB PIT BACKFILL AT THE FOLLOWING RATES. BLEND AMENDMENTS WITH THOROUGHLY WITH SOIL BACKFILL. SHRUB PITS SHALL BE 2.5'x2.5'x1' (6.25 CF/ 0.25 CY).
- M.A. APPLICATION RATES:
  - M.A.A. HUMIC ACID: 2 LBS PER SHRUB PIT
  - M.A.B. COMMERCIAL GRADE COMPOST - 2 CUBIC FEET PER SHRUB PIT
  - M.A.C. PLANTING TABLET FERTILIZER - 2 TABLETS PER SHRUB PIT
  - M.A.D. CALCIFIED DIATOMACEOUS EARTH - 15 LBS PER SHRUB PIT

N. IMMEDIATELY CLEAN UP ANY TOPSOIL OR OTHER DEBRIS ON THE SITE CREATED FROM LANDSCAPE OPERATIONS AND DISPOSE OF PROPERLY OFF SITE.

O. CONTRACTOR SHALL SUBMIT MATERIAL SAMPLES FOR LANDSCAPE ROCK MULCH TO LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO PROCUREMENT. LANDSCAPE BOULDERS, PHOTO SUBMITTAL IS ADEQUATE. FOR ROCK MULCH, SUBMIT 1 GALLON BAG SAMPLE TO OWNER.

Tree Protection Notes:

A. PROTECT THE CRITICAL ROOT ZONE OF THE TREES TO BE RETAINED ON SITE: (NOTE: CRITICAL ROOT ZONE IS THE AREA DIRECTLY BELOW THE DRIP LINE OF THE TREE.)
- A.A. CONSTRUCT PROTECTIVE FENCING OF CHAIN-LINK AROUND THE CRITICAL ROOT ZONE PRIOR TO DEMOLITION OR CONSTRUCTION.
- A.B. DO NOT ALLOW COMPACTION BY EQUIPMENT TRAFFIC DURING CONSTRUCTION OR DURING DEMOLITION.
- A.C. DO NOT ALLOW CEMENT TRUCKS TO RINSE WITHIN THE PROTECTION AREA, ANYWHERE THAT TREE ROOTS EXIST OR IN PLANNED PLANTING BEDS.
- A.D. DO NOT STOCKPILE MATERIALS, DEBRIS OR DIRT WITHIN THE TREE PROTECTION AREA.
- A.E. MAINTAIN WATERING WITHIN THE CRITICAL ROOT ZONE FROM MID-APRIL TO MID-OCTOBER AT THE RATE OF NOT LESS THAN THE EQUIVALENT OF 1-1/2" OF WATER OVER THE ENTIRE AREA PER WEEK.
- A.F. DO NOT TRENCH, EXCAVATE, FILL OR OTHERWISE DISTURB THE SOIL WITHIN THE CRITICAL ROOT ZONE.
- A.G. ADJUST PROPOSED IMPROVEMENT LOCATIONS AS REQUIRED TO AVOID DAMAGING TREE ROOTS.

B. PROTECT THE CROWN AND TRUNK OF TREES TO BE RETAINED ON SITE:
- B.A. OPERATE EQUIPMENT IN SUCH A WAY AS TO AVOID CONTACT WITH TREE TRUNKS OR BRANCHES.
- B.B. PRUNING OF PUBLIC PROPERTY TREES SHALL BE PERFORMED BY A LICENSED ARBORIST.

C. ALL TREES DAMAGED OR DESTROYED DURING CONSTRUCTION SHALL BE REPLACED WITH A TREE OF 4" CALIPER OR BIGGER SIZE AND SIMILAR SPECIES

Keynotes:

(#) CALLOUT NUMBERS COORDINATED TO NUMBERED NOTES BELOW.

1. PLANTER BED CUT EDGE - SEE DETAIL 4/L1.50.
2. LANDSCAPE SWALE - REFER TO GRADING PLAN C4.00 FOR MORE INFORMATION.
3. RETAIN AND PROTECT EXISTING LANDSCAPE.
4. PEDESTRIAN & BICYCLE PATHWAYS AND GREENBELTS GRAVEL PATH.
5. CONTRACTOR SHALL PROVIDE LARGER (APPROX. 3-IN. +) CALIPER TREES AT THESE LOCATIONS. CONFIRM CALIPER & SPECIES AVAILABILITY WITH LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO INSTALLATION.

Material Legend:

- LANDSCAPE REPAIR AS NEEDED. SIS PREMIUM DRYLAND PASTURE MIX NATIVE GRASS SEED BY STEVENSON INTERMOUNTAIN SEED, INC. OR APPROVED EQUAL.
- 1"-2" PERMABARK ROCK MULCH. DEPTH: TBD.
- BASALT BOULDERS, 3'-4' DIA. TYP.

PLANT SCHEDULE

TREES	BOTANICAL / COMMON NAME	SIZE
	ACER CIRCINATUM / VINE MAPLE	2" CAL. B & B
	LARIX OCCIDENTALIS / WESTERN LARCH	6`-7`H B&B
	MALUS X `SNOWDRIFT` / SNOWDRIFT CRAB APPLE	2" CAL. B & B
	PRUNUS VIRGINIANA `CANADA RED` / CANADA RED CHOKECHERRY	2" CAL. B & B
	PSEUDOTSUGA MENZIESII / DOUGLAS FIR	6`-7`H B&B
	PICEA ENGELMANNII / ENGELMANN SPRUCE	6`-7`H B&B
	PINUS FLEXILIS `VANDERWOLF`S PYRAMID` / VANDERWOLF`S PYRAMID PINE	6`-7`H B&B
	POPULUS TREMULOIDES / QUAKING ASPEN	10-12`H B&B

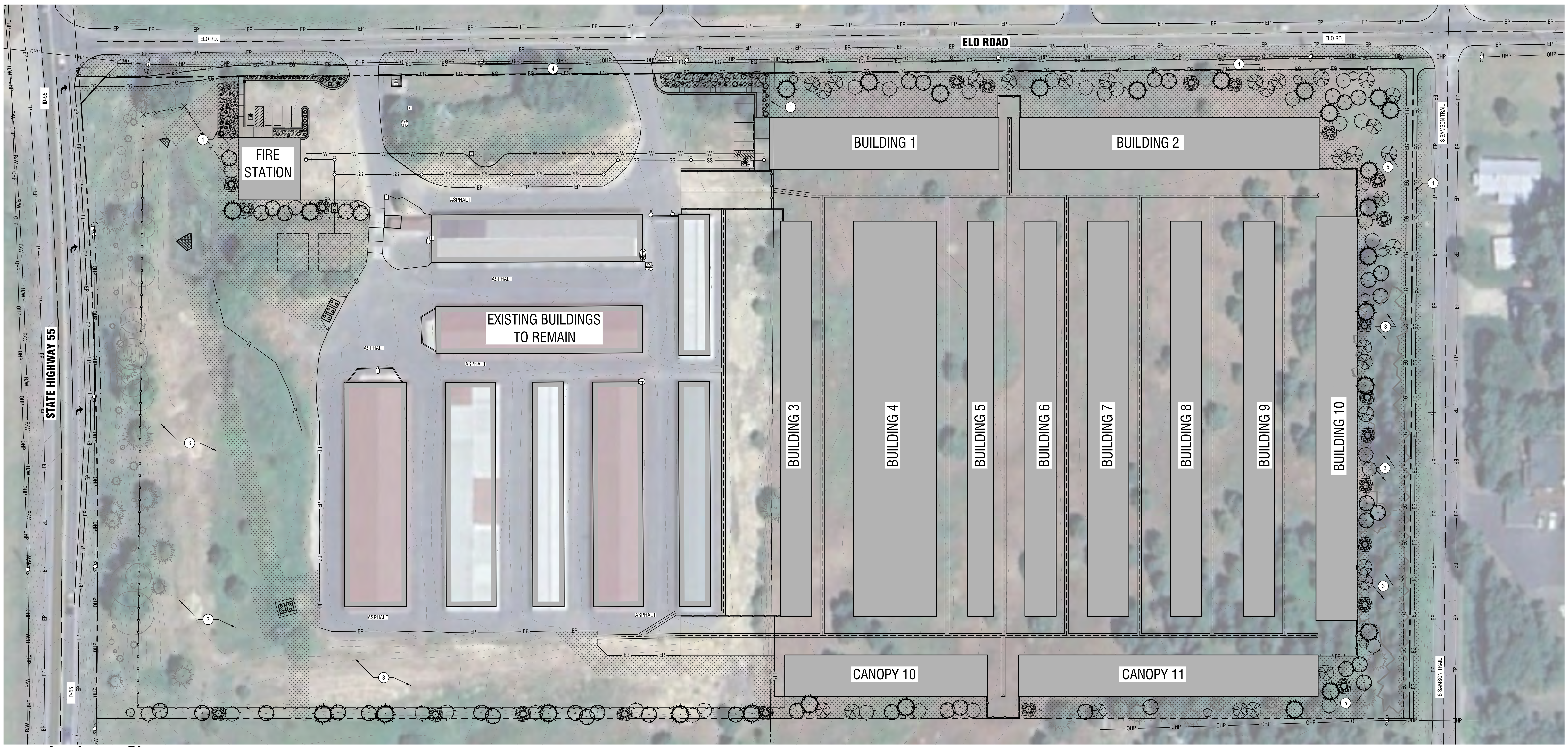
PLANT SCHEDULE

SHRUBS	BOTANICAL / COMMON NAME	SIZE
	ARCTOSTAPHYLOS UVA-URSI / KINNIKINNICK	3 GAL
	CALAMAGROSTIS X ACUTIFLORA `KARL FOERSTER` / FEATHER REED GRASS	2 GAL
	CORNUS SERICEA / RED TWIG DOGWOOD	5 GAL
	MAHONIA REPENS / CREEPING MAHONIA	3 GAL
	PHILADELPHUS LEWISII / WILD MOCKORANGE	5 GAL
	RIBES AUREUM / GOLDEN CURRANT	3 GAL
	RHUS TRILOBATA / OAKLEAF SUMAC	2 GAL
	ROSA WOODSII / MOUNTAIN ROSE	5 GAL
	SYMPHORICARPOS ALBUS / COMMON WHITE SNOWBERRY	5 GAL

Trees Provided

ELO ROAD (NORTH PROPERTY LINE) TREES PROVIDED:	47 (DECIDUOUS AND EVERGREEN TREES) 17 EXISTING TREES (APPROX.) TO BE RETAINED
S. SAMSON TRAIL (EAST PROPERTY LINE) TREES PROVIDED:	52 (DECIDUOUS AND EVERGREEN TREES) 25 EXISTING TREES (APPROX.) TO BE RETAINED
SOUTH PROPERTY LINE TREES PROVIDED:	52 (DECIDUOUS AND EVERGREEN TREES) 6 EXISTING TREES (APPROX.) TO BE RETAINED
HWY 55 (WEST PROPERTY LINE) TREE PROVIDED:	20 (DECIDUOUS AND EVERGREEN TREES) 12 EXISTING TREES (APPROX.) TO BE RETAINED
TOTAL (EXISTING AND PROPOSED):	**147 TREES**

THE LAND GROUP



Landscape Plan

Horizontal Scale: 1" = 40'

0 40' 80'

STOR-IT SELF STORAGE EXPANSION

AVEST LP
379 Elo Road
McCall, Idaho 83638

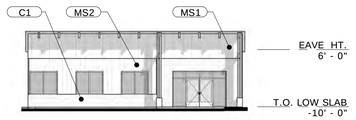
Revisions
1.

NOT FOR CONSTRUCTION

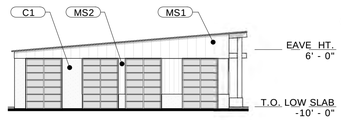
Project No.: 122091
Date of Issuance: 02.05.2026
Project Milestone:

Landscape Plan

L1.00

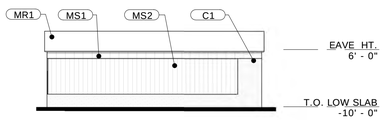


FIRE STATION - NORTH ELEVATION
SCALE: 1" = 20'-0"



FIRE STATION - EAST ELEVATION
SCALE: 1" = 20'-0"

FIRE STATION - WEST ELEVATION
SCALE: 1" = 20'-0"



FIRE STATION - SOUTH ELEVATION
SCALE: 1" = 20'-0"

EXTERIOR FINISH SPECIFICATIONS

MR1: METAL ROOFING & RIDGE FLASHING
MBCI 'ULTRA-DEK' OR APPROVED EQUAL
PRE-FINISHED STANDING SEAM PANELS.
INSTALL PER MANUFACTURER SPEC.
COLOR: FERN GREEN

MS: VERTICAL METAL SIDING:
MBCI 'RAIN GUARD' VERTICAL METAL PANEL.
INSTALL PER MANUFACTURER SPEC.
COLOR MS1: FERN GREEN
COLOR MS2: COPPER METALLIC

WM: WALL MURAL
MBCI 'RAIN GUARD' VERTICAL METAL PANEL
WALL MURAL.
WM1: FERN GREEN
WM2: KK-BRWN
WM3: ALMOND

EW: ENGINEERED WOOD MEMBER
EXTERIOR LAMINATED CEDAR

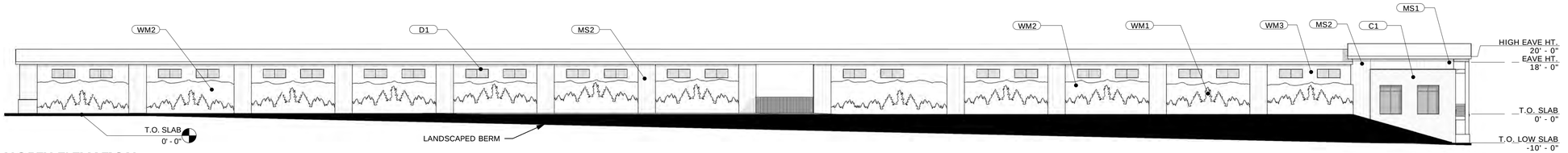
EXTERIOR FINISH SPECIFICATIONS

FG: FASCIA, COPING CAP & TRIM, GUTTER
MBCI OR APPROVED EQUAL. PRE-FINISHED SHEET METAL COPING CAP AND TRIM.
PRE-FINISHED FASCIA AND GUTTER.
INSTALL PER MANUFACTURER SPEC.
COLOR: FERN GREEN

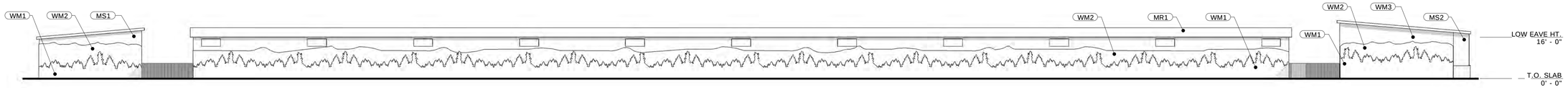
C1: CONCRETE MASONRY UNIT (VENEER)
BASALITE GROUND FACE CMU VENEER OR APPROVED EQUAL, STACKED BOND ALTERNATING 4"x4"x24" & 4"x8"x24" UNITS
COLOR: 60/40 MIX RANDOM, 620 GF CREAM/ 660 GF OLD PYRAMID.

D1: EXTERIOR WINDOW & DOOR FRAME
MATERIAL: ANODIZED ALUMINUM
COLOR: "COPPER METALLIC"

D2: OVERHEAD DOORS
MANUFACTURER: OVERHEAD DOOR
PRODUCT: MODEL 432
COLOR: "WHITE"

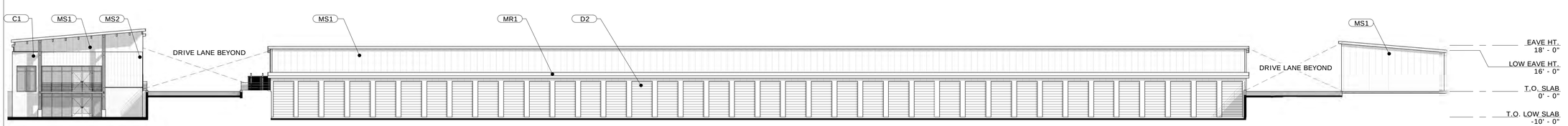


NORTH ELEVATION
SCALE: 1" = 20'-0"



EAST ELEVATION
SCALE: 1" = 20'-0"

SOUTH ELEVATION
SCALE: 1" = 20'-0"



WEST ELEVATION
SCALE: 1" = 20'-0"

HATCH DESIGN ARCHITECTURE
200 W. 36TH ST.
BOISE, IDAHO 83714
OFFICE: (208) 475-3204
FAX: (208) 475 475-3205

NOT FOR CONSTRUCTION

NEW SELF STORAGE EXPANSION:
STOR-IT SELF STORAGE
379 ELO RD, McCALL, ID

DELTA	DATE	DESCRIPTION - COMMENTS

DATE:	APRIL 2022
DRAWN BY:	WE
CHECKED BY:	JLH
JOB NUMBER:	MKT

SHEET TITLE
EXTERIOR BUILDING ELEVATIONS

SHEET NUMBER
A-4.0

5/20/2022 9:49:31 AM

GEOTECHNICAL INVESTIGATION

STOR-IT MCCALL ELO

379 Elo Rd

McCall, ID

PREPARED FOR:

Mr. Jeff Hatch
Hatch Design Architecture
200 West 36th Street
Boise, ID 83714

PREPARED BY:

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December 27, 2021
B213183c

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December 27, 2021

Atlas No. B213183c

Mr. Jeff Hatch
Hatch Design Architecture
200 West 36th Street
Boise, ID 83714

Subject: Geotechnical Investigation
Stor-It McCall Elo
379 Elo Rd
McCall, ID

Dear Mr. Hatch:

In compliance with your instructions, Atlas has conducted a soils exploration and foundation evaluation for the above referenced development. Fieldwork for this investigation was conducted on December 1, 2021. Data have been analyzed to evaluate pertinent geotechnical conditions. Results of this investigation, together with our recommendations, are to be found in the following report. We have provided a PDF copy for your review and distribution.

Often, questions arise concerning soil conditions because of design and construction details that occur on a project. Atlas would be pleased to continue our role as geotechnical engineers during project implementation.

If you have any questions, please call us at (208) 376-4748.

Respectfully submitted,

Gavin Marron, EI
Staff Engineer

Elizabeth Brown, PE
Geotechnical Services Manager

PROFESSIONAL ENGINEER
LICENSED
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8/18/2023
STATE OF IDAHO
ELIZABETH BROWN

Clinton Wyllie, PG
Staff Geologist

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1. INTRODUCTION

This report presents results of a geotechnical investigation and analysis in support of data utilized in design of structures as defined in the 2018 International Building Code (IBC). Information in support of groundwater and stormwater issues pertinent to the practice of Civil Engineering is included. Observations and recommendations relevant to the earthwork phase of the project are also presented. Revisions in plans or drawings for the proposed structures from those enumerated in this report should be brought to the attention of the soils engineer to determine whether changes in the provided recommendations are required. Deviations from noted subsurface conditions, if encountered during construction, should also be brought to the attention of the soils engineer.

1.1 Project Description

The proposed development is in the southern portion of the City of McCall, Valley County, ID, and occupies a portion of the NE¼SE¼ of Section 21, Township 18 North, Range 3 East, Boise Meridian. This project is expected to consist of a new bus stop/bike repair station on the northwest side of an existing storage facility and an expansion on the east side of the existing facility comprised of 12 self-storage structures. A new septic system will also be constructed as part of this project in the vicinity of test pit 2. The site to be developed is approximately 9.960 acres. Total settlements are limited to 1 inch. Loads of up to 4,000 pounds per lineal foot for wall footings, and column loads of up to 50,000 pounds were assumed for settlement calculations. Additionally, assumptions have been made for traffic loading of pavements. Retaining walls approximately 10 feet high are anticipated as part of the project. Atlas has not been informed of the proposed grading plan.

1.2 Authorization

Authorization to perform this exploration and analysis was given in the form of a written authorization to proceed from Mr. Jeff Hatch of Hatch Design Architecture to Monica Saculles of Atlas Technical Consultants (Atlas), on November 17, 2021. Said authorization is subject to terms, conditions, and limitations described in the Professional Services Contract entered into between Hatch Design Architecture and Atlas. Our scope of services for the proposed development has been provided in our proposal dated November 16, 2021 and repeated below.

1.3 Scope of Investigation

The scope of this investigation included review of geologic literature and existing available geotechnical studies of the area, visual site reconnaissance of the immediate site, subsurface exploration of the site, field and laboratory testing of materials collected, and engineering analysis and evaluation of foundation materials.

2. SITE DESCRIPTION

2.1 Site Access

Access to the site may be gained via State Highway 55 to Elo Road in McCall. The site occupies the southeast corner of this intersection. The location is depicted on site maps included in the **Appendix**.

2.2 Regional Geology

In the area of McCall, Idaho, three major groups of rocks border one another. These consist of granite of the Idaho Batholith, flood-basalts of the Columbia River Basalt Group, and metamorphosed island-arc sedimentary and volcanic rocks of the Seven Devils Group. Structurally, McCall is situated near the north end of Long Valley, a major tectonic feature of west central Idaho. West Mountain Escarpment is the high ridge formed along the west side of the Long Valley fault. West Mountain and Long Valley are part of a group of linear north-south range and valley features formed by block faulting that occurred during the late Tertiary and Quaternary. As West Mountain rose and Long Valley subsided, as much as 7,000 feet of alluvium accumulated in the valley.

Glacial features can be found around the area as most of the broad, high elevation region north of McCall was buried by an ice cap during the Pleistocene. Payette Lake and Little Payette Lake were formed as a result of glaciation in the region as valley glaciers carved the basin and deposited the moraines which impound the lakes. Other glacial geomorphic features, such as cirques - the alpine headwalls where glaciers begin - and medial moraines, around the area are visible in the landscape. An example would be Timber Ridge which formed originally as a large prominent medial moraine. Meltwater streams from these glaciers coursed across the valley depositing thick deposits of sand and gravel that can be seen as high terraces above the Payette River. These terraces are relict valley floors that have been incised as the post-glacial climate has changed and discharges in the Payette drainages have diminished.

2.3 General Site Characteristics

The site to be developed is approximately 9.96 acres in size. Currently, several storage facilities are present in the western portion of the site. The remainder of the site consists of undeveloped land. The site is surrounded by existing residential/commercial properties and undeveloped land. The western portion of the property is relatively flat and level. However, a slightly drop in elevation occurs from east to west. The eastern portion of the property slopes upwards from the west to the east at approximately 5 feet horizontal to 1 foot vertical (5:1). Mature trees, weeds, and grasses are present throughout the site.

Regional drainage is south and west toward the Payette River. Stormwater drainage for the site is achieved by percolation through surficial soils. From the east, intermittent off-site stormwater may drain onto the project site. Stormwater drainage collection and retention systems are not in place on the project site and were not noted within the vicinity of the project site.

2.4 Regional Site Climatology and Geochemistry

According to the Western Regional Climate Center, the average precipitation for west central Idaho mountain valleys is on the order of 18 to 37 inches per year, with an annual snowfall of approximately 137 inches with a annual high of 242 inches. The monthly mean temperatures range from 22º F to 62º F with daily extremes ranging from -35º F to 100º F. The annual average wind speed is approximately 4 miles per hour from the northwest. Soils and sediments in the area are primarily derived from granitic materials and exhibit low electro-chemical potential for corrosion of metals or concretes. Surface waters, groundwaters, and soils in the region typically have pH levels ranging from 6.4 to 7.8.

3. SEISMIC SITE EVALUATION

3.1 Geoseismic Setting

Soils on site are classed as Site Class D in accordance with Chapter 20 of the American Society of Civil Engineers (ASCE) publication ASCE/SEI 7-16. Structures constructed on this site should be designed per IBC requirements for such a seismic classification. Our investigation did not reveal hazards resulting from potential earthquake motions including: slope instability, liquefaction, and surface rupture caused by faulting or lateral spreading. Incidence and anticipated acceleration of seismic activity in the area is low.

3.2 Seismic Design Parameter Values

The United States Geological Survey National Seismic Hazard Maps (2008), includes a peak ground acceleration map. The map for 2% probability of exceedance in 50 years in the Western United States in standard gravity (g) indicates that a peak ground acceleration of 0.268 is appropriate for the project site based on a Site Class D.

The following section provides an assessment of the earthquake-induced earthquake loads for the site based on the Risk-Targeted Maximum Considered Earthquake (MCE_R). The MCE_R spectral response acceleration for short periods, S_{MS}, and at 1-second period, S_{M1}, are adjusted for site class effects as required by the 2018 IBC. Design spectral response acceleration parameters as presented in the 2018 IBC are defined as a 5% damped design spectral response acceleration at short periods, S_{DS}, and at 1-second period, S_{D1}.

The USGS National Seismic Hazards Mapping Project includes a program that provides values for ground motion at a selected site based on the same data that were used to prepare the USGS ground motion maps. The maps were developed using attenuation relationships for soft rock sites; the source model, assumptions, and empirical relationships used in preparation of the maps are described in Petersen and others (1996).

Table 1 – Seismic Design Values

Seismic Design Parameter	Design Value
Site Class	D "Stiff Soil"
S_s	0.424 (g)
S_1	0.137 (g)
F_a	1.461
F_v	2.325
S_{MS}	0.620
S_{M1}	0.319
S_{DS}	0.413
S_{D1}	0.213

4. SOILS EXPLORATION

4.1 Exploration and Sampling Procedures

Field exploration conducted to determine engineering characteristics of subsurface materials included a reconnaissance of the project site and investigation by test pit. Atlas was provided test pit locations via a site map by Jeff Hatch of Hatch Design Architecture. Actual test pit sites were located in the field by means of a Global Positioning System (GPS) device and are reportedly accurate to within fifteen feet. Upon completion of investigation, each test pit was backfilled with loose excavated materials. Re-excavation and compaction of these test pit areas are required prior to construction of overlying structures.

In addition, samples were obtained from representative soil strata encountered. Samples obtained have been visually classified in the field by professional staff, identified according to test pit number and depth, placed in sealed containers, and transported to our laboratory for additional testing. Subsurface materials have been described in detail on logs provided in the **Appendix**. Results of field and laboratory tests are also presented in the **Appendix**. Atlas recommends that these logs **not** be used to estimate fill material quantities.

4.2 Laboratory Testing Program

Along with our field investigation, a supplemental laboratory testing program was conducted to determine additional pertinent engineering characteristics of subsurface materials necessary in an analysis of anticipated behavior of the proposed structures. Laboratory tests were conducted in accordance with current applicable American Society for Testing and Materials (ASTM) specifications, and results of these tests are to be found in the **Appendix**. The laboratory testing program for this report included: Atterberg Limits Testing – ASTM D4318, Grain Size Analysis – ASTM C117/C136, and Hydrometer – ASTM D422.

4.3 Soil and Sediment Profile

The profile below represents a generalized interpretation for the project site. Note that on site soils strata, encountered between test pit locations, may vary from the individual soil profiles presented in the logs, which can be found in the **Appendix**.

Silty gravel with sand fill materials were encountered at ground surface in test pits 1, 2, 3, and 5. These materials were brown to light brown or dark brown, slightly moist to moist, and medium dense, with fine to coarse-grained sand, and fine to coarse gravel, and intermittent 1.5-foot minus boulders. Various debris was encountered within test pits 1 and 3. Varying layers of sandy lean clay soils, silt with sand soils, silt soils, sandy silt soils, silty sand sediments, poorly graded sand with gravel sediments, poorly graded gravel with sand sediments, and silty gravel with sand sediments were encountered beneath fill materials and throughout the remaining test pits. Fine-grained soils were brown to light brown, gray, dark brown, or gray-brown, slightly moist to saturated, and medium stiff to very stiff, with fine to medium-grained sand. Coarse-grained soils were gray-brown, brown, or light brown, dry to saturated, and medium dense to dense, with fine to coarse-grained sand, fine to coarse gravel, and 1.5-foot minus boulders. Organic materials were measured to depths of up to roughly 2.3 feet.

During excavation, test pit sidewalls were generally stable. However, moisture contents will affect wall competency with saturated soils having a tendency to readily slough when under load and unsupported.

4.4 Volatile Organic Scan

No environmental concerns were identified prior to commencement of the investigation. Therefore, soils obtained during on-site activities were not assessed for volatile organic compounds by portable photoionization detector. Samples obtained during our exploration activities exhibited no odors or discoloration typically associated with this type of contamination. Groundwater encountered did not exhibit obvious signs of contamination.

5. SITE HYDROLOGY

Existing surface drainage conditions are defined in the **General Site Characteristics** section. Information provided in this section is limited to observations made at the time of the investigation. Either regional or local ordinances may require information beyond the scope of this report.

5.1 Groundwater

During this field investigation, groundwater was encountered in test pits 1, 3, and 10 at depths ranging from 5.5 to 7.1 feet bgs. Soil moistures in the test pits were generally slightly moist to moist within surficial soils. Within the deeper soil horizons, soil moistures graded from slightly moist to saturated as the water table was approached and penetrated. In the vicinity of the project site, groundwater levels are controlled in large part by residential and commercial irrigation activity and leakage from nearby canals. Maximum groundwater elevations likely occur during the later portion of the irrigation season.

According to Idaho Department of Water Resources (IDWR) monitoring well data within approximately ½-mile of the project site, groundwater was measured at depths ranging between 12 and 68 feet bgs. Due to the variability of groundwater depths across the site, Atlas recommends groundwater monitoring be performed to determine seasonal groundwater elevations.

5.2 Soil Infiltration Rates

Soil permeability, which is a measure of the ability of a soil to transmit a fluid, was not tested in the field. Given the absence of direct measurements, for this report an estimation of infiltration is presented using generally recognized values for each soil type and gradation. Of soils comprising the generalized soil profile for this study, sandy lean clay, silt with sand, and silt soils generally offer little permeability, with typical hydraulic infiltration rates of less than 2 inches per hour. Silty sand and silty gravel with sand sediments usually display rates of 4 to 8 inches per hour. Poorly graded gravel with sand and poorly graded sand with gravel sediments typically exhibit infiltration values in excess of 12 inches per hour.

Due to the variability of soil types encountered throughout the site, Atlas recommends that infiltration testing be performed once the infiltration facility locations have been determined. However, for preliminary design purposes, an infiltration rate of 1 inch per hour can be assumed.

6. SLOPES AND SETBACKS

Native slopes on the site were roughly 5 feet horizontal to 1 foot vertical (5:1). Therefore, slope setback requirements as outlined in the 2018 IBC are not applicable. Our investigation did not reveal any potential slope instabilities.

7. LATERAL EARTH PRESSURES

Retaining, below-grade, or basement walls will be subject to lateral earth pressures. The magnitude of earth pressure is a function of both type and compaction of backfill behind walls within the “active” zone, and allowable rotation of the top of the wall. The active zone is defined as the wedge of soil between the surface of the wall and a plane inclined 31 degrees from vertical passing through the base of the wall. All clayey soils must be completely removed from within the active zone. The following recommendations should be used when dealing with lateral earth pressures on a gravity block: 1) a sliding frictional coefficient of 0.35 is appropriate considering sandy lean clay soils, silt soils, sandy silt soils, and silty sand sediments, and 2) a sliding frictional coefficient of 0.45 is appropriate considering native poorly graded gravel with sand sediments and granular structural fill under typical conditions.

A state of plastic equilibrium is when the subject material is considered to be 1) homogeneous and unbounded and 2) at the point of incipient instability. This state is evaluated on the basis of unit weight, mechanical properties, and the definition of instability. For the purpose of this report, it is assumed that native relatively free draining soils and imported granular fill material will be the materials of concern regarding lateral earth pressures. If other materials are considered for use, Atlas must be contacted to provide alternate lateral earth pressure information. Furthermore, changes in natural soil moisture, such as can be imposed by site stormwater systems, can change the values listed below.

Below-grade restrained walls, such as basement walls, should be designed based on at-rest pressures. Active pressures are appropriate under conditions where the wall moves or rotates away from the soil mass at failure. Passive pressures are used for conditions where the wall moves toward the soil mass at failure. Rotation, or lateral movement, of the top of the wall equal to 0.002 times the height of the wall will be necessary for on-site soil backfill to achieve an "active" loading condition. Lateral movement of the top of the wall equal to 0.001 times the height of the wall will be necessary for the "active" pressure condition for imported granular structural backfill.

7.1 Retaining Wall Backfill Materials

For lateral earth pressure analysis, Atlas anticipates that the soils of interest will be the onsite native silt soils, silty sand sediments and poorly graded gravel with sand sediments. Clayey soils are not suitable for use as backfill on the soil side of walls. Seismic lateral earth pressures have also been provided in the following tables, and were calculated per the Whitman method. For silty sand sediments, the following values are applicable under non-surcharged, drained conditions.

Table 2 – Lateral Earth Pressure Values for Native Silt Soil

Soil Type: Silt					
Internal Friction Angle:	26	°	Dry Unit Weight:	100	pcf
Cohesion:	100	psf	Bouyant Unit Weight:	61	pcf
Natural Void Ratio:	0.6		Natural Moisture:	17	%
Ground Acceleration[2]:	0.268		Backfill Slope:	0	°
At rest lateral earth pressure:	66	pcf[1]		K_0=	0.56
Active lateral earth pressure:	46	pcf[1]		K_a=	0.39
Passive lateral earth pressure:	300	pcf[1]		K_p=	2.56
Seismic active lateral earth pressure:	69	pcf[1]		K_{ae}=	0.59
Seismic passive lateral earth pressure:	219	pcf[1]		K_{pe}=	1.87

[1]Lateral earth pressure values are in pounds per square foot, per foot of wall (psf/ft). Alternately, the values presented may also be considered as equivalent fluid with units of pounds per cubic foot (pcf).
[2]Ground acceleration obtained from the USGS Seismic Design Maps.

Table 3 – Lateral Earth Pressure Values for Native Silty Sand Sediments

Soil Type: Silty Sand					
Internal Friction Angle:	30	°	Dry Unit Weight:	110	pcf
Cohesion:	100	psf	Bouyant Unit Weight:	71	pcf
Natural Void Ratio:	0.6		Natural Moisture:	15	%
Ground Acceleration[2]:	0.268		Backfill Slope:	0	°
At rest lateral earth pressure:	63	pcf[1]		K_0=	0.50
Active lateral earth pressure:	42	pcf[1]		K_a=	0.33
Passive lateral earth pressure:	380	pcf[1]		K_p=	3.00
Seismic active lateral earth pressure:	68	pcf[1]		K_{ae}=	0.53
Seismic passive lateral earth pressure:	278	pcf[1]		K_{pe}=	2.20

[1]Lateral earth pressure values are in pounds per square foot, per foot of wall (psf/ft). Alternately, the values presented may also be considered as equivalent fluid with units of pounds per cubic foot (pcf).
[2]Ground acceleration obtained from the USGS Seismic Design Maps.

Native poorly graded gravel with sand sediments and imported, compacted, structural material, which is be used to backfill the soil side of walls, must demonstrate the following characteristics:

Table 4 – Lateral Earth Pressure Values for Native Sediments and Fill Materials

Soil Type: Compacted Sandy Gravel Fill and Native Poorly Graded Gravel with Sand					
Internal Friction Angle:	35	°	Dry Unit Weight:	128	pcf
Cohesion:	N/A		Bouyant Unit Weight:	83	pcf
Natural Void Ratio:	0.4		Natural Moisture:	5	%
Ground Acceleration[2]:	0.268		Backfill Slope:	0	°
At rest lateral earth pressure:	57	pcf[1]		K_0=	0.43
Active lateral earth pressure:	36	pcf[1]		K_a=	0.27
Passive lateral earth pressure:	496	pcf[1]		K_p=	3.69
Seismic active lateral earth pressure:	63	pcf[1]		K_{ae}=	0.47
Seismic passive lateral earth pressure:	363	pcf[1]		K_{pe}=	2.70

[1]Lateral earth pressure values are in pounds per square foot, per foot of wall (psf/ft). Alternately, the values presented may also be considered as equivalent fluid with units of pounds per cubic foot (pcf).
[2]Ground acceleration obtained from the USGS Seismic Design Maps.

Please note that the values for seismic lateral earth pressures are calculated using both the static and seismic coefficients. The effect of seismic conditions alone is the difference between the static and seismic lateral earth pressures presented above. Also, the expected pressure diagram is considered to be an inverted triangular force, with the maximum force at the ground surface.

In the case that another material is used for backfill, Atlas should be consulted for alternate lateral earth pressure values. Granular structural fill should consist of 4-inch-minus select, clean, granular soil with no more than 30 percent oversize (greater than ¾-inch) material and no more than 5 percent non-plastic fines (passing the No. 200 sieve). Retaining wall and basement backfill must be placed in accordance with recommendations in the **Structural Fill** section of this report and must be properly compacted and tested.

Lateral earth pressure values do not incorporate specific factors of safety, and are only applicable for non-surcharged, drained conditions. Factors of safety, if applicable, should be integrated into the structural design of the wall. The preceding values are presented for idealized conditions relating to simple shallow structures. For complex structures, deep structures, or structures with significant perimeter landscaping, a soils engineer should be retained as part of the design team in developing appropriate project design parameters and construction specifications.

7.2 Retaining Wall Drainage

Atlas recommends that a drainage system be incorporated into the retained soil mass. This can be accomplished by installing wall and toe drains as a part of each soil-supporting wall system. In areas where there is potential for significantly high soil moistures within the supported soil mass, installation of drains within the soil mass is recommended. Particular consideration of roof drain effluent and irrigation water must be made. Further, these drainage systems must be separate from other retaining wall/foundation systems. If the granular structural fill option to reduce lateral pressures is used, a compacted low permeability soil cap is recommended within the upper 2 feet of the surface to limit surface water infiltration behind the walls.

8. FOUNDATION AND SLAB DISCUSSION AND RECOMMENDATIONS

Various foundation types have been considered for support of the proposed structures. Two requirements must be met in the design of foundations. First, the applied bearing stress must be less than the ultimate bearing capacity of foundation soils to maintain stability. Second, total and differential settlement must not exceed an amount that will produce an adverse behavior of the superstructure. Allowable settlement is usually exceeded before bearing capacity considerations become important; thus, allowable bearing pressure is normally controlled by settlement considerations.

Considering subsurface conditions and the proposed construction, it is recommended that the structures be founded upon conventional spread footings and continuous wall footings. Total settlements should not exceed 1 inch if the following design and construction recommendations are observed.

8.1 Foundation Design Recommendations

Test pits 6 through 10 were advanced where new structures are planned. The following foundation design recommendations are applicable for the new structures that will be constructed to the east of the existing storage unit facility.

Based on data obtained from the site and test results from various laboratory tests performed, Atlas recommends the following guidelines for the net allowable soil bearing capacity:

Table 5 – Soil Bearing Capacity

Footing Depth	ASTM D1557 Subgrade Compaction	Net Allowable Soil Bearing Capacity
Footings must bear on competent, undisturbed, native sandy lean clay soils, silt soils, sandy silt soils, poorly graded gravel with sand sediments, or compacted structural fill. Existing fill materials and organics must be completely removed from below foundation elements.[1] Excavation depths ranging from roughly 1.4 to 2.3 feet bgs should be anticipated to expose proper bearing soils.[2]	Not Required for Native Soil 95% for Structural Fill	1,500 lbs/ft^2 A ⅓ increase is allowable for short-term loading, which is defined by seismic events or designed wind speeds.
Footings must bear on competent, undisturbed, native silty sand sediments, poorly graded gravel with sand sediments, or compacted structural fill. Existing fill materials, sandy lean clay soils, and organics must be completely removed from below foundation elements.[1] Excavation depths ranging from roughly 1.4 to 3.4 feet bgs should be anticipated to expose proper bearing soils.[2]	Not Required for Native Soil 95% for Structural Fill	2,500 lbs/ft^2

[1]It will be required for Atlas personnel to verify the bearing soil suitability for each structure at the time of construction.
[2]Depending on the time of year construction takes place, the subgrade soils may be unstable because of high moisture contents. If unstable conditions are encountered, over-excavation and replacement with granular structural fill and/or use of geotextiles may be required.

Footings should be proportioned to meet either the stated soil bearing capacity or the 2018 IBC minimum requirements. Total settlement should be limited to approximately 1 inch, and differential settlement should be limited to approximately ½ inch. Objectionable soil types encountered at the bottom of footing excavations should be removed and replaced with structural fill. Excessively loose or soft areas that are encountered in the footings subgrade will require over-excavation and backfilling with structural fill. To minimize the effects of slight differential movement that may occur because of variations in the character of supporting soils and seasonal moisture content, Atlas recommends continuous footings be suitably reinforced to make them as rigid as possible. Per Valley County code requirements, footing frost depth is a minimum of 24 inches. However, Atlas recommends that the bottom of external footings be 36 inches below finished grade. The reason for the increased footing frost depth is because Atlas has repeatedly seen frost depths of 36 inches in the vicinity of the project site. Based on the soil types encountered onsite, foundation drains are not needed.

8.2 Floor Slab-on-Grade

Uncontrolled fill, which contained debris, was encountered predominantly in the western portion of the site. Atlas recommends that these fill materials be removed to a depth of at least 3 feet below existing grade. If fill materials remain after excavation, the exposed subgrade must be compacted to at least 95 percent of the maximum dry density as determined by ASTM D1557. The excavated fill materials can be replaced in accordance with the **Structural Fill** section provided that all organic material and/or debris is completely removed. Once final grades have been determined, Atlas is available to provide additional recommendations.

Organic, loose, or obviously compressive materials must be removed prior to placement of concrete floors or floor-supporting fill. In addition, the remaining subgrade should be treated in accordance with guidelines presented in the **Earthwork** section. Areas of excessive yielding should be excavated and backfilled with structural fill. Fill used to increase the elevation of the floor slab should meet requirements detailed in the **Structural Fill** section. Fill materials must be compacted to a minimum 95 percent of the maximum dry density as determined by ASTM D1557.

A free-draining granular mat should be provided below slabs-on-grade to provide drainage and a uniform and stable bearing surface. This should be a minimum of 4 inches in thickness and properly compacted. The mat should consist of a sand and gravel mixture, complying with Idaho Standards for Public Works Construction (ISPWC) specifications for ¾-inch (Type 1) crushed aggregate. The granular mat should be compacted to no less than 95 percent of the maximum dry density as determined by ASTM D1557. A moisture-retarder should be placed beneath floor slabs to minimize potential ground moisture effects on moisture-sensitive floor coverings. The moisture-retarder should be at least 15-mil in thickness and have a permeance of less than 0.01 US perms as determined by ASTM E96. Placement of the moisture-retarder will require special consideration with regard to effects on the slab-on-grade and should adhere to recommendations outlined in the ACI 302.1R and ASTM E1745 publications. Upon request, Atlas can provide further consultation regarding installation.

9. PAVEMENT DISCUSSION AND RECOMMENDATIONS

Atlas has made assumptions for traffic loading variables based on the character of the proposed construction. The Client shall review and understand these assumptions to make sure they reflect intended use and loading of pavements both now and in the future. Based on experience with soils in the region, a subgrade California Bearing Ratio (CBR) value of 4 has been assumed for near-surface soils on site. The following are minimum thickness requirements for assured pavement function. Depending on site conditions, additional work, e.g. soil preparation, may be required to support construction equipment. These have been listed within the **Soft Subgrade Soils** section.

9.1 Flexible Pavement Sections

The American Association of State Highway and Transportation Officials (AASHTO) design method has been used to calculate the following pavement sections. Calculation sheets provided in the **Appendix** indicate the soils constant, traffic loading, traffic projections, and material constants used to calculate the pavement sections. Atlas recommends that materials used in the construction of asphaltic concrete pavements meet requirements of the ISPWC Standard Specification for Highway Construction. Construction of the pavement section should be in accordance with these specifications and should adhere to guidelines recommended in the section on **Construction Considerations**.

Table 6 – AASHTO Flexible Pavement Specifications

Pavement Section Component	Driveways and Parking Light Duty	Driveways and Parking Heavy Duty
Asphaltic Concrete	2.5 Inches	3.0 Inches
Crushed Aggregate Base	4.0 Inches	4.0 Inches
Structural Subbase	10.0 Inches	12.0 Inches
Compacted Subgrade	See **Pavement Subgrade Preparation** Section	See **Pavement Subgrade Preparation** Section

[1]**It will be required for Atlas personnel to verify subgrade competency at the time of construction.**

- Asphaltic Concrete: Asphalt mix design shall meet the requirements of ISPWC, Section 810. Materials shall be placed in accordance with ISPWC Standard Specifications for Highway Construction.
- Aggregate Base: Material complying with ISPWC Standards for Crushed Aggregate Materials.
- Structural Subbase: Granular structural fill material complying with the requirements detailed in the **Structural Fill** section of this report except that the maximum material diameter is no more than $^{2}/_{3}$ the component thickness. Gradation and suitability requirements shall be per ISPWC Section 801, Table 1.

9.2 Pavement Subgrade Preparation

Uncontrolled fill, which contained debris, was encountered in portions of the site. Atlas recommends that these fill materials be removed to a depth of at least 3 feet below existing grade. If fill materials remain after excavation, the exposed subgrade must be compacted to at least 95 percent of the maximum dry density as determined by ASTM D698. The excavated fill materials can be replaced in accordance with the **Structural Fill** section provided that all organic material and/or debris is completely removed. However, the existing fill materials are not suitable for use as either the base or subbase components of the recommended pavement section. Once final grades have been determined, Atlas is available to provide additional recommendations.

It is noted that in the vicinity of test pit 1, debris-containing fill materials will remain below the improved 3 foot zone (specified above). If water or increased moisture conditions occur within these fill materials, settlement or vertical movement may occur. This risk must be recognized and accepted by the project owner. Otherwise, complete removal of the fill zone will be required.

9.3 Common Pavement Section Construction Issues

The subgrade upon which above pavement sections are to be constructed must be properly stripped, compacted (if indicated), inspected, and proof-rolled. Proof rolling of subgrade soils should be accomplished using a heavy rubber-tired, fully loaded, tandem-axle dump truck or equivalent. Verification of subgrade competence by Atlas personnel at the time of construction is required. Fill materials on the site must demonstrate the indicated compaction prior to placing material in support of the pavement section. Atlas anticipated that pavement areas will be subjected to moderate traffic. Subgrade clayey and silty soils near and above optimum moisture contents may pump during compaction. Pumping or soft areas must be removed and replaced with structural fill.

Fill material and aggregates in support of the pavement section must be compacted to no less than 95 percent of the maximum dry density as determined by ASTM D698 for flexible pavements and by ASTM D1557 for rigid pavements. If a material placed as a pavement section component cannot be tested by usual compaction testing methods, then compaction of that material must be approved by observed proof rolling. Minor deflections from proof rolling for flexible pavements are allowable. Deflections from proof rolling of rigid pavement support courses should not be visually detectable.

Atlas recommends that rigid concrete pavement be provided for heavy garbage receptacles. This will eliminate damage caused by the considerable loading transferred through the small steel wheels onto asphaltic concrete. Rigid concrete pavement should consist of Portland Cement Concrete Pavement (PCCP) generally adhering to ITD specifications for Urban Concrete. PCCP should be 6 inches thick on a 4-inch drainage fill course (see **Floor Slab-on-Grade** section), and should be reinforced with welded wire fabric. Control joints must be on 12-foot centers or less.

10. CONSTRUCTION CONSIDERATIONS

Recommendations in this report are based upon structural elements of the project being founded on competent, native sandy lean clay soils, silt soils, silty sand sediments, poorly graded gravel with sand sediments, or compacted structural fill. Structural areas should be stripped to an elevation that exposes these soil types.

10.1 Earthwork

Excessively organic soils, deleterious materials, or disturbed soils generally undergo high volume changes when subjected to loads, which is detrimental to subgrade behavior in the area of pavements, floor slabs, structural fills, and foundations. Mature trees, brush, and thick grasses with associated root systems were noted at the time of our investigation. It is recommended that organic or disturbed soils, if encountered, be removed to depths of 1 foot (minimum), and wasted or stockpiled for later use. However, in areas where trees are/were present, deeper excavation depths should be anticipated. Stripping depths should be adjusted in the field to assure that the entire root zone or disturbed zone or topsoil are removed prior to placement and compaction of structural fill materials.

Exact removal depths should be determined during grading operations by Atlas personnel, and should be based upon subgrade soil type, composition, and firmness or soil stability. If underground storage tanks, underground utilities, wells, or septic systems are discovered during construction activities, they must be decommissioned then removed or abandoned in accordance with governing Federal, State, and local agencies. Excavations developed as the result of such removal must be backfilled with structural fill materials as defined in the **Structural Fill** section.

Atlas should oversee subgrade conditions (i.e., moisture content) as well as placement and compaction of new fill (if required) after native soils are excavated to design grade. Recommendations for structural fill presented in this report can be used to minimize volume changes and differential settlements that are detrimental to the behavior of footings, pavements, and floor slabs. Sufficient density tests should be performed to properly monitor compaction. For structural fill beneath building structures, one in-place density test per lift for every 5,000 square feet is recommended. In parking and driveway areas, this can be decreased to one test per lift for every 10,000 square feet.

10.2 Dry Weather

If construction is to be conducted during dry seasonal conditions, many problems associated with soft soils may be avoided. However, some rutting of subgrade soils may be induced by shallow groundwater conditions related to springtime runoff or irrigation activities during late summer through early fall. Solutions to problems associated with soft subgrade soils are outlined in the **Soft Subgrade Soils** section. Problems may also arise because of lack of moisture in native and fill soils at time of placement. This will require the addition of water to achieve near-optimum moisture levels. Low-cohesion soils exposed in excavations may become friable, increasing chances of sloughing or caving. Measures to control excessive dust should be considered as part of the overall health and safety management plan.

10.3 Wet Weather

If construction is to be conducted during wet seasonal conditions (commonly from mid-November through May), problems associated with soft soils must be considered as part of the construction plan. During this time of year, fine-grained soils such as silts and clays will become unstable with increased moisture content, and eventually deform or rut. Additionally, constant low temperatures reduce the possibility of drying soils to near optimum conditions.

10.4 Soft Subgrade Soils

Shallow fine-grained subgrade soils that are high in moisture content should be expected to pump and rut under construction traffic. Throughout construction, soft areas may develop after the existing asphalt is removed and heavy rubber tired equipment drives over the site. In addition, areas where significant cracking has occurred will likely have soft subgrade soils because of moisture infiltration and will be prone to pumping and rutting. During periods of wet weather, construction may become very difficult if not impossible. The following recommendations and options have been included for dealing with soft subgrade conditions:

- Track-mounted vehicles should be used to strip the subgrade of root matter and other deleterious debris and used to remove the existing asphalt and to perform any other necessary excavations. Heavy rubber-tired equipment should be prohibited from operating directly on the native subgrade and areas in which structural fill materials have been placed. Construction traffic should be restricted to designated roadways that do not cross, or cross on a limited basis, proposed roadway or parking areas.
- Soft areas can be over-excavated and replaced with granular structural fill.
- Construction roadways on soft subgrade soils should consist of a minimum 2-foot thickness of large cobbles of 4 to 6 inches in diameter with sufficient sand and fines to fill voids. Construction entrances should consist of a 6-inch thickness of clean, 2-inch minimum, angular drain-rock and must be a minimum of 10 feet wide and 30 to 50 feet long. During the construction process, top dressing of the entrance may be required for maintenance.
- Scarification and aeration of subgrade soils can be employed to reduce the moisture content of wet subgrade soils. After stripping is complete, the exposed subgrade should be ripped or disked to a depth of 1½ feet and allowed to air dry for 2 to 4 weeks. Further disking should be performed on a weekly basis to aid the aeration process.
- Alternative soil stabilization methods include use of geotextiles, lime, and cement stabilization. Atlas is available to provide recommendations and guidelines at your request.

10.5 Frozen Subgrade Soils

Prior to placement of structural fill materials or foundation elements, frozen subgrade soils must either be allowed to thaw or be stripped to depths that expose non-frozen soils and wasted or stockpiled for later use. Stockpiled materials must be allowed to thaw and return to near-optimal conditions prior to use as structural fill.

The onsite, shallow clayey and silty soils are susceptible to frost heave during freezing temperatures. For exterior flatwork and other structural elements, adequate drainage away from subgrades is critical. Compaction and use of structural fill will also help to mitigate the potential for frost heave. Complete removal of frost susceptible soils for the full frost depth, followed by replacement with a non-frost susceptible structural fill, can also be used to mitigate the potential for frost heave. Atlas is available to provide further guidance/assistance upon request.

10.6 Structural Fill

Soils recommended for use as structural fill are those classified as GW, GP, SW, and SP in accordance with the Unified Soil Classification System (USCS) (ASTM D2487). Use of silty soils (USCS designation of GM, SM, and ML) as structural fill may be acceptable. However, use of silty soils (GM, SM, and ML) as structural fill below footings is prohibited. These materials require very high moisture contents for compaction and require a long time to dry out if natural moisture contents are too high and may also be susceptible to frost heave under certain conditions. Therefore, these materials can be quite difficult to work with as moisture content, lift thickness, and compactive effort becomes difficult to control. If silty soil is used for structural fill, lift thicknesses should not exceed 6 inches (loose), and fill material moisture must be closely monitored at both the working elevation and the elevations of materials already placed. Following placement, silty soils must be protected from degradation resulting from construction traffic or subsequent construction.

Recommended granular structural fill materials, those classified as GW, GP, SW, and SP, should consist of a 6-inch minus select, clean, granular soil with no more than 50 percent oversize (greater than ¾-inch) material and no more than 12 percent fines (passing No. 200 sieve). These fill materials should be placed in layers not to exceed 12 inches in loose thickness. Prior to placement of structural fill materials, surfaces must be prepared as outlined in the **Construction Considerations** section. Structural fill material should be moisture-conditioned to achieve optimum moisture content prior to compaction. For structural fill below footings, areas of compacted backfill must extend outside the perimeter of the footings for a distance equal to the thickness of fill between the bottom of foundation and underlying soils, or 5 feet, whichever is less. All fill materials must be monitored during placement and tested to confirm compaction requirements, outlined below, have been achieved.

Each layer of structural fill must be compacted, as outlined below:

- Below Structures and Rigid Pavements: A minimum of 95 percent of the maximum dry density as determined by ASTM D1557.
- Below Flexible Pavements: A minimum of 92 percent of the maximum dry density as determined by ASTM D1557 or 95 percent of the maximum dry density as determined by ASTM D698.

The ASTM D1557 test method must be used for samples containing up to 40 percent oversize (greater than ¾-inch) particles. If material contains more than 40 percent but less than 50 percent oversize particles, compaction of fill must be confirmed by proof rolling each lift with a 10-ton vibratory roller (or equivalent) until the maximum density has been achieved. Density testing must be performed after each proof rolling pass until the in-place density test results indicate a drop (or no increase) in the dry density, defined as maximum density or “break over” point. The number of required passes should be used as the requirements on the remainder of fill placement. Material should contain sufficient fines to fill void spaces, and must not contain more than 50 percent oversize particles.

10.7 Backfill of Walls

Backfill materials must conform to the requirements of structural fill, as defined in this report. For wall heights greater than 2.5 feet, the maximum material size should not exceed 4 inches in diameter. Placing oversized material against rigid surfaces interferes with proper compaction, and can induce excessive point loads on walls. Backfill shall not commence until the wall has gained sufficient strength to resist placement and compaction forces. Further, retaining walls above 2.5 feet in height shall be backfilled in a manner that will limit the potential for damage from compaction methods and/or equipment. It is recommended that only small hand-operated compaction equipment be used for compaction of backfill within a horizontal distance equal to the height of the wall, measured from the back face of the wall.

Backfill should be compacted in accordance with the specifications for structural fill, except in those areas where it is determined that future settlement is not a concern, such as planter areas. In nonstructural areas, backfill must be compacted to a firm and unyielding condition.

10.8 Excavations

Shallow excavations that do not exceed 4 feet in depth may be constructed with side slopes approaching vertical. Below this depth, it is recommended that slopes be constructed in accordance with Occupational Safety and Health Administration (OSHA) regulations, Section 1926, Subpart P. Based on these regulations, on-site soils are classified as type "C" soil, and as such, excavations within these soils should be constructed at a maximum slope of 1½ feet horizontal to 1 foot vertical (1½:1) for excavations up to 20 feet in height. Excavations in excess of 20 feet will require additional analysis. Note that these slope angles are considered stable for short-term conditions only, and will not be stable for long-term conditions.

During the subsurface exploration, test pit sidewalls generally exhibited little indication of collapse. For deep excavations, native granular sediments cannot be expected to remain in position. These materials are prone to failure and may collapse, thereby undermining upper soil layers. This is especially true when excavations approach depths near the water table. Care must be taken to ensure that excavations are properly backfilled in accordance with procedures outlined in this report.

10.9 Groundwater Control

Groundwater was encountered during the investigation but is anticipated to be below the depth of most construction. Excavations below the water table will require a dewatering program. Dewatering will be required prior to placement of fill materials. Placement of concrete can be accomplished through water by the use of a treme. It may be possible to discharge dewatering effluent to remote portions of the site, to a sump, or to a pit. This will essentially recycle effluent, thus eliminating the need to enter into agreements with local drainage authorities. Should the scope of the proposed project change, Atlas should be contacted to provide more detailed groundwater control measures.

Special precautions may be required for control of surface runoff and subsurface seepage. It is recommended that runoff be directed away from open excavations. Silty and clayey soils may become soft and pump if subjected to excessive traffic during time of surface runoff. Ponded water in construction areas should be drained through methods such as trenching, sloping, crowning grades, nightly smooth drum rolling, or installing a French drain system. Additionally, temporary or permanent driveway sections should be constructed if extended wet weather is forecasted.

11. GENERAL COMMENTS

Based on the subsurface conditions encountered during this investigation and available information regarding the proposed structures, the site is adequate for the planned construction. When plans and specifications are complete, and if significant changes are made in the character or location of the proposed development, consultation with Atlas must be arranged as supplementary recommendations may be required. Suitability of subgrade soils and compaction of structural fill materials must be verified by Atlas personnel prior to placement of structural elements. Additionally, monitoring and testing should be performed to verify that suitable materials are used for structural fill and that proper placement and compaction techniques are utilized.

12. REFERENCES

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Appendix I WARRANTY AND LIMITING CONDITIONS

Atlas warrants that findings and conclusions contained herein have been formulated in accordance with generally accepted professional engineering practice in the fields of foundation engineering, soil mechanics, and engineering geology only for the site and project described in this report. These engineering methods have been developed to provide the client with information regarding apparent or potential engineering conditions relating to the site within the scope cited above and are necessarily limited to conditions observed at the time of the site visit and research. Field observations and research reported herein are considered sufficient in detail and scope to form a reasonable basis for the purposes cited above.

Limitations

Refusal was encountered in test pits 2 and 4 because of large boulders.

Exclusive Use

This report was prepared for exclusive use of the property owner(s), at the time of the report, and their retained design consultants ("Client"). Conclusions and recommendations presented in this report are based on the agreed-upon scope of work outlined in this report together with the Contract for Professional Services between the Client and Atlas Technical Consultants ("Consultant"). Use or misuse of this report, or reliance upon findings hereof, by parties other than the Client is at their own risk. Neither Client nor Consultant make representation of warranty to such other parties as to accuracy or completeness of this report or suitability of its use by such other parties for purposes whatsoever, known or unknown, to Client or Consultant. Neither Client nor Consultant shall have liability to indemnify or hold harmless third parties for losses incurred by actual or purported use or misuse of this report. No other warranties are implied or expressed.

Report Recommendations are Limited and Subject to Misinterpretation

There is a distinct possibility that conditions may exist that could not be identified within the scope of the investigation or that were not apparent during our site investigation. Findings of this report are limited to data collected from noted explorations advanced and do not account for unidentified fill zones, unsuitable soil types or conditions, and variability in soil moisture and groundwater conditions. To avoid possible misinterpretations of findings, conclusions, and implications of this report, Atlas should be retained to explain the report contents to other design professionals as well as construction professionals.

Since actual subsurface conditions on the site can only be verified by earthwork, note that construction recommendations are based on general assumptions from selective observations and selective field exploratory sampling. Upon commencement of construction, such conditions may be identified that require corrective actions, and these required corrective actions may impact the project budget. Therefore, construction recommendations in this report should be considered preliminary, and Atlas should be retained to observe actual subsurface conditions during earthwork construction activities to provide additional construction recommendations as needed.

Since geotechnical reports are subject to misinterpretation, **do not** separate the soil logs from the report. Rather, provide a copy of, or authorize for their use, the complete report to other design professionals or contractors. Locations of exploratory sites referenced within this report should be considered approximate locations only. For more accurate locations, services of a professional land surveyor are recommended.

This report is also limited to information available at the time it was prepared. In the event additional information is provided to Atlas following publication of our report, it will be forwarded to the client for evaluation in the form received.

Environmental Concerns

Comments in this report concerning either onsite conditions or observations, including soil appearances and odors, are provided as general information. These comments are not intended to describe, quantify, or evaluate environmental concerns or situations. Since personnel, skills, procedures, standards, and equipment differ, a geotechnical investigation report is not intended to substitute for a geoenvironmental investigation or a Phase II/III Environmental Site Assessment. If environmental services are needed, Atlas can provide, via a separate contract, those personnel who are trained to investigate and delineate soil and water contamination.

Vicinity Map

Figure 1

MAP NOTES:

- Delorme Street Atlas
- Not to Scale

LEGEND

Approximate Site Location

Stor-It McCall Elo
379 Elo Road
McCall, ID

Modified from DeLorme by: GJM
December 16, 2021
Drawing: B213183g

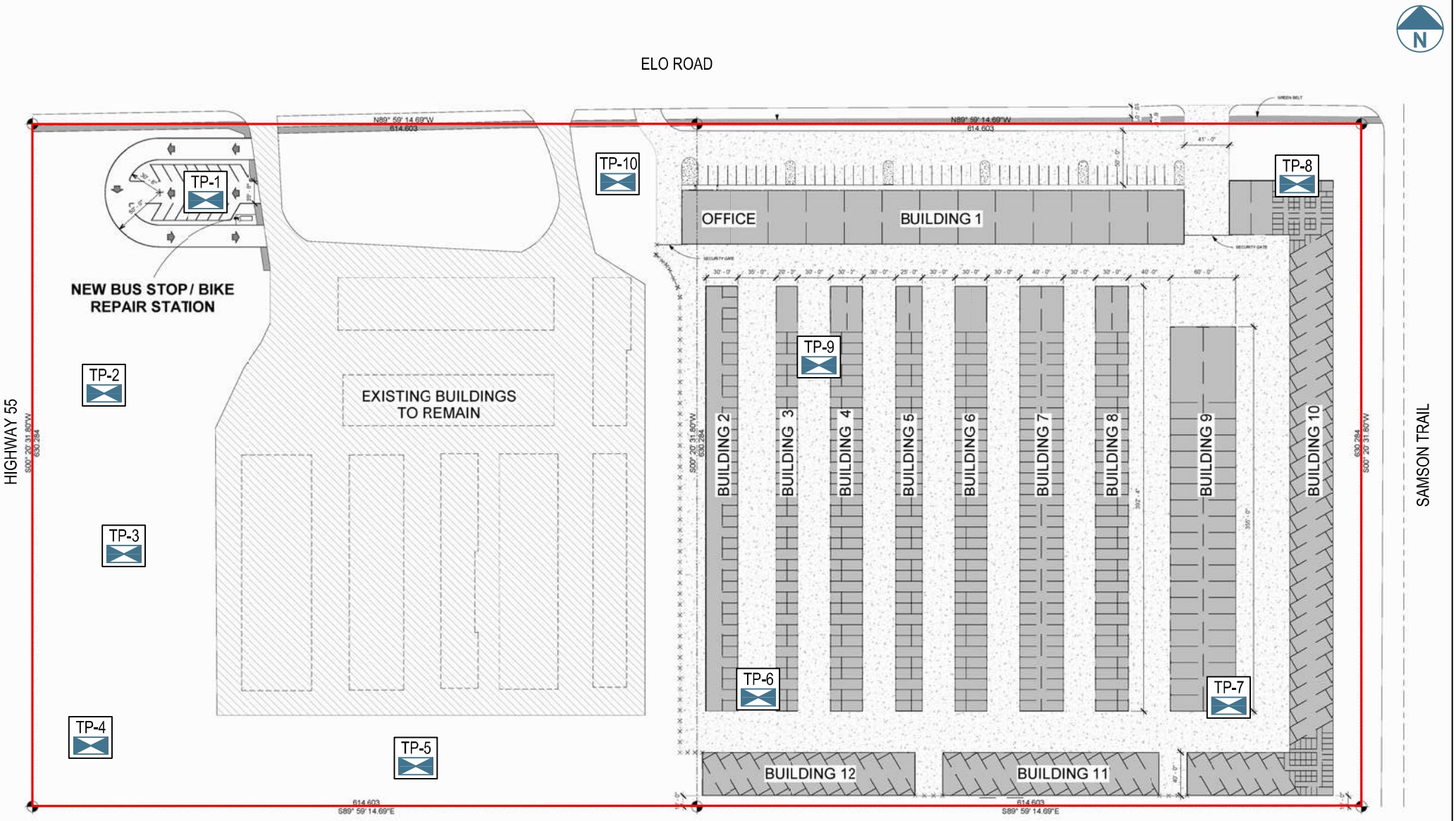
ATLAS

2791 S. Victory View Way
Boise, ID 83709

Phone: (208) 376-4748
Fax: (208) 322-6515
Web: oneatlas.com

Site Map

Figure 2



NOTES:

- Not to Scale

LEGEND

Approximate Site Boundary

Approximate Atlas Test Pit Location

Stor-It McCall Elo
379 Elo Road
McCall, ID

Modified by: GJM
December 17, 2021
Drawing: B213183g

ATLAS
2791 S. Victory View Way
Boise, ID 83709
Phone: (208) 376-4748
Fax: (208) 322-6515
Web: oneatlas.com

Appendix IV GEOTECHNICAL INVESTIGATION TEST PIT LOG

Test Pit Log #: TP-1
Date Advanced: December 1, 2021
Excavated by: Tom Bateman
Logged by: Gavin Marron, EI

Latitude: 44.883077
Longitude: -116.089943
Depth to Water Table: 7.1 feet bgs
Total Depth: 10.1 feet bgs

Depth (feet bgs)	Field Description and USCS Soil and Sediment Classification	Sample Type	Sample Depth (feet bgs)	Qp	Lab Test ID
0.0-6.5	Silty Gravel with Sand Fill (GM-FILL): Brown, slightly moist to moist, medium dense, with fine to coarse-grained sand, fine to coarse gravel, and intermittent 1.5-foot minus boulders. --Plastic debris encountered at 4.2 feet bgs. --Intermittent wood debris encountered from 3.0 to 6.5 feet bgs. --Masonry debris encountered at 5.9 feet bgs.				
6.5-10.1	Silt (ML): Light brown, moist to saturated, medium stiff to stiff, with fine to medium-grained sand.				

Notes: See Site Map for test pit location.

GEOTECHNICAL INVESTIGATION TEST PIT LOG

Test Pit Log #: TP-2
Date Advanced: December 1, 2021
Excavated by: Tom Bateman
Logged by: Gavin Marron, EI

Latitude: 44.882656
Longitude: -116.090273
Depth to Water Table: Not Encountered
Total Depth: 10.2 feet bgs

Depth (feet bgs)	Field Description and USCS Soil and Sediment Classification	USDA Soil Classification and Design Soil Subgroup	Sample Type	Sample Depth (feet bgs)	Qp	Lab Test ID
0.0-3.8	Silty Gravel with Sand Fill (GM-FILL): Brown to light brown, slightly moist to moist, medium dense, with fine to coarse-grained sand and fine to coarse gravel. --Organics encountered to a depth of 0.6 foot bgs.					
3.8-10.2	Silt with Sand (ML): Light brown, moist, very stiff, with fine to medium-grained sand. --Intermittent 1.5-foot minus boulders encountered from 9.0 to 10.2 feet bgs. --Refusal at 10.2 because of large boulders.	Silt Loam B-2	GS	6.5-7.5		A

Notes: See Site Map for test pit location.

Lab Test ID	Sieve Analysis (% Passing)		
	Sand	Silt	Clay
A	19.9	73.7	6.4

GEOTECHNICAL INVESTIGATION TEST PIT LOG

Test Pit Log #: TP-3
Date Advanced: December 1, 2021
Excavated by: Tom Bateman
Logged by: Gavin Marron, EI

Latitude: 44.882214
Longitude: -116.090251
Depth to Water Table: 5.5 feet bgs
Total Depth: 8.0 feet bgs

Depth (feet bgs)	Field Description and USCS Soil and Sediment Classification	Sample Type	Sample Depth (feet bgs)	Qp	Lab Test ID
0.0-2.5	Silty Gravel with Sand Fill (GM-FILL): Brown to light brown, slightly moist, medium dense, with fine to coarse-grained sand, fine to coarse gravel, and 4-inch minus cobbles. --Organics encountered to a depth of 0.6 foot bgs. --Trash debris encountered from 2.0 to 2.5 feet bgs.				
2.5-5.0	Silt (ML): Brown, slightly moist to moist, medium stiff to stiff, with fine-grained sand.				
5.0-8.0	Poorly Graded Sand with Gravel (SP): Light brown, moist to saturated, medium dense, with fine to coarse-grained sand and fine to coarse gravel.				

Notes: See Site Map for test pit location.

GEOTECHNICAL INVESTIGATION TEST PIT LOG

Test Pit Log #: TP-4
Date Advanced: December 1, 2021
Excavated by: Tom Bateman
Logged by: Gavin Marron, EI

Latitude: 44.881653
Longitude: -116.090202
Depth to Water Table: Not Encountered
Total Depth: 9.0 feet bgs

Depth (feet bgs)	Field Description and USCS Soil and Sediment Classification	Sample Type	Sample Depth (feet bgs)	Qp	Lab Test ID
0.0-6.0	Silt (ML): Dark brown to gray-brown, slightly moist to moist, medium stiff to very stiff, with fine-grained sand. --Organics encountered to a depth of 1.0 foot bgs.	GS	3.5-4.0		B
6.0-9.0	Silty Gravel with Sand (GM): Gray-brown, slightly moist, dense to very dense, with fine to coarse-grained sand, fine to coarse gravel, and intermittent 1.5-foot minus boulders. --Refusal at 9.0 feet bgs because of large boulders.				

Notes: See Site Map for test pit location.

Lab Test ID	Moisture (%)	LL	PI	Sieve Analysis (% Passing)				
				#4	#10	#40	#100	#200
B	26.6	NP	NP	100	99	96	93	89.2

GEOTECHNICAL INVESTIGATION TEST PIT LOG

Test Pit Log #: TP-5
Date Advanced: December 1, 2021
Excavated by: Tom Bateman
Logged by: Gavin Marron, EI

Latitude: 44.881611
Longitude: -116.089035
Depth to Water Table: Not Encountered
Total Depth: 9.0 feet bgs

Depth (feet bgs)	Field Description and USCS Soil and Sediment Classification	Sample Type	Sample Depth (feet bgs)	Qp	Lab Test ID
0.0-1.5	Silty Gravel with Sand Fill (GM-FILL): Brown to dark brown, slightly moist, medium dense, with fine to coarse-grained sand, fine to coarse gravel, and 4-inch minus cobbles.				
1.5-4.5	Sandy Silt (ML): Dark brown, slightly moist to moist, medium stiff to very stiff, with fine to medium-grained sand.				
4.5-9.0	Silty Sand (SM): Brown, moist, medium dense, with fine to coarse-grained sand.				

Notes: See Site Map for test pit location.

GEOTECHNICAL INVESTIGATION TEST PIT LOG

Test Pit Log #: TP-6
Date Advanced: December 1, 2021
Excavated by: Tom Bateman
Logged by: Gavin Marron, EI

Latitude: 44.881751
Longitude: -116.087899
Depth to Water Table: Not Encountered
Total Depth: 8.5 feet bgs

Depth (feet bgs)	Field Description and USCS Soil and Sediment Classification	Sample Type	Sample Depth (feet bgs)	Qp	Lab Test ID
0.0-3.4	Sandy Silt (ML): Dark brown to brown, slightly moist to moist, medium stiff to very stiff, with fine to medium-grained sand. --Organics encountered to a depth of 2.0 feet bgs.	GS	2.5-3.0		C
3.4-8.5	Poorly Graded Gravel with Sand (GP): Light brown, dry to slightly moist, medium dense to dense, with fine to coarse-grained sand, fine to coarse gravel, and 4-inch minus cobbles.				

Notes: See Site Map for test pit location.

Lab Test ID	Moisture (%)	LL	PI	Sieve Analysis (% Passing)				
				#4	#10	#40	#100	#200
C	19.8	32	8	96	94	81	68	61.9

GEOTECHNICAL INVESTIGATION TEST PIT LOG

Test Pit Log #: TP-7
Date Advanced: December 1, 2021
Excavated by: Tom Bateman
Logged by: Gavin Marron, EI

Latitude: 44.881759
Longitude: -116.086099
Depth to Water Table: Not Encountered
Total Depth: 7.0 feet bgs

Depth (feet bgs)	Field Description and USCS Soil and Sediment Classification	Sample Type	Sample Depth (feet bgs)	Qp	Lab Test ID
0.0-1.8	Sandy Lean Clay (CL): Dark brown, slightly moist, stiff, with fine to medium-grained sand. --Organics encountered throughout.				
1.8-5.5	Silty Sand (SM): Brown, slightly moist, medium dense, with fine to coarse-grained sand.				
5.5-7.0	Poorly Graded Gravel with Sand (GP): Light brown, slightly moist, dense, with fine to coarse-grained sand, fine to coarse gravel, and 4-inch minus cobbles.				

Notes: See Site Map for test pit location.

GEOTECHNICAL INVESTIGATION TEST PIT LOG

Test Pit Log #: TP-8
Date Advanced: December 1, 2021
Excavated by: Tom Bateman
Logged by: Gavin Marron, EI

Latitude: 44.883153
Longitude: -116.085955
Depth to Water Table: Not Encountered
Total Depth: 7.5 feet bgs

Depth (feet bgs)	Field Description and USCS Soil and Sediment Classification	Sample Type	Sample Depth (feet bgs)	Qp	Lab Test ID
0.0-1.4	Sandy Lean Clay (CL): Dark brown, slightly moist, stiff, with fine to medium-grained sand. --Organics encountered throughout.				
1.4-2.8	Silty Sand (SM): Brown, slightly moist, medium dense, with fine to coarse-grained sand.				
2.8-7.5	Poorly Graded Gravel with Sand (GP): Light brown, slightly moist, dense, with fine to coarse-grained sand, fine to coarse gravel, and 4-inch minus cobbles.				

Notes: See Site Map for test pit location.

GEOTECHNICAL INVESTIGATION TEST PIT LOG

Test Pit Log #: TP-9
Date Advanced: December 1, 2021
Excavated by: Tom Bateman
Logged by: Gavin Marron, EI

Latitude: 44.882720
Longitude: -116.087641
Depth to Water Table: Not Encountered
Total Depth: 9.0 feet bgs

Depth (feet bgs)	Field Description and USCS Soil and Sediment Classification	Sample Type	Sample Depth (feet bgs)	Qp	Lab Test ID
0.0-2.3	Sandy Lean Clay (CL): Dark brown, slightly moist, stiff, with fine to medium-grained sand. --Organics encountered throughout.				
2.3-3.5	Silty Sand (SM): Brown, slightly moist, medium dense, with fine to coarse-grained sand.				
3.5-9.0	Poorly Graded Gravel with Sand (GP): Light brown, slightly moist, dense, with fine to coarse-grained sand, fine to coarse gravel, and 4-inch minus cobbles.				

Notes: See Site Map for test pit location.

GEOTECHNICAL INVESTIGATION TEST PIT LOG

Test Pit Log #: TP-10
Date Advanced: December 1, 2021
Excavated by: Tom Bateman
Logged by: Gavin Marron, EI

Latitude: 44.883123
Longitude: -116.088379
Depth to Water Table: 5.5 feet bgs
Total Depth: 6.5 feet bgs

Depth (feet bgs)	Field Description and USCS Soil and Sediment Classification	Sample Type	Sample Depth (feet bgs)	Qp	Lab Test ID
0.0-2.1	Poorly Graded Gravel with Sand (GP): Light brown, slightly moist, medium dense, with fine to coarse-grained sand, fine to coarse gravel, and 4-inch minus cobbles.				
2.1-4.5	Silty Sand (SM): Light brown, slightly moist to moist, medium dense, with fine to coarse-grained sand and intermittent fine to coarse gravel.				
4.5-6.5	Silt (ML): Gray, moist to saturated, stiff to very stiff, with fine-grained sand.				

Notes: See Site Map for test pit location.

Appendix V GEOTECHNICAL GENERAL NOTES

Unified Soil Classification System			
Major Divisions		**Symbol**	**Soil Descriptions**
Coarse-Grained Soils < 50% passes No.200 sieve	Gravel & Gravelly Soils < 50% coarse	GW	Well-graded gravels; gravel/sand mixtures with little or no fines
		GP	Poorly-graded gravels; gravel/sand mixtures with little or no fines
		GM	Silty gravels; poorly-graded gravel/sand/silt mixtures
		GC	Clayey gravels; poorly-graded gravel/sand/clay mixtures
	Sand & Sandy Soils > 50% coarse fraction	SW	Well-graded sands; gravelly sands with little or no fines
		SP	Poorly-graded sands; gravelly sands with little or no fines
		SM	Silty sands; poorly-graded sand/gravel/silt mixtures
		SC	Clayey sands; poorly-graded sand/gravel/clay mixtures
Fine-Grained Soils > 50% passes No.200 sieve	Silts & Clays LL < 50	ML	Inorganic silts; sandy, gravelly or clayey silts
		CL	Lean clays; inorganic, gravelly, sandy, or silty, low to medium-plasticity clays
		OL	Organic, low-plasticity clays and silts
	Silts & Clays LL > 50	MH	Inorganic, elastic silts; sandy, gravelly or clayey elastic silts
		CH	Fat clays; high-plasticity, inorganic clays
		OH	Organic, medium to high-plasticity clays and silts
Highly Organic Soils		PT	Peat, humus, hydric soils with high organic content

Relative Density and Consistency Classification	
Coarse-Grained Soils	**SPT Blow Counts (N)**
Very Loose:	< 4
Loose:	4-10
Medium Dense:	10-30
Dense:	30-50
Very Dense:	> 50
Fine-Grained Soils	**SPT Blow Counts (N)**
Very Soft:	< 2
Soft:	2-4
Medium Stiff:	4-8
Stiff:	8-15
Very Stiff:	15-30
Hard:	> 30

Moisture Content and Cementation Classification	
Description	**Field Test**
Dry	Absence of moisture, dry to touch
Slightly Moist	Damp, but no visible moisture
Moist	Visible moisture
Wet	Visible free water
Saturated	Soil is usually below water table
Description	**Field Test**
Weak	Crumbles or breaks with handling or slight finger pressure
Moderate	Crumbles or breaks with considerable finger pressure
Strong	Will not crumble or break with finger pressure

Particle Size	
Boulders:	> 12 in.
Cobbles:	12 to 3 in.
Gravel:	3 in. to 5 mm
Coarse-Grained Sand:	5 to 0.6 mm
Medium-Grained Sand:	0.6 to 0.2 mm
Fine-Grained Sand:	0.2 to 0.075 mm
Silts:	0.075 to 0.005 mm
Clays:	< 0.005 mm

Acronym List	
GS	grab sample
LL	Liquid Limit
M	moisture content
NP	non-plastic
PI	Plasticity Index
Q_p	penetrometer value, unconfined compressive strength, tsf
V	vane value, ultimate shearing strength, tsf

Appendix VI AASHTO PAVEMENT DESIGN

Pavement Section Design Location: Stor-It McCall Elo, Light Duty

Average Daily Traffic Count:	250	All Lanes & Both Directions		
Design Life:	20	Years		
Percent of Traffic in Design Lane:	50%			
Terminal Seviceability Index (Pt):	2.5			
Level of Reliability:	95			
Subgrade CBR Value:	4		**Subgrade Mr:**	6,000

Calculation of Design-18 kip ESALs

	Daily Traffic	Growth Rate	Load Factors	Design ESALs
Passenger Cars:	69	2.0%	0.0008	490
Buses:	0	2.0%	0.6806	0
Panel & Pickup Trucks:	53	2.0%	0.0122	5,734
2-Axle, 6-Tire Trucks:	2	2.0%	0.1890	3,352
Emergency Vehicles:	1.0	2.0%	4.4800	39,731
Dump Trucks:	0	2.0%	3.6300	0
Tractor Semi Trailer Trucks:	0	2.0%	2.3719	0
Double Trailer Trucks	0	2.0%	2.3187	0
Heavy Tractor Trailer Combo Trucks:	0	2.0%	2.9760	0
Average Daily Traffic in Design Lane:	125			

Total Design Life 18-kip ESALs:	49,307
Actual Log (ESALs):	4.693
Trial SN:	2.50
Trial Log (ESALs):	4.749
Pavement Section Design SN:	2.61

	Design Depth Inches	**Structural Coefficient**	**Drainage Coefficient**
Asphaltic Concrete:	2.50	0.42	n/a
Asphalt-Treated Base:	0.00	0.25	n/a
Cement-Treated Base:	0.00	0.17	n/a
Crushed Aggregate Base:	4.00	0.14	1.0
Subbase:	10.00	0.10	1.0
Special Aggregate Subgrade:	0.00	0.09	0.9

AASHTO PAVEMENT DESIGN

Pavement Section Design Location: Stor-It McCall Elo, Heavy Duty

Average Daily Traffic Count:	250	All Lanes & Both Directions		
Design Life:	20	Years		
Percent of Traffic in Design Lane:	50%			
Terminal Seviceability Index (Pt):	2.5			
Level of Reliability:	95			
Subgrade CBR Value:	4		**Subgrade Mr:**	6,000

Calculation of Design-18 kip ESALs

	Daily Traffic	Growth Rate	Load Factors	Design ESALs
Passenger Cars:	49	2.0%	0.0008	348
Buses:	1	2.0%	0.6806	6,036
Panel & Pickup Trucks:	55	2.0%	0.0122	5,951
2-Axle, 6-Tire Trucks:	15	2.0%	0.1890	25,142
Emergency Vehicles:	1.0	2.0%	4.4800	39,731
Dump Trucks:	1	2.0%	3.6300	32,193
Tractor Semi Trailer Trucks:	3	2.0%	2.3719	63,106
Double Trailer Trucks	0	2.0%	2.3187	0
Heavy Tractor Trailer Combo Trucks:	0	2.0%	2.9760	0
Average Daily Traffic in Design Lane:	125			

Total Design Life 18-kip ESALs:	172,506
Actual Log (ESALs):	5.237
Trial SN:	3.02
Trial Log (ESALs):	5.247
Pavement Section Design SN:	3.02

	Design Depth Inches	**Structural Coefficient**	**Drainage Coefficient**
Asphaltic Concrete:	3.00	0.42	n/a
Asphalt-Treated Base:	0.00	0.25	n/a
Cement-Treated Base:	0.00	0.17	n/a
Crushed Aggregate Base:	4.00	0.14	1.0
Subbase:	12.00	0.10	1.0
Special Aggregate Subgrade:	0.00	0.09	0.9

Important Information about This

Geotechnical-Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

While you cannot eliminate all such risks, you can manage them. The following information is provided to help.

The Geoprofessional Business Association (GBA) has prepared this advisory to help you – assumedly a client representative – interpret and apply this geotechnical-engineering report as effectively as possible. In that way, you can benefit from a lowered exposure to problems associated with subsurface conditions at project sites and development of them that, for decades, have been a principal cause of construction delays, cost overruns, claims, and disputes. If you have questions or want more information about any of the issues discussed herein, contact your GBA-member geotechnical engineer. Active engagement in GBA exposes geotechnical engineers to a wide array of risk-confrontation techniques that can be of genuine benefit for everyone involved with a construction project.

Understand the Geotechnical-Engineering Services Provided for this Report

Geotechnical-engineering services typically include the planning, collection, interpretation, and analysis of exploratory data from widely spaced borings and/or test pits. Field data are combined with results from laboratory tests of soil and rock samples obtained from field exploration (if applicable), observations made during site reconnaissance, and historical information to form one or more models of the expected subsurface conditions beneath the site. Local geology and alterations of the site surface and subsurface by previous and proposed construction are also important considerations. Geotechnical engineers apply their engineering training, experience, and judgment to adapt the requirements of the prospective project to the subsurface model(s). Estimates are made of the subsurface conditions that will likely be exposed during construction as well as the expected performance of foundations and other structures being planned and/or affected by construction activities.

The culmination of these geotechnical-engineering services is typically a geotechnical-engineering report providing the data obtained, a discussion of the subsurface model(s), the engineering and geologic engineering assessments and analyses made, and the recommendations developed to satisfy the given requirements of the project. These reports may be titled investigations, explorations, studies, assessments, or evaluations. Regardless of the title used, the geotechnical-engineering report is an engineering interpretation of the subsurface conditions within the context of the project and does not represent a close examination, systematic inquiry, or thorough investigation of all site and subsurface conditions.

Geotechnical-Engineering Services are Performed for Specific Purposes, Persons, and Projects, and At Specific Times

Geotechnical engineers structure their services to meet the specific needs, goals, and risk management preferences of their clients. A geotechnical-engineering study conducted for a given civil engineer will not likely meet the needs of a civil-works constructor or even a different civil engineer. Because each geotechnical-engineering study is unique, each geotechnical-engineering report is unique, prepared *solely* for the client.

Likewise, geotechnical-engineering services are performed for a specific project and purpose. For example, it is unlikely that a geotechnical-engineering study for a refrigerated warehouse will be the same as one prepared for a parking garage; and a few borings drilled during a preliminary study to evaluate site feasibility will not be adequate to develop geotechnical design recommendations for the project.

Do not rely on this report if your geotechnical engineer prepared it:

- for a different client;
- for a different project or purpose;
- for a different site (that may or may not include all or a portion of the original site); or
- before important events occurred at the site or adjacent to it; e.g., man-made events like construction or environmental remediation, or natural events like floods, droughts, earthquakes, or groundwater fluctuations.

Note, too, the reliability of a geotechnical-engineering report can be affected by the passage of time, because of factors like changed subsurface conditions; new or modified codes, standards, or regulations; or new techniques or tools. *If you are the least bit uncertain* about the continued reliability of this report, contact your geotechnical engineer before applying the recommendations in it. A minor amount of additional testing or analysis after the passage of time – if any is required at all – could prevent major problems.

Read this Report in Full

Costly problems have occurred because those relying on a geotechnical-engineering report did not read the report in its entirety. Do not rely on an executive summary. Do not read selective elements only. *Read and refer to the report in full.*

You Need to Inform Your Geotechnical Engineer About Change

Your geotechnical engineer considered unique, project-specific factors when developing the scope of study behind this report and developing the confirmation-dependent recommendations the report conveys. Typical changes that could erode the reliability of this report include those that affect:

- the site's size or shape;
- the elevation, configuration, location, orientation, function or weight of the proposed structure and the desired performance criteria;
- the composition of the design team; or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project or site changes – even minor ones – and request an assessment of their impact. *The geotechnical engineer who prepared this report cannot accept*

responsibility or liability for problems that arise because the geotechnical engineer was not informed about developments the engineer otherwise would have considered.

Most of the "Findings" Related in This Report Are Professional Opinions

Before construction begins, geotechnical engineers explore a site's subsurface using various sampling and testing procedures. *Geotechnical engineers can observe actual subsurface conditions only at those specific locations where sampling and testing is performed.* The data derived from that sampling and testing were reviewed by your geotechnical engineer, who then applied professional judgement to form opinions about subsurface conditions throughout the site. Actual sitewide-subsurface conditions may differ – maybe significantly – from those indicated in this report. Confront that risk by retaining your geotechnical engineer to serve on the design team through project completion to obtain informed guidance quickly, whenever needed.

This Report's Recommendations Are Confirmation-Dependent

The recommendations included in this report – including any options or alternatives – are confirmation-dependent. In other words, they are not final, because the geotechnical engineer who developed them relied heavily on judgement and opinion to do so. Your geotechnical engineer can finalize the recommendations *only after observing actual subsurface conditions* exposed during construction. If through observation your geotechnical engineer confirms that the conditions assumed to exist actually do exist, the recommendations can be relied upon, assuming no other changes have occurred. *The geotechnical engineer who prepared this report cannot assume responsibility or liability for confirmation-dependent recommendations if you fail to retain that engineer to perform construction observation.*

This Report Could Be Misinterpreted

Other design professionals' misinterpretation of geotechnical-engineering reports has resulted in costly problems. Confront that risk by having your geotechnical engineer serve as a continuing member of the design team, to:

- confer with other design-team members;
- help develop specifications;
- review pertinent elements of other design professionals' plans and specifications; and
- be available whenever geotechnical-engineering guidance is needed.

You should also confront the risk of constructors misinterpreting this report. Do so by retaining your geotechnical engineer to participate in prebid and preconstruction conferences and to perform construction-phase observations.

Give Constructors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can shift unanticipated-subsurface-conditions liability to constructors by limiting the information they provide for bid preparation. To help prevent the costly, contentious problems this practice has caused, include the complete geotechnical-engineering report, along with any attachments or appendices, with your contract documents, *but be certain to note conspicuously that you've included the material for information purposes only.* To avoid misunderstanding, you may also want to note that "informational purposes" means constructors have no right to rely on the interpretations, opinions, conclusions, or recommendations in the report. Be certain that constructors know they may learn about specific project requirements, including options selected from the report, *only* from the design drawings and specifications. Remind constructors that they may perform their own studies if they want to, and *be sure to allow enough time* to permit them to do so. Only then might you be in a position to give constructors the information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions. Conducting prebid and preconstruction conferences can also be valuable in this respect.

Read Responsibility Provisions Closely

Some client representatives, design professionals, and constructors do not realize that geotechnical engineering is far less exact than other engineering disciplines. This happens in part because soil and rock on project sites are typically heterogeneous and not manufactured materials with well-defined engineering properties like steel and concrete. That lack of understanding has nurtured unrealistic expectations that have resulted in disappointments, delays, cost overruns, claims, and disputes. To confront that risk, geotechnical engineers commonly include explanatory provisions in their reports. Sometimes labeled "limitations," many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely.* Ask questions. Your geotechnical engineer should respond fully and frankly.

Geoenvironmental Concerns Are Not Covered

The personnel, equipment, and techniques used to perform an environmental study – e.g., a "phase-one" or "phase-two" environmental site assessment – differ significantly from those used to perform a geotechnical-engineering study. For that reason, a geotechnical-engineering report does not usually provide environmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated subsurface environmental problems have led to project failures.* If you have not obtained your own environmental information about the project site, ask your geotechnical consultant for a recommendation on how to find environmental risk-management guidance.

Obtain Professional Assistance to Deal with Moisture Infiltration and Mold

While your geotechnical engineer may have addressed groundwater, water infiltration, or similar issues in this report, the engineer's services were not designed, conducted, or intended to prevent migration of moisture – including water vapor – from the soil through building slabs and walls and into the building interior, where it can cause mold growth and material-performance deficiencies. Accordingly, ***proper implementation of the geotechnical engineer's recommendations will not of itself be sufficient to prevent moisture infiltration. Confront the risk of moisture infiltration*** by including building-envelope or mold specialists on the design team. ***Geotechnical engineers are not building-envelope or mold specialists.***

GEOPROFESSIONAL BUSINESS ASSOCIATION

Telephone: 301/565-2733
e-mail: info@geoprofessional.org www.geoprofessional.org

STORMWATER APPLICATION
City of McCall

Fill in all information. Submit one copy of signed application and three copies of Stormwater Management Plan/Report to the City Engineer.

1. Project Name: Stor-It Self Storage Expansion
   Location: 379 Elo Road, McCall, ID 83638

2. Owner's Name: C.W. Hurless
   Street: _____ City: _____
   State: _____ Zip Code: _____ Phone: _____

3. Project Description: This project is an eastward expansion of the existing Stor-It Self Storage Facility.

   a. Total property area, in acres. 18.06 acres
   b. Proposed impervious surface (asphalt, rooftop, concrete, sidewalk, etc.) in square feet.
      Roof: 220,849-sf
      Concrete & Asphalt: 249,163-sf
   c. Describe existing vegetation present on site. There is an exisitng storage facility surrounded by shrubs and trees.
   d. Start date of construction. TBD
   e. Estimated length of time to complete improvements. TBD

4. Stormwater Management Plan/Report attached? Yes X No ____

5. Circle the section of the Stormwater Management Plan/Report Checklist which are applicable to project.

   A X B X C X D X E X F X

6. Party responsible for operation and maintenance of project, including maintenance of temporary and permanent Best Management Practices:

   TBD
   Name Title Signature Date

   Address Daytime Phone After Hours Phone

Do not write below this line.

This Stormwater Management Plan/Report is:

Approved: _____

Not Approved: _____

Approved, with conditions: _____

By The City of McCall

Representative Title Signature Date

Stor-It Self Storage
McCall Storage Facility Expansion

379 Elo Road, McCall, Idaho

Storm Water Management & Engineering Drainage Report

Developer
Avest LP | Stor-It Self Storage
Boise, ID
C.W. Hurless, Construction Development Head
(208)867-8579
cw@stor-it.com

Engineer
The Land Group, Inc.
462 East Shore Drive, Ste. 100
Eagle, Idaho 83616
Contact: James W. Gute, P.E.
Ph: 208.939.4041

June 26, 2024

TLG Project No. 122091

Report Purpose

The following report is prepared in accordance with the City of McCall requirements for development and proposed storm drainage systems. This storm drain study addresses the requirements of McCall Resolution 16-10, and the referenced Drainage Management Guidelines (DMG) of January 1997. The scope of this report addresses improvements proposed in the Stor-It Self Storage Facility Expansion.

Project & Site Description

Eleven (11) new storage buildings and corresponding pavement access roads east of the existing facility are included in the Stor-It Self Storage Facility expansion. A fire station and corresponding parking and landscaping will also be incorporated on the northwest corner of the property (northeast of an existing infiltration basin). The existing, private infiltration basin is located in the northwest corner of the property. The runoff from the entire site currently drains to this existing infiltration basin and will continue to do so post-development.

Storm drain improvements for the proposed project are designed in accordance with currently adopted standards of the City of McCall and the Idaho Department of Environmental Quality.

The proposed impervious surface will exceed 15,000-sf. Under DMG requirements, the final storm drain management plan for a project of this size must incorporate all elements of the DMG (Sections A, B, C, D, E and F of the Stormwater Management Plan Checklist). Therefore, this report addresses the following elements:

A. Basin Characteristics
B. Erosion & Sediment Control
C. Conveyance Systems
D. First Flush Storm Treatment
E. Permanent BMP's
F. Operation & Maintenance

A. Basin Characteristics

1. Project Site

a.	Total site area:	18.06 acres
b.	Development area:	6.96 acres
c.	Development density:	1.1 bldg/acre
d.	Area of streets, sidewalks, and driveways:	5.72 acres
e.	Estimated roof area:	5.07 acres
f.	Total impervious area:	10.79 acres

2. Pre-development vs Post-Development

Pre-Development:

The current project site includes eight (8) storage buildings, asphalt drive aisles, and a private infiltration basin. A pre-development drainage basin map can be found in Appendix A.

a. Percent Impervious: 21%
b. Drainage Length: ~1,250-ft
c. Average slope of the drainage: ~2%
d. Wetlands: No

Post-Development:

Eleven (11) new storage buildings and corresponding pavement access roads east of the existing facility are included in the Stor-It Self Storage Facility expansion. A fire station and corresponding parking and landscaping will also be incorporated on the northwest corner of the property. The existing, private infiltration basin will retain the entire site's runoff from the 100-yr storm (See Section C for more information). A post-development drainage basin map can be found in Appendix A.

a. Percent Impervious: 60%
b. Drainage Length: ~1,300-ft
c. Average slope of the drainage: ~2%
d. Wetlands: No

3. Existing Drainage Facilities

Currently, the runoff from the entire site drains to an existing, private infiltration basin in the northwest corner of the site. Post-development, via valley gutters and sheet flow, all runoff from the impervious asphalt and concrete areas will be directed to sand and grease traps for treatment. From there, the storm water will be routed to the existing, private infiltration basin via storm drain pipes that will daylight at the bottom of the infiltration basin. See the information below and attached Exhibit 1 for more information on the exiting drainage facilities.

a. Location of facilities: NW corner of site
b. Type of facilities: Private infiltration basin
c. Size of facilities: 44,280-sf (top of infiltration basin)
d. Capacity of facilities: 76,653-cf

B. Erosion and Sediment Control

Temporary erosion and sediment control provisions are addressed by the Stormwater Pollution Prevention Plan (SWPPP) which will be incorporated within the construction documents. The SWPPP will provide required Erosion & Sediment Control facilities to be implemented during construction, which

have been selected by a certified SWPPP plan designer from the catalog of Best Management Practices (BMPs) maintained by the Idaho Department of Environmental Quality.

Permanent stormwater BMPs to manage erosion, sediment and other pollutant transport in the post-construction stormwater flows are integrated within the project design. As shown on the construction plans, disturbed slope areas will be landscaped and/or re-seeded for soil stabilization. The infiltration basin will retain all runoff from the site which will include the 2-yr/24-hr storm event to provide first-flush, stormwater detention of the water quality storm event (see Section D below for additional information).

C. Conveyance and Detention Systems

All stormwater runoff from the project site will be retained on-site in the existing, private infiltration basin. The site is greater than 10-acres. Therefore, the SCS Curve Number Method for the post-development 100-yr, 24-hr design storm was utilized to determine the site runoff volume as presented in Appendix B. The runoff volume from the entire site (existing and proposed) and the volume provided by the existing infiltration basin are as follows:

Post-Development	*Volume (cf)*
100-yr, 24-hr Storm Runoff Volume	75,015-cf
Existing infiltration basin Volume Provided	76,653-cf

Per the above table, the infiltration basin capacity exceeds the volume required to meet the 100-yr, 24-hr storm runoff volume. The 100-yr storm was used to be conservative and to show that the existing infiltration basin far exceeds McCall City requirements to "detain, onsite, the increase in runoff that is estimated will be caused by the proposed project for the ***ten-year storm***" (McCall Drainage Management Guidelines page 11-2). It should be noted that this volume also allows for 1-ft of freeboard.

Conveyance systems were designed for the 10-yr design storm per Table 11-1 of the McCall Drainage Management Guidelines. Where provided, flow through sand and grease traps were designed to not exceed 0.5-ft/sec for the 10-year conveyance design storm. The rational method was used because the drainage areas that the sand and grease traps serve are less than 10-acres. See Appendix B for the Sand and Grease Trap flow velocity calculations and Exhibit 3 for the sand and grease trap treatment areas.

D. First Flush Storm Treatment

As required by the DMG, the project must provide stormwater treatment and/or detention for the 2-yr/24-hr storm event[1]. As described in Section C, the sand and grease traps were designed to not exceed

[1] Per DMG pg. I-3 for projects with impervious surfaces 5,000-sf or greater, and DMG pg. II-2.

0.5-ft/sec for the 10-year storm, and the existing infiltration basin capacity exceeds what would be required to detain the runoff from the 100-yr, 24-hr storm. Therefore, the proposed system meets the First Flush Storm Treatment requirements.

E. Permanent BMPs

The proposed stormwater system incorporates permanent BMPs to control and reduce pollutant transport. Incorporated BMPs include:

- Operational controls such as site maintenance to keep the project site in a generally tidy condition to reduce fugitive dust or sediment that could be transported by stormwater.
- Industrial controls such as Erosion & Sediment Control or SWPPP plans to accompany future site construction activities which will address construction debris, mud-tracking, portable restrooms and other common pollutant sources.
- Vegetative groundcover and seeding to stabilize slopes and control erosion.
- Permanent infiltration basin to detain all runoff from the site.

F. Operation & Maintenance

Operation and Maintenance instructions will be prepared for the proposed stormwater system. Detailed instructions and schedules for the routine, regular maintenance required to preserve the long-term function of the storm drain systems will be provided to the responsible party. Instructions will also be provided for any special maintenance required following a large runoff event.

Appendix A

Pre- and Post-Development Storm Drain Analysis

Exhibit Ex 1 – Pre-Development Map

Exhibit Ex 2 – Post-Development Map

Exhibit Ex 3 – SGT Treatment Areas

Legend:

PERVIOUS AREA

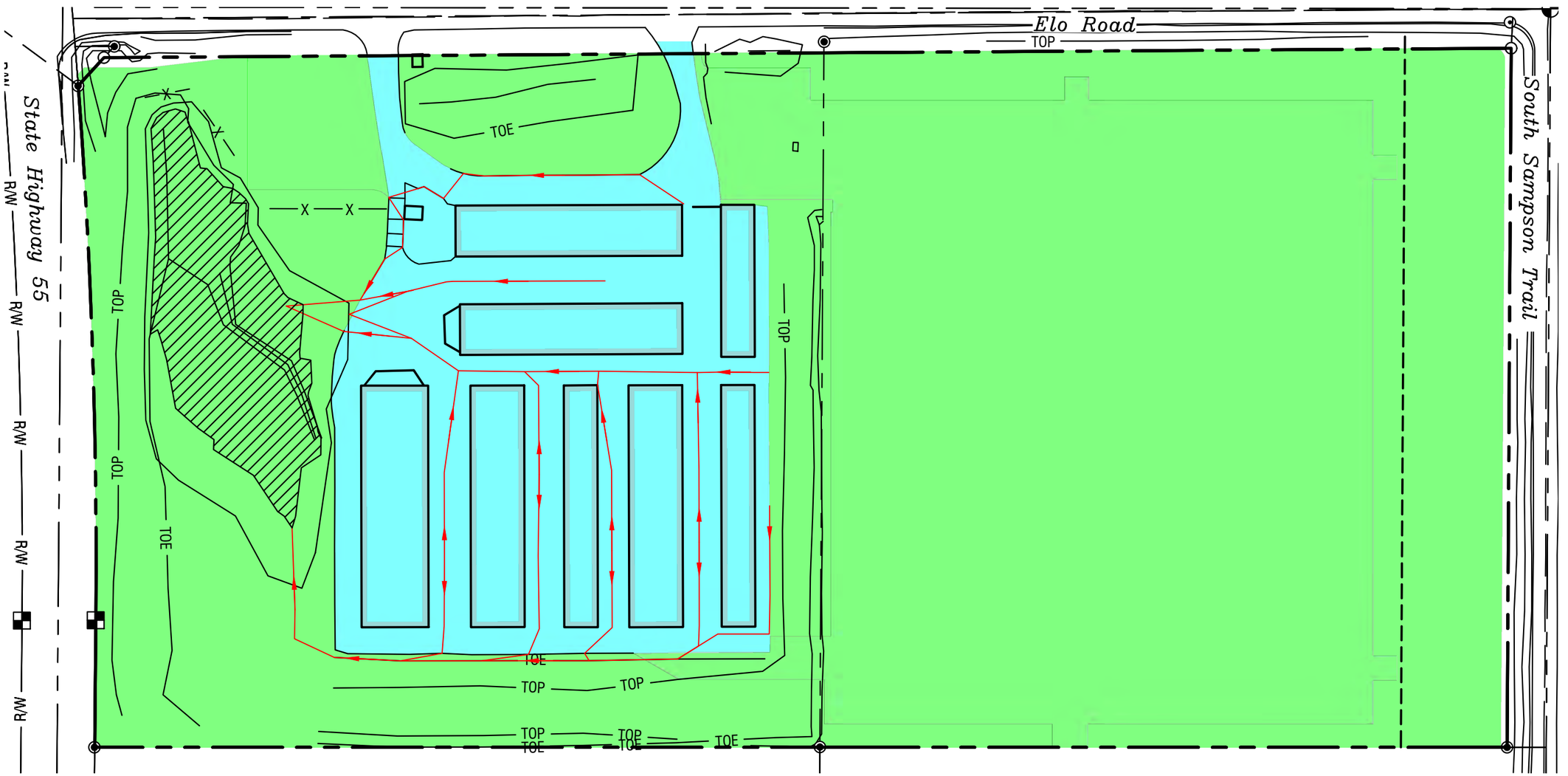
IMPERVIOUS AREA

SWALE INUNDATION AREA

RUNOFF FLOWLINE

Pre-Development:

TOTAL AREA =	786,694-SF	(18.06-AC)
IMPERVIOUS AREA =	166,601-SF	(3.82-AC)
PERVIOUS AREA =	620,093-SF	(14.24-AC)



0 100' 200'

Pre-Development

Horizontal Scale: 1" = 100'

THE LAND GROUP

Drainage Basin Map
Stor-It Self Storage Facility Expansion

379 Elo Road
McCall, ID 83638

Revisions

1. 1

Project No.: 122091
Date of Issuance: 08.21.2023

Pre-Development

Ex. 1

File Location: g:\2022\122091\cad\calcs and reports\storm\122091 drainage area map.dwg
Last Plotted By: dale rasley
Date Plotted: Monday, August 21 2023 at 10:26 AM

Legend:

PERVIOUS AREA

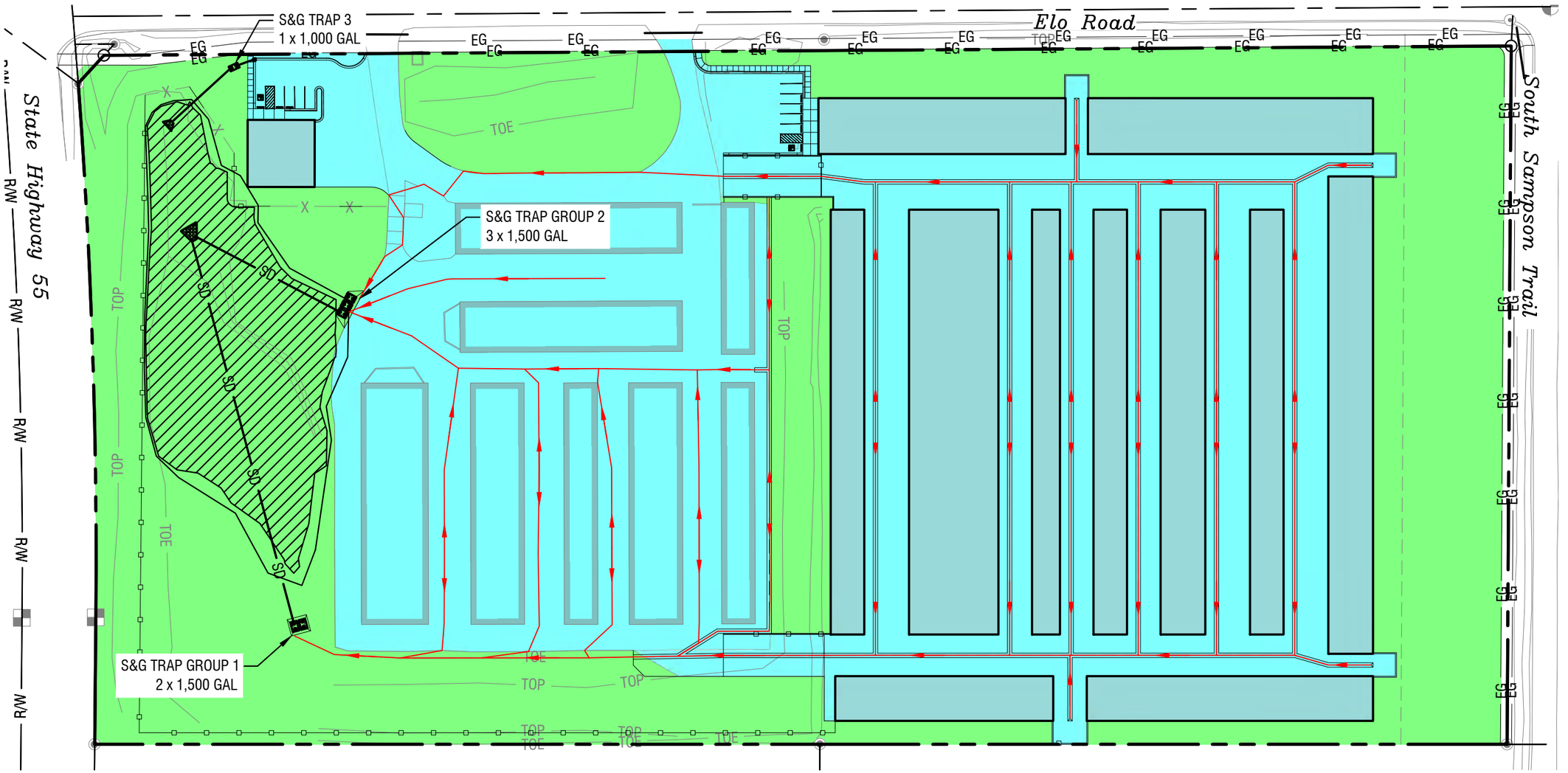
IMPERVIOUS AREA

SWALE INUNDATION AREA

RUNOFF FLOWLINE

Post-Development:

TOTAL AREA =	786,694-SF	(18.06-AC)
IMPERVIOUS AREA =	469,942-SF	(7.27-AC)
PERVIOUS AREA =	316,752-SF	(10.79-AC)



Post-Development

Horizontal Scale: 1" = 100'

0 100' 200'

THE LAND GROUP

Drainage Basin Map
Stor-It Self Storage Facility Expansion

379 Elo Road
McCall, ID 83638

Revisions	
1.	

Project No.: 122091
Date of Issuance: 08.21.2023

Post-Development

Ex. 2

File Location: g:\2022\122091\cad\calcs and reports\storm\122091 drainage area map.dwg
Last Plotted By: dale rasley
Date Plotted: Monday, August 21 2023 at 10:29 AM

Legend:

SAND AND GREASE TRAP GROUP 1 TREATMENT AREA

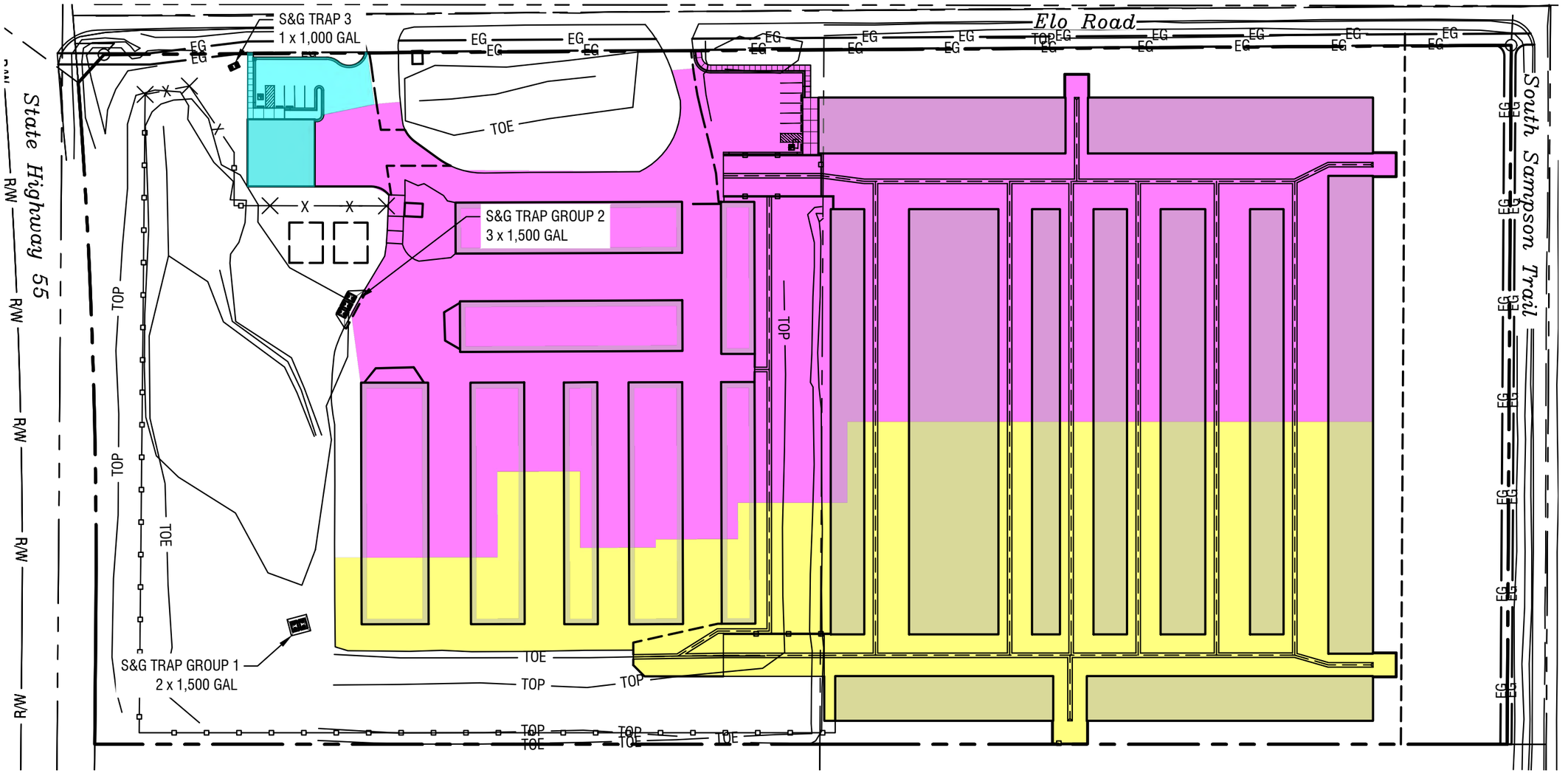
SAND AND GREASE TRAP 3 TREATMENT AREA

SAND AND GREASE TRAP GROUP 2 TREATMENT AREA

Sand & Grease Trap Treatment Areas

SGT GROUP 1 =	182,300-SF	(4.19-AC)
SGT GROUP 2 =	294,389-SF	(6.76-AC)
SGT 3 =	9,276-SF	(0.21-AC)

THE LAND GROUP



SGT Treatment Areas

Horizontal Scale: 1" = 100'

Drainage Basin Map
Stor-It Self Storage Facility Expansion

379 Elo Road
McCall, ID 83638

Revisions	
1.	

Project No.: 122091
Date of Issuance: 08.21.2023

SGT Treatment Areas

Ex. 3

File Location: g:\2022\122091\cad\calcs and reports\storm\122091 drainage area map.dwg
Last Plotted By: Gracie Easley
Date Plotted: Monday, August 21 2023 at 10:29 AM

Appendix B

Runoff Volume Calculations
Sand and Grease Trap Flow Velocity Calculations

Stor-It Self Storage - Site Runoff Volume Calculation (See Exhibit 2)

Prepared By: L. Rasley
Date: 08/21/2023
Project #: 122091

Drainage Area Characteristics: Post Development

Total Area (A) =	786,694 s.f.	(18.06 ac)	
Pervious =	316,752 s.f.	(7.27 ac)	CN = 70
Impervious	469,942 s.f.	(10.79 ac)	CN = 98
Weighted 'CN' =	86.73		

SCS Curve Number Equations

P = 2.32 in	depth of rainfall (Resolution 10-16: 100-yr 24-hr storm)*	
S = 1.53 in	potential abstraction	S = (1000/CN)-10
Q= 1.14 in	actual direct runoff	Q = ((P-0.2S)^2)/(P+0.8S)
V_R = 75,015 c.f.	**runoff volume**	V_R = Q*A

System Size: Existing Infiltration Basin

V_T = 76,653-cf	TOTAL facility capacity	(derived from AutoCAD Volume Calculations using existing ground elevations from topographic survey)

*The 100-yr, 24-hour storm was used to be conservative and to show that the existing infiltration basin far exceeds McCall City requirements to "detain, onsite, the increase in runoff that is estimated will be caused by the proposed project for the ***ten-year storm*** " (McCall Drainage Management Guidelines page 11-2).

THE LAND GROUP, INC.

Drainage Calculations
Basin Developed Volume

Prepared By: Lacie Myers
Date: 06/26/2024
Project #: 122091

Sand and Grease Trap Group 1

Impervious Area	=	182,300	sf
Pervious Area	=	0	sf
ΣArea	=	182,300	sf
ΣArea	=	4.19	acres
C Coefficient	=	1.00	

10-Year Return Period Max Flow (based on Fig II-I McCall Drainage Management Guidelines)

Time (min)	Time (sec)	Intensity (in/hr)	Q dev. (cfs)	
10	600	1.65	6.91	<- Use Q @ Tc = 10-min to be conservative
15	900	1.45	6.07	
20	1,200	1.25	5.23	
30	1,800	0.95	3.98	
40	2,400	0.82	3.43	
50	3,000	0.72	3.01	
60	3,600	0.65	2.72	
120	7,200	0.45	1.88	
180	10,800	0.35	1.46	
360	21,600	0.24	1.00	
720	43,200	0.15	0.63	
1,440	86,400	0.09	0.38	

Sand and Grease Trap Calculations:

No. = 2	# of units provided (1500-gal. S&G Trap)	
A_b = 9.20 s.f.	area between baffles (20" baffle spacing)	1000= 7.10 s.f.
V_b = 0.38 fps	**velocity between baffles**	**1500= 9.20 s.f.**

THE LAND GROUP, INC.

Drainage Calculations
Basin Developed Volume

Sand and Grease Trap Group 2

Prepared By: Lacie Myers
Date: 06/26/2024
Project #: 122091

Impervious Area	=	294,389	sf
Pervious Area	=	0	sf
ΣArea	=	294,389	sf
ΣArea	=	6.76	acres
C Coefficient	=	1.00	

10-Year Return Period Max Flow (based on Fig II-I McCall Drainage Management Guidelines)

Time (min)	Time (sec)	Intensity (in/hr)	Q dev. (cfs)	
10	600	1.65	11.15	<- Use Q @ Tc = 10-min to be conservative
15	900	1.45	9.80	
20	1,200	1.25	8.45	
30	1,800	0.95	6.42	
40	2,400	0.82	5.54	
50	3,000	0.72	4.87	
60	3,600	0.65	4.39	
120	7,200	0.45	3.04	
180	10,800	0.35	2.37	
360	21,600	0.24	1.62	
720	43,200	0.15	1.01	
1,440	86,400	0.09	0.61	

Sand and Grease Trap Calculations:

No. = 3	# of units provided (1500-gal. S&G Trap)	
A_b = 9.20 s.f.	area between baffles (20" baffle spacing)	1000= 7.10 s.f.
V_b = 0.40 fps	**velocity between baffles**	**1500= 9.20 s.f.**

THE LAND GROUP, INC.

Drainage Calculations
Basin Developed Volume

Sand and Grease Trap 3

Prepared By: Lacie Myers
Date: 06/26/2024
Project #: 122091

Impervious Area	=	9,276 s.f.	sf
Pervious Area	=	0	sf
ΣArea	=	9,276	sf
ΣArea	=	0.21	acres
C Coefficient	=	1.00	

10-Year Return Period Max Flow (based on Fig II-I McCall Drainage Management Guidelines)

Time (min)	Time (sec)	Intensity (in/hr)	Q dev. (cfs)	
10	600	1.65	0.35	<- Use Q @ Tc = 10-min to be conservative
15	900	1.45	0.31	
20	1,200	1.25	0.27	
30	1,800	0.95	0.20	
40	2,400	0.82	0.17	
50	3,000	0.72	0.15	
60	3,600	0.65	0.14	
120	7,200	0.45	0.10	
180	10,800	0.35	0.07	
360	21,600	0.24	0.05	
720	43,200	0.15	0.03	
1,440	86,400	0.09	0.02	

Sand and Grease Trap Calculations:

No. = 1	# of units provided (1500-gal. S&G Trap)	
A_b = 7.10 s.f.	area between baffles (20" baffle spacing)	**1000= 7.10 s.f.**
V_b = 0.05 fps	**velocity between baffles**	1500= 9.20 s.f.

Your Safety • Your Mobility
Your Economic Opportunity

IDAHO TRANSPORTATION DEPARTMENT
P.O. Box 8028 • Boise, ID 83707-2028
(208) 334-8300 • itd.idaho.gov

March 19, 2024

Hatch Design Architecture
200 W 36th St
Boise, ID 83714

RE: McCall Self-Storage Expansion - ITD Development Staff Report

Dear Hatch Design Architecture,

The Idaho Transportation Department (ITD) has completed our review of the McCall Self-Storage Expansion Traffic Impact Study (TIS). The proposed development will be located at 379 Elo Road, McCall, Idaho.

Development Summary

- The proposed development is requesting to add an additional 148,171 square-feet of self-storage space. Additionally, the northwest corner will provide a 3,600 square-foot fire station.

ITD Staff Requirements

- Per the TIS, ITD will require a right-turn lane from Highway 55 onto Elo Road. The turn lane shall have a 340-foot storage with a 180 foot taper.

Right-of-Way Dedications

- Right of way necessary to construct the right-turn lane and accommodate roadway drainage shall be dedicated to ITD.

Permit Requirements

- Once Civil Plans have been drafted for any work occurring in ITD's Right-of-Way, submit an access permit application via our online permitting tool here.
    - ITD staff will receive the application and all submitted supportive documents, which should include:
        - Civil Plans
        - Parcel Deed
        - Cross-Access or Access Easement, if applicable
        - Traffic Control Plan designed by a certified Traffic Control Supervisor
    - Access and Utility Permits
        - Both Access and Utility Permits, if required, for work being done in ITD ROW will need to be submitted for reviewed and approved by ITD staff prior to work beginning.

Expiration of Staff Report

- This Staff Report is valid for a period of one year from the date of the TIS. ITS deserves the right to request an updated TIS to reflect current conditionals if an approved encroachment permit and/or proportionate share contribution are not obtained/provided within one year.

Notices

- This report does not supersede or nullify any local land use requirements or legal property restrictions. Legal property restrictions include but are not limited to easements, access agreements, deed restrictions, plat restrictions, liens or other encumbrances. Removing, modifying, or establishing legal property restrictions is the responsibility of the developer.
- This report does not constitute a permit approval, or denial issued pursuant to IDAPA 29.03.42.

IDAHO TRANSPORTATION DEPARTMENT
P.O. Box 8028 • Boise, ID 83707-2028
(208) 334-8300 • itd.idaho.gov

ITD Staff Recommendations are intended to assure that the proposed development will not place an undue burden on the existing State Highway system within the vicinity impacted by the proposed development. Maintaining safety and mobility for Idaho's motorists is of utmost importance to ITD. We appreciate your improvements to livability in McCall, Idaho, as we want all residents to travel safely and efficiently on the highway system.

If you have any questions, feel free to contact me at Brian.Duran@itd.idaho.gov or Kendra Conder, Development Services Coordinator at (208) 334-8377 or email Kendra.conder@itd.idaho.gov.

Sincerely,

Brian Duran
Development Services Manager
Idaho Transportation Department | District 3

Exhibit A

Traffic Impact Study
Proposed Self Storage Facility

McCall, Idaho

Prepared For:

Hatch Design Architecture

Kenig, Lindgren, O'Hara, Aboona, Inc.

July 28, 2023

Table of Contents

List of Figures and Tables

Figures

Tables

I. Executive Summary

This report summarizes the results of a traffic impact study conducted by Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA, Inc.) for the proposed expansion of the Stor-It Self Storage facility located at 379 Elo Road in McCall, Idaho. The objectives of the traffic study are as follows:

- Determine the existing vehicular conditions in the study area to establish a base condition.
- Assess the impact that the proposed development will have on transportation conditions in the area.
- Determine any roadway/intersection modifications and/or improvements that will be necessary to effectively accommodate and mitigate future conditions.

Vehicle turning movement counts were conducted at the intersections of Elo Road with Highway 55, Elo Road with Samson Trail, and Elo Road with the two existing site access drives during the following time periods.

- Weekday Morning Peak Period (7:00 A.M. to 9:00 A.M.)
- Weekday Afternoon Peak Period (2:00 P.M. to 4:00 P.M.)
- Weekday Evening Peak Period (4:00 P.M. to 6:00 P.M.)
- Saturday Morning Peak Period (7:00 A.M. to 9:00 A.M.)
- Saturday Midday Peak Period (11:00 A.M. to 2:00 P.M.)
- Saturday Evening Peak Period (4:00 P.M. to 6:00 P.M.)

As proposed, the existing self-storage facility (which provides 68,970 square-feet of building space) will be expanded to provide an additional 148,171 square-feet of self-storage space of which 35,140 square-feet will be canopy space. Furthermore, the northwest corner of the site will provide a fire station. Access to the facility will continue to be provided off Elo Road via two full movement access points.

Based on the preceding analyses and recommendations, the following conclusions have been made:

- Overall, the existing roadway network has adequate capacity to accommodate the traffic that will be generated by the proposed development.
- The existing access system will be adequate in accommodating the traffic estimated to be generated by the proposed expansion and will ensure efficient and flexible access is provided.

- To mitigate the increase in recreational vehicles and emergency vehicles performing a northbound right-turn movement from Highway 55 onto Elo Road and to better accommodate existing heavy vehicles and buses, Highway 55 should be widened to provide a northbound right-turn lane with 340 feet of storage and 180 feet of taper.

- Sufficient sight distance exists to the north and south on Highway 55 and Elo Road to allow vehicles to yield to allow emergency vehicles to enter the roadway from Elo Road.

- The provision of a traffic signal or use of emergency vehicle traffic control signal is not required at the intersection of Elo Road with Highway 55 to accommodate projected traffic volumes or to ensure that emergency vehicles are able to enter Highway 55 from Elo Road.

1. Introduction

This report summarizes the methodologies, results, and findings of a traffic impact study conducted by Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA, Inc.) for the proposed expansion to the Stor-It Self Storage facility located at 379 Elo Road in McCall, Idaho.

As proposed, the existing self-storage facility (which provides 68,970 square-feet of building space) will be expanded to provide an additional 148,171 square-feet of self-storage space of which 35,140 square-feet will be canopy space. Furthermore, the northwest corner of the site will provide a fire station. Access to the facility will continue to be provided off Elo Road via two full movement access points.

The purpose of this study was to examine existing traffic conditions, assess the impact that the proposed development will have on traffic conditions in the area, and determine recommendations to mitigate any impacts and enhance the area roadways. **Figure 1** shows the location of the site in relation to the area street system. **Figure 2** shows an aerial view of the study area.

The sections of this report present the following:

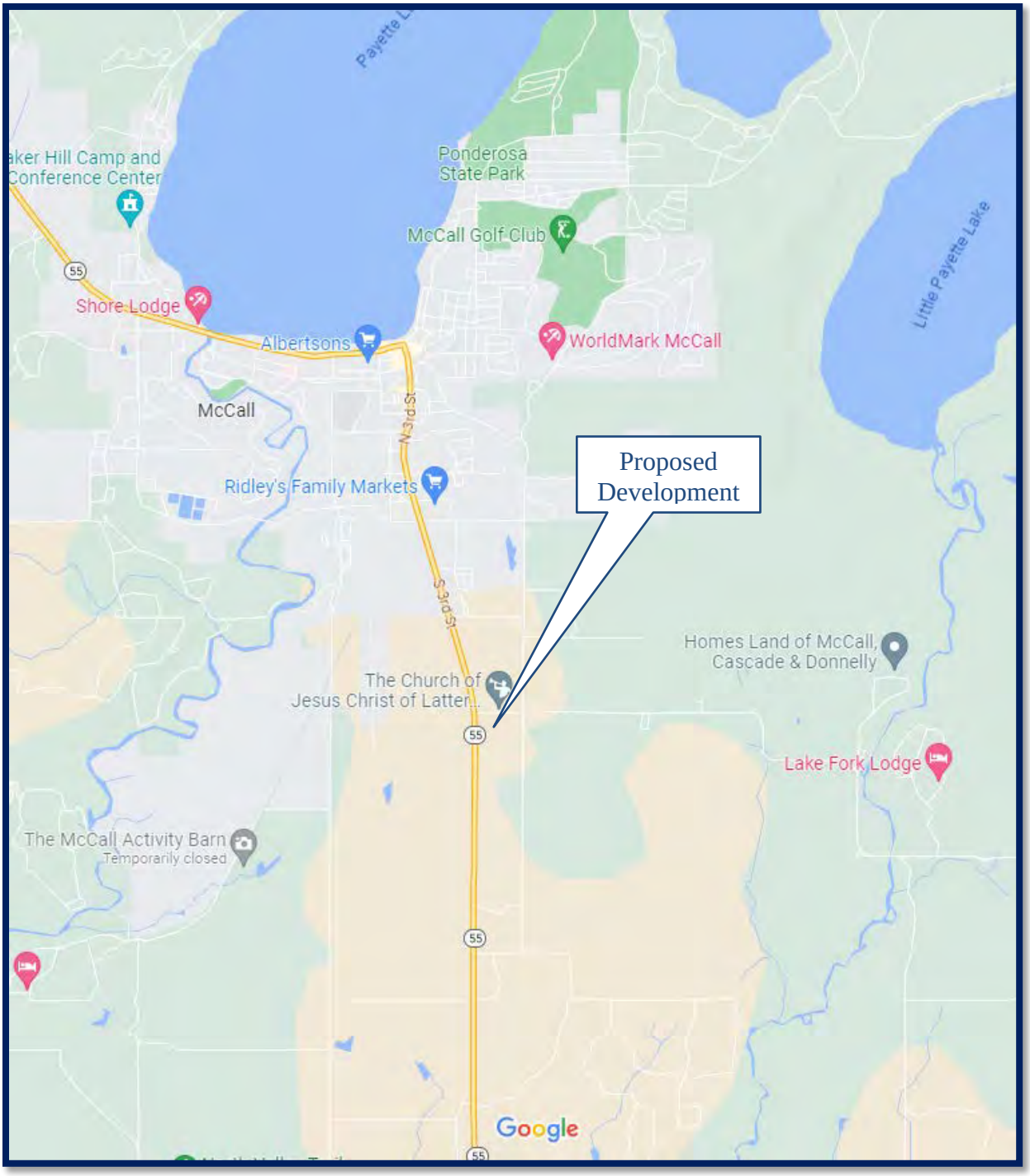
- Existing roadway conditions
- A description of the proposed development
- Directional distribution of the traffic generated by the proposed development
- Vehicle trip generation for the development
- Future traffic conditions including access to the development
- Traffic analyses for the weekday morning, weekday afternoon, weekday evening, Saturday morning, Saturday midday, and Saturday evening peak hours.
- Evaluation and recommendations with respect to adequacy of the access to the site and the adjacent roadway system

Traffic capacity analyses were conducted for the weekday morning and weekday evening peak hours for the following conditions:

1. Existing Conditions - Analyze the capacity of the existing street system using existing peak hour traffic volumes in the surrounding area.

2. No-Build Conditions – Analyze the capacity of the future street system using the no-build traffic volumes that include the existing traffic volumes and an ambient growth factor. The Year 2025 conditions were analyzed.

3. Projected Conditions – Analyze the capacity of the future street system using the projected traffic volumes that include the existing traffic volumes, background development traffic growth, and the traffic estimated to be generated by the buildout of the proposed development. The Year 2025 projected conditions were analyzed.



Site Location **Figure 1**

Aerial View of Study Area **Figure 2**

2. Existing Conditions

Existing transportation conditions in the vicinity of the site were documented in order to obtain a database for projecting future conditions. The following provides a description of the geographical location of the site, physical characteristics of the area street system including lane usage and traffic control devices, and existing peak hour traffic volumes.

Site Location

The site, which is currently occupied by the existing self-storage facility and vacant land, is located on the south side of Elo Road between Highway 55 and Samson Trail, approximately two miles south of downtown McCall and one mile southeast of the McCall Municipal Airport. Land uses in the vicinity of the site include The Church of Jesus Christ of Latter-day Saints, Farm to Market Mini Storage, and MCPAWS Regional Animal Shelter to the north and the Mountain Life Church to the south.

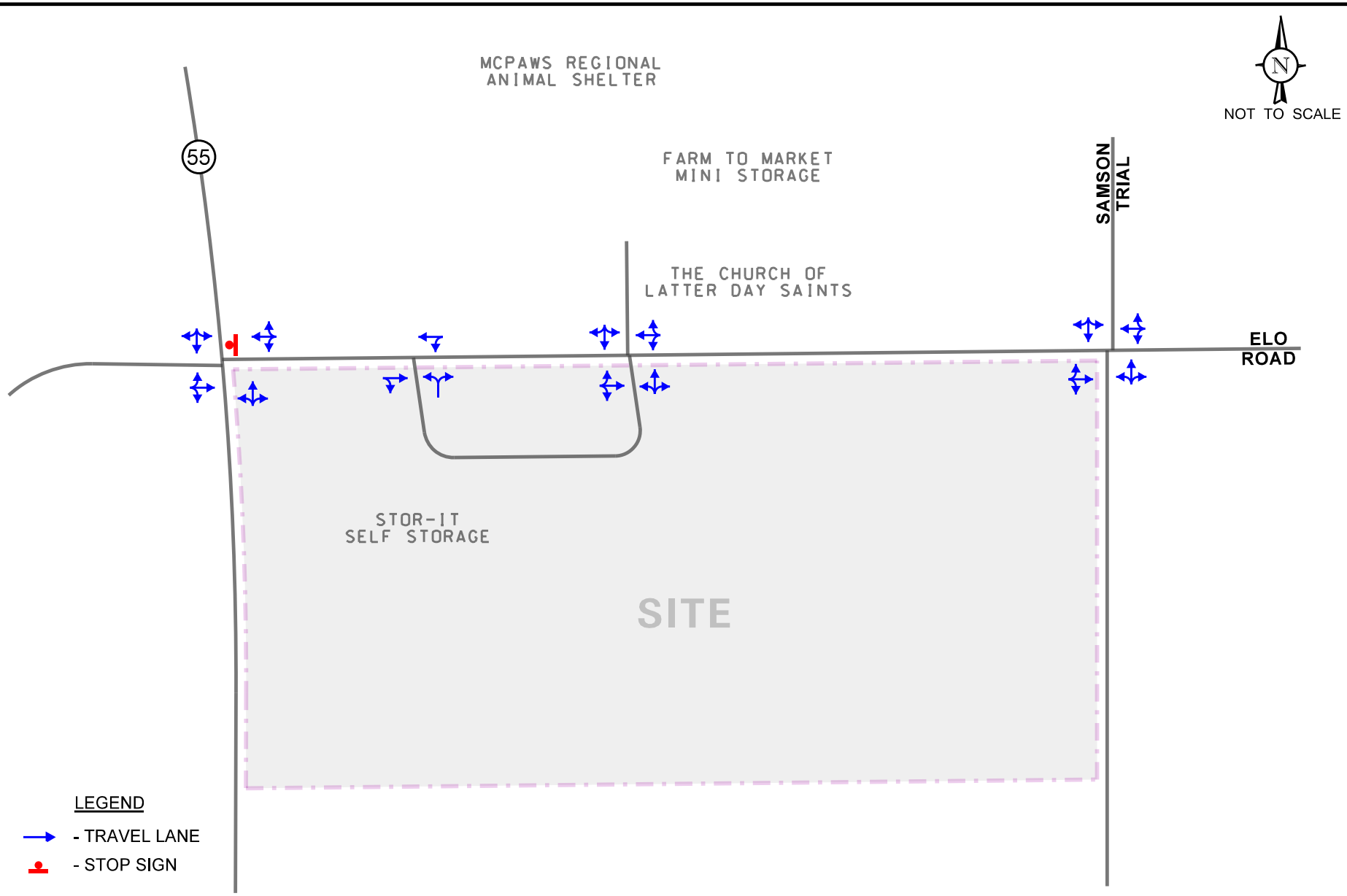
Existing Street System Characteristics

The characteristics of the existing streets near the development are described below and illustrated in **Figure 3**.

Highway 55 is a north-south roadway that provides a single travel lane in each direction and is classified as an other principal arterial roadway in the McCall Transportation Master Plan. At its unsignalized intersection with Elo Road, Highway 55 provides a shared through/right-turn lane on the northbound approach and a shared left-turn/through lane on the southbound approach. North of Elo Road, Highway 55 carries an annual average daily traffic (AADT) volume of 9,100 vehicles and south of Elo Road, Highway 55 carries an AADT volume of 8,100 vehicles (ITD 2022). Highway 55 is under the jurisdiction of ITD and has a posted speed limit of 45 miles per hour.

Elo Road is an east-west roadway that provides a single travel lane in each direction and is classified as a major collector roadway in the McCall Transportation Master Plan. Elo Road provides a shared left/right-turn lane that is under stop-sign control at its unsignalized intersection with Highway 55. At its unsignalized intersection with Samson Trail, Elo Road provides a shared left/through/right-turn lane on the eastbound and westbound approaches. Elo Road carries an AADT volume of 1,400 vehicles (ITD 2022).

Samson Trail is a north-south roadway that provides a single travel lane in each direction and is classified as a minor collector in the McCall Transportation Master Plan. At its unsignalized intersection with Elo Road, Samson Trail provides a shared left/through/right-turn lane on the northbound and southbound approaches that are under stop-sign control.



Stor-It Self Storage
Expansion
McCall, Idaho

Existing Roadway Characteristics

KLOA
Kenig,Lindgren,O'Hara,Aboona,Inc.

Job No: 22-367

Figure: 3

Existing Traffic Volumes

In order to determine current vehicle, pedestrian, and bicycle conditions within the study area, KLOA, Inc. utilized peak period traffic counts for the following intersections:

- Elo Road with Highway 55
- Elo Road with Samson Trail
- Elo Road with Stor-It West Access
- Elo Road with Stor-It East Access

The counts were conducted on Thursday, May 11, 2023, during the weekday morning (7:00 A.M. to 9:00 A.M.), weekday afternoon (2:00 P.M. to 4:00 P.M.), and weekday evening (4:00 P.M. to 6:00 P.M.) peak periods and on Saturday, July 1, 2023, during the Saturday morning (7:00 A.M. to 9:00 A.M.), Saturday midday (11:00 A.M. to 2:00 P.M.), and Saturday evening (4:00 P.M. to 6:00 P.M.) peak periods. The results of the traffic counts indicated that the peak hour traffic volumes occurred during the following:

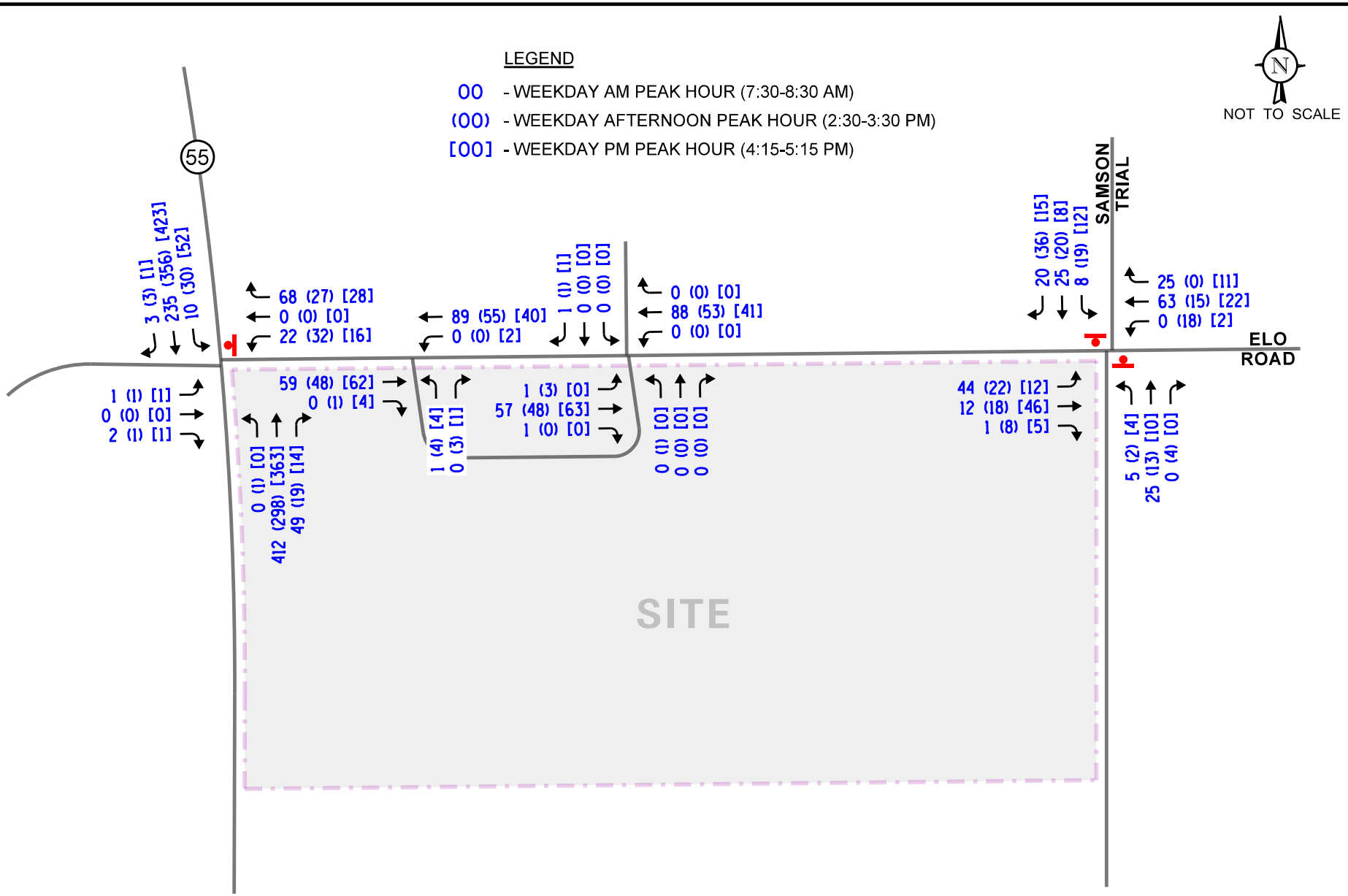
- Weekday Morning Peak Hour – 7:30 A.M. to 8:30 A.M.
- Weekday Afternoon Peak Hour – 2:30 P.M. to 3:30 P.M.
- Weekday Evening Peak Hour – 4:15 P.M. to 5:15 P.M.
- Saturday Morning Peak Hour – 8:00 A.M. to 9:00 A.M.
- Saturday Midday Peak Hour – 1:00 P.M. to 2:00 P.M.
- Saturday Evening Peak Hour – 4:00 P.M. to 5:00 P.M.

It should be noted that the weekday traffic counts were conducted to coincide with the peak activity for the McCall-Donnelly School District schools and bus routes and on the date the traffic counts were conducted the district had a typical school day. Furthermore, the weekday morning and weekday afternoon peak hour traffic volumes encompass the traffic generated by the schools within the district.

Additionally, it is our understanding that the City of McCall experiences a higher traffic volume on the weekends, particularly during the summer months and on the Fourth of July weekend, given its proximity to Payette Lake. This is further understood given that the City issued a travel advisory for July 1st through July 4th. As such, the Saturday counts conducted represent a conservatively high Saturday traffic volumes.

KLOA, Inc. compared the July 1, 2023, midday traffic counts with traffic counts also conducted on Saturday, May 13, 2023, during the midday peak period. The results of the comparison indicated that the July traffic counts were approximately 65 to 70 percent higher at the intersection of Elo Road with Highway 55 and were approximately two and a half times greater at the intersection of Elo Road with Samson Trail. As such, the July 1, 2023, traffic counts represent the peak traffic conditions for Saturday within the study area and were utilized for the purposes of this evaluation.

Figure 4 illustrates the existing weekday peak hour vehicle traffic volumes and **Figure 5** illustrates the existing Saturday peak hour vehicle traffic volumes.



Stor-It Self Storage
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McCall, Idaho

Existing Traffic Volumes -Weekday Peak Hours

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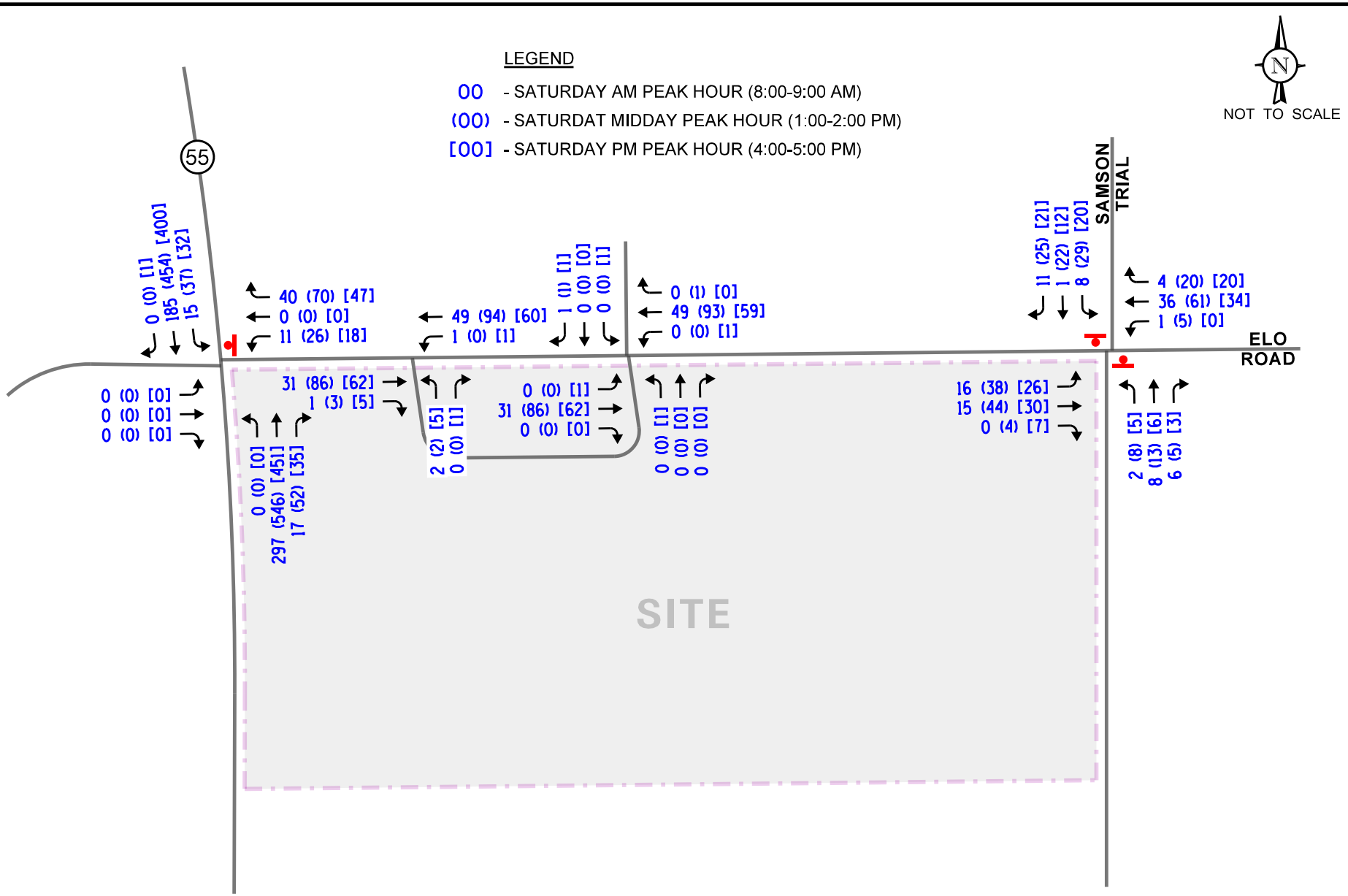
Figure: 4



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Existing Traffic Volumes - Saturday Peak Hours

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Figure: 5

3. Traffic Characteristics of the Proposed Development

In order to properly evaluate future traffic conditions in the surrounding area, it was necessary to determine the traffic characteristics of the proposed development, including the directional distribution and volumes of traffic that it will generate.

Proposed Development Plan

As proposed, the existing self-storage facility (which provides 68,970 square-feet of building space) will be expanded to provide an additional 148,171 square-feet of self-storage space of which 35,140 square-feet will be canopy space. Furthermore, the northwest corner of the site will provide an approximately 3,600 square-foot fire station. Access to the facility will continue to be provided off Elo Road via two full movement access points. A site plan illustrating the proposed development is included in the Appendix.

Directional Distribution

The directions from which patrons will approach and depart the site was estimated based on existing travel patterns, as determined from the traffic counts. **Figure 6** illustrates the directional distribution of traffic.

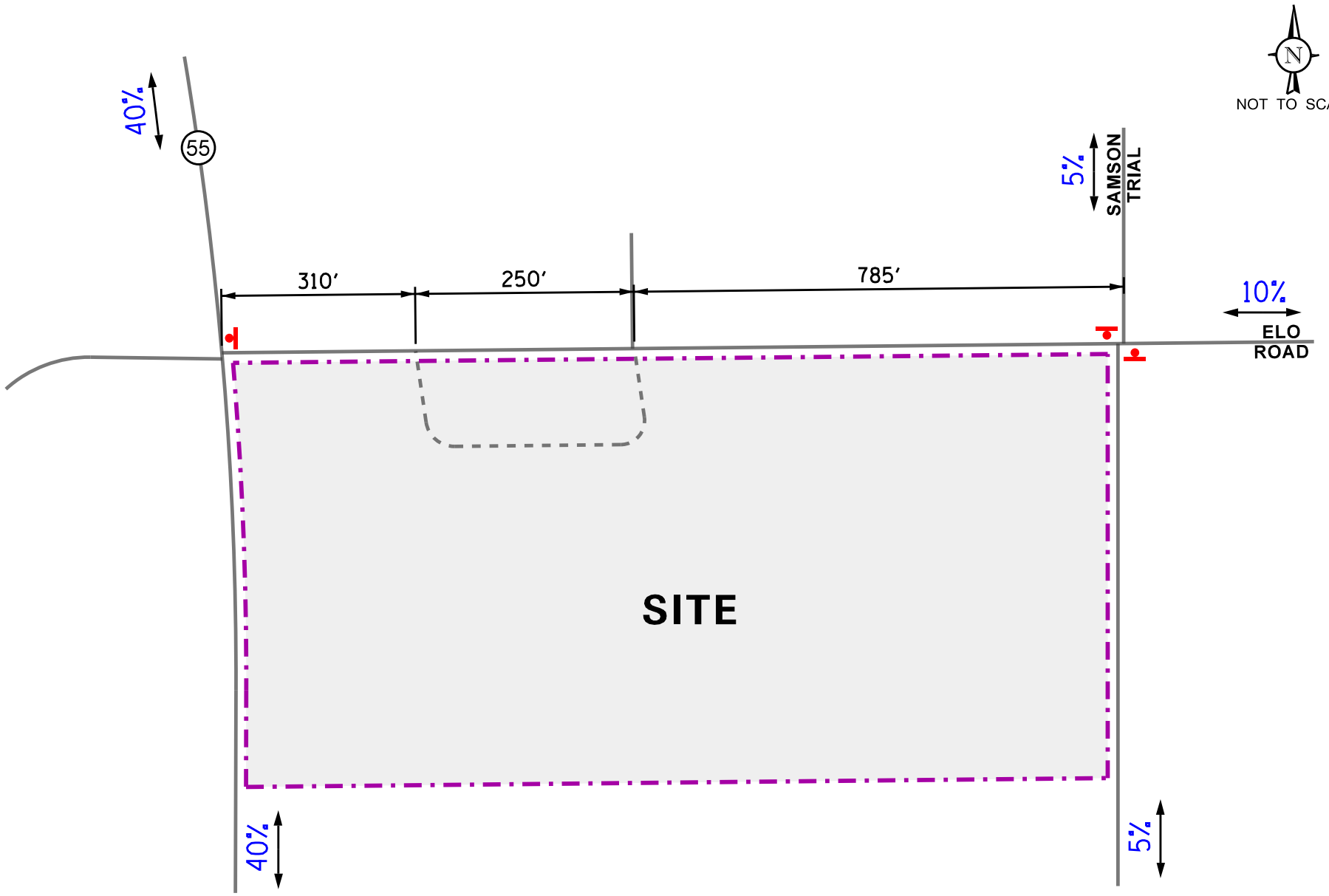
Peak Hour Traffic Volumes

The number of peak hour trips estimated to be generated by the proposed expansion of the self-storage facility was based on the following two methodologies:

- Existing trip generation rates based on the results of the traffic counts.
- Trip generation rates published by the Institute of Transportation Engineers (ITE) in the *Trip Generation Manual*, 11th Edition.

The Mini-Warehouse (Land-Use Code 151) was utilized for the proposed expansion. Furthermore, the number of peak hour trips estimated to be generated by the proposed fire station was also based on trip generation rates published by the Institute of Transportation Engineers (ITE) in the *Trip Generation Manual*, 11th Edition and the Fire and Rescue Station (Land-Use Code 575) was utilized. However, for the Fire and Rescue Station land-use, data is only available for the weekday evening peak hour. As such, the trips generated during the weekday evening peak hour were applied to all hours analyzed to provide a conservative analysis.

Table 1 summarizes the trips projected to be generated by the development on a weekday and **Table 2** summarizes the trips projected to be generated by the development on Saturday. For the purposes of this evaluation and in order to provide a conservative analysis, the highest values for either of the two methodologies for the self-storage facility was utilized. All values utilized were bolded in Tables 1 and 2.



Stor-It Self Storage
Expansion
McCall, Idaho

Directional Distribution

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Figure: 6

Table 1
PROJECTED SITE-GENERATED TRAFFIC VOLUMES - WEEKDAY

ITE Land-Use Code	Type/Size	Weekday Morning Peak Hour			Weekday Afternoon Peak Hour			Weekday Evening Peak Hour			Weekday Daily Two-Way Trips
		In	Out	Total	In	Out	Total	In	Out	Total	
--	Existing Facility Trip Generation Rates[1]	2	2	4	2	17	19	***13***	***11***	***24***	--
151	Self-Storage (148,171s.f.)	***8***	***5***	***13***	***9***	***10***	***19***	10	12	22	216
575	Fire and Rescue Station (3,600 s.f.)	***1***	***1***	***2***	***1***	***1***	***2***	***1***	***1***	***2***	--
Expansion Total		**9**	**6**	**15**	**10**	**11**	**21**	**14**	**12**	**26**	

1 – Based on the results of the peak hour traffic counts

Table 2
PROJECTED SITE-GENERATED TRAFFIC VOLUMES – SATURDAY

ITE Land-Use Code	Type/Size	Saturday Morning Peak Hour			Saturday Midday Peak Hour			Weekday Evening Peak Hour			Saturday Daily Two-Way Trips
		In	Out	Total	In	Out	Total	In	Out	Total	
--	Existing Facility Trip Generation Rates[1]	4	5	9	6	5	11	***15***	***15***	***30***	--
151	Self-Storage (148,171s.f.)	***16***	***7***	***23***	***15***	***14***	***29***	14	9	23	262
575	Fire and Rescue Station (3,600 s.f.)	***1***	***1***	***2***	***1***	***1***	***2***	***1***	***1***	***2***	--
Expansion Total		**17**	**8**	**25**	**16**	**15**	**31**	**16**	**16**	**32**	

1 – Based on the results of the peak hour traffic counts

4. Projected Traffic Conditions

The total projected traffic volumes include the existing traffic volumes, increase in background traffic due to growth, and the traffic estimated to be generated by the proposed subject development.

Development Traffic Assignment

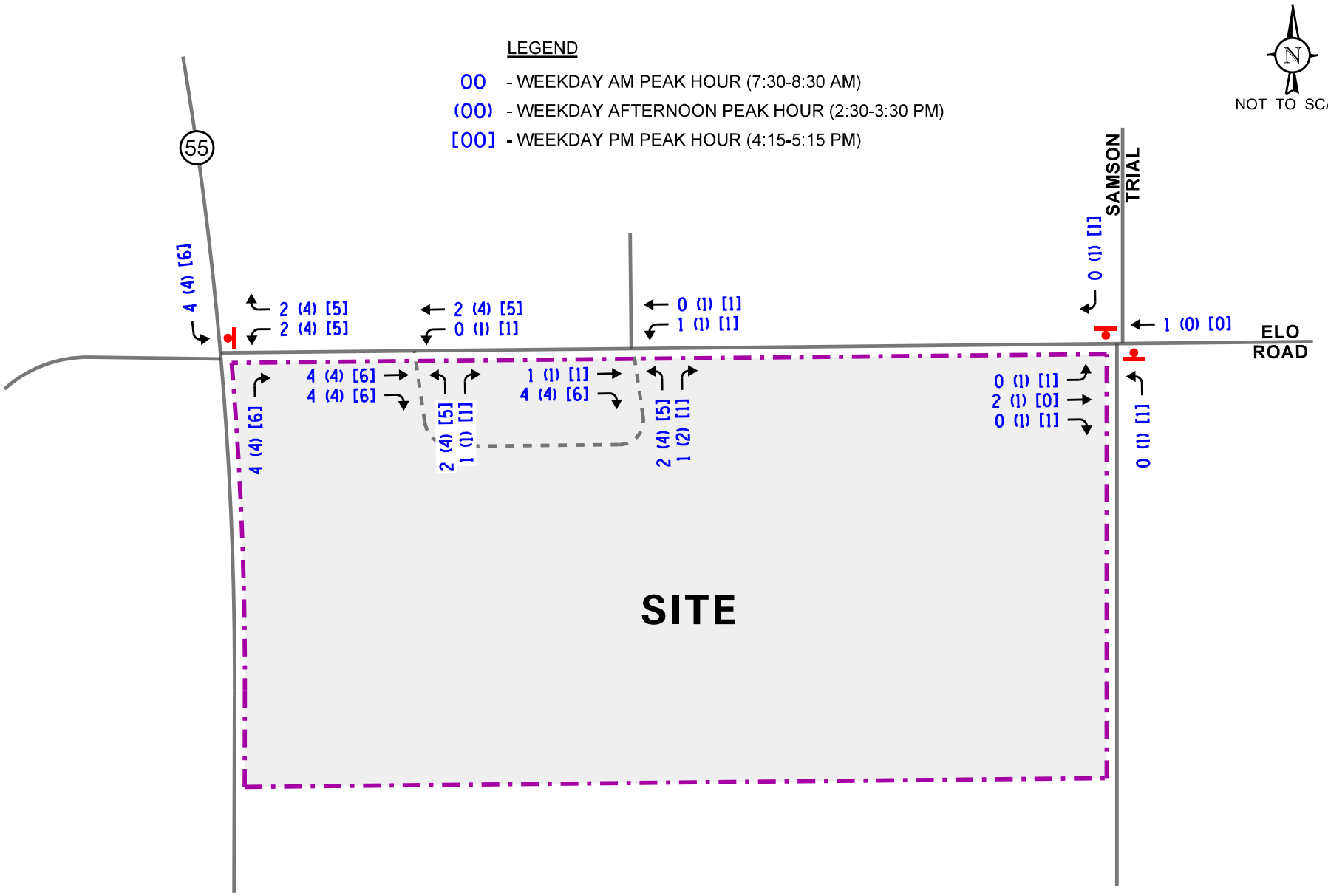
The estimated peak hour traffic volumes that will be generated by the proposed development were assigned to the street system in accordance with the previously described directional distribution (Figure 6). **Figure 7** illustrates the traffic assignment for the weekday peak hours and **Figure 8** illustrates the traffic assignment for the Saturday peak hours.

Background Traffic Conditions

To account for the ambient traffic growth within the area that is not attributed to any particular development, the existing traffic volumes were increased by a regional growth factor of approximately two and one-half percent per year for two years (five percent total). This growth percentage was based on the AADT projections for Highway 55, Elo Road, and Samson Trail within the McCall Transportation Master Plan. **Figure 9** illustrates the Year 2025 no-build weekday peak hour traffic volumes and **Figure 10** illustrates the Year 2025 no-build Saturday peak hour traffic volumes.

Total Projected Traffic Volumes

The existing traffic volumes that were increased by the regional growth factor were combined with the new peak hour traffic volumes generated by the subject development to determine the total projected traffic volumes. **Figure 11** illustrates the Year 2025 no-build weekday peak hour traffic volumes and **Figure 12** illustrates the Year 2025 no-build Saturday peak hour traffic volumes.



Stor-It Self Storage
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McCall, Idaho

Site-Generated Traffic Volumes - Weekday Peak Hours

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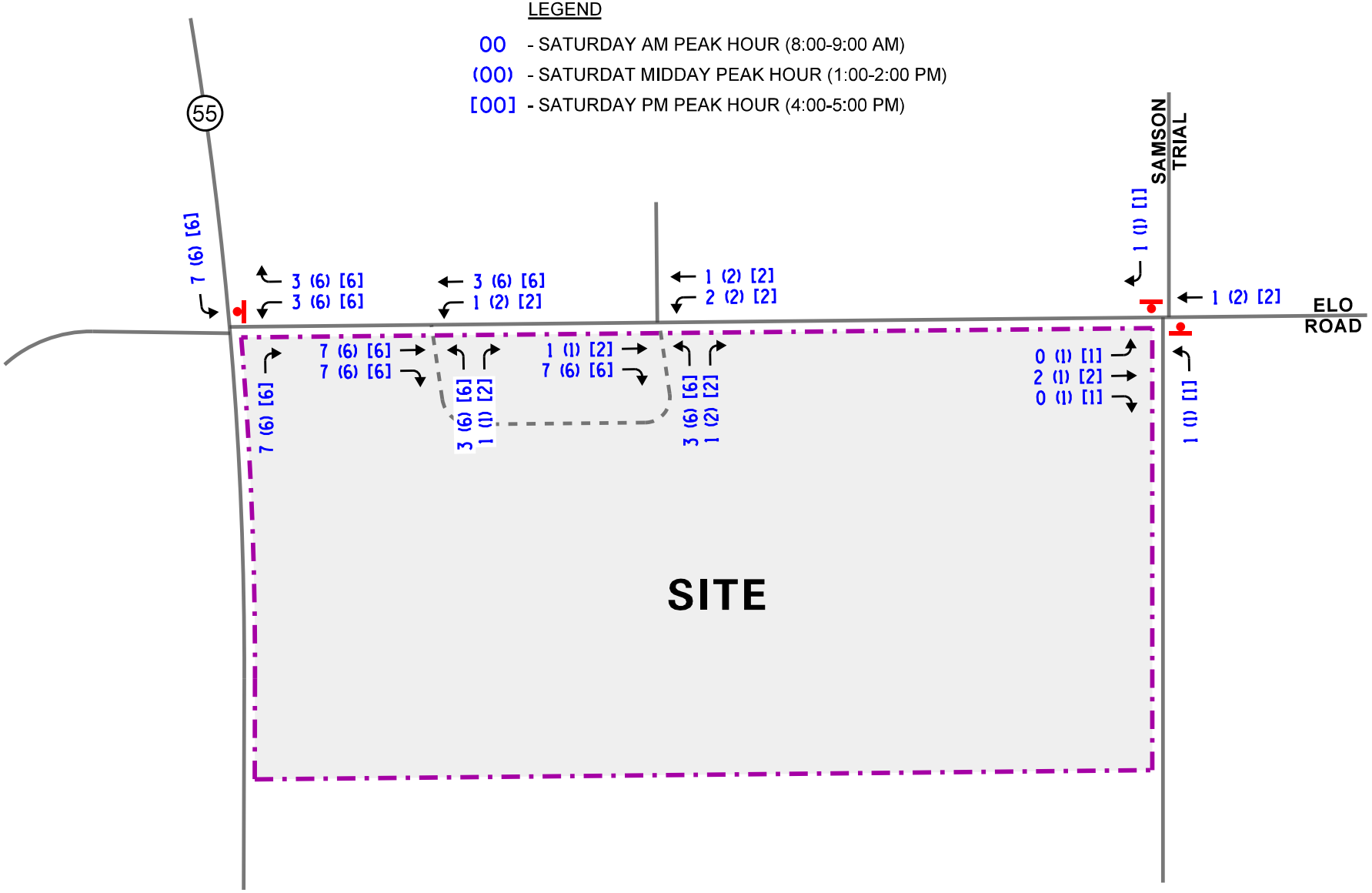
Figure: 7



Stor-It Self Storage
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McCall, Idaho

Site-Generated Traffic Volumes - Saturday Peak Hours

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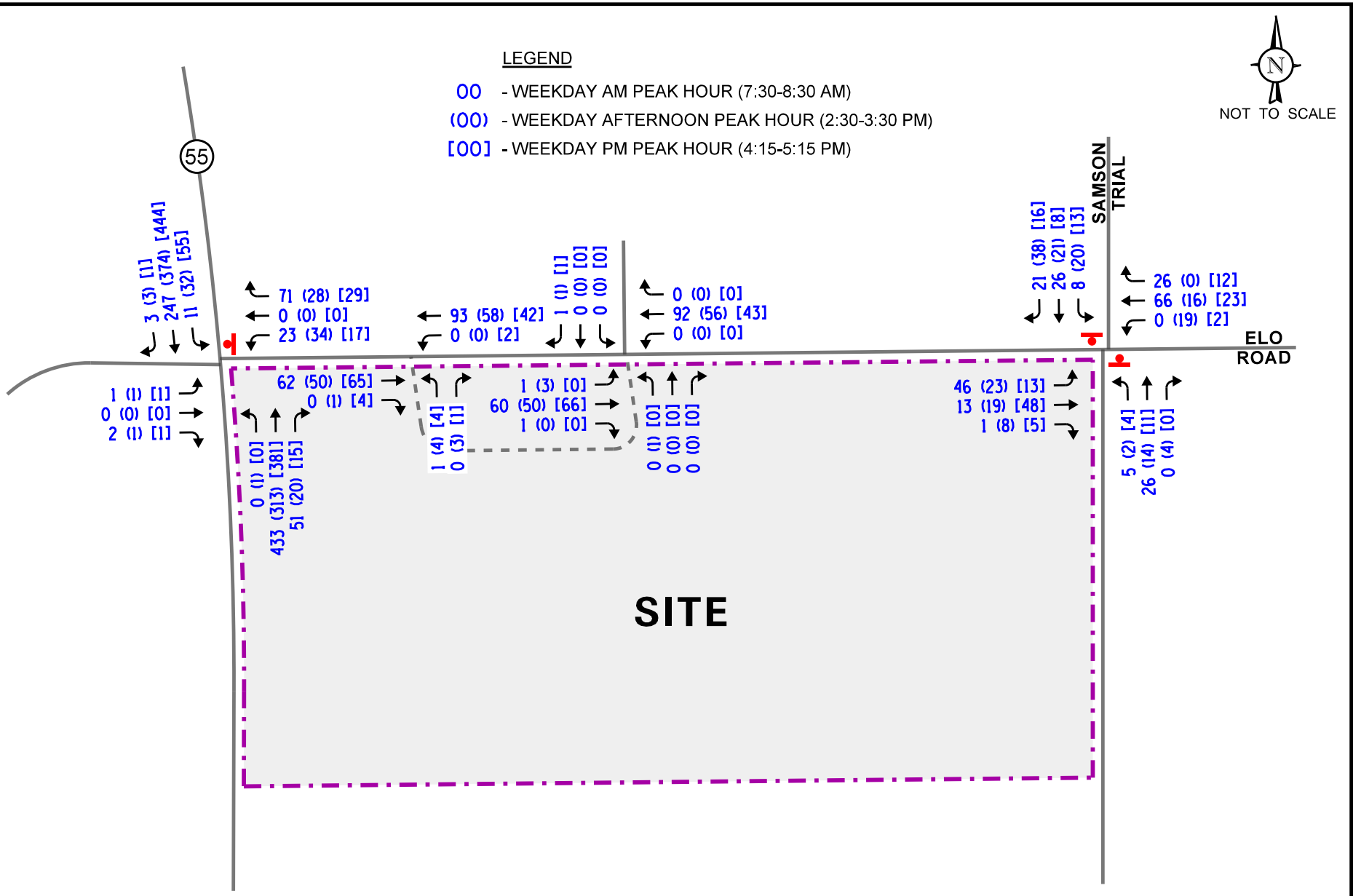
Kenig,Lindgren,O'Hara,Aboona,Inc.

Job No: 22-367

Figure: 8



Stor-It Self Storage
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Year 2025 No-Build Traffic Volumes
Weekday Peak Hours

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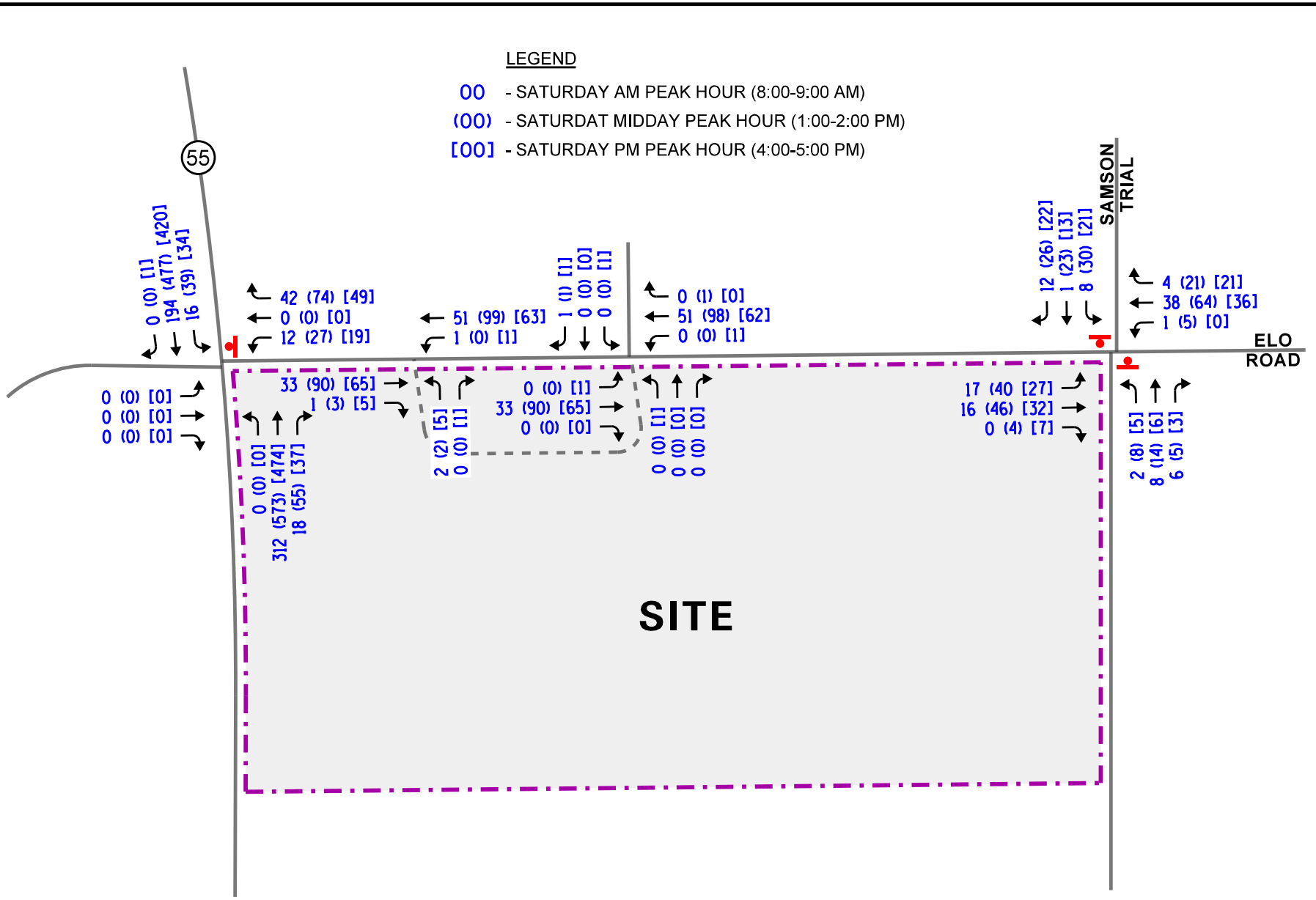
Job No: 22-367

Figure: 9



Stor-It Self Storage
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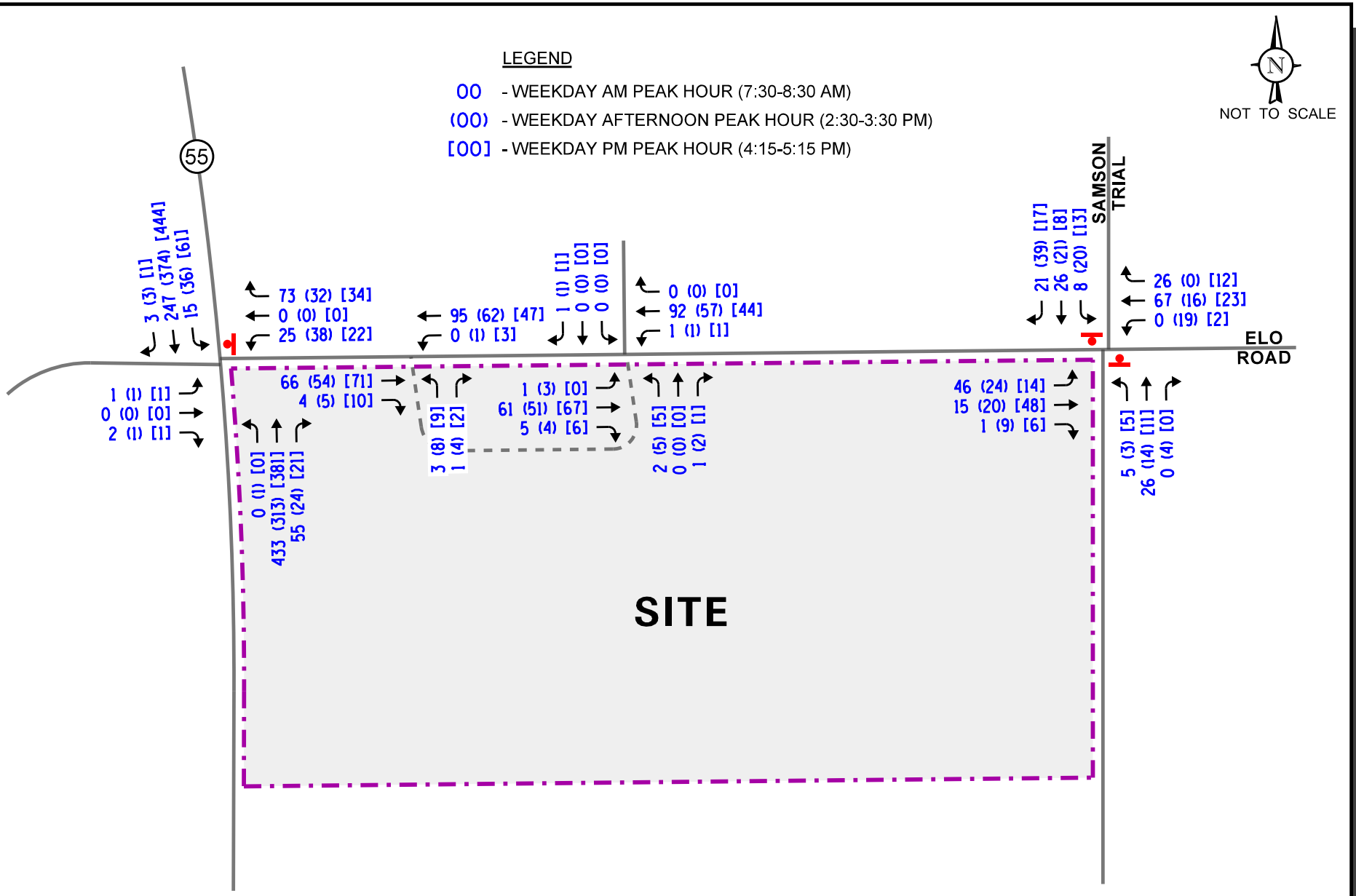
McCall, Idaho

Year 2025 No-Build Traffic Volumes
Saturday Peak Hours

KLOA
Kenig,Lindgren,O'Hara,Aboona,Inc.

Job No: 22-367 Figure: 10

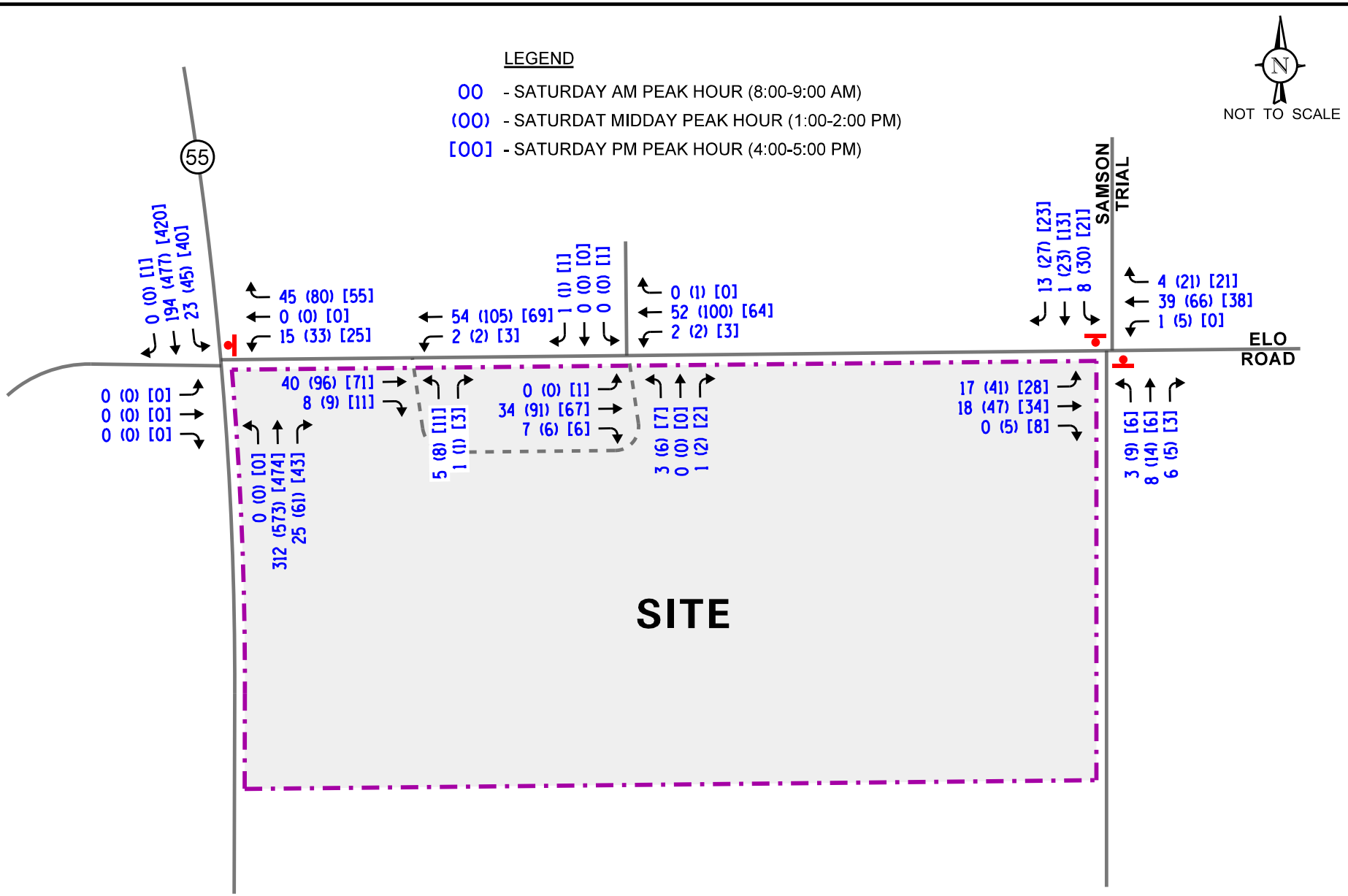


Stor-It Self Storage
Expansion
McCall, Idaho

Year 2025 Total Traffic Volumes
Weekday Peak Hours

KLOA
Kenig,Lindgren,O'Hara,Aboona,Inc.

Job No: 22-367 Figure: 11



Stor-It Self Storage
Expansion
McCall, Idaho

Year 2025 Total Traffic Volumes
Saturday Peak Hours

KLOA
Kenig,Lindgren,O'Hara,Aboona,Inc.

Job No: 22-367 Figure: 12

5. Traffic Analysis and Recommendations

The following provides an evaluation conducted for the peak hours. The analysis includes conducting capacity analyses to determine how well the street system and access drives are projected to operate and whether any street improvements or modifications are required.

Traffic Analyses

Intersection analyses were performed for the peak hours for the existing (Year 2023), no-build (Year 2025), and total projected (Year 2025) traffic volumes.

The traffic analyses were performed using the methodologies outlined in the Transportation Research Board's *Highway Capacity Manual (HCM), 6th Edition* and analyzed using Synchro/SimTraffic 11 software.

The analyses for the unsignalized intersections determine the average control delay to vehicles at an intersection. Control delay is the elapsed time from a vehicle joining the queue at a stop sign (includes the time required to decelerate to a stop) until its departure from the stop sign and resumption of free flow speed. The methodology analyzes each intersection approach controlled by a stop sign and considers traffic volumes on all approaches and lane characteristics.

The ability of an intersection to accommodate traffic flow is expressed in terms of level of service, which is assigned a letter from A to F based on the average control delay experienced by vehicles passing through the intersection. The *Highway Capacity Manual* definitions for levels of service and the corresponding control delay for signalized intersections and unsignalized intersections are included in the Appendix of this report.

Summaries of the traffic analysis results showing the level of service and overall intersection delay (measured in seconds) for the existing, no-build and total projected conditions are presented in **Tables 3** through **8**. A discussion of the intersections follows. Summary sheets for the capacity analyses are included in the Appendix.

Table 3
CAPACITY ANALYSIS RESULTS
EXISTING CONDITIONS – WEEKDAY PEAK HOURS

Intersection	Weekday Morning Peak Hour		Weekday Afternoon Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay	LOS	Delay
Highway 55 with Elo Road						
• Eastbound Approach	B	13.7	B	14.6	C	16.3
• Westbound Approach	C	15.1	C	16.6	C	15.4
• Northbound Left Turn	--	--	A	8.1	--	--
• Southbound Left Turn	A	8.7	A	8.1		8.3
Elo Road with Samson Trail						
• Northbound Approach	B	11.2	B	10.4	A	9.8
• Southbound Approach	B	10.7	B	10.1	A	9.2
• Eastbound Left Turn	A	7.6	A	7.4	A	7.3
• Westbound Left Turn	--	--	A	7.3	A	7.3
Elo Road with West Access Drive						
• Northbound Approach	A	9.7	A	9.0	A	9.0
• Westbound Left Turn	--	--	--	--	A	7.3
Elo Road with East Access Drive						
• Northbound Approach	--	--	A	9.5	--	--
• Southbound Approach	A	8.9	A	8.6	A	8.5
• Eastbound Left Turn	A	7.5	A	7.4	--	--
• Westbound Left Turn	--	--	--	--	--	--

LOS = Level of Service
Delay is measured in seconds.

Table 4
CAPACITY ANALYSIS RESULTS
EXISTING CONDITIONS – SATURDAY PEAK HOURS

Intersection	Saturday Morning Peak Hour		Saturday Midday Peak Hour		Saturday Evening Peak Hour	
	LOS	Delay	LOS	Delay	LOS	Delay
Highway 55 with Elo Road						
• Eastbound Approach	--	--	--	--	--	--
• Westbound Approach	B	12.2	C	23.5	C	15.9
• Northbound Left Turn	--	--	--	--	--	--
• Southbound Left Turn	A	8.1	A	9.0	A	8.5
Elo Road with Samson Trail						
• Northbound Approach	A	9.5	B	10.5	A	9.8
• Southbound Approach	A	9.3	B	10.4	A	9.8
• Eastbound Left Turn	A	7.5	A	7.5	A	7.4
• Westbound Left Turn	A	7.2	A	7.5	--	--
Elo Road with West Access Drive						
• Northbound Approach	A	9.1	A	9.6	A	9.2
• Westbound Left Turn	A	7.3	--	--	A	7.3
Elo Road with East Access Drive						
• Northbound Approach	--	--	--	--	A	9.4
• Southbound Approach	A	8.6	A	8.8	A	9.0
• Eastbound Left Turn	--	--	--	--	A	7.3
• Westbound Left Turn	--	--	--	--	A	7.3

LOS = Level of Service
Delay is measured in seconds.

Table 5
CAPACITY ANALYSIS RESULTS
NO-BUILD CONDITIONS – WEEKDAY PEAK HOURS

Intersection	Weekday Morning Peak Hour		Weekday Afternoon Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay	LOS	Delay
Highway 55 with Elo Road						
• Eastbound Approach	B	14.1	C	15.2	C	17.1
• Westbound Approach	C	15.8	C	17.6	C	16.3
• Northbound Left Turn	--	--	A	8.2	--	--
• Southbound Left Turn	A	8.8	A	8.2	A	8.4
Elo Road with Samson Trail						
• Northbound Approach	B	11.4	B	10.5	A	9.8
• Southbound Approach	B	10.8	B	10.2	A	9.2
• Eastbound Left Turn	A	7.6	A	7.4	A	7.3
• Westbound Left Turn	--	--	A	7.3	A	7.3
Elo Road with West Access Drive						
• Northbound Approach	A	9.7	A	9.0	A	9.0
• Westbound Left Turn	--	--	--	--	A	7.3
Elo Road with East Access Drive						
• Northbound Approach	--	--	A	9.5	--	--
• Southbound Approach	A	8.9	A	8.7	A	8.5
• Eastbound Left Turn	A	7.5	A	7.4	--	--
• Westbound Left Turn	A	8.9	--	--	--	--

LOS = Level of Service
Delay is measured in seconds.

Table 6
CAPACITY ANALYSIS RESULTS
NO-BUILD CONDITIONS – SATURDAY PEAK HOURS

Intersection	Saturday Morning Peak Hour		Saturday Midday Peak Hour		Saturday Evening Peak Hour	
	LOS	Delay	LOS	Delay	LOS	Delay
Highway 55 with Elo Road						
• Eastbound Approach	--	--	--	--	--	--
• Westbound Approach	B	12.6	D	26.1	C	16.8
• Northbound Left Turn	--	--	--	--	--	--
• Southbound Left Turn	A	8.2	A	9.1	A	8.6
Elo Road with Samson Trail						
• Northbound Approach	A	9.5	B	10.6	A	9.8
• Southbound Approach	A	9.3	B	10.5	A	9.8
• Eastbound Left Turn	A	7.6	A	7.5	A	7.4
• Westbound Left Turn	A	7.2	A	7.5	--	--
Elo Road with West Access Drive						
• Northbound Approach	A	9.2	A	9.6	A	9.2
• Westbound Left Turn	A	7.3	--	--	A	7.4
Elo Road with East Access Drive						
• Northbound Approach	--	--	--	--	A	9.5
• Southbound Approach	A	8.6	A	8.8	A	9.1
• Eastbound Left Turn	--	--	--	--	A	7.3
• Westbound Left Turn	--	--	--	--	A	7.4

LOS = Level of Service
Delay is measured in seconds.

Table 7
CAPACITY ANALYSIS RESULTS
PROJECTED CONDITIONS – WEEKDAY PEAK HOURS

Intersection	Weekday Morning Peak Hour		Weekday Afternoon Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay	LOS	Delay
Highway 55 with Elo Road						
• Eastbound Approach	B	14.3	C	15.4	C	17.5
• Westbound Approach	C	16.2	C	18.3	C	17.3
• Northbound Left Turn	--	--	A	8.2	--	--
• Southbound Left Turn	A	8.8	A	8.2	A	8.4
Elo Road with Samson Trail						
• Northbound Approach	B	11.5	B	10.6	A	9.8
• Southbound Approach	B	10.8	B	10.2	A	9.2
• Eastbound Left Turn	A	7.6	A	7.4	A	7.3
• Westbound Left Turn	--	--	A	7.3	A	7.3
Elo Road with West Access Drive						
• Northbound Approach	A	9.8	A	9.2	A	9.2
• Westbound Left Turn	--	--	A	7.4	A	7.4
Elo Road with East Access Drive						
• Northbound Approach	A	9.6	A	9.3	A	9.2
• Southbound Approach	A	8.9	--	--	A	8.5
• Eastbound Left Turn	A	7.5	A	7.4	--	--
• Westbound Left Turn	A	7.4	A	7.4	A	7.4

LOS = Level of Service
Delay is measured in seconds.

Table 8
CAPACITY ANALYSIS RESULTS
PROJECTED CONDITIONS – SATURDAY PEAK HOURS

Intersection	Saturday Morning Peak Hour		Saturday Midday Peak Hour		Saturday Evening Peak Hour	
	LOS	Delay	LOS	Delay	LOS	Delay
Highway 55 with Elo Road						
• Eastbound Approach	--	--	--	--	--	--
• Westbound Approach	B	13.1	D	30.4	C	18.2
• Northbound Left Turn	--	--	--	--	--	--
• Southbound Left Turn	A	9.2	A	9.2	A	8.6
Elo Road with Samson Trail						
• Northbound Approach	A	9.5	B	10.7	A	9.9
• Southbound Approach	A	9.3	B	10.5	A	9.9
• Eastbound Left Turn	A	7.6	A	7.5	A	7.4
• Westbound Left Turn	A	7.3	A	7.5	--	--
Elo Road with West Access Drive						
• Northbound Approach	A	9.2	A	9.7	A	9.3
• Westbound Left Turn	A	7.3	A	7.4	A	7.4
Elo Road with East Access Drive						
• Northbound Approach	A	9.2	A	9.6	A	9.4
• Southbound Approach	A	8.7	A	8.8	A	9.1
• Eastbound Left Turn	--	--	--	--	A	7.3
• Westbound Left Turn	A	7.3	A	7.4	A	7.4

LOS = Level of Service
Delay is measured in seconds.

Discussion and Recommendations

The following summarizes how the intersections are projected to operate and identifies any street and traffic control improvements necessary to accommodate the development-generated traffic.

Elo Road with Highway 55

The results of the capacity analysis indicate that the eastbound and westbound approaches currently operate at the acceptable level of service (LOS) C or better during the weekday and Saturday peak hours. Under no-build conditions, the eastbound and westbound approaches are projected to continue operating at LOS C or better during the peak hours, expect for the westbound approach during the Saturday midday peak hour which is projected to operate at the acceptable LOS D. Under total projected conditions, the eastbound and westbound approaches are projected to continue operating at no-build levels of service with both approaches operating at LOS D or better. The northbound and southbound left-turn movements are projected to continue operating at LOS A during the peak hours with 95th percentile queues of one to two vehicles. As such, this intersection has sufficient reserve capacity, including on high volume holiday weekends, to accommodate the traffic estimated to be generated by the proposed expansion and no traffic control improvements are required.

However, it should be noted that northbound Highway 55 at Elo Road is at a down grade, and it is our understanding that the proposed self-storage facility will also be utilized for the storage of recreational vehicles. Therefore, given that the proposed self-storage facility and associated fire station will increase the number of heavy vehicles (fire trucks and recreational vehicles), it is recommended that Highway 55 be widened to provide an exclusive northbound right-turn lane. This turn lane will be beneficial based on the following:

- It will provide a dedicated turn lane for larger (heavier) vehicles that are traveling downhill to make a right turn onto Elo Road.

- The provision of a southbound right-turn lane separates the slower, right-turning vehicles from the through traffic, thus increasing the capacity of the roadway.

- The lane will also be utilized by existing traffic, including any school buses, traversing the intersection.

Based on information provided in the *Traffic Manual: Idaho Supplementary Guidance to the MUTCD*[1] published by the Idaho Transportation Department in Figure 3B-4, this turn lane should provide 340 feet of storage and 180 feet of storage. Furthermore, it should be noted that when the existing, no-build, and total projected traffic volumes were compared to the right-turn lane warrant criteria published in the *Traffic Manual: Idaho Supplementary Guidance to the MUTCD*, a northbound right-turn lane is warranted during the weekday morning peak hour and during the Saturday midday and Saturday evening peak hours. A copy of the right-turn lane warrant diagram is included in the Appendix.

[1] Manual on Uniform Traffic Control Devices

Additionally, the intersection sight distance at this intersection was evaluated to ensure that adequate sight distance is provided for vehicles approaching intersection from the north or south on Highway 55 to yield to an emergency vehicle entering the roadway. The intersection sight distance was performed for heavy vehicles and passenger vehicles and the exhibits are included in the appendix. It should be noted that in order to provide a conservative evaluation, the intersection sight distance for semi-trailer vehicles were utilized as these vehicles require the longest sight distances. As can be seen from the intersection sight distance exhibit, sufficient horizontal and vertical sight distance is provided at this intersection. However, it should be noted that it should be noted that the horizontal sight distance is based on aerial photography assumes that the landscaping along the east side of Highway 55 is not blocking the sightlines. Furthermore, the vertical sight distance is based on a scaled PDF of the of the vertical profile.

While the adequate sight distance is provided at this intersection, as previously indicated, the traffic volumes were also compared to the peak hour traffic signal warrant guidelines (Warrant 3) published in the MUTCD to determine if traffic control was warranted/required to stop traffic on Highway 55 to allow emergency vehicles to enter the roadway. The results indicated that a traffic signal was not warranted during the weekday peak hours and was not warranted during the Saturday morning or evening peak hours. While a traffic signal is warranted during the Saturday midday peak hour, a signal is warranted based on the existing traffic volumes and a traffic signal is not required at this intersection based on the following:

- The Saturday traffic counts were conducted on a peak holiday weekend which have abnormally high traffic volumes. When the non peak Saturday peak hour traffic volumes, which were 60 percent less than the peak traffic volumes, were compared to the traffic signal warrant criteria a traffic signal is not warranted.

- The results of the capacity analysis indicate that the intersection has sufficient reserve capacity to accommodate the projected traffic volumes

- A traffic signal is not warranted during either of the five remaining peak hours evaluated.

- Sufficient sight distance exists for vehicles to yield on Highway 55.

As such, the utilization of a traffic signal or an emergency vehicle traffic control signal is not required at this intersection.

Elo Road with Samson Trail

The results of the capacity analysis indicate that the northbound and southbound (Samson Trail) approaches currently operate at LOS B or better during the weekday and Saturday peak hours. Under no-build and total projected conditions, the northbound and southbound approaches are projected to continue operating at LOS B or better during the peak hours. Furthermore, the eastbound and westbound left-turn movements from Elo Road onto Samson Trail are projected to continue operating at LOS A during the peak hours. As such, the proposed Stor-It expansion generated traffic will have a limited impact on the operation of this intersection and no roadway or traffic control improvements will be required.

Elo Road with Site Access Drives

The results of the capacity analysis indicate that outbound movements from access drives onto Elo Road currently operate at LOS A during the weekday and Saturday peak hours. Under no-build and total projected conditions. Outbound movements from the access drives onto Elo Road are projected to continue operating at LOS A during the peak hours. Furthermore, the westbound left-turn movements from Elo Road onto the access drives are projected to continue operating at LOS A during the peak hours with 95th percentile queues of one vehicle. As such, the existing access system will be adequate in accommodating the traffic estimated to be generated by the proposed expansion and no roadway or traffic control improvements will be required.

6. Conclusion

Based on the preceding analyses and recommendations, the following conclusions have been made:

- Overall, the existing roadway network has adequate capacity to accommodate the traffic that will be generated by the proposed development.

- The existing access system will be adequate in accommodating the traffic estimated to be generated by the proposed expansion and will ensure efficient and flexible access is provided.

- To mitigate the increase in recreational vehicles and emergency vehicles performing a northbound right-turn movement from Highway 55 onto Elo Road and to better accommodate existing heavy vehicles and buses, Highway 55 should be widened to provide a northbound right-turn lane with 340 feet of storage and 180 feet of taper.

- Sufficient sight distance exists to the north and south on Highway 55 and Elo Road to allow vehicles to yield to allow emergency vehicles to enter the roadway from Elo Road.

- The provision of a traffic signal or use of emergency vehicle traffic control signal is not required at the intersection of Elo Road with Highway 55 to accommodate projected traffic volumes or to ensure that emergency vehicles are able to enter Highway 55 from Elo Road.

Appendix

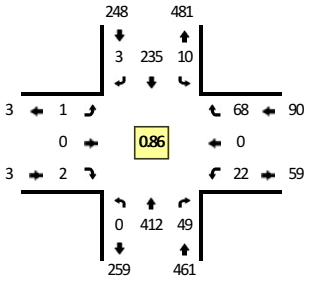
Traffic Count Summary Sheets
Site Plan
Level of Service Criteria
Capacity Analysis Summary Sheets
Right-Turn Lane Warrant Diagram
Sight Distance Exhibit
Peak Hour Traffic Signal Warrant Diagram

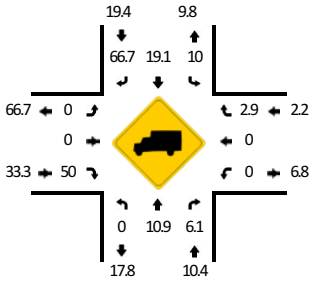
Traffic Count Summary Sheets

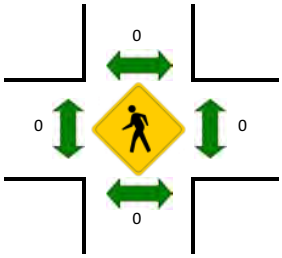
Type of peak hour being reported: System-wide Peak | Method for determining peak hour: Total Entering Volume

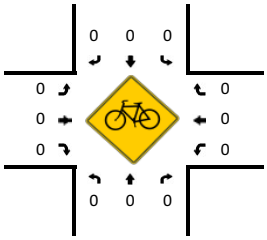
LOCATION: SR 55 -- Elo Rd | **QC JOB #:** 16156795
CITY/STATE: Valley, ID | **DATE:** Thu, May 11 2023

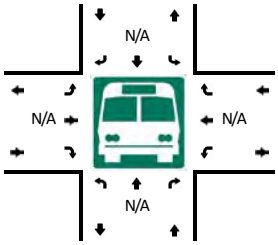
Peak-Hour: 7:30 AM -- 8:30 AM
Peak 15-Min: 7:30 AM -- 7:45 AM

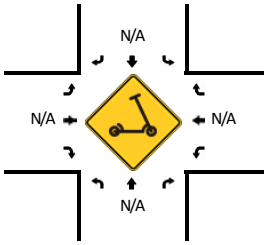












15-Min Count Period Beginning At	SR 55 (Northbound)				SR 55 (Southbound)				Elo Rd (Eastbound)				Elo Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	56	2	0	0	34	0	0	0	0	0	0	1	0	5	0	98	
7:15 AM	0	76	8	0	1	65	0	0	0	0	0	0	1	0	8	0	159	
7:30 AM	0	122	23	0	1	56	0	0	1	0	0	0	2	0	28	0	233	
7:45 AM	0	136	15	0	2	49	0	0	0	0	1	0	10	0	20	0	233	723
8:00 AM	0	80	6	0	3	71	2	0	0	0	1	0	8	0	11	0	182	807
8:15 AM	0	74	5	0	4	59	1	0	0	0	0	0	2	0	9	0	154	802
8:30 AM	0	84	3	0	5	38	0	0	0	0	0	0	5	0	6	0	141	710
8:45 AM	0	85	1	0	5	59	0	0	0	0	0	0	0	0	6	0	156	633

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	488	92	0	4	224	0	0	4	0	0	0	8	0	112	0	932
Heavy Trucks	0	40	4		0	24	0		0	0	0		0	0	0		68
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 7/24/2023 6:33 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

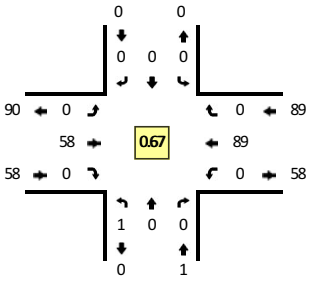
Type of peak hour being reported: System-wide Peak

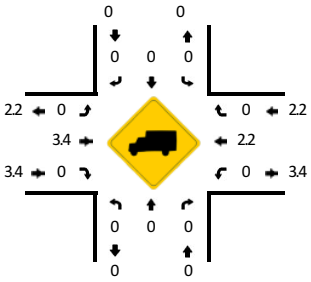
Method for determining peak hour: Total Entering Volume

LOCATION: West Dwy -- Elo Rd
CITY/STATE: Valley, ID

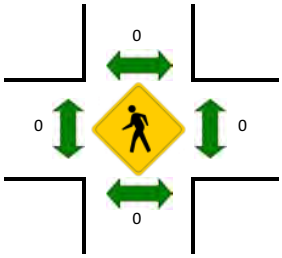
QC JOB #: 16156798
DATE: Thu, May 11 2023

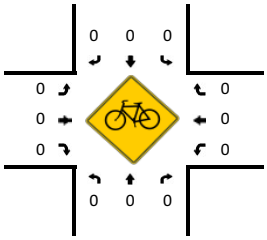
Peak-Hour: 7:30 AM -- 8:30 AM
Peak 15-Min: 7:30 AM -- 7:45 AM

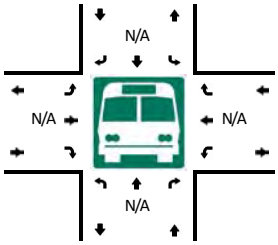


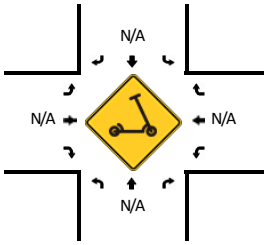


Quality Counts
DATA THAT DRIVES COMMUNITIES









15-Min Count Period Beginning At	West Dwy (Northbound)				West Dwy (Southbound)				Elo Rd (Eastbound)				Elo Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	7	0	0	9	
7:15 AM	0	0	0	0	0	0	0	0	0	9	0	0	0	8	0	0	17	
7:30 AM	0	0	0	0	0	0	0	0	0	23	0	0	0	32	0	0	55	
7:45 AM	1	0	0	0	0	0	0	0	0	18	0	0	0	27	0	0	46	127
8:00 AM	0	0	0	0	0	0	0	0	0	8	0	0	0	19	0	0	27	145
8:15 AM	0	0	0	0	0	0	0	0	0	9	0	0	0	11	0	0	20	148
8:30 AM	0	0	0	0	0	0	0	0	0	8	0	0	0	11	0	0	19	112
8:45 AM	0	0	0	0	0	0	0	0	0	5	1	0	0	6	0	0	12	78

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	0	0	0	0	0	92	0	0	0	128	0	0	220
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 7/24/2023 6:33 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

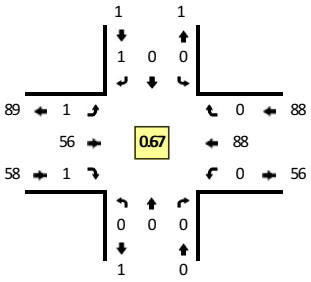
Type of peak hour being reported: System-wide Peak

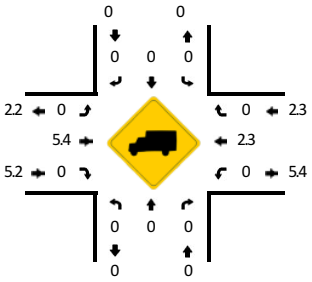
Method for determining peak hour: Total Entering Volume

LOCATION: East Dwy -- Elo Rd
CITY/STATE: Valley, ID

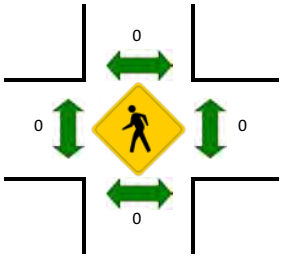
QC JOB #: 161567101
DATE: Thu, May 11 2023

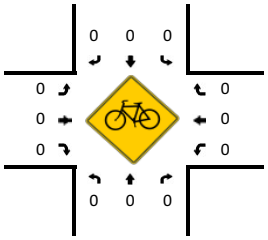
Peak-Hour: 7:30 AM -- 8:30 AM
Peak 15-Min: 7:30 AM -- 7:45 AM

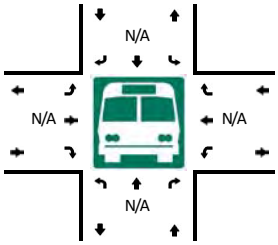


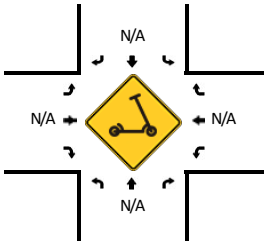


Quality Counts
DATA THAT DRIVES COMMUNITIES









15-Min Count Period Beginning At	East Dwy (Northbound)				East Dwy (Southbound)				Elo Rd (Eastbound)				Elo Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	7	0	0	9	
7:15 AM	0	0	0	0	0	0	0	0	0	9	0	0	0	8	0	0	17	
7:30 AM	0	0	0	0	0	0	0	0	1	22	0	0	0	32	0	0	55	
7:45 AM	0	0	0	0	0	0	1	0	0	17	1	0	0	26	0	0	45	126
8:00 AM	0	0	0	0	0	0	0	0	0	8	0	0	0	20	0	0	28	145
8:15 AM	0	0	0	0	0	0	0	0	0	9	0	0	0	10	0	0	19	147
8:30 AM	0	0	0	0	0	0	0	0	0	8	0	0	0	11	0	0	19	111
8:45 AM	0	0	0	0	0	0	0	0	0	5	0	0	0	6	0	0	11	77

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	0	0	0	0	4	88	0	0	0	128	0	0	220
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 7/24/2023 6:33 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: System-wide Peak

Method for determining peak hour: Total Entering Volume

LOCATION: S Samson Trl -- Elo Rd

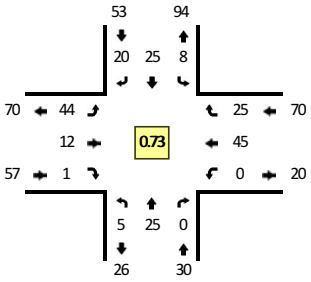
QC JOB #: 161567104

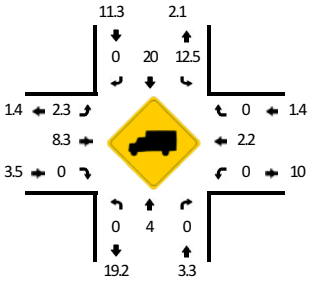
CITY/STATE: Valley, ID

DATE: Thu, May 11 2023

Peak-Hour: 7:30 AM -- 8:30 AM

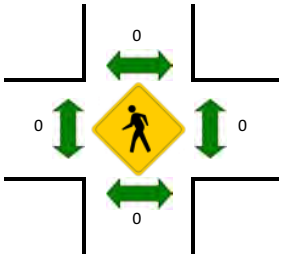
Peak 15-Min: 7:45 AM -- 8:00 AM

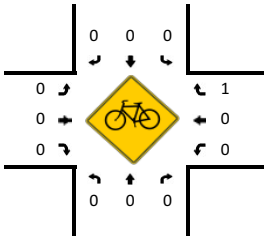


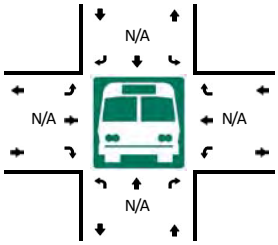


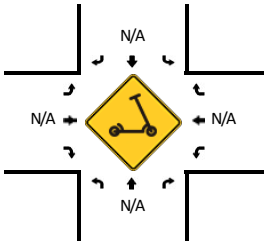
Quality Counts

DATA THAT DRIVES COMMUNITIES









15-Min Count Period Beginning At	S Samson Trl (Northbound)				S Samson Trl (Southbound)				Elo Rd (Eastbound)				Elo Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	2	0	0	0	0	3	3	0	1	0	1	0	0	3	3	0	16	
7:15 AM	1	1	0	0	1	2	0	0	6	2	0	0	0	7	3	0	23	
7:30 AM	0	10	0	0	1	1	2	0	19	2	1	0	0	14	13	0	63	
7:45 AM	4	8	0	0	1	10	7	0	17	2	0	0	0	15	8	0	72	174
8:00 AM	1	3	0	0	4	8	9	0	5	3	0	0	0	9	2	0	44	202
8:15 AM	0	4	0	0	2	6	2	0	3	5	0	0	0	7	2	0	31	210
8:30 AM	2	2	0	0	0	0	3	0	2	5	1	0	1	6	2	0	24	171
8:45 AM	1	1	0	0	1	1	0	0	2	4	0	0	0	5	2	0	17	116

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	16	32	0	0	4	40	28	0	68	8	0	0	0	60	32	0	288
Heavy Trucks	0	0	0		0	12	0		4	0	0		0	4	0		20
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 7/24/2023 6:33 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

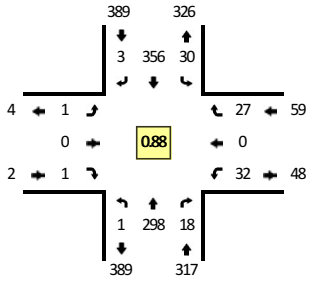
Type of peak hour being reported: User-Defined

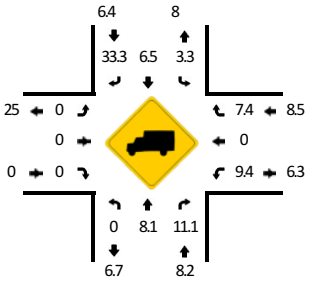
Method for determining peak hour: Total Entering Volume

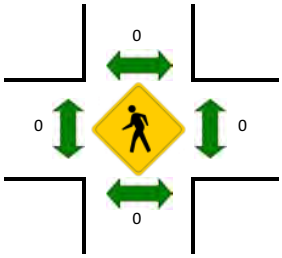
LOCATION: SR 55 -- Elo Rd
CITY/STATE: Valley, ID

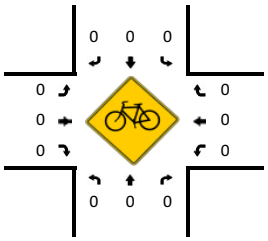
QC JOB #: 16156796
DATE: Thu, May 11 2023

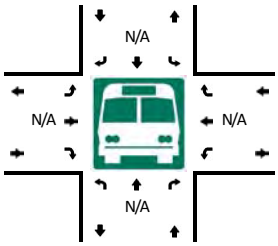
Peak-Hour: 2:30 PM -- 3:30 PM
Peak 15-Min: 3:15 PM -- 3:30 PM

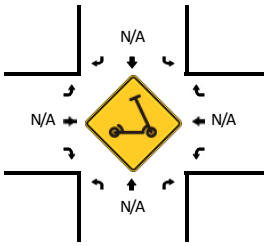












15-Min Count Period Beginning At	SR 55 (Northbound)				SR 55 (Southbound)				Elo Rd (Eastbound)				Elo Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
2:00 PM	0	80	1	0	7	67	0	0	0	0	1	0	2	0	3	0	161	
2:15 PM	0	75	4	0	2	85	0	0	0	0	0	0	3	0	9	0	178	
2:30 PM	0	85	3	0	4	75	1	0	0	0	0	0	3	0	3	0	174	
2:45 PM	1	66	8	0	8	82	0	0	0	0	0	0	5	0	3	0	173	686
3:00 PM	0	73	6	0	7	93	2	0	1	0	0	0	10	0	9	0	201	726
3:15 PM	0	74	1	0	11	106	0	0	0	0	1	0	14	0	12	0	219	767
3:30 PM	0	91	4	0	8	83	1	0	0	0	0	0	5	0	5	0	197	790
3:45 PM	0	71	6	0	9	95	0	0	0	0	0	0	4	0	6	0	191	808
4:00 PM	0	84	5	0	9	81	0	0	0	0	0	0	7	0	10	0	196	803
4:15 PM	0	98	3	0	13	111	0	0	0	0	1	0	4	0	7	0	237	821
4:30 PM	0	95	4	0	12	103	0	0	0	0	0	0	4	0	5	0	223	847
4:45 PM	0	78	3	0	13	105	0	0	0	0	0	0	3	0	10	0	212	868
5:00 PM	0	92	4	0	14	104	1	0	1	0	0	0	5	0	6	0	227	899
5:15 PM	0	70	2	0	12	113	0	0	0	0	0	0	1	0	4	0	202	864
5:30 PM	1	75	3	0	11	85	0	0	0	0	0	0	4	0	8	0	187	828
5:45 PM	0	67	3	0	7	70	0	0	2	0	0	0	2	0	8	0	159	775

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	296	4	0	44	424	0	0	0	0	4	0	56	0	48	0	876
Heavy Trucks	0	40	0		0	28	0		0	0	0		4	0	4		76
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 7/24/2023 6:38 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

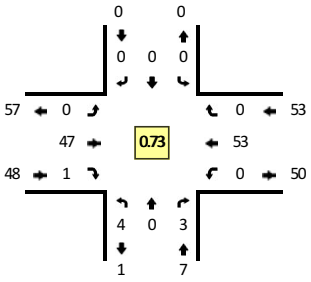
Type of peak hour being reported: User-Defined

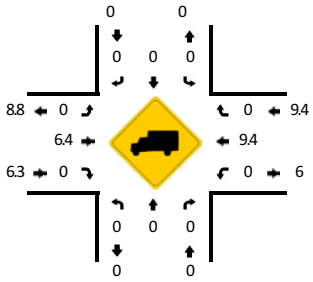
Method for determining peak hour: Total Entering Volume

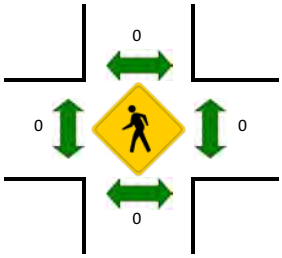
LOCATION: West Dwy -- Elo Rd
CITY/STATE: Valley, ID

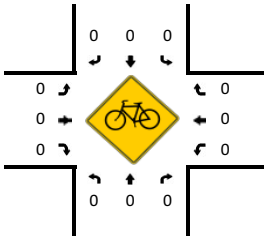
QC JOB #: 16156799
DATE: Thu, May 11 2023

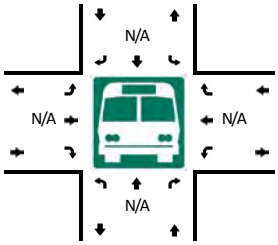
Peak-Hour: 2:30 PM -- 3:30 PM
Peak 15-Min: 3:15 PM -- 3:30 PM

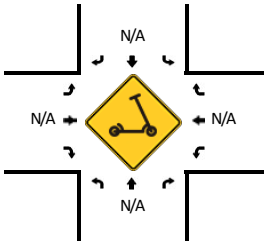












15-Min Count Period Beginning At	West Dwy (Northbound)				West Dwy (Southbound)				Elo Rd (Eastbound)				Elo Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
2:00 PM	1	0	1	0	0	0	0	0	0	9	0	0	0	3	0	0	14	
2:15 PM	0	0	0	0	0	0	0	0	0	5	1	0	1	12	0	0	19	
2:30 PM	0	0	1	0	0	0	0	0	0	7	0	0	0	6	0	0	14	
2:45 PM	0	0	0	0	0	0	0	0	0	17	0	0	0	8	0	0	25	72
3:00 PM	3	0	1	0	0	0	0	0	0	11	1	0	0	16	0	0	32	90
3:15 PM	1	0	1	0	0	0	0	0	0	12	0	0	0	23	0	0	37	108
3:30 PM	1	0	0	0	0	0	0	0	0	11	1	0	1	9	0	0	23	117
3:45 PM	1	0	0	0	0	0	0	0	0	15	0	0	1	9	0	0	26	118
4:00 PM	0	0	1	0	0	0	0	0	0	13	0	0	0	17	0	0	31	117
4:15 PM	0	0	0	0	0	0	0	0	0	15	0	1	1	10	0	0	27	107
4:30 PM	1	0	0	0	0	0	0	0	0	13	2	0	0	8	0	0	24	108
4:45 PM	2	0	0	0	0	0	0	0	0	16	0	0	1	11	0	0	30	112
5:00 PM	1	0	1	0	0	0	0	0	0	15	2	0	0	10	0	0	29	110
5:15 PM	1	0	0	0	0	0	0	0	0	15	0	0	0	4	0	0	20	103
5:30 PM	1	0	1	0	0	0	0	0	0	14	0	0	1	11	0	0	28	107
5:45 PM	0	0	0	0	0	0	0	0	0	9	1	0	0	10	0	0	20	97

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	4	0	4	0	0	0	0	0	0	48	0	0	0	92	0	0	148
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	12	0		12
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 7/24/2023 6:38 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

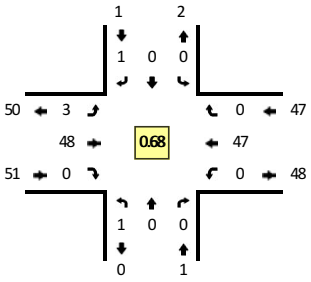
Type of peak hour being reported: User-Defined

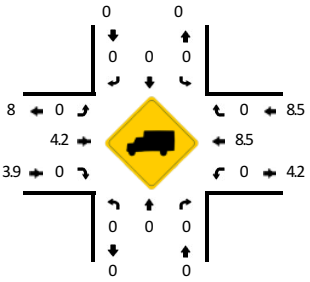
Method for determining peak hour: Total Entering Volume

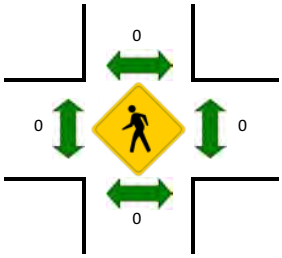
LOCATION: East Dwy -- Elo Rd
CITY/STATE: Valley, ID

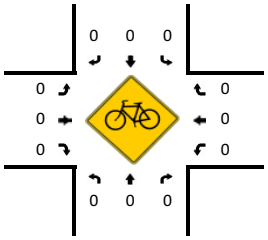
QC JOB #: 161567102
DATE: Thu, May 11 2023

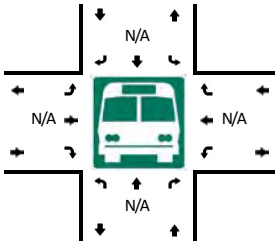
Peak-Hour: 2:30 PM -- 3:30 PM
Peak 15-Min: 3:15 PM -- 3:30 PM

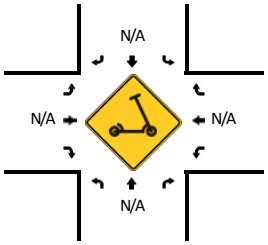












15-Min Count Period Beginning At	East Dwy (Northbound)				East Dwy (Southbound)				Elo Rd (Eastbound)				Elo Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
2:00 PM	0	0	0	0	0	0	0	0	0	10	0	0	0	2	0	0	12	
2:15 PM	0	0	0	0	0	0	0	0	0	5	0	0	0	13	0	0	18	
2:30 PM	0	0	0	0	0	0	0	0	0	6	0	1	0	5	0	0	12	
2:45 PM	0	0	0	0	0	0	0	0	0	17	0	0	0	5	0	0	22	64
3:00 PM	1	0	0	0	0	0	0	0	1	12	0	0	0	15	0	0	29	81
3:15 PM	0	0	0	0	0	0	1	0	1	13	0	0	0	22	0	0	37	100
3:30 PM	0	0	0	0	0	0	0	0	2	9	0	0	0	10	0	0	21	109
3:45 PM	0	0	0	0	0	0	0	0	0	15	0	0	0	10	0	0	25	112
4:00 PM	0	0	0	0	0	0	2	0	0	14	0	0	0	15	0	0	31	114
4:15 PM	0	0	0	0	0	0	1	0	0	15	0	0	0	10	0	0	26	103
4:30 PM	0	0	0	0	0	0	0	0	0	13	0	0	0	8	0	0	21	103
4:45 PM	0	0	0	0	0	0	0	0	0	16	0	0	0	12	0	0	28	106
5:00 PM	0	0	0	0	0	0	0	0	0	16	0	0	0	10	0	0	26	101
5:15 PM	0	0	0	0	0	0	0	0	0	15	0	0	0	4	0	0	19	94
5:30 PM	0	0	0	0	0	0	0	0	0	13	0	0	1	12	0	0	26	99
5:45 PM	0	0	0	0	0	0	0	0	0	11	0	0	0	10	0	0	21	92

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	0	0	4	0	4	52	0	0	0	88	0	0	148
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	12	0		12
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 7/24/2023 6:38 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: User-Defined

Method for determining peak hour: Total Entering Volume

LOCATION: S Samson Trl -- Elo Rd

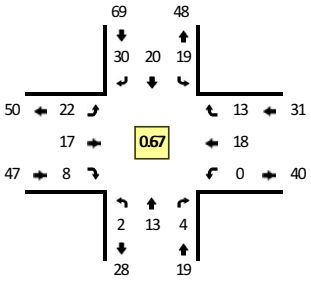
CITY/STATE: Valley, ID

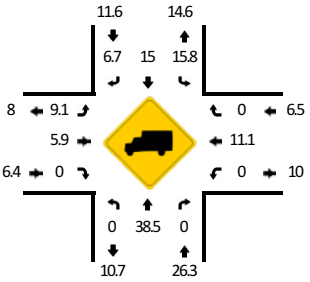
QC JOB #: 161567105

DATE: Thu, May 11 2023

Peak-Hour: 2:30 PM -- 3:30 PM

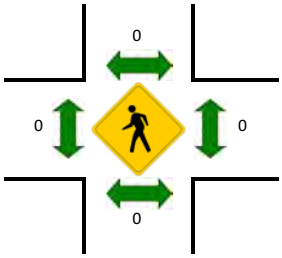
Peak 15-Min: 3:15 PM -- 3:30 PM

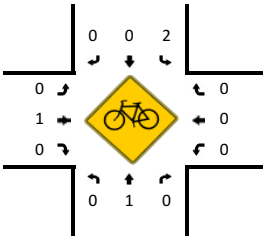


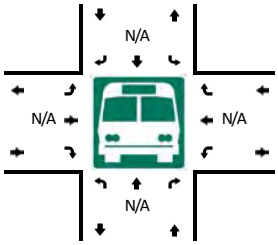


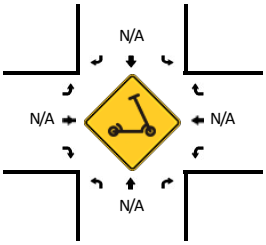
Quality Counts

DATA THAT DRIVES COMMUNITIES









15-Min Count Period Beginning At	S Samson Trl (Northbound)				S Samson Trl (Southbound)				Elo Rd (Eastbound)				Elo Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
2:00 PM	1	1	0	0	0	2	2	0	2	8	0	0	1	0	5	0	22	
2:15 PM	1	2	0	0	4	4	5	0	3	2	0	0	0	7	1	0	29	
2:30 PM	0	5	0	0	1	1	1	0	4	1	1	0	0	3	4	0	21	
2:45 PM	0	1	3	0	0	3	4	0	9	5	3	0	0	4	4	0	36	108
3:00 PM	0	3	1	0	6	9	12	0	6	3	1	0	0	4	2	0	47	133
3:15 PM	2	4	0	0	12	7	13	0	3	8	3	0	0	7	3	0	62	166
3:30 PM	0	3	2	0	5	1	3	0	2	5	2	0	1	6	2	0	32	177
3:45 PM	2	0	0	0	4	0	5	0	5	8	2	0	1	4	1	0	32	173
4:00 PM	0	3	0	0	0	4	8	0	5	8	0	0	0	7	3	0	38	164
4:15 PM	1	3	0	0	1	3	4	0	3	12	1	0	0	3	4	0	35	137
4:30 PM	1	4	0	0	3	3	4	0	4	8	1	0	1	3	3	0	35	140
4:45 PM	2	2	0	0	4	1	3	0	3	9	3	0	0	7	0	0	34	142
5:00 PM	0	1	0	0	4	1	4	0	2	16	0	0	1	6	4	0	39	143
5:15 PM	0	4	0	0	4	3	1	0	1	11	3	0	0	3	1	0	31	139
5:30 PM	1	2	1	0	6	0	2	0	2	8	3	0	0	11	4	0	40	144
5:45 PM	2	1	0	0	1	5	1	0	1	8	2	0	0	6	4	0	31	141

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	8	16	0	0	48	28	52	0	12	32	12	0	0	28	12	0	248
Heavy Trucks	0	0	0		8	4	4		0	0	0		0	4	0		20
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

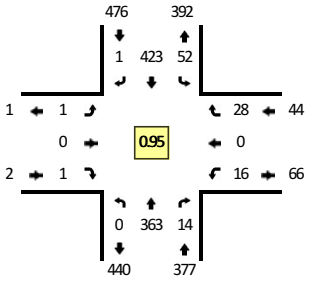
Report generated on 7/24/2023 6:38 PM

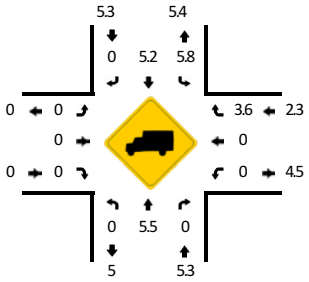
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: System-wide Peak | Method for determining peak hour: Total Entering Volume

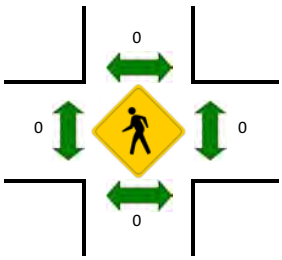
LOCATION: SR 55 -- Elo Rd | **QC JOB #:** 16156796
CITY/STATE: Valley, ID | **DATE:** Thu, May 11 2023

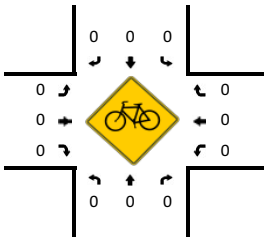
Peak-Hour: 4:15 PM -- 5:15 PM
Peak 15-Min: 4:15 PM -- 4:30 PM

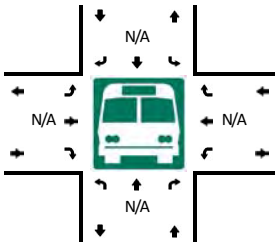


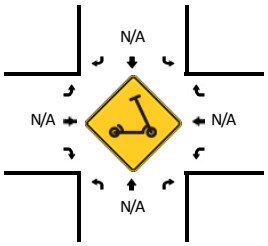


Quality Counts
DATA THAT DRIVES COMMUNITIES









15-Min Count Period Beginning At	SR 55 (Northbound)				SR 55 (Southbound)				Elo Rd (Eastbound)				Elo Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
2:00 PM	0	80	1	0	7	67	0	0	0	0	1	0	2	0	3	0	161	
2:15 PM	0	75	4	0	2	85	0	0	0	0	0	0	3	0	9	0	178	
2:30 PM	0	85	3	0	4	75	1	0	0	0	0	0	3	0	3	0	174	
2:45 PM	1	66	8	0	8	82	0	0	0	0	0	0	5	0	3	0	173	686
3:00 PM	0	73	6	0	7	93	2	0	1	0	0	0	10	0	9	0	201	726
3:15 PM	0	74	1	0	11	106	0	0	0	0	1	0	14	0	12	0	219	767
3:30 PM	0	91	4	0	8	83	1	0	0	0	0	0	5	0	5	0	197	790
3:45 PM	0	71	6	0	9	95	0	0	0	0	0	0	4	0	6	0	191	808
4:00 PM	0	84	5	0	9	81	0	0	0	0	0	0	7	0	10	0	196	803
4:15 PM	0	98	3	0	13	111	0	0	0	0	1	0	4	0	7	0	237	821
4:30 PM	0	95	4	0	12	103	0	0	0	0	0	0	4	0	5	0	223	847
4:45 PM	0	78	3	0	13	105	0	0	0	0	0	0	3	0	10	0	212	868
5:00 PM	0	92	4	0	14	104	1	0	1	0	0	0	5	0	6	0	227	899
5:15 PM	0	70	2	0	12	113	0	0	0	0	0	0	1	0	4	0	202	864
5:30 PM	1	75	3	0	11	85	0	0	0	0	0	0	4	0	8	0	187	828
5:45 PM	0	67	3	0	7	70	0	0	2	0	0	0	2	0	8	0	159	775

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	392	12	0	52	444	0	0	0	0	4	0	16	0	28	0	948
Heavy Trucks	0	36	0		0	16	0		0	0	0		0	0	0		52
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

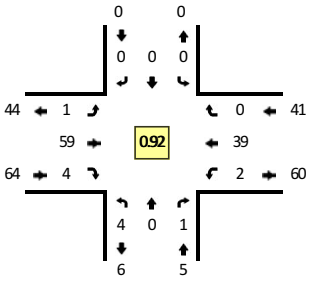
Comments:

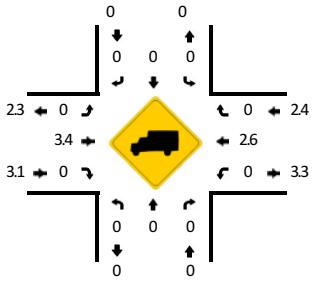
Report generated on 7/24/2023 6:38 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: System-wide Peak | Method for determining peak hour: Total Entering Volume

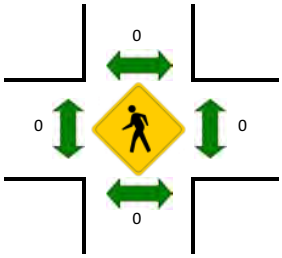
LOCATION: West Dwy -- Elo Rd | **QC JOB #:** 16156799
CITY/STATE: Valley, ID | **DATE:** Thu, May 11 2023

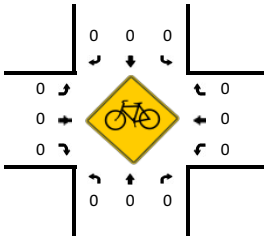
Peak-Hour: 4:15 PM -- 5:15 PM
Peak 15-Min: 4:45 PM -- 5:00 PM

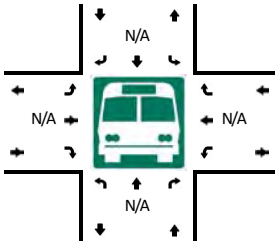


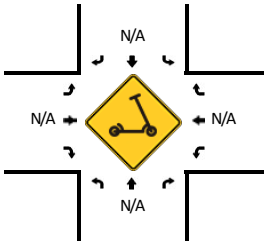


Quality Counts
DATA THAT DRIVES COMMUNITIES









15-Min Count Period Beginning At	West Dwy (Northbound)				West Dwy (Southbound)				Elo Rd (Eastbound)				Elo Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
2:00 PM	1	0	1	0	0	0	0	0	0	9	0	0	0	3	0	0	14	
2:15 PM	0	0	0	0	0	0	0	0	0	5	1	0	1	12	0	0	19	
2:30 PM	0	0	1	0	0	0	0	0	0	7	0	0	0	6	0	0	14	
2:45 PM	0	0	0	0	0	0	0	0	0	17	0	0	0	8	0	0	25	72
3:00 PM	3	0	1	0	0	0	0	0	0	11	1	0	0	16	0	0	32	90
3:15 PM	1	0	1	0	0	0	0	0	0	12	0	0	0	23	0	0	37	108
3:30 PM	1	0	0	0	0	0	0	0	0	11	1	0	1	9	0	0	23	117
3:45 PM	1	0	0	0	0	0	0	0	0	15	0	0	1	9	0	0	26	118
4:00 PM	0	0	1	0	0	0	0	0	0	13	0	0	0	17	0	0	31	117
4:15 PM	0	0	0	0	0	0	0	0	0	15	0	1	1	10	0	0	27	107
4:30 PM	1	0	0	0	0	0	0	0	0	13	2	0	0	8	0	0	24	108
4:45 PM	2	0	0	0	0	0	0	0	0	16	0	0	1	11	0	0	30	112
5:00 PM	1	0	1	0	0	0	0	0	0	15	2	0	0	10	0	0	29	110
5:15 PM	1	0	0	0	0	0	0	0	0	15	0	0	0	4	0	0	20	103
5:30 PM	1	0	1	0	0	0	0	0	0	14	0	0	1	11	0	0	28	107
5:45 PM	0	0	0	0	0	0	0	0	0	9	1	0	0	10	0	0	20	97

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	8	0	0	0	0	0	0	0	0	64	0	0	4	44	0	0	120
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

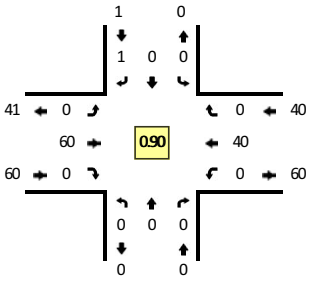
Comments:

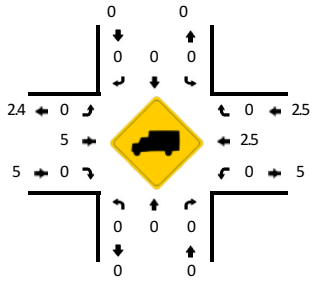
Report generated on 7/24/2023 6:38 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: System-wide Peak | Method for determining peak hour: Total Entering Volume

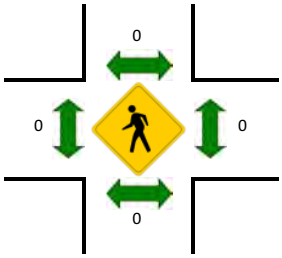
LOCATION: East Dwy -- Elo Rd | **QC JOB #:** 161567102
CITY/STATE: Valley, ID | **DATE:** Thu, May 11 2023

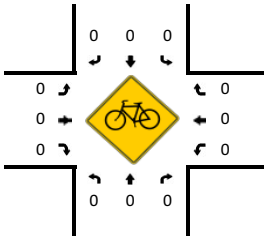
Peak-Hour: 4:15 PM -- 5:15 PM
Peak 15-Min: 4:45 PM -- 5:00 PM

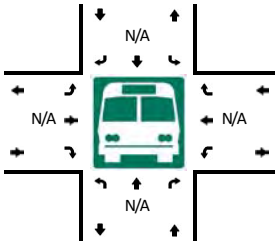


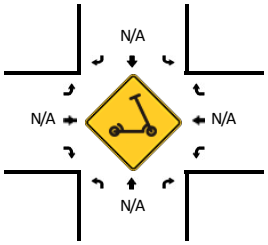


Quality Counts
DATA THAT DRIVES COMMUNITIES









15-Min Count Period Beginning At	East Dwy (Northbound)				East Dwy (Southbound)				Elo Rd (Eastbound)				Elo Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
2:00 PM	0	0	0	0	0	0	0	0	0	10	0	0	0	2	0	0	12	
2:15 PM	0	0	0	0	0	0	0	0	0	5	0	0	0	13	0	0	18	
2:30 PM	0	0	0	0	0	0	0	0	0	6	0	1	0	5	0	0	12	
2:45 PM	0	0	0	0	0	0	0	0	0	17	0	0	0	5	0	0	22	64
3:00 PM	1	0	0	0	0	0	0	0	1	12	0	0	0	15	0	0	29	81
3:15 PM	0	0	0	0	0	0	1	0	1	13	0	0	0	22	0	0	37	100
3:30 PM	0	0	0	0	0	0	0	0	2	9	0	0	0	10	0	0	21	109
3:45 PM	0	0	0	0	0	0	0	0	0	15	0	0	0	10	0	0	25	112
4:00 PM	0	0	0	0	0	0	2	0	0	14	0	0	0	15	0	0	31	114
4:15 PM	0	0	0	0	0	0	1	0	0	15	0	0	0	10	0	0	26	103
4:30 PM	0	0	0	0	0	0	0	0	0	13	0	0	0	8	0	0	21	103
4:45 PM	0	0	0	0	0	0	0	0	0	16	0	0	0	12	0	0	28	106
5:00 PM	0	0	0	0	0	0	0	0	0	16	0	0	0	10	0	0	26	101
5:15 PM	0	0	0	0	0	0	0	0	0	15	0	0	0	4	0	0	19	94
5:30 PM	0	0	0	0	0	0	0	0	0	13	0	0	1	12	0	0	26	99
5:45 PM	0	0	0	0	0	0	0	0	0	11	0	0	0	10	0	0	21	92

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	0	0	0	0	0	64	0	0	0	48	0	0	112
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

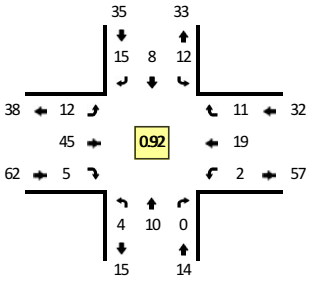
Comments:

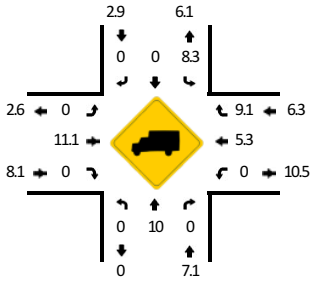
Report generated on 7/24/2023 6:38 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

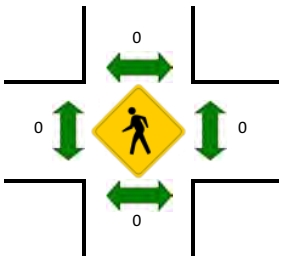
Type of peak hour being reported: System-wide Peak | Method for determining peak hour: Total Entering Volume

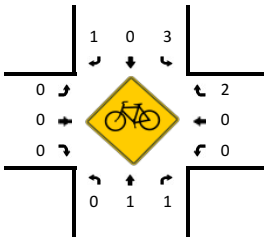
LOCATION: S Samson Trl -- Elo Rd | **QC JOB #:** 161567105
CITY/STATE: Valley, ID | **DATE:** Thu, May 11 2023

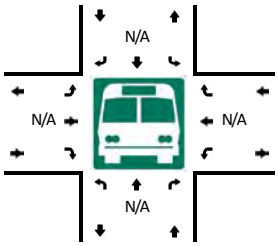
Peak-Hour: 4:15 PM -- 5:15 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

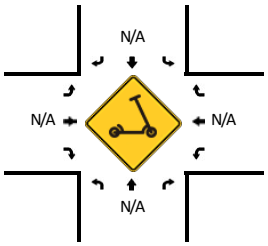












15-Min Count Period Beginning At	S Samson Trl (Northbound)				S Samson Trl (Southbound)				Elo Rd (Eastbound)				Elo Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
2:00 PM	1	1	0	0	0	2	2	0	2	8	0	0	1	0	5	0	22	
2:15 PM	1	2	0	0	4	4	5	0	3	2	0	0	0	7	1	0	29	
2:30 PM	0	5	0	0	1	1	1	0	4	1	1	0	0	3	4	0	21	
2:45 PM	0	1	3	0	0	3	4	0	9	5	3	0	0	4	4	0	36	108
3:00 PM	0	3	1	0	6	9	12	0	6	3	1	0	0	4	2	0	47	133
3:15 PM	2	4	0	0	12	7	13	0	3	8	3	0	0	7	3	0	62	166
3:30 PM	0	3	2	0	5	1	3	0	2	5	2	0	1	6	2	0	32	177
3:45 PM	2	0	0	0	4	0	5	0	5	8	2	0	1	4	1	0	32	173
4:00 PM	0	3	0	0	0	4	8	0	5	8	0	0	0	7	3	0	38	164
4:15 PM	1	3	0	0	1	3	4	0	3	12	1	0	0	3	4	0	35	137
4:30 PM	1	4	0	0	3	3	4	0	4	8	1	0	1	3	3	0	35	140
4:45 PM	2	2	0	0	4	1	3	0	3	9	3	0	0	7	0	0	34	142
5:00 PM	0	1	0	0	4	1	4	0	2	16	0	0	1	6	4	0	39	143
5:15 PM	0	4	0	0	4	3	1	0	1	11	3	0	0	3	1	0	31	139
5:30 PM	1	2	1	0	6	0	2	0	2	8	3	0	0	11	4	0	40	144
5:45 PM	2	1	0	0	1	5	1	0	1	8	2	0	0	6	4	0	31	141

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	4	0	0	16	4	16	0	8	64	0	0	4	24	16	0	156
Heavy Trucks	0	0	0		0	0	0		0	8	0		0	0	0		8
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		8	0	0		0	0	0		0	0	4		12
Scooters																	

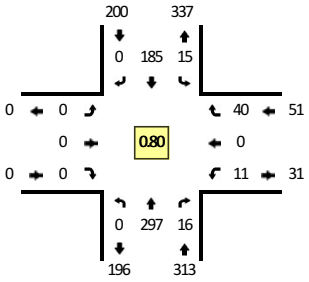
Comments:

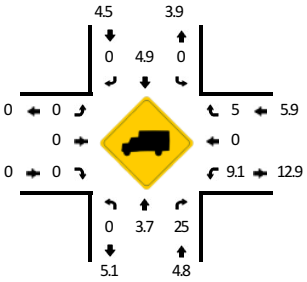
Report generated on 7/24/2023 6:38 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: System-wide Peak | Method for determining peak hour: Total Entering Volume

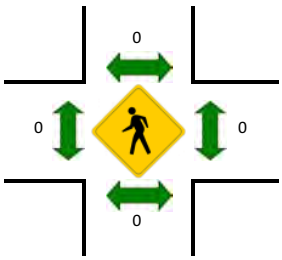
LOCATION: Hwy 55 -- Elo Rd | **QC JOB #:** 16257101
CITY/STATE: McCall, ID | **DATE:** Sat, Jul 1 2023

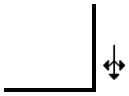
Peak-Hour: 8:00 AM -- 9:00 AM
Peak 15-Min: 8:45 AM -- 9:00 AM

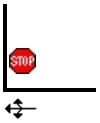


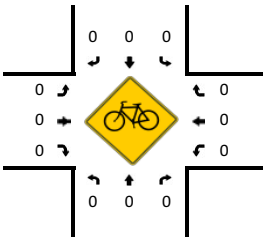


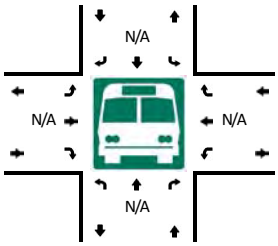
Quality Counts
DATA THAT DRIVES COMMUNITIES

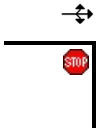


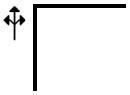


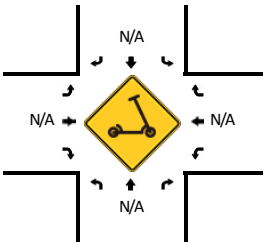












15-Min Count Period Beginning At	Hwy 55 (Northbound)				Hwy 55 (Southbound)				Elo Rd (Eastbound)				Elo Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	28	0	0	2	28	0	0	1	0	0	0	1	0	3	0	63	
7:15 AM	0	43	1	0	2	30	1	0	1	0	0	0	1	0	3	0	82	
7:30 AM	0	44	2	0	2	27	0	0	0	0	0	0	1	0	6	0	82	
7:45 AM	0	62	4	0	2	30	0	0	0	0	0	0	1	0	4	0	103	330
8:00 AM	0	54	3	0	1	35	0	0	0	0	0	0	2	0	8	0	103	370
8:15 AM	0	71	5	0	3	49	0	0	0	0	0	0	2	0	10	0	140	428
8:30 AM	0	86	2	0	5	41	0	0	0	0	0	0	2	0	8	0	144	490
8:45 AM	0	86	6	0	6	60	0	0	0	0	0	0	5	0	14	0	177	564

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	344	24	0	24	240	0	0	0	0	0	0	20	0	56	0	708
Heavy Trucks	0	12	8		0	8	0		0	0	0		4	0	0		32
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

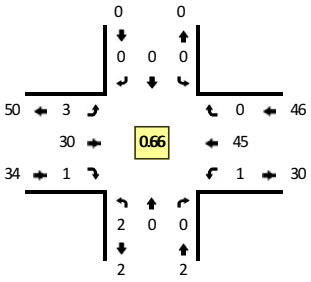
Report generated on 7/24/2023 6:31 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

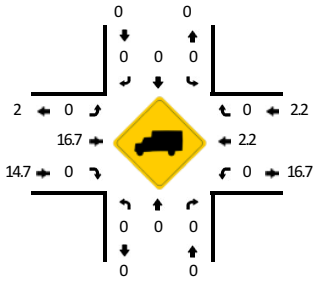
Type of peak hour being reported: System-wide Peak | Method for determining peak hour: Total Entering Volume

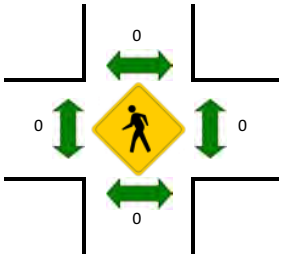
LOCATION: West Storage Driveway -- Elo Rd | **QC JOB #:** 16257104
CITY/STATE: McCall, ID | **DATE:** Sat, Jul 1 2023

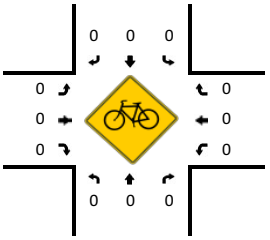
Peak-Hour: 8:00 AM -- 9:00 AM
Peak 15-Min: 8:45 AM -- 9:00 AM

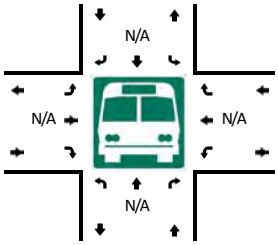


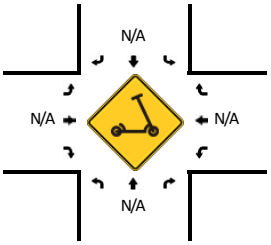
Quality Counts
DATA THAT DRIVES COMMUNITIES











15-Min Count Period Beginning At	West Storage Driveway (Northbound)				West Storage Driveway (Southbound)				Elo Rd (Eastbound)				Elo Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	3	0	0	5	
7:15 AM	0	0	0	0	0	0	0	0	0	3	0	0	0	4	0	0	7	
7:30 AM	0	0	0	0	0	0	0	0	0	3	1	0	0	7	0	0	11	
7:45 AM	1	0	0	0	0	0	0	0	0	6	0	0	0	6	0	0	13	36
8:00 AM	0	0	0	0	0	0	0	0	0	4	0	1	1	8	0	0	14	45
8:15 AM	1	0	0	0	0	0	0	0	0	8	0	0	0	11	0	0	20	58
8:30 AM	0	0	0	0	0	0	0	0	0	6	1	1	0	9	0	0	17	64
8:45 AM	1	0	0	0	0	0	0	0	0	12	0	1	0	17	0	0	31	82

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	4	0	0	0	0	0	0	0	0	48	0	4	0	68	0	0	124
Heavy Trucks	0	0	0		0	0	0		0	8	0		0	0	0		8
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

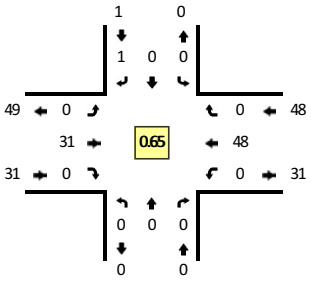
Comments:

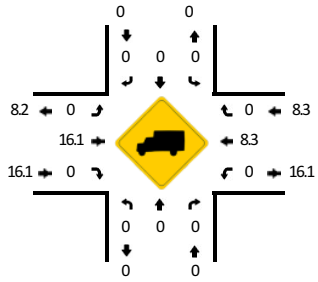
Report generated on 7/24/2023 6:31 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: System-wide Peak | Method for determining peak hour: Total Entering Volume

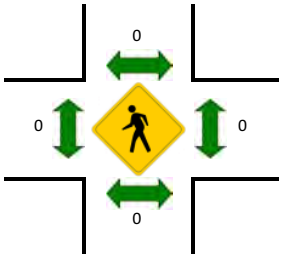
LOCATION: East Storage Driveway -- Elo Rd | **QC JOB #:** 16257107
CITY/STATE: McCall, ID | **DATE:** Sat, Jul 1 2023

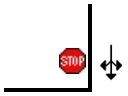
Peak-Hour: 8:00 AM -- 9:00 AM
Peak 15-Min: 8:45 AM -- 9:00 AM

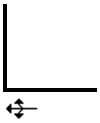


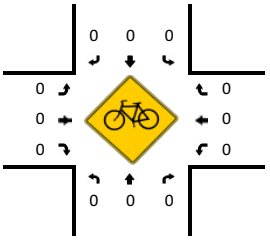


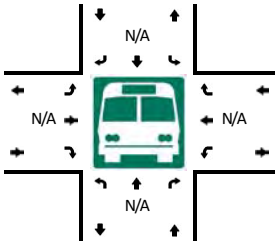
Quality Counts
DATA THAT DRIVES COMMUNITIES

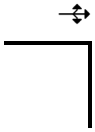


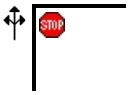


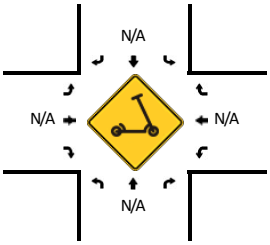












15-Min Count Period Beginning At	East Storage Driveway (Northbound)				East Storage Driveway (Southbound)				Elo Rd (Eastbound)				Elo Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	3	0	0	5	
7:15 AM	0	0	0	0	0	0	0	0	0	3	0	0	0	4	0	0	7	
7:30 AM	0	0	0	0	0	0	0	0	1	2	0	0	0	8	0	0	11	
7:45 AM	0	0	0	0	0	0	0	0	0	6	0	0	0	6	0	0	12	35
8:00 AM	0	0	0	0	0	0	1	0	0	4	0	0	0	8	0	0	13	43
8:15 AM	0	0	0	0	0	0	0	0	0	8	0	0	0	11	0	0	19	55
8:30 AM	0	0	0	0	0	0	0	0	0	7	0	0	0	10	0	0	17	61
8:45 AM	0	0	0	0	0	0	0	0	0	12	0	0	0	19	0	0	31	80

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	0	0	0	0	0	48	0	0	0	76	0	0	124
Heavy Trucks	0	0	0		0	0	0		0	8	0		0	4	0		12
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

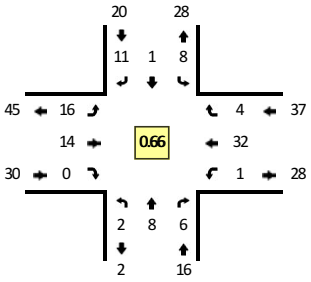
Comments:

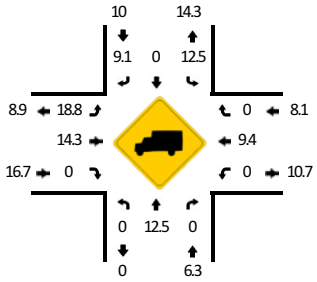
Report generated on 7/24/2023 6:31 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

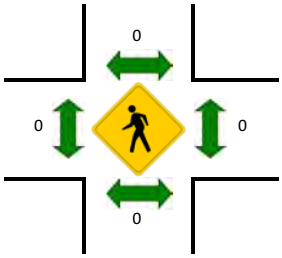
Type of peak hour being reported: System-wide Peak | Method for determining peak hour: Total Entering Volume

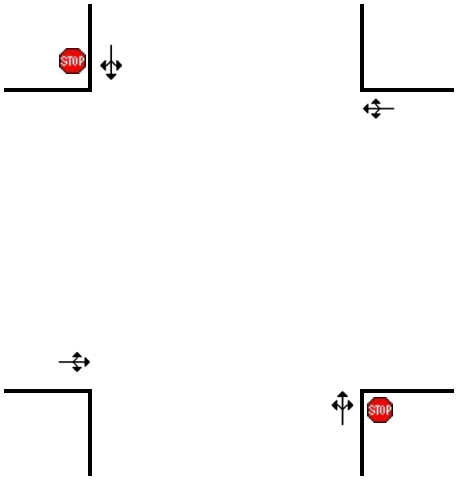
LOCATION: S Samson Trl -- Elo Rd | **QC JOB #:** 16257110
CITY/STATE: McCall, ID | **DATE:** Sat, Jul 1 2023

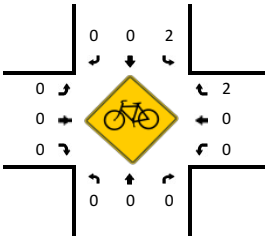
Peak-Hour: 8:00 AM -- 9:00 AM
Peak 15-Min: 8:45 AM -- 9:00 AM

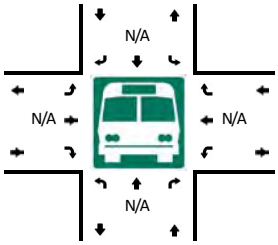


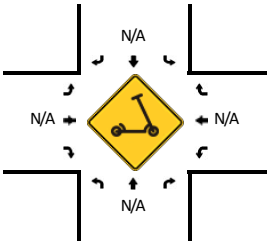












15-Min Count Period Beginning At	S Samson Trl (Northbound)				S Samson Trl (Southbound)				Elo Rd (Eastbound)				Elo Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	2	0	1	0	0	2	0	0	0	2	0	0	7	
7:15 AM	0	0	0	0	0	1	1	0	1	2	1	0	0	3	0	0	9	
7:30 AM	1	0	0	0	3	1	1	0	0	1	0	0	0	5	1	0	13	
7:45 AM	2	2	0	0	1	1	1	0	5	2	0	0	0	5	1	0	20	49
8:00 AM	0	0	1	0	3	1	2	0	2	2	0	0	0	4	2	0	17	59
8:15 AM	0	2	0	0	2	0	2	0	5	2	0	0	0	8	0	0	21	71
8:30 AM	1	2	4	0	1	0	0	0	2	5	0	0	1	9	1	0	26	84
8:45 AM	1	4	1	0	2	0	7	0	7	5	0	0	0	11	1	0	39	103

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	4	16	4	0	8	0	28	0	28	20	0	0	0	44	4	0	156
Heavy Trucks	0	0	0		0	0	4		8	0	0		0	0	0		12
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		8	0	0		0	0	0		0	0	4		12
Scooters																	

Comments:

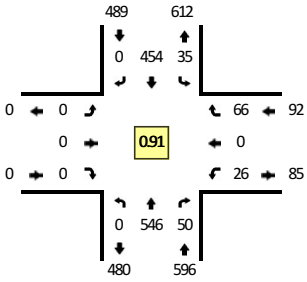
Report generated on 7/24/2023 6:31 PM

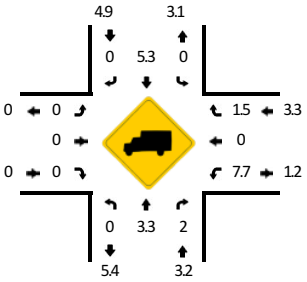
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

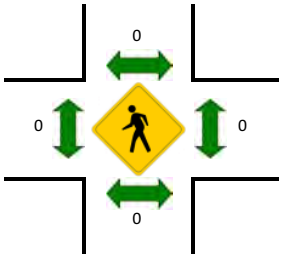
Type of peak hour being reported: System-wide Peak | Method for determining peak hour: Total Entering Volume

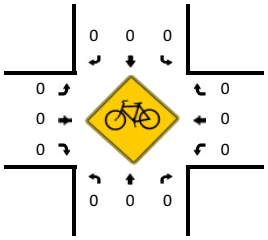
LOCATION: Hwy 55 -- Elo Rd | **QC JOB #:** 16257103
CITY/STATE: McCall, ID | **DATE:** Sat, Jul 1 2023

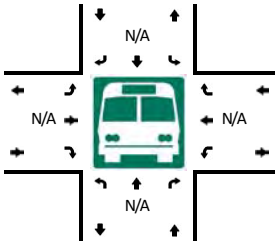
Peak-Hour: 1:00 PM -- 2:00 PM
Peak 15-Min: 1:30 PM -- 1:45 PM

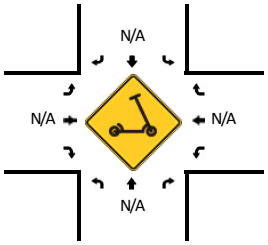












15-Min Count Period Beginning At	Hwy 55 (Northbound)				Hwy 55 (Southbound)				Elo Rd (Eastbound)				Elo Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
11:00 AM	0	161	6	0	5	92	0	0	0	0	0	0	10	0	16	0	290	
11:15 AM	0	137	7	0	7	104	0	0	0	0	0	0	4	0	8	0	267	
11:30 AM	0	160	6	0	12	98	0	0	0	0	0	0	3	0	12	0	291	
11:45 AM	0	142	4	0	13	116	0	0	0	0	0	0	4	0	15	0	294	1142
12:00 PM	0	146	10	0	13	85	1	0	1	0	1	0	7	0	23	0	287	1139
12:15 PM	0	127	6	0	6	131	1	0	0	0	0	0	4	0	16	0	291	1163
12:30 PM	0	138	6	0	8	109	0	0	0	0	1	0	4	0	19	0	285	1157
12:45 PM	0	142	8	0	6	88	0	0	0	0	0	0	4	0	16	0	264	1127
1:00 PM	0	132	13	0	7	101	0	0	0	0	0	0	3	0	14	0	270	1110
1:15 PM	0	125	8	0	9	112	0	0	0	0	0	0	10	0	21	0	285	1104
1:30 PM	0	160	13	0	9	117	0	0	0	0	0	0	7	0	17	0	323	1142
1:45 PM	0	129	16	0	10	124	0	0	0	0	0	0	6	0	14	0	299	1177

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	640	52	0	36	468	0	0	0	0	0	0	28	0	68	0	1292
Heavy Trucks	0	20	0		0	20	0		0	0	0		4	0	4		48
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

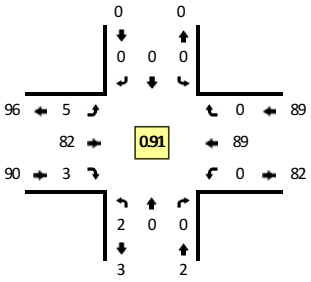
Comments:

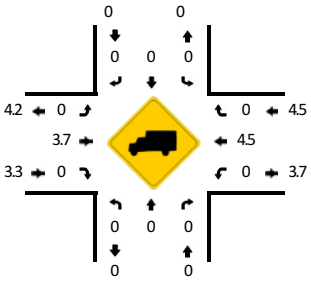
Report generated on 7/24/2023 6:30 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

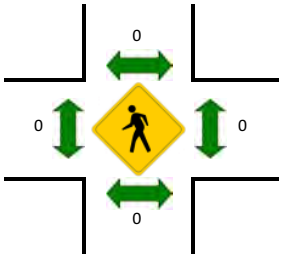
Type of peak hour being reported: System-wide Peak | Method for determining peak hour: Total Entering Volume

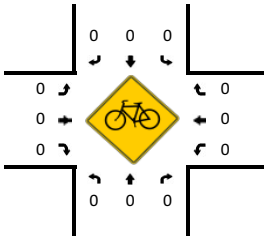
LOCATION: West Storage Driveway -- Elo Rd | **QC JOB #:** 16257106
CITY/STATE: McCall, ID | **DATE:** Sat, Jul 1 2023

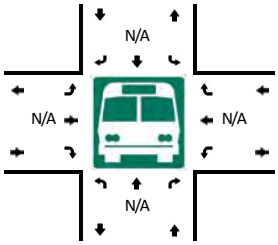
Peak-Hour: 1:00 PM -- 2:00 PM
Peak 15-Min: 1:15 PM -- 1:30 PM

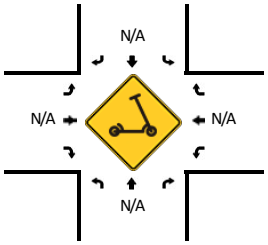












15-Min Count Period Beginning At	West Storage Driveway (Northbound)				West Storage Driveway (Southbound)				Elo Rd (Eastbound)				Elo Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
11:00 AM	0	0	0	0	0	0	0	0	0	10	0	1	1	26	0	0	38	
11:15 AM	0	0	1	0	0	0	0	0	0	15	0	0	0	11	0	0	27	
11:30 AM	0	0	0	0	0	0	0	0	0	15	2	4	0	15	0	0	36	
11:45 AM	1	0	1	0	0	0	0	0	0	16	1	1	0	21	0	0	41	142
12:00 PM	1	0	0	0	0	0	0	0	0	22	0	1	1	25	0	0	50	154
12:15 PM	0	0	0	0	0	0	0	0	0	13	0	0	0	20	0	0	33	160
12:30 PM	0	0	0	0	0	0	0	0	0	15	0	0	0	25	0	0	40	164
12:45 PM	1	0	0	0	0	0	0	0	0	14	1	1	0	19	0	0	36	159
1:00 PM	0	0	0	0	0	0	0	0	0	19	0	0	0	17	0	0	36	145
1:15 PM	2	0	0	0	0	0	0	0	0	16	3	0	0	29	0	0	50	162
1:30 PM	0	0	0	0	0	0	0	0	0	22	0	2	0	24	0	0	48	170
1:45 PM	0	0	0	0	0	0	0	0	0	25	0	3	0	19	0	0	47	181

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	8	0	0	0	0	0	0	0	0	64	12	0	0	116	0	0	200
Heavy Trucks	0	0	0		0	0	0		0	4	0		0	0	0		4
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

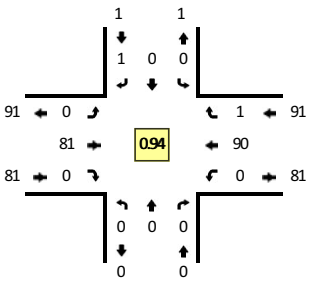
Comments:

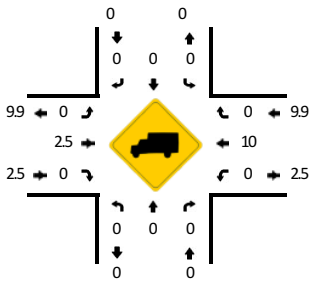
Report generated on 7/24/2023 6:30 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

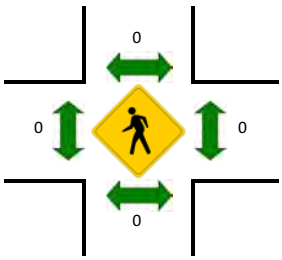
Type of peak hour being reported: System-wide Peak | Method for determining peak hour: Total Entering Volume

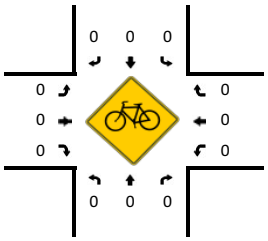
LOCATION: East Storage Driveway -- Elo Rd | **QC JOB #:** 16257109
CITY/STATE: McCall, ID | **DATE:** Sat, Jul 1 2023

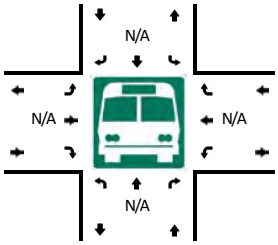
Peak-Hour: 1:00 PM -- 2:00 PM
Peak 15-Min: 1:30 PM -- 1:45 PM

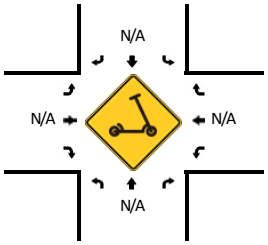












15-Min Count Period Beginning At	East Storage Driveway (Northbound)				East Storage Driveway (Southbound)				Elo Rd (Eastbound)				Elo Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
11:00 AM	0	0	0	0	0	0	0	0	0	9	0	0	0	28	0	0	37	
11:15 AM	0	0	0	0	0	0	1	0	0	17	0	0	0	12	1	0	31	
11:30 AM	0	1	0	0	0	0	1	0	0	15	0	0	0	15	0	0	32	
11:45 AM	0	0	0	0	0	0	0	0	0	17	0	0	0	21	0	0	38	138
12:00 PM	0	0	0	0	1	0	0	0	0	22	0	0	0	28	0	0	51	152
12:15 PM	1	0	0	0	0	0	0	0	0	12	1	0	0	20	0	0	34	155
12:30 PM	0	0	0	0	0	0	0	0	0	15	0	0	0	25	0	0	40	163
12:45 PM	0	0	0	0	1	0	0	0	0	13	0	0	0	19	0	0	33	158
1:00 PM	0	0	0	0	0	0	0	0	0	20	0	0	0	19	0	0	39	146
1:15 PM	0	0	0	0	0	0	0	0	0	15	0	0	0	28	0	0	43	155
1:30 PM	0	0	0	0	0	0	0	0	0	22	0	0	0	24	0	0	46	161
1:45 PM	0	0	0	0	0	0	1	0	0	24	0	0	0	19	1	0	45	173

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	0	0	0	0	0	88	0	0	0	96	0	0	184
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	8	0		8
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

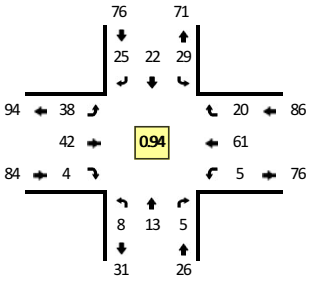
Comments:

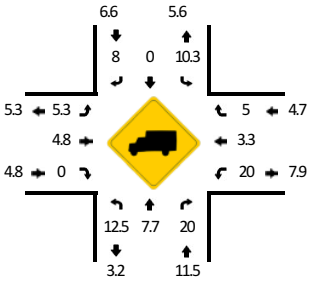
Report generated on 7/24/2023 6:30 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: System-wide Peak | Method for determining peak hour: Total Entering Volume

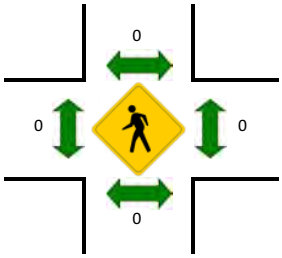
LOCATION: S Samson Trl -- Elo Rd | **QC JOB #:** 16257112
CITY/STATE: McCall, ID | **DATE:** Sat, Jul 1 2023

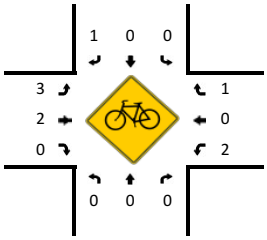
Peak-Hour: 1:00 PM -- 2:00 PM
Peak 15-Min: 1:30 PM -- 1:45 PM

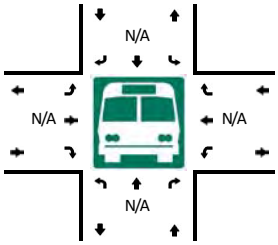


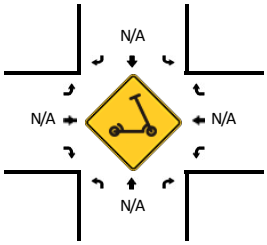


Quality Counts
DATA THAT DRIVES COMMUNITIES









15-Min Count Period Beginning At	S Samson Trl (Northbound)				S Samson Trl (Southbound)				Elo Rd (Eastbound)				Elo Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
11:00 AM	2	3	1	0	9	1	9	0	1	5	3	0	0	16	8	0	58	
11:15 AM	2	2	0	0	4	7	4	0	8	11	0	0	0	9	3	0	50	
11:30 AM	0	1	2	0	3	7	3	0	6	8	3	0	0	9	9	0	51	
11:45 AM	2	5	1	0	14	12	6	0	5	9	3	0	1	13	5	0	76	235
12:00 PM	1	7	0	0	10	10	10	0	8	13	1	0	0	18	6	0	84	261
12:15 PM	0	4	1	0	3	5	4	0	6	6	0	0	0	13	13	0	55	266
12:30 PM	3	2	0	0	7	3	4	0	4	11	0	0	3	18	7	0	62	277
12:45 PM	2	3	0	0	11	4	3	0	4	9	2	0	1	14	6	0	59	260
1:00 PM	0	1	1	0	10	8	4	0	10	9	1	0	1	15	5	0	65	241
1:15 PM	3	4	1	0	5	5	6	0	4	12	0	0	2	20	3	0	65	251
1:30 PM	4	4	1	0	6	4	8	0	12	11	1	0	2	13	6	0	72	261
1:45 PM	1	4	2	0	8	5	7	0	12	10	2	0	0	13	6	0	70	272

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	16	16	4	0	24	16	32	0	48	44	4	0	8	52	24	0	288
Heavy Trucks	0	4	0		4	0	4		0	4	0		0	4	0		20
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		4	4	0		0	0	0		8
Scooters																	

Comments:

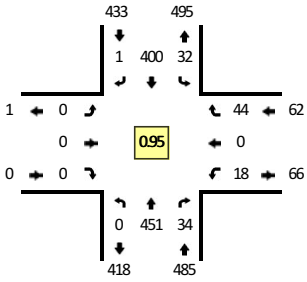
Report generated on 7/24/2023 6:30 PM

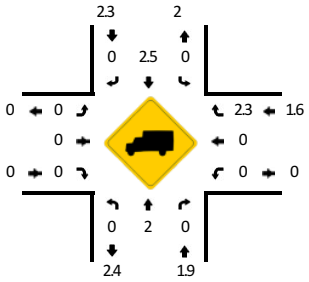
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: System-wide Peak | Method for determining peak hour: Total Entering Volume

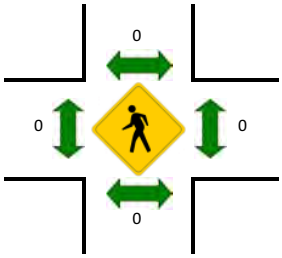
LOCATION: Hwy 55 -- Elo Rd | **QC JOB #:** 16257102
CITY/STATE: McCall, ID | **DATE:** Sat, Jul 1 2023

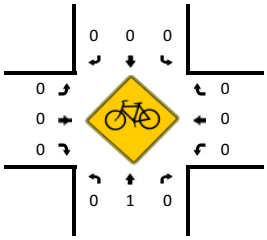
Peak-Hour: 4:00 PM -- 5:00 PM
Peak 15-Min: 4:15 PM -- 4:30 PM

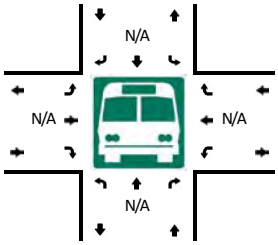


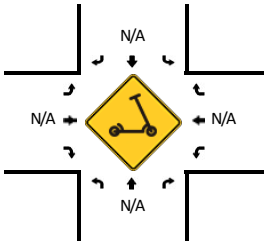


Quality Counts
DATA THAT DRIVES COMMUNITIES









15-Min Count Period Beginning At	Hwy 55 (Northbound)				Hwy 55 (Southbound)				Elo Rd (Eastbound)				Elo Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	121	12	0	12	97	0	0	0	0	0	0	1	0	12	0	255	
4:15 PM	0	116	14	0	3	111	0	0	0	0	0	0	7	0	8	0	259	
4:30 PM	0	105	4	0	7	87	0	0	0	0	0	0	1	0	11	0	215	
4:45 PM	0	109	4	0	10	105	1	0	0	0	0	0	9	0	13	0	251	980
5:00 PM	0	83	6	0	18	73	0	0	0	0	0	0	3	0	14	0	197	922
5:15 PM	0	98	6	0	10	73	0	0	0	0	0	0	5	0	11	0	203	866
5:30 PM	0	75	4	0	6	101	0	0	0	0	0	0	4	0	6	0	196	847
5:45 PM	0	82	7	0	6	83	0	0	0	0	0	0	2	0	11	0	191	787

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	464	56	0	12	444	0	0	0	0	0	0	28	0	32	0	1036
Heavy Trucks	0	4	0		0	20	0		0	0	0		0	0	0		24
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

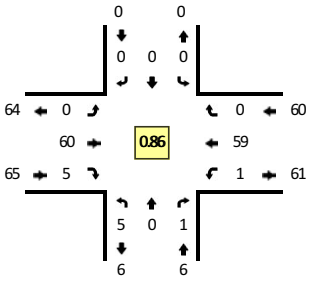
Report generated on 7/24/2023 6:32 PM

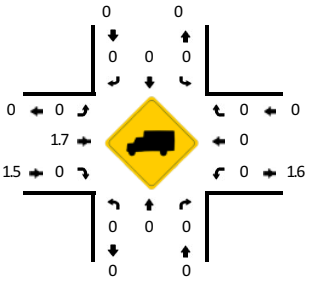
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

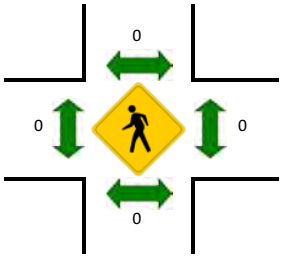
Type of peak hour being reported: System-wide Peak | Method for determining peak hour: Total Entering Volume

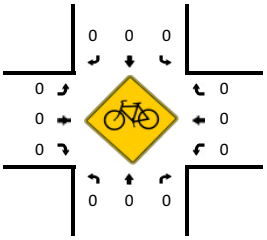
LOCATION: West Storage Driveway -- Elo Rd | **QC JOB #:** 16257105
CITY/STATE: McCall, ID | **DATE:** Sat, Jul 1 2023

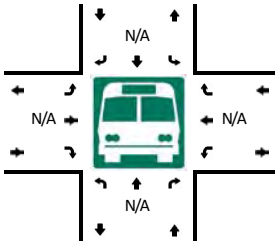
Peak-Hour: 4:00 PM -- 5:00 PM
Peak 15-Min: 4:00 PM -- 4:15 PM

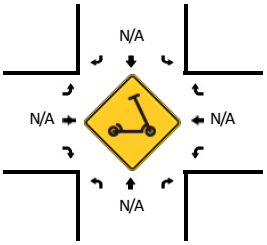












15-Min Count Period Beginning At	West Storage Driveway (Northbound)				West Storage Driveway (Southbound)				Elo Rd (Eastbound)				Elo Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	1	0	0	0	0	0	0	0	0	23	1	0	0	13	0	0	38	
4:15 PM	1	0	1	0	0	0	0	0	0	14	2	0	0	16	0	0	34	
4:30 PM	1	0	0	0	0	0	0	0	0	11	1	0	0	10	0	0	23	
4:45 PM	2	0	0	0	0	0	0	0	0	12	1	0	1	20	0	0	36	131
5:00 PM	1	0	0	0	0	0	0	0	0	24	0	0	0	16	0	0	41	134
5:15 PM	0	0	0	0	0	0	0	0	0	16	0	0	0	16	0	0	32	132
5:30 PM	0	0	0	0	0	0	0	0	0	9	0	0	0	10	0	0	19	128
5:45 PM	0	0	0	0	0	0	0	0	0	14	0	0	0	12	0	0	26	118

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	4	0	0	0	0	0	0	0	0	92	4	0	0	52	0	0	152
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

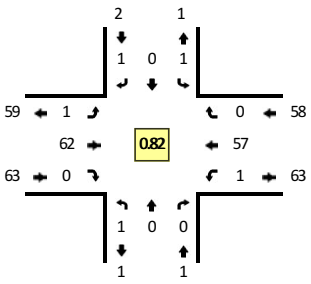
Comments:

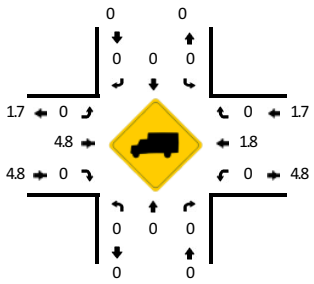
Report generated on 7/24/2023 6:32 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: System-wide Peak | Method for determining peak hour: Total Entering Volume

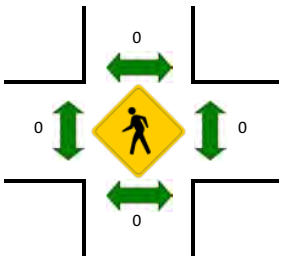
LOCATION: East Storage Driveway -- Elo Rd | **QC JOB #:** 16257108
CITY/STATE: McCall, ID | **DATE:** Sat, Jul 1 2023

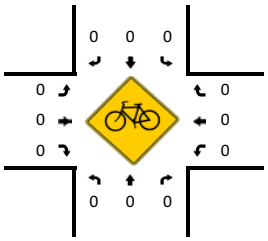
Peak-Hour: 4:00 PM -- 5:00 PM
Peak 15-Min: 4:00 PM -- 4:15 PM

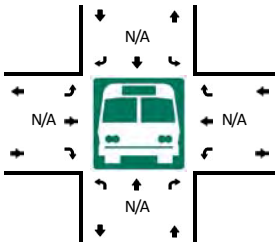


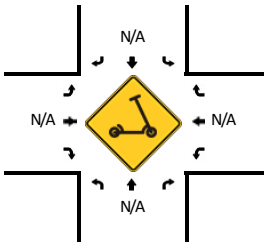


Quality Counts
DATA THAT DRIVES COMMUNITIES









15-Min Count Period Beginning At	East Storage Driveway (Northbound)				East Storage Driveway (Southbound)				Elo Rd (Eastbound)				Elo Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	1	0	1	0	1	22	0	0	1	12	0	0	38	
4:15 PM	0	0	0	0	0	0	0	0	0	15	0	0	0	15	0	0	30	
4:30 PM	1	0	0	0	0	0	0	0	0	12	0	0	0	9	0	0	22	
4:45 PM	0	0	0	0	0	0	0	0	0	13	0	0	0	21	0	0	34	124
5:00 PM	0	0	0	0	0	0	0	0	0	24	0	0	0	17	0	0	41	127
5:15 PM	0	0	0	0	0	0	0	0	0	16	0	0	0	16	0	0	32	129
5:30 PM	0	0	0	0	0	0	0	0	0	9	0	0	0	10	0	0	19	126
5:45 PM	0	0	0	0	0	0	0	0	0	14	0	1	0	13	0	0	28	120

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	4	0	4	0	4	88	0	0	4	48	0	0	152
Heavy Trucks	0	0	0		0	0	0		0	4	0		0	0	0		4
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 7/24/2023 6:32 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

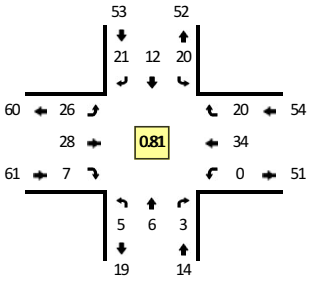
Type of peak hour being reported: System-wide Peak

Method for determining peak hour: Total Entering Volume

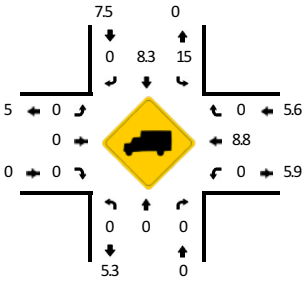
LOCATION: S Samson Trl -- Elo Rd
CITY/STATE: McCall, ID

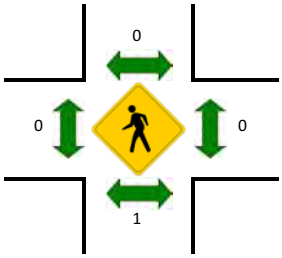
QC JOB #: 16257111
DATE: Sat, Jul 1 2023

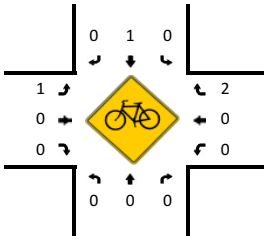
Peak-Hour: 4:00 PM -- 5:00 PM
Peak 15-Min: 4:00 PM -- 4:15 PM

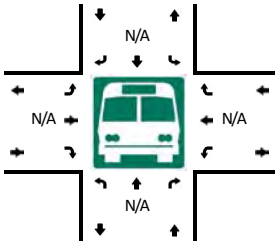


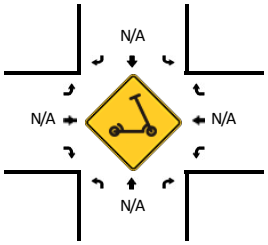
Quality Counts
DATA THAT DRIVES COMMUNITIES











15-Min Count Period Beginning At	S Samson Trl (Northbound)				S Samson Trl (Southbound)				Elo Rd (Eastbound)				Elo Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	2	0	0	4	7	3	0	9	10	4	0	0	9	8	0	56	
4:15 PM	2	1	2	0	8	0	7	0	8	5	0	0	0	6	3	0	42	
4:30 PM	0	3	0	0	3	2	2	0	6	2	2	0	0	8	5	0	33	
4:45 PM	3	0	1	0	5	3	9	0	3	11	1	0	0	11	4	0	51	182
5:00 PM	0	1	1	0	5	0	4	0	5	19	1	0	2	12	3	0	53	179
5:15 PM	0	0	1	0	6	3	5	0	5	8	2	0	0	10	2	0	42	179
5:30 PM	0	4	1	0	7	4	3	0	4	5	0	0	2	5	1	0	36	182
5:45 PM	1	3	2	0	2	4	3	0	4	10	0	0	0	9	2	0	40	171

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	8	0	0	16	28	12	0	36	40	16	0	0	36	32	0	224
Heavy Trucks	0	0	0		4	0	0		0	0	0		0	4	0		8
Buses																	
Pedestrians		4				0				0				0			4
Bicycles	0	0	0		0	0	0		0	0	0		0	0	4		4
Scooters																	

Comments:

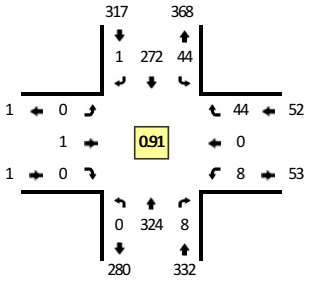
Report generated on 7/24/2023 6:32 PM

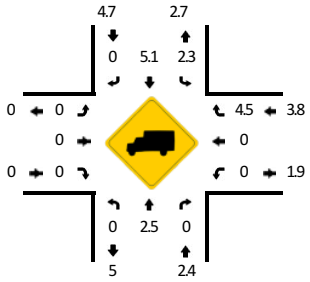
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: System-wide Peak | Method for determining peak hour: Total Entering Volume

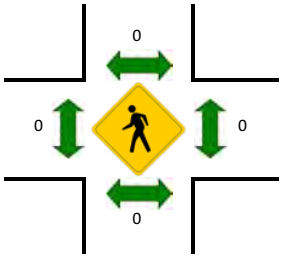
LOCATION: SR 55 -- Elo Rd | **QC JOB #:** 16156797
CITY/STATE: Valley, ID | **DATE:** Sat, May 13 2023

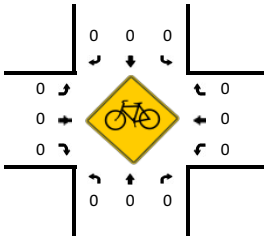
Peak-Hour: 12:15 PM -- 1:15 PM
Peak 15-Min: 12:30 PM -- 12:45 PM

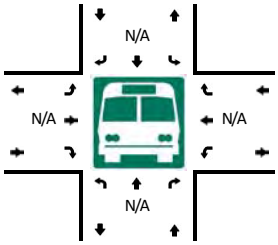


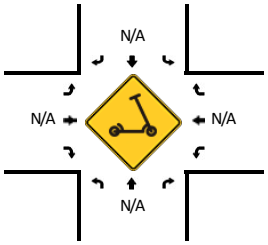


Quality Counts
DATA THAT DRIVES COMMUNITIES









15-Min Count Period Beginning At	SR 55 (Northbound)				SR 55 (Southbound)				Elo Rd (Eastbound)				Elo Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
11:00 AM	0	66	2	0	6	58	0	0	0	0	0	0	0	0	7	0	139	
11:15 AM	0	58	1	0	9	61	1	0	0	0	0	0	2	0	9	0	141	
11:30 AM	0	72	4	0	9	69	0	0	0	0	0	0	2	0	9	0	165	
11:45 AM	0	71	2	0	4	83	0	0	0	0	0	0	4	0	7	0	171	616
12:00 PM	0	70	5	0	6	54	0	0	0	0	0	0	1	0	9	0	145	622
12:15 PM	0	81	3	0	10	55	0	0	0	0	0	0	0	0	9	0	158	639
12:30 PM	0	92	3	0	16	69	0	0	0	0	0	0	1	0	11	0	192	666
12:45 PM	0	77	0	0	10	61	0	0	0	0	0	0	6	0	11	0	165	660
1:00 PM	0	74	2	0	8	87	1	0	0	1	0	0	1	0	13	0	187	702
1:15 PM	0	51	3	0	12	80	0	0	0	0	0	0	3	0	4	0	153	697
1:30 PM	0	58	0	0	14	60	0	0	0	0	0	0	3	0	7	0	142	647
1:45 PM	0	71	0	0	10	58	0	0	0	0	0	0	2	0	8	0	149	631

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	368	12	0	64	276	0	0	0	0	0	0	4	0	44	0	768
Heavy Trucks	0	8	0		4	16	0		0	0	0		0	0	4		32
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

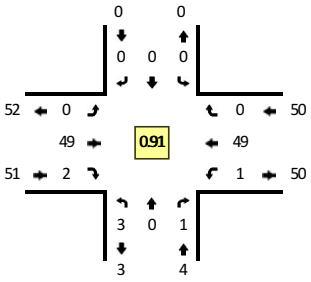
Comments:

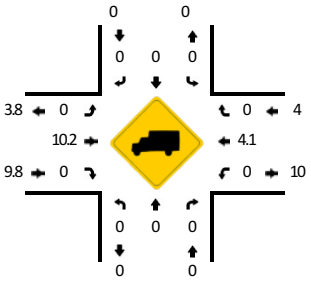
Report generated on 7/24/2023 6:41 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: System-wide Peak | Method for determining peak hour: Total Entering Volume

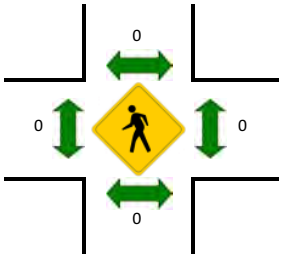
LOCATION: West Dwy -- Elo Rd | **QC JOB #:** 161567100
CITY/STATE: Valley, ID | **DATE:** Sat, May 13 2023

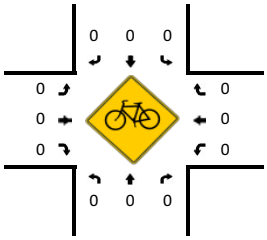
Peak-Hour: 12:15 PM -- 1:15 PM
Peak 15-Min: 12:30 PM -- 12:45 PM

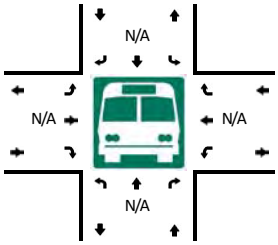


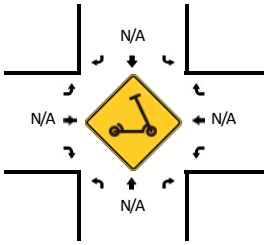


Quality Counts
DATA THAT DRIVES COMMUNITIES









15-Min Count Period Beginning At	West Dwy (Northbound)				West Dwy (Southbound)				Elo Rd (Eastbound)				Elo Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
11:00 AM	0	0	0	0	0	0	0	0	0	6	1	0	0	7	0	0	14	
11:15 AM	1	0	0	0	0	0	0	0	0	8	1	0	0	10	0	0	20	
11:30 AM	2	0	1	0	0	0	0	0	0	12	0	0	0	9	0	0	24	
11:45 AM	0	0	0	0	0	0	0	0	0	6	0	0	0	11	0	0	17	75
12:00 PM	1	0	0	0	0	0	0	0	0	10	1	0	0	8	0	0	20	81
12:15 PM	1	0	0	0	0	0	0	0	0	13	0	0	0	9	0	0	23	84
12:30 PM	1	0	0	0	0	0	0	0	0	17	1	0	0	10	0	0	29	89
12:45 PM	1	0	1	0	0	0	0	0	0	8	1	0	1	16	0	0	28	100
1:00 PM	0	0	0	0	0	0	0	0	0	11	0	0	0	14	0	0	25	105
1:15 PM	0	0	1	0	0	0	0	0	0	13	1	0	0	7	0	0	22	104
1:30 PM	1	0	0	0	0	0	0	0	0	14	0	0	0	9	0	0	24	99
1:45 PM	0	0	0	0	0	0	0	0	0	8	2	0	0	10	0	0	20	91

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	4	0	0	0	0	0	0	0	0	68	4	0	0	40	0	0	116
Heavy Trucks	0	0	0		0	0	0		0	12	0		0	4	0		16
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

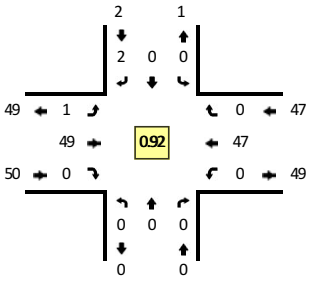
Comments:

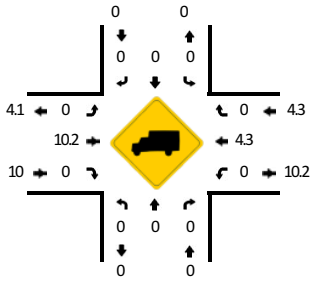
Report generated on 7/24/2023 6:41 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: System-wide Peak | Method for determining peak hour: Total Entering Volume

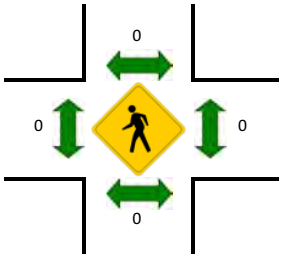
LOCATION: East Dwy -- Elo Rd | **QC JOB #:** 161567103
CITY/STATE: Valley, ID | **DATE:** Sat, May 13 2023

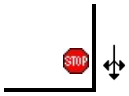
Peak-Hour: 12:15 PM -- 1:15 PM
Peak 15-Min: 12:30 PM -- 12:45 PM

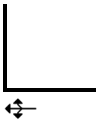


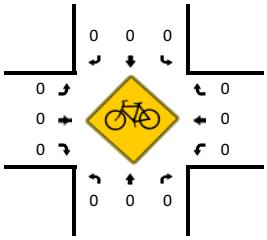


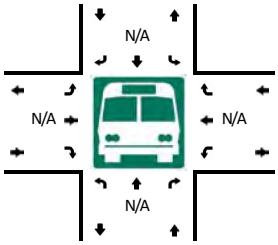
Quality Counts
DATA THAT DRIVES COMMUNITIES

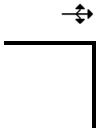


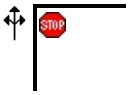


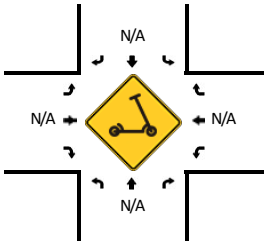












15-Min Count Period Beginning At	East Dwy (Northbound)				East Dwy (Southbound)				Elo Rd (Eastbound)				Elo Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
11:00 AM	0	0	0	0	0	0	1	0	0	6	0	0	0	6	0	0	13	
11:15 AM	0	0	0	0	0	0	0	0	0	8	0	0	0	10	0	0	18	
11:30 AM	0	0	0	0	0	0	2	0	1	12	0	0	0	7	0	0	22	
11:45 AM	0	0	0	0	0	0	0	0	0	6	0	0	1	11	0	0	18	71
12:00 PM	0	0	0	0	0	0	0	0	0	10	0	0	0	8	0	0	18	76
12:15 PM	0	0	0	0	0	0	0	0	0	13	0	0	0	8	0	0	21	79
12:30 PM	0	0	0	0	0	0	0	0	0	17	0	0	0	10	0	0	27	84
12:45 PM	0	0	0	0	0	0	1	0	0	9	0	0	0	16	0	0	26	92
1:00 PM	0	0	0	0	0	0	1	0	1	10	0	0	0	13	0	0	25	99
1:15 PM	0	0	1	0	0	0	1	0	1	12	1	0	0	6	0	0	22	100
1:30 PM	0	0	0	0	0	0	0	0	0	13	0	0	0	9	0	0	22	95
1:45 PM	0	0	0	0	0	0	1	0	0	9	0	0	0	9	0	0	19	88

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	0	0	0	0	0	68	0	0	0	40	0	0	108
Heavy Trucks	0	0	0		0	0	0		0	12	0		0	4	0		16
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

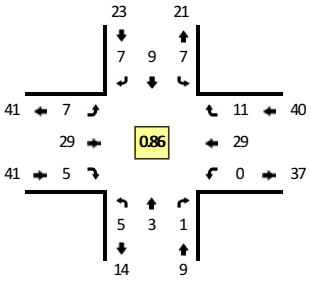
Comments:

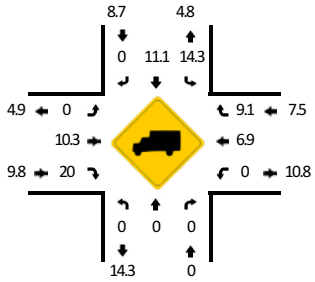
Report generated on 7/24/2023 6:41 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

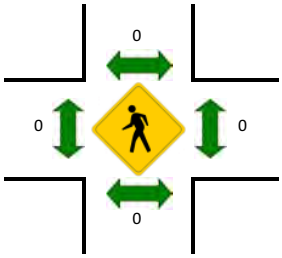
Type of peak hour being reported: System-wide Peak | Method for determining peak hour: Total Entering Volume

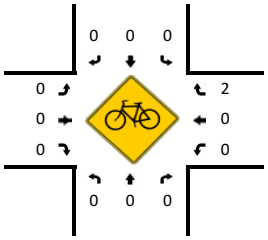
LOCATION: S Samson Trl -- Elo Rd | **QC JOB #:** 161567106
CITY/STATE: Valley, ID | **DATE:** Sat, May 13 2023

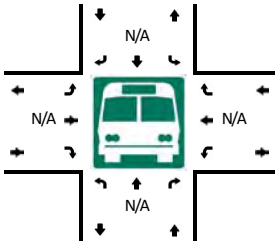
Peak-Hour: 12:15 PM -- 1:15 PM
Peak 15-Min: 12:30 PM -- 12:45 PM

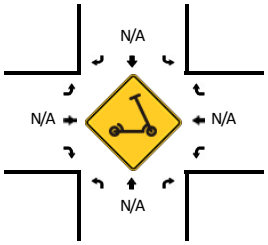












15-Min Count Period Beginning At	S Samson Trl (Northbound)				S Samson Trl (Southbound)				Elo Rd (Eastbound)				Elo Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
11:00 AM	1	2	0	0	3	0	0	0	1	3	1	0	1	4	1	0	17	
11:15 AM	1	2	1	0	1	0	2	0	0	6	2	0	0	5	3	0	23	
11:30 AM	1	2	0	0	5	2	1	0	4	6	2	0	0	5	0	0	28	
11:45 AM	1	1	0	0	1	1	3	0	2	4	0	0	0	8	0	0	21	89
12:00 PM	1	3	1	0	4	0	0	0	2	5	2	0	1	7	3	0	29	101
12:15 PM	0	0	0	0	4	4	1	0	1	6	1	0	0	7	4	0	28	106
12:30 PM	1	1	1	0	2	3	2	0	4	11	2	0	0	5	1	0	33	111
12:45 PM	2	1	0	0	0	2	2	0	0	7	1	0	0	8	3	0	26	116
1:00 PM	2	1	0	0	1	0	2	0	2	5	1	0	0	9	3	0	26	113
1:15 PM	0	0	0	0	5	1	3	0	3	8	2	0	0	3	4	0	29	114
1:30 PM	0	0	1	0	4	0	2	0	0	10	3	0	0	7	1	0	28	109
1:45 PM	0	3	0	0	1	1	1	0	2	5	1	0	0	8	1	0	23	106

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	4	4	4	0	8	12	8	0	16	44	8	0	0	20	4	0	132
Heavy Trucks	0	0	0		0	4	0		0	8	4		0	4	0		20
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	8		8
Scooters																	

Comments:

Report generated on 7/24/2023 6:41 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Site Plan

SITE RECAP

PROJECT SITE:
TOTAL PROPERTY SIZE: 786,607 SF (18.06 ACRES)

EXISTING BUILDING FOOTPRINTS: 68,970 SF

TOTAL LOT COVERAGE: 29% (231,157 SF)

LANDSCAPING/OPEN SPACE: 40% (316,459 SF)

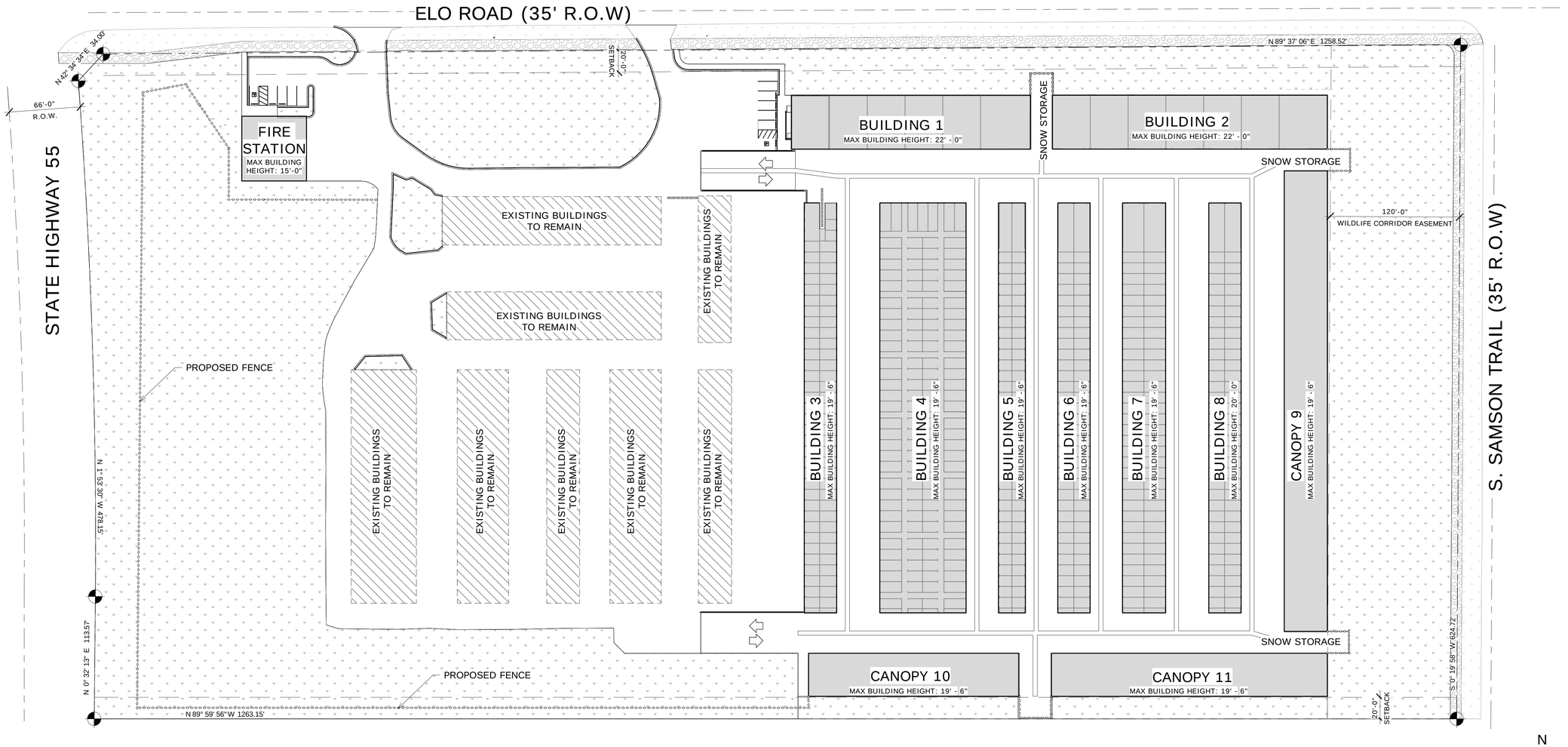
ZONING: RE

SETBACKS:
ELO ROAD SETBACK = 20'-0"
S. SAMPSON TRAIL SETBACK = 120'-0"
REAR SETBACK = 20'-0"

PARKING:
STANDARD: 10 PARKING SPACES
ADA: 2 PARKING SPACES
RV: 50 PARKING SPACES

BUILDING AREA RECAP

BUILDING 1	11,100 SF
BUILDING 2	12,750 SF
BUILDING 3	11,281 SF
BUILDING 4	30,400 SF
BUILDING 5	9,500 SF
BUILDING 6	11,400 SF
BUILDING 7	15,200 SF
BUILDING 8	11,400 SF
CANOPY 9	17,080 SF
CANOPY 10	7,800 SF
CANOPY 11	10,260 SF
TOTAL:	148,171 SF



SITE PLAN
SCALE: 1" = 50'-0"

HATCH DESIGN ARCHITECTURE
200 W. 36TH ST.
BOISE, IDAHO 83714
OFFICE: (208) 475-3204
FAX: (208) 475 475-3205

NOT FOR CONSTRUCTION

NEW SELF STORAGE EXPANSION:

STOR-IT SELF STORAGE

379 ELO RD, McCALL, ID

DELTA	DATE	DESCRIPTION - COMMENTS

DATE:	APRIL 2022
DRAWN BY:	WE
CHECKED BY:	JLH
JOB NUMBER:	MKT

SHEET TITLE
SITE PLAN

SHEET NUMBER
A-1.0

1/5/2023 3:28:18 PM

Level of Service Criteria

LEVEL OF SERVICE CRITERIA

Signalized Intersections		
Level of Service	Interpretation	Average Control Delay (seconds per vehicle)
A	Favorable progression. Most vehicles arrive during the green indication and travel through the intersection without stopping.	≤10
B	Good progression, with more vehicles stopping than for Level of Service A.	>10 - 20
C	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. Number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.	>20 - 35
D	The volume-to-capacity ratio is high and either progression is ineffective or the cycle length is too long. Many vehicles stop and individual cycle failures are noticeable.	>35 - 55
E	Progression is unfavorable. The volume-to-capacity ratio is high and the cycle length is long. Individual cycle failures are frequent.	>55 - 80
F	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.	>80.0

Unsignalized Intersections	
Level of Service	Average Total Delay (SEC/VEH)
A	0 - 10
B	> 10 - 15
C	> 15 - 25
D	> 25 - 35
E	> 35 - 50
F	> 50

Source: *Highway Capacity Manual*, 6th Edition.

Capacity Analysis Summary Sheets

Existing Weekday Morning Peak Hour

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	1	0	2	22	0	68	0	412	49	10	235	3
Future Vol, veh/h	1	0	2	22	0	68	0	412	49	10	235	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	0	0	50	0	0	3	0	11	6	10	19	67
Mvmt Flow	1	0	2	26	0	79	0	479	57	12	273	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	846	835	275	808	808	508	276	0	0	536	0	0
Stage 1	299	299	-	508	508	-	-	-	-	-	-	-
Stage 2	547	536	-	300	300	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.7	7.1	6.5	6.23	4.1	-	-	4.2	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.75	3.5	4	3.327	2.2	-	-	2.29	-	-
Pot Cap-1 Maneuver	284	306	662	302	317	563	1299	-	-	993	-	-
Stage 1	714	670	-	551	542	-	-	-	-	-	-	-
Stage 2	525	527	-	713	669	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	241	302	662	298	313	563	1299	-	-	993	-	-
Mov Cap-2 Maneuver	241	302	-	298	313	-	-	-	-	-	-	-
Stage 1	714	661	-	551	542	-	-	-	-	-	-	-
Stage 2	451	527	-	701	660	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.7	15.1	0	0.3
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1299	-	-	418	462	993	-	-
HCM Lane V/C Ratio	-	-	-	0.008	0.227	0.012	-	-
HCM Control Delay (s)	0	-	-	13.7	15.1	8.7	0	-
HCM Lane LOS	A	-	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.9	0	-	-

Intersection	
Int Delay, s/veh	5.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	44	12	1	0	63	25	5	25	0	8	25	20
Future Vol, veh/h	44	12	1	0	63	25	5	25	0	8	25	20
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	73	73	73	73	73	73	73	73	73	73	73	73
Heavy Vehicles, %	2	8	0	0	2	0	0	4	0	13	20	0
Mvmt Flow	60	16	1	0	86	34	7	34	0	11	34	27

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	120	0	0	17	0	0	271	257	17	257	240	103
Stage 1	-	-	-	-	-	-	137	137	-	103	103	-
Stage 2	-	-	-	-	-	-	134	120	-	154	137	-
Critical Hdwy	4.12	-	-	4.1	-	-	7.1	6.54	6.2	7.23	6.7	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.54	-	6.23	5.7	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.54	-	6.23	5.7	-
Follow-up Hdwy	2.218	-	-	2.2	-	-	3.5	4.036	3.3	3.617	4.18	3.3
Pot Cap-1 Maneuver	1468	-	-	1613	-	-	686	644	1068	674	631	957
Stage 1	-	-	-	-	-	-	871	779	-	877	776	-
Stage 2	-	-	-	-	-	-	874	793	-	823	750	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1468	-	-	1613	-	-	618	618	1068	625	605	957
Mov Cap-2 Maneuver	-	-	-	-	-	-	618	618	-	625	605	-
Stage 1	-	-	-	-	-	-	835	747	-	841	776	-
Stage 2	-	-	-	-	-	-	812	793	-	753	719	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	5.8	0	11.2	10.7
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	618	1468	-	-	1613	-	-	706
HCM Lane V/C Ratio	0.066	0.041	-	-	-	-	-	0.103
HCM Control Delay (s)	11.2	7.6	0	-	0	-	-	10.7
HCM Lane LOS	B	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0	-	-	0.3

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	59	0	0	89	1	0
Future Vol, veh/h	59	0	0	89	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	67	67	67	67	67	67
Heavy Vehicles, %	3	0	0	2	0	0
Mvmt Flow	88	0	0	133	1	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	88	0	221	88
Stage 1	-	-	-	-	88	-
Stage 2	-	-	-	-	133	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1520	-	772	976
Stage 1	-	-	-	-	940	-
Stage 2	-	-	-	-	898	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1520	-	772	976
Mov Cap-2 Maneuver	-	-	-	-	772	-
Stage 1	-	-	-	-	940	-
Stage 2	-	-	-	-	898	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	772	-	-	1520	-
HCM Lane V/C Ratio	0.002	-	-	-	-
HCM Control Delay (s)	9.7	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	57	1	0	88	0	0	0	0	0	0	1
Future Vol, veh/h	1	57	1	0	88	0	0	0	0	0	0	1
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	67	67	67	67	67	67	67	67	67	67	67	67
Heavy Vehicles, %	0	5	0	0	2	0	0	0	0	0	0	0
Mvmt Flow	1	85	1	0	131	0	0	0	0	0	0	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	131	0	0	86	0	0	220	219	86	219	219	131
Stage 1	-	-	-	-	-	-	88	88	-	131	131	-
Stage 2	-	-	-	-	-	-	132	131	-	88	88	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1467	-	-	1523	-	-	740	683	978	741	683	924
Stage 1	-	-	-	-	-	-	925	826	-	877	792	-
Stage 2	-	-	-	-	-	-	876	792	-	925	826	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1467	-	-	1523	-	-	739	682	978	740	682	924
Mov Cap-2 Maneuver	-	-	-	-	-	-	739	682	-	740	682	-
Stage 1	-	-	-	-	-	-	924	825	-	876	792	-
Stage 2	-	-	-	-	-	-	875	792	-	924	825	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	0	8.9
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1467	-	-	1523	-	-	924
HCM Lane V/C Ratio	-	0.001	-	-	-	-	-	0.002
HCM Control Delay (s)	0	7.5	0	-	0	-	-	8.9
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0

Capacity Analysis Summary Sheets

Existing Weekday Afternoon Peak Hour

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	1	0	1	32	0	27	1	298	19	30	356	3
Future Vol, veh/h	1	0	1	32	0	27	1	298	19	30	356	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	9	0	7	0	8	11	3	7	33
Mvmt Flow	1	0	1	36	0	31	1	339	22	34	405	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	843	838	407	827	828	350	408	0	0	361	0	0
Stage 1	475	475	-	352	352	-	-	-	-	-	-	-
Stage 2	368	363	-	475	476	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.19	6.5	6.27	4.1	-	-	4.13	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.19	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.19	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.581	4	3.363	2.2	-	-	2.227	-	-
Pot Cap-1 Maneuver	286	305	648	283	309	682	1162	-	-	1192	-	-
Stage 1	574	561	-	651	635	-	-	-	-	-	-	-
Stage 2	656	628	-	557	560	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	265	293	648	274	297	682	1162	-	-	1192	-	-
Mov Cap-2 Maneuver	265	293	-	274	297	-	-	-	-	-	-	-
Stage 1	573	540	-	650	634	-	-	-	-	-	-	-
Stage 2	626	627	-	535	539	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.6	16.6	0	0.6
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1162	-	-	376	377	1192	-	-
HCM Lane V/C Ratio	0.001	-	-	0.006	0.178	0.029	-	-
HCM Control Delay (s)	8.1	0	-	14.6	16.6	8.1	0	-
HCM Lane LOS	A	A	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.6	0.1	-	-

Intersection	
Int Delay, s/veh	7.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	22	18	8	18	15	0	2	13	4	19	20	36
Future Vol, veh/h	22	18	8	18	15	0	2	13	4	19	20	36
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	67	67	67	67	67	67	67	67	67	67	67	67
Heavy Vehicles, %	9	6	0	0	11	0	0	39	0	16	15	7
Mvmt Flow	33	27	12	27	22	0	3	19	6	28	30	54

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	22	0	0	39	0	0	217	175	33	188	181	22
Stage 1	-	-	-	-	-	-	99	99	-	76	76	-
Stage 2	-	-	-	-	-	-	118	76	-	112	105	-
Critical Hdwy	4.19	-	-	4.1	-	-	7.1	6.89	6.2	7.26	6.65	6.27
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.89	-	6.26	5.65	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.89	-	6.26	5.65	-
Follow-up Hdwy	2.281	-	-	2.2	-	-	3.5	4.351	3.3	3.644	4.135	3.363
Pot Cap-1 Maneuver	1549	-	-	1584	-	-	744	657	1046	743	690	1041
Stage 1	-	-	-	-	-	-	912	747	-	899	807	-
Stage 2	-	-	-	-	-	-	891	765	-	860	784	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1549	-	-	1584	-	-	661	631	1046	700	663	1041
Mov Cap-2 Maneuver	-	-	-	-	-	-	661	631	-	700	663	-
Stage 1	-	-	-	-	-	-	892	731	-	879	793	-
Stage 2	-	-	-	-	-	-	799	752	-	814	767	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.4	4	10.4	10.1
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	692	1549	-	-	1584	-	-	816
HCM Lane V/C Ratio	0.041	0.021	-	-	0.017	-	-	0.137
HCM Control Delay (s)	10.4	7.4	0	-	7.3	0	-	10.1
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0.1	-	-	0.5

Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	48	1	0	55	4	3
Future Vol, veh/h	48	1	0	55	4	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	73	73	73	73	73	73
Heavy Vehicles, %	6	0	0	9	0	0
Mvmt Flow	66	1	0	75	5	4

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	67	0	142	67
Stage 1	-	-	-	-	67	-
Stage 2	-	-	-	-	75	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1547	-	856	1002
Stage 1	-	-	-	-	961	-
Stage 2	-	-	-	-	953	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1547	-	856	1002
Mov Cap-2 Maneuver	-	-	-	-	856	-
Stage 1	-	-	-	-	961	-
Stage 2	-	-	-	-	953	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	913	-	-	1547	-
HCM Lane V/C Ratio	0.011	-	-	-	-
HCM Control Delay (s)	9	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

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	3	48	0	0	53	0	1	0	0	0	0	1
Future Vol, veh/h	3	48	0	0	53	0	1	0	0	0	0	1
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	68	68	68	68	68	68	68	68	68	68	68	68
Heavy Vehicles, %	0	4	0	0	9	0	0	0	0	0	0	0
Mvmt Flow	4	71	0	0	78	0	1	0	0	0	0	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	78	0	0	71	0	0	158	157	71	157	157	78
Stage 1	-	-	-	-	-	-	79	79	-	78	78	-
Stage 2	-	-	-	-	-	-	79	78	-	79	79	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1533	-	-	1542	-	-	813	739	997	814	739	988
Stage 1	-	-	-	-	-	-	935	833	-	936	834	-
Stage 2	-	-	-	-	-	-	935	834	-	935	833	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1533	-	-	1542	-	-	810	737	997	812	737	988
Mov Cap-2 Maneuver	-	-	-	-	-	-	810	737	-	812	737	-
Stage 1	-	-	-	-	-	-	932	831	-	933	834	-
Stage 2	-	-	-	-	-	-	934	834	-	932	831	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0	9.5	8.6
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	810	1533	-	-	1542	-	-	988
HCM Lane V/C Ratio	0.002	0.003	-	-	-	-	-	0.001
HCM Control Delay (s)	9.5	7.4	0	-	0	-	-	8.6
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Capacity Analysis Summary Sheets

Existing Weekday Evening Peak Hour

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	1	0	1	16	0	28	0	363	14	52	423	1
Future Vol, veh/h	1	0	1	16	0	28	0	363	14	52	423	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	4	0	6	0	6	5	0
Mvmt Flow	1	0	1	17	0	29	0	382	15	55	445	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	960	953	446	946	946	390	446	0	0	397	0	0
Stage 1	556	556	-	390	390	-	-	-	-	-	-	-
Stage 2	404	397	-	556	556	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.24	4.1	-	-	4.16	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.336	2.2	-	-	2.254	-	-
Pot Cap-1 Maneuver	238	261	617	243	264	654	1125	-	-	1140	-	-
Stage 1	519	516	-	638	611	-	-	-	-	-	-	-
Stage 2	627	607	-	519	516	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	216	244	617	231	247	654	1125	-	-	1140	-	-
Mov Cap-2 Maneuver	216	244	-	231	247	-	-	-	-	-	-	-
Stage 1	519	483	-	638	611	-	-	-	-	-	-	-
Stage 2	599	607	-	485	483	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	16.3	15.4	0	0.9
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1125	-	-	320	393	1140	-	-
HCM Lane V/C Ratio	-	-	-	0.007	0.118	0.048	-	-
HCM Control Delay (s)	0	-	-	16.3	15.4	8.3	0	-
HCM Lane LOS	A	-	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.4	0.2	-	-

Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	12	46	5	2	22	11	4	10	0	12	8	15
Future Vol, veh/h	12	46	5	2	22	11	4	10	0	12	8	15
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, %	0	11	0	0	5	9	0	10	0	8	0	0
Mvmt Flow	13	50	5	2	24	12	4	11	0	13	9	16

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	36	0	0	55	0	0	126	119	53	118	115	30
Stage 1	-	-	-	-	-	-	79	79	-	34	34	-
Stage 2	-	-	-	-	-	-	47	40	-	84	81	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.6	6.2	7.18	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.6	-	6.18	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.6	-	6.18	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4.09	3.3	3.572	4	3.3
Pot Cap-1 Maneuver	1588	-	-	1563	-	-	852	757	1020	844	779	1050
Stage 1	-	-	-	-	-	-	935	814	-	967	871	-
Stage 2	-	-	-	-	-	-	972	846	-	909	832	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1588	-	-	1563	-	-	826	750	1020	829	772	1050
Mov Cap-2 Maneuver	-	-	-	-	-	-	826	750	-	829	772	-
Stage 1	-	-	-	-	-	-	928	807	-	959	870	-
Stage 2	-	-	-	-	-	-	946	845	-	890	825	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.4	0.4	9.8	9.2
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	770	1588	-	-	1563	-	-	895
HCM Lane V/C Ratio	0.02	0.008	-	-	0.001	-	-	0.043
HCM Control Delay (s)	9.8	7.3	0	-	7.3	0	-	9.2
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	62	4	2	40	4	1
Future Vol, veh/h	62	4	2	40	4	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	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, %	3	0	0	3	0	0
Mvmt Flow	67	4	2	43	4	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	71	0	116	69
Stage 1	-	-	-	-	69	-
Stage 2	-	-	-	-	47	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1542	-	885	1000
Stage 1	-	-	-	-	959	-
Stage 2	-	-	-	-	981	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1542	-	884	1000
Mov Cap-2 Maneuver	-	-	-	-	884	-
Stage 1	-	-	-	-	959	-
Stage 2	-	-	-	-	980	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	905	-	-	1542	-
HCM Lane V/C Ratio	0.006	-	-	0.001	-
HCM Control Delay (s)	9	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	63	0	0	41	0	0	0	0	0	0	1
Future Vol, veh/h	0	63	0	0	41	0	0	0	0	0	0	1
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	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	5	0	0	3	0	0	0	0	0	0	0
Mvmt Flow	0	70	0	0	46	0	0	0	0	0	0	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	46	0	0	70	0	0	117	116	70	116	116	46
Stage 1	-	-	-	-	-	-	70	70	-	46	46	-
Stage 2	-	-	-	-	-	-	47	46	-	70	70	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1575	-	-	1544	-	-	864	778	998	865	778	1029
Stage 1	-	-	-	-	-	-	945	841	-	973	861	-
Stage 2	-	-	-	-	-	-	972	861	-	945	841	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1575	-	-	1544	-	-	863	778	998	865	778	1029
Mov Cap-2 Maneuver	-	-	-	-	-	-	863	778	-	865	778	-
Stage 1	-	-	-	-	-	-	945	841	-	973	861	-
Stage 2	-	-	-	-	-	-	971	861	-	945	841	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	0	8.5
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1575	-	-	1544	-	-	1029
HCM Lane V/C Ratio	-	-	-	-	-	-	-	0.001
HCM Control Delay (s)	0	0	-	-	0	-	-	8.5
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0

Capacity Analysis Summary Sheets

Existing Saturday Morning Peak Hour

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	0	0	0	11	0	40	0	297	17	15	185	0
Future Vol, veh/h	0	0	0	11	0	40	0	297	17	15	185	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	0	0	0	9	0	5	0	4	25	0	5	0
Mvmt Flow	0	0	0	14	0	50	0	371	21	19	231	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	676	661	231	651	651	382	231	0	0	392	0	0
Stage 1	269	269	-	382	382	-	-	-	-	-	-	-
Stage 2	407	392	-	269	269	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.19	6.5	6.25	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.19	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.19	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.581	4	3.345	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	370	385	813	372	390	659	1349	-	-	1178	-	-
Stage 1	741	690	-	627	616	-	-	-	-	-	-	-
Stage 2	625	610	-	721	690	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	337	378	813	367	383	659	1349	-	-	1178	-	-
Mov Cap-2 Maneuver	337	378	-	367	383	-	-	-	-	-	-	-
Stage 1	741	677	-	627	616	-	-	-	-	-	-	-
Stage 2	578	610	-	707	677	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	12.2	0	0.6
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1349	-	-	-	562	1178	-	-
HCM Lane V/C Ratio	-	-	-	-	0.113	0.016	-	-
HCM Control Delay (s)	0	-	-	0	12.2	8.1	0	-
HCM Lane LOS	A	-	-	A	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0.4	0	-	-

Intersection	
Int Delay, s/veh	4.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	16	15	0	1	36	4	2	8	6	8	1	11
Future Vol, veh/h	16	15	0	1	36	4	2	8	6	8	1	11
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	66	66	66	66	66	66	66	66	66	66	66	66
Heavy Vehicles, %	19	14	0	0	9	0	0	13	0	13	0	9
Mvmt Flow	24	23	0	2	55	6	3	12	9	12	2	17

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	61	0	0	23	0	0	143	136	23	144	133	58
Stage 1	-	-	-	-	-	-	71	71	-	62	62	-
Stage 2	-	-	-	-	-	-	72	65	-	82	71	-
Critical Hdwy	4.29	-	-	4.1	-	-	7.1	6.63	6.2	7.23	6.5	6.29
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.63	-	6.23	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.63	-	6.23	5.5	-
Follow-up Hdwy	2.371	-	-	2.2	-	-	3.5	4.117	3.3	3.617	4	3.381
Pot Cap-1 Maneuver	1440	-	-	1605	-	-	831	735	1060	801	761	989
Stage 1	-	-	-	-	-	-	944	815	-	922	847	-
Stage 2	-	-	-	-	-	-	943	820	-	900	840	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1440	-	-	1605	-	-	804	722	1060	773	747	989
Mov Cap-2 Maneuver	-	-	-	-	-	-	804	722	-	773	747	-
Stage 1	-	-	-	-	-	-	928	801	-	906	846	-
Stage 2	-	-	-	-	-	-	925	819	-	864	826	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.9	0.2	9.5	9.3
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	832	1440	-	-	1605	-	-	877
HCM Lane V/C Ratio	0.029	0.017	-	-	0.001	-	-	0.035
HCM Control Delay (s)	9.5	7.5	0	-	7.2	0	-	9.3
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	31	1	1	49	2	0
Future Vol, veh/h	31	1	1	49	2	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	66	66	66	66	66	66
Heavy Vehicles, %	17	0	0	2	0	0
Mvmt Flow	47	2	2	74	3	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	49	0	126	48
Stage 1	-	-	-	-	48	-
Stage 2	-	-	-	-	78	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1571	-	874	1027
Stage 1	-	-	-	-	980	-
Stage 2	-	-	-	-	950	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1571	-	873	1027
Mov Cap-2 Maneuver	-	-	-	-	873	-
Stage 1	-	-	-	-	980	-
Stage 2	-	-	-	-	949	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	9.1
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	873	-	-	1571	-
HCM Lane V/C Ratio	0.003	-	-	0.001	-
HCM Control Delay (s)	9.1	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	0	31	0	0	49	0	0	0	0	0	0	1
Future Vol, veh/h	0	31	0	0	49	0	0	0	0	0	0	1
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	65	65	65	65	65	65	65	65	65	65	65	65
Heavy Vehicles, %	0	16	0	0	8	0	0	0	0	0	0	0
Mvmt Flow	0	48	0	0	75	0	0	0	0	0	0	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	75	0	0	48	0	0	124	123	48	123	123	75
Stage 1	-	-	-	-	-	-	48	48	-	75	75	-
Stage 2	-	-	-	-	-	-	76	75	-	48	48	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1537	-	-	1572	-	-	855	771	1027	856	771	992
Stage 1	-	-	-	-	-	-	971	859	-	939	836	-
Stage 2	-	-	-	-	-	-	938	836	-	971	859	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1537	-	-	1572	-	-	853	771	1027	856	771	992
Mov Cap-2 Maneuver	-	-	-	-	-	-	853	771	-	856	771	-
Stage 1	-	-	-	-	-	-	971	859	-	939	836	-
Stage 2	-	-	-	-	-	-	937	836	-	971	859	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	0	8.6
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1537	-	-	1572	-	-	992
HCM Lane V/C Ratio	-	-	-	-	-	-	-	0.002
HCM Control Delay (s)	0	0	-	-	0	-	-	8.6
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0

Capacity Analysis Summary Sheets

Existing Saturday Midday Peak Hour

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	26	0	70	0	546	52	37	454	0
Future Vol, veh/h	0	0	0	26	0	70	0	546	52	37	454	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	0	0	8	0	2	0	3	2	0	5	0
Mvmt Flow	0	0	0	29	0	77	0	600	57	41	499	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1248	1238	499	1210	1210	629	499	0	0	657	0	0
Stage 1	581	581	-	629	629	-	-	-	-	-	-	-
Stage 2	667	657	-	581	581	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.18	6.5	6.22	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.18	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.18	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.572	4	3.318	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	152	177	576	155	184	482	1075	-	-	940	-	-
Stage 1	503	503	-	460	478	-	-	-	-	-	-	-
Stage 2	451	465	-	489	503	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	122	166	576	148	173	482	1075	-	-	940	-	-
Mov Cap-2 Maneuver	122	166	-	148	173	-	-	-	-	-	-	-
Stage 1	503	473	-	460	478	-	-	-	-	-	-	-
Stage 2	379	465	-	460	473	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	23.5	0	0.7
HCM LOS	A	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1075	-	-	-	299	940	-	-
HCM Lane V/C Ratio	-	-	-	-	0.353	0.043	-	-
HCM Control Delay (s)	0	-	-	0	23.5	9	0	-
HCM Lane LOS	A	-	-	A	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	1.5	0.1	-	-

Intersection	
Int Delay, s/veh	5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	38	44	4	5	61	20	8	13	5	29	22	25
Future Vol, veh/h	38	44	4	5	61	20	8	13	5	29	22	25
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	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	5	5	0	20	3	5	13	8	20	10	0	8
Mvmt Flow	40	47	4	5	65	21	9	14	5	31	23	27

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	86	0	0	51	0	0	240	225	49	225	217	76
Stage 1	-	-	-	-	-	-	129	129	-	86	86	-
Stage 2	-	-	-	-	-	-	111	96	-	139	131	-
Critical Hdwy	4.15	-	-	4.3	-	-	7.23	6.58	6.4	7.2	6.5	6.28
Critical Hdwy Stg 1	-	-	-	-	-	-	6.23	5.58	-	6.2	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.23	5.58	-	6.2	5.5	-
Follow-up Hdwy	2.245	-	-	2.38	-	-	3.617	4.072	3.48	3.59	4	3.372
Pot Cap-1 Maneuver	1492	-	-	1447	-	-	692	664	971	714	685	969
Stage 1	-	-	-	-	-	-	849	778	-	902	827	-
Stage 2	-	-	-	-	-	-	868	804	-	845	792	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1492	-	-	1447	-	-	639	643	971	681	663	969
Mov Cap-2 Maneuver	-	-	-	-	-	-	639	643	-	681	663	-
Stage 1	-	-	-	-	-	-	825	756	-	877	824	-
Stage 2	-	-	-	-	-	-	817	801	-	802	770	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.3	0.4	10.5	10.4
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	686	1492	-	-	1447	-	-	748
HCM Lane V/C Ratio	0.04	0.027	-	-	0.004	-	-	0.108
HCM Control Delay (s)	10.5	7.5	0	-	7.5	0	-	10.4
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.4

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	86	3	0	94	2	0
Future Vol, veh/h	86	3	0	94	2	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	4	0	0	5	0	0
Mvmt Flow	95	3	0	103	2	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	98	0	200	97
Stage 1	-	-	-	-	97	-
Stage 2	-	-	-	-	103	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1508	-	793	965
Stage 1	-	-	-	-	932	-
Stage 2	-	-	-	-	926	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1508	-	793	965
Mov Cap-2 Maneuver	-	-	-	-	793	-
Stage 1	-	-	-	-	932	-
Stage 2	-	-	-	-	926	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	793	-	-	1508	-
HCM Lane V/C Ratio	0.003	-	-	-	-
HCM Control Delay (s)	9.6	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	86	0	0	93	1	0	0	0	0	0	1
Future Vol, veh/h	0	86	0	0	93	1	0	0	0	0	0	1
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	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	3	0	0	10	0	0	0	0	0	0	0
Mvmt Flow	0	91	0	0	99	1	0	0	0	0	0	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	100	0	0	91	0	0	191	191	91	191	191	100
Stage 1	-	-	-	-	-	-	91	91	-	100	100	-
Stage 2	-	-	-	-	-	-	100	100	-	91	91	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1505	-	-	1517	-	-	773	708	972	773	708	961
Stage 1	-	-	-	-	-	-	921	823	-	911	816	-
Stage 2	-	-	-	-	-	-	911	816	-	921	823	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1505	-	-	1517	-	-	772	708	972	773	708	961
Mov Cap-2 Maneuver	-	-	-	-	-	-	772	708	-	773	708	-
Stage 1	-	-	-	-	-	-	921	823	-	911	816	-
Stage 2	-	-	-	-	-	-	910	816	-	921	823	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	0	8.8
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1505	-	-	1517	-	-	961
HCM Lane V/C Ratio	-	-	-	-	-	-	-	0.001
HCM Control Delay (s)	0	0	-	-	0	-	-	8.8
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0

Capacity Analysis Summary Sheets

Existing Saturday Evening Peak Hour

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	0	0	0	18	0	47	0	451	35	32	400	1
Future Vol, veh/h	0	0	0	18	0	47	0	451	35	32	400	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	2	0	2	0	0	3	0
Mvmt Flow	0	0	0	19	0	49	0	475	37	34	421	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1008	1002	422	984	984	494	422	0	0	512	0	0
Stage 1	490	490	-	494	494	-	-	-	-	-	-	-
Stage 2	518	512	-	490	490	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.22	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.318	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	221	244	636	229	250	575	1148	-	-	1064	-	-
Stage 1	564	552	-	561	550	-	-	-	-	-	-	-
Stage 2	544	540	-	564	552	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	196	234	636	222	240	575	1148	-	-	1064	-	-
Mov Cap-2 Maneuver	196	234	-	222	240	-	-	-	-	-	-	-
Stage 1	564	529	-	561	550	-	-	-	-	-	-	-
Stage 2	497	540	-	540	529	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	15.9	0	0.6
HCM LOS	A	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1148	-	-	-	399	1064	-	-
HCM Lane V/C Ratio	-	-	-	-	0.171	0.032	-	-
HCM Control Delay (s)	0	-	-	0	15.9	8.5	0	-
HCM Lane LOS	A	-	-	A	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0.6	0.1	-	-

Intersection	
Int Delay, s/veh	4.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	26	30	7	0	34	20	5	6	3	20	12	21
Future Vol, veh/h	26	30	7	0	34	20	5	6	3	20	12	21
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	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	0	0	0	0	9	0	0	0	0	15	8	0
Mvmt Flow	32	37	9	0	42	25	6	7	4	25	15	26

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	67	0	0	46	0	0	181	173	42	166	165	55
Stage 1	-	-	-	-	-	-	106	106	-	55	55	-
Stage 2	-	-	-	-	-	-	75	67	-	111	110	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.25	6.58	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.25	5.58	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.25	5.58	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.635	4.072	3.3
Pot Cap-1 Maneuver	1547	-	-	1575	-	-	785	724	1034	770	717	1018
Stage 1	-	-	-	-	-	-	905	811	-	925	837	-
Stage 2	-	-	-	-	-	-	939	843	-	863	793	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1547	-	-	1575	-	-	741	709	1034	749	702	1018
Mov Cap-2 Maneuver	-	-	-	-	-	-	741	709	-	749	702	-
Stage 1	-	-	-	-	-	-	886	794	-	906	837	-
Stage 2	-	-	-	-	-	-	899	843	-	834	776	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3	0	9.8	9.8
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	773	1547	-	-	1575	-	-	823
HCM Lane V/C Ratio	0.022	0.021	-	-	-	-	-	0.08
HCM Control Delay (s)	9.8	7.4	0	-	0	-	-	9.8
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.3

Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	62	5	1	60	5	1
Future Vol, veh/h	62	5	1	60	5	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	0	0	0	0	0
Mvmt Flow	72	6	1	70	6	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	78	0	147	75
Stage 1	-	-	-	-	75	-
Stage 2	-	-	-	-	72	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1533	-	850	992
Stage 1	-	-	-	-	953	-
Stage 2	-	-	-	-	956	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1533	-	849	992
Mov Cap-2 Maneuver	-	-	-	-	849	-
Stage 1	-	-	-	-	953	-
Stage 2	-	-	-	-	955	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	9.2
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	870	-	-	1533	-
HCM Lane V/C Ratio	0.008	-	-	0.001	-
HCM Control Delay (s)	9.2	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

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	1	62	0	1	59	0	1	0	0	1	0	1
Future Vol, veh/h	1	62	0	1	59	0	1	0	0	1	0	1
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	82	82	82	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	0	5	0	0	2	0	0	0	0	0	0	0
Mvmt Flow	1	76	0	1	72	0	1	0	0	1	0	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	72	0	0	76	0	0	153	152	76	152	152	72
Stage 1	-	-	-	-	-	-	78	78	-	74	74	-
Stage 2	-	-	-	-	-	-	75	74	-	78	78	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1541	-	-	1536	-	-	819	743	991	820	743	996
Stage 1	-	-	-	-	-	-	936	834	-	940	837	-
Stage 2	-	-	-	-	-	-	939	837	-	936	834	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1541	-	-	1536	-	-	817	742	991	818	742	996
Mov Cap-2 Maneuver	-	-	-	-	-	-	817	742	-	818	742	-
Stage 1	-	-	-	-	-	-	935	833	-	939	836	-
Stage 2	-	-	-	-	-	-	937	836	-	935	833	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.1	9.4	9
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	817	1541	-	-	1536	-	-	898
HCM Lane V/C Ratio	0.001	0.001	-	-	0.001	-	-	0.003
HCM Control Delay (s)	9.4	7.3	0	-	7.3	0	-	9
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Capacity Analysis Summary Sheets

No-Build Weekday Morning Peak Hour

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	0	2	23	0	71	0	433	51	11	247	3
Future Vol, veh/h	1	0	2	23	0	71	0	433	51	11	247	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	0	0	50	0	0	3	0	11	6	10	19	67
Mvmt Flow	1	0	2	27	0	83	0	503	59	13	287	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	889	877	289	849	849	533	290	0	0	562	0	0
Stage 1	315	315	-	533	533	-	-	-	-	-	-	-
Stage 2	574	562	-	316	316	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.7	7.1	6.5	6.23	4.1	-	-	4.2	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.75	3.5	4	3.327	2.2	-	-	2.29	-	-
Pot Cap-1 Maneuver	266	289	649	283	300	545	1283	-	-	971	-	-
Stage 1	700	659	-	534	528	-	-	-	-	-	-	-
Stage 2	507	513	-	699	659	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	223	284	649	278	295	545	1283	-	-	971	-	-
Mov Cap-2 Maneuver	223	284	-	278	295	-	-	-	-	-	-	-
Stage 1	700	648	-	534	528	-	-	-	-	-	-	-
Stage 2	430	513	-	685	648	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.1	15.8	0	0.4
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1283	-	-	397	441	971	-	-
HCM Lane V/C Ratio	-	-	-	0.009	0.248	0.013	-	-
HCM Control Delay (s)	0	-	-	14.1	15.8	8.8	0	-
HCM Lane LOS	A	-	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	1	0	-	-

Intersection	
Int Delay, s/veh	5.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	46	13	1	0	66	26	5	26	0	8	26	21
Future Vol, veh/h	46	13	1	0	66	26	5	26	0	8	26	21
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	73	73	73	73	73	73	73	73	73	73	73	73
Heavy Vehicles, %	2	8	0	0	2	0	0	4	0	13	20	0
Mvmt Flow	63	18	1	0	90	36	7	36	0	11	36	29

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	126	0	0	19	0	0	286	271	19	271	253	108
Stage 1	-	-	-	-	-	-	145	145	-	108	108	-
Stage 2	-	-	-	-	-	-	141	126	-	163	145	-
Critical Hdwy	4.12	-	-	4.1	-	-	7.1	6.54	6.2	7.23	6.7	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.54	-	6.23	5.7	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.54	-	6.23	5.7	-
Follow-up Hdwy	2.218	-	-	2.2	-	-	3.5	4.036	3.3	3.617	4.18	3.3
Pot Cap-1 Maneuver	1460	-	-	1611	-	-	670	632	1065	660	621	951
Stage 1	-	-	-	-	-	-	863	773	-	871	772	-
Stage 2	-	-	-	-	-	-	867	788	-	814	744	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1460	-	-	1611	-	-	600	604	1065	609	594	951
Mov Cap-2 Maneuver	-	-	-	-	-	-	600	604	-	609	594	-
Stage 1	-	-	-	-	-	-	825	739	-	833	772	-
Stage 2	-	-	-	-	-	-	802	788	-	741	711	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	5.8	0	11.4	10.8
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	603	1460	-	-	1611	-	-	696
HCM Lane V/C Ratio	0.07	0.043	-	-	-	-	-	0.108
HCM Control Delay (s)	11.4	7.6	0	-	0	-	-	10.8
HCM Lane LOS	B	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0	-	-	0.4

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	62	0	0	93	1	0
Future Vol, veh/h	62	0	0	93	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	67	67	67	67	67	67
Heavy Vehicles, %	3	0	0	2	0	0
Mvmt Flow	93	0	0	139	1	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	93	0	232	93
Stage 1	-	-	-	-	93	-
Stage 2	-	-	-	-	139	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1514	-	761	970
Stage 1	-	-	-	-	936	-
Stage 2	-	-	-	-	893	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1514	-	761	970
Mov Cap-2 Maneuver	-	-	-	-	761	-
Stage 1	-	-	-	-	936	-
Stage 2	-	-	-	-	893	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	761	-	-	1514	-
HCM Lane V/C Ratio	0.002	-	-	-	-
HCM Control Delay (s)	9.7	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	60	1	0	92	0	0	0	0	0	0	1
Future Vol, veh/h	1	60	1	0	92	0	0	0	0	0	0	1
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	67	67	67	67	67	67	67	67	67	67	67	67
Heavy Vehicles, %	0	5	0	0	2	0	0	0	0	0	0	0
Mvmt Flow	1	90	1	0	137	0	0	0	0	0	0	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	137	0	0	91	0	0	231	230	91	230	230	137
Stage 1	-	-	-	-	-	-	93	93	-	137	137	-
Stage 2	-	-	-	-	-	-	138	137	-	93	93	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1459	-	-	1517	-	-	728	673	972	729	673	917
Stage 1	-	-	-	-	-	-	919	822	-	871	787	-
Stage 2	-	-	-	-	-	-	870	787	-	919	822	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1459	-	-	1517	-	-	727	672	972	728	672	917
Mov Cap-2 Maneuver	-	-	-	-	-	-	727	672	-	728	672	-
Stage 1	-	-	-	-	-	-	918	821	-	870	787	-
Stage 2	-	-	-	-	-	-	869	787	-	918	821	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	0	8.9
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1459	-	-	1517	-	-	917
HCM Lane V/C Ratio	-	0.001	-	-	-	-	-	0.002
HCM Control Delay (s)	0	7.5	0	-	0	-	-	8.9
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0

Capacity Analysis Summary Sheets

No-Build Weekday Afternoon Peak Hour

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	1	0	1	34	0	28	1	313	20	32	374	3
Future Vol, veh/h	1	0	1	34	0	28	1	313	20	32	374	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	9	0	7	0	8	11	3	7	33
Mvmt Flow	1	0	1	39	0	32	1	356	23	36	425	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	885	880	427	869	870	368	428	0	0	379	0	0
Stage 1	499	499	-	370	370	-	-	-	-	-	-	-
Stage 2	386	381	-	499	500	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.19	6.5	6.27	4.1	-	-	4.13	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.19	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.19	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.581	4	3.363	2.2	-	-	2.227	-	-
Pot Cap-1 Maneuver	268	288	632	265	292	666	1142	-	-	1174	-	-
Stage 1	557	547	-	636	624	-	-	-	-	-	-	-
Stage 2	641	617	-	541	546	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	247	276	632	256	280	666	1142	-	-	1174	-	-
Mov Cap-2 Maneuver	247	276	-	256	280	-	-	-	-	-	-	-
Stage 1	556	525	-	635	623	-	-	-	-	-	-	-
Stage 2	610	616	-	518	524	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	15.2	17.6	0	0.6
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1142	-	-	355	355	1174	-	-
HCM Lane V/C Ratio	0.001	-	-	0.006	0.198	0.031	-	-
HCM Control Delay (s)	8.2	0	-	15.2	17.6	8.2	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.7	0.1	-	-

Intersection	
Int Delay, s/veh	7.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	23	19	8	19	16	0	2	14	4	20	21	38
Future Vol, veh/h	23	19	8	19	16	0	2	14	4	20	21	38
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	67	67	67	67	67	67	67	67	67	67	67	67
Heavy Vehicles, %	9	6	0	0	11	0	0	39	0	16	15	7
Mvmt Flow	34	28	12	28	24	0	3	21	6	30	31	57

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	24	0	0	40	0	0	226	182	34	196	188	24
Stage 1	-	-	-	-	-	-	102	102	-	80	80	-
Stage 2	-	-	-	-	-	-	124	80	-	116	108	-
Critical Hdwy	4.19	-	-	4.1	-	-	7.1	6.89	6.2	7.26	6.65	6.27
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.89	-	6.26	5.65	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.89	-	6.26	5.65	-
Follow-up Hdwy	2.281	-	-	2.2	-	-	3.5	4.351	3.3	3.644	4.135	3.363
Pot Cap-1 Maneuver	1546	-	-	1583	-	-	734	651	1045	734	684	1038
Stage 1	-	-	-	-	-	-	909	744	-	895	804	-
Stage 2	-	-	-	-	-	-	885	762	-	856	781	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1546	-	-	1583	-	-	648	624	1045	689	656	1038
Mov Cap-2 Maneuver	-	-	-	-	-	-	648	624	-	689	656	-
Stage 1	-	-	-	-	-	-	888	727	-	874	790	-
Stage 2	-	-	-	-	-	-	789	748	-	808	763	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.4	4	10.5	10.2
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	681	1546	-	-	1583	-	-	809
HCM Lane V/C Ratio	0.044	0.022	-	-	0.018	-	-	0.146
HCM Control Delay (s)	10.5	7.4	0	-	7.3	0	-	10.2
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0.1	-	-	0.5

Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	50	1	0	58	4	3
Future Vol, veh/h	50	1	0	58	4	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	73	73	73	73	73	73
Heavy Vehicles, %	6	0	0	9	0	0
Mvmt Flow	68	1	0	79	5	4

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	69	0	148	69
Stage 1	-	-	-	-	69	-
Stage 2	-	-	-	-	79	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1545	-	849	1000
Stage 1	-	-	-	-	959	-
Stage 2	-	-	-	-	949	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1545	-	849	1000
Mov Cap-2 Maneuver	-	-	-	-	849	-
Stage 1	-	-	-	-	959	-
Stage 2	-	-	-	-	949	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	908	-	-	1545	-
HCM Lane V/C Ratio	0.011	-	-	-	-
HCM Control Delay (s)	9	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

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	3	50	0	0	56	0	1	0	0	0	0	1
Future Vol, veh/h	3	50	0	0	56	0	1	0	0	0	0	1
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	68	68	68	68	68	68	68	68	68	68	68	68
Heavy Vehicles, %	0	4	0	0	9	0	0	0	0	0	0	0
Mvmt Flow	4	74	0	0	82	0	1	0	0	0	0	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	82	0	0	74	0	0	165	164	74	164	164	82
Stage 1	-	-	-	-	-	-	82	82	-	82	82	-
Stage 2	-	-	-	-	-	-	83	82	-	82	82	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1528	-	-	1538	-	-	804	732	993	805	732	983
Stage 1	-	-	-	-	-	-	931	831	-	931	831	-
Stage 2	-	-	-	-	-	-	930	831	-	931	831	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1528	-	-	1538	-	-	801	730	993	803	730	983
Mov Cap-2 Maneuver	-	-	-	-	-	-	801	730	-	803	730	-
Stage 1	-	-	-	-	-	-	928	829	-	928	831	-
Stage 2	-	-	-	-	-	-	929	831	-	928	829	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0	9.5	8.7
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	801	1528	-	-	1538	-	-	983
HCM Lane V/C Ratio	0.002	0.003	-	-	-	-	-	0.001
HCM Control Delay (s)	9.5	7.4	0	-	0	-	-	8.7
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Capacity Analysis Summary Sheets

No-Build Weekday Evening Peak Hour

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	1	0	1	17	0	29	0	381	15	55	444	1
Future Vol, veh/h	1	0	1	17	0	29	0	381	15	55	444	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	4	0	6	0	6	5	0
Mvmt Flow	1	0	1	18	0	31	0	401	16	58	467	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1009	1001	468	993	993	409	468	0	0	417	0	0
Stage 1	584	584	-	409	409	-	-	-	-	-	-	-
Stage 2	425	417	-	584	584	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.24	4.1	-	-	4.16	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.336	2.2	-	-	2.254	-	-
Pot Cap-1 Maneuver	221	245	599	226	247	638	1104	-	-	1121	-	-
Stage 1	501	501	-	623	600	-	-	-	-	-	-	-
Stage 2	611	595	-	501	501	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	199	228	599	214	230	638	1104	-	-	1121	-	-
Mov Cap-2 Maneuver	199	228	-	214	230	-	-	-	-	-	-	-
Stage 1	501	466	-	623	600	-	-	-	-	-	-	-
Stage 2	582	595	-	465	466	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	17.1	16.3	0	0.9
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1104	-	-	299	368	1121	-	-
HCM Lane V/C Ratio	-	-	-	0.007	0.132	0.052	-	-
HCM Control Delay (s)	0	-	-	17.1	16.3	8.4	0	-
HCM Lane LOS	A	-	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.4	0.2	-	-

Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	13	48	5	2	23	12	4	11	0	13	8	16
Future Vol, veh/h	13	48	5	2	23	12	4	11	0	13	8	16
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, %	0	11	0	0	5	9	0	10	0	8	0	0
Mvmt Flow	14	52	5	2	25	13	4	12	0	14	9	17

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	38	0	0	57	0	0	132	125	55	125	121	32
Stage 1	-	-	-	-	-	-	83	83	-	36	36	-
Stage 2	-	-	-	-	-	-	49	42	-	89	85	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.6	6.2	7.18	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.6	-	6.18	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.6	-	6.18	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4.09	3.3	3.572	4	3.3
Pot Cap-1 Maneuver	1585	-	-	1560	-	-	845	751	1018	835	773	1048
Stage 1	-	-	-	-	-	-	930	811	-	964	869	-
Stage 2	-	-	-	-	-	-	969	844	-	904	828	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1585	-	-	1560	-	-	817	743	1018	818	765	1048
Mov Cap-2 Maneuver	-	-	-	-	-	-	817	743	-	818	765	-
Stage 1	-	-	-	-	-	-	922	804	-	955	868	-
Stage 2	-	-	-	-	-	-	942	843	-	883	821	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.4	0.4	9.8	9.2
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	761	1585	-	-	1560	-	-	889
HCM Lane V/C Ratio	0.021	0.009	-	-	0.001	-	-	0.045
HCM Control Delay (s)	9.8	7.3	0	-	7.3	0	-	9.2
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	65	4	2	42	4	1
Future Vol, veh/h	65	4	2	42	4	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	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, %	3	0	0	3	0	0
Mvmt Flow	71	4	2	46	4	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	75	0	123	73
Stage 1	-	-	-	-	73	-
Stage 2	-	-	-	-	50	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1537	-	877	995
Stage 1	-	-	-	-	955	-
Stage 2	-	-	-	-	978	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1537	-	876	995
Mov Cap-2 Maneuver	-	-	-	-	876	-
Stage 1	-	-	-	-	955	-
Stage 2	-	-	-	-	977	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	897	-	-	1537	-
HCM Lane V/C Ratio	0.006	-	-	0.001	-
HCM Control Delay (s)	9	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	66	0	0	43	0	0	0	0	0	0	1
Future Vol, veh/h	0	66	0	0	43	0	0	0	0	0	0	1
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	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	5	0	0	3	0	0	0	0	0	0	0
Mvmt Flow	0	73	0	0	48	0	0	0	0	0	0	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	48	0	0	73	0	0	122	121	73	121	121	48
Stage 1	-	-	-	-	-	-	73	73	-	48	48	-
Stage 2	-	-	-	-	-	-	49	48	-	73	73	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1572	-	-	1540	-	-	858	773	995	859	773	1027
Stage 1	-	-	-	-	-	-	942	838	-	971	859	-
Stage 2	-	-	-	-	-	-	969	859	-	942	838	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1572	-	-	1540	-	-	857	773	995	859	773	1027
Mov Cap-2 Maneuver	-	-	-	-	-	-	857	773	-	859	773	-
Stage 1	-	-	-	-	-	-	942	838	-	971	859	-
Stage 2	-	-	-	-	-	-	968	859	-	942	838	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	0	8.5
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1572	-	-	1540	-	-	1027
HCM Lane V/C Ratio	-	-	-	-	-	-	-	0.001
HCM Control Delay (s)	0	0	-	-	0	-	-	8.5
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0

Capacity Analysis Summary Sheets

No-Build Saturday Morning Peak Hour

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	0	0	0	12	0	42	0	312	18	16	194	0
Future Vol, veh/h	0	0	0	12	0	42	0	312	18	16	194	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	0	0	0	9	0	5	0	4	25	0	5	0
Mvmt Flow	0	0	0	15	0	53	0	390	23	20	243	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	711	696	243	685	685	402	243	0	0	413	0	0
Stage 1	283	283	-	402	402	-	-	-	-	-	-	-
Stage 2	428	413	-	283	283	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.19	6.5	6.25	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.19	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.19	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.581	4	3.345	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	351	368	801	353	373	642	1335	-	-	1157	-	-
Stage 1	728	681	-	611	604	-	-	-	-	-	-	-
Stage 2	609	597	-	709	681	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	317	361	801	348	366	642	1335	-	-	1157	-	-
Mov Cap-2 Maneuver	317	361	-	348	366	-	-	-	-	-	-	-
Stage 1	728	667	-	611	604	-	-	-	-	-	-	-
Stage 2	559	597	-	695	667	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	12.6	0	0.6
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1335	-	-	-	541	1157	-	-
HCM Lane V/C Ratio	-	-	-	-	0.125	0.017	-	-
HCM Control Delay (s)	0	-	-	0	12.6	8.2	0	-
HCM Lane LOS	A	-	-	A	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0.4	0.1	-	-

Intersection	
Int Delay, s/veh	4.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	17	16	0	1	38	4	2	8	6	8	1	12
Future Vol, veh/h	17	16	0	1	38	4	2	8	6	8	1	12
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	66	66	66	66	66	66	66	66	66	66	66	66
Heavy Vehicles, %	19	14	0	0	9	0	0	13	0	13	0	9
Mvmt Flow	26	24	0	2	58	6	3	12	9	12	2	18

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	64	0	0	24	0	0	151	144	24	152	141	61
Stage 1	-	-	-	-	-	-	76	76	-	65	65	-
Stage 2	-	-	-	-	-	-	75	68	-	87	76	-
Critical Hdwy	4.29	-	-	4.1	-	-	7.1	6.63	6.2	7.23	6.5	6.29
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.63	-	6.23	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.63	-	6.23	5.5	-
Follow-up Hdwy	2.371	-	-	2.2	-	-	3.5	4.117	3.3	3.617	4	3.381
Pot Cap-1 Maneuver	1437	-	-	1604	-	-	821	727	1058	791	754	985
Stage 1	-	-	-	-	-	-	938	811	-	919	845	-
Stage 2	-	-	-	-	-	-	939	817	-	894	836	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1437	-	-	1604	-	-	793	713	1058	763	740	985
Mov Cap-2 Maneuver	-	-	-	-	-	-	793	713	-	763	740	-
Stage 1	-	-	-	-	-	-	921	796	-	902	844	-
Stage 2	-	-	-	-	-	-	919	816	-	857	821	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.9	0.2	9.5	9.3
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	824	1437	-	-	1604	-	-	874
HCM Lane V/C Ratio	0.029	0.018	-	-	0.001	-	-	0.036
HCM Control Delay (s)	9.5	7.6	0	-	7.2	0	-	9.3
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	33	1	1	51	2	0
Future Vol, veh/h	33	1	1	51	2	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	66	66	66	66	66	66
Heavy Vehicles, %	17	0	0	2	0	0
Mvmt Flow	50	2	2	77	3	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	52	0	132	51
Stage 1	-	-	-	-	51	-
Stage 2	-	-	-	-	81	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1567	-	867	1023
Stage 1	-	-	-	-	977	-
Stage 2	-	-	-	-	947	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1567	-	866	1023
Mov Cap-2 Maneuver	-	-	-	-	866	-
Stage 1	-	-	-	-	977	-
Stage 2	-	-	-	-	946	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	9.2
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	866	-	-	1567	-
HCM Lane V/C Ratio	0.003	-	-	0.001	-
HCM Control Delay (s)	9.2	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	33	0	0	51	0	0	0	0	0	0	1
Future Vol, veh/h	0	33	0	0	51	0	0	0	0	0	0	1
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	65	65	65	65	65	65	65	65	65	65	65	65
Heavy Vehicles, %	0	16	0	0	8	0	0	0	0	0	0	0
Mvmt Flow	0	51	0	0	78	0	0	0	0	0	0	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	78	0	0	51	0	0	130	129	51	129	129	78
Stage 1	-	-	-	-	-	-	51	51	-	78	78	-
Stage 2	-	-	-	-	-	-	79	78	-	51	51	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1533	-	-	1568	-	-	847	765	1023	849	765	988
Stage 1	-	-	-	-	-	-	967	856	-	936	834	-
Stage 2	-	-	-	-	-	-	935	834	-	967	856	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1533	-	-	1568	-	-	845	765	1023	849	765	988
Mov Cap-2 Maneuver	-	-	-	-	-	-	845	765	-	849	765	-
Stage 1	-	-	-	-	-	-	967	856	-	936	834	-
Stage 2	-	-	-	-	-	-	934	834	-	967	856	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	0	8.6
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1533	-	-	1568	-	-	988
HCM Lane V/C Ratio	-	-	-	-	-	-	-	0.002
HCM Control Delay (s)	0	0	-	-	0	-	-	8.6
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0

Capacity Analysis Summary Sheets

No-Build Saturday Midday Peak Hour

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	0	0	0	27	0	74	0	573	55	39	477	0
Future Vol, veh/h	0	0	0	27	0	74	0	573	55	39	477	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	0	0	8	0	2	0	3	2	0	5	0
Mvmt Flow	0	0	0	30	0	81	0	630	60	43	524	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1311	1300	524	1270	1270	660	524	0	0	690	0	0
Stage 1	610	610	-	660	660	-	-	-	-	-	-	-
Stage 2	701	690	-	610	610	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.18	6.5	6.22	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.18	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.18	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.572	4	3.318	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	137	163	557	141	170	463	1053	-	-	914	-	-
Stage 1	485	488	-	442	463	-	-	-	-	-	-	-
Stage 2	433	449	-	471	488	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	107	152	557	134	159	463	1053	-	-	914	-	-
Mov Cap-2 Maneuver	107	152	-	134	159	-	-	-	-	-	-	-
Stage 1	485	456	-	442	463	-	-	-	-	-	-	-
Stage 2	357	449	-	440	456	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	26.1	0	0.7
HCM LOS	A	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1053	-	-	-	280	914	-	-
HCM Lane V/C Ratio	-	-	-	-	0.396	0.047	-	-
HCM Control Delay (s)	0	-	-	0	26.1	9.1	0	-
HCM Lane LOS	A	-	-	A	D	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	1.8	0.1	-	-

Intersection	
Int Delay, s/veh	5.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	40	46	4	5	64	21	8	14	5	30	23	26
Future Vol, veh/h	40	46	4	5	64	21	8	14	5	30	23	26
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	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	5	5	0	20	3	5	13	8	20	10	0	8
Mvmt Flow	43	49	4	5	68	22	9	15	5	32	24	28

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	90	0	0	53	0	0	252	237	51	236	228	79
Stage 1	-	-	-	-	-	-	137	137	-	89	89	-
Stage 2	-	-	-	-	-	-	115	100	-	147	139	-
Critical Hdwy	4.15	-	-	4.3	-	-	7.23	6.58	6.4	7.2	6.5	6.28
Critical Hdwy Stg 1	-	-	-	-	-	-	6.23	5.58	-	6.2	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.23	5.58	-	6.2	5.5	-
Follow-up Hdwy	2.245	-	-	2.38	-	-	3.617	4.072	3.48	3.59	4	3.372
Pot Cap-1 Maneuver	1486	-	-	1445	-	-	679	654	968	702	675	965
Stage 1	-	-	-	-	-	-	840	772	-	899	825	-
Stage 2	-	-	-	-	-	-	864	801	-	837	785	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1486	-	-	1445	-	-	624	632	968	668	652	965
Mov Cap-2 Maneuver	-	-	-	-	-	-	624	632	-	668	652	-
Stage 1	-	-	-	-	-	-	815	749	-	872	822	-
Stage 2	-	-	-	-	-	-	811	798	-	791	761	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.3	0.4	10.6	10.5
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	673	1486	-	-	1445	-	-	737
HCM Lane V/C Ratio	0.043	0.029	-	-	0.004	-	-	0.114
HCM Control Delay (s)	10.6	7.5	0	-	7.5	0	-	10.5
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.4

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	90	3	0	99	2	0
Future Vol, veh/h	90	3	0	99	2	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	4	0	0	5	0	0
Mvmt Flow	99	3	0	109	2	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	102	0	210	101
Stage 1	-	-	-	-	101	-
Stage 2	-	-	-	-	109	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1503	-	783	960
Stage 1	-	-	-	-	928	-
Stage 2	-	-	-	-	921	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1503	-	783	960
Mov Cap-2 Maneuver	-	-	-	-	783	-
Stage 1	-	-	-	-	928	-
Stage 2	-	-	-	-	921	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	783	-	-	1503	-
HCM Lane V/C Ratio	0.003	-	-	-	-
HCM Control Delay (s)	9.6	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	90	0	0	98	1	0	0	0	0	0	1
Future Vol, veh/h	0	90	0	0	98	1	0	0	0	0	0	1
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	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	3	0	0	10	0	0	0	0	0	0	0
Mvmt Flow	0	96	0	0	104	1	0	0	0	0	0	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	105	0	0	96	0	0	201	201	96	201	201	105
Stage 1	-	-	-	-	-	-	96	96	-	105	105	-
Stage 2	-	-	-	-	-	-	105	105	-	96	96	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1499	-	-	1510	-	-	762	699	966	762	699	955
Stage 1	-	-	-	-	-	-	916	819	-	906	812	-
Stage 2	-	-	-	-	-	-	906	812	-	916	819	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1499	-	-	1510	-	-	761	699	966	762	699	955
Mov Cap-2 Maneuver	-	-	-	-	-	-	761	699	-	762	699	-
Stage 1	-	-	-	-	-	-	916	819	-	906	812	-
Stage 2	-	-	-	-	-	-	905	812	-	916	819	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	0	8.8
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1499	-	-	1510	-	-	955
HCM Lane V/C Ratio	-	-	-	-	-	-	-	0.001
HCM Control Delay (s)	0	0	-	-	0	-	-	8.8
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0

Capacity Analysis Summary Sheets

No-Build Saturday Evening Peak Hour

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	0	0	0	19	0	49	0	474	37	34	420	1
Future Vol, veh/h	0	0	0	19	0	49	0	474	37	34	420	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	2	0	2	0	0	3	0
Mvmt Flow	0	0	0	20	0	52	0	499	39	36	442	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1060	1053	443	1034	1034	519	443	0	0	538	0	0
Stage 1	515	515	-	519	519	-	-	-	-	-	-	-
Stage 2	545	538	-	515	515	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.22	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.318	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	204	228	619	212	234	557	1128	-	-	1040	-	-
Stage 1	546	538	-	544	536	-	-	-	-	-	-	-
Stage 2	526	526	-	546	538	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	179	218	619	205	223	557	1128	-	-	1040	-	-
Mov Cap-2 Maneuver	179	218	-	205	223	-	-	-	-	-	-	-
Stage 1	546	513	-	544	536	-	-	-	-	-	-	-
Stage 2	477	526	-	521	513	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	16.8	0	0.6
HCM LOS	A	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1128	-	-	-	376	1040	-	-
HCM Lane V/C Ratio	-	-	-	-	0.19	0.034	-	-
HCM Control Delay (s)	0	-	-	0	16.8	8.6	0	-
HCM Lane LOS	A	-	-	A	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0.7	0.1	-	-

Intersection	
Int Delay, s/veh	4.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	27	32	7	0	36	21	5	6	3	21	13	22
Future Vol, veh/h	27	32	7	0	36	21	5	6	3	21	13	22
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	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	0	0	0	0	9	0	0	0	0	15	8	0
Mvmt Flow	33	40	9	0	44	26	6	7	4	26	16	27

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	70	0	0	49	0	0	190	181	45	173	172	57
Stage 1	-	-	-	-	-	-	111	111	-	57	57	-
Stage 2	-	-	-	-	-	-	79	70	-	116	115	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.25	6.58	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.25	5.58	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.25	5.58	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.635	4.072	3.3
Pot Cap-1 Maneuver	1544	-	-	1571	-	-	774	717	1031	762	710	1015
Stage 1	-	-	-	-	-	-	899	807	-	923	836	-
Stage 2	-	-	-	-	-	-	935	841	-	858	789	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1544	-	-	1571	-	-	728	701	1031	741	694	1015
Mov Cap-2 Maneuver	-	-	-	-	-	-	728	701	-	741	694	-
Stage 1	-	-	-	-	-	-	879	789	-	903	836	-
Stage 2	-	-	-	-	-	-	893	841	-	828	772	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3	0	9.8	9.8
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	763	1544	-	-	1571	-	-	815
HCM Lane V/C Ratio	0.023	0.022	-	-	-	-	-	0.085
HCM Control Delay (s)	9.8	7.4	0	-	0	-	-	9.8
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.3

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	65	5	1	63	5	1
Future Vol, veh/h	65	5	1	63	5	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	0	0	0	0	0
Mvmt Flow	76	6	1	73	6	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	82	0	154	79
Stage 1	-	-	-	-	79	-
Stage 2	-	-	-	-	75	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1528	-	842	987
Stage 1	-	-	-	-	949	-
Stage 2	-	-	-	-	953	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1528	-	841	987
Mov Cap-2 Maneuver	-	-	-	-	841	-
Stage 1	-	-	-	-	949	-
Stage 2	-	-	-	-	952	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	9.2
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	862	-	-	1528	-
HCM Lane V/C Ratio	0.008	-	-	0.001	-
HCM Control Delay (s)	9.2	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

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	1	65	0	1	62	0	1	0	0	1	0	1
Future Vol, veh/h	1	65	0	1	62	0	1	0	0	1	0	1
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	82	82	82	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	0	5	0	0	2	0	0	0	0	0	0	0
Mvmt Flow	1	79	0	1	76	0	1	0	0	1	0	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	76	0	0	79	0	0	160	159	79	159	159	76
Stage 1	-	-	-	-	-	-	81	81	-	78	78	-
Stage 2	-	-	-	-	-	-	79	78	-	81	81	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1536	-	-	1532	-	-	810	737	987	811	737	991
Stage 1	-	-	-	-	-	-	932	832	-	936	834	-
Stage 2	-	-	-	-	-	-	935	834	-	932	832	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1536	-	-	1532	-	-	808	736	987	809	736	991
Mov Cap-2 Maneuver	-	-	-	-	-	-	808	736	-	809	736	-
Stage 1	-	-	-	-	-	-	931	831	-	935	833	-
Stage 2	-	-	-	-	-	-	933	833	-	931	831	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.1	9.5	9.1
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	808	1536	-	-	1532	-	-	891
HCM Lane V/C Ratio	0.002	0.001	-	-	0.001	-	-	0.003
HCM Control Delay (s)	9.5	7.3	0	-	7.4	0	-	9.1
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Capacity Analysis Summary Sheets

Projected Weekday Morning Peak Hour

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	1	0	2	25	0	73	0	433	55	15	247	3
Future Vol, veh/h	1	0	2	25	0	73	0	433	55	15	247	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	0	0	50	0	0	3	0	11	6	10	19	67
Mvmt Flow	1	0	2	29	0	85	0	503	64	17	287	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	901	890	289	859	859	535	290	0	0	567	0	0
Stage 1	323	323	-	535	535	-	-	-	-	-	-	-
Stage 2	578	567	-	324	324	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.7	7.1	6.5	6.23	4.1	-	-	4.2	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.75	3.5	4	3.327	2.2	-	-	2.29	-	-
Pot Cap-1 Maneuver	261	284	649	279	296	543	1283	-	-	966	-	-
Stage 1	693	654	-	533	527	-	-	-	-	-	-	-
Stage 2	505	510	-	692	653	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	217	278	649	273	290	543	1283	-	-	966	-	-
Mov Cap-2 Maneuver	217	278	-	273	290	-	-	-	-	-	-	-
Stage 1	693	640	-	533	527	-	-	-	-	-	-	-
Stage 2	426	510	-	675	639	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.3	16.2	0	0.5
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1283	-	-	390	434	966	-	-
HCM Lane V/C Ratio	-	-	-	0.009	0.263	0.018	-	-
HCM Control Delay (s)	0	-	-	14.3	16.2	8.8	0	-
HCM Lane LOS	A	-	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	1	0.1	-	-

Intersection	
Int Delay, s/veh	5.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	46	15	1	0	67	26	5	26	0	8	26	21
Future Vol, veh/h	46	15	1	0	67	26	5	26	0	8	26	21
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	73	73	73	73	73	73	73	73	73	73	73	73
Heavy Vehicles, %	2	8	0	0	2	0	0	4	0	13	20	0
Mvmt Flow	63	21	1	0	92	36	7	36	0	11	36	29

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	128	0	0	22	0	0	291	276	22	276	258	110
Stage 1	-	-	-	-	-	-	148	148	-	110	110	-
Stage 2	-	-	-	-	-	-	143	128	-	166	148	-
Critical Hdwy	4.12	-	-	4.1	-	-	7.1	6.54	6.2	7.23	6.7	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.54	-	6.23	5.7	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.54	-	6.23	5.7	-
Follow-up Hdwy	2.218	-	-	2.2	-	-	3.5	4.036	3.3	3.617	4.18	3.3
Pot Cap-1 Maneuver	1458	-	-	1607	-	-	665	628	1061	655	617	949
Stage 1	-	-	-	-	-	-	859	771	-	869	771	-
Stage 2	-	-	-	-	-	-	865	786	-	811	742	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1458	-	-	1607	-	-	595	600	1061	605	590	949
Mov Cap-2 Maneuver	-	-	-	-	-	-	595	600	-	605	590	-
Stage 1	-	-	-	-	-	-	821	737	-	831	771	-
Stage 2	-	-	-	-	-	-	800	786	-	738	709	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	5.6	0	11.5	10.8
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	599	1458	-	-	1607	-	-	693
HCM Lane V/C Ratio	0.071	0.043	-	-	-	-	-	0.109
HCM Control Delay (s)	11.5	7.6	0	-	0	-	-	10.8
HCM Lane LOS	B	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0	-	-	0.4

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	66	4	0	95	3	1
Future Vol, veh/h	66	4	0	95	3	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	67	67	67	67	67	67
Heavy Vehicles, %	3	0	0	2	0	0
Mvmt Flow	99	6	0	142	4	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	105	0	244	102
Stage 1	-	-	-	-	102	-
Stage 2	-	-	-	-	142	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1499	-	749	959
Stage 1	-	-	-	-	927	-
Stage 2	-	-	-	-	890	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1499	-	749	959
Mov Cap-2 Maneuver	-	-	-	-	749	-
Stage 1	-	-	-	-	927	-
Stage 2	-	-	-	-	890	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	792	-	-	1499	-
HCM Lane V/C Ratio	0.008	-	-	-	-
HCM Control Delay (s)	9.6	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

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	1	61	5	1	92	0	2	0	1	0	0	1
Future Vol, veh/h	1	61	5	1	92	0	2	0	1	0	0	1
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	67	67	67	67	67	67	67	67	67	67	67	67
Heavy Vehicles, %	0	5	0	0	2	0	0	0	0	0	0	0
Mvmt Flow	1	91	7	1	137	0	3	0	1	0	0	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	137	0	0	98	0	0	237	236	95	236	239	137
Stage 1	-	-	-	-	-	-	97	97	-	139	139	-
Stage 2	-	-	-	-	-	-	140	139	-	97	100	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1459	-	-	1508	-	-	722	668	967	723	666	917
Stage 1	-	-	-	-	-	-	914	819	-	869	785	-
Stage 2	-	-	-	-	-	-	868	785	-	914	816	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1459	-	-	1508	-	-	720	667	967	721	665	917
Mov Cap-2 Maneuver	-	-	-	-	-	-	720	667	-	721	665	-
Stage 1	-	-	-	-	-	-	913	818	-	868	784	-
Stage 2	-	-	-	-	-	-	866	784	-	912	815	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.1	9.6	8.9
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	787	1459	-	-	1508	-	-	917
HCM Lane V/C Ratio	0.006	0.001	-	-	0.001	-	-	0.002
HCM Control Delay (s)	9.6	7.5	0	-	7.4	0	-	8.9
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Capacity Analysis Summary Sheets

Projected Weekday Afternoon Peak Hour

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	1	0	1	38	0	32	1	313	24	36	374	3
Future Vol, veh/h	1	0	1	38	0	32	1	313	24	36	374	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	9	0	7	0	8	11	3	7	33
Mvmt Flow	1	0	1	43	0	36	1	356	27	41	425	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	899	894	427	881	882	370	428	0	0	383	0	0
Stage 1	509	509	-	372	372	-	-	-	-	-	-	-
Stage 2	390	385	-	509	510	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.19	6.5	6.27	4.1	-	-	4.13	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.19	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.19	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.581	4	3.363	2.2	-	-	2.227	-	-
Pot Cap-1 Maneuver	262	283	632	260	287	665	1142	-	-	1170	-	-
Stage 1	550	541	-	634	622	-	-	-	-	-	-	-
Stage 2	638	614	-	534	541	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	239	270	632	250	274	665	1142	-	-	1170	-	-
Mov Cap-2 Maneuver	239	270	-	250	274	-	-	-	-	-	-	-
Stage 1	549	516	-	633	621	-	-	-	-	-	-	-
Stage 2	603	613	-	509	516	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	15.4	18.3	0	0.7
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1142	-	-	347	350	1170	-	-
HCM Lane V/C Ratio	0.001	-	-	0.007	0.227	0.035	-	-
HCM Control Delay (s)	8.2	0	-	15.4	18.3	8.2	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.9	0.1	-	-

Intersection	
Int Delay, s/veh	7.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	24	20	9	19	16	0	3	14	4	20	21	39
Future Vol, veh/h	24	20	9	19	16	0	3	14	4	20	21	39
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	67	67	67	67	67	67	67	67	67	67	67	67
Heavy Vehicles, %	9	6	0	0	11	0	0	39	0	16	15	7
Mvmt Flow	36	30	13	28	24	0	4	21	6	30	31	58

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	24	0	0	43	0	0	234	189	37	202	195	24
Stage 1	-	-	-	-	-	-	109	109	-	80	80	-
Stage 2	-	-	-	-	-	-	125	80	-	122	115	-
Critical Hdwy	4.19	-	-	4.1	-	-	7.1	6.89	6.2	7.26	6.65	6.27
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.89	-	6.26	5.65	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.89	-	6.26	5.65	-
Follow-up Hdwy	2.281	-	-	2.2	-	-	3.5	4.351	3.3	3.644	4.135	3.363
Pot Cap-1 Maneuver	1546	-	-	1579	-	-	725	645	1041	727	678	1038
Stage 1	-	-	-	-	-	-	901	739	-	895	804	-
Stage 2	-	-	-	-	-	-	884	762	-	849	776	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1546	-	-	1579	-	-	639	618	1041	682	650	1038
Mov Cap-2 Maneuver	-	-	-	-	-	-	639	618	-	682	650	-
Stage 1	-	-	-	-	-	-	879	721	-	874	790	-
Stage 2	-	-	-	-	-	-	787	748	-	800	757	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.3	4	10.6	10.2
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	673	1546	-	-	1579	-	-	806
HCM Lane V/C Ratio	0.047	0.023	-	-	0.018	-	-	0.148
HCM Control Delay (s)	10.6	7.4	0	-	7.3	0	-	10.2
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0.1	-	-	0.5

Intersection	
Int Delay, s/veh	0.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	54	5	1	62	8	4
Future Vol, veh/h	54	5	1	62	8	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	73	73	73	73	73	73
Heavy Vehicles, %	6	0	0	9	0	0
Mvmt Flow	74	7	1	85	11	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	81	0	165	78
Stage 1	-	-	-	-	78	-
Stage 2	-	-	-	-	87	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1529	-	830	988
Stage 1	-	-	-	-	950	-
Stage 2	-	-	-	-	941	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1529	-	829	988
Mov Cap-2 Maneuver	-	-	-	-	829	-
Stage 1	-	-	-	-	950	-
Stage 2	-	-	-	-	940	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	9.2
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	876	-	-	1529	-
HCM Lane V/C Ratio	0.019	-	-	0.001	-
HCM Control Delay (s)	9.2	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	51	4	1	57	0	5	0	2	0	0	0
Future Vol, veh/h	3	51	4	1	57	0	5	0	2	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	68	68	68	68	68	68	68	68	68	68	68	68
Heavy Vehicles, %	0	4	0	0	9	0	0	0	0	0	0	0
Mvmt Flow	4	75	6	1	84	0	7	0	3	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	84	0	0	81	0	0	172	172	78	174	175	84
Stage 1	-	-	-	-	-	-	86	86	-	86	86	-
Stage 2	-	-	-	-	-	-	86	86	-	88	89	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1526	-	-	1529	-	-	796	725	988	793	722	981
Stage 1	-	-	-	-	-	-	927	827	-	927	827	-
Stage 2	-	-	-	-	-	-	927	827	-	925	825	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1526	-	-	1529	-	-	794	722	988	788	719	981
Mov Cap-2 Maneuver	-	-	-	-	-	-	794	722	-	788	719	-
Stage 1	-	-	-	-	-	-	924	825	-	924	826	-
Stage 2	-	-	-	-	-	-	926	826	-	919	823	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.1	9.3	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	841	1526	-	-	1529	-	-	-
HCM Lane V/C Ratio	0.012	0.003	-	-	0.001	-	-	-
HCM Control Delay (s)	9.3	7.4	0	-	7.4	0	-	0
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	-

Capacity Analysis Summary Sheets

Projected Weekday Evening Peak Hour

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	1	0	1	22	0	34	0	381	21	61	444	1
Future Vol, veh/h	1	0	1	22	0	34	0	381	21	61	444	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	4	0	6	0	6	5	0
Mvmt Flow	1	0	1	23	0	36	0	401	22	64	467	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1026	1019	468	1008	1008	412	468	0	0	423	0	0
Stage 1	596	596	-	412	412	-	-	-	-	-	-	-
Stage 2	430	423	-	596	596	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.24	4.1	-	-	4.16	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.336	2.2	-	-	2.254	-	-
Pot Cap-1 Maneuver	215	239	599	221	242	636	1104	-	-	1115	-	-
Stage 1	494	495	-	621	598	-	-	-	-	-	-	-
Stage 2	607	591	-	494	495	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	191	220	599	208	223	636	1104	-	-	1115	-	-
Mov Cap-2 Maneuver	191	220	-	208	223	-	-	-	-	-	-	-
Stage 1	494	456	-	621	598	-	-	-	-	-	-	-
Stage 2	573	591	-	455	456	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	17.5	17.3	0	1
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1104	-	-	290	352	1115	-	-
HCM Lane V/C Ratio	-	-	-	0.007	0.167	0.058	-	-
HCM Control Delay (s)	0	-	-	17.5	17.3	8.4	0	-
HCM Lane LOS	A	-	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.6	0.2	-	-

Intersection	
Int Delay, s/veh	3.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	14	48	6	2	23	12	5	11	0	13	8	17
Future Vol, veh/h	14	48	6	2	23	12	5	11	0	13	8	17
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, %	0	11	0	0	5	9	0	10	0	8	0	0
Mvmt Flow	15	52	7	2	25	13	5	12	0	14	9	18

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	38	0	0	59	0	0	135	128	56	128	125	32
Stage 1	-	-	-	-	-	-	86	86	-	36	36	-
Stage 2	-	-	-	-	-	-	49	42	-	92	89	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.6	6.2	7.18	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.6	-	6.18	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.6	-	6.18	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4.09	3.3	3.572	4	3.3
Pot Cap-1 Maneuver	1585	-	-	1558	-	-	841	748	1016	831	769	1048
Stage 1	-	-	-	-	-	-	927	808	-	964	869	-
Stage 2	-	-	-	-	-	-	969	844	-	900	825	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1585	-	-	1558	-	-	812	740	1016	814	761	1048
Mov Cap-2 Maneuver	-	-	-	-	-	-	812	740	-	814	761	-
Stage 1	-	-	-	-	-	-	918	800	-	954	868	-
Stage 2	-	-	-	-	-	-	941	843	-	878	817	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.5	0.4	9.8	9.2
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	761	1585	-	-	1558	-	-	890
HCM Lane V/C Ratio	0.023	0.01	-	-	0.001	-	-	0.046
HCM Control Delay (s)	9.8	7.3	0	-	7.3	0	-	9.2
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	71	10	3	47	9	2
Future Vol, veh/h	71	10	3	47	9	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	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, %	3	0	0	3	0	0
Mvmt Flow	77	11	3	51	10	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	88	0	140	83
Stage 1	-	-	-	-	83	-
Stage 2	-	-	-	-	57	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1520	-	858	982
Stage 1	-	-	-	-	945	-
Stage 2	-	-	-	-	971	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1520	-	856	982
Mov Cap-2 Maneuver	-	-	-	-	856	-
Stage 1	-	-	-	-	945	-
Stage 2	-	-	-	-	969	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	9.2
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	876	-	-	1520	-
HCM Lane V/C Ratio	0.014	-	-	0.002	-
HCM Control Delay (s)	9.2	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	67	6	1	44	0	5	0	1	0	0	1
Future Vol, veh/h	0	67	6	1	44	0	5	0	1	0	0	1
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	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	5	0	0	3	0	0	0	0	0	0	0
Mvmt Flow	0	74	7	1	49	0	6	0	1	0	0	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	49	0	0	81	0	0	130	129	78	129	132	49
Stage 1	-	-	-	-	-	-	78	78	-	51	51	-
Stage 2	-	-	-	-	-	-	52	51	-	78	81	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1571	-	-	1529	-	-	847	765	988	849	762	1025
Stage 1	-	-	-	-	-	-	936	834	-	967	856	-
Stage 2	-	-	-	-	-	-	966	856	-	936	832	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1571	-	-	1529	-	-	845	764	988	847	761	1025
Mov Cap-2 Maneuver	-	-	-	-	-	-	845	764	-	847	761	-
Stage 1	-	-	-	-	-	-	936	834	-	967	855	-
Stage 2	-	-	-	-	-	-	964	855	-	935	832	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.2	9.2	8.5
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	866	1571	-	-	1529	-	-	1025
HCM Lane V/C Ratio	0.008	-	-	-	0.001	-	-	0.001
HCM Control Delay (s)	9.2	0	-	-	7.4	0	-	8.5
HCM Lane LOS	A	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Capacity Analysis Summary Sheets

Projected Saturday Morning Peak Hour

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	0	0	0	15	0	45	0	312	25	23	194	0
Future Vol, veh/h	0	0	0	15	0	45	0	312	25	23	194	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	0	0	0	9	0	5	0	4	25	0	5	0
Mvmt Flow	0	0	0	19	0	56	0	390	31	29	243	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	735	722	243	707	707	406	243	0	0	421	0	0
Stage 1	301	301	-	406	406	-	-	-	-	-	-	-
Stage 2	434	421	-	301	301	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.19	6.5	6.25	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.19	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.19	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.581	4	3.345	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	338	355	801	341	363	638	1335	-	-	1149	-	-
Stage 1	712	669	-	608	601	-	-	-	-	-	-	-
Stage 2	604	592	-	693	669	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	301	345	801	333	352	638	1335	-	-	1149	-	-
Mov Cap-2 Maneuver	301	345	-	333	352	-	-	-	-	-	-	-
Stage 1	712	650	-	608	601	-	-	-	-	-	-	-
Stage 2	551	592	-	673	650	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	13.1	0	0.9
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1335	-	-	-	519	1149	-	-
HCM Lane V/C Ratio	-	-	-	-	0.145	0.025	-	-
HCM Control Delay (s)	0	-	-	0	13.1	8.2	0	-
HCM Lane LOS	A	-	-	A	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0.5	0.1	-	-

Intersection	
Int Delay, s/veh	4.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	17	18	0	1	39	4	3	8	6	8	1	13
Future Vol, veh/h	17	18	0	1	39	4	3	8	6	8	1	13
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	66	66	66	66	66	66	66	66	66	66	66	66
Heavy Vehicles, %	19	14	0	0	9	0	0	13	0	13	0	9
Mvmt Flow	26	27	0	2	59	6	5	12	9	12	2	20

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	65	0	0	27	0	0	156	148	27	156	145	62
Stage 1	-	-	-	-	-	-	79	79	-	66	66	-
Stage 2	-	-	-	-	-	-	77	69	-	90	79	-
Critical Hdwy	4.29	-	-	4.1	-	-	7.1	6.63	6.2	7.23	6.5	6.29
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.63	-	6.23	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.63	-	6.23	5.5	-
Follow-up Hdwy	2.371	-	-	2.2	-	-	3.5	4.117	3.3	3.617	4	3.381
Pot Cap-1 Maneuver	1435	-	-	1600	-	-	815	724	1054	786	750	984
Stage 1	-	-	-	-	-	-	935	808	-	918	844	-
Stage 2	-	-	-	-	-	-	937	816	-	891	833	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1435	-	-	1600	-	-	786	710	1054	758	736	984
Mov Cap-2 Maneuver	-	-	-	-	-	-	786	710	-	758	736	-
Stage 1	-	-	-	-	-	-	918	793	-	901	843	-
Stage 2	-	-	-	-	-	-	916	815	-	854	818	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.7	0.2	9.5	9.3
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	818	1435	-	-	1600	-	-	876
HCM Lane V/C Ratio	0.031	0.018	-	-	0.001	-	-	0.038
HCM Control Delay (s)	9.5	7.6	0	-	7.3	0	-	9.3
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	40	8	2	54	5	1
Future Vol, veh/h	40	8	2	54	5	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	66	66	66	66	66	66
Heavy Vehicles, %	17	0	0	2	0	0
Mvmt Flow	61	12	3	82	8	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	73	0	155	67
Stage 1	-	-	-	-	67	-
Stage 2	-	-	-	-	88	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1540	-	841	1002
Stage 1	-	-	-	-	961	-
Stage 2	-	-	-	-	940	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1540	-	839	1002
Mov Cap-2 Maneuver	-	-	-	-	839	-
Stage 1	-	-	-	-	961	-
Stage 2	-	-	-	-	938	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	9.2
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	862	-	-	1540	-
HCM Lane V/C Ratio	0.011	-	-	0.002	-
HCM Control Delay (s)	9.2	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	34	7	2	52	0	3	0	1	0	0	1
Future Vol, veh/h	0	34	7	2	52	0	3	0	1	0	0	1
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	65	65	65	65	65	65	65	65	65	65	65	65
Heavy Vehicles, %	0	16	0	0	8	0	0	0	0	0	0	0
Mvmt Flow	0	52	11	3	80	0	5	0	2	0	0	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	80	0	0	63	0	0	145	144	58	145	149	80
Stage 1	-	-	-	-	-	-	58	58	-	86	86	-
Stage 2	-	-	-	-	-	-	87	86	-	59	63	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1531	-	-	1553	-	-	828	751	1014	828	746	986
Stage 1	-	-	-	-	-	-	959	851	-	927	827	-
Stage 2	-	-	-	-	-	-	926	827	-	958	846	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1531	-	-	1553	-	-	826	749	1014	826	745	986
Mov Cap-2 Maneuver	-	-	-	-	-	-	826	749	-	826	745	-
Stage 1	-	-	-	-	-	-	959	851	-	927	825	-
Stage 2	-	-	-	-	-	-	923	825	-	957	846	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.3	9.2	8.7
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	866	1531	-	-	1553	-	-	986
HCM Lane V/C Ratio	0.007	-	-	-	0.002	-	-	0.002
HCM Control Delay (s)	9.2	0	-	-	7.3	0	-	8.7
HCM Lane LOS	A	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Capacity Analysis Summary Sheets

Projected Saturday Midday Peak Hour

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	0	0	0	33	0	80	0	573	61	45	477	0
Future Vol, veh/h	0	0	0	33	0	80	0	573	61	45	477	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	0	0	8	0	2	0	3	2	0	5	0
Mvmt Flow	0	0	0	36	0	88	0	630	67	49	524	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1330	1319	524	1286	1286	664	524	0	0	697	0	0
Stage 1	622	622	-	664	664	-	-	-	-	-	-	-
Stage 2	708	697	-	622	622	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.18	6.5	6.22	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.18	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.18	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.572	4	3.318	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	133	158	557	137	166	461	1053	-	-	909	-	-
Stage 1	478	482	-	440	461	-	-	-	-	-	-	-
Stage 2	429	446	-	464	482	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	101	146	557	129	153	461	1053	-	-	909	-	-
Mov Cap-2 Maneuver	101	146	-	129	153	-	-	-	-	-	-	-
Stage 1	478	445	-	440	461	-	-	-	-	-	-	-
Stage 2	347	446	-	429	445	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	30.4	0	0.8
HCM LOS	A	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1053	-	-	-	263	909	-	-
HCM Lane V/C Ratio	-	-	-	-	0.472	0.054	-	-
HCM Control Delay (s)	0	-	-	0	30.4	9.2	0	-
HCM Lane LOS	A	-	-	A	D	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	2.4	0.2	-	-

Intersection	
Int Delay, s/veh	5.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	41	47	5	5	66	21	9	14	5	30	23	27
Future Vol, veh/h	41	47	5	5	66	21	9	14	5	30	23	27
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	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	5	5	0	20	3	5	13	8	20	10	0	8
Mvmt Flow	44	50	5	5	70	22	10	15	5	32	24	29

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	92	0	0	55	0	0	259	243	53	242	234	81
Stage 1	-	-	-	-	-	-	141	141	-	91	91	-
Stage 2	-	-	-	-	-	-	118	102	-	151	143	-
Critical Hdwy	4.15	-	-	4.3	-	-	7.23	6.58	6.4	7.2	6.5	6.28
Critical Hdwy Stg 1	-	-	-	-	-	-	6.23	5.58	-	6.2	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.23	5.58	-	6.2	5.5	-
Follow-up Hdwy	2.245	-	-	2.38	-	-	3.617	4.072	3.48	3.59	4	3.372
Pot Cap-1 Maneuver	1484	-	-	1442	-	-	672	649	966	696	670	963
Stage 1	-	-	-	-	-	-	836	769	-	897	823	-
Stage 2	-	-	-	-	-	-	861	799	-	833	782	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1484	-	-	1442	-	-	616	626	966	662	647	963
Mov Cap-2 Maneuver	-	-	-	-	-	-	616	626	-	662	647	-
Stage 1	-	-	-	-	-	-	810	745	-	869	820	-
Stage 2	-	-	-	-	-	-	807	796	-	787	758	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.3	0.4	10.7	10.5
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	664	1484	-	-	1442	-	-	735
HCM Lane V/C Ratio	0.045	0.029	-	-	0.004	-	-	0.116
HCM Control Delay (s)	10.7	7.5	0	-	7.5	0	-	10.5
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.4

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	96	9	2	105	8	1
Future Vol, veh/h	96	9	2	105	8	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	4	0	0	5	0	0
Mvmt Flow	105	10	2	115	9	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	115	0	229	110
Stage 1	-	-	-	-	110	-
Stage 2	-	-	-	-	119	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1487	-	764	949
Stage 1	-	-	-	-	920	-
Stage 2	-	-	-	-	911	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1487	-	763	949
Mov Cap-2 Maneuver	-	-	-	-	763	-
Stage 1	-	-	-	-	920	-
Stage 2	-	-	-	-	910	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	9.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	780	-	-	1487	-
HCM Lane V/C Ratio	0.013	-	-	0.001	-
HCM Control Delay (s)	9.7	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

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	91	6	2	100	1	6	0	2	0	0	1
Future Vol, veh/h	0	91	6	2	100	1	6	0	2	0	0	1
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	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	3	0	0	10	0	0	0	0	0	0	0
Mvmt Flow	0	97	6	2	106	1	6	0	2	0	0	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	107	0	0	103	0	0	211	211	100	212	214	107
Stage 1	-	-	-	-	-	-	100	100	-	111	111	-
Stage 2	-	-	-	-	-	-	111	111	-	101	103	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1497	-	-	1502	-	-	750	690	961	749	687	953
Stage 1	-	-	-	-	-	-	911	816	-	899	807	-
Stage 2	-	-	-	-	-	-	899	807	-	910	814	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1497	-	-	1502	-	-	749	689	961	747	686	953
Mov Cap-2 Maneuver	-	-	-	-	-	-	749	689	-	747	686	-
Stage 1	-	-	-	-	-	-	911	816	-	899	806	-
Stage 2	-	-	-	-	-	-	897	806	-	908	814	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.1	9.6	8.8
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	793	1497	-	-	1502	-	-	953
HCM Lane V/C Ratio	0.011	-	-	-	0.001	-	-	0.001
HCM Control Delay (s)	9.6	0	-	-	7.4	0	-	8.8
HCM Lane LOS	A	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Capacity Analysis Summary Sheets

Projected Saturday Evening Peak Hour

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	25	0	55	0	474	43	40	420	1
Future Vol, veh/h	0	0	0	25	0	55	0	474	43	40	420	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	2	0	2	0	0	3	0
Mvmt Flow	0	0	0	26	0	58	0	499	45	42	442	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1078	1071	443	1049	1049	522	443	0	0	544	0	0
Stage 1	527	527	-	522	522	-	-	-	-	-	-	-
Stage 2	551	544	-	527	527	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.22	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.318	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	198	223	619	207	229	555	1128	-	-	1035	-	-
Stage 1	538	532	-	542	534	-	-	-	-	-	-	-
Stage 2	522	522	-	538	532	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	170	211	619	199	217	555	1128	-	-	1035	-	-
Mov Cap-2 Maneuver	170	211	-	199	217	-	-	-	-	-	-	-
Stage 1	538	503	-	542	534	-	-	-	-	-	-	-
Stage 2	468	522	-	509	503	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	18.2	0	0.7
HCM LOS	A	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1128	-	-	-	356	1035	-	-
HCM Lane V/C Ratio	-	-	-	-	0.237	0.041	-	-
HCM Control Delay (s)	0	-	-	0	18.2	8.6	0	-
HCM Lane LOS	A	-	-	A	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0.9	0.1	-	-

Intersection	
Int Delay, s/veh	4.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	28	34	8	0	38	21	6	6	3	21	13	23
Future Vol, veh/h	28	34	8	0	38	21	6	6	3	21	13	23
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	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	0	0	0	0	9	0	0	0	0	15	8	0
Mvmt Flow	35	42	10	0	47	26	7	7	4	26	16	28

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	73	0	0	52	0	0	199	190	47	183	182	60
Stage 1	-	-	-	-	-	-	117	117	-	60	60	-
Stage 2	-	-	-	-	-	-	82	73	-	123	122	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.25	6.58	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.25	5.58	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.25	5.58	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.635	4.072	3.3
Pot Cap-1 Maneuver	1540	-	-	1567	-	-	764	708	1028	750	701	1011
Stage 1	-	-	-	-	-	-	892	803	-	920	833	-
Stage 2	-	-	-	-	-	-	931	838	-	851	783	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1540	-	-	1567	-	-	717	692	1028	728	685	1011
Mov Cap-2 Maneuver	-	-	-	-	-	-	717	692	-	728	685	-
Stage 1	-	-	-	-	-	-	871	785	-	899	833	-
Stage 2	-	-	-	-	-	-	887	838	-	821	765	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3	0	9.9	9.9
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	752	1540	-	-	1567	-	-	808
HCM Lane V/C Ratio	0.025	0.022	-	-	-	-	-	0.087
HCM Control Delay (s)	9.9	7.4	0	-	0	-	-	9.9
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.3

Intersection	
Int Delay, s/veh	0.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	71	11	3	69	11	3
Future Vol, veh/h	71	11	3	69	11	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	0	0	0	0	0
Mvmt Flow	83	13	3	80	13	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	96	0	176	90
Stage 1	-	-	-	-	90	-
Stage 2	-	-	-	-	86	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1510	-	818	973
Stage 1	-	-	-	-	939	-
Stage 2	-	-	-	-	942	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1510	-	816	973
Mov Cap-2 Maneuver	-	-	-	-	816	-
Stage 1	-	-	-	-	939	-
Stage 2	-	-	-	-	940	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	9.3
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	845	-	-	1510	-
HCM Lane V/C Ratio	0.019	-	-	0.002	-
HCM Control Delay (s)	9.3	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	67	6	3	64	0	7	0	2	1	0	1
Future Vol, veh/h	1	67	6	3	64	0	7	0	2	1	0	1
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	82	82	82	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	0	5	0	0	2	0	0	0	0	0	0	0
Mvmt Flow	1	82	7	4	78	0	9	0	2	1	0	1

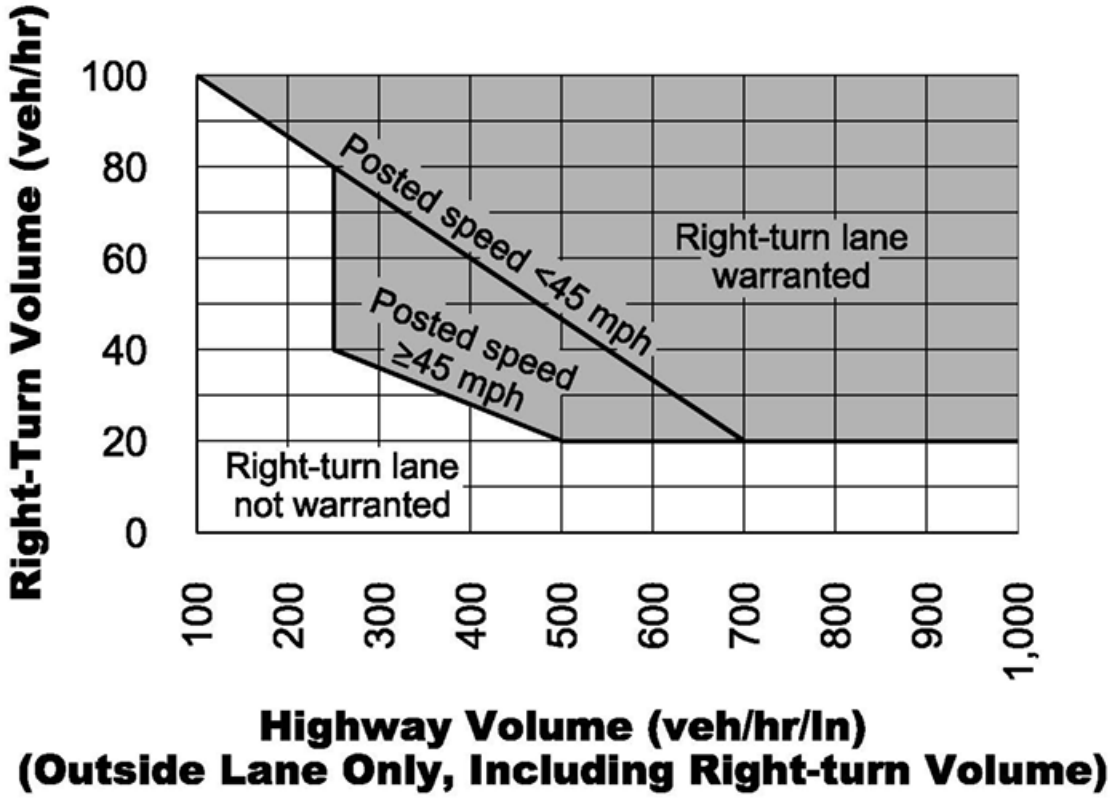
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	78	0	0	89	0	0	175	174	86	175	177	78
Stage 1	-	-	-	-	-	-	88	88	-	86	86	-
Stage 2	-	-	-	-	-	-	87	86	-	89	91	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1533	-	-	1519	-	-	792	723	978	792	720	988
Stage 1	-	-	-	-	-	-	925	826	-	927	827	-
Stage 2	-	-	-	-	-	-	926	827	-	923	823	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1533	-	-	1519	-	-	789	720	978	787	717	988
Mov Cap-2 Maneuver	-	-	-	-	-	-	789	720	-	787	717	-
Stage 1	-	-	-	-	-	-	924	825	-	926	825	-
Stage 2	-	-	-	-	-	-	922	825	-	920	822	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.3	9.4	9.1
HCM LOS			A	A

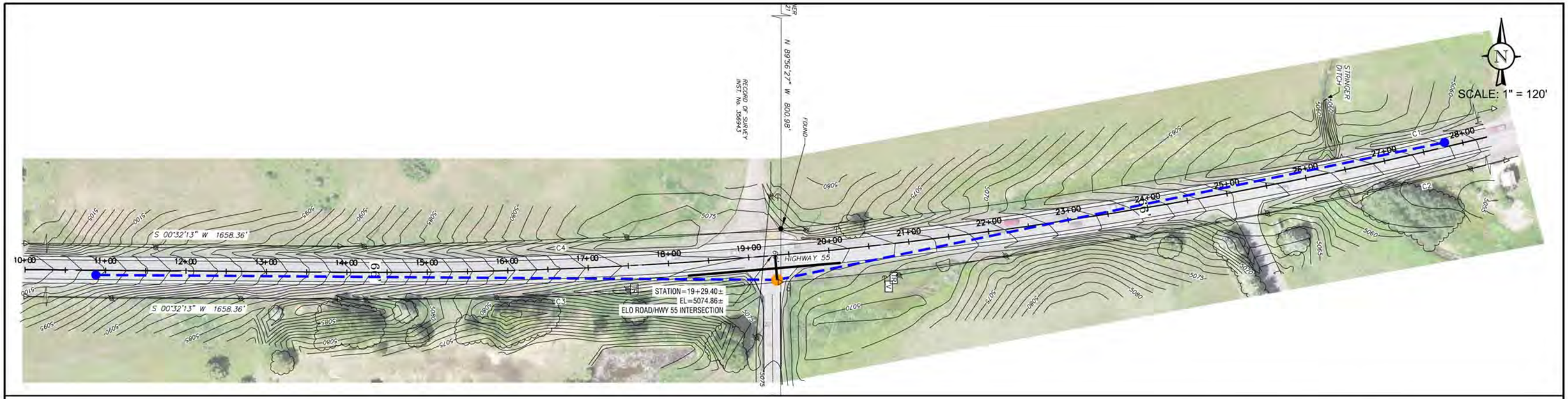
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	824	1533	-	-	1519	-	-	876
HCM Lane V/C Ratio	0.013	0.001	-	-	0.002	-	-	0.003
HCM Control Delay (s)	9.4	7.3	0	-	7.4	0	-	9.1
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Right Turn Lane Warrant Diagram

Figure 3B-1. Right-Turn Lane Warrant



Sight Distance Exhibit



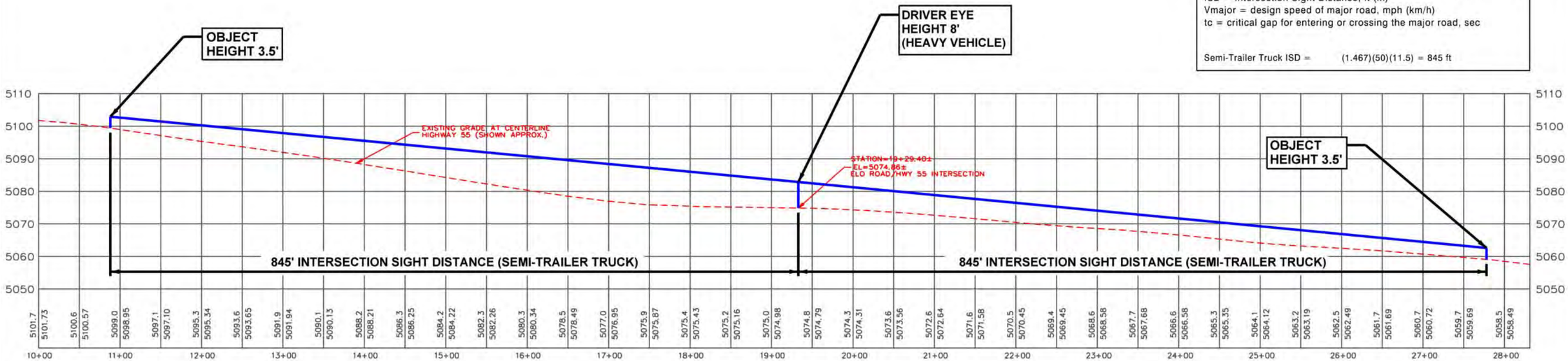
NOTE:
SIGHT DISTANCE STUDY BASED AERIAL IMAGERY AND PDF OF VERTICAL PROFILE. ACTUAL PROFILE IS REQUIRED TO CONFIRM ACCURACY.

POSTED SPEED LIMIT = 45 MPH
DESIGN SPEED = 50 MPH

AASHTO

b = ISD = 1.467 Vmajor tc
where: b = length of sight triangle along the major road or ISD, ft (m)
ISD = Intersection Sight Distance, ft (m)
Vmajor = design speed of major road, mph (km/h)
tc = critical gap for entering or crossing the major road, sec

Semi-Trailer Truck ISD = (1.467)(50)(11.5) = 845 ft

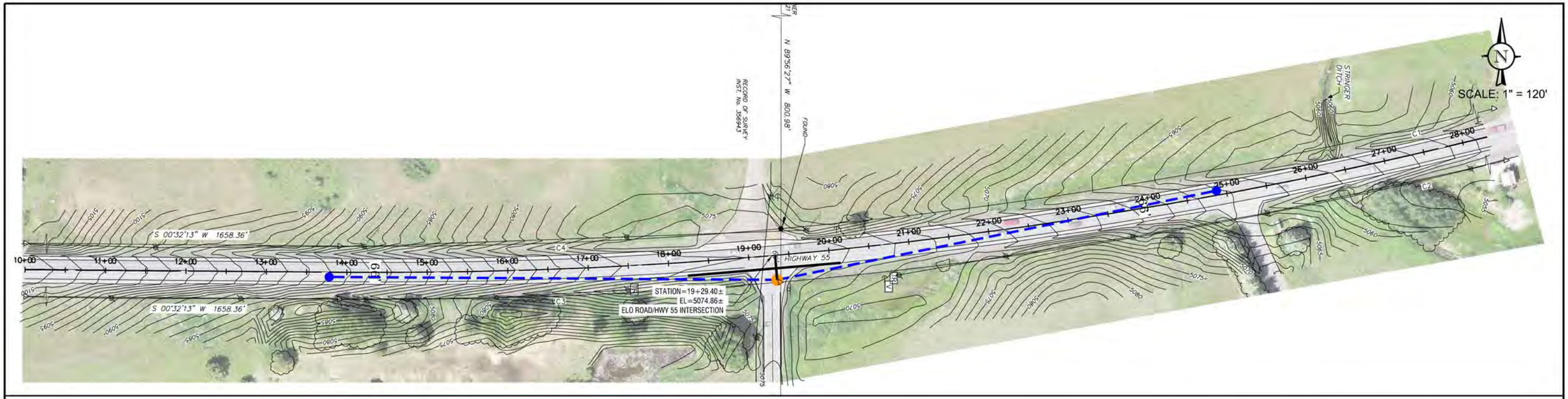


STOR-IT SELF STORAGE EXPANSION
MCCALL, IDAHO

INTERSECTION SIGHT DISTANCE STUDY
SEMI-TRAILER TRUCK

DRAWN: MD CHECKED: BM
DATE: 07-28-23 REV:
PROJECT # 22-367
EXHIBIT: A

KLOA
Kenig,Lindgren,O'Hara,Aboona,Inc.



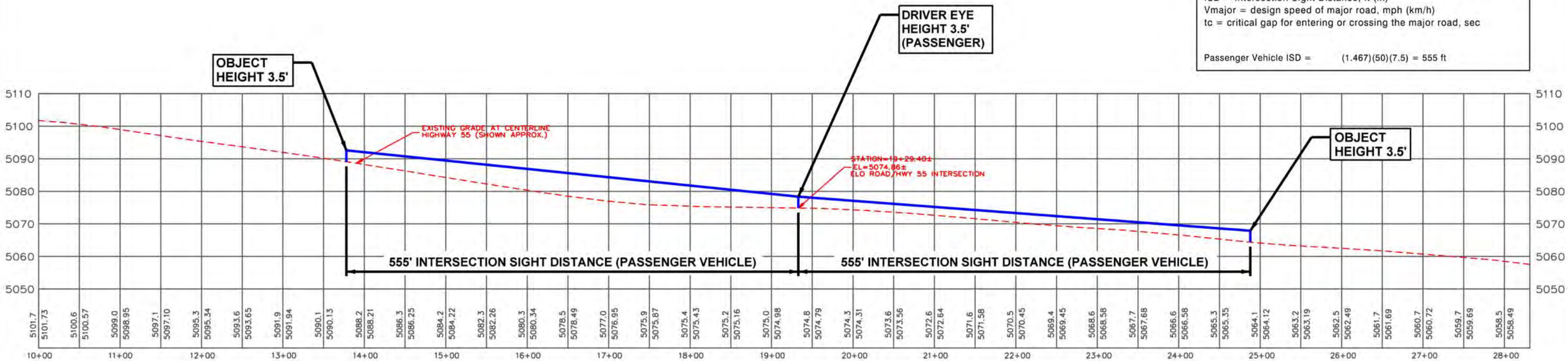
NOTE:
SIGHT DISTANCE STUDY BASED AERIAL IMAGERY AND PDF OF VERTICAL PROFILE. ACTUAL PROFILE IS REQUIRED TO CONFIRM ACCURACY.

POSTED SPEED LIMIT = 45 MPH
DESIGN SPEED = 50 MPH

AASHTO

b = ISD = 1.467 Vmajor tc
where: b = length of sight triangle along the major road or ISD, ft (m)
ISD = Intersection Sight Distance, ft (m)
Vmajor = design speed of major road, mph (km/h)
tc = critical gap for entering or crossing the major road, sec

Passenger Vehicle ISD = (1.467)(50)(7.5) = 555 ft



STOR-IT SELF STORAGE EXPANSION
MCCALL, IDAHO

INTERSECTION SIGHT DISTANCE STUDY
PASSENGER VEHICLE

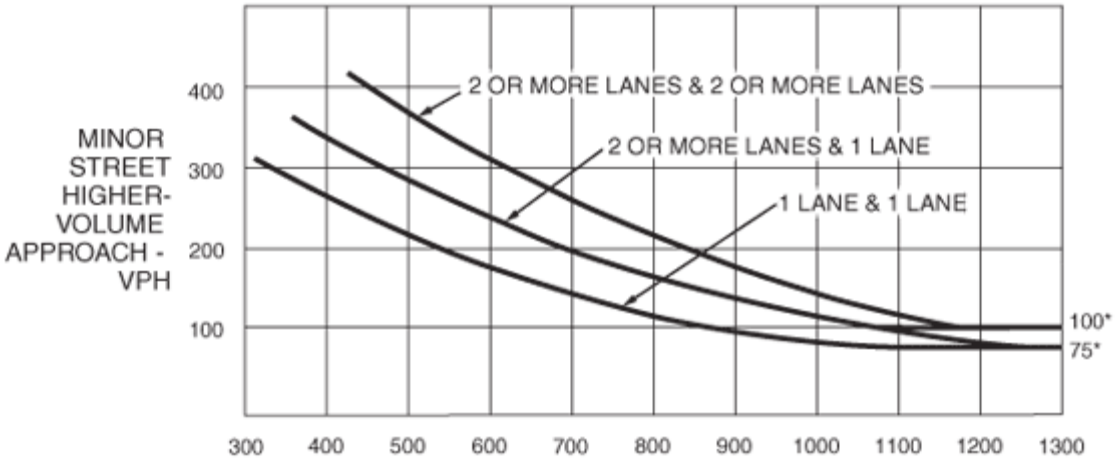
DRAWN: MD CHECKED: BM
DATE: 07-28-23 REV:
PROJECT # 22-367
EXHIBIT: B

KLOA
Kenig,Lindgren,O'Hara,Aboona,Inc.

Peak Hour Traffic Signal Warrant Diagram

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.