STAFF REPORT FOR THE PLANNING COMMISSION MEETING OF DECEMBER 19, 2023

FILE NO: LU-2023-0423 **AGENDA ITEM: 6.D**

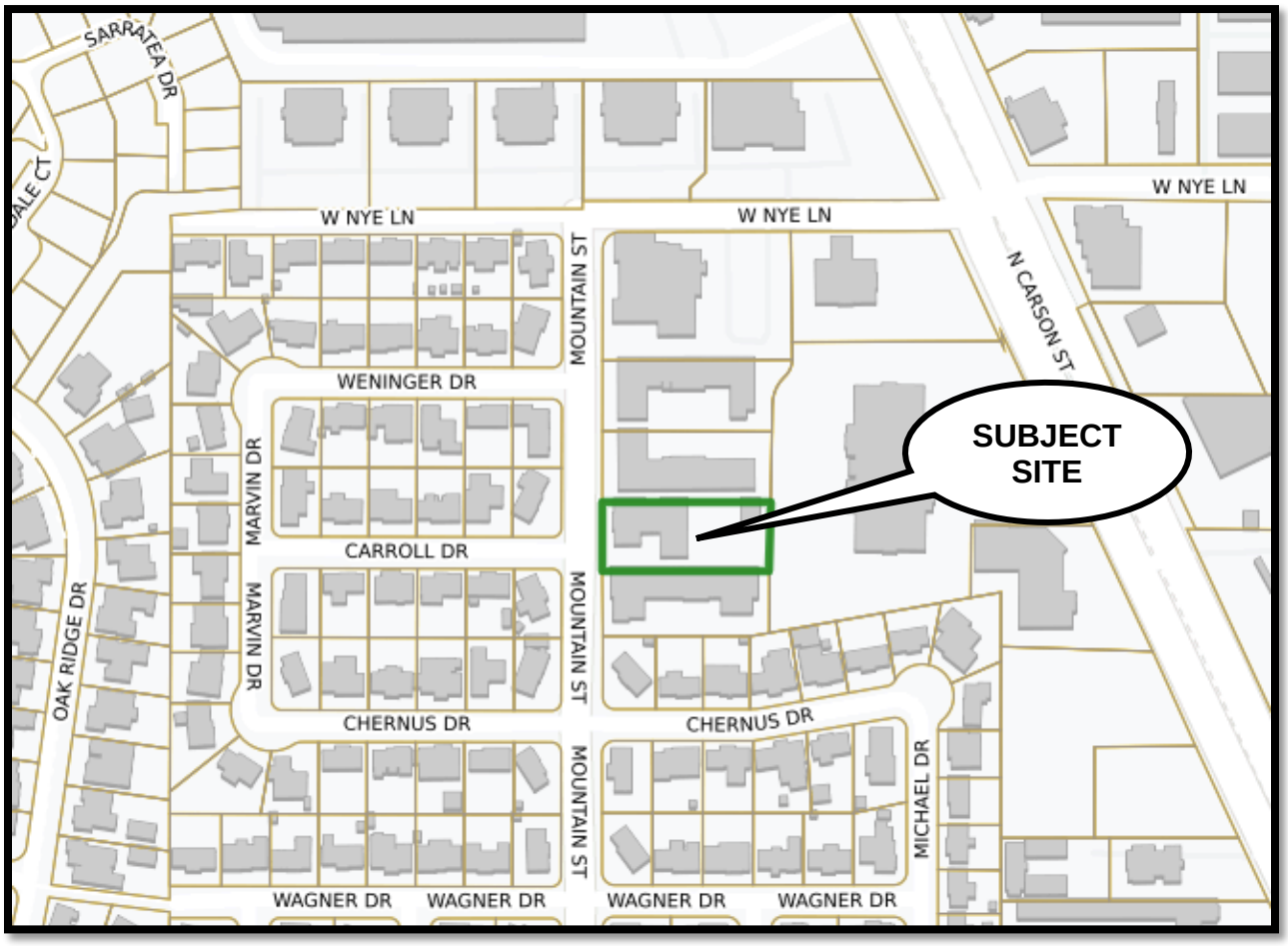
STAFF CONTACT: Heather Manzo, Associate Planner

AGENDA TITLE: LU-2023-0423 For Possible Action: Discussion and possible action regarding an application for a special use permit ("SUP") to allow for the establishment of a child care facility on a property within the Residential Office ("RO") zoning district located at 2805 Mountain Street, Assessor's Parcel Number ("APN") 001-021-12. (Heather Manzo, hmanzo@carson.org)

STAFF SUMMARY: The Boys and Girls Club ("Applicant") is proposing the establishment of a childcare facility within an existing building. This request is contingent on the adoption of an amendment to Title 18 (ZA-2023-0426). The Planning Commission has the authority to approve the SUP.

PROPOSED MOTION: "I move to approve the special use permit LU-2023-0423 based on the ability to make the required findings, and subject to the conditions of approval contained in the staff report."

VICINITY MAP:



RECOMMENDED CONDITIONS OF APPROVAL

1. All development shall be substantially in accordance with Special Use Permit plans and application materials on file with the Carson City Community Development Department, Planning Division ("Planning Division").

2. All on and off-site improvements shall conform to City standards and requirements.

3. The use for which this permit is approved shall commence within twelve (12) months of the date of final approval. A single, one (1) year extension must be requested in writing to the Planning Division thirty (30) days prior to the one (1) year expiration date. Should this permit not be initiated within one (1) year and no extension granted, the permit shall become null and void.

4. The applicant must sign and return the Notice of Decision within ten (10) days of receipt of notification. If the Notice of Decision is not signed and returned within ten (10) days, then the item may be rescheduled for the next Planning Commission meeting for further consideration.

5. Prior to the approval of any building permit, site improvement permit or business license, the Applicant shall demonstrate that the childcare facility use may be established at the subject site.

LEGAL REQUIREMENTS: Carson City Municipal Code ("CCMC"): 18.02.080 (Special Use Permits), 18.04.110 Residential Office ("RO"), and Carson City Design Standards ("CCDS") Division 1, Section 1.6 (Childcare Facilities Performance Standards).

MASTER PLAN DESIGNATION: Community/Regional Commercial

PRESENT ZONING: RO

KEY ISSUES: Will the proposed use be compatible with the surrounding neighborhood and be in keeping with the standards of the Carson City Municipal Code?

SURROUNDING ZONING AND LAND USE INFORMATION:
- EAST: RC / Eagle Medical Center
- WEST: SF6 / single family residences
- NORTH: RO / congregate care facility
- SOUTH: RO / congregate care facility

ENVIRONMENTAL INFORMATION:
- FLOOD ZONE: X Shaded
- EARTHQUAKE FAULT: Greater than 500 feet
- FAULT ZONE: Zone 1 Greatest Severity
- SLOPE/DRAINAGE: The site is developed

SITE DEVELOPMENT INFORMATION:
- SITE SIZE: ±0.68 acres
- EXISTING DEVELOPMENT: vacant, previously law offices
- PROPOSED DEVELOPMENT: childcare facility

- PROPOSED PARKING: 20 onsite spaces and on-street parking along Mountain Street

PREVIOUS REVIEWS: None

DISCUSSION:
The applicant is proposing a change of use from offices to a childcare facility on a ±0.68 acre site with an existing 7,129 square foot building. The request also includes the conversion of an existing 912 square foot garage to a commercial kitchen as an accessory use to the childcare facility. The kitchen will be utilized for meal preparation to support the childcare facility. No additions are being proposed, the existing landscape area will remain, and the parking lot located to the east of the building will be reconfigured to include a fenced play area and 20 on-site parking spaces.

A zoning text amendment has been requested to allow for the establishment of a childcare facility with the approval of a SUP within the RO zoning district (ZA-2023-0426). A condition is recommended to ensure the use will only be established if the use is allowed by code. Childcare facilities also need to comply with the regulations outlined in the CCDS Division 1, Section 1.6.

PUBLIC COMMENTS: Public notices were mailed on December 8, 2023 to 36 property owners within 300 feet of the subject property. As of the writing of this report, no comments from property owners in the vicinity of the proposed project have been received. Any comments that are received after this report is completed will be submitted to the Planning Commission prior to or at the meeting on December 19, 2023, depending on the date of submission of the comments to the Planning Division.

OTHER CITY DEPARTMENTS OR OUTSIDE AGENCY COMMENTS: The following comments were received by various City departments. Recommendations have been incorporated into the recommended conditions of approval, where applicable.

Fire Department:

1. The project shall comply with the current edition of the International Fire Code and Northern Nevada Fire Code Amendments as adopted by Carson City.

2. Fire sprinkler system will be required if there is not direct egress from each room being used as an I-4.

Development Engineering:
The Carson City Public Works Department, Development Engineering Division ("Development Engineering") has no preference or objection to the SUP, offers no conditions of approval and offers the following discussion:

CCMC 18.02.080(5)(a) - Master Plan
The request is not in conflict with any Master Plan policies.

CCMC 18.02.080(5)(b) – Use, Peaceful Enjoyment, Economic Value, Compatibility
Development Engineering has no comment on this finding.

CCMC 18.02.080(5)(c) - Traffic/Pedestrians
Parking will be provided via an existing parking lot in the rear of the facility and available on-street parking along the Mountain Street frontage. A traffic impact study prepared on November 30, 2023 indicates that the existing street network has sufficient capacity except for one existing issue where cars turn from West Nye Lane onto southbound North Carson Street. At this location the traffic

impact study recommends an acceleration lane, however the City is in the process of conducting a regional study of this area that will provide recommendations for transportation improvement solutions to address the North Carson Street corridor. Since this area is already being studied and recommended improvements have not yet been identified, this project will not be required to install an acceleration lane at this time.

CCMC 18.02.080(5)(d) - Public Services

Sanitary Sewer: There is sufficient capacity in the City's sewer main system to meet the proposed demand.

Water: There is sufficient capacity in the City's water mains to supply the required domestic water and fire flow demands.

Storm Drain: There is a negligible change to the stormwater runoff of the site.

CCMC 18.02.080(5)(e) – Title 18 Standards
Development Engineering has no comment on this finding.

CCMC 18.02.080(5)(f) – Public health, Safety, Convenience, and Welfare
The project will meet engineering standards for health and safety.

Earthquake faults: There are no known fault lines within 500 feet of the project.

Federal Emergency Management Agency ("FEMA") flood zones: The FEMA flood zone is Zone X (shaded) and no special flood mitigation is required.

Site slope: The site is relatively flat and fully developed.

CCMC 18.02.080(5)(g) – Material Damage or Prejudice to Other Property
Development Engineering has no comment on this finding.

CCMC18.02.080(5)(h) – Adequate Information
The plans and reports provided were adequate for this analysis.

SPECIAL USE PERMIT FINDINGS: Staff's recommendation is based upon the findings as required by CCMC Section 18.02.080 (Special Use Permits) enumerated below and substantiated in the public record for the project.

1. Will be consistent with the master plan elements.

The requested development is consistent with the concept of a Compact and Efficient Pattern of Growth (Guiding Principle 1). Carson City is committed to a compact pattern that makes efficient use of the limited land area and water resources it has available for urban growth, and that fosters the provision of infrastructure and services in a cost-effective manner. The subject property is served by water and sewer.

Goal 1.2 of the Master Plan discusses promoting infill and redevelopment in targeted areas. It encourages mixed-use development as a redevelopment strategy along the City's major gateway corridors.

The proposed project will re-activate a vacant building consistent with the concepts of compact

development, placing people near economic centers to encourage mixed-use activity centers, and will provide for more childcare options within the community.

2. Will not be detrimental to the use, peaceful enjoyment, economic value, or development of surrounding properties or the general neighborhood; and will cause no objectionable noise, vibrations, fumes, odors, dust, glare or physical activity.

This use will not be detrimental to the use, peaceful enjoyment, or economic value of surrounding properties. Adaptive reuse of the developed site will activate a vacant property with little impact to the exterior appearance of the property as viewed from the public right-of-way. The subject site serves as a transition between higher intensity commercial uses to the east and the residential neighborhood to the west. The proposed childcare facility will retain the yard improvements along Mountain Street. Primary access to the site will occur via West Nye Street to the parking lot through an existing access easement. Exterior improvements relate to the addition of exit doors to comply with Carson City Fire Department regulations and modifications to the parking lot on the east side of the building to provide outside play areas as required by the State of Nevada. Children will be onsite between 7:00 am and 6:00pm, however, the playground will not be in use until after 9:00am.

3. Will have little or no detrimental effect on vehicular or pedestrian traffic.

The parking lot is located on the east side of the building and is accessed from West Nye Lane. There is sufficient parking to accommodate the use. The proposed childcare use is not anticipated to have a detrimental effect on vehicular or pedestrian traffic. The site is developed, existing access will be utilized, sidewalks exist along the site frontage, and there is sufficient capacity in the roadway network to support the proposed use. The City is currently studying the North Carson Street corridor and once the study is complete, recommendations to improve the system will be implemented. It is not recommended that this project make any roadway improvements.

4. Will not overburden existing public services and facilities, including schools, police and fire protection, water, sanitary sewer, public roads, storm drainage, and other public improvements.

The site is within a developed area of the City and adequate public facilities and services exist to serve the site. The Fire Department has noted that the site will need to provide some improvements to the building to ensure the use complies with the current fire code requirements.

5. Meets the definition and specific standards set forth elsewhere in this title for such particular use and meets the purpose statement of that district.

This request has been made concurrent with a request to amend Title 18 to allow a childcare facility to establish within the RO zoning district subject to the approval of a SUP (ZA-2023-0426). A condition is recommended to require the code amendment to be adopted prior to the issuance of permits or licenses associated with this request.

Childcare facilities are subject to the standards outlined in CCDS Section 1.6 and compliance with these standards is summarized below. As proposed and with the recommended conditions of approval, the project will meet the definition and specific standards required to support this use.

CCDS Section 1.6: The following performance standards shall be used in review of individual special use permit requests for childcare facilities in addition to other standards of this title.

1. The size, client density and operational characteristics, including, but not limited to, the number of employees, hours of operation and loading/unloading area of a proposed childcare facility within a residential zoning district shall be compatible with and shall not adversely affect adjacent residents pursuant to the requirements of this chapter. Consideration shall be given to the following:
    a. With the construction of, or approval of, new facilities, the facility shall be similar in scale, bulk and site coverage with that of the immediate neighborhood;
    b. The availability of public facilities, services and utilities;
    c. Emphasis on maintaining the residential neighborhood character;
    d. The generation of traffic and the capacity and physical character of surrounding streets.

Staff Response: The site is located within a commercial zoning district and is surrounded by commercial uses to the north, east and south. Residences located to the west of the subject site are separated from the project by Mountain Street. The exterior appearance as viewed from Mountain Street will remain the same except for the addition of exit doors to meet Fire Department requirements. The applicant anticipates having up to 17 employees onsite during peak hours and the site can accommodate up to 106 children. There will be three parking spaces dedicated to child pickup and drop off and one parking space per employee located within the parking area. Additionally, there is on-street parking available on Mountain Street adjacent to the site. The site is developed and will not require any new services or facilities and there is capacity in the roadway network to accommodate the use.

2. Parking shall meet the requirements of Division 2 (Parking and Loading) of the development standards.

Staff Response: Parking standards for childcare facilities require 1 space for every employee and require drop-off and pick-up areas. At peak operation, 17 spaces will be required for employees and three spaces will be available for student drop-off and pick-up. The Applicant provided a breakdown of pick up and drop off times, noting that they will be staggered. The site will have a total of 20 parking spaces and has been designed to comply with the required parking. It is worth noting that CCDS 2.3.10 states that existing buildings located within the RO zoning district may utilize on-street parking to satisfy additional parking needs. Should the Applicant find additional staff is necessary to provide care to their clients, there is sufficient frontage along Mountain Street to park five vehicles adjacent to the site.

3. Landscaping. In the design of parking area landscaping, considerations shall be given to the retention of existing trees and shrubbery.

Staff Response: The site is fully developed with existing landscape area. The applicant has proposed to retain existing landscape area and if maintenance is needed, will make improvements to landscape areas along with other site improvements.

4. Signs. This section shall apply exclusively to signs for childcare facilities located within a residential zoning district. Compliance with Division 4 (Signs) of the development standards shall not be required for a childcare facility. The board find and declare that an on-site sign to "advertise or promote" the facility is not necessary. On-site identification of the address and logo no greater than 2 square feet in size distinctive to a particular childcare facility used as a public convenience in identifying the site for the public shall be permitted.

Staff Response: Since the site is located within a commercial zoning district, this requirement does not apply. Signs require a sign permit and must be in compliance with Division 4 of the CCDS.

5. If the facility's structure is located within the historic district, then design and material shall require review and approval by the HRC.

Staff Response: Since the site is not located within a historic district, this requirement does not apply.

6. Open Space. Open space requirements shall be designated and regulated by the Carson City health department prior to approval of the special use permit.

Staff Response: The applicant will comply with this requirement by creating a play area that meets the state's requirements for a child care facility.

7. Interior Space Requirement for Children. The interior space requirements shall be designated and regulated by the Carson City health department prior to approval of the special use permit.

Staff Response: The Carson City Health Department has reviewed the application and is recommending approval.

8. Childcare facilities may be established in the general industrial ("GI") zoning district only as an accessory use to a permitted primary use.

Staff Response: The project is located within the RO zoning district and this requirement is not applicable to the site.

9. In residential zoning districts, a childcare facility may only be established as an accessory use to the residential use of the structure, and the residence must be occupied by the operator as a primary residence.

Staff Response: The site is located within a commercial zoning district so this requirement does not apply to this project.

6. Will not be detrimental to the public health, safety, convenience and welfare.

The use located in a commercial zoning district and will provide childcare services to the community. As proposed and with recommended conditions of approval, the proposed use will not be detrimental to public health, safety, convenience, and welfare. The use is compatible with other uses in the neighborhood.

7. Will not result in material damage or prejudice to other property in the vicinity.

The proposed use will be established within an existing building and on a fully developed site. The use is compatible with other surrounding uses and the site serves as a transition from the more intense commercial development to the east and the residential neighborhood to the west. The proposed childcare facility will not result in material damage to other property in the vicinity.

Attachments:
Application LU-2023-0423

RECEIVED
DEC 06 2023
CARSON CITY PLANNING DIVISION

Carson City Planning Division
108 E. Proctor Street - Carson City NV 89701
Phone: (775) 887-2180 • E-mail: planning@carson.org

FOR OFFICE USE ONLY:

CCMC 18.02.080

SPECIAL USE PERMIT

FEE*: $2,450.00 MAJOR
$2,200.00 MINOR (Residential zoning districts)
+ noticing fee
***Due after application is deemed complete by staff**

FILE

APPLICANT	PHONE #
BGCWN (Boys and Girls Clubs of Western Nevada)	775-882-8820

MAILING ADDRESS, CITY, STATE, ZIP
1870 Russell Way Carson City NV 89706

EMAIL ADDRESS
brettz@bgcwn.org

PROPERTY OWNER	PHONE #
2805 LFDP LLC	775-885-1896

MAILING ADDRESS, CITY, STATE, ZIP
2805 Mountain Street Carson City NV 89703

EMAIL ADDRESS
slawrence@dyerlawrence.com

APPLICANT AGENT/REPRESENTATIVE	PHONE #
Brett Zunino	775-848-9821

MAILING ADRESS, CITY STATE, ZIP
1870 Russell Way Carson City NV 89706

EMAIL ADDRESS
brettz@bgcwn.org

- ☐ **SUBMITTAL PACKET – 4 Complete Packets (1 Unbound Original and 3 Copies) including:**
  - ☐ Application Form
  - ☐ Detailed Written Project Description
  - ☐ Site Plan
  - ☐ Building Elevation Drawings and Floor Plans
  - ☐ Special Use Permit Findings
  - ☐ Master Plan Policy Checklist
  - ☐ Applicant's Acknowledgment Statement
  - ☐ Documentation of Taxes Paid-to-Date
  - ☐ Project Impact Reports (Engineering)
- ☐ **CD or USB DRIVE with complete application in PDF**

Application Received and Reviewed By:

Submittal Deadline: Planning Commission application submittal schedule.

Note: Submittals must be of sufficient clarity and detail for all departments to adequately review the request. Additional information may be required.

Project's Assessor Parcel Number(s):	Street Address
00102112	2805 Mountain Street Carson City NV 89703

Project's Master Plan Designation	Project's Current Zoning	Nearest Major Cross Street(s)
C/RC	Residential Office	Mountain / Nye

Please provide a brief description of your proposed project and/or proposed use below. Provide additional pages to describe your request in more detail.
The proposed project seeks to provide a childcare facility in the existing building at APN 00102112 with an existing total area of 7,164 sf on a parcel .68 acres.

The project aims to change the zoning from RO to NB in order to provide a conforming use as a child
*Please see revised detailed project description

PROPERTY OWNER'S AFFIDAVIT

I, Sandra G. Lawrence being duly deposed, do hereby affirm that I am the record owner of the subject property, and that I have knowledge of, and I agree to, the filing of this application.

Signature: Sandra Lawrence | Address: 2805 Mountain St Carson City NV 89703 | Date: 11/6/23

Use additional page(s) if necessary for additional owners.

STATE OF NEVADA)
COUNTY)

On November 6, 2023, Sandra G. Lawrence, personally appeared before me, a notary public, personally known (or proved) to me to be the person whose name is subscribed to the foregoing document and who acknowledged to me that he/she executed the foregoing document.

Notary Public: Kelly Gilbert

NOTARY PUBLIC
STATE OF NEVADA
County of Douglas
KELLY GILBERT
No. 18-2125-5
My Appointment Expires July 1, 2027

NOTE: If your project is located within the Historic District or Airport Area, it may need to be scheduled before the Historic Resources Commission or the Airport Authority in addition to being scheduled for review by the Planning Commission. Planning staff can help you make this determination.

SPECIAL USE PERMIT

Detailed Written Project Description

The current proposed project seeks to provide a childcare/daycare facility in the existing 2805 Mountain Street building APN 001-02-112 with an existing total area of 7,164 s.f. on a parcel of approximately .68 Acres. The project aims to capitalize on the concurrently submitted Zoning Code (text) Amendment in order to provide a conforming land use as a childcare facility that is not accessory to a residential use. The proposed project requests the building use to be changed to an Institutional Group 4 (I-4) Day Care Facilities, for the intent to provide childcare to persons of 6 months to 5 years old. It is the intent to provide the required improvements for the change of use such as: 1,800 s.f. outdoor playground, classrooms, and plumbing requirements ect. Additionally, the project requests that the existing 700 s.f. detached storage building be permitted as an accessory use for a commercial kitchen (B group accessory to the I-4).

Special Use Permit Findings

1. **Will be consistent with the objectives of the Master Plan elements.**

Explanation: Explain how your project will further and be in keeping with, and not contrary to, the goals of the Master Plan elements. Turn to the Master Plan Policy Checklist included with this application. The Master Plan Policy Checklist for Special Use Permits and Major Project Reviews addresses five items that appear in the Carson City Master Plan. Each theme looks at how a proposed development can help achieve the goals of the Carson City Master Plan. Address each theme; a check indicates that the proposed development meets the applicable Master Plan Policy. Provide written support of the policy statement in your own words as a part of these findings. For additional guidance, please refer to the Carson City Master Plan document on our website at www.carson.org/planning or you may contact the Planning Division to review the document in our office or request a copy.

Goals:
Economic Vitality 1) Strong Employment Base; 2) Support Redevelopment Efforts
Liveable Neighborhoods & Activity Centers 1) Increase the Quality of Development; 2) Encouraging Redevelopment; 3) Mixed Use In Activity Centers
Enhance the Quality of Life for Carson City 1) Provide Infrastructure to Support Population Growth for Public Facilities

For Carson City to maintain a strong employment base the community needs to ensure services are available to support family needs around child care. Most recently the Quad-County Regional Community Health Needs Assessment ranked affordable, quality daycare as number 4 overall out of 45 needs and third among households with incomes less than $55,000. Though Carson City has approved child care facilities, the need continues to grow as the majority of current daycare facilities have waitlists larger than their capacity. The Governor's childcare policy report, released in 2023, coined Nevada as a daycare desert. In Carson City, for every

child in daycare, there are three waiting for that same spot. The report further suggests that our daycare desert is the primary root cause of our depleted workforce, high prices of goods and services, and inflation.

Nonprofit community hubs like the Boys & Girls Clubs of Western Nevada proposing and executing on projects like this are uniquely qualified to help solve these problems.

We believe the location of this project, within a neighborhood community, next to three Senior Care Living Facilities (called) is serendipitous. Research has shown that the collocation of intergenerational shared sites increases the health and well-being of both young and older individuals and reduces social isolation and may create cost efficiencies - such as the potential of the Senior Living Facilities (called) to use the proposed commercial kitchen as a ghost kitchen.

2. **Will not be detrimental to the use, peaceful enjoyment, economic value, or development of surrounding properties or the general neighborhoods or includes improvements or modifications either on-site or within the public right-of-way to mitigate development related to adverse impacts such as noise, vibrations, fumes, odors, dust, glare or physical activity.**

Explanation: A. Describe the general types of land uses and zoning designations adjoining your property (for example: North: grocery store, Retail Commercial Zoning)

B. Explain why your project is similar to existing development in the neighborhood, and why it will not hurt property values or cause problems, such as noise, dust, odors, vibration, fumes, glare, or physical activity, etc. with neighboring property owners. Have other properties in your area obtained approval of similar requests? How will your project differ in appearance from your neighbors? Your response should consider the proposed physical appearances of your proposal, as well as comparing your use to others in the area.

C. Provide a statement explaining how your project will not be detrimental to the use, peaceful enjoyment or development of the surrounding properties and the general neighborhood.

D. If outdoor lighting is to be a part of the project, please indicate how it will be shielding from adjoining property and the type of lighting (wattage/height/placement) provided.

E. Describe the proposed landscaping, including screening and arterial landscape areas (if required by zoning code). Include a site place with existing and proposed landscape shown on the plan which complies with City ordinance requirements.

F. Explain any short-range and long-range benefit to the people of Carson City that will occur if your project is approved.

A. The two parcels directly north of the property are zoned Residential Office and are currently serving in a non-conforming use operating as Skyline Estates Senior Living & Memory Care and owned by Skyline Estates Property LLC. The parcel directly south of the property is zoned Residential Office and is currently serving a non-conforming use operating as Skyline Estates Senior Living & Memory Care and owned by Skyline

Estates Property LLC. The parcels directly to the west, and to the west of Mountain street are zoned Single Family 6,000 (SF6) and are serving a conforming use as residential units built out in the 1960-1970's. The parcel directly to the east is zoned Retail Commercial and is serving a conforming use operating as Eagle Medical Center owned by SPT IVEY Eagle Carson City MOB. The concurrent Zoning Code (text) Amendment application requests consideration for the current zoning of Residential Office to allow for child care facilities as stand alone facilities rather than as an accessory use to a residence.

B. This project is intended to provide no change in visual cues to the Mountain Street side of the building other than likely pick up and drop off indicators and new signage. Property values should not be harmed as it is a neighborhood with neighborhood uses, two elementary schools and a church are located south on Mountain Street past Winne Lane, and a community park where kids gather is located to the north and is less than a half a mile walkable distance from this location. Two outdoor play structures will be located at the rear of the building near the parking lot and accessible off the alley way and additional off-street shared parking for the facility. To the north and south are located the Senior Living Facilities (Called) which are currently non-conforming uses.
C. The facility will integrate into the neighborhood and intends to be a good neighbor, working with both the Senior Living Facilities to the north and south (called) as well as neighborhood to ensure that minimal disruption to day-to-day activities occurs. Drop-off will occur between 7am and 9am, with the intent that this extended time period will negate congestion and maintain a flow of traffic. The same goes for the pick-up time frame, which will occur between 4pm and 6pm. The earliest children will go outside is 9am, and the latest they will be out will be 5:30pm, respecting neighborhood quiet hours.
D. Any exterior lighting in use during hours of operation and security lighting would conform with the engineering design standards and dark sky communities.
E. The property is already fully landscaped and would remain as landscaped. 24 trees currently are on the premises and will remain in their established locations. Proposed areas for the 2 playgrounds are within the already impervious areas of the current parking lot and would not change the current landscaping.
F. We believe that dovetailing on the Boys and Girls Clubs of Western Nevada's current Club model within a daycare model will not only be revolutionary in the industry, in that we now serve the entire family, newborn through high school graduation, but will also provide this desperately needed service to the community, which in turn will be a catalyst to help improve our local economy. These daycares will be called Smart Starts. This facility has the potential to open to over 100 kids whose parents need affordable daycare. We plan on making nearly $2,000,000 in improvements to make this a state-of-the-art facility. A few notables are building two playgrounds, installing appropriate, decorative fencing, renovating the interior to accommodate new-born through Pre-k children, and providing city and state recommended egress and safety features. We also have the potential to develop a commercial kitchen in the detached three-car garage that will help to serve the community as a ghost kitchen, our Smart Starts, and Club kids.

Explain any short-range and long-range benefit to the people of Carson City that will occur if your project is approved.
Describe the proposed landscaping, including screening and arterial landscape areas (if required by zoning code). Include a site place with existing and proposed landscape shown on the plan which complies with City ordinance requirements.
Provide a statement explaining how your project will not be detrimental to the use, peaceful enjoyment or development of the surrounding properties and the general neighborhood.

3. **Will have little or no detrimental effect on vehicular or pedestrian traffic.**

Explanation: Consider the pedestrian and vehicular traffic that currently exists on the road serving your project. What impact will your development have to pedestrian and vehicular traffic when it is successfully operating? Will additional walkways and traffic lights be needed? Will you be causing traffic to substantially increase in the area? State how you have arrived at your conclusions.

Pedestrian traffic should not increase due to the proposed use, however sufficient neighborhood sidewalks are available. Vehicular traffic will be handled both off Mountain Street, which the city lists as an arterial as well as in the access through the alley/driveway with access off Nye.

4. **Will not overburden existing public services and facilities, including schools, police and fire protection, water, sanitary sewer, public roads, storm drainage and other public improvements.**

Explanation: A. How will your project affect the school district? Will your project add to the student population or will it provide a service to the student population?
B. How will your project affect police and fire protection?
C. Is the water supply serving your project adequate to meet your needs without degrading supply and quality to others in the area? Is there adequate water pressure? Are the lines in need of replacement? Is your project served by a well? Contact the Development Engineering Division at (775)887-2300 for assistance with this item, if applicable.
D. If your project will result in the covering of land area with paving or a compacted surface, how will drainage be accommodated? Contact the Development Engineering Division at (775)887-2300 for assistance with this item, if applicable.
E. Is there adequate capacity in the sewage disposal trunk line that you will connect to in order to serve your project, or is your site on a septic system? Contact the Development Engineering Division at (775)887-2300 for assistance with this item, if applicable.
F. What kind of road improvements are proposed or needed to accommodate your project? Contact the Development Engineering Division at (775)887-2300 for assistance with this item, if applicable.
G. Indicate the source of the information that you are providing to support your conclusions and statements made in this application (private engineer, Development Engineering, Public Works, Transportation, title report or other source).

A. Though this project will not directly impact the school district's student population, it will provide the opportunity for needed child care for the school district's workforce on the north end of Carson City. This project will also provide for 100+ children to be moved from waitlist status at daycares around the City to be provided a safe learning environment.
B. This project should not increase the need for access to police and fire services. As required by law all staff will be properly background checked and fingerprinted by the Sheriff's Department.
C. Water supply should be adequate to meet the needs of the facility. The building was built with adequate water access, has adequate water pressure, and no new water lines are necessary. The property is not on a well.
D. The parking lot is already paved, and although some of this lot will be remodeled to accommodate two playground structures, drainage is expected to remain the same.
E. Sewage disposal trunk line should be adequate to meet the needs of the facility. The building was built with adequate sewer disposal. The property does not have a septic system.
F. No road improvements are needed for this project.

5. **Meets the definition and specific standards set forth elsewhere in Carson City Municipal Code, Title 18 for such particular use and meets the purpose statement of that district.**

Explanation: Explain how your project meets the purpose statement of the zoning district in which it is located and how it meets the specific standards that are set forth in that zoning district. In CCMC Section 18.04, Use Districts, find the zoning district where your property is located. Refer to the purpose statement at the beginning of the zoning district section and explain how your project meets the purpose statement of that district. In addition, find the specific Intensity and Dimensional Standards for your zoning district in either CCMC Section 18.04.190 (Residential) or CCMC Section 18.04.195 (Non-Residential) and explain how your project meets these specific standards. To access the Carson City Municipal Code, visit our website at www.carson.org/planning

In the Carson City Municipal Code Title 18 Residential Office (RO) zoned property have conditional uses associated which required a Special Use Permit requiring the Planning Commission to take a more detailed review at the proposed project. Childcare facilities fall under this category needing a Special Use Permit. The proposed project at 2805 Mountain Street meets the standards of a Child care facility. We feel the proposed project will meet the definition and specific standards required to support this use in the RO zoning district pending the concurrent Zoning Code (text) Amendment. *Carson City Municipal Code 18.04.110 Residential Office (RO) Section 3 Conditional Use*

6. **Will not be detrimental to the public health, safety, convenience and welfare.**

Explanation: Provide a statement explaining how your project will not be detrimental to the public health, safety, convenience and welfare. If applicable, provide information on any benefits that your project will provide to the general public.

We believe the proposed project use will enhance the health, safety, convenience and welfare of Carson City. The project located in the proposed Neighborhood Business zoning district, located along an arterial and surrounded by neighborhood uses, will not be detrimental to public health, safety, convenience and welfare. The use is compatible with other uses in the neighborhood.

7. **Will not result in material damage or prejudice to other property in the vicinity, as a result of the proposed mitigation measures.**

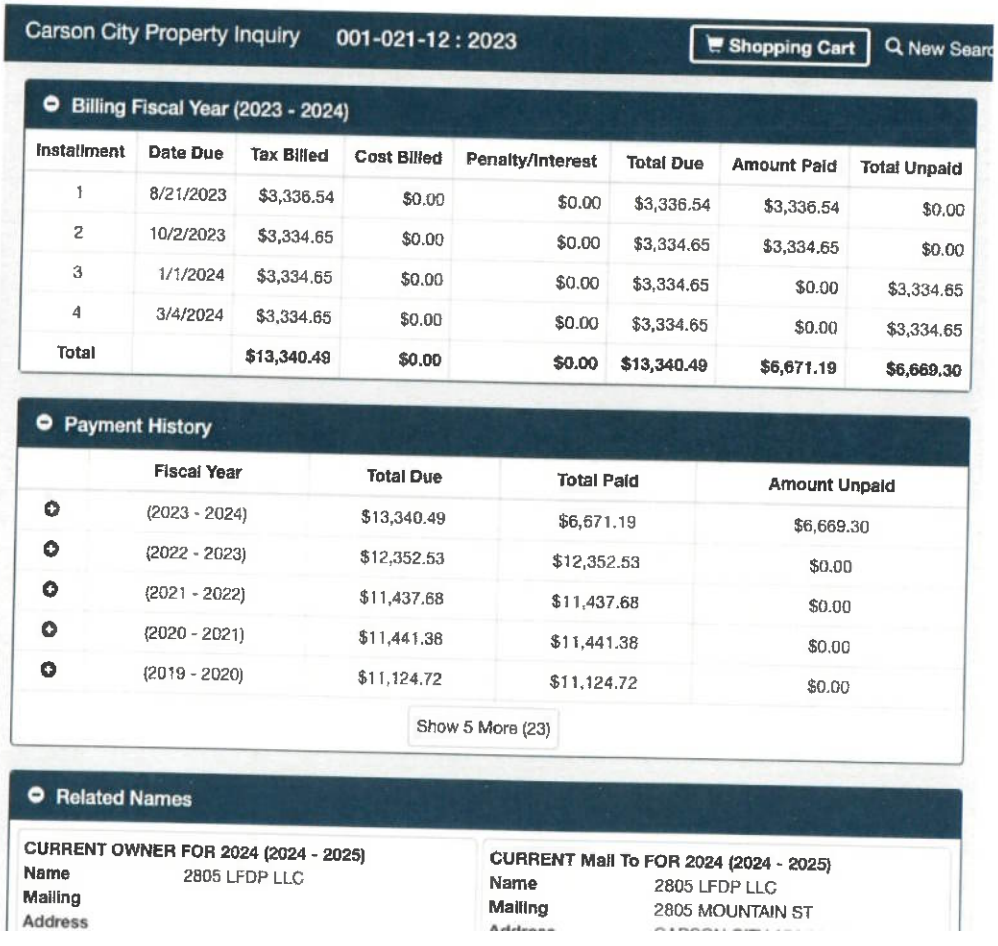
Explanation: Provide a statement explaining how your project will not result in material damage or prejudice to other property in the vicinity.

The proposed project will be established within an existing building and on a fully developed site. The use is compatible with other surrounding neighborhood uses and we believe will not result in material damage to other property in the vicinity.

Applicant's Acknowledgement Statement

See attached applicant's acknowledgements statement.

Documentation of Taxes Paid-To-Date



Carson City Property Inquiry 001-021-12 : 2023 Shopping Cart New Searc

Billing Fiscal Year (2023 - 2024)

Installment	Date Due	Tax Billed	Cost Billed	Penalty/Interest	Total Due	Amount Paid	Total Unpaid
1	8/21/2023	$3,336.54	$0.00	$0.00	$3,336.54	$3,336.54	$0.00
2	10/2/2023	$3,334.65	$0.00	$0.00	$3,334.65	$3,334.65	$0.00
3	1/1/2024	$3,334.65	$0.00	$0.00	$3,334.65	$0.00	$3,334.65
4	3/4/2024	$3,334.65	$0.00	$0.00	$3,334.65	$0.00	$3,334.65
Total		$13,340.49	$0.00	$0.00	$13,340.49	$6,671.19	$6,669.30

Payment History

	Fiscal Year	Total Due	Total Paid	Amount Unpaid
	(2023 - 2024)	$13,340.49	$6,671.19	$6,669.30
	(2022 - 2023)	$12,352.53	$12,352.53	$0.00
	(2021 - 2022)	$11,437.68	$11,437.68	$0.00
	(2020 - 2021)	$11,441.38	$11,441.38	$0.00
	(2019 - 2020)	$11,124.72	$11,124.72	$0.00

Show 5 More (23)

Related Names

CURRENT OWNER FOR 2024 (2024 - 2025)
Name 2805 LFDP LLC
Mailing Address

CURRENT Mail To FOR 2024 (2024 - 2025)
Name 2805 LFDP LLC
Mailing 2805 MOUNTAIN ST

Master Plan Policy Checklist

Special Use Permits & Major Project Reviews & Administrative Permits

PURPOSE

The purpose of a development checklist is to provide a list of questions that address whether a development proposal is in conformance with the goals and objectives of the 2006 Carson City Master Plan that are related to non-residential and multi-family residential development. This checklist is designed for developers, staff, and decision-makers and is intended to be used as a guide only.

Development Name: Smart Start by Boys and Girls Clubs of Western Nevada

Reviewed By: _____

Date of Review: _____

DEVELOPMENT CHECKLIST

The following five themes are those themes that appear in the Carson City Master Plan and which reflect the community's vision at a broad policy level. Each theme looks at how a proposed development can help achieve the goals of the Carson City Master Plan. A check mark indicates that the proposed development meets the applicable Master Plan policy. The Policy Number is indicated at the end of each policy statement summary. Refer to the Comprehensive Master Plan for complete policy language.

CHAPTER 3: A BALANCED LAND USE PATTERN

The Carson City Master Plan seeks to establish a balance of land uses within the community by providing employment opportunities, a diverse choice of housing, recreational opportunities, and retail services.

Is or does the proposed development:

- ☑ Meet the provisions of the Growth Management Ordinance (1.1d, Municipal Code 18.12)?
- ☐ Use sustainable building materials and construction techniques to promote water and energy conservation (1.1e, f)?
- ☐ Located in a priority infill development area (1.2a)?
- ☑ Provide pathway connections and easements consistent with the adopted Unified Pathways Master Plan and maintain access to adjacent public lands (1.4a)?

- [x] Protect existing site features, as appropriate, including mature trees or other character-defining features (1.4c)?
- [ ] At adjacent county boundaries or adjacent to public lands, coordinated with the applicable agency with regards to compatibility, access and amenities (1.5a, b)?
- [ ] In identified Mixed-Use areas, promote mixed-use development patterns as appropriate for the surrounding context consistent with the land use descriptions of the applicable Mixed-Use designation, and meet the intent of the Mixed-Use Evaluation Criteria (2.1b, 2.2b, 2.3b, Land Use Districts, Appendix C)?
- [x] Meet adopted standards (e.g. setbacks) for transitions between non-residential and residential zoning districts (2.1d)?
- [ ] Protect environmentally sensitive areas through proper setbacks, dedication, or other mechanisms (3.1b)?
- [x] Sited outside the primary floodplain and away from geologic hazard areas or follows the required setbacks or other mitigation measures (3.3d, e)?
- [x] Provide for levels of services (i.e. water, sewer, road improvements, sidewalks, etc.) consistent with the Land Use designation and adequate for the proposed development (Land Use table descriptions)?
- [ ] If located within an identified Specific Plan Area (SPA), meet the applicable policies of that SPA (Land Use Map, Chapter 8)?

CHAPTER 4: EQUITABLE DISTRIBUTION OF RECREATIONAL OPPORTUNITIES

The Carson City Master Plan seeks to continue providing a diverse range of park and recreational opportunities to include facilities and programming for all ages and varying interests to serve both existing and future neighborhoods.

Is or does the proposed development:

- [ ] Provide park facilities commensurate with the demand created and consistent with the City's adopted standards (4.1b)?
- [ ] Consistent with the Open Space Master Plan and Carson River Master Plan (4.3a)?

CHAPTER 5: ECONOMIC VITALITY

The Carson City Master Plan seeks to maintain its strong diversified economic base by promoting principles which focus on retaining and enhancing the strong employment base, include a broader range of retail services in targeted areas, and include the roles of technology, tourism, recreational amenities, and other economic strengths vital to a successful community.

Is or does the proposed development:

- ☐ Encourage a citywide housing mix consistent with the labor force and non-labor force populations (5.1j)
- ☐ Encourage the development of regional retail centers (5.2a)
- ☐ Encourage reuse or redevelopment of underused retail spaces (5.2b)?
- ☐ Support heritage tourism activities, particularly those associated with historic resources, cultural institutions and the State Capitol (5.4a)?
- ☐ Promote revitalization of the Downtown core (5.6a)?
- ☐ Incorporate additional housing in and around Downtown, including lofts, condominiums, duplexes, live-work units (5.6c)?

CHAPTER 6: LIVABLE NEIGHBORHOODS AND ACTIVITY CENTERS

The Carson City Master Plan seeks to promote safe, attractive and diverse neighborhoods, compact mixed-use activity centers, and a vibrant, pedestrian-friendly Downtown.

Is or does the proposed development:

- ☐ Use durable, long-lasting building materials (6.1a)?
- ☐ Promote variety and visual interest through the incorporation of varied building styles and colors, garage orientation and other features (6.1b)?
- ☐ Provide variety and visual interest through the incorporation of well-articulated building facades, clearly identified entrances and pedestrian connections, landscaping and other features consistent with the Development Standards (6.1c)?
- ☐ Provide appropriate height, density and setback transitions and connectivity to surrounding development to ensure compatibility with surrounding development for infill projects or adjacent to existing rural neighborhoods (6.2a, 9.3b 9.4a)?
- ☐ If located in an identified Mixed-Use Activity Center area, contain the appropriate mix, size and density of land uses consistent with the Mixed-Use district policies (7.1a, b)?
- ☐ If located Downtown:
  - ☐ Integrate an appropriate mix and density of uses (8.1a, e)?
  - ☐ Include buildings at the appropriate scale for the applicable Downtown Character Area (8.1b)?
  - ☐ Incorporate appropriate public spaces, plazas and other amenities (8.1d)?
- ☐ Incorporate a mix of housing models and densities appropriate for the project location and size (9.1a)?

CHAPTER 7: A CONNECTED CITY

The Carson City Master Plan seeks promote a sense of community by linking its many neighborhoods, employment areas, activity centers, parks, recreational

amenities and schools with an extensive system of interconnected roadways, multi-use pathways, bicycle facilities, and sidewalks.

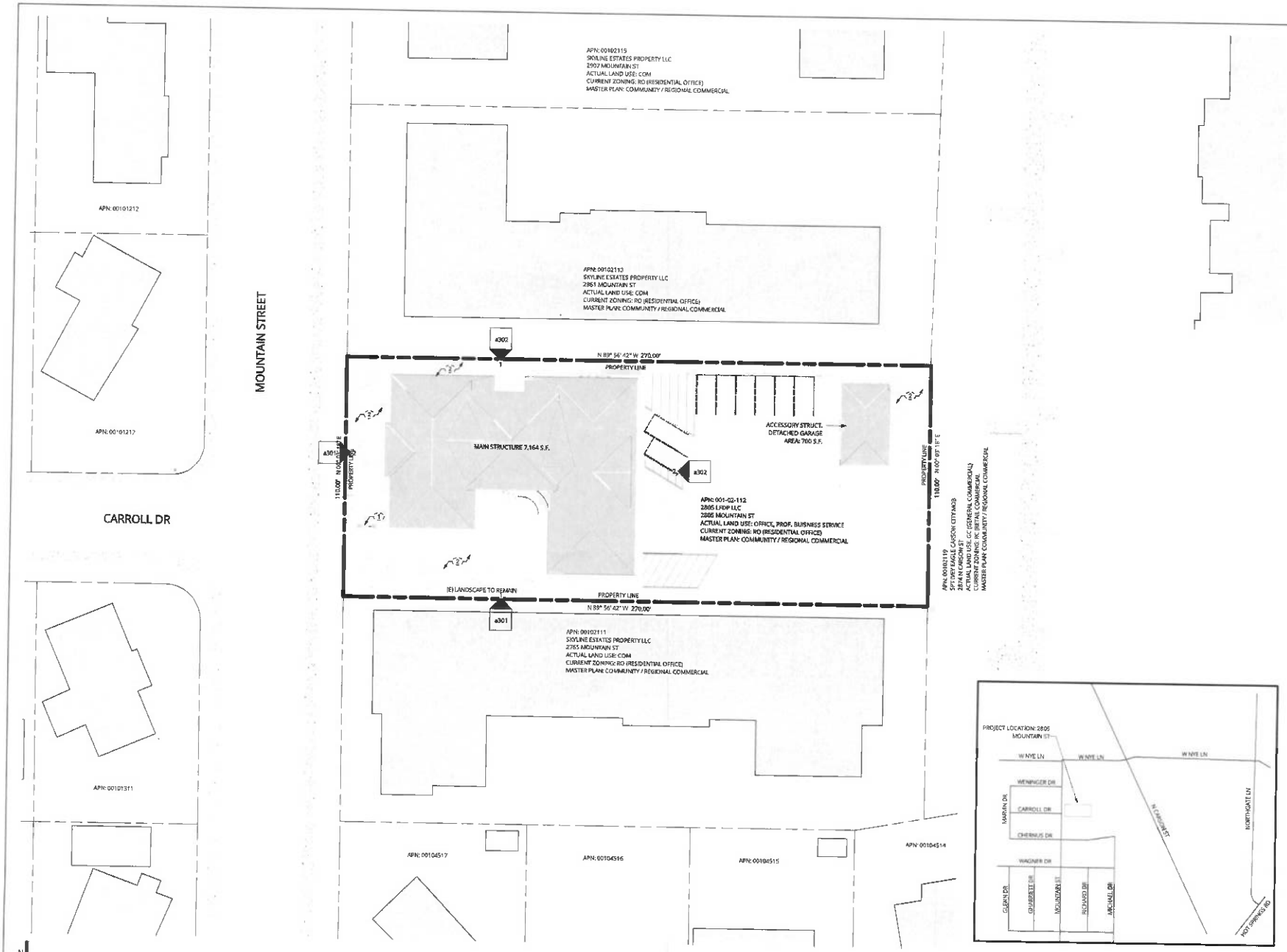
Is or does the proposed development:

- ☐ Promote transit-supportive development patterns (e.g. mixed-use, pedestrian-oriented, higher density) along major travel corridors to facilitate future transit (11.2b)?
- ☐ Maintain and enhance roadway connections and networks consistent with the Transportation Master Plan (11.2c)?
- ☑ Provide appropriate pathways through the development and to surrounding lands, including parks and public lands, consistent with the Unified Pathways Master Plan (12.1a, c)?

Applicant's Acknowledgement Statement

I certify that the foregoing statements are true and correct to the best of my knowledge and belief. I agree to fully comply with all conditions as established by the Planning Commission. I am aware that this permit becomes null and void if the use is not initiated within one year of the date of the planning commission's approval; and I understand that this permit may be revoked for violation of any of these conditions of approval of this application that does not exempt me from all City code requirements.

Applicants Signature	Brett Zunino *Printed Name*	11/6/2023 *Date*



DEMO SITE PLAN

1" = 20'-0"

VICINITY MAP

1/4" = 1'-0"

EXISTING CODE ANALYSIS

CODE ANALYSIS (EXISTING) SUMMARY:

OCCUPANCY GROUP(S):	B GROUP - PROF. OFFIC
TYPE OF CONSTRUCTION:	TYPE V-B
FIRE SPRINKLERS:	NO
ALARM SYSTEM:	NO
MAIN STRUCTURE	
NO. OF STORIES:	1
BUILDING HEIGHT:	+/- 24' FEET
AREA:	7,164 S.F.
ACCESSORY BLD (DETACHED GARAGE)	
NO. OF STORIES:	1
BUILDING HEIGHT:	+/- 17' FEET
AREA:	700 S.F.
EXISTING USE:	STORAGE / GARAGE

SITE DATA / ZONING SUMMARY

ADDRESS:	2805 MOUNTAIN STREET, CARSON CITY, NV
APN:	001-02-112
AREA:	.68 ACRES
ZONING:	OFFICES, PROFESSIONAL AND BUSINESS SE
LAND USE:	RESIDENTIAL OFFICE (RO)
MASTER PLAN:	COMMUNITY / REGIONAL COMMERCIAL

DEMO/EXISTING SHEET NOTE

1. EXISTING MONUMENT SIGN TO REMAIN
2. EXISTING LANDSCAPE TO REMAIN
3. EXISTING ACCESSIBLE PATH TO REMAIN

REVISIONS		
REV	DATE	DESCRIPTION

DEMO SITE PLAN

a100

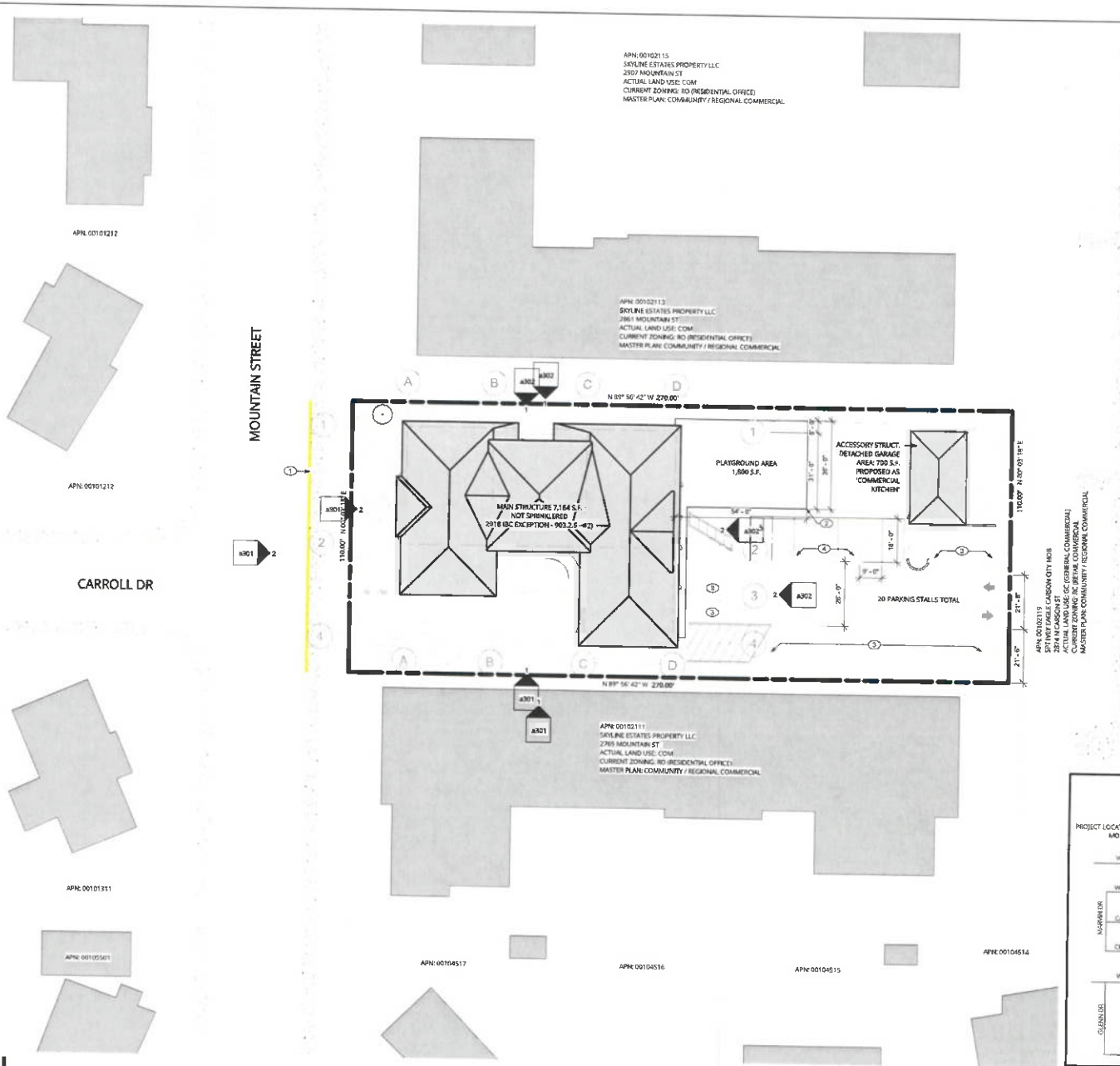
FORMGREY STUDIO

BGCWN SMART START

2805 MOUNTAIN ST
CARSON CITY, NV 89706

Project Status

NOT FOR CONSTRUCTION



ARCHTIECTURAL SITE PLAN (PROPOSED)

1" = 20'-0"

SITE PLAN NOTES

APN: 001-02-112
OWNER: BGCWN

1. THERE IS AN AVAILABLE PUBLIC WATER SYSTEM
2. THIS IS NOT A LEGAL SURVEY. PROPERTY DESCRIPTION INFORMATION ON THIS SHEET FOR GENERAL USE ONLY
3. PROVIDE POSITIVE DRAINAGE AWAY FROM PERIMETER OF BUILDING, MINIMUM SLOPE 5% FOR 10' MIN. AWAY FROM BLDG.
4. SLOPE ALL CONCRETE 2% UNLESS NOTED OTHERWISE.
5. CONNECT UTILITY EXTENSIONS TO EXISTING UTILITIES. CONTRACTOR TO VERIFY LOCATIONS OF EXTENSIONS
6. LIMITS OF CONSTRUCTION, STORAGE AREA, & VEGETATION OF CONCERN TO BE COORDINATED W/ OWNER OR ARCHITECT
7. FOR REMAINING SITE INFORMATION REFER TO CIVIL DRAWINGS
8. ALL EXTERIOR BELOW GRADE WALLS ENCLOSING HABITABLE SPACES SHALL BE WATERPROOFED IN ACCORDANCE WITH SECTION 1805.3.2, OF THE IBC 2012
9. WATERPROOF THE INSIDE FACE OF ALL RETAINING WALLS PER SECTION 1805.3.2 OF THE IBC 2012.
10. BACKFILL SHALL BE PLACED AND COMPACTED IN A MANNER THAT DOES NOT DAMAGE THE FOUNDATION OR THE WATERPROOFING OR DAMPPROOFING MATERIAL
11. 11. SITE CONDITIONS SHALL BE PROVIDED AND MAINTAINED IN ACCORDANCE WITH CHAPTER 6 OF THE 2012 INTERNATIONAL WILDLAND-URBAN INTERFACE CODE AS SHOWN BELOW IN EXCERPT.
12. FOR REMAINING SITE INFORMATION REFER TO CIVIL AND LANSCAPE DRAWINGS.

CODE ANALYSIS

CODE ANALYSIS (PROPOSED) SUMMARY:

OCCUPANCY GROUP(S):	I-4 - CHILDCARE / DAYCARE
TYPE OF CONSTRUCTION:	TYPE V-B
FIRE SPRINKLERS:	NO (2018 IBC 903.2.6 - #2) IBC
ALARM SYSTEM	YES - DEFERRED
MAIN STRUCTURE	
NO. OF STORIES:	1
BUILDING HEIGHT:	+/- 24' FEET
AREA:	7,164 S.F
ACCESSORY BLD (DETACHED GARAGE)	
NO. OF STORIES:	1
BUILDING HEIGHT:	+/- 17' FEET
AREA:	700 S.F
PROPOSED USE:	COMMERCIAL KITCHEN

SITE DATA / ZONING SUMMARY

ADDRESS:	2805 MOUNTAIN STREET, CARSON CITY, NV
APN:	001-02-112
AREA:	.68 ACRES
ZONING:	NEIGHBORHOOD BUSINESS (NB)
LAND USE:	CHILDCARE / DAYCARE FACILITY
MASTER PLAN:	COMMUNITY / REGIONAL COMMERCIAL

SITE PLAN SHEET NOTES

1. PICK-UP / DROP-OFF
2. PLAYGROUND FENCE
3. EXISTING PARKING SPACE TO REMAIN
4. NEW PARKING SPACE

REVISIONS		
REV	DATE	DESCRIPTION

VICINITY MAP

1/4" = 1'-0"

ARCHITECTURAL SITE PLAN

a101.5

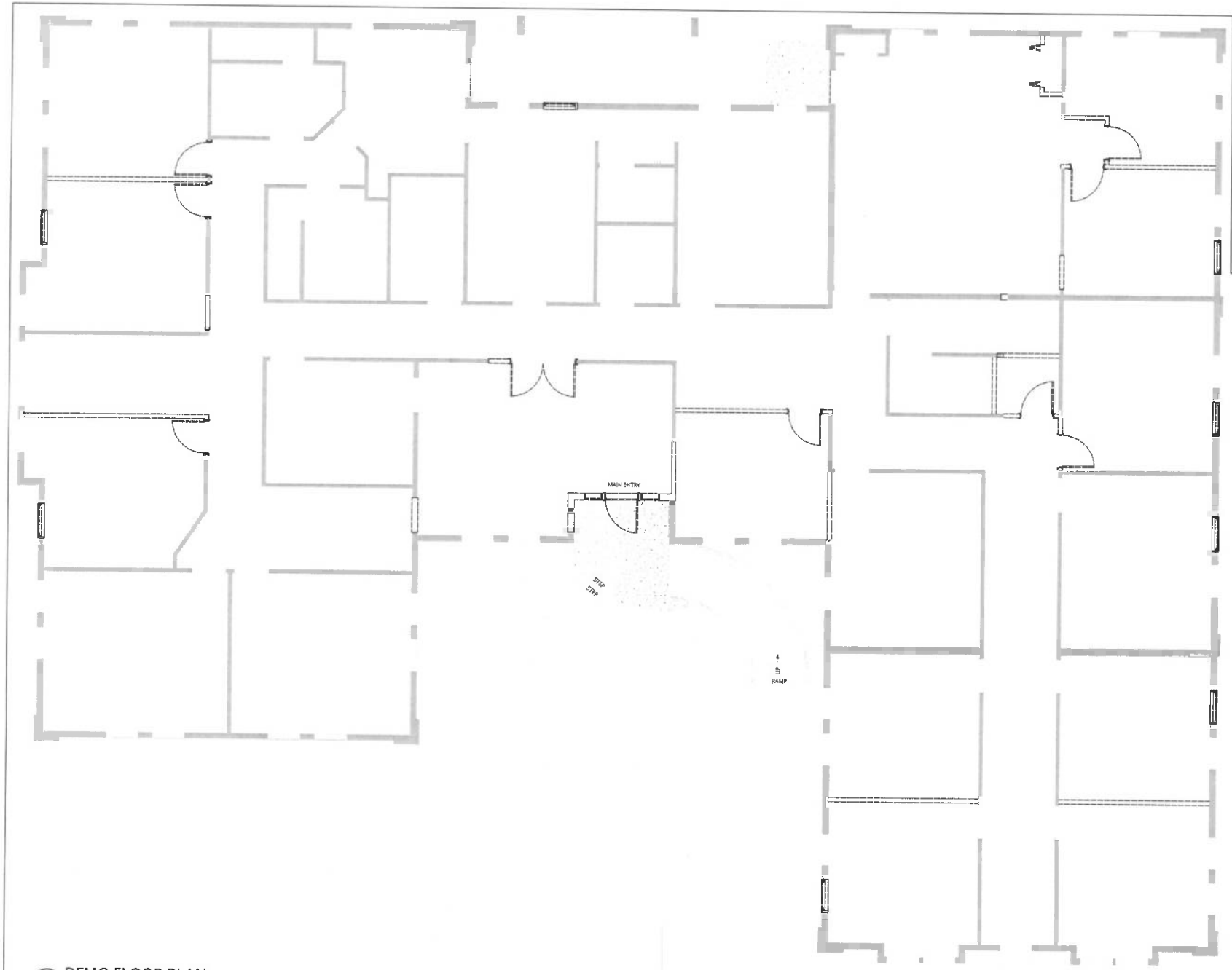
FORMGREY STUDIO

BGCWN SMART START

2805 MOUNTAIN ST
CARSON CITY, NV 89706

Project Status

NOT FOR CONSTRUCTION



DEMOLITION NOTES

1. ALL DEMOLITION WORK SHALL BE PERFORMED WITH "DUE CARE AND DILIGENCE" SO AS TO PREVENT THE ARBITRARY DESTRUCTION OF ADJACENT CONSTRUCTION DESIGNATED TO REMAIN.

2. CARE SHALL ALSO BE TAKEN TO PREVENT THE INTERRUPTION OF CONCEALED UTILITIES WHICH ARE TO REMAIN.

3. ANY UTILITIES DISCOVERED DURING THE DEMOLITION PROCESS WHICH WERE PREVIOUSLY UNIDENTIFIED SHALL BE REPORTED TO THE ARCHITECT BEFORE REMOVAL OR DISCONNECTION.

4. REMOVE ALL EXISTING CONSTRUCTION AS DESIGNATED ON DEMOLITION PLAN.

5. PATCH EXISTING CONSTRUCTION TO REMAIN TO MATCH EXISTING ADJACENT CONSTRUCTION AND FINISHES UNLESS NOTED OTHERWISE.

6. WHERE EXISTING DOORS AND WINDOWS ARE DESIGNATED TO BE REMOVED, PATCH OPENING WITH CONSTRUCTION TO MATCH EXISTING ADJACENT CONSTRUCTION UNLESS NOTED OTHERWISE.

7. ALL EQUIPMENT SUCH AS PLUMBING FIXTURES, ELECTRICAL FIXTURES AND EQUIPMENT, MECHANICAL EQUIPMENT, AIR CONDITIONING UNITS, ETC., TO BE REMOVED SHALL BE TURNED OVER TO THE OWNER OR STORED AS DIRECTED BY THE OWNER

WALL LEGEND

- DEMOLISHED U.N.O.
- EXISTING TO REMAIN U.N.O.
- PROPOSED U.N.O.
- 8" CONCRETE WALL U.N.O.
- 8" CMU WALL U.N.O.
- 6" EXTERIOR STUDWALL U.N.O.
- 4" INTERIOR STUDWALL U.N.O.

REVISIONS

REV	DATE	DESCRIPTION

DEMOLITION PLAN

a200

FORMGREY STUDIO

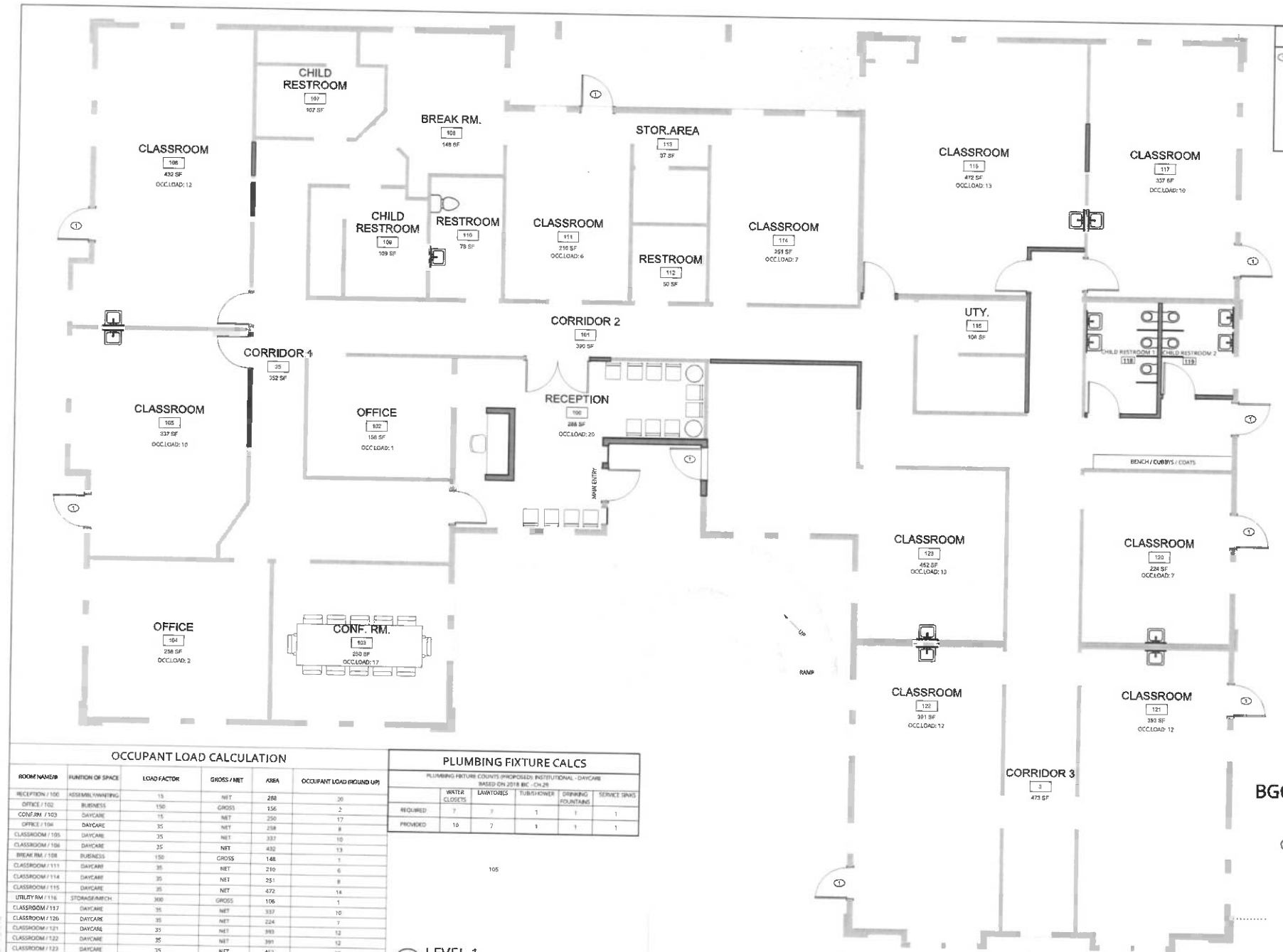
BGCWN SMART START

2805 MOUNTAIN ST
CARSON CITY, NV 89706

1 DEMO FLOOR PLAN

Project Status

NOT FOR CONSTRUCTION



FLOOR PLAN SHEET NOTES

1. (N) DOOR - SEE DEMO PLAN. EXTERIOR DOOR ADDED TO M... 2018 IBC FIRE SPRINKLER EXCEPTION 903.2.6, ITEM #2.

WALL LEGEND

- DEMOLISHED U.N.O.
- EXISTING TO REMAIN U.N.O
- PROPOSED U.N.O
- 8" CONCRETE WALL U.N.O.
- 8" CMU WALL U.N.O.
- 6" EXTERIOR STUDWALL U.N.O
- 4" INTERIOR STUDWALL U.N.O

REVISIONS

REV	DATE	DESCRIPTION

OCCUPANT LOAD CALCULATION

ROOM NAME/#	FUNTION OF SPACE	LOAD FACTOR	GROSS / NET	AREA	OCCUPANT LOAD (ROUND UP)
RECEPTION / 100	ASSEMBLY/WAITING	15	NET	288	20
OFFICE / 102	BUSINESS	150	GROSS	156	2
CONF.RM. / 103	DAYCARE	15	NET	250	17
OFFICE / 104	DAYCARE	35	NET	258	8
CLASSROOM / 105	DAYCARE	35	NET	337	10
CLASSROOM / 106	DAYCARE	35	NET	432	13
BREAK RM. / 108	BUSINESS	150	GROSS	148	1
CLASSROOM / 111	DAYCARE	35	NET	210	6
CLASSROOM / 114	DAYCARE	35	NET	251	8
CLASSROOM / 115	DAYCARE	35	NET	472	14
UTILITY RM. / 116	STORAGE/MECH.	300	GROSS	106	1
CLASSROOM / 117	DAYCARE	35	NET	337	10
CLASSROOM / 120	DAYCARE	35	NET	224	7
CLASSROOM / 121	DAYCARE	35	NET	393	12
CLASSROOM / 122	DAYCARE	35	NET	391	12
CLASSROOM / 123	DAYCARE	35	NET	462	13
				TOTAL	154

PLUMBING FIXTURE CALCS

PLUMBING FIXTURE COUNTS (PROPOSED) INSTITUTIONAL - DAYCARE
BASED ON 2018 IBC - CH.29

	WATER CLOSETS	LAVATORIES	TUBS/SHOWER	DRINKING FOUNTAINS	SERVICE SINKS
REQUIRED	7	7	1	1	1
PROVIDED	10	7	1	1	1

105

1 LEVEL 1
1/8" = 1'-0"

FLOOR PLAN

a201

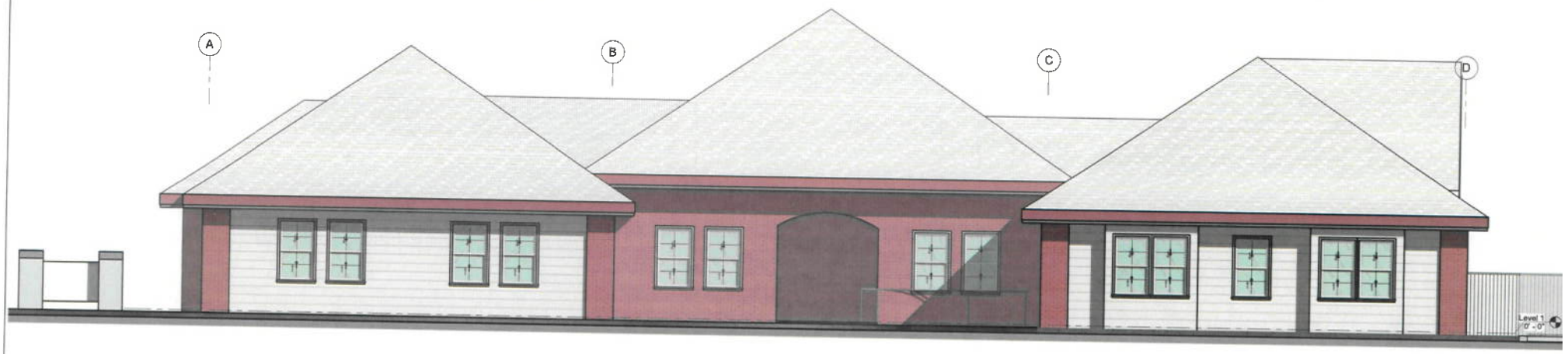
FORMGREY STUDIO

BGCWN SMART START

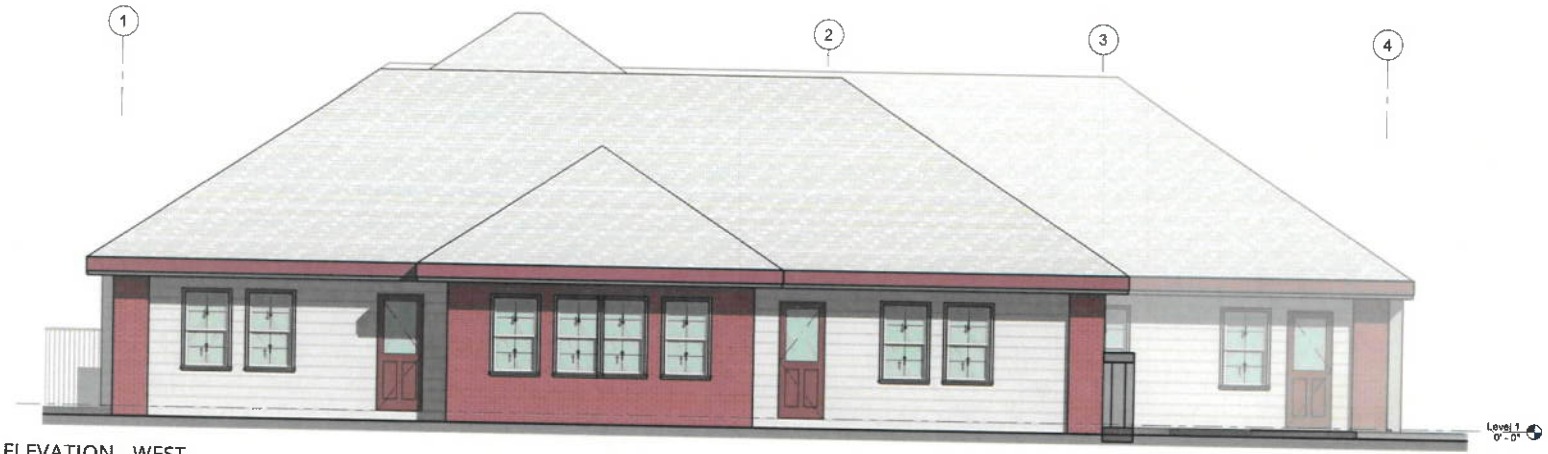
2805 MOUNTAIN ST
CARSON CITY, NV 89706

Project Status

NOT FOR CONSTRUCTION



1 EXTERIOR ELEVATION - SOUTH
1/4" = 1'-0"



2 EXTERIOR ELEVATION - WEST
1/4" = 1'-0"

DETACHED GARAGE HERE

REVISIONS		
REV	DATE	DESCRIPTION

ELEVATIONS

a301

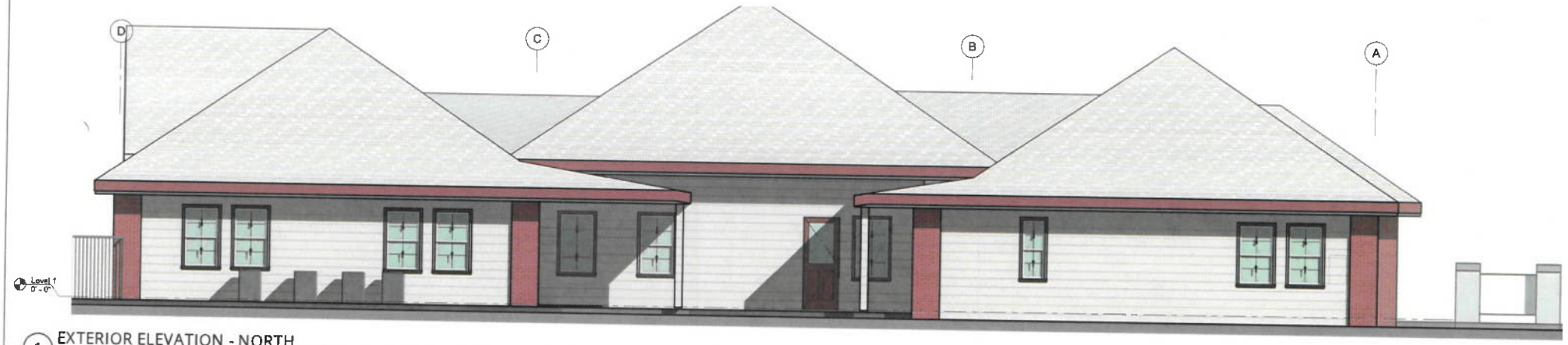
FORMGREY STUDIO

BGCWN SMART START

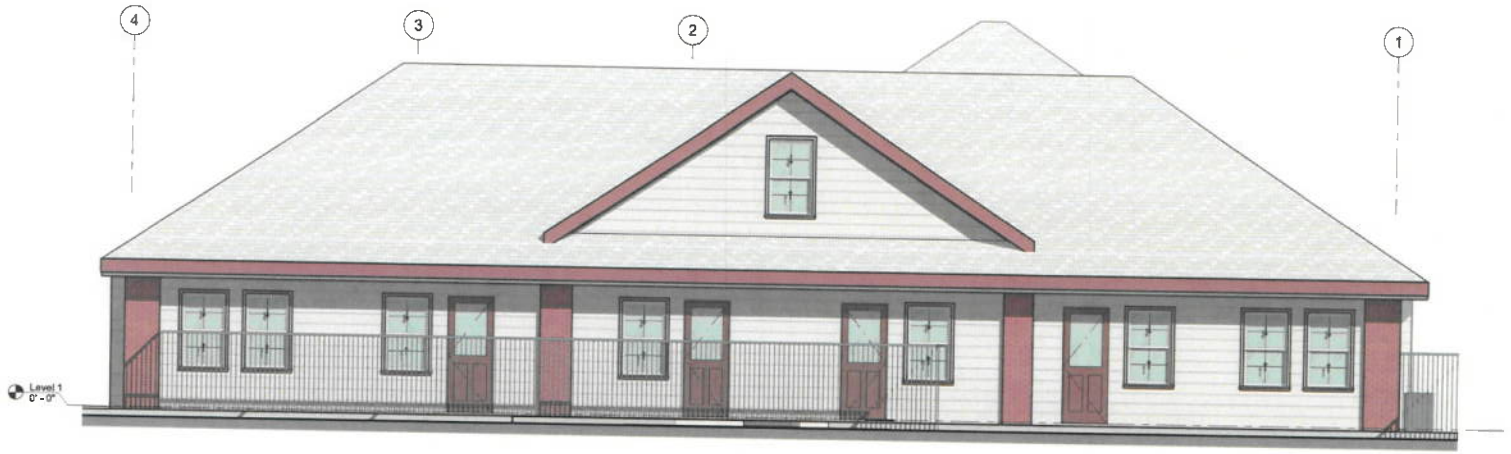
2805 MOUNTAIN ST
CARSON CITY, NV 89706

Project Status

NOT FOR CONSTRUCTION



1 EXTERIOR ELEVATION - NORTH



2 EXTERIOR ELEVATION - EAST

REVISIONS		
REV	DATE	DESCRIPTION

ELEVATIONS

a302

FORMGREY STUDIO

BGCWN SMART START

2805 MOUNTAIN ST
CARSON CITY, NV 89706

Project Status

NOT FOR CONSTRUCTION

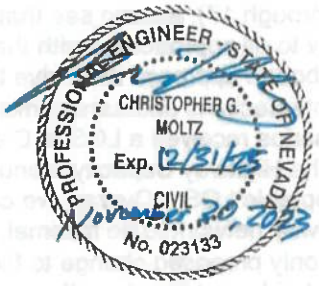
Traffic Impact Study

Project: Boys & Girls Clubs of Western Nevada Smart Start Program
2805 Mountain Street
Carson City, NV 89703
Carson City APN 001-021-12
Project No: 143.001

Prepared by:

Heartfelt Engineering, LLC
PO Box 2457
Carson City, Nevada 89702
chris@heartfeltengineering.com
775-546-5582

November 30, 2023



Prepared for:

Boys and Girls Clubs of Western Nevada for submittal to Carson City, NV

Boys & Girls Clubs of Western Nevada
ATTN: Brett Zunino
berettz@bgcwn.org
775-848-3821

Subject:	**Traffic Impact Study – Boys & Girls Clubs of Western Nevada Smart Start Program – *November 30, 2023 UPDATE***
Project Address:	**2805 Mountain Street**
Project APN:	**Carson City APN 001-021-12**
Jurisdiction:	**Carson City, NV**
Property Owner(s):	**2805 LFDP LLC**
Project Number:	**143.001**

Mr. Zunino,

Thank you for choosing Heartfelt Engineering, LLC to perform this Traffic Impact Study. I hope that this report provides the supporting documentation necessary for approval of your project.

Please note that this report has been updated as of 11/30/2023 based on preliminary comments from Carson City. Pursuant to comments from Carson City, the Baseline Traffic Volumes in the report have all been adjusted based on review of NDOT TRINA Traffic Count data. Any subsequent attachments and analysis have been updated as a result of this analysis as well. For more information on NDOT TRINA counts and adjustment to the raw peak hour traffic counts, refer to Section V. B. of this report. Note that the increases to traffic as a result of TRINA Traffic Count data adjustments have not-significantly altered the results of LOS Analysis for the intersections. The recommendations of this report have not changed, just the numbers for analysis and attachments. Additionally, a proposed schedule regarding staff movements and proposed scheduled pickup time to prevent a morning or afternoon "rush" has been proposed by the Boys and Girls Club and is discussed in Section VIII. E. of this report.

As discussed in further detail in the attached report, the key takeaway items are:

- Based on review of Level of Service (LOS) Analysis performed with HCS 2022 traffic software (Summarized in Tables 7-10 (pages 16-17) we can take away a few important findings. First, under every traffic scenario we can see that all intersections produce acceptable Levels of Service both under current 2023 and future 2050 traffic scenarios, both with and without the proposed project. Secondly, by comparing Table 7 to Table 8 and Table 9 to Table 10 (pages 16 through 17), we can see that the proposed project produces minimal increase increases in delay to all approaches, with the highest increase in delay of 2.8 seconds observed to the eastbound approach of W Nye Lane and N Carson Street in 2050.
- All intersections and turning movements under both the current 2023 and future 2050 traffic scenarios received a LOS of C or better. This exceeds the LOS of D or better as recommended by The Highway Capacity Manual, 7th Edition, and therefore exceeds what is considered acceptable LOS. Overall, we can consider the impact of this project on the surrounding roadway network to be minimal.
- The only proposed change to the roadway network is the proposed recommendation to change street-side parking along the east side of Mountain Street into an appropriately striped and marked loading zone which prevents permanent parking. A similarly striped loading zone can be found directly three parcels north of the project location on the south side of W. Nye Lane (See Figures 6 and 7 on page 22).

- Based on parallel parking spot standards by Carson City, a parallel parking stall shall be 22ft long minimum (Parking Lot Requirements Standard Detail C-5.5.1.2). If we go by Carson City parallel parking standards and compare it to the lot length of the parcel along Mountain Street of 110 feet, and if the loading zone is striped into 22ft sections for individual vehicles, then there can be room for five vehicles to be parked at the same time. If the loading zone is not striped for individual 22ft sections, then a realistic number of four loading spots can be anticipated. Based on review of total trips anticipated as part of this project (46 entering during the AM Peak Hour and 41 entering in the PM Peak Hour), and the trip distribution in Attachment 2, we can assume 30% of incoming trips will utilize the loading zone on Mountain Street. This comes to 14 trips during the weekday AM Peak Hour, and 12 trips during the weekday PM Peak Hour.
- Based on site visits performed on November 22, 2023 and November 28, 2023 during the peak hours there is more than ample street parking along Mountain Street. Personal knowledge of this street, as well as review of review of historic Google Earth imagery confirms that on-street parking is minimal and if the five-space loading zone is ever full, neighboring street-side parking along Mountain Street can temporarily handle any overflow parking for child drop-offs and pickups.
- In an effort to better address Carson City's concerns regarding the drop off schedule and avoiding a "rush" or peak demand where traffic is overflowing into the surrounding neighborhood, the Boys and Girls Club has provided our office with a proposed operations schedule for a typical weekday. This schedule will reduce traffic demands during the AM and PM Peak Hours, additionally having scheduled drop-off and pickup times will avoid a "rush" for both staff members, and proposed loading zone facilities.
- Based on NDOT AMSS standards (and confirmed by observing existing traffic), acceleration lanes are warranted for left turns off W Nye Lane onto N Carson Street. Right turn acceleration lanes were not observed as critical at this time based on field observations and plenty of observed gap between segments of oncoming vehicles.
- It should be noted that the need for left turn acceleration lanes is a pre-existing issue, not caused by the proposed project. Additionally, if acceleration turn lanes onto northbound and southbound N Carson Street are to be installed, the proposed project does not contribute any traffic left turns onto southbound Carson Street (from eastbound W Nye Lane), and therefore should not be required to contribute any pro-rata share to that turning movement and lane modification.
- Review of Google Earth Imagery identifies that while there appears to be plenty of median space (east to west across N Carson Street) to add a left turn acceleration lane; however, there is not nearly enough space for the recommended 740 feet of length per NDOT's AMSS. Only approximately 330 feet of space is available within the median of southbound N Carson Street, and 220 feet for northbound N Carson Street for dedication and installation of left turn-acceleration lanes. **Accordingly, rather than giving vehicles false security and installing an acceleration lane much too short in length (since NDOT Access Management Systems and Standards cannot be met), it may be prudent to continue to have no left-turn acceleration lanes from W Nye Lane onto N Carson Street.** Refer to Figure 9 on page 25.
- There is no need for right-turn lanes at the two driveways located on N Carson Street at this time. The proposed project is not anticipated to generate any U-turns along N Carson Street.
- Any parking restriping or other improvements should be performed to Carson City standard details.

If you (or any plan reviewers) have any questions or comments, please reach me at (775) 546-5582 or contact me by email at chris@heartfeltengineering.com.

Best Regards,

Christopher Moltz, P.E.
Principal, Heartfelt Engineering

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I INTRODUCTION AND SUMMARY

This report presents the results of the Traffic Impact Study for Boys & Girls Clubs of Western Nevada Smart Start project (Boys and Girls Club) on Mountain Street. A general vicinity map is shown in Figure 1 (page 7), a site location overview is shown in Figure 2 (page 8), and a zoomed overview of the existing building is shown in Figure 3 (page 9). This study was performed in general accordance with our approved scope of services and work order.

The conclusions and recommendations contained in this report are based on:

- Site visits and traffic counts performed during the Weekday AM (7:00am to 9:00am) and Weekday PM (4:00pm to 6:00pm) Peak Hours on Wednesday, November 22, 2023.
- Methodology contained within the *"Highway Capacity Manual (HCM) 7th Edition"* (Published 2022 by the Transportation Research Board (TRB))
- Level of Service (LOS) analysis from MacTrans HCS 2023 Traffic Modeling Software
- Published trip generation data from the *"Trip Generation Manual: 11th Edition"* (Published September 2021 by the Institute of Transportation Engineers)

If any findings, assumptions, conditions, or project plans are found to vary from those described in this report, our office should be contacted immediately to verify that the recommendations contained herein remain applicable to the final project design. Accordingly, this report may be revised at any time.

A. Purpose of Report and Study Objectives

The purpose of this report is to analyze the traffic impact of the proposed project (Boys and Girls Club) to be located within the NE¼ of Section 16 of T.15N., R.20E., M.D.B.&M., on Carson City APN 001-021-12. This project will be a Boys and Girls Club that is repurposing an existing office building into the Boys and Girls Club Smart Start Program.

A scope for the Traffic Impact Study was provided by Christopher Martinovich from Carson City's Traffic Department, which was subsequently forwarded to our office by the applicant. It was determined that a traffic impact study for the project should include analysis of the following intersections for both the current (2023) and future (2050) traffic volumes, for the Weekday AM Peak Hour (7:00am to 9:00am), the Weekday PM Peak Hour (4:00pm to 6:00pm), both with and without the proposed project. Additionally, it was determined that AM and PM Peak Hour Traffic Counts should be compared to NDOT Trina Counts and adjusted if needed:

- Shared Project Driveway and W Nye Lane
- N. Carson Street and W Nye Lane
- Mountain Street and W Nye Lane

It was determined that this traffic study will analyze and adopt the 2050 RTC traffic model for future traffic volumes for intersections to be analyzed, as well as new traffic counts must be obtained for the AM and PM Weekday Peak Hours.

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B. Executive Summary

This Executive Summary is intended to concisely and accurately summarize the findings and impacts this proposed project will have on traffic for the surrounding roadway network.

1. Site Location and Study Area

The site location of this proposed project is Carson City APN 001-021-12. This parcel is currently used as an office building. It is proposed that the existing office building is to be repurposed for the Boys & Girls Clubs of Western Nevada Smart Start project (Boys and Girls Club). The address is listed as 2805 Mountain Street per the Carson City Assessor's Office. The parcel is contiguous with Mountain Street on the west, a private access driveway which provides private access to the parking lot and connects to W Nye Lane in the east, and other existing office buildings to the north and south. Directly to the east of the private access driveway is a medical office building and parking lot, and approximately 450 feet from the access driveway is S Carson Street. It is assumed that a small portion of vehicles will use this parking lot to the east to travel between the proposed project and N Carson Street or vice versa. No new driveways are proposed as part of this project.

Based on the Traffic Impact Study scope provided by Carson City, three intersections were analyzed for current (2023) and future (2050) traffic volumes, both with and without the proposed project. The intersections analyzed in this report are:

- Shared Project Driveway and W Nye Lane
- N Carson Street and W Nye Lane
- Mountain Street and W Nye Lane

2. Development Description

This project consists of converting an existing office building and repurposing the building for the Boys & Girls Clubs of Western Nevada Smart Start project (Boys and Girls Club). This project best reflects a day care, as children of very young ages will be dropped off for learning in the morning during the weekday AM Peak Hours (7am to 9am) and picked up during the weekday PM Peak Hours (4pm to 6pm). All project driveways are pre-existing.

The proposed project intends to remove the following existing land use:

- 7,164 square foot office building

The proposed project intends to include the following land use element:

- 111 Child capacity Day Care Center

3. Principal Findings

Based on review of Level of Service (LOS) Analysis performed with HCS 2022 traffic software (Summarized in Tables 7-10 (pages 16-17) we can take away a few important findings. First, under every traffic scenario we can see that all intersections produce acceptable Levels of Service both under current 2023 and future 2050 traffic scenarios, both with and without the proposed project. Secondly, by comparing Table 7 to Table 8 and Table 9 to Table 10, we can see that the proposed project produces minimal increase increases in delay to all approaches, with the highest increase in delay of 2.8 seconds observed to the eastbound approach of W Nye Lane and N Carson Street in 2050.

All intersections and turning movements under both the current 2023 and future 2050 traffic scenarios received a LOS of C or better. This exceeds the LOS of D or better as recommended by The Highway Capacity Manual, 7th Edition, and therefore exceeds what is considered acceptable LOS. Overall, we can consider the impact of this project on the surrounding roadway network to be minimal.

4. Conclusions and Recommendations

The following is a bullet item summary of the conclusions and recommendations:

- The only proposed change to the roadway network is the proposed recommendation to change street-side parking along the east side of Mountain Street into an appropriately striped and marked loading zone which prevents permanent parking. A similarly striped loading zone can be found directly three parcels north of the project location on the south side of W. Nye Lane (See Figures 6 and 7 on page 22).
- Based on parallel parking spot standards by Carson City, a parallel parking stall shall be 22ft long minimum (Parking Lot Requirements Standard Detail C-5.5.1.2). If we go by Carson City parallel parking standards and compare it to the lot length of the parcel along Mountain Street of 110 feet, and if the loading zone is striped into 22ft sections for individual vehicles, then there can be room for five vehicles to be parked at the same time. If the loading zone is not striped for individual 22ft sections, then a realistic number of four loading spots can be anticipated. Based on review of total trips anticipated as part of this project (46 entering during the AM Peak Hour and 41 entering in the PM Peak Hour), and the trip distribution in Attachment 2, we can assume 30% of incoming trips will utilize the loading zone on Mountain Street. This comes to 14 trips during the weekday AM Peak Hour, and 12 trips during the weekday PM Peak Hour.
- Based on site visits performed on November 22, 2023 and November 28, 2023 during the peak hours there is more than ample street parking along Mountain Street. Personal knowledge of this street, as well as review of review of historic Google Earth imagery confirms that on-street parking is minimal and if the five-space loading zone is ever full, neighboring street-side parking along Mountain Street can temporarily handle any overflow parking for child drop-offs and pickups.
- In an effort to better address Carson City's concerns regarding the drop off schedule and avoiding a "rush" or peak demand where traffic is overflowing into the surrounding neighborhood, the Boys and Girls Club has provided our office with a proposed operations schedule for a typical weekday. This schedule will reduce traffic demands during the AM and PM Peak Hours, additionally having scheduled drop-off and pickup times will avoid a "rush" for both staff members, and proposed loading zone facilities.
- Based on NDOT AMSS standards (and confirmed by observing existing traffic), acceleration lanes are warranted for left turns off W Nye Lane onto N Carson Street. Right turn acceleration lanes were not observed as critical at this time based on field observations and plenty of observed gap between segments of oncoming vehicles.

- It should be noted that the need for left turn acceleration lanes is a pre-existing issue, not caused by the proposed project. Additionally, if acceleration turn lanes onto northbound and southbound N Carson Street are to be installed, the proposed project does not contribute any traffic left turns onto southbound Carson Street (from eastbound W Nye Lane), and therefore should not be required to contribute any pro-rata share to that turning movement and lane modification.
- Review of Google Earth Imagery identifies that while there appears to be plenty of median space (east to west across N Carson Street) to add a left turn acceleration lane; however, there is not nearly enough space for the recommended 740 feet of length per NDOT's AMSS. Only approximately 330 feet of space is available within the median of southbound N Carson Street, and 220 feet for northbound N Carson Street for dedication and installation of left turn-acceleration lanes. **Accordingly, rather than giving vehicles false security and installing an acceleration lane much too short in length (since NDOT Access Management Systems and Standards cannot be met), it may be prudent to continue to have no left-turn acceleration lanes from W Nye Lane onto N Carson Street.** Refer to Figure 9 on page 25.
- There is no need for right-turn lanes at the two driveways located on N Carson Street at this time. The proposed project is not anticipated to generate any U-turns along N Carson Street.
- Any parking restriping or other improvements should be performed to Carson City standard details.

II PROPOSED DEVELOPMENT

A. Land Use and Intensity

It is proposed that the existing office building is to be repurposed for the Boys & Girls Clubs of Western Nevada Smart Start project (Boys and Girls Club). This project best reflects a day care, as children of very young ages will be dropped off for learning in the morning during the weekday AM Peak Hours (7am to 9am) and picked up during the weekday PM Peak Hours (4pm to 6pm).

The proposed project intends to remove the following existing land use:

- 7,164 square foot office building

The proposed project intends to include the following land use element:

- 111 Child capacity Day Care Center

ITE Land Use: 565 – Day Care Center was determined to be an acceptable land use for the proposed project.

Per review of data for ITE Land Use: 565 – Day Care Center, a 111 student day care center will create a Weekday AM Peak Hour demand from 7am to 9am of 87 trips and a Weekday PM Peak Hour demand from 4pm to 6pm of 88 trips.
A summary of peak hour trips for the 111 student day care center can be seen below in Table 1.

Table 1 – Assigned Peak Hour Trips for 111 Student Day Care Center

ITE Land Use: 565 – Day Care Center 111 Students	
AM Peak Hour	**PM Peak Hour**
87 Trips	88 Trips
46 entering, 41 exiting	41 entering, 47 exiting

Typically, when an existing business or building is repurposed, we can subtract the existing number of peak hour trips from the current land use to the proposed land use. The existing building to be re-purposed for the Boys and Girls Club (day care) is currently used as an office. Accordingly, existing office trips can be subtracted from the proposed project.

ITE Land Use: 710 – General Office Building was determined to be an acceptable land use for the existing project.

Per review of data for ITE Land Use: 710 – General Office Building, a 7,164 square foot general office building will create a Weekday AM Peak Hour demand from 7am to 9am of 11 trips and a Weekday PM Peak Hour demand from 4pm to 6pm of 10 trips.

A summary of existing peak hour trips for the 7,164 square foot general office building can be seen below in Table 2.

Table 2 – Assigned Peak Hour Trips for 7,164 Square Foot General Office Building

ITE Land Use: 710 – General Office Building 7,164 Square Feet	
AM Peak Hour	**PM Peak Hour**
11 Trips	10 Trips
10 entering, 1 exiting	2 entering, 8 exiting

The net number of trips anticipated to be generated by the proposed change in land use can be seen on the following page in Table 3.

Table 3 – Net Peak Hour Trips to be Generated by Proposed Change in Land Use from General Office Building to Boys and Girls Club

ITE Land Use: 565 – Day Care Center 111 Students	
AM Peak Hour	**PM Peak Hour**
87 Trips	88 Trips
46 entering, 41 exiting	41 entering, 47 exiting
ITE Land Use: 710 – General Office Building 7,164 Square Feet	
AM Peak Hour	**PM Peak Hour**
-11 Trips	-10 Trips
-10 entering, -1 exiting	-2 entering, -8 exiting
Net Peak Hour Trips to be Generated by Proposed Change in Land Use	
AM Peak Hour	**PM Peak Hour**
76 Trips	78 Trips
36 entering, 40 exiting	39 entering, 39 exiting

B. Location

The site location of this proposed project is Carson City APN 001-021-12 located at 2805 Mountain Street in Carson City, Nevada. This subject property consists of an existing office building. The proposed project (Boys & Girls Clubs of Western Nevada Smart Start program) plans on repurposing the existing office into a day care facility.

The parcel is contiguous with Mountain Street on the west, a private access driveway which provides private access to the parking lot and connects to W Nye Lane in the east, and other existing office buildings to the north and south. Directly to the east of the private access driveway is a medical office building and parking lot, and approximately 450 feet from the access driveway is S Carson Street. It is assumed that a small portion of vehicles will use this parking lot to the east to travel between the proposed project and N Carson Street or vice versa.

N Carson Street (approximately 450 feet east of the project location) provides access through Carson City from north to south. N Carson Street is a street that intersects with I-580 in two locations (N Carson St. and I-580, and S Carson St. and I-580 / US 50 / US 395 intersection). N Carson Street has been identified as minor arterial per the NDOT road functional classification map for Carson City Urbanized North. N Carson Street is a four-lane street (two lanes in each direction) which runs north / south between I-580 in the north and US 395 / I-580 to the south at the south end of Carson City. N

Carson Street is regulated by stop signs and traffic lights along its entirety. Traffic flows along N. Carson Street are uninterrupted at the intersection with W. Nye Lane.

W Nye Lane (north of the project location) runs from east to west and intersects several roads, including Mountain Street in the west, N Carson Street and Northgate Lane in the middle, and Hot Springs Road in the east. W Nye Lane has been identified as a Minor Collector per the NDOT road functional classification map for Carson City Urbanized North. W Nye Lane is a two-lane road (1 lane in each direction) which runs east / west in Carson City, between Mountain Street in the west and Hot Springs Road in the east. W Nye Lane is unsignalized across its entirety, but is controlled by stop signs at the intersections of N. Carson Street, Northgate Lane, and Hot Springs Road. W Nye Lane is free flowing at the intersection with Mountain Street.

Mountain Street (directly west of the project location) provides local access through portions of the west side of Carson City from north to south. Mountain Street has been identified as a Minor Collector per the NDOT road functional classification map for Carson City Urbanized North. Mountain Street is a two-lane road (one lane in each direction) which runs north / south between W Nye Lane in the north and King Street in the south. Mountain Street is unsignalized along its entirety, however, it is controlled by multiple stop signs along its length.

A project vicinity map can be seen on the below in Figure 1. An aerial overview of the site location can be seen on page 8 in Figure 2.

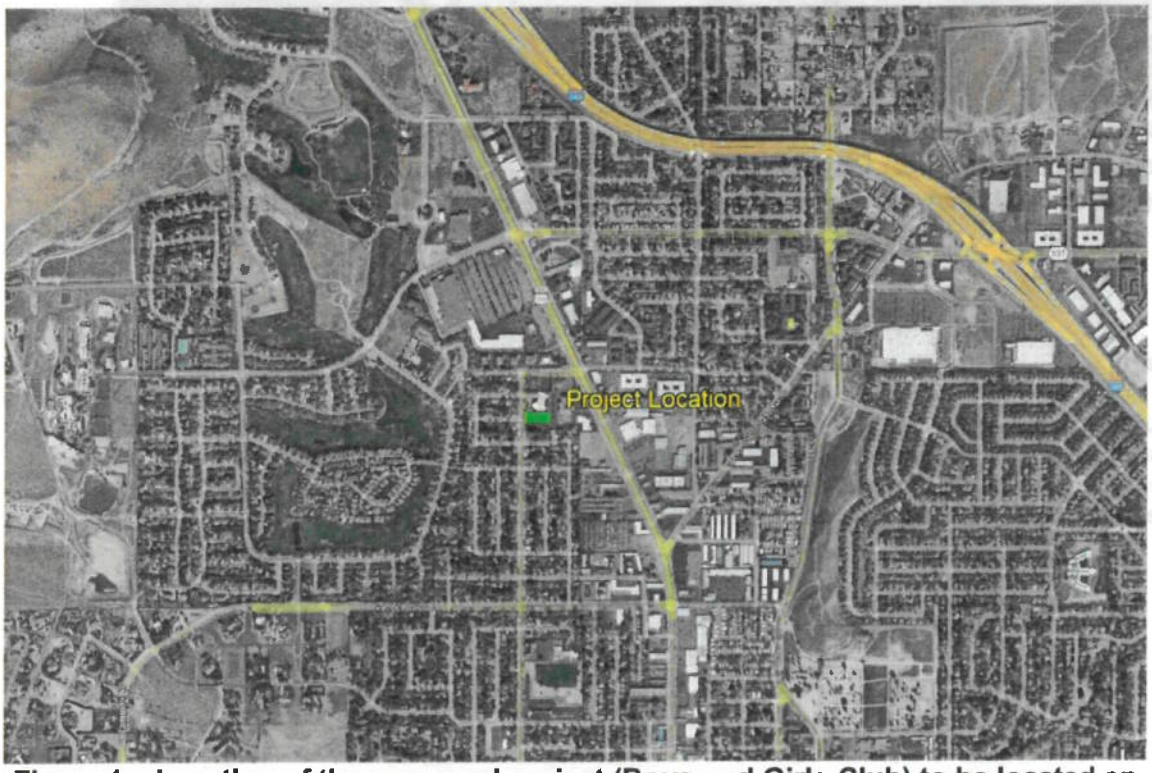

Figure 1 – Location of the proposed project (Boys and Girls Club) to be located on Carson City APN 001-021-12 at 2805 Mountain Street. (Imagery from Google Earth Mapping Software)

Figure 2 – Aerial overview of the site location for the proposed project (Boys and Girls Club) to be located on Carson City APN 001-021-12. An approximate location of the subject properties is shown as a green polygon. (Imagery from Google Earth Mapping Software)

C. Site Plan

The existing building is currently used as an office building. While the building will be repurposed, and minor changes will be made, such as modifying the outdoor area to allow for a playground, no major changes to the project are anticipated as far as the building itself, traffic, or access is proposed. An overview of the current office building can be seen on the following page in Figure 3.

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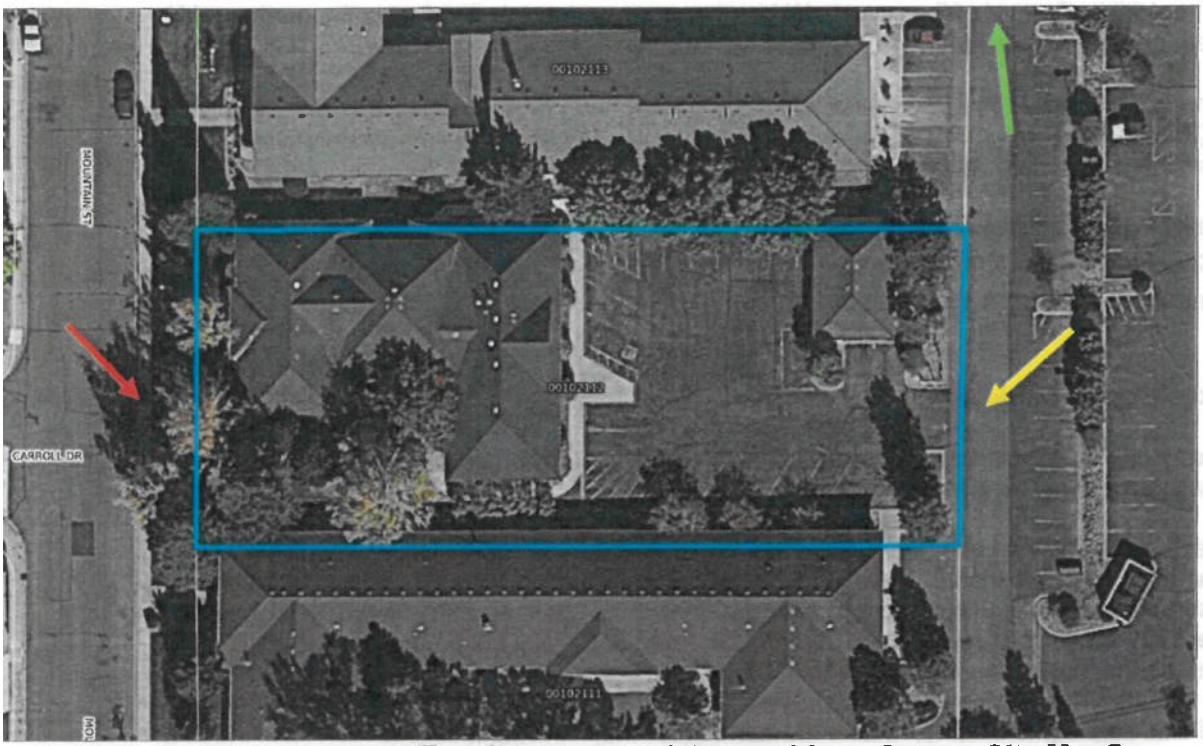

Figure 3 – Aerial Overview of Existing Building (obtained from Carson City MapGeo GIS). Mountain Street currently allows for on-street parking (red arrow). It is anticipated that the Boys and Girls Club will use this area as a loading zone during norning drop-offs and afternoon pick-ups. The existing private access driveway in the rear of the property (yellow arrow) will provide the only access to the parking lot facilities. It is anticipated that the majority of vehicles will utilize this private access driveway to access W. Nye Lane to the north (green arrow); however, due to the close proximity from the building to N. Carson Street, it is likely that some vehicles will cut across the parking lot to the east to access N. Carson Street.

. Phasing and Timing

his project can be considered a single-phase project.

AREA CONDITIONS

. Study Area

he site location of this proposed project is Carson City APN 001-021-12 located at 2805 Mountain treet in Carson City, Nevada. This subject property consists of an existing office building. The oposed project (Boys & Girls Clubs of Western Nevada Smart Start program) plans on repurposing e existing office into a day care facility. Nearby streets within the vicinity of the project location are

Mountain Street (directly west of the parcel), W Nye Lane approximately 500 feet to the north, and N Carson Street approximately 450 feet to the east.

Based on the Traffic Impact Study scope provided by Carson City, three intersections were analyzed for current (2023) and future (2050) traffic volumes, both with and without the proposed project. The intersections analyzed in this report are:

- Shared Project Driveway and W Nye Lane
- N. Carson Street and W Nye Lane
- Mountain Street and W Nye Lane

B. Study Area and Lane Use

The proposed study area is the previously identified intersections of N. Carson Street and W. Nye Lane, and Mountain Street and W. Nye Lane.

W Nye Lane is an east / west orientated, two-lane road (one lane in each direction), which provides access between Mountain Street in the west, and Hot Springs Road in the east. W Nye Lane provides direct access between the two intersections analyzed in this report. It also provides direct access to the private access driveway which runs south from W Nye Lane to the subject property where it allows access to the parking lot on the east side of the subject property. W Nye Lane is uninterrupted at the intersection with Mountain Street and at the intersection with the private access driveway. W Nye Lane is controlled with stop signs on either side of its intersection with N. Carson Street.

W Nye Lane intersects with Mountain Street on the west. Mountain Street borders the project location on its western border. Mountain St. is a north / south orientated, two-lane road (one lane in each direction), which provides access between W Nye Lane in the north and King Street in the south. Mountain Street is free-flowing along the west side of the project location until it terminates with a stop sign at W Nye Lane approximately 500 feet north of the project location. Mountain Street allows street parking in the vicinity of the project location.

N Carson Street (approximately 450 feet east of the project location) provides access through Carson City from north to south. N Carson Street is a four-lane street (two lanes in each direction) which runs north / south between I-580 in the north and US 395 / I-580 to the south at the south end of Carson City. Traffic flows along N. Carson Street are uninterrupted at the intersection in the vicinity of the project location. There are multiple deceleration turn lanes at the intersection of N. Carson Street and W. Nye Lane (both left turn and right turn deceleration / turn lanes for both northbound and southbound traffic). There is also a dedicated pedestrian crosswalk across N. Carson Street on the north side of W. Nye Lane. N. Carson Street does not allow street parking in the vicinity of the project location.

It is recommended that the street side parking along the west side of the project location (east side of Mountain Street) is designated, signed and striped as "NO PARKING. LOADING ZONE". A similarly striped loading zone can be found directly three parcels north of the project location on the south side of W. Nye Lane. Based on site visits performed on November 22, 2023 and November 28, 2023, there is more than ample street parking along Mountain Street during the weekday peak hours, and removing the parking and changing it to a loading zone is justified and feasible for the project's needs, without causing major impact to the surrounding neighborhood and its parking. No changes to points of access or driveway approaches to or from the proposed project are proposed as part of this project.

All existing intersections analyzed as part of this project are unsignalized intersections. No changes to existing intersections are proposed as part of this project.

An overview of existing/proposed lane geometry can be seen in Attachment 1.

Based on observations during the AM and PM Peak Hours traffic ranged between light along W Nye Lane and Mountain Street, and heavy along N. Carson Street. Due to the relatively level grade and light traffic, the roadway speed of 25 mph was determined to be adequate for both W Nye Lane and Mountain Street. Due to the relatively level grade, heavier traffic, multiple lanes of travel, and long un-obstructed sight distances, the roadway speed of 45 mph was determined to be adequate.

C. Site Accessibility

Direct access to the site is anticipated to be good, due to the un-interrupted flows and access from W Nye Lane (via the existing private access driveway on the east side of the property) and Mountain Street on the west side of the property. Additionally, it is proposed that the existing street-side parking along the east side of Mountain Street is removed in favor of an appropriately striped and marked loading zone which prevents permanent parking. Both of these features will provide direct access and excellent accessibility into and out of the project. While not desired, some vehicles will undoubtedly drive through the medical office building and parking lot directly to the east of the parking lot in the rear of the property, as approximately 450 feet east of the subject parcel and directly through the property to the east is N. Carson Street.

D. Condition of Existing Roads

Based on a site visit some condition issues of existing pavement were identified based on a visual review (particularly at the intersection of W Nye Lane and Mountain Street). Overall, Mountain Street appeared to be in better condition than W Nye Lane. The Carson City Pavement Condition Map dated April 2022 was referenced, and Mountain Street is rated as either Satisfactory (71-85) or Fair (57-70). The portion of Mountain Street directly abutting the project location has been identified as being rated Satisfactory (71-85). W Nye Lane near the intersection of Mountain Street ranges between Poor (41-55) and Very Poor (26-40).

IV METHODOLOGY

Methodology used for this report is based on intersection Level of Service (LOS) analysis from the Highway Capacity Manual (HCM) 7th Edition (Published 2022 by the Transportation Research Board (TRB)). In summary, there are different Levels of Service which can be assigned to an intersection, and they are all based on the average delay (in seconds per vehicle). Levels of service assigned vary between signalized intersections and un-signalized intersections. Table 4 (following page) shows the average delay (in seconds per vehicle) and assigned Level of Service for un-signalized intersections. Table 5 (following page) shows the average delay (in seconds per vehicle) and assigned Level of Service for signalized intersections. Two way stop controls should be analyzed by individual movement, but four way stop controls, and signalized intersections should be analyzed in terms of

average vehicle delay of all movements. It should be noted that for this project, there are no signalized intersections in the study area, so the data in Table 5 is not applicable to this analysis.

Table 4 – Un-signalized Intersections – Assigned Level of Service (LOS) Based on Average Delay (Seconds/Vehicle)

Average Delay (Seconds/Vehicle)	Assigned Level of Service (LOS)
< 10	A
10 - 15	B
15 - 25	C
25 - 35	D
35 - 50	E
> 50	F

Table 5 – Signalized Intersections – Assigned Level of Service (LOS) Based on Averaged Delay (Seconds/Vehicle)

Average Delay (Seconds/Vehicle)	Assigned Level of Service (LOS)
< 10	A
10 - 20	B
20 - 35	C
35 - 55	D
55 - 80	E
> 80	F

Based on the above discussed LOS analysis provided by the Highway Capacity Manual (7th Edition), the existing road conditions were analyzed using HCS 2023 (MacTrans Highway Capacity Software) based on Highway Capacity Manual methodology to determine applicable Levels of Service to all current intersections for both 2023 current traffic volumes, as well as 2050 future traffic volumes (with the proposed project).

Please note that some assumptions were made in this traffic analysis. The assumptions made for this analysis are:

- Distribution of trips to and from the project site will be primarily based on observations and data obtained during Peak Hour Traffic Counts, published Pass-by Trip data, ease of access, and engineering judgement.
- Some vehicles will drop children off in the proposed loading zone on the east side of Mountain Street, make a U-Turn, and then head back southbound on Mountain Street (effectively not passing through the intersections analyzed in this report).

- Some vehicles heading southbound on N. Carson Street will drive through the Medical Building Parking Lot east of the project location (effectively not passing through the intersections analyzed in this report). Overall, this number is anticipated to be small.

These assumptions were made on engineering judgment based on review of nearby streets, access roads, proposed land use, traffic counts, review of available data and resources, site visits, and personal knowledge of these intersections.

V EXISTING TRAFFIC

A. Site Generated Traffic (2023)

Before trip assignment (number of trips for given traffic movements) can be determined, estimated trip distribution needs to be determined first. Trip distribution is the expected directions vehicles are to come from into and out of the proposed site. Trip distribution was based on traffic counts performed during the Weekday AM Peak Hour (7am to 9am) and Weekday PM Peak Hour (4pm to 6pm), as well as estimated pass-by trips. Based on a pass-by trip addendum provided by the ITE Trip Generation Manual, 11th Edition, pass-by trip percentages for ITE Land Use 565: Day Care Center are anticipated to be 44% Pass-by Trips, 32% Diverted Trips, and 24% Primary Trips. Based on this information, we can anticipate 76% of all vehicles to follow AM and PM Peak Hour Traffic Count volumes. Additionally for these 76% of trips, vehicles will be heading a certain direction (for example, southbound on N. Carson Street), drop their child off at the Boys and Girls Club and then continue the way they were traveling (for example, southbound N. Carson Street). For the 24% Primary or "New" Trips, we can anticipate vehicles to drive to the daycare, then drive back the way they came and will primarily be based on proximity to residential areas, similar facilities in the area, and likely paths of travel. For a visual overview of Trip Distribution, please see Attachment 2.

In order to determine site traffic (trip assignment), trip generation data was analyzed, determined, and assigned movement volumes based on observed trip distribution. For more information on estimated trips to be generated, refer to Section II. A. of this report. Trip assignment analysis was performed based on the assumptions stated in the previous section. Trip assignment for traffic from the proposed project can be seen in Attachment 3.

B. Baseline (Existing) Traffic (2023)

Traffic counts were performed in order to obtain existing weekday AM and PM Peak Hour traffic volumes for the intersections analyzed. Peak Hour Traffic Counts were performed during the Weekday AM Peak Hour (7am to 9am), Weekday PM Peak Hour (4pm to 6pm) on Wednesday, November 22, 2023. No adverse weather or site conditions were observed which may have altered traffic patterns for peak hour counts. The results of these Peak Hour traffic counts can be seen in Attachment 4. Based on discussions with Carson City Staff, it was determined that the obtained raw traffic counts should then be compared to historic NDOT TRINA traffic count data, as due to timing constraints of the study, Raw Traffic Counts were obtained just prior to Thanksgiving. Review of NDOT TRINA Data identified a Traffic Station Near the project location (TRINA Station 0250140) on Carson Street 540 feet north of Nye Lane. The most recent hourly traffic report for TRINA Station 0250140 was available for download

from the NDOT TRINA database and can be seen in Attachment 9. Review of the hourly traffic report for TRINA Station 0250140 was reviewed for average AM and PM Peak Hour Traffic Counts. During the AM Peak Hours an average Road Total of 1,122 vehicles was observed during the AM Peak Hour between the hours of 7am and 9am. Additionally, an average Road Total of 1,301 vehicles was observed during the PM Peak Hour between the hours of 4pm and 6pm. 2023 raw traffic counts revealed 865 vehicles passing through N Carson Street during the AM Peak Hour (7am to 9am) and 1,209 vehicles passing through N Carson Street during the PM Peak Hour (4pm to 6pm). This is a difference of 257 vehicles during the AM Peak Hour and 92 vehicles during the PM Peak Hour. Using this information, it was determined that the AM Peak Hour raw traffic count volumes should be increased by 29.711% (257 difference in vehicles from TRINA vs raw counts / 865 vehicles from raw counts = 0.29711) and the PM Peak Hour raw traffic count volumes should be increased by 7.6096% (92 difference in vehicles from TRINA vs raw counts / 1,209 vehicles from raw counts = 0.076096) to determine Adjusted Traffic Count Volumes which should be used as the Baseline Traffic Volumes. The results of the (Adjusted) 2023 Baseline Traffic Volumes can be seen in Attachment 4 as well.

C. Total Traffic (2023)

The total traffic for current (2023) conditions is simply the addition of the baseline existing traffic (Attachment 4) plus the anticipated site generated traffic (project trip assignment for Boys and Girls Club, Attachment 3).

Total Traffic (2023 Baseline Traffic plus Proposed Project) conditions can be seen in Attachment 5.

VI PROJECTED TRAFFIC (2050)

A. Site Generated Traffic (2050)

Trip distribution and trip generation for the proposed project (Boys and Girls Club) will remain constant. Therefore, the trip distribution figure seen in Attachment 2, and the trip assignment figure in Attachment 3 are still applicable to 2050 projected traffic to and from the project.

B. Future Traffic (2050)

Future traffic volumes should be projected based on a reputable cited source. Based on previous guidance from Carson City, the 2050 RTC Traffic Model should be used to project future traffic growth for the area.

The 2050 RTC Traffic Model was reviewed for sections of roadway analyzed in this report. The sections of roadway were analyzed, and the difference in average annual daily traffic (AADT) volumes between 2020 traffic volumes and projected 2050 future volumes were used to calculate a growth factor, which was then applied to the 2023 Weekday AM and PM Peak Hour traffic counts. An overview of the 2050 RTC Traffic Model, and anticipated growth factor can be seen on the following page Table 6. The 2050 baseline (future) traffic volumes for intersections analyzed can be seen in Attachment 6.

Table 6 – Calculated Growth Factors (Based on 2050 RTC Traffic Model)

Traffic Growth	Roadway				
	Mountain Street	W. Nye Lane (West of N Carson Street)*	N. Carson Street (North of W Nye Lane)	N. Carson Street (South of W Nye Lane)	W. Nye Lane (East of N Carson Street)
F2020 Daily Volume	2,312	2,312	17,650	18,662	3,168
F2050 Daily Volume	2,953	2,953	20,950	21,723	3,590
Difference (2050 vs 2020)	641	641	3,300	3,061	422
Total Growth Percentage	27.72%	27.72%	18.70%	16.40%	13.32%
Growth Percentage Per Year	0.92%	0.92%	0.62%	0.55%	0.44%
Total Growth Percentage Expected (from 2023 to 2050)	24.95%	24.95%	16.83%	14.76%	11.99%

*Data Not Available, Used Mountain Street Increase In Traffic

C. Total Traffic (2050)

The total traffic for future (2050) conditions is simply the addition of the future traffic (Attachment 6) plus the anticipated site generated traffic (project trip assignment for Boys and Girls Club, Attachment 3).

Total Future Traffic (2050 Future Traffic plus Project) conditions can be seen in Attachment 7.

VII IMPROVEMENT ANALYSIS

Based on the previously discussed LOS analysis discussed in Section IV. Methodology, both the existing (2023) road conditions with and without the proposed project and the future (2050) road conditions with and without the proposed project were analyzed using HCS 2023 (MacTrans Highway Capacity Software) based on Highway Capacity Manual 7th Edition methodology to determine applicable Levels of Service to the proposed intersections.

This Level of Service (LOS) analysis is the determining factor into which any improvements are required for any of these intersections. Results of HCS 2023 analysis are discussed in the following section: VIII. Findings.

VIII FINDINGS

A. Site Accessibility

Direct access to the site is anticipated to be good, due to the un-interrupted flows and access from W ye Lane (via the existing private access driveway on the east side of the property) and Mountain treet on the west side of the property. Additionally, it is proposed that the existing street-side parking long the east side of Mountain Street is removed in favor of an appropriately striped and marked ading zone which prevents permanent parking. Both of these features will provide direct access and xcellent accessibility into and out of the project. While not desired, some vehicles will undoubtedly rive through the medical office building and parking lot directly to the east of the parking lot in the rear

of the property, as approximately 450 feet east of the subject parcel and directly through the property to the east is N. Carson Street.

B. Traffic Impacts

Tables 7-10 (below and following page) show the average delay (in seconds per vehicle) and assigned Level of Service (LOS) for the intersections analyzed for both 2023 and 2050 scenarios with the proposed project (Boys and Girls Club).

Supporting HCS 2023 software printouts of which Tables 7-10 summarize can be seen in Attachment 8.

Table 7 – Summary of Delay and Corresponding Level of Service (LOS) for Intersections Analyzed for 2023 Baseline (Existing) Traffic

Year	Scenario	Intersection	Intersection Type	Approach Movement	AM Peak Hour		PM Peak Hour	
					Delay (s/veh)	LOS	Delay (s/veh)	LOS
2023	Baseline Traffic	1 - Mountain Street and W Nye Lane	Two-Way Stop Control (W Nye Lane is Free-Flowing)	Eastbound	0.0	A	0.0	A
				Westbound	3.7	A	7.3	A
				Northbound	8.7	A	8.5	A
				Southbound	9.5	A	10.2	B
		2 - Project Driveway and W Nye Lane	Two-Way Stop Control (W Nye Lane is Free-Flowing)	Eastbound	0.0	A	0.0	A
				Westbound	1.8	A	0.4	A
				Northbound	8.9	A	8.8	A
				Southbound	10.1	B	9.7	A
		3 - N Carson Street and W Nye Lane	Two-Way Stop Control (N Carson Street is Free-Flowing)	Eastbound	15.7	C	16.6	C
				Westbound	11.8	B	15.0	B
				Northbound	0.6	A	0.2	A
				Southbound	0.6	A	0.6	A

Table 8 – Summary of Delay and Corresponding Level of Service (LOS) for Intersections Analyzed for 2023 Baseline Traffic Plus Proposed Project (Boys and Girls Club)

Year	Scenario	Intersection	Intersection Type	Approach Movement	AM Peak Hour		PM Peak Hour	
					Delay (s/veh)	LOS	Delay (s/veh)	LOS
2023	Baseline Traffic Plus Proposed Project	1 - Mountain Street and W Nye Lane	Two-Way Stop Control (W Nye Lane is Free-Flowing)	Eastbound	0.0	A	0.0	A
				Westbound	4.1	A	7.3	A
				Northbound	8.7	A	8.5	A
				Southbound	9.7	A	10.5	B
		2 - Project Driveway and W Nye Lane	Two-Way Stop Control (W Nye Lane is Free-Flowing)	Eastbound	0.0	A	0.0	A
				Westbound	2.9	A	2.2	A
				Northbound	9.3	A	9.2	A
				Southbound	11.0	B	8.7	A
		3 - N Carson Street and W Nye Lane	Two-Way Stop Control (N Carson Street is Free-Flowing)	Eastbound	16.4	C	18.1	C
				Westbound	12.6	B	16.3	B
				Northbound	0.8	A	0.4	A
				Southbound	0.6	A	0.6	A

Table 9 – Summary of Delay and Corresponding Level of Service (LOS) for Intersections Analyzed for 2050 Future Traffic

Year	Scenario	Intersection	Intersection Type	Approach Movement	AM Peak Hour		PM Peak Hour	
					Delay (s/veh)	LOS	Delay (s/veh)	LOS
2050	Future Traffic	1 - Mountain Street and W Nye Lane	Two-Way Stop Control (W Nye Lane is Free-Flowing)	Eastbound	0.0	A	0.0	A
				Westbound	3.7	A	7.3	A
				Northbound	8.7	A	8.5	A
				Southbound	9.8	A	10.8	B
		2 - Project Driveway and W Nye Lane	Two-Way Stop Control (W Nye Lane is Free-Flowing)	Eastbound	0.0	A	0.0	A
				Westbound	1.8	A	0.4	A
				Northbound	9.0	A	8.9	A
				Southbound	10.7	B	10.1	B
		3 - N Carson Street and W Nye Lane	Two-Way Stop Control (N Carson Street is Free-Flowing)	Eastbound	18.9	C	21.1	C
				Westbound	12.7	B	17.1	B
				Northbound	0.7	A	0.2	A
				Southbound	0.6	A	0.7	A

Table 10 – Summary of Delay and Corresponding Level of Service (LOS) for Intersections Analyzed for 2050 Future Traffic Plus Proposed Project (Boys and Girls Club)

Year	Scenario	Intersection	Intersection Type	Approach Movement	AM Peak Hour		PM Peak Hour	
					Delay (s/veh)	LOS	Delay (s/veh)	LOS
2050	Future Traffic Plus Proposed Project	1 - Mountain Street and W Nye Lane	Two-Way Stop Control (W Nye Lane is Free-Flowing)	Eastbound	0.0	A	0.0	A
				Westbound	4.1	A	7.3	A
				Northbound	8.8	A	8.5	A
				Southbound	10.0	A	11.1	B
		2 - Project Driveway and W Nye Lane	Two-Way Stop Control (W Nye Lane is Free-Flowing)	Eastbound	0.0	A	0.0	A
				Westbound	2.8	A	2.0	A
				Northbound	9.5	A	9.3	A
				Southbound	11.6	B	11.0	B
		3 - N Carson Street and W Nye Lane	Two-Way Stop Control (N Carson Street is Free-Flowing)	Eastbound	20.2	C	23.9	C
				Westbound	13.8	B	19.0	C
				Northbound	0.8	A	0.4	A
				Southbound	0.6	A	0.6	A

Based on review of Level of Service (LOS) Analysis performed with HCS 2022 traffic software (Summarized in Tables 7-10 (pages 16-17) we can take away a few important findings. First, under every traffic scenario we can see that all intersections produce acceptable Levels of Service both under current 2023 and future 2050 traffic scenarios, both with and without the proposed project. Secondly, by comparing Table 7 to Table 8 and Table 9 to Table 10, we can see that the proposed project produces minimal increase increases in delay to all approaches, with the highest increase in delay of 2.8 seconds observed to the eastbound approach of W Nye Lane and N Carson Street in 2050.

All intersections and turning movements under both the current 2023 and future 2050 traffic scenarios received a LOS of C or better. This exceeds the LOS of D or better as recommended by The Highway

Capacity Manual, 7th Edition, and therefore exceeds what is considered acceptable LOS. Overall, we can consider the impact of this project on the surrounding roadway network to be minimal.

C. Need for Traffic / Roadway Improvements

Per review of HCS 2023 Analysis and traffic counts performed, as well as field observations, existing traffic seems to function well.

The only proposed change to the roadway network is the proposed recommendation to change street-side parking along the east side of Mountain Street into an appropriately striped and marked loading zone which prevents permanent parking

It is recommended that the street side parking along the west side of the project location (east side of Mountain Street) is designated, signed and striped as "NO PARKING. LOADING ZONE". A similarly striped loading zone can be found directly three parcels north of the project location on the south side of W. Nye Lane. Based on site visits performed on November 22, 2023 and November 28, 2023 during the peak hours, there is more than ample street parking along Mountain Street, and removing the parking and changing it to a loading zone is justified and feasible for the project's needs, without causing major impact to the surrounding neighborhood and its parking. No changes to points of access or driveway approaches to or from the proposed project are proposed as part of this project.
All existing intersections analyzed as part of this project are unsignalized intersections. No changes to existing intersections or their geometry are proposed as part of this project. No need for right-turn lanes on N Carson Street were identified at this time.

D. Site Specific Hazards / Considerations

The roadway in front of the site was reviewed to determine if there are any site-specific hazards or considerations regarding the proposed project access. Site visits were performed on Wednesday, November 22, 2023, to obtain Peak Hour traffic counts. During the site visit, a few observations were made.

All speed limits seem reasonable given the existing roadway geometry and sight distances (all roads were observed to have a roadway speed of 25 mph with the exception of N. Carson Street (observed to have a roadway speed of 45 mph).

While the approaches to N Carson Street from W Nye Lane are striped to perform as single-lane, all-direction approaches, in reality left turn and through traffic either crossing or turning onto N Carson Street typically was observed waiting in queue, while vehicles wishing to turn right onto N Carson Street had ample room to do so.

It was observed during peak hour traffic counts at the intersection on N Carson Street and W Nye Lane, there were multiple instances of vehicles turning left from W Nye Lane attempting to cross N Carson Street (from both directions) who would cross half the street, illegally park in the median, and wait for additional cars pass before making a full left turn. This is an extremely dangerous maneuver, particularly, and it blocks the visibility of drivers already on N Carson Street who desire to turn left. It was noticed that this maneuver was particularly performed by elderly drivers, who possibly don't have the reaction times or vision to adequately judge the speed and distance of oncoming vehicles. Left turn acceleration lanes from W. Nye Lane onto N Carson Street would help alleviate this dangerous

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aneuver. I would like to note that this is a pre-existing roadway hazard which will be further analyzed Section VII F. NDOT Access Management Systems and Standards.

addition to field observations, NDOT Crash Data (2016-2020) was reviewed for number and severity crashes at the project location (Figure 4, below). 31 Crashes have been identified in the vicinity of e project location: approximately 2/5ths of which are injury crashes, and the remaining 3/5ths are operty damage only crashes. Almost all crashes were observed at the intersection of W Nye Lane nd N Carson Street. This is not surprising as this intersection provides the greatest opportunity for ashes. The number of crashes overall seems average given the minor arterial classification. No ashes were observed in front of the project location along Mountain Street or the private driveway ong W Nye Lane.

igure 4 – NDOT Crash Data 2016-2020 at the project location. Accessed on 11/20/2023. The intersection of Mountain St and W Nye Ln is shown as a blue arrow. The ntersection of N Carson St and W Nye Ln is shown as a red arrow. The existing shared private driveway to the project location (Boys Girls Club) is shown as a green arrow.

. Review of Proposed Loading Zone on Mountain Street

is recommended that the street side parking along the west side of the project location (east side of lountain Street) is designated, signed and striped as "NO PARKING. LOADING ZONE" (Figure 5, age 21). A similarly striped loading zone can be found directly three parcels north of the project cation on the south side of W. Nye Lane (See Figures 6 and 7 on pages 21 and 22). Based on site sits performed on November 22, 2023 and November 28, 2023 during the peak hours, there is more an ample street parking along Mountain Street, and removing the parking and changing it to a loading one is justified for the project's needs. Any loading spaces should be striped appropriately. Based n parallel parking spot standards by Carson City, a parallel parking stall shall be 22ft long minimum Parking Lot Requirements Standard Detail C-5.5.1.2). If we go by Carson City parallel parking andards and compare it to the lot length of the parcel along Mountain Street of 110 feet, and if the

loading zone is striped into 22ft sections for individual vehicles, then there can be room for five vehicles to be parked at the same time. If the loading zone is not striped for individual 22ft sections, then a realistic number of four loading spots can be anticipated. Based on review of total trips anticipated as part of this project (46 entering during the AM Peak Hour and 41 entering in the PM Peak Hour), and the trip distribution in Attachment 2, we can assume 30% of incoming trips will utilize the loading zone on Mountain Street. This comes to 14 trips during the AM Peak Hour, and 12 trips during the PM Peak Hour. This is not a significant number of trips overall. Based on a site visit performed on November 22, 2023, there is more than ample street parking along Mountain Street (Figure 8 on page 23). Personal knowledge of this street, as well as review of review of historic Google Earth imagery confirms that on-street parking is minimal and if the five-space loading zone is ever full, neighboring street-side parking along Mountain Street can handle any overflow parking for child drop-offs and pickups. If the loading zone is determined to be an issue or concern, then the Boys and Girls Club may implement measures to prevent overcrowding on Mountain Street, such as limiting a drop-off time to 10 minutes, or scheduling and staggering drop-off times for attendees. Overall, the installation of a loading zone does not appear to be of great concern, and does not appear that it would negatively affect neighborhood parking as there is already a surplus of neighborhood parking.

In an effort to better address Carson City's concerns regarding the drop off schedule and avoiding a "rush" or peak demand where traffic is overflowing into the surrounding neighborhood, the Boys and Girls Club has provided our office with a proposed operations schedule for a typical weekday:

- Morning Staff Arrives prior to 7:00am
- Children / Students will have scheduled dropoff times between 7:00am and 10:00am
- Children / Student will have scheduled checkout and departure times between 3:00pm and 6:00pm
- Staff to Vacate Premises by 6:30pm

This schedule will reduce traffic demands during the AM and PM Peak Hours, additionally having scheduled drop-off and pickup times will avoid a "rush" for both staff members, and proposed loading zone facilities.

Figure 5 – Overview of Recommended Loading Zone on Mountain Street (yellow arrow). This loading zone can handle between four and five vehicles (depending on how it is striped). It is anticipated that vehicles within the loading zone will likely drop off or pickup their child, then either continue north and turn right onto W Nye Lane, or they will make a U-Turn and head back south on Mountain Street. Likely locations in which vehicles will make U-turns are the intersections of Mountain Street and Carroll Dr and Mountain Street and Weninger Dr (Blue Arrows). Given the overall light traffic observed along Mountain Street, this does not appear to be of primary concern at this time.

Figure 6 – Aerial Overview of Similar Loading Zone Along W Nye Lane to the North of the Project Location (noted with Red Arrow). Imagery obtained from Carson City MapGeo Software.

Figure 7 – Google Street View of Similar Loading Zone Along W Nye Lane to the North of the Project Location

Figure 8 – Photo of Street Parking taken November 22, 2023. Note that nearby office parking lots were observed to be full and traffic patterns appeared normal. Additionally, there are no nearby facilities such as schools, playgrounds, or event centers which identified the need for additional on-street parking in the area.

. NDOT Access Management System and Standards

As previously identified in Section VIII D Site Specific Hazards / Considerations, it was observed during peak hour traffic counts at the intersection on N Carson Street and W Nye Lane, there were multiple instances of vehicles turning left from W Nye Lane attempting to cross N. Carson Street (from both directions) who would cross half the street, illegally park in the median, and wait for additional cars pass before making a full left turn. This maneuver was determined to be very dangerous.

As part of the scope, our office will refer to the NDOT Access Management System and Standards (AMSS) to see if first, acceleration lanes are warranted, which may alleviate chances of this dangerous maneuver being performed. Secondly, we will determine any deviations from those standards which may be required if such acceleration lanes should be installed.

NDOT's "Access Management System and Standards, 2017 Edition (AMSS)" was reviewed for guidance.

Review of Chapter 4.4.3 of NDOT's AMSS identifies that "Acceleration lanes should be used on high speed (≥ 45 mph), high volume (≥ 10,000 vehicles per day, based on a 20-year forecast) roads, as determined by a traffic impact study or when entering vehicles do not have a sufficient gap to enter traffic safely, or as required by the Department". The roadway speed limit is greater than or equal to 45 mph, and current daily traffic is identified as 17,650 vehicles in 2020 per the RTC Traffic Model. Accordingly, based on NDOT standards (and confirmed by observing existing traffic), acceleration lanes are warranted for left turns off W Nye Lane onto N Carson Street. Right turn acceleration lanes were not observed as critical at this time based on field observations and plenty of observed gap between segments of oncoming vehicles.

It should be noted that the need for left turn acceleration lanes is a pre-existing issue, not caused by the proposed project. Additionally, if acceleration turn lanes onto northbound and southbound N Carson Street are to be installed, the proposed project does not contribute any traffic left turns onto southbound Carson Street (from eastbound W Nye Lane), and therefore should not be required to contribute any pro-rata share to that turning movement and lane modification.

Review of Table 4-26: Minimum Length of Left-Turn or Right-Turn Acceleration Lanes from NDOT's AMSS revealed that based on a design Speed of 45 mph for Level Grades (±2% or less), a length of 560 feet is required. Additionally, per the Table 4-26 Notes, "Taper length must be added to the acceleration lengths provided above. Taper length is to be provided as shown in Table 4-24". Table 4-24 identifies that for a 45 mph speed limit, a taper length of 15:1 is recommended. Based on an estimated 12ft lane width, this comes to 180 feet, for a total length of 740 feet.

Review of Google Earth Imagery identifies that while there appears to be plenty of median space (east to west across N Carson Street) to add a left turn acceleration lane; however, there is not nearly enough space for the recommended 740 feet of length per NDOT's AMSS. Only approximately 330 feet of space is available within the median of southbound N Carson Street, and 220 feet for northbound N Carson Street for dedication and installation of left turn-acceleration lanes. Accordingly, rather than giving vehicles false security and installing an acceleration lane much too short in length, it may be prudent to continue to have no left-turn acceleration lanes from W Nye Lane onto N Carson Street. Please refer to Figure 9 on the following page.

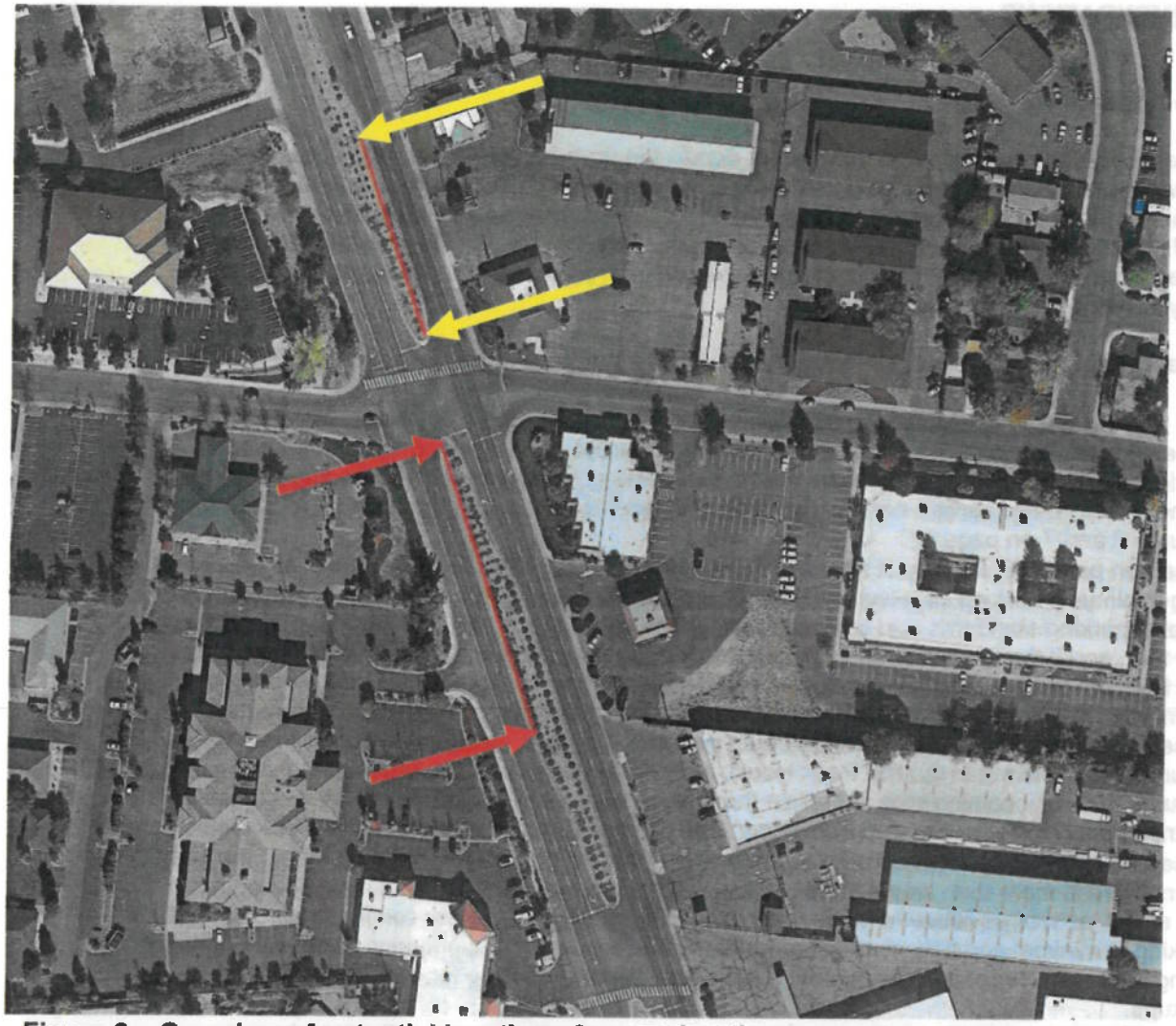


Figure 9 – Overview of potential locations for acceleration lanes onto northbound and southbound N Carson Street from W Nye Lane. The median south of W Nye Lane only has approximately 330 feet of space to install a left turn acceleration lane onto southbound N Carson Street (red arrows) and median north of W Nye Lane only has approximately 220 feet of space to install a left turn acceleration lane onto northbound N Carson Street (yellow arrows). Recommended length of acceleration lanes (if installed has been calculated to be 740 feet). Imagery from Google Earth Software.

IX RECOMMENDATIONS

A. Site Accessibility

Direct access to the site is anticipated to be good, due to the un-interrupted flows and access from W Nye Lane (via the existing private access driveway on the east side of the property) and Mountain Street on the west side of the property. It is proposed that the existing street-side parking along the east side of Mountain Street is removed in favor of an appropriately striped and marked loading zone which prevents permanent parking. Both of these features will provide direct access and excellent accessibility into and out of the project.

In order to accurately and concisely summarize the need for traffic / roadway improvements:

- The only proposed change to the roadway network is the proposed recommendation to change street-side parking along the east side of Mountain Street into an appropriately striped and marked loading zone which prevents permanent parking. A similarly striped loading zone can be found directly three parcels north of the project location on the south side of W. Nye Lane (See Figures 6 and 7 on page 22).
- Based on parallel parking spot standards by Carson City, a parallel parking stall shall be 22ft long minimum (Parking Lot Requirements Standard Detail C-5.5.1.2). If we go by Carson City parallel parking standards and compare it to the lot length of the parcel along Mountain Street of 110 feet, and if the loading zone is striped into 22ft sections for individual vehicles, then there can be room for five vehicles to be parked at the same time. If the loading zone is not striped for individual 22ft sections, then a realistic number of four loading spots can be anticipated. Based on review of total trips anticipated as part of this project (46 entering during the AM Peak Hour and 41 entering in the PM Peak Hour), and the trip distribution in Attachment 2, we can assume 30% of incoming trips will utilize the loading zone on Mountain Street. This comes to 14 trips during the weekday AM Peak Hour, and 12 trips during the weekday PM Peak Hour.
- Based on site visits performed on November 22, 2023 and November 28, 2023 during the peak hours there is more than ample street parking along Mountain Street. Personal knowledge of this street, as well as review of review of historic Google Earth imagery confirms that on-street parking is minimal and if the five-space loading zone is ever full, neighboring street-side parking along Mountain Street can temporarily handle any overflow parking for child drop-offs and pickups.
- In an effort to better address Carson City's concerns regarding the drop off schedule and avoiding a "rush" or peak demand where traffic is overflowing into the surrounding neighborhood, the Boys and Girls Club has provided our office with a proposed operations schedule for a typical weekday. This schedule will reduce traffic demands during the AM and PM Peak Hours, additionally having scheduled drop-off and pickup times will avoid a "rush" for both staff members, and proposed loading zone facilities.
- Based on NDOT AMSS standards (and confirmed by observing existing traffic), acceleration lanes are warranted for left turns off W Nye Lane onto N Carson Street. Right turn acceleration lanes were not observed as critical at this time based on field observations and plenty of observed gap between segments of oncoming vehicles.
- It should be noted that the need for left turn acceleration lanes is a pre-existing issue, not caused by the proposed project. Additionally, if acceleration turn lanes onto northbound and southbound N Carson Street are to be installed, the proposed project does not contribute any traffic left turns onto southbound Carson Street (from eastbound W Nye Lane), and therefore

should not be required to contribute any pro-rata share to that turning movement and lane modification.

- Review of Google Earth Imagery identifies that while there appears to be plenty of median space (east to west across N Carson Street) to add a left turn acceleration lane; however, there is not nearly enough space for the recommended 740 feet of length per NDOT's AMSS. Only approximately 330 feet of space is available within the median of southbound N Carson Street, and 220 feet for northbound N Carson Street for dedication and installation of left turn-acceleration lanes. **Accordingly, rather than giving vehicles false security and installing an acceleration lane much too short in length (since NDOT Access Management Systems and Standards cannot be met), it may be prudent to continue to have no left-turn acceleration lanes from W Nye Lane onto N Carson Street.** Refer to Figure 9 on page 25.
- There is no need for right-turn lanes at the two driveways located on N Carson Street at this time. The proposed project is not anticipated to generate any U-turns along N Carson Street.
- Any parking restriping or other improvements should be performed to Carson City standard details.

B. Traffic Impacts

Based on review of Level of Service (LOS) Analysis performed with HCS 2022 traffic software (Summarized in Tables 7-10 (pages 16-17) we can take away a few important findings. First, under every traffic scenario we can see that all intersections produce acceptable Levels of Service both under current 2023 and future 2050 traffic scenarios, both with and without the proposed project. Secondly, by comparing Table 7 to Table 8 and Table 9 to Table 10, we can see that the proposed project produces minimal increase increases in delay to all approaches, with the highest increase in delay of 2.8 seconds observed to the eastbound approach of W Nye Lane and N Carson Street by 2050.

All intersections and turning movements under both the current 2023 and future 2050 traffic scenarios received a LOS of C or better. This exceeds the LOS of D or better as recommended by The Highway Capacity Manual, 7th Edition, and therefore exceeds what is considered acceptable LOS. Overall, we can consider the impact of this project on the surrounding roadway network to be minimal.

ADDITIONAL NOTES

The recommendations presented in this report are based on best available data and reputable published data. Multiple assumptions are made and stated to come to the conclusions stated in this report. By nature, future traffic predictions are only predictions based on the best available data at the time.

Our conclusions and recommendations may be invalidated, by changes outside our control, such as changes to the local traffic network, new projects, or changes in land uses. This report may be subject to review and revision at any time. Opinions expressed in this report do not constitute a warranty of any kind, either express or implied.

REFERENCES

"Highway Capacity Manual: 7th Edition: A Guide For Multimodal Mobility Analysis". Washington, D.C.: Transportation Research Board, 2022.

"Trip Generation Manual: 11th Edition". Washington, D.C.: Institute of Transportation Engineers, September 2021.

"Access Management System and Standards, 2017 Edition". Carson City, NV: Nevada Department of Transportation, 2017.

"Carson City Pavement Condition Map". Online GIS Database, Carson City. Accessed on 11/21/2023.

"Roadway Functional Classification, Carson City North Urbanized, Carson City, Nevada". Carson City, NV: Nevada Department of Transportation, 2016.

LIST OF ATTACHMENTS

ATTACHMENT 1 – EXISTING / PROPOSED LANE GEOMETRY FOR INTERSECTIONS ANALYZED

ATTACHMENT 2 – TRIP DISTRIBUTION

ATTACHMENT 3 – TRIP ASSIGNMENT FOR PROJECT (BOYS AND GIRLS CLUB)

ATTACHMENT 4 – CURRENT 2023 BASELINE TRAFFIC (PEAK HOUR TRAFFIC COUNTS)

ATTACHMENT 5 – CURRENT 2023 BASELINE TRAFFIC PLUS PROPOSED PROJECT (BOYS AND GIRLS CLUB)

ATTACHMENT 6 – FUTURE 2050 BASELINE TRAFFIC

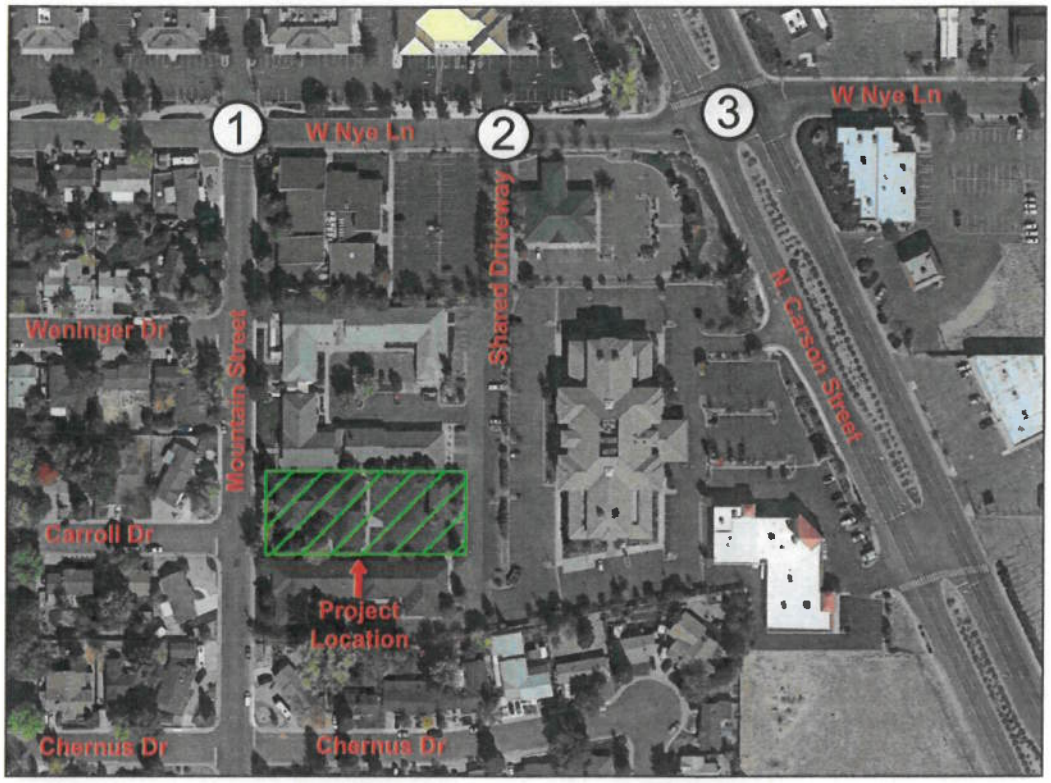
ATTACHMENT 7 – FUTURE 2050 BASELINE TRAFFIC PLUS PROPOSED PROJECT (BOYS AND GIRLS CLUB)

ATTACHMENT 8 – HCS 2023 TRAFFIC SOFTWARE ANALYSIS

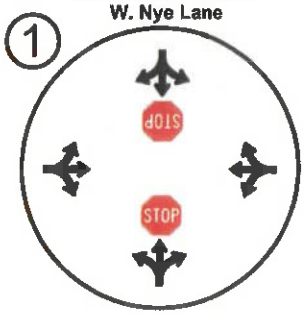
ATTACHMENT 9 – NDOT HOURLY TRAFFIC VOLUME REPORT FOR TRINA STATION 0250140

ATTACHMENT 1 – EXISTING / PROPOSED LANE GEOMETRY FOR INTERSECTIONS ANALYZED

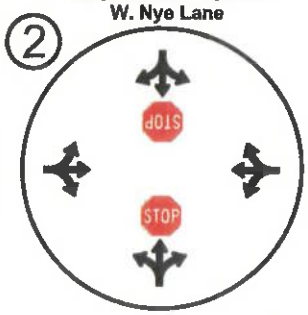
Existing Lane Geometry for Intersections Analyzed



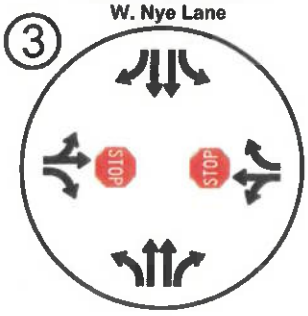
Mountain Street and W. Nye Lane



Project Driveway and W. Nye Lane



N. Carson Street and W. Nye Lane



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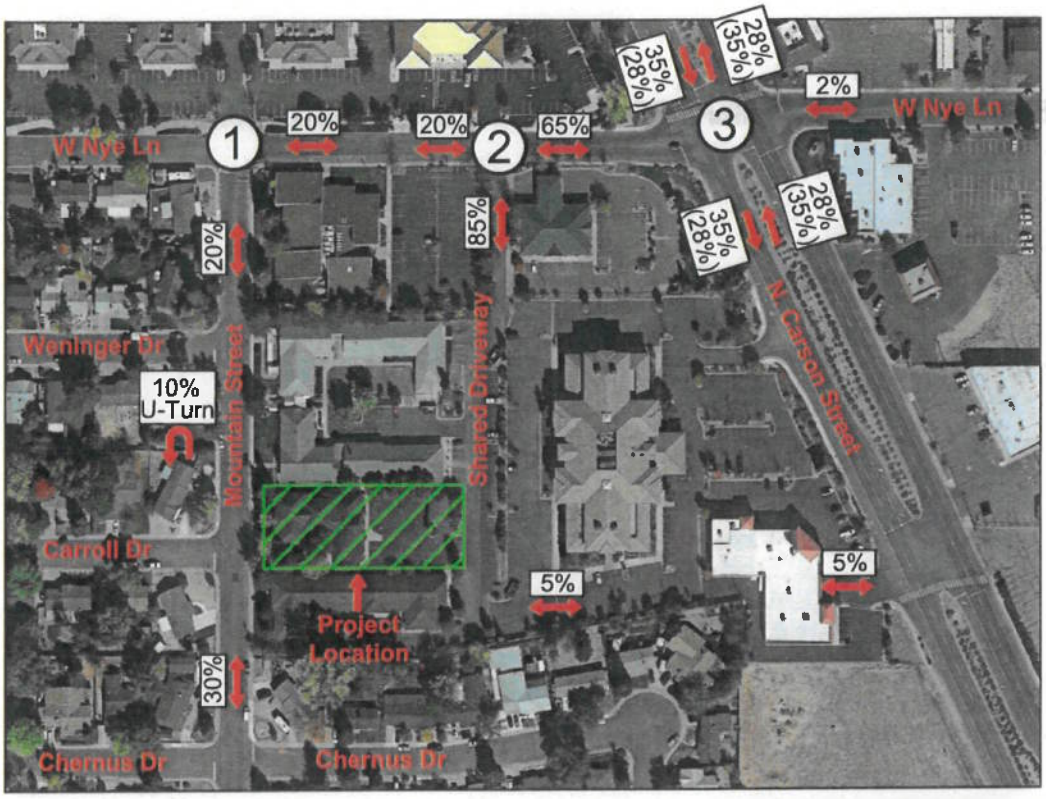
NO SCALE

* Aerial Imagery Obtained from Google Earth

ATTACHMENT 2 – TRIP DISTRIBUTION

Project Trip Distribution (2023)



% AM TRIP DISTRIBUTION
(%) PM TRIP DISTRIBUTION

NOTE: **PM TRIP DISTRIBUTION ONLY SHOWN IF ANTICIPATED TO BE DIFFERENT THAN AM TRIP DISTRIBUTION**

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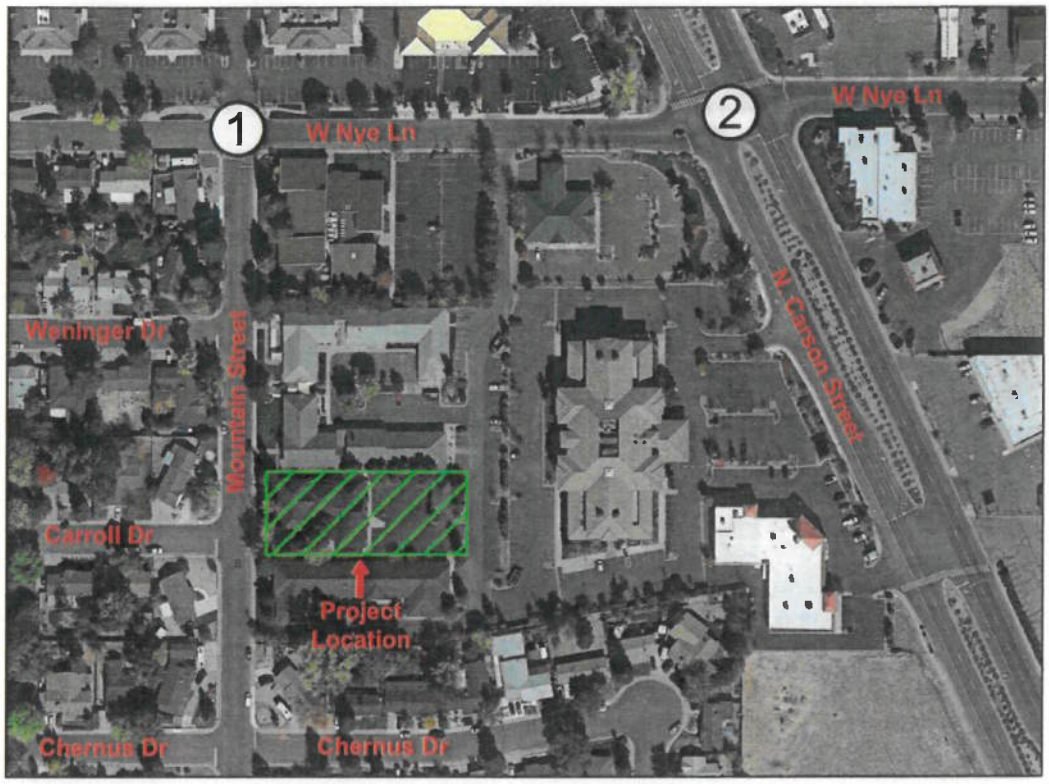
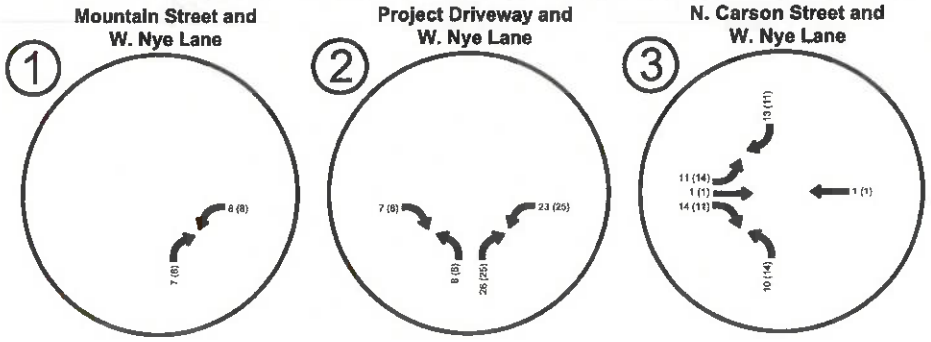
NO SCALE

** Aerial Imagery Obtained from Google Earth*

ATTACHMENT 3 – TRIP ASSIGNMENT FOR PROJECT (BOYS AND GIRLS CLUB)

Trip Assignment for Proposed Project





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NO SCALE

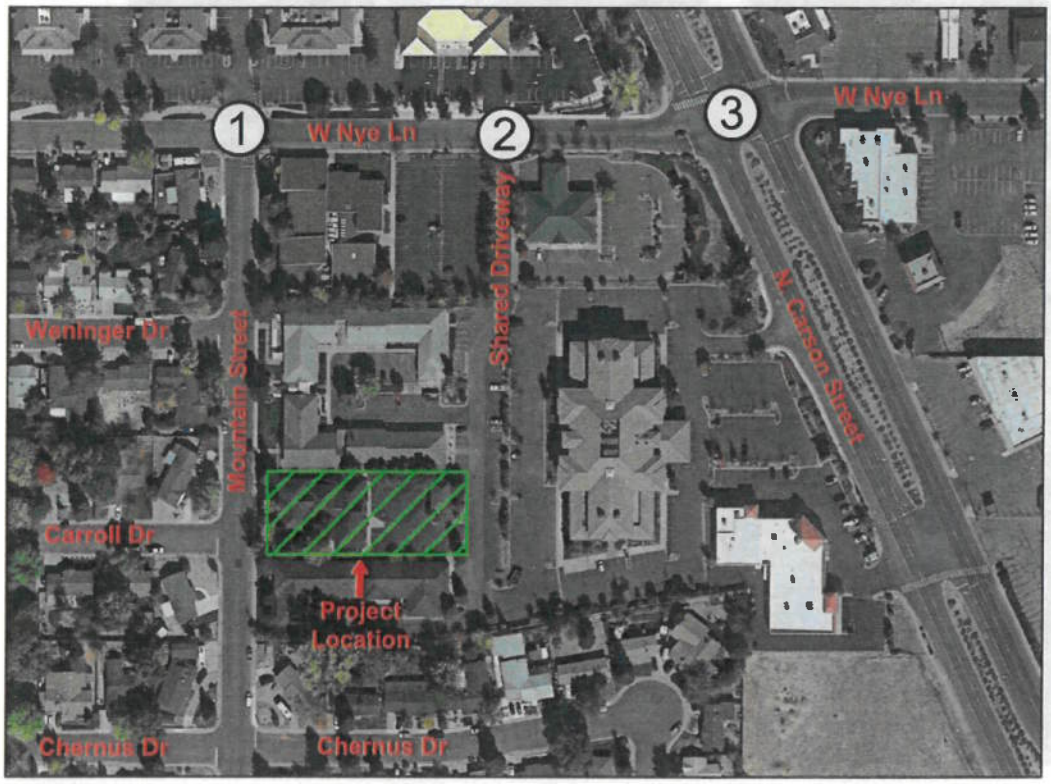
\# AM PEAK HOUR VOLUME
(#) PM PEAK HOUR VOLUME

N

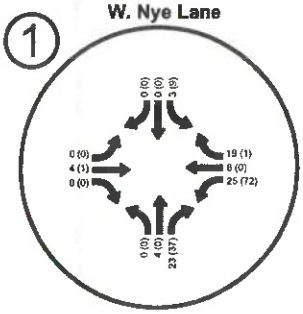
*Aerial Imagery Obtained from Google Earth

ATTACHMENT 4 – CURRENT 2023 BASELINE TRAFFIC (PEAK HOUR TRAFFIC COUNTS)

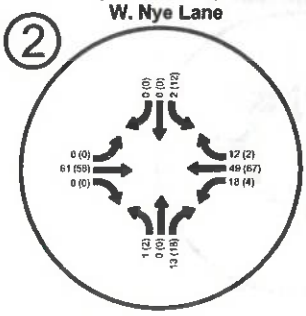
Current (2023) Raw Traffic Counts



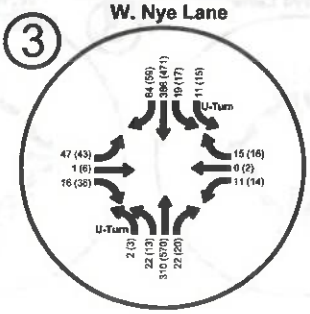
Mountain Street and W. Nye Lane



Project Driveway and W. Nye Lane



N. Carson Street and W. Nye Lane



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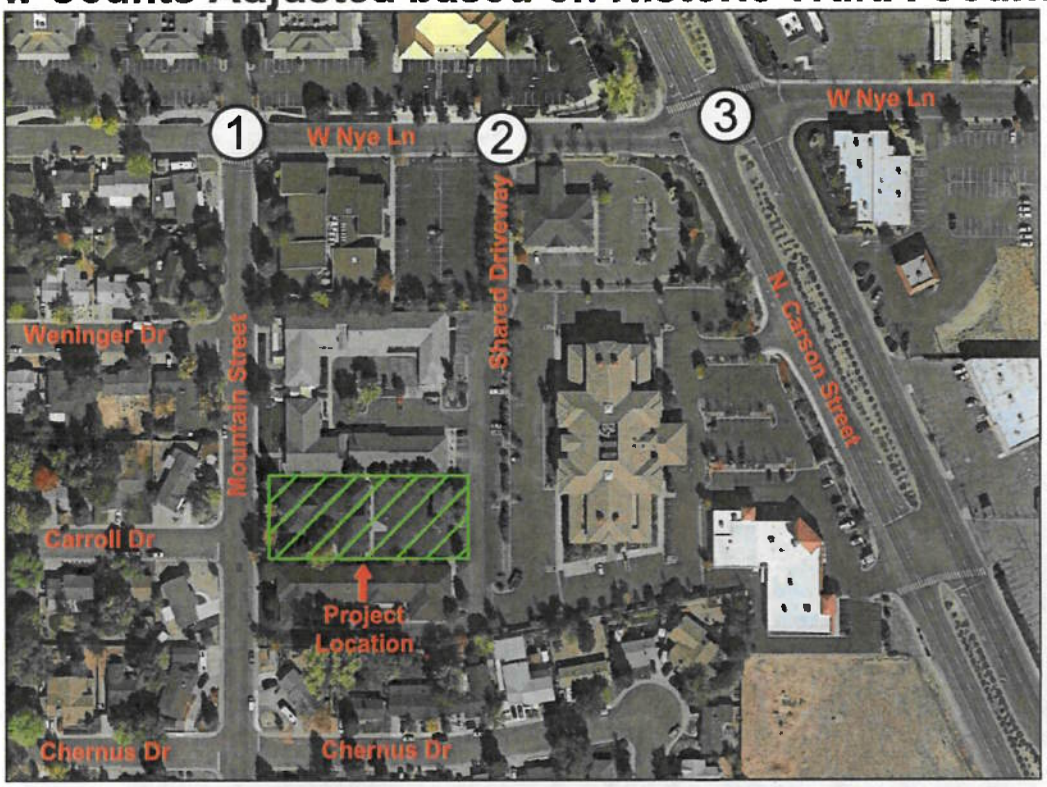
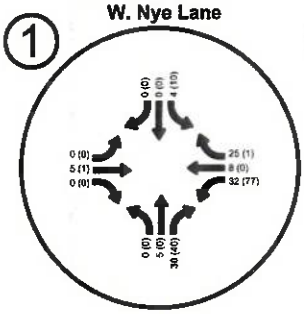
\# AM PEAK HOUR VOLUME
(#) PM PEAK HOUR VOLUME

** Aerial Imagery Obtained from Google Earth*

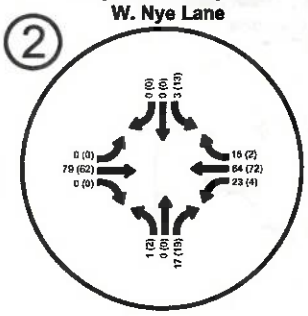
Current (2023) Baseline Traffic
(Raw Counts Adjusted based on Historic TRINA Counts)



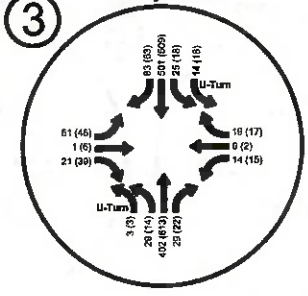
Mountain Street and W. Nye Lane



Project Driveway and W. Nye Lane



N. Carson Street and W. Nye Lane



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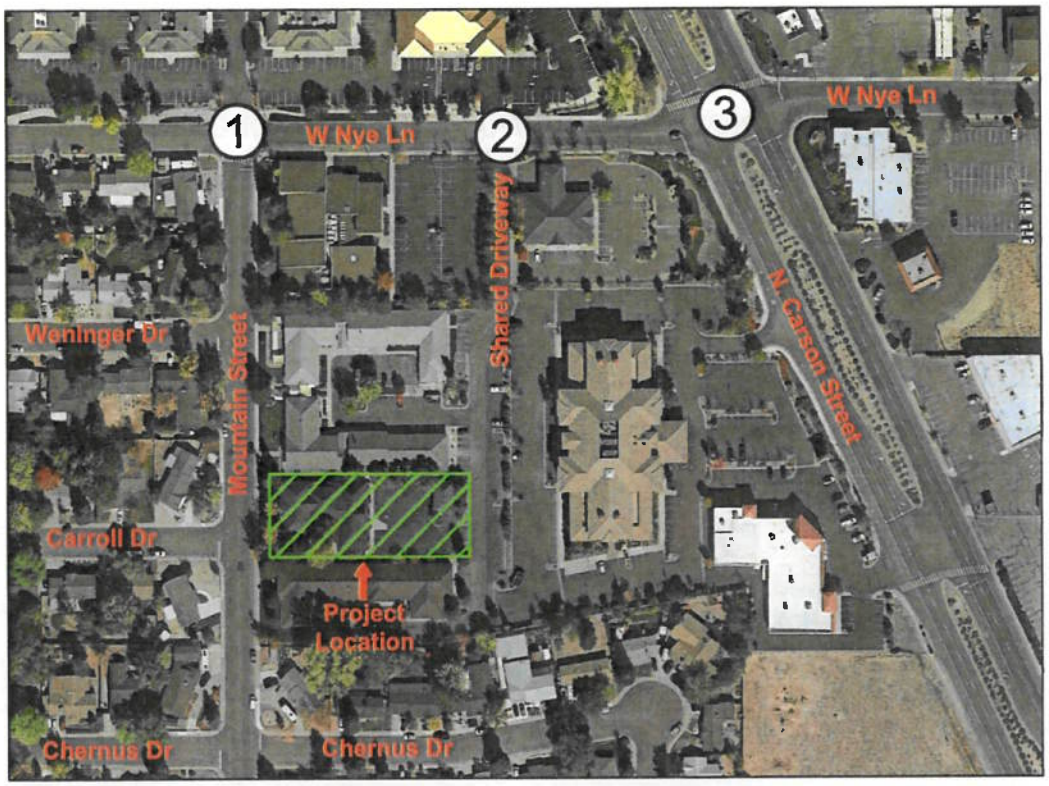
NO SCALE

AM PEAK HOUR VOLUME
(#) PM PEAK HOUR VOLUME

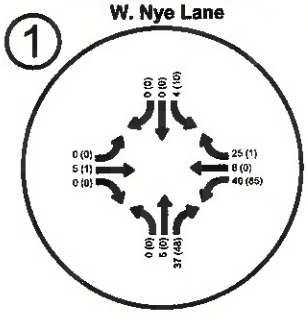
* Aerial Imagery Obtained from Google Earth

ATTACHMENT 5 – CURRENT 2023 BASELINE TRAFFIC PLUS PROPOSED PROJECT (BOYS AND GIRLS CLUB)

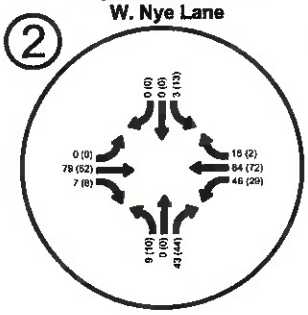
Current (2023) Baseline Traffic Plus Proposed Project



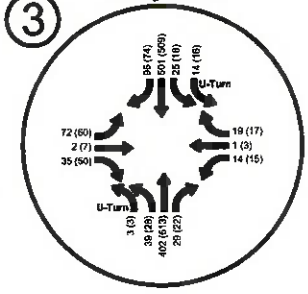
Mountain Street and W. Nye Lane



Project Driveway and W. Nye Lane



N. Carson Street and W. Nye Lane



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NO SCALE

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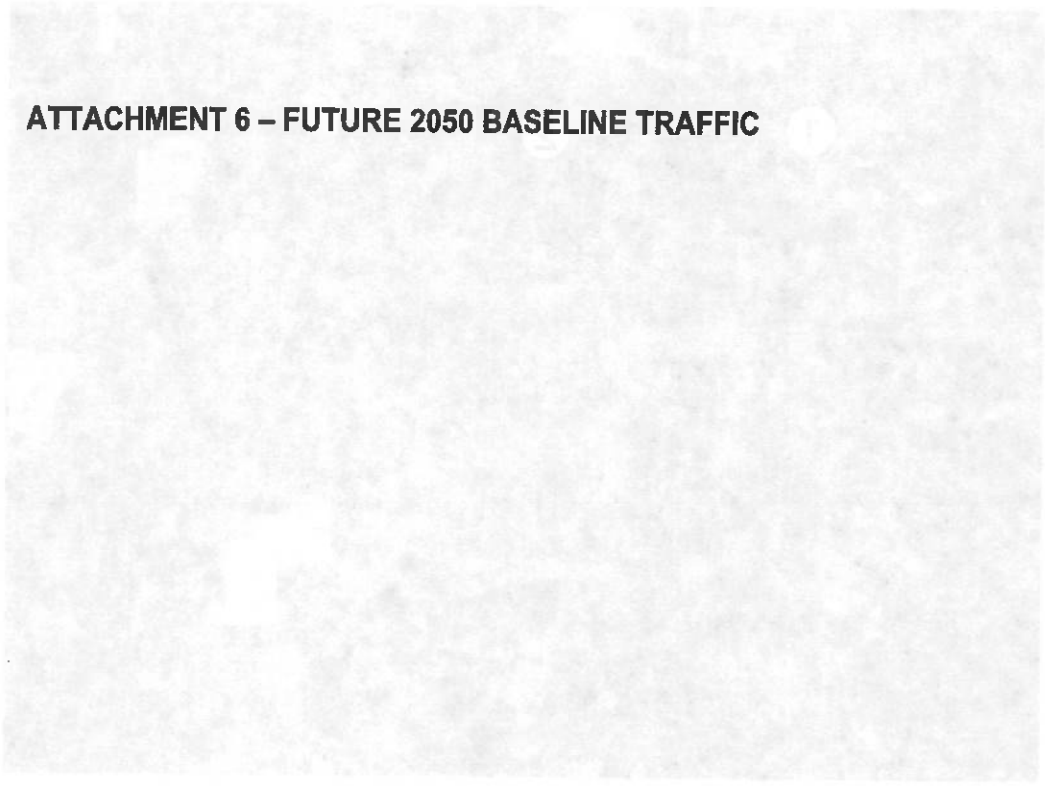
(#) PM PEAK HOUR VOLUME

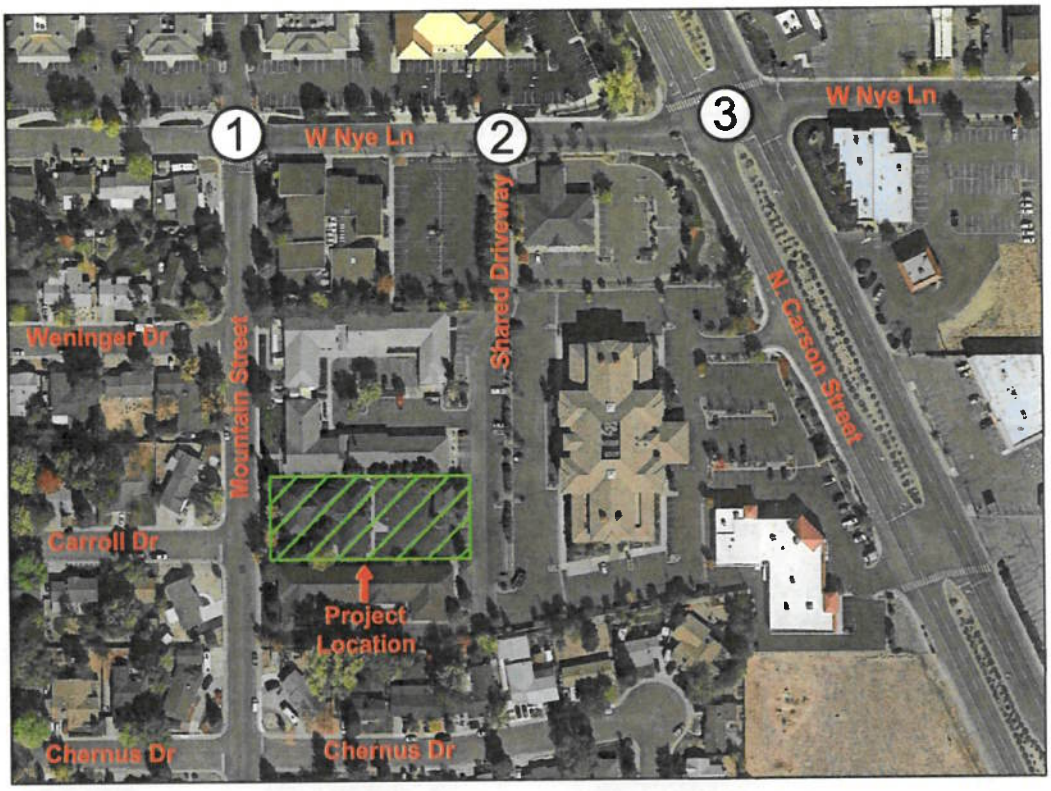
N

* Aerial Imagery Obtained from Google Earth

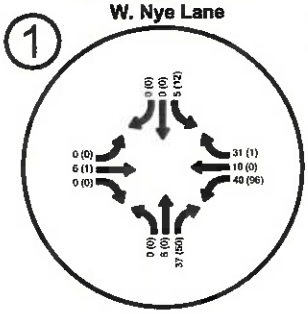
ATTACHMENT 6 – FUTURE 2050 BASELINE TRAFFIC



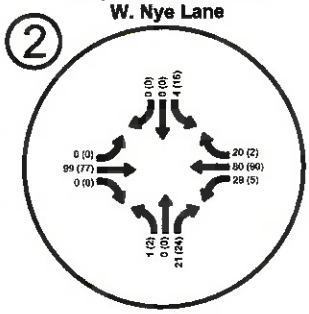
Future (2050) Baseline Traffic



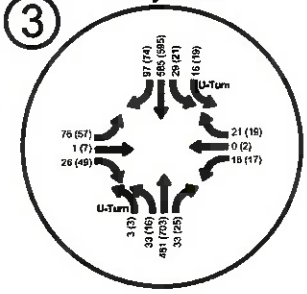
Mountain Street and W. Nye Lane



Project Driveway and W. Nye Lane



N. Carson Street and W. Nye Lane



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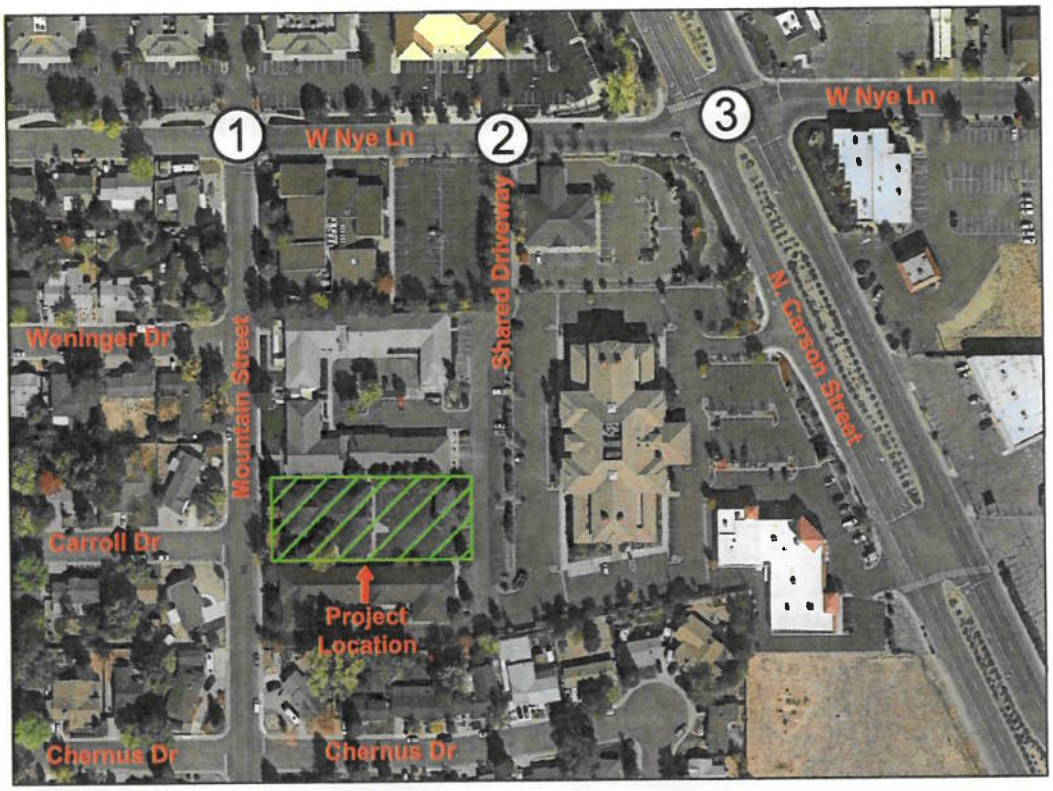
NO SCALE

\# AM PEAK HOUR VOLUME
(#) PM PEAK HOUR VOLUME

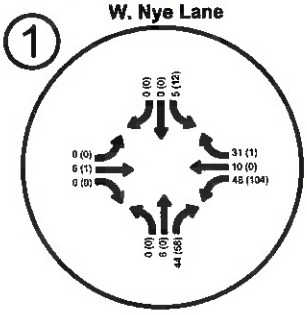
* Aerial Imagery Obtained from Google Earth

ATTACHMENT 7 – FUTURE 2050 BASELINE TRAFFIC PLUS PROPOSED PROJECT (BOYS AND GIRLS CLUB)

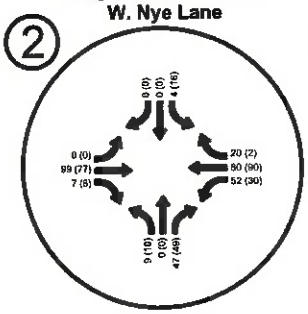
Future (2050) Baseline Traffic Plus Proposed Project



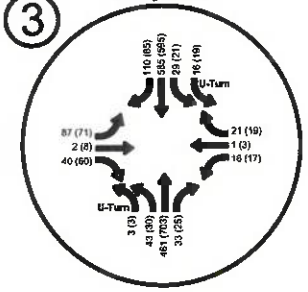
Mountain Street and W. Nye Lane



Project Driveway and W. Nye Lane



N. Carson Street and W. Nye Lane



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NO SCALE

\# AM PEAK HOUR VOLUME
(#) PM PEAK HOUR VOLUME

* Aerial Imagery Obtained from Google Earth

ATTACHMENT 8 – HCS 2023 TRAFFIC SOFTWARE ANALYSIS

HCS Two-Way Stop-Control Report

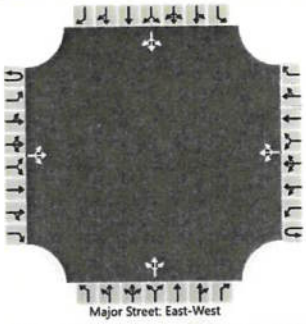
General Information

Analyst	Christopher Moltz, P.E.
Agency/Co.	Heartfelt Engineering
Date Performed	11/27/2023
Analysis Year	2023
Time Analyzed	AM Peak Hour
Intersection Orientation	East-West
Project Description	2023 AM - Baseline

Site Information

Intersection	1 - Mountain St / Nye Ln
Jurisdiction	Carson City
East/West Street	W Nye Lane
North/South Street	Mountain St
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	5	0		32	8	25		0	5	30		4	0	0
Percent Heavy Vehicles (%)		3				3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.13				4.13				7.13	6.53	6.23		7.13	6.53	6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				35					38				4	
Capacity, c (veh/h)		1569				1609					1015				808	
v/c Ratio		0.00				0.02					0.04				0.01	
95% Queue Length, Q_{95} (veh)		0.0				0.1					0.1				0.0	
Control Delay (s/veh)		7.3	0.0	0.0		7.3	0.2	0.2			8.7				9.5	
Level of Service (LOS)		A	A	A		A	A	A			A				A	
Approach Delay (s/veh)	0.0				3.7				8.7				9.5			
Approach LOS	A				A				A				A			

HCS Two-Way Stop-Control Report

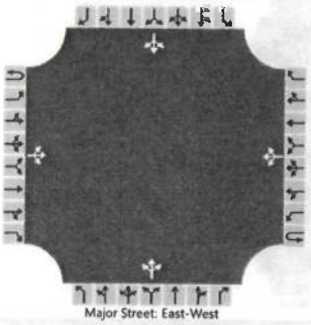
General Information

Analyst	Christopher Moltz, P.E.
Agency/Co.	Heartfelt Engineering
Date Performed	11/27/2023
Analysis Year	2023
Time Analyzed	PM Peak Hour
Intersection Orientation	East-West
Project Description	2023 PM - Baseline

Site Information

Intersection	1 - Mountain St / Nye Ln
Jurisdiction	Carson City
East/West Street	W Nye Lane
North/South Street	Mountain St
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	1	0		77	0	1		0	0	40		10	0	0
Percent Heavy Vehicles (%)		3				3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.13				4.13				7.13	6.53	6.23		7.13	6.53	6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				84					43				11	
Capacity, c (veh/h)		1615				1615					1081				698	
v/c Ratio		0.00				0.05					0.04				0.02	
95% Queue Length, Q_{95} (veh)		0.0				0.2					0.1				0.0	
Control Delay (s/veh)		7.2	0.0	0.0		7.4	0.4	0.4			8.5				10.2	
Level of Service (LOS)		A	A	A		A	A	A			A				B	
Approach Delay (s/veh)	0.0				7.3				8.5				10.2			
Approach LOS	A				A				A				B			

HCS Two-Way Stop-Control Report

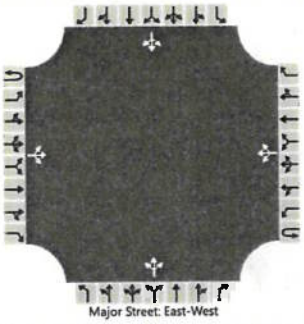
General Information

Analyst	Christopher Moltz, P.E.
Agency/Co.	Heartfelt Engineering
Date Performed	11/27/2023
Analysis Year	2023
Time Analyzed	AM Peak Hour
Intersection Orientation	East-West
Project Description	2023 AM - Baseline

Site Information

Intersection	2 - Project Driveway / Nye Ln
Jurisdiction	Carson City
East/West Street	W Nye Lane
North/South Street	Project Driveway
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	79	0		23	64	16		1	0	17		3	0	0
Percent Heavy Vehicles (%)		3				3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.13				4.13				7.13	6.53	6.23		7.13	6.53	6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				25					20				3	
Capacity, c (veh/h)		1503				1504					952				704	
v/c Ratio		0.00				0.02					0.02				0.00	
95% Queue Length, Q_{95} (veh)		0.0				0.1					0.1				0.0	
Control Delay (s/veh)		7.4	0.0	0.0		7.4	0.1	0.1			8.9				10.1	
Level of Service (LOS)		A	A	A		A	A	A			A				B	
Approach Delay (s/veh)	0.0				1.8				8.9				10.1			
Approach LOS	A				A				A				B			

HCS Two-Way Stop-Control Report

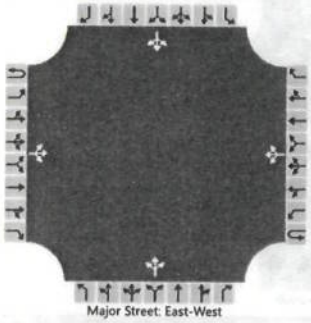
General Information

Analyst	Christopher Moltz, P.E.
Agency/Co.	Heartfelt Engineering
Date Performed	11/27/2023
Analysis Year	2023
Time Analyzed	PM Peak Hour
Intersection Orientation	East-West
Project Description	2023 PM - Baseline

Site Information

Intersection	2 - Project Driveway / Nye Ln
Jurisdiction	Carson City
East/West Street	W Nye Lane
North/South Street	Project Driveway
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	62	0		4	72	2		2	0	19		13	0	0
Percent Heavy Vehicles (%)		3				3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.13				4.13				7.13	6.53	6.23		7.13	6.53	6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				4					23				14	
Capacity, c (veh/h)		1511				1528					972				777	
v/c Ratio		0.00				0.00					0.02				0.02	
95% Queue Length, Q_{95} (veh)		0.0				0.0					0.1				0.1	
Control Delay (s/veh)		7.4	0.0	0.0		7.4	0.0	0.0			8.8				9.7	
Level of Service (LOS)		A	A	A		A	A	A			A				A	
Approach Delay (s/veh)	0.0				0.4				8.8				9.7			
Approach LOS	A				A				A				A			

HCS Two-Way Stop-Control Report

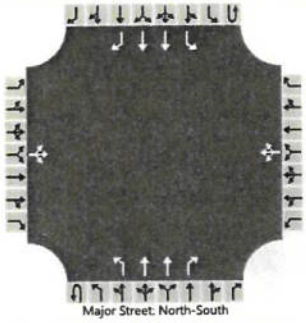
General Information

Analyst	Christopher Moltz, P.E.
Agency/Co.	Heartfelt Engineering
Date Performed	11/27/2023
Analysis Year	2023
Time Analyzed	AM Peak Hour
Intersection Orientation	North-South
Project Description	2023 AM - Baseline

Site Information

Intersection	3 - N Carson St / Nye Ln
Jurisdiction	Carson City
East/West Street	W Nye Lane
North/South Street	N Carson St
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	1	2	1	0	1	2	1
Configuration			LTR				LTR			L	T	R		L	T	R
Volume (veh/h)		61	1	21		14	0	19	3	29	402	29	14	25	501	83
Percent Heavy Vehicles (%)		3	3	3		3	3	3	3	3			3	3		
Proportion Time Blocked																
Percent Grade (%)		0				0										
Right Turn Channelized										No				No		
Median Type | Storage		Left Only								3						

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5	6.5	6.9		7.5	6.5	6.9	6.4	4.1			6.4	4.1		
Critical Headway (sec)		7.56	6.56	6.96		7.56	6.56	6.96	6.46	4.16			6.46	4.16		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3	2.5	2.2			2.5	2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33	2.53	2.23			2.53	2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			90				36			35				42		
Capacity, c (veh/h)			428				567			895				925		
v/c Ratio			0.21				0.06			0.04				0.05		
95% Queue Length, Q_{95} (veh)			0.8				0.2			0.1				0.1		
Control Delay (s/veh)			15.7				11.8			9.2				9.1		
Level of Service (LOS)			C				B			A				A		
Approach Delay (s/veh)		15.7				11.8				0.6				0.6		
Approach LOS		C				B				A				A		

HCS Two-Way Stop-Control Report

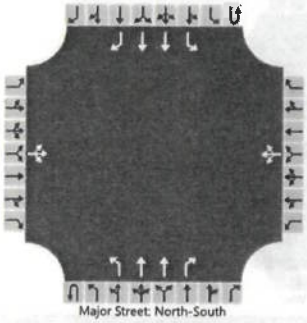
General Information

Analyst	Christopher Moltz, P.E.
Agency/Co.	Heartfelt Engineering
Date Performed	11/27/2023
Analysis Year	2023
Time Analyzed	PM Peak Hour
Intersection Orientation	North-South
Project Description	2023 PM - Baseline

Site Information

Intersection	3 - N Carson St / Nye Ln
Jurisdiction	Carson City
East/West Street	W Nye Lane
North/South Street	N Carson St
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	1	2	1	0	1	2	1
Configuration			LTR				LTR			L	T	R		L	T	R
Volume (veh/h)		46	6	39		15	2	17	3	14	613	22	16	18	509	63
Percent Heavy Vehicles (%)		3	3	3		3	3	3	3	3			3	3		
Proportion Time Blocked																
Percent Grade (%)		0				0										
Right Turn Channelized										No				No		
Median Type | Storage		Left Only								3						

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5	6.5	6.9		7.5	6.5	6.9	6.4	4.1			6.4	4.1		
Critical Headway (sec)		7.56	6.56	6.96		7.56	6.56	6.96	6.46	4.16			6.46	4.16		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3	2.5	2.2			2.5	2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33	2.53	2.23			2.53	2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			99				37			18				37		
Capacity, c (veh/h)			408				397			860				671		
v/c Ratio			0.24				0.09			0.02				0.06		
95% Queue Length, Q_{95} (veh)			0.9				0.3			0.1				0.2		
Control Delay (s/veh)			16.6				15.0			9.3				10.7		
Level of Service (LOS)			C				B			A				B		
Approach Delay (s/veh)		16.6				15.0				0.2				0.6		
Approach LOS		C				B				A				A		

HCS Two-Way Stop-Control Report

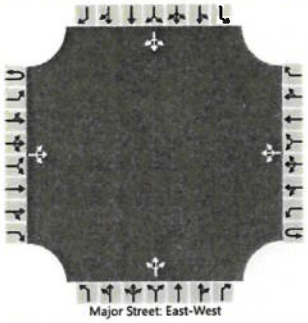
General Information

Analyst	Christopher Moltz, P.E.
Agency/Co.	Heartfelt Engineering
Date Performed	11/27/2023
Analysis Year	2023
Time Analyzed	AM Peak Hour
Intersection Orientation	East-West
Project Description	2023 AM - Plus Project

Site Information

Intersection	1 - Mountain St / Nye Ln
Jurisdiction	Carson City
East/West Street	W Nye Lane
North/South Street	Mountain St
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	5	0		40	8	25		0	5	37		4	0	0
Percent Heavy Vehicles (%)		3				3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.13				4.13				7.13	6.53	6.23		7.13	6.53	6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				43					46				4	
Capacity, c (veh/h)		1569				1609					1020				772	
v/c Ratio		0.00				0.03					0.04				0.01	
95% Queue Length, Q_{95} (veh)		0.0				0.1					0.1				0.0	
Control Delay (s/veh)		7.3	0.0	0.0		7.3	0.2	0.2			8.7				9.7	
Level of Service (LOS)		A	A	A		A	A	A			A				A	
Approach Delay (s/veh)	0.0				4.1				8.7				9.7			
Approach LOS	A				A				A				A			

HCS Two-Way Stop-Control Report

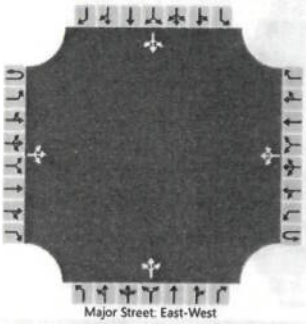
General Information

Analyst	Christopher Moltz, P.E.
Agency/Co.	Heartfelt Engineering
Date Performed	11/27/2023
Analysis Year	2023
Time Analyzed	PM Peak Hour
Intersection Orientation	East-West
Project Description	2023 PM - Plus Project

Site Information

Intersection	1 - Mountain St / Nye Ln
Jurisdiction	Carson City
East/West Street	W Nye Lane
North/South Street	Mountain St
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	1	0		85	0	1		0	0	48		10	0	0
Percent Heavy Vehicles (%)		3				3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.13				4.13				7.13	6.53	6.23		7.13	6.53	6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				92					52				11	
Capacity, c (veh/h)		1615				1615					1081				666	
v/c Ratio		0.00				0.06					0.05				0.02	
95% Queue Length, Q_{95} (veh)		0.0				0.2					0.2				0.0	
Control Delay (s/veh)		7.2	0.0	0.0		7.4	0.4	0.4			8.5				10.5	
Level of Service (LOS)		A	A	A		A	A	A			A				B	
Approach Delay (s/veh)	0.0				7.3				8.5				10.5			
Approach LOS	A				A				A				B			

HCS Two-Way Stop-Control Report

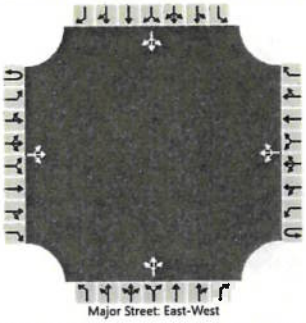
General Information

Analyst	Christopher Moltz, P.E.
Agency/Co.	Heartfelt Engineering
Date Performed	11/27/2023
Analysis Year	2023
Time Analyzed	AM Peak Hour
Intersection Orientation	East-West
Project Description	2023 AM - Plus Project

Site Information

Intersection	2 - Project Driveway / Nye Ln
Jurisdiction	Carson City
East/West Street	W Nye Lane
North/South Street	Project Driveway
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	79	7		46	64	16		9	0	43		3	0	0
Percent Heavy Vehicles (%)		3				3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.13				4.13				7.13	6.53	6.23		7.13	6.53	6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				50					57				3	
Capacity, c (veh/h)		1503				1495					893				605	
v/c Ratio		0.00				0.03					0.06				0.01	
95% Queue Length, Q_{95} (veh)		0.0				0.1					0.2				0.0	
Control Delay (s/veh)		7.4	0.0	0.0		7.5	0.3	0.3			9.3				11.0	
Level of Service (LOS)		A	A	A		A	A	A			A				B	
Approach Delay (s/veh)	0.0				2.9				9.3				11.0			
Approach LOS	A				A				A				B			

HCS Two-Way Stop-Control Report

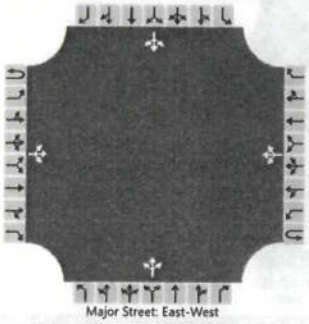
General Information

Analyst	Christopher Moltz, P.E.
Agency/Co.	Heartfelt Engineering
Date Performed	11/27/2023
Analysis Year	2023
Time Analyzed	PM Peak Hour
Intersection Orientation	East-West
Project Description	2023 PM - Plus Project

Site Information

Intersection	2 - Project Driveway / Nye Ln
Jurisdiction	Carson City
East/West Street	W Nye Lane
North/South Street	Project Driveway
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	62	8		29	72	2		10	0	44		0	0	13
Percent Heavy Vehicles (%)		3				3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.13				4.13				7.13	6.53	6.23		7.13	6.53	6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				32					59				14	
Capacity, c (veh/h)		1511				1517					920				978	
v/c Ratio		0.00				0.02					0.06				0.01	
95% Queue Length, Q_{95} (veh)		0.0				0.1					0.2				0.0	
Control Delay (s/veh)		7.4	0.0	0.0		7.4	0.2	0.2			9.2				8.7	
Level of Service (LOS)		A	A	A		A	A	A			A				A	
Approach Delay (s/veh)	0.0				2.2				9.2				8.7			
Approach LOS	A				A				A				A			

HCS Two-Way Stop-Control Report

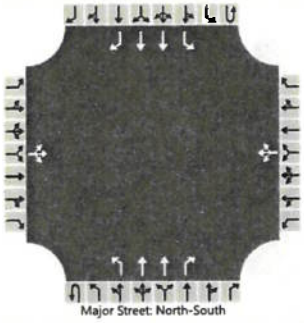
General Information

Analyst	Christopher Moltz, P.E.
Agency/Co.	Heartfelt Engineering
Date Performed	11/27/2023
Analysis Year	2023
Time Analyzed	AM Peak Hour
Intersection Orientation	North-South
Project Description	2023 AM - Plus Project

Site Information

Intersection	3 - N Carson St / Nye Ln
Jurisdiction	Carson City
East/West Street	W Nye Lane
North/South Street	N Carson St
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	1	2	1	0	1	2	1
Configuration			LTR				LTR			L	T	R		L	T	R
Volume (veh/h)		72	2	35		14	1	19	3	39	402	29	14	25	501	96
Percent Heavy Vehicles (%)		3	3	3		3	3	3	3	3			3	3		
Proportion Time Blocked																
Percent Grade (%)		0				0										
Right Turn Channelized										No				No		
Median Type | Storage		Left Only								3						

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5	6.5	6.9		7.5	6.5	6.9	6.4	4.1			6.4	4.1		
Critical Headway (sec)		7.56	6.56	6.96		7.56	6.56	6.96	6.46	4.16			6.46	4.16		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3	2.5	2.2			2.5	2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33	2.53	2.23			2.53	2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			118				37			46				42		
Capacity, c (veh/h)			434				509			893				925		
v/c Ratio			0.27				0.07			0.05				0.05		
95% Queue Length, Q_{95} (veh)			1.1				0.2			0.2				0.1		
Control Delay (s/veh)			16.4				12.6			9.2				9.1		
Level of Service (LOS)			C				B			A				A		
Approach Delay (s/veh)		16.4				12.6				0.8				0.6		
Approach LOS		C				B				A				A		

HCS Two-Way Stop-Control Report

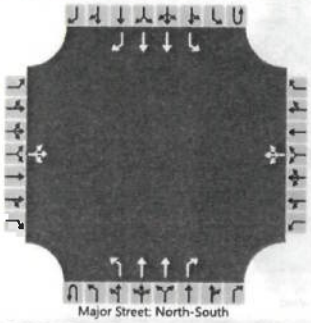
General Information

Analyst	Christopher Moltz, P.E.
Agency/Co.	Heartfelt Engineering
Date Performed	11/27/2023
Analysis Year	2023
Time Analyzed	PM Peak Hour
Intersection Orientation	North-South
Project Description	2023 PM - Plus Project

Site Information

Intersection	3 - N Carson St / Nye Ln
Jurisdiction	Carson City
East/West Street	W Nye Lane
North/South Street	N Carson St
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	1	2	1	0	1	2	1
Configuration			LTR				LTR			L	T	R		L	T	R
Volume (veh/h)		60	7	50		15	3	17	3	28	613	22	16	18	509	74
Percent Heavy Vehicles (%)		3	3	3		3	3	3	3	3			3	3		
Proportion Time Blocked																
Percent Grade (%)		0				0										
Right Turn Channelized										No				No		
Median Type | Storage		Left Only								3						

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5	6.5	6.9		7.5	6.5	6.9	6.4	4.1			6.4	4.1		
Critical Headway (sec)		7.56	6.56	6.96		7.56	6.56	6.96	6.46	4.16			6.46	4.16		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3	2.5	2.2			2.5	2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33	2.53	2.23			2.53	2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			127				38			34				37		
Capacity, c (veh/h)			402				356			887				671		
v/c Ratio			0.32				0.11			0.04				0.06		
95% Queue Length, Q_{95} (veh)			1.3				0.4			0.1				0.2		
Control Delay (s/veh)			18.1				16.3			9.2				10.7		
Level of Service (LOS)			C				C			A				B		
Approach Delay (s/veh)		18.1				16.3				0.4				0.6		
Approach LOS		C				C				A				A		

HCS Two-Way Stop-Control Report

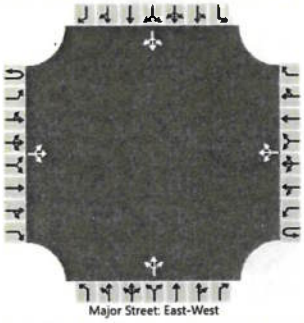
General Information

Analyst	Christopher Moltz, P.E.
Agency/Co.	Heartfelt Engineering
Date Performed	11/27/2023
Analysis Year	2050
Time Analyzed	AM Peak Hour
Intersection Orientation	East-West
Project Description	2050 AM - Future

Site Information

Intersection	1 - Mountain St / Nye Ln
Jurisdiction	Carson City
East/West Street	W Nye Lane
North/South Street	Mountain St
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	6	0		40	10	31		0	6	37		5	0	0
Percent Heavy Vehicles (%)		3				3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.13				4.13				7.13	6.53	6.23		7.13	6.53	6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				43					47				5	
Capacity, c (veh/h)		1557				1608					1007				763	
v/c Ratio		0.00				0.03					0.05				0.01	
95% Queue Length, Q_{95} (veh)		0.0				0.1					0.1				0.0	
Control Delay (s/veh)		7.3	0.0	0.0		7.3	0.2	0.2			8.7				9.8	
Level of Service (LOS)		A	A	A		A	A	A			A				A	
Approach Delay (s/veh)	0.0				3.7				8.7				9.8			
Approach LOS	A				A				A				A			

HCS Two-Way Stop-Control Report

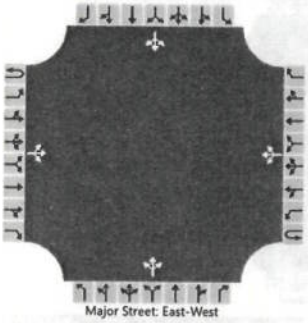
General Information

Analyst	Christopher Moltz, P.E.
Agency/Co.	Heartfelt Engineering
Date Performed	11/27/2023
Analysis Year	2050
Time Analyzed	PM Peak Hour
Intersection Orientation	East-West
Project Description	2050 PM - Future

Site Information

Intersection	1 - Mountain St / Nye Ln
Jurisdiction	Carson City
East/West Street	W Nye Lane
North/South Street	Mountain St
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	1	0		96	0	1		0	0	50		12	0	0
Percent Heavy Vehicles (%)		3				3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.13				4.13				7.13	6.53	6.23		7.13	6.53	6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				104					54				13	
Capacity, c (veh/h)		1615				1615					1081				635	
v/c Ratio		0.00				0.06					0.05				0.02	
95% Queue Length, Q_{95} (veh)		0.0				0.2					0.2				0.1	
Control Delay (s/veh)		7.2	0.0	0.0		7.4	0.5	0.5			8.5				10.8	
Level of Service (LOS)		A	A	A		A	A	A			A				B	
Approach Delay (s/veh)	0.0				7.3				8.5				10.8			
Approach LOS	A				A				A				B			

HCS Two-Way Stop-Control Report

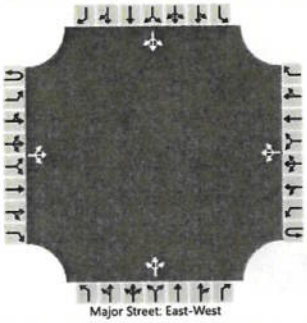
General Information

Analyst	Christopher Moltz, P.E.
Agency/Co.	Heartfelt Engineering
Date Performed	11/27/2023
Analysis Year	2050
Time Analyzed	AM Peak Hour
Intersection Orientation	East-West
Project Description	2050 AM - Baseline

Site Information

Intersection	2 - Project Driveway / Nye Ln
Jurisdiction	Carson City
East/West Street	W Nye Lane
North/South Street	Project Driveway
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	99	0		29	80	20		1	0	21		4	0	0
Percent Heavy Vehicles (%)		3				3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.13				4.13				7.13	6.53	6.23		7.13	6.53	6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				32					24				4	
Capacity, c (veh/h)		1476				1477					926				639	
v/c Ratio		0.00				0.02					0.03				0.01	
95% Queue Length, Q_{95} (veh)		0.0				0.1					0.1				0.0	
Control Delay (s/veh)		7.4	0.0	0.0		7.5	0.2	0.2			9.0				10.7	
Level of Service (LOS)		A	A	A		A	A	A			A				B	
Approach Delay (s/veh)	0.0				1.8				9.0				10.7			
Approach LOS	A				A				A				B			

HCS Two-Way Stop-Control Report

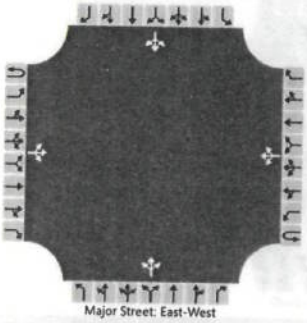
General Information

Analyst	Christopher Moltz, P.E.
Agency/Co.	Heartfelt Engineering
Date Performed	11/27/2023
Analysis Year	2050
Time Analyzed	PM Peak Hour
Intersection Orientation	East-West
Project Description	2050 PM - Baseline

Site Information

Intersection	2 - Project Driveway / Nye Ln
Jurisdiction	Carson City
East/West Street	W Nye Lane
North/South Street	Project Driveway
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	77	0		5	90	2		2	0	24		16	0	0
Percent Heavy Vehicles (%)		3				3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.13				4.13				7.13	6.53	6.23		7.13	6.53	6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				5					28				17	
Capacity, c (veh/h)		1486				1507					952				726	
v/c Ratio		0.00				0.00					0.03				0.02	
95% Queue Length, Q_{95} (veh)		0.0				0.0					0.1				0.1	
Control Delay (s/veh)		7.4	0.0	0.0		7.4	0.0	0.0			8.9				10.1	
Level of Service (LOS)		A	A	A		A	A	A			A				B	
Approach Delay (s/veh)	0.0				0.4				8.9				10.1			
Approach LOS	A				A				A				B			

HCS Two-Way Stop-Control Report

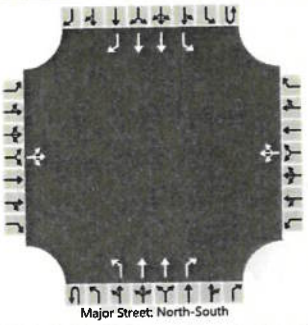
General Information

Analyst	Christopher Moltz, P.E.
Agency/Co.	Heartfelt Engineering
Date Performed	11/27/2023
Analysis Year	2050
Time Analyzed	AM Peak Hour
Intersection Orientation	North-South
Project Description	2050 AM - Baseline

Site Information

Intersection	3 - N Carson St / Nye Ln
Jurisdiction	Carson City
East/West Street	W Nye Lane
North/South Street	N Carson St
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	1	2	1	0	1	2	1
Configuration			LTR				LTR			L	T	R		L	T	R
Volume (veh/h)		76	1	26		16	0	21	3	33	461	33	16	29	585	97
Percent Heavy Vehicles (%)		3	3	3		3	3	3	3	3			3	3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized									No				No			
Median Type | Storage	Left Only								3							

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5	6.5	6.9		7.5	6.5	6.9	6.4	4.1			6.4	4.1		
Critical Headway (sec)		7.56	6.56	6.96		7.56	6.56	6.96	6.46	4.16			6.46	4.16		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3	2.5	2.2			2.5	2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33	2.53	2.23			2.53	2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			112				40			39				49		
Capacity, c (veh/h)			371				509			815				858		
v/c Ratio			0.30				0.08			0.05				0.06		
95% Queue Length, Q_{95} (veh)			1.3				0.3			0.2				0.2		
Control Delay (s/veh)			18.9				12.7			9.6				9.4		
Level of Service (LOS)			C				B			A				A		
Approach Delay (s/veh)	18.9				12.7				0.7				0.6			
Approach LOS	C				B				A				A			

HCS Two-Way Stop-Control Report

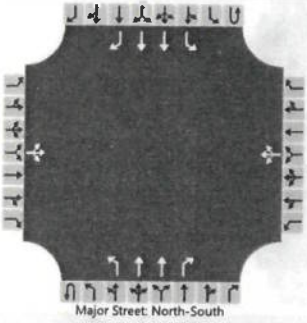
General Information

Analyst	Christopher Moltz, P.E.
Agency/Co.	Heartfelt Engineering
Date Performed	11/27/2023
Analysis Year	2050
Time Analyzed	PM Peak Hour
Intersection Orientation	North-South
Project Description	2050 PM - Baseline

Site Information

Intersection	3 - N Carson St / Nye Ln
Jurisdiction	Carson City
East/West Street	W Nye Lane
North/South Street	N Carson St
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	1	2	1	0	1	2	1
Configuration			LTR				LTR			L	T	R		L	T	R
Volume (veh/h)		57	7	49		17	2	19	3	16	703	25	19	21	595	74
Percent Heavy Vehicles (%)		3	3	3		3	3	3	3	3			3	3		
Proportion Time Blocked																
Percent Grade (%)		0				0										
Right Turn Channelized										No				No		
Median Type | Storage		Left Only								3						

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5	6.5	6.9		7.5	6.5	6.9	6.4	4.1			6.4	4.1		
Critical Headway (sec)		7.56	6.56	6.96		7.56	6.56	6.96	6.46	4.16			6.46	4.16		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3	2.5	2.2			2.5	2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33	2.53	2.23			2.53	2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			123				41			21				43		
Capacity, c (veh/h)			346				338			780				590		
v/c Ratio			0.36				0.12			0.03				0.07		
95% Queue Length, Q_{95} (veh)			1.6				0.4			0.1				0.2		
Control Delay (s/veh)			21.1				17.1			9.7				11.6		
Level of Service (LOS)			C				C			A				B		
Approach Delay (s/veh)		21.1				17.1				0.2				0.7		
Approach LOS		C				C				A				A		

HCS Two-Way Stop-Control Report

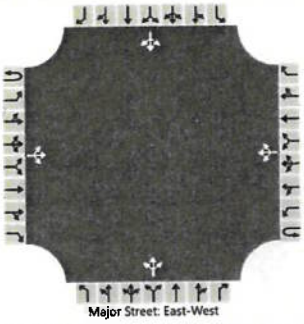
General Information

Analyst	Christopher Moltz, P.E.
Agency/Co.	Heartfelt Engineering
Date Performed	11/27/2023
Analysis Year	2050
Time Analyzed	AM Peak Hour
Intersection Orientation	East-West
Project Description	2050 AM - Plus Project

Site Information

Intersection	1 - Mountain St / Nye Ln
Jurisdiction	Carson City
East/West Street	W Nye Lane
North/South Street	Mountain St
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	6	0		48	10	31		0	6	44		5	0	0
Percent Heavy Vehicles (%)		3				3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.13				4.13				7.13	6.53	6.23		7.13	6.53	6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				52					54				5	
Capacity, c (veh/h)		1557				1608					1011				729	
v/c Ratio		0.00				0.03					0.05				0.01	
95% Queue Length, Q_{95} (veh)		0.0				0.1					0.2				0.0	
Control Delay (s/veh)		7.3	0.0	0.0		7.3	0.2	0.2			8.8				10.0	
Level of Service (LOS)		A	A	A		A	A	A			A				A	
Approach Delay (s/veh)	0.0				4.1				8.8				10.0			
Approach LOS	A				A				A				A			

HCS Two-Way Stop-Control Report

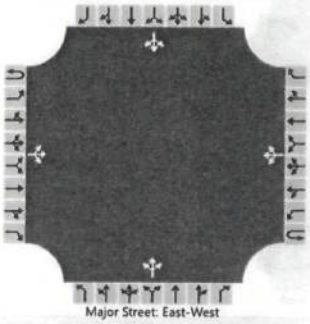
General Information

Analyst	Christopher Moltz, P.E.
Agency/Co.	Heartfelt Engineering
Date Performed	11/27/2023
Analysis Year	2050
Time Analyzed	PM Peak Hour
Intersection Orientation	East-West
Project Description	2050 PM - Plus Project

Site Information

Intersection	1 - Mountain St / Nye Ln
Jurisdiction	Carson City
East/West Street	W Nye Lane
North/South Street	Mountain St
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	1	0		104	0	1		0	0	58		12	0	0
Percent Heavy Vehicles (%)		3				3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.13				4.13				7.13	6.53	6.23		7.13	6.53	6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				113					63				13	
Capacity, c (veh/h)		1615				1615					1081				606	
v/c Ratio		0.00				0.07					0.06				0.02	
95% Queue Length, Q_{95} (veh)		0.0				0.2					0.2				0.1	
Control Delay (s/veh)		7.2	0.0	0.0		7.4	0.5	0.5			8.5				11.1	
Level of Service (LOS)		A	A	A		A	A	A			A				B	
Approach Delay (s/veh)	0.0				7.3				8.5				11.1			
Approach LOS	A				A				A				B			

HCS Two-Way Stop-Control Report

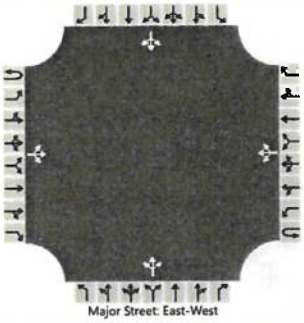
General Information

Analyst	Christopher Moltz, P.E.
Agency/Co.	Heartfelt Engineering
Date Performed	11/27/2023
Analysis Year	2050
Time Analyzed	AM Peak Hour
Intersection Orientation	East-West
Project Description	2050 AM - Plus Project

Site Information

Intersection	2 - Project Driveway / Nye Ln
Jurisdiction	Carson City
East/West Street	W Nye Lane
North/South Street	Project Driveway
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	99	7		52	80	20		9	0	47		4	0	0
Percent Heavy Vehicles (%)		3				3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.13				4.13				7.13	6.53	6.23		7.13	6.53	6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				57					61				4	
Capacity, c (veh/h)		1476				1467					862				548	
v/c Ratio		0.00				0.04					0.07				0.01	
95% Queue Length, Q_{95} (veh)		0.0				0.1					0.2				0.0	
Control Delay (s/veh)		7.4	0.0	0.0		7.6	0.3	0.3			9.5				11.6	
Level of Service (LOS)		A	A	A		A	A	A			A				B	
Approach Delay (s/veh)	0.0				2.8				9.5				11.6			
Approach LOS	A				A				A				B			

HCS Two-Way Stop-Control Report

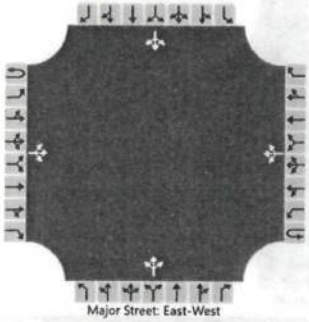
General Information

Analyst	Christopher Moltz, P.E.
Agency/Co.	Heartfelt Engineering
Date Performed	11/27/2023
Analysis Year	2050
Time Analyzed	PM Peak Hour
Intersection Orientation	East-West
Project Description	2050 PM - Plus Project

Site Information

Intersection	2 - Project Driveway / Nye Ln
Jurisdiction	Carson City
East/West Street	W Nye Lane
North/South Street	Project Driveway
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		0	77	8		30	90	2		10	0	49		16	0	0
Percent Heavy Vehicles (%)		3				3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.13				4.13				7.13	6.53	6.23		7.13	6.53	6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				33					64				17	
Capacity, c (veh/h)		1486				1496					904				620	
v/c Ratio		0.00				0.02					0.07				0.03	
95% Queue Length, Q_{95} (veh)		0.0				0.1					0.2				0.1	
Control Delay (s/veh)		7.4	0.0	0.0		7.5	0.2	0.2			9.3				11.0	
Level of Service (LOS)		A	A	A		A	A	A			A				B	
Approach Delay (s/veh)	0.0				2.0				9.3				11.0			
Approach LOS	A				A				A				B			

HCS Two-Way Stop-Control Report

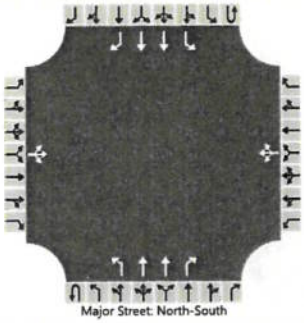
General Information

Analyst	Christopher Moltz, P.E.
Agency/Co.	Heartfelt Engineering
Date Performed	11/27/2023
Analysis Year	2050
Time Analyzed	AM Peak Hour
Intersection Orientation	North-South
Project Description	2050 AM - Plus Project

Site Information

Intersection	3 - N Carson St / Nye Ln
Jurisdiction	Carson City
East/West Street	W Nye Lane
North/South Street	N Carson St
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	1	2	1	0	1	2	1
Configuration			LTR				LTR			L	T	R		L	T	R
Volume (veh/h)		87	2	40		16	1	21	3	43	461	33	16	29	585	110
Percent Heavy Vehicles (%)		3	3	3		3	3	3	3	3			3	3		
Proportion Time Blocked																
Percent Grade (%)		0				0										
Right Turn Channelized										No				No		
Median Type | Storage		Left Only								3						

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5	6.5	6.9		7.5	6.5	6.9	6.4	4.1			6.4	4.1		
Critical Headway (sec)		7.56	6.56	6.96		7.56	6.56	6.96	6.46	4.16			6.46	4.16		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3	2.5	2.2			2.5	2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33	2.53	2.23			2.53	2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			140				41			50				49		
Capacity, c (veh/h)			375				450			813				858		
v/c Ratio			0.37				0.09			0.06				0.06		
95% Queue Length, Q_{95} (veh)			1.7				0.3			0.2				0.2		
Control Delay (s/veh)			20.2				13.8			9.7				9.4		
Level of Service (LOS)			C				B			A				A		
Approach Delay (s/veh)		20.2				13.8				0.8				0.6		
Approach LOS		C				B				A				A		

HCS Two-Way Stop-Control Report

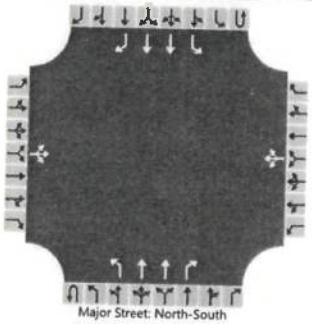
General Information

Analyst	Christopher Moltz, P.E.
Agency/Co.	Heartfelt Engineering
Date Performed	11/27/2023
Analysis Year	2050
Time Analyzed	PM Peak Hour
Intersection Orientation	North-South
Project Description	2050 PM - Plus Project

Site Information

Intersection	3 - N Carson St / Nye Ln
Jurisdiction	Carson City
East/West Street	W Nye Lane
North/South Street	N Carson St
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	1	2	1	0	1	2	1
Configuration			LTR				LTR			L	T	R		L	T	R
Volume (veh/h)		71	8	60		17	3	19	3	30	703	25	19	21	595	85
Percent Heavy Vehicles (%)		3	3	3		3	3	3	3	3			3	3		
Proportion Time Blocked																
Percent Grade (%)		0				0										
Right Turn Channelized										No				No		
Median Type | Storage		Left Only								3						

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5	6.5	6.9		7.5	6.5	6.9	6.4	4.1			6.4	4.1		
Critical Headway (sec)		7.56	6.56	6.96		7.56	6.56	6.96	6.46	4.16			6.46	4.16		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3	2.5	2.2			2.5	2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33	2.53	2.23			2.53	2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			151				42			36				43		
Capacity, c (veh/h)			339				299			804				590		
v/c Ratio			0.45				0.14			0.04				0.07		
95% Queue Length, Q_{95} (veh)			2.2				0.5			0.1				0.2		
Control Delay (s/veh)			23.9				19.0			9.7				11.6		
Level of Service (LOS)			C				C			A				B		
Approach Delay (s/veh)		23.9				19.0				0.4				0.6		
Approach LOS		C				C				A				A		

ATTACHMENT 9 – NDOT HOURLY TRAFFIC VOLUME REPORT FOR TRINA STATION 0250140

Nevada Department of Transportation

Short-term Hourly Traffic Volume for 11/28/2022 through 12/01/2022

Site names: 0250140,Carson St
County: Carson City

Location: 540ft N of Nye Ln

Seasonal Factor Grp: 57
Daily Factor Grp: 57
Axle Factor Grp: 07
Growth Factor Grp: 07

	Sun, Nov 27, 2022			Mon, Nov 28, 2022			Tue, Nov 29, 2022			Wed, Nov 30, 2022			Thu, Dec 1, 2022			Fri, Dec 2, 2022			Sat, Dec 3, 2022		
	Road	S	N	Road	S	N	Road	S	N	Road	S	N	Road	S	N	Road	S	N	Road	S	N
00:00							43	23	20	48	21	27	44	22	22						
01:00							22	9	13	39	20	19	24	8	16						
02:00							17	10	7	30	15	15	23	13	10						
03:00							36	10	26	33	14	19	43	11	32						
04:00							78	27	51	62	22	40	73	22	51						
05:00							202	77	125	220	84	136	253	91	162						
06:00							583	317	266	576	311	265	562	296	266						
07:00							1,148	682	466	1,161	683	478	1,107	652	455						
08:00							1,079	591	488	1,114	619	495									
09:00							1,062	577	485	1,128	611	517									
10:00				965		519	1,125	589	536	1,250	666	584									
11:00				1,289	627	662	1,264	651	613	1,303	664	639									
12:00				1,410	664	746	1,299	662	637	1,508	689	819									
13:00				1,282	637	645	1,303	610	693	1,409	644	765									
14:00				1,350	646	704	1,325	632	693	1,340	629	711									
15:00				1,270	570	700	1,408	649	759	1,331	635	696									
16:00				1,311	562	749	1,389	606	783	1,455	595	860									
17:00				1,129	465	664	1,245	505	740	1,275	592	683									
18:00				611	309	302	677	311	366	736	338	398									
19:00				434	212	222	439	219	220	462	218	244									
20:00				303	135	168	322	161	161	321	155	166									
21:00				181	92	89	204	103	101	217	102	115									
22:00				140	70	70	127	69	58	127	57	70									
23:00				68	41	27	70	37	33	79	49	30									
Total				11,743	5,030	6,267	16,467	8,127	8,340	17,224	8,433	8,791	2,129	1,115	1,014						
AM Peak Vol							1,264	756	613	1,380	746	658									
AM Peak Fct							.852	.738	.824	.835	.784	.663									
AM Peak Hr				:	:	:	11: 00	7: 30	11: 00	10: 45	7: 15	10: 45									
PM Peak Vol				1,410	664	784	1,444	662	843	1,508	690	874									
PM Peak Fct				.94	.943	.848	.885	.876	.807	.913	.871	.881									
PM Peak Hr				12: 00	12: 00	16: 30	15: 45	12: 00	16: 30	12: 00	12: 15	16: 15									
Seasonal Fct				1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.146	1.146	1.146						
Daily Fct				.937	.937	.937	.943	.943	.943	.905	.905	.905	.880	.880	.880						
Axle Fct				.500	.500	.500	.500	.500	.500	.500	.500	.500	.500	.500	.500						
Pulse Fct				2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000						

Created 07/19/2023 11:55 AM

ROAD AADT 16,797

S AADT 8,219

N AADT 8,577

SMART START BUSINESS OPERATIONS NARRATIVE

Overview

Although we meet Carson City Municipal Code for parking we will also reference Title 18 Appendix Division 2 Parking 2.3 General Parking Requirements 2.3.10 "Except as otherwise provided in section 11, if an existing building that is located within a residential office, general office or redevelopment district is converted to a use requiring more parking spaces than the existing use, on-street curb parking may be counted towards the total number of required spaces if: (b) Not less than fifty (50) percent of the required number of parking spaces will be provided off-street."

It should be noted that the parent drop off/pick up and employee parking for the daycare would not have simultaneous peaks in parking demand. Below you will see expected peak parking demand over the typical weekday. The Smart Starts by BGCWN will operate on a schedule of 7am - 6pm open.

According to the U.S. General Services Administration Child Care Center Design Guide Public Buildings Service Office of Child Care July 2003 publication Chapter 6: Site Design "Parents are required to physically bring their child(ren) into the center to "sign in" and to pick up their child(ren) inside the center and "sign out". The reverse is true in the evening. The center usually opens at 6:30 AM and fills on a bell curve that peaks around 10 AM when the building will be at maximum preschool/infant/toddler capacity. Staff will arrive for work only as an increased number of children fill the building. In the evening, teachers will remain only as long as necessary to maintain the required staff to child ratio. A completely full building will be extremely rare due to illness or family vacations. In addition, many of the children in the facility will have a sibling enrolled at the center, further reducing auto traffic. The average time for loading and unloading (parking time) is seven minutes. In the absence of actual data, the following formula may be used [*for short term drop off parking*]:

Formula: Full Capacity x .7 / 8.57 = minimum number of drop off spaces

Smart Starts by BGCWN at 2805 Mountain Street
Formula: 111 x .7 / 8.57 = 9

17	Staff Spaces (per Carson City Municipal Code)
9	Smart Start Drop Off Spaces (4 off street @ Property + 5 on street Mountain)
26	Total

Though each day will not look identical, an **typical** day operationally will look like:

Morning
6:30am: 11 staff arrive
7:00-7:30am: 25 kids arrive, 2 staff arrive

7:30-8:00am: 25 kids arrive
8:00am-9:00am: 40 kids arrive
9:00am-11:00am: 10 kids arrive, one staff arrives
10:30am: 3 staff arrive
As you will see with the schedule above we will have 14 full time staff arriving for a full day 7am - 4pm (one would be 9-6pm) of work, while at 10:30am and 2:30pm our relief part time staff will arrive to facilitate breaks and transitions for full time staff. Staff start times will be staggered to allow for best flow of traffic in and out of the facility parking.

Afternoon
10:30am: 3 staff lunch break
11:30am: 3 staff lunch break
12:30pm: 3 staff lunch break
1:30pm: 2 staff lunch break
2:30pm: 3 staff depart, 9 staff arrive
3:30pm: 11 staff depart, 10 children picked up
4pm: 2 staff depart
4-4:30pm: 25 children depart
4:30-5pm: 25 children depart
5-5:30pm: 25 children depart
5:30-6pm: 25 children depart
6:30pm: 10 staff depart

All staff will be provided with a break room onsite so that they do not have to leave for their lunch break. All part-time staff will receive a 15-minute break to be taken onsite and full-time staff will have a one-hour lunch break.

Thank you,
BGCWN Team