

# **INITIAL STUDY and ENVIRONMENTAL CHECKLIST**

FOR

**BEST DEVELOPMENT GROCERY OUTLET**

**December 2020**

**Lead Agency:**  
City of Fort Bragg



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**LACO Project No. 8135.14**

**State Clearinghouse Number: TBD**

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## I. PROJECT SUMMARY

**Date:** December 2020

**Project Title:** Best Development  
Grocery Outlet

**Lead Agency:** City of Fort Bragg

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**Location:** The proposed project is located at 825, 845, and 851 S. Franklin Street within the City of Fort Bragg city limits in Mendocino County, within the Coastal Zone, and is identified by Assessor's Parcel Numbers (APNs) 018-120-47, 018-120-48 and 018-120-49 (Site). The Site comprises a total of 1.63 acres and is accessed via South Street (see Figure 1).

**Coastal Zone:** Yes

**Affected Parcel(s):** Assessor's Parcel Number(s) 018-120-47, 018-120-48 and 018-120-49

**Current City of Fort Bragg Land Use and Zoning Designation:** Highway Visitor Commercial (CH) – see Figure 2.

### Anticipated Permits and Approvals:

- 1) Adoption of a Mitigated Negative Declaration (MND) by the City of Fort Bragg
- 2) Approval of a Zoning Clearance (ZC) by the City of Fort Bragg
- 3) Approval of a Coastal Development Permit (CDP) by the City of Fort Bragg
- 4) Approval of Design Review by the City of Fort Bragg
- 5) Approval of a Parcel Merger by the City of Fort Bragg
- 6) Approval of a Sign Permit by the City of Fort Bragg
- 7) Approval of an Encroachment Permit by the City of Bragg
- 8) Approval of a Grading Permit by the City of Fort Bragg
- 9) Approval of a Building Permit by the City of Fort Bragg

**Tribal Cultural Resources:** Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

On June 20, 2019, Genesis Society (Cultural Resource Consultant) contacted the Native American Heritage Commission (NAHC) to request information concerning archaeological sites or traditional use areas for the project area. The NAHC response letter, dated June 28, 2019, indicated that a Sacred Lands File (SLF) search was completed and returned a negative result. The NAHC provided a list of 13 Native American contacts

who may have knowledge of cultural resources in the project area and suggested that Genesis Society contact all of those indicated. The NAHC Native American Contacts List dated June 27, 2019, including the EPA Director and Chairperson of the Cahto Tribe; the Chairpersons of the Coyote Valley Band of Pomo Indians, Guidiville Band of Pomo Indians, Hopland Band of Pomo Indians, Kashia Band of Pomo Indians of the Stewarts Point Rancheria, Manchester Band of Pomo Indians, Noyo River Indian Community, Pinoleville Pomo Nation, Potter Valley Tribe, Redwood Valley or Little River Band of Pomo Indians, and Sherwood Valley Band of Pomo Indians; and the President of the Round Valley Reservation/ Covelo Indian Community.

On July 22, 2019, Genesis Society sent letters to all representatives on the NAHC contact list, and those contacted were requested to supply any information they might have concerning prehistoric sites or traditional use areas within, adjacent, or near the project area. A follow-up email and telephone call were placed with Tina Sutherland of the Sherwood Valley Band of Pomo Indians on Saturday, August 10, 2019, prior to the pedestrian survey. No responses were received from the contacted parties. As no prehistoric cultural material was identified during the records search or pedestrian survey, no additional consultation was undertaken by Genesis Society or the City of Fort Bragg (City), and the City, as Lead Agency, has deemed the Tribal consultation process complete. Copies of the NAHC response and Native American Contacts List and an example of the letters sent to Tribal representatives are included in Appendix A.

**CEQA Requirement:**

The proposed project is subject to the requirements of the California Environmental Quality Act (CEQA). The Lead Agency is the City of Fort Bragg. The purpose of this Initial Study (IS) is to provide a basis for determining whether to prepare an Environmental Impact Report (EIR) or a Negative Declaration. This IS is intended to satisfy the requirements of the CEQA (Public Resources Code, Div. 13, Sec. 21000-21177) and the State CEQA Guidelines (California Code of Regulations, Title 14, Sec 15000-15387).

CEQA encourages lead agencies and applicants to modify their projects to avoid significant adverse impacts (CEQA Section 20180(c) (2) and State CEQA Guidelines Section 15070(b) (2)).

Section 15063(d) of the State CEQA Guidelines states that an IS shall contain the following information in brief form:

- 1) A description of the project including the project location
- 2) Identification of the environmental setting
- 3) Identification of environmental effects by use of a checklist, matrix, or other method, provided that entries on a checklist or other form are briefly explained to provide evidence to support the entries
- 4) Discussion of means to mitigate significant effects identified, if any
- 5) Examination of whether the project would be consistent with existing zoning, plans, and other applicable land use controls
- 6) The name of the person or persons who prepared and/or participated in the Initial Study

## II. PROJECT DESCRIPTION

BRR Architecture (Applicant) is proposing to construct a Grocery Outlet (retail store) on a 1.63-acre Site located at 825, 845, and 851 S. Franklin Street, Fort Bragg, and identified by Assessor's Parcel Numbers (APNs) 018-120-47, 018-120-48, and 018-120-49 (Site). Grocery Outlet is a value grocer, meaning they sell brand name products at bargain prices due to their opportunity buying style. The Site is owned by Dominic and Juliette Affinito and is located in the Coastal Zone within the City of Fort Bragg city limits. The Site has a City of Fort Bragg land use designation of Highway Visitor Commercial (CH) (2008) and a zoning designation of Highway Visitor Commercial (CH) per the City of Fort Bragg Zoning Map (2016). No changes to the Site's current land use or zoning designations are proposed under the project.

The project includes the demolition of an existing 16,436 square-foot vacant former office building and associated 47-space parking lot and wooden fencing along the property line, and the construction and operation of a 16,157 square-foot, one-story, retail store with a 53-space parking lot and associated improvements and infrastructure. The project would be operated by 15 to 25 full-time staff and two (2) managers and would be open from 9:00 AM to 10:00 PM, 7 days per week with two (2) different shifts covering operating hours. Per correspondence with the property owners, the Site has not been leased since 2010 but has been used as storage since then. The retail store would be a maximum of 32.25 feet tall at the top of the proposed canopy and a maximum of 23 feet tall at the top of the proposed parapet. The project would include 51,650 square feet (1.18 acres) of hardscape areas that would be covered with the proposed store, parking lot, accessways or sidewalks, and driveways. Associated improvements and infrastructure on-site would include a loading dock and trash enclosure on the west side of the store, a parking area with 53-parking spaces on the south side of the store, an internal system of walkways and crosswalks, two (2) bicycle racks, two (2) driveways, a new fire connection, replacement of an existing sewer connection, connection to underground utilities, landscaping for stormwater capture and treatment, illuminated signage, and landscaping throughout the Site. The existing planted ornamental trees along the South Street frontage would be removed and replaced with landscaping as shown in Figure 4. Landscaping includes trees and vegetation along the property boundaries within the proposed parking lot. Trees would be planted primarily along the north, south, and east boundaries, with a few along the west boundary, as well as one tree within each of the parking lot landscaping islands. Approximately 19,265 square feet (0.44 acres) of the Site would be landscaped and permeable to stormwater as the project would be designed to capture stormwater and pre-treat it on-site to remove dirt, oil, and heavy metals using bioretention basins located along the northwest and southwest boundaries.

The project would include the installation of a six-foot-tall illuminated monument sign on the southeast corner of the Site. The monument sign would have 15 square feet of branding on each side, in addition to the unbranded base. Additionally, an 83.3 square foot illuminated channel sign would be located on the sign parapet along the front elevation. All exterior lighting would be limited to a maximum height of 18 feet and utilize energy-efficient fixtures and lamps. No permanently installed lighting would blink, flash, or be of unusually high intensity or brightness. Exterior lighting would be shielded or recessed and directed downward and away from adjoining properties and public right-of-way to reduce light bleed so that no on-site light fixture directly illuminates an area off-site, in compliance with regulations set by the International Dark-Sky Association. The project will also include a merger of three (3) existing parcels (lots) to create one 71,002 square foot (1.63 acres) parcel (see Table 1, below) to accommodate the footprint of the proposed retail store within the resulting parcel.

Table 1. Parcel Merger

Existing Parcels	Proposed Parcel
APN 018-120-47, ±17,119 SF (±0.393 acres)	APN to be determined ±71,002 SF (±1.6299816 acres)
APN 018-120-48, ±14,723 SF (±0.338 acres)	
APN 018-120-49, ±38,986 SF (±0.895 acres)	

**Site Access**

The Site is bordered to the north by South Street, to the south by N. Harbor Drive, and to the east by S. Franklin Street – all local roads managed by the City of Fort Bragg Public Works. The Site is located a short distance from State Highway 1, a four-lane conventional highway managed by the California Department of Transportation (Caltrans), to the west. Currently, the Site is accessed on the north end via a paved entrance to South Street. There is an existing dirt driveway that runs across the southern parcel from S. Franklin Street to N. Harbor Drive. The proposed project includes the construction of a new, 30-foot wide entrance on N. Harbor Drive and a 35-foot entrance on S. Franklin Street. The existing driveway on the north end of the Site would be removed as part of the project. The project will additionally include an internal system of walkways and crosswalks to provide pedestrian connectivity between the parking lot, building, and sidewalk. The pedestrian improvements would be Americans with Disabilities Act (ADA)-compliant. A sidewalk would be constructed along the South Street, S. Franklin Street, and N. Harbor Drive frontages, as required by City standards and to provide pedestrian access around the Site. Where required, existing sidewalks would be upgraded to meet City standards. A total of 53 standard parking spaces, including three (3) ADA-accessible spaces would be provided on-site to serve the retail store, in addition to two (2) bicycle racks.

**Utilities and Services**

The Site currently and would continue to be served by electrical, propane, city water and wastewater, solid waste, and telecommunication services. The Site is located within the service boundaries of the City of Fort Bragg water and wastewater collection. There are currently on-site utility connections; however, the recorded use of the building was for office space and the proposed use is retail grocery – water and sewer capacity fees would be associated with the proposed increase in use. The existing water connection on South Street includes a 6-inch fire service line and is proposed to be the main water service to the building, with a new 6-inch fire connection to be constructed to the east of the existing connection. A total of three (3) fire hydrants with valve lines are proposed for fire suppression on the Site. There is an existing 4-inch sewer lateral extending from the existing manhole on South Street and proposed to be removed and replaced with the construction of a new 6-inch sewer lateral per City standards. On-site drainage will be managed utilizing post-construction Low Impact Development (LID) site design measures including bioretention facilities sized to capture and treat runoff from the proposed impervious surfaces produced by the 24 hour 85<sup>th</sup> percentile rain event, and landscaped areas throughout the Site to encourage natural stormwater infiltration. Post-construction LIDs will connect to proposed curbs and gutters along the perimeter of the Site. Additionally, electricity would be provided by Pacific Gas and Electric Company (PG&E). Gas service, if needed, would be provided via a propane tank located on the northern portion of the Site.

Waste Management (WM) would provide solid waste collection services through the WM facility, located in the City of Fort Bragg, which would be collected from a trash bin enclosure to be installed in the western portion of the Site. Xfinity (Comcast) provides cable TV and internet services, with various telecommunication companies providing land-line telephone service to the surrounding area. All utility lines within the project Site would be underground.

## **Drainage**

As the Site is currently developed with flat topography, stormwater typically infiltrates in the undeveloped portion of the Site or flows to the northwest and southwest towards the neighboring property, in the developed portion of the Site.

Drainage improvements on-site would include post-construction Best Management Practices (BMPs), including bioretention facilities sized to capture and treat runoff from the proposed impervious surfaces produced by the 24 hour 85<sup>th</sup> percentile rain event, and landscaped areas throughout the Site to encourage natural stormwater infiltration. Off-site improvements, such as sidewalk curbs and gutters would be required to convey flows from the post-construction BMPs at the project Site to the existing Caltrans stormwater drainage system located west of the Site on State Highway 1, which does not currently exist in the vicinity of the Site. Drainage across the Site appears to flow to the northwest and southwest towards the neighboring property. The nearest bodies of water are the Noyo River, which is located approximately 600 feet south of the Site, and the Pacific Ocean, which is located approximately 1,200 feet west of the Site. Regional drainage is controlled by the Noyo River.

## **City of Fort Bragg Coastal Land Use and Development Code Consistency Analysis**

The Coastal Land Use and Development Code (CLUDC) Article 2, Section 17.22.020 E indicates that the Highway and Visitor Commercial (CH) zoning district's allowable land uses include lodging, restaurants, and retail stores. The City of Fort Bragg CLUDC (2018) defines "Groceries, specialty foods" as "a retail business where the majority of the floor area open to the public is occupied by food products packaged for preparation and consumption away from the store. Includes retail bakeries, where any on-site baking is only for on-site sales" and defines "General retail – 5,000 sf or larger" as "stores and shops selling many lines of merchandise." These are both permitted land uses in the CH district and have no "special use regulations"; therefore, the proposed retail store would be a permitted use on-site, subject to the approval of a Zoning Clearance and Coastal Development Permit.

Per the CLUDC Article 2, Chapter 17.22 – Commercial Zoning Districts, the proposed project is consistent with the purpose of this chapter by meeting the following applicable requirements:

- Minimum parcel size;
- Minimum parcel width and maximum parcel depth;
- Front, interior, and street-side setbacks;
- Floor area ratio;
- Maximum floor area allowed for individual commercial buildings between the Noyo River and Pudding Creek bridges;
- Lot coverage; and
- Maximum height.

Per the CLUDC Article 3, Chapter 17.30 – Standards for all Development and Land Uses, the proposed project is consistent with the purpose of this chapter by meeting the following applicable requirements:

- Height of fencing, landscaping at street corners, and outdoor light fixtures;
- Outdoor lighting;
- Performance standards for dust;
- Public improvements (i.e. frontage);
- Solid waste/recyclable materials storage and enclosures; and
- Underground utility connections.

Under Chapter 17.34 – Landscaping Standards, the proposed project is consistent with the purpose of this chapter by meeting the following applicable requirements:

- Submittal of preliminary landscape plan;
- Landscape setbacks and establishment in unused areas;
- Landscape buffers provided in parking areas, as well as adjacent to site or rear property lines, and structures;
- Amount and location of interior parking lot landscaping;
- Landscaping minimum dimensions;
- Size at time of planting and proposed groundcover and shrubs;
- Irrigation system for water efficiency and scheduling; and
- Proposed maintenance of landscaped areas.

Under Chapter 17.36 – Parking and Loading, the proposed project is consistent with the purpose of this chapter by meeting the following applicable requirements:

- Parking spaces by land use;
- RV space within the Site (a Minor Use Permit will be applied for to waive this requirement);
- Bicycle parking spaces, and design and devices;
- Motorcycle parking spaces and dimensions;
- Location and access to nonresidential parking;
- Minimum parking space configuration and surfacing of all parking spaces and maneuvering areas;
- Number of driveways and site access for nonresidential development;
- Proposed driveways distances from street corners;
- Driveway spacing and dimensions for nonresidential development;
- Providing off-street loading spaces; and
- Loading space dimensions, location, and screening.

Under Chapter 17.38 – Signs, the proposed project is consistent with the purpose of this chapter by meeting the following applicable requirement:

- The proposed signs do not exceed the standards of Sections 17.38.070 (Zoning District Sign Standards) and 17.38.080 (Standards for Specific Sign Types), and are of the minimum size and height necessary to enable pedestrians and motorists to readily identify the Site from a sufficient distance to safely and conveniently access the Site;
- The placement of the sign on the Site is appropriate for the height and area of a freestanding and wall sign;
- The proposed signs relate to the architectural design of the structure;
- The proposed signs do not unreasonably block the sightlines of existing signs on adjacent properties;
- The placement and size of the sign will not impair pedestrian or vehicular safety;
- The design, height, location, and size of the signs are visually complementary and compatible with the scale, and architectural style of the primary structures on the Site, prominent natural features on the Site, and structures and prominent natural features on adjacent properties on the same street; and
- The proposed signs are in substantial conformance with the design criteria in Subsection 17.38.060.F (Design criteria for signs).

Per the CLUDC Article 5, Chapter 17.50 – Land and Marine Resource Protection, the proposed project is consistent with the purpose of this chapter by providing evidence that the following sensitive coastal resources are not applicable:

- Archaeological resource preservation;



- Environmentally sensitive habitat areas; and
- Visual Resources, as the proposed project is not located in an area that triggers requirements of Section 17.50.070.

### **City of Fort Bragg Commercial District Design Guidelines Consistency Analysis**

The City of Fort Bragg Design Guidelines, Chapter 2 Commercial District Design Guidelines provides a framework for commercial land use classifications within the City. As previously mentioned, the proposed project has a land use designation of Highway Visitor Commercial (CH), which is used primarily located primarily along Highway 1 and arterials at the entry points to the community. Uses include lodging, restaurants, and retail outlets serving both residents and visitors. Provided below is a consistency analysis of design guidelines that apply to the proposed project.

Per the City of Fort Bragg Design Guidelines, Chapter 2 Commercial District Design Guidelines, *Section 2.2 Central Business District Design Guidelines*, the proposed project is consistent with the purpose of this chapter by meeting the following applicable guidelines.

#### Guideline No. 2.23 Site Planning

- Open Space, Courtyards, and Plazas: The proposed project contains an outdoor seating area, and the building entrance is designed as a “corner cut-off”.
- Parking and Circulation: The project includes the construction of a new complete sidewalk system along the perimeter of the Site, entrances to the lot are designed with patterned concrete to differentiate from the sidewalk, landscape buffers are proposed along the entire parking area, between it, and the public street and a landscaped area would be situated in front of the proposed building.

#### Guideline No. 2.24 Architecture

- Architectural Form and Composition: The proposed building includes differentiated treatments along the base, mid-section, and top along the three (3) facades facing public streets, windows would remain clear glass for lighting a view out, and the roofline on the corner cut-off entrance is also unique to the other rooflines for additional visual interest.
  - Special architectural features will be incorporated (i.e. columns, parapets, variable rooflines, windows, and architectural bands on the street-facing facades).
  - All building elevations are visible from streets, and each employs architectural design and features compatible with the front façade.
  - There will be minimal use of blank, windowless walls.
  - Windows are proposed on each of the three (3) street-facing facades, and meet requirements for elevations, materials used, and decorative framing around windows – security grills are not proposed.
  - The building will be composed of elements and details representative of Fort Bragg's architectural heritage, as the Applicant's chosen design elements were influenced by Fort Bragg's downtown architecture. The window and door treatments give homage to the smaller shops along the main downtown street's detailing as well as the Hardie Board (wood composite) wood paneling, masonry, and providing a variety of the materials on the elevations to add visual interest.
  - Rooflines of the building would align with buildings on adjacent properties to avoid clashes in building height. The buildings surrounding the proposed Grocery Outlet are mostly two-story buildings with heights similar to the proposed new Site.

- The overall pattern of the wide bays at the wall projections and alternating recessed planes are based on a module derived from Fort Bragg's prevailing module of ground-level building features.
- Storefronts: The proposed project's windows along the building entrance's façade encompass approximately 66 percent of the storefront surface area
  - The proposed street-facing facades consist of a base, mid-section, and roofline.
  - The entryway is located at a corner cut-off, and the entry doors are recessed under an overhang/architectural feature that would provide weather protection and a transition zone from the parking lot and sidewalk. Decorative light fixtures are proposed on the columns framing the entry as well.
  - An architectural band is proposed between the base of the building and the top of the building to differentiate the storefront from the top half of the building and to add visual interest.
  - The storefront includes mounted light fixtures, corbels along with the architectural band below the overhang and decorative columns.
- Awnings: The entryway to the building is covered to protect pedestrians and incorporates multiple colors and materials to add interest.
- Rear entrances: The building has frontage along South Street but does not have pedestrian access, due to safety concerns. However, the entrance located on the corner cut-off helps address the lack of an entrance on Franklin Street, as the entrance provides visual interest for two elevations since it is located on the corner.
  - The project landscape plan provides tree plantings and other landscaping at the rear of the building, despite the lack of a rear entrance.
- Building Materials: They are highlighted on the elevation drawings, and the building materials are consistent with these guidelines.
- Building Color: The proposed project includes the use of wood composite, where the natural colors reflect the possible inherent colors of these materials.
  - The façade colors relate to one another and are generally related to nearby businesses.
  - The facades generally reflect this guideline, with a primary color (walls), secondary color (base), and trim color.
  - Architectural pillars and decorative bands utilize secondary and trim colors.
  - Trim colors, such as the architectural bands, pillar bases, and trim elements, are darker than the primary wall colors.
- Historically, certain color palettes were associated with particular architectural styles. Although the proposed project is not located in downtown, historic color schemes are being utilized.

As for Guideline 2.24 Architecture, Subsection *Lighting*, the Applicant is currently engaging with a lighting designer to design exterior lighting to highlight the interesting architectural features, where the facades or roofs will not be fully lit. The lighting designer will also design the entrances to be well-illuminated for safety and identification purposes, and entranceways, arcades, and similar enclosed areas will be well illuminated. Lighting on Site will be designed as to not produce glare or spill over onto adjacent properties as well, where the latest technical and operational energy conservation concepts will be considered in the lighting design.

Per the City of Fort Bragg Design Guidelines, Chapter 2 Commercial District Design Guidelines, *Section 2.5 Special Use Commercial Design Guidelines*, the proposed project is consistent with the purpose of this chapter by meeting the following applicable guidelines.

#### Guideline No. 2.56 Large Scale Retail

- Site Planning: The proposed project is separated from residential development across Franklin Street by a public street and landscape buffers.
  - The parking area is surrounded by landscaping between the pedestrian sidewalks and parking lot.
  - The entrances proposed were analyzed for conflicts with traffic flow with a traffic analysis to ensure consistency.
  - The storage areas, trash enclosures, and loading facilities are located on the west side of the building and screened from streets and public areas.
- Architecture: The proposed project contains three street-facing elevations which include elevation changes with parapet walls with substantial cornice.
  - The building's three street-facing facades include an identifiable base made of concrete masonry units (CMU).
  - The three street-facing facades include recessed areas, columns, a defined base, pitched elements above windows and an architectural band in the mid-section, and variable roofline with parapets and cornices.

#### **Special Studies**

The following special studies and reports have been prepared for the proposed project and are summarized below:

#### **Cultural Resources Correspondence**

A *Grocery Outlet Development Project, Mendocino County, Cultural Resources Inventory Survey (Cultural Survey)* was prepared by Genesis Society on August 15, 2019. As noted in the *Cultural Survey*, the survey was completed to comply with the requirements of CEQA and Section 106 of the National Historic Preservation Act and addresses cultural and historical resources. Archival research was conducted and letters were sent to the EPA Director and Chairperson of the Cahto Tribe; the Chairpersons of the Coyote Valley Band of Pomo Indians, Guidiville Band of Pomo Indians, Hopland Band of Pomo Indians, Kashia Band of Pomo Indians of the Stewarts Point Rancheria, Manchester Band of Pomo Indians, Noyo River Indian Community, Pinoleville Pomo Nation, Potter Valley Tribe, Redwood Valley or Little River Band of Pomo Indians, and Sherwood Valley Band of Pomo Indians; the President of the Round Valley Reservation/Covelo Indian Community; and the Native American Heritage Commission (NAHC). In a letter response from the NAHC, a record search of the Sacred Lands File (SLF) was completed with negative results. According to the *Cultural Survey*, no significant historical resources, no unique archaeological resources, or historic properties were identified within the area of potential effects (APE). Since no prehistoric consultation materials were identified during either the records search or pedestrian survey, no additional consultation was undertaken. Based on the absence of any contributing components of any significant historical resources/unique archaeological resources within the APE, archaeological clearance is recommended for the project/undertaking as recently proposed (Genesis Society, 2019). Due to the sensitive and confidential nature of the report, a copy of the *Cultural Survey* is not included as an appendix to this Initial Study.

#### **Biological Review**

A *Grocery Outlet Fort Bragg, California Property Biological Review (Biological Review; see Appendix B)* was prepared by Wildland Resource Managers in August 2019. As noted in the *Biological Review*, the study was conducted to identify and assess the biological features of the project area inclusive of its soils, vegetation, wetlands, wildlife habitats, and the presence of sensitive species to comply with Mendocino County's planning requirements pursuant to CEQA. A query of the CNDDDB for the Fort Bragg quadrangle was made to determine if any special status plant or animals could be on the property given the current habitat

conditions. A listing of 73 species was found, but with the limited grass habitat on the Site and general surrounding urban conditions, there is no suitable habitat for any of the database listed species on the three (3) lots, and none were observed during the field visit. No species of listed plants or animals were found within the project site area and there are no wetland features within or around the immediate area. No wildlife activity was observed occupying the Site other than gopher mounding and crow flyover. As there is a remote possibility that bats may be present in the abandoned building, a follow-up survey to address this question is required as a mitigation. If bats are found to utilize the Site, then consultation with CDFW will be required. If bats are not found, there will be little loss of biological or ecological resources if the Site is developed (*Biological Review*, 2019).

### **Traffic Impact Analysis**

A *Traffic Impact Analysis* (see Appendix C) was prepared by KD Anderson & Anderson Associates dated October 22, 2019, for the Grocery Outlet Store project (retail store) located in Fort Bragg, California. As noted in the *Traffic Impact Analysis*, the relative impacts of developing the retail store and the adequacy of site access are dependent on the physical characteristics of the adjoining street system, as well as the amount of traffic generated by the proposed project. The project is expected to generate a total of 1,709-weekday trips and 2,842 daily trips on a Saturday. Roughly 6 percent (165 trips) of the Saturday traffic occurs in the midday peak hour and 9 percent (148 trips) of the weekday trips occur during the weekday p.m. peak hour. After discounting for pass-by trips already occurring on State Highway 1 near the Site, the project is projected to generate 105 new primary trips in the Saturday midday peak hours, and 95 new primary trips in the weekday p.m. peak hours. Based on the location of competing stores, the most likely effect on regional travel associated with the development of the project is to slightly reduce the length of trips from areas south of the river off of State Highway 20 or State Highway 1 that are today made northbound and to offer another option for shopping trips made by residents of areas to the north. As the proposed project is relatively close to other stores, the regional effect on VMT is likely to be small, but generally will be reduced by offering a closer option for northbound traffic (*Traffic Impact Analysis*, 2019).

### **III. PROJECT SETTING AND LOCATION**

The approximately 1.63-acre Site is located on the west side of S. Franklin Street in the Coastal Zone within the City of Fort Bragg, approximately 400 feet east of State Highway 1. South Street runs along the north parcel boundary while N. Harbor Drive runs along the south parcel boundary of the Site. The Site is located immediately adjacent to commercial developments to the north, south, and west, and is located approximately 600 feet north of the Noyo River. Current businesses adjacent to the west parcel boundary include Super 8, Mountain Mike's Pizza, and Chevron. The Seabird Lodge is across South Street to the north of the Site, and the Harbor Lite Lodge is located across North Harbor Drive to the south of the Site. To the east and across S. Franklin Street are single-family residences in addition to two (2) vacant lots. The project Site is relatively flat with elevations at the Site range from approximately 117 feet and 122 feet above mean sea level (amsl) (Google Earth, 2020).

The Site consists of three (3) lots located on the west side of S. Franklin Street. The project Site contains existing development primarily within the northern half of the Site. The northern lot is 95 percent covered by a paved parking area with shrubbery planted around the edges of the lot. The existing 16,436 square-foot vacant former office building, locally referred to as the "Old Social Services Building" is located on the middle lot. The southern-most lot is vacant with one-third bare soil and two-thirds covered with annual grasses and forbs with scattered shrubs. The Site is not known to contain any creeks/streams, riparian areas, or wetlands on-site (USFWS, 2020). The Site is located in Zone "X" – area of minimal flood hazard – as shown on Federal Emergency Management Agency's (FEMA) National Flood Hazard Layer FIRMette map number 06045C1016G, effective July 18, 2017.

#### IV. ENVIRONMENTAL EFFECTS

An environmental checklist follows this section and addresses all potential adverse effects resulting from the proposed project. No significant adverse effects are expected from any of the proposed activities.

#### V. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a **"Potentially Significant Impact"** or **"Potentially Significant Unless Mitigation Incorporated"** as indicated by the checklists on the following pages.

	Aesthetics		Agriculture and Forestry Resources		Air Quality
X	Biological Resources		Cultural Resources		Energy
X	Geology/Soils		Greenhouse Gas Emissions		Hazards & Hazardous Materials
	Hydrology/Water Quality		Land Use/Planning		Mineral Resources
X	Noise		Population/Housing		Public Services
	Recreation		Transportation		Tribal Cultural Resources
	Utilities/Service Systems		Wildfire		Mandatory Findings of Significance

An explanation for all checklist responses is included, and all answers take into account the whole action involved and the following types of impacts: off-site and on-site; cumulative and project-level; indirect and direct; and construction and operational. The explanation of each issue identifies (a) the threshold of significance, if any, used to evaluate each question; and (b) the mitigation measure identified, if any, to reduce the impact to less than significance. The mitigation measures are provided in the Mitigation Monitoring and Reporting Program (MMRP) (see Appendix D).

In the checklist the following definitions are used:

**"Potentially Significant Impact"** means there is substantial evidence that an effect may be significant.

**"Potentially Significant Unless Mitigation Incorporated"** means the incorporation of one or more mitigation measures can reduce the effect from potentially significant to a less than significant level.

**"Less Than Significant Impact"** means that the effect is less than significant and no mitigation is necessary to reduce the impact to a lesser level.

**"No Impact"** means that the effect does not apply to the proposed project, or clearly will not impact nor be impacted by the proposed project.

**DETERMINATION: (To be completed by the Lead Agency on the basis of this initial evaluation)**

<input type="checkbox"/>	I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
<input checked="" type="checkbox"/>	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
<input type="checkbox"/>	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
<input type="checkbox"/>	I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
<input type="checkbox"/>	I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.



Signature

Byron Turner  
Consulting Planner for the City of Fort Bragg

Name and Title

12/16/2020

Date

I. <b>AESTHETICS.</b> Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Thresholds of Significance:** The project would have a significant effect on aesthetics if it would have a substantial adverse effect on a scenic vista; substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway; substantially degrade the existing visual character or quality of public views of the site and its surroundings (if the project is in a non-urbanized area) or conflict with applicable zoning and other regulations governing scenic quality (if the project is in an urbanized area); or create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area.

**DISCUSSION**

The Site is located within the City of Fort Bragg city limits on urban and built-up land, surrounded by parcels utilized for commercial businesses, residences, and two (2) vacant lots (DOC, 2016). The Site contains existing development primarily within the northern half of the Site. The northern lot is 95 percent covered by a paved parking area with shrubbery planted around the edges. The existing 16,436 square-foot vacant former office building is located on the middle lot. The southern-most lot is vacant with one-third bare soil and two-thirds covered with annual grasses and forbs with scattered shrubs. Currently, the Site is accessed on the north end via a paved entrance to South Street. There is an existing dirt driveway that runs across the southern parcel from S. Franklin Street to N. Harbor Drive.

Under the proposed project, an existing 16,436 square-foot vacant former office building and associated 47-space parking lot and wooden fencing along the property line would be demolished, and a Grocery Outlet (retail store) would be constructed on the Site. Conceptual plans for the proposed project indicate that the retail store would be a one-story structure, 16,157 square-feet in size. Associated improvements and infrastructure on-site would include a loading dock and trash enclosure on the west side of the store, a parking area with 53 parking spaces on the south side of the store, an internal system of walkways and crosswalks, two (2) bicycle racks, two (2) driveways, a new fire connection, replacement of an existing sewer connection, connection to underground utilities, landscaping for stormwater capture and treatment, illuminated signage, and landscaping throughout the Site. The existing planted ornamental trees along the South Street frontage would be removed and replaced with landscaping selected for the local climate. Landscaping includes trees and vegetation along the property boundaries within the proposed parking lot and bioretention basins located along the northwest and southwest boundaries. Trees would be planted along the north, south, and east boundaries, with a few along the west boundary, as well as one tree within each of the parking lot landscaping islands. The project would include the installation of a six-foot-tall

illuminated monument sign on the southeast corner of the Site. The monument sign would have 15 square feet of branding on each side, in addition to the unbranded base (see Signage Package; Appendix E). Additionally, an 83.3 square foot illuminated channel sign would be located on the sign parapet along the front elevation. All exterior lighting would utilize energy-efficient fixtures and lamps, shielded or recessed, and directed downward in compliance with regulations set by the International Dark-Sky Association.

The Site is bordered to the north by South Street, to the east by S. Franklin Street, to the south by N. Harbor Drive, and to the west by a Super 8, Mountain Mike's Pizza, and Chevron. Nearby uses include commercial businesses to the north, west, and south, and residences and two (2) vacant lots to the east. State Highway 1 is located on the other side of the existing commercial businesses, approximately 400 feet west of the Site.

I.a) The project would not have a substantial adverse effect on a scenic vista. Per the City's Community Design Element of the Coastal General Plan Map CD-1., the proposed project is not located in an area designated as having "potential scenic views toward the ocean or the Noyo River".

The proposed retail store would occupy a similar location to the existing structure on the northern portion of the Site, where views looking to the west toward the Pacific Ocean are blocked by the existing Super 8 hotel, west of the project Site. There are limited views of the Pacific Ocean through the Site from S. Franklin Street along the north boundary as these views extend through numerous parcels, including an existing gas station and the undeveloped Mill Site to the west of State Highway 1. The 'keyhole' view is also dependent on the future development patterns of these sites. The proposed retail store would be setback 10 feet from the north boundary and vegetation is proposed along the boundary as seen in the landscape plan (see Figure 4), which excludes new tree planting within the 10-foot setback, preserving a limited view to the Pacific Ocean through the northern portion of the Site. A less than significant impact would occur.

I.b) Neither of the two (2) highways near the project Site, State Highway 1 and State Highway 20, state scenic highways. Per Caltrans Scenic Highway System Lists, State Highway 1 and State Highway 20 are eligible state scenic highways, although they have not been designated as scenic (Caltrans, 2019). Additionally, the proposed project would be separated from State Highway 1 by an existing hotel and gas station. Although the proposed project would likely be visible from State Highway 1, it would only be visible behind the existing commercial development. In addition, the existing vacant former office building slated to be demolished is not listed on any local, state, or federal historic list or registry as it was constructed sometime between 1996 and 1998 as indicated in the *Cultural Survey*, prepared by Genesis Society, dated August 15, 2019.

As previously mentioned, the southern portion of the Site is approximately one-third bare soil but is otherwise vegetated with annual grasses and forbs, with scattered shrubs. The northern portion is almost completely paved or developed with an existing structure; however, the northern property boundary has ornamental landscaping. The existing vegetation would be removed for the development of the new building, parking lot, and the Site's landscaping. The existing vegetation was likely planted as ornamental landscaping around the existing parking lot, and therefore, would not be considered scenic. The replacement of the existing vegetation with landscaping selected for the local climate, including the planting of 37 new trees, would not be anticipated to damage any existing scenic resources on Site, such as existing trees or rock outcroppings. No impact would occur.

I.c) As previously mentioned, the proposed project is not located in an area designated as having "potential scenic views toward the ocean or the Noyo River". The proposed retail store would occupy a similar location to the existing structure on the northern portion of the Site, where views looking to the west toward the Pacific Ocean are blocked by the existing hotel, west of the project Site. Views to the project Site are currently



dominated by the existing former office building and associated parking lot, which has been vacant since 2010. The southern portion of the Site is partially bare, with vegetation consisting of grasses and forbs, with scattered shrubs. Existing views to the Site are not characterized as scenic; therefore, the proposed project is not anticipated to substantially degrade the existing visual character or quality of the public views of the Site and its surroundings, as the height of the proposed retail store would be consistent with the Site's existing development and would comply with all required development standards, including maximum building height. Although the Site is located on urban and built-up land per the California Department of Conservation, the project is not located in an "urbanized area," as defined by Public Resources Code, Chapter 21071. A less than significant impact would occur.

I.d) The proposed project has the potential to increase light and glare and impact nighttime views as compared to existing conditions, as the Site's current development consists of a former office building that has been vacant since 2010. A six-foot illuminated monument sign on the southeast corner of the Site is proposed, in addition to an 83.3 square foot illuminated channel sign located on the sign parapet along the front elevation of the retail store. To minimize potential impacts associated with light and glare on surrounding development, the proposed project includes exterior lighting that would utilize energy-efficient fixtures and lamps, shielded or recessed, and directed downward in compliance with regulations set by the International Dark-Sky Association. A less than significant impact would occur.

**MITIGATION MEASURES**

No mitigation required.

**FINDINGS**

The proposed project would have a **Less than Significant Impact** on Aesthetics.

II. AGRICULTURE AND FORESTRY RESOURCES. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g), timberland (as defined by PRC section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forestland to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Thresholds of Significance:** The project would have a significant effect on agriculture and forestry resources if it would convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (hereafter “farmland”), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural uses; conflict with existing zoning for agricultural use or a Williamson Act contract; conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g), timberland (as defined by PRC section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)); Result in the loss of forest land or conversion of forest land to non-forest use; or involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forestland to non-forest use.

**DISCUSSION**

The Site is located within the Coastal Zone in the City of Fort Bragg city limits. The approximately 1.63-acre Site contains existing development primarily within the northern half of the Site. The northern lot is 95 percent covered by a paved parking area with shrubbery planted around the edges. The existing 16,436 square-foot vacant former office building is located on the middle lot. The southern-most lot is vacant with one-third bare soil and two-thirds covered with annual grasses and forbs with scattered shrubs.

The Site is designated as “Urban and Built-Up Land” under the Farmland Mapping and Monitoring Program (FMMP) of the California Department of Conservation (DOC, 2016), Division of Land Resource Protection, and is not under a Williamson Act Agricultural Preserve contract (Mendocino County Maps - Timber Production & Williamson Act Lands, 2014).

II.a-b) The proposed project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use, conflict with existing zoning for agricultural use, or a Williamson Act contract. As noted above, the Site is designated as “Urban and Built-Up Land” under the FMMP of the DOC and is located within the City of Fort Bragg in an urban built-up environment. No impact would occur.

II.c-d) The Site is neither designated nor zoned as forest land or timberland and there is no forest land in the vicinity of the Site. No impact would occur.

II.e) There are no components of the project that would involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmland, to non-agricultural use or conversion of forest land to non-forest use. As described above, the Site is located within the City of Fort Bragg city limits in an urban built-up environment. No impact would occur.

**MITIGATION MEASURES**

No mitigation required.

**FINDINGS**

The proposed project would have **No Impact** on Agricultural and Forestry Resources.

III. AIR QUALITY. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Thresholds of Significance:** The project would have a significant effect on air quality if it would conflict with or obstruct implementation of applicable air quality plans; result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard; expose sensitive receptors to substantial pollutant concentrations; or result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

**DISCUSSION**

Air pollution control in the State of California is based on federal, state, and local laws and regulations. According to the 2005 Mendocino County Air Quality Management District (MCAQMD) Particulate Matter Attainment Plan (PM Attainment Plan) (pg. 5), the United States Environmental Protection Agency (EPA), California Air Resources Board (CARB), and regional clean air agencies all regulate air quality. The EPA and the CARB have set thresholds for each of the criteria pollutants, which include: ozone (O<sub>3</sub>), carbon monoxide (CO), oxides of nitrogen (NO<sub>x</sub>), lead (Lb), sulfur dioxide (SO<sub>2</sub>), particulate matter less than 10 microns in size (PM<sub>10</sub>), and particulate matter less than 2.5 microns in size (PM<sub>2.5</sub>). The standards set by the CARB are generally more stringent than those set by the EPA and the CARB has set additional standards for visibility-reducing particles (of any size), sulfates, and hydrogen sulfide (H<sub>2</sub>S). These standards are based on observable short-term (acute) health effects (MCAQMD, 2005).

The Site is located within the North Coast Air Basin (NCAB) and is subject to the requirements of the MCAQMD. The MCAQMD is responsible for monitoring and enforcing the state and federal Clean Air Acts as well as local air quality protection regulations in the County of Mendocino. The entire NCAB is currently designated as “non-attainment,” or more than allowable limits, for the state 24-hour allowable limits for breathable particulate matter of 10 microns or less (PM<sub>10</sub>), and as “attainment,” or within allowable limits, concerning the balance of the criteria pollutants. The MCAQMD has been determined to be in “attainment”, or within allowable limits, for all federal and state ambient air quality standards, except for the state annual average PM<sub>10</sub> standard and the 24-hour PM<sub>10</sub> standard.

The California Clean Air Act does not require attainment plans or transportation conformity for Districts that exceed the PM<sub>10</sub> standard but only requires that the Districts make reasonable efforts toward coming into attainment, defined as a five percent reduction in emissions per year until the standard is attained. Although not required for coming into attainment for the state standard, the MCAQMD adopted the PM Attainment Plan in 2005. The PM Attainment Plan includes a description of local air quality, the sources of local particulate matter (PM) emissions, and recommended control measures to reduce future PM<sub>10</sub> levels. While PM<sub>10</sub> levels have dropped over the last 20 years, due to changing industrial base, enhanced regulations, and increased enforcement by the MCAQMD, the MCAQMD still exceeds the State PM<sub>10</sub> level several times a year. The

majority of these exceedances result from wildfires, residential wood burning, unpaved roads, and construction activities (MCAQMD, 2005). To minimize air quality impacts due to dust resulting from activities such as construction and grading, the City of Fort Bragg (City) Section 17.30.080(D) of the Coastal Land Use and Development Code (CLUDC) outline's the City's dust management plan and Section 17.62.020(B) of the CLUDC requires that a Dust Prevention and Control Plan be submitted in conjunction with a grading plan or other plan involving the movement of dirt.

The project includes the demolition of an existing 16,436 square-foot vacant former office building and associated 47-space parking lot and wooden fencing along the property line, and the construction and operation of a 16,157 square-foot, one-story, Grocery Outlet (retail store) with a 53-space parking lot and associated improvements and infrastructure. The project and its emission sources are subject to the rules and regulations contained in the most recent version of the *Rules and Regulations* of the MCAQMD. The MCAQMD has also identified significance thresholds for use in evaluating project impacts under CEQA, provided in Table 2, below. [Please note: the MCAQMD does not specify thresholds for SO<sub>2</sub>. As a result, the Best Available Control Technology (BACT) emission rates for stationary sources, utilized by the North Coast Unified Air Quality Management District (NCUAQMD) specific to SO<sub>2</sub> are used for this analysis.]

Table 2. MCAQMD Significance Thresholds

Criteria Pollutant and Precursors	Construction Related		Operational Related	
	Average Daily Emissions (lb/day)	Maximum Annual Emissions (tons/year) <sup>1</sup>	Indirect Source Average Daily Emissions (lb/day)	Project/Stationary Source Maximum Annual Emissions (tons/year)
ROG	54	10	180	40
NOx	54	10	42	40
PM <sub>10</sub>	82	15	82	15
PM <sub>2.5</sub>	54	10	54	10
Fugitive Dust (PM <sub>10</sub> /PM <sub>2.5</sub> )	Best Management Practices	--	same as above	
Local CO	--	--	125 tons/year	
SO <sub>2</sub> *	--	--	80	40

<sup>1</sup> = Specific maximum allowable annual emissions related to construction were not provided by MCAQMD and were calculated based on the maximum average daily emissions thresholds.

\* = MCAQMD does not specify thresholds for SO<sub>2</sub>. As such, the NCUAQMD threshold for SO<sub>2</sub> is used for this analysis.

Source: MCAQMD, 2010; NCUAQMD, 2015.

During the project demolition and construction phases, the contractor would be expected to use heavy construction machinery and temporary air pollutant emissions would be associated with demolition, grading, excavation, and construction on the Site; however, the project would be required to comply with existing policies of the MCAQMD regarding the control of fugitive dust during these activities, which include maintaining all construction equipment in good working condition, and limiting truck idling on-site to a maximum of five minutes, pursuant to State law. Additionally, construction would be required to comply with the City's dust management plan and the site-specific Dust Prevention and Control Plan required for construction of the project, pursuant to the City CLUDC.

Although the Site currently contains an existing former office building, it is currently vacant. Therefore, exiting on-site emissions sources are anticipated to be minimal, if any. Once construction is complete, emissions from the operation of the project would be comprised of direct and indirect emissions, including but not limited to exhaust and fugitive dust from the operation of personal vehicles associated with employees and shoppers traveling to and from the Site, and delivery trucks, in addition to the operation of the new facility,

including heating and cooling and equipment operation. Continued compliance with MCAQMD emissions standards would be required once the new building has been constructed.

III.a-b) The project would not conflict with or obstruct implementation of any air quality plan, or result in any cumulatively considerable net increase of PM<sub>10</sub>. MCAQMD has advised that generally, an activity that individually complies with the state and local standards for air quality emissions will not result in a cumulatively considerable net increase in the countywide PM<sub>10</sub> emissions.

A *Traffic Impact Analysis* was prepared by KD Anderson & Associates, Inc., dated October 22, 2019, describing the proposed project as a discount grocery store located near the center of the population center of the City of Fort Bragg, which is expected to provide a majority of its customer base. Based on the location of comparable competing retail outlets located north and south of the Noyo River (i.e. Harvest Market, Safeway, and Purity Market), the most likely effect on regional travel associated with the development of the project is to slightly reduce the length of trips from areas south of the Noyo River off of State Highway 20 or State Highway 1 that are today made northbound and to offer another option for shopping trips made by residents of areas to the north. As the proposed project is relatively close to other stores, the regional effect on vehicle miles traveled (VMT) is likely to be small, but generally will be reduced by offering a closer option for northbound traffic. The Governor's Office of Planning and Research (OPR) released *Technical Advisory on Evaluating Transportation Impacts in CEQA* dated April 2018, which was used in preparing the *Traffic Impact Analysis*. This document indicates that by adding retail opportunities into the urban fabric and thereby improving retail destination proximity, local-serving retail development tends to shorten trips and reduce VMT, thus lead agencies generally may presume such development creates a less than significant transportation impact. As such, VMT will generally be reduced under the proposed project as indicated in the *Traffic Impact Analysis*, and therefore should not result in an increase in particulate matter.

While the anticipated development at the Site would generate temporary emissions and direct and indirect emissions once construction is complete, the project would not include any source of visible emissions, including intentional fire/burning or manufacturing, and would control exhaust emissions from construction equipment by minimizing idling. In addition, the contractor would suppress fugitive dust during construction and operation, pursuant to Rule-1-430 (Fugitive Dust Emissions) of Chapter IV (Prohibitions) of Regulation 1 (Air Pollution Control Rules) of the MCAQMD's Rules and Regulations (February 2011), and would maintain all construction equipment in good working order such that exhaust and fugitive dust emissions are minimized. The project would be subject to current and future regulations adopted by MCAQMD, including the PM Attainment Plan (2005), and compliance with these regulations would ensure the project would not result in a substantial increase of PM<sub>10</sub> within the vicinity of the Site. Based on the aforementioned analysis, the proposed project would not conflict with or obstruct implementation of federal, state, or MCAQMD standards, or MCAQMD's Attainment Plan; violate any air quality standard, or result in a cumulatively considerable net increase in the PM<sub>10</sub> non-attainment levels in Mendocino County for construction emissions. VMT will generally be reduced under the proposed project as indicated in the *Traffic Impact Analysis*, and therefore should not result in an increase in particulate matter. As such, a less than significant impact would occur.

III.c-d) Sensitive receptors are generally defined as people that have an increased sensitivity to air pollution or environmental contaminants, and generally include schools, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential dwelling unit(s). Sensitive receptors in the vicinity of the Site include:

- Motels located adjacent to the west and directly north and south of the Site;
- Existing single-family and multi-family residences located directly east and southeast of the Site;

- Mendocino County Superior Court located approximately 600 feet northwest of the Site;
- Moura Senior Housing located approximately 800 feet east of the Site; and
- Mendocino Coast District Hospital located approximately 950 feet northeast of the Site.

Emissions associated with construction of the proposed project would not be anticipated to exceed the annual thresholds of significance of the MCAQMD for the six listed pollutants nor would the project create substantial emissions (such as odors or dust) adversely affecting a substantial number of people. Temporary odors and dust, including exhaust from construction equipment, typical of construction sites and equipment use, may be generated during the construction phase and temporarily impact residents living near the Site. However, with suppression of fugitive dust during construction and operation, pursuant to Rule-1-430 (Fugitive Dust Emissions) of Chapter IV (Prohibitions) of Regulation 1 (Air Pollution Control Rules) of the MCAQMD's *Rules and Regulations* (February 2011) and the City's dust management plan (Section 17.30.080(D) of the CLUDC) and the site-specific Dust Prevention and Control Plan required pursuant to Section 17.62.020(B) of the CLUDC, and maintaining all equipment in good working condition, fugitive dust, and exhaust emissions would be minimized.

Emissions associated with the operation of the proposed project would not be anticipated to exceed the annual thresholds of significant of the MCAQMD for four of the six listed pollutants nor would the project create substantial emissions (such as odors or dust) for those four listed pollutants, adversely affecting a substantial number of people. VMT will generally be reduced under the proposed project as indicated in the *Traffic Impact Analysis*, and therefore should not result in an increase in particulate matter. As such, a less than significant impact would occur.

#### **MITIGATION MEASURES**

No mitigation required.

#### **FINDINGS**

The proposed project would have a **Less Than Significant Impact** on Air Quality.

IV. BIOLOGICAL RESOURCES. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Thresholds of Significance:** The project would have a significant effect on biological resources if it would have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service; have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service; have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means; interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites; conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

**DISCUSSION**

The approximately 1.63-acre Site is currently developed within the northern half of the Site and is located in the Coastal Zone within the City of Fort Bragg city limits on urban and built-up land. The northern lot is 95 percent covered by a paved parking area with shrubbery planted around the edges of the lot. The existing 16,436 square-foot vacant former office building is located on the middle lot. The southern half of the Site is vacant with one-third bare soil and two-thirds covered with annual grasses and forbs with scattered shrubs.



The Site is bordered to the north by South Street, to the east by S. Franklin Street, to the south by N. Harbor Drive, and to the west by a Super 8, Mountain Mike's Pizza, and Chevron. According to the U.S. Fish and Wildlife Service's (USFWS) National Wetlands Inventory (NWI) Wetlands Mapper, there are no known creeks/streams, riparian areas, or wetlands on-site (USFWS, 2020). The existing planted ornamental trees along the South Street frontage would be removed and replaced with landscaping selected for the local climate. Proposed landscaping includes trees and vegetation along the property boundaries within the proposed parking lot and bioretention basins located along the northwest and southwest boundaries. Trees would be planted along the north, south, and east boundaries, with a few along the west boundary, as well as one tree within each of the parking lot landscaping islands. Based on the *Cultural Resources Inventory Survey*, prepared by Genesis Society, dated August 15, 2019, the existing development was constructed sometime between 1996 and 1998. Per correspondence with the previous owners, the Site has not been leased since 2010 but has been used as storage since then. Drainage across the Site appears to flow to the northwest and southwest. The nearest bodies of water are the Noyo River, which is located approximately 600 feet south of the Site, and the Pacific Ocean, which is located approximately 1,200 feet west of the Site. Regional drainage is controlled by the Noyo River.

The Site is not known to contain any wetland or riparian areas (USFWS, 2020). However, as provided by the U.S. Fish and Wildlife Service's (USFWS) Information, Planning, and Consultation (IPaC) System, 18 mammal, bird, reptiles, amphibians, fishes, insects, and flowering plant species, listed as threatened or endangered under the Endangered Species Act (ESA), have the potential to occur at the Site. Furthermore, the California Native Plant Society's (CNPS) *Inventory of Rare and Endangered Plants*, lists 46 rare or endangered plants with the potential to occur within the Fort Bragg quadrangle.

A *Grocery Outlet Fort Bragg, California Property Biological Review (Biological Review; see Appendix B)* was prepared by Wildland Resource Managers in August 2019. As noted in the *Biological Review*, the study was conducted to identify and assess the biological features of the project area inclusive of its soils, vegetation, wetlands, wildlife habitats, and the presence of sensitive species in order to comply with Mendocino County's planning requirements pursuant to CEQA. A query of the CNDDDB for the Fort Bragg quadrangle was made to determine if any special status plant or animals could be on the property given the current habitat conditions. A listing of 73 species was found, but with the limited grass habitat on the Site and general surrounding urban conditions, there is no suitable habitat for any of the database listed species on the three (3) lots, and none were observed during the field visit. No species of listed plants or animals were found within the project site area and there are no wetland features within or around the immediate area. No wildlife activity was observed occupying the Site other than gopher mounding and crow flyover. As there is a remote possibility that bats may be present in the abandoned building, a follow-up survey to address this question is advisable. If bats are found to utilize the Site, then consultation with CDFW is advisable. If bats are not found, there will be little loss of biological or ecological resources if the Site is developed (*Biological Review*, 2019). Because the Site is located in an urban built-up environment, surrounded by similar, urban uses, there is limited potential for any special status plant or wildlife species to be present at the Site.

On November 19, 2020, a referral response was received from Daniel Harrington, an Environmental Scientist at the California Department of Fish and Wildlife Services (CDFW) concluding that although CDFW would normally recommend plant and natural community surveys to Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities for most projects in the Coastal Zone, the scoping survey provided (*Biological Review; see Appendix B*) will be adequate for these parcels. Per CDFW, the parcels are urban with existing development, and the undeveloped portions are heavily disturbed and isolated from other habitat elements. CDFW did recommend that the bat surveys suggested

in the scoping report be a condition of approval and that if it's discovered that the existing building serves as a bat roost, further mitigation may need to be considered.

IV.a) The project would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFW) or U.S. Fish and Wildlife Service (USFWS) based on the location of the Site and the surrounding uses.

The approximately 1.63-acre Site is currently developed within the northern half and undeveloped within the southern half and is located in an urban built-up environment. As indicated in the *Biological Review*, there are 73 special status plant and wildlife species with the potential to occur on or within the vicinity of the Site; however, there is limited potential for any special status plant or wildlife species to be present at the Site. As noted above, the Site is located within a built-up urban environment and is comprised of an existing building, paved parking lot, and annual grasses and forbs with scattered shrubs that do not provide suitable habitat for the above-listed species. As there is a remote possibility that bats may be present in the abandoned building, Mitigation Measure BIO-1 is applied. With mitigation, a less than significant impact would occur.

IV.b) The proposed project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community. No riparian habitat is mapped on-site or within the vicinity (NWI, 2020), and no other sensitive natural communities are located on or adjacent to the Site. No impact would occur.

IV.c) As provided by the USFWS National Wetlands Inventory (NWI) Wetlands Mapper, there are no known creeks/streams or wetlands on-site (USFWS, 2020). The nearest bodies of water are the Noyo River, which is located approximately 600 feet south of the Site, and the Pacific Ocean, which is located approximately 1,200 feet west of the Site. Regional drainage is controlled by the Noyo River. As there are no wetlands in or in close vicinity to the Site, no impact would occur.

IV.d) The project would not be anticipated to substantially interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites. Although according to the USFWS IPac List, generated September 14, 2020, there is potential for four (4) bird species listed as Threatened and one (1) bird species listed as Endangered under the Endangered Species Act, four (4) of which are migratory bird species protected under the Endangered Species Act, Migratory Bird Treaty Act of 1918 (MBTA), or other regulations to be present at the Site, there is little potential for these native resident bird species to be impacted during project construction and operation, as there are currently no trees on-site that may provide nesting habitat for these native birds. In addition, the Site does not contain any streams, creeks, or wetland areas, and is located within an urban built-up environment with no existing wildlife corridors. There are no existing wildlife nursery sites within or near the Site that could be impacted by the project. No impact would occur.

IV.e) Under the City of Fort Bragg's Coastal General Plan policies, the project has been reviewed for consistency with Element 4 (Conservation, Open Space, Energy, and Parks), which contains goals and policies related to the protection and enhancement of natural resources, reduction of greenhouse gas (GHG) emissions, protection of water quality, and enhancement of open space, and for the provision of coastal access and recreational opportunities for Fort Bragg residents and visitors. The project Site is not mapped for open space or environmentally sensitive areas as indicated on Map OS-1 Open Space and Environmentally Sensitive Habitat Areas.

The proposed project would entail the demolition of an existing vacant former office building and associated paved parking lot and wooden fencing along the property line to construct a retail store and paved parking lot within the existing developed footprint. The Site is located within an urban built-up environment and covered with annual grasses and forbs with scattered shrubs on the southern-most lot, and shrubbery and a few ornamental trees planted around the edges of the existing paved parking lot to the north and northwest of the Site. The project includes substantial landscaping compared to what currently exists that would introduce native plants for the local climate to the Site. In addition, during construction of the project, BMPs to prevent erosion and the discharge of sediment would be implemented to protect waterbodies from stormwater pollutants due to project construction. The project would not conflict with any local policies or ordinances related to the protection of biological resources. No impact would occur.

IV.f) The proposed project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan, as there are no such plans applicable to the Site. No impact would occur.

#### **MITIGATION MEASURES**

BIO-1: A bat survey shall be conducted prior to demolishing the existing building on-site. If no bats are found no further mitigation is required. If bats are discovered, prior to demolition the bats must be removed through live exclusion or similar means that do not harm bats. If bats are discovered no removal can occur during the maternity season (typically late May through mid-August) to protect flightless baby bats.

#### **FINDINGS**

The proposed project would have a **Less Than Significant Impact With Mitigation Incorporated** on Biological Resources.

V. CULTURAL RESOURCES. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Thresholds of Significance:** The project would have a significant effect on cultural resources if it would cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5; cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5; or disturb any human remains, including those interred outside of formal cemeteries.

**DISCUSSION**

Various City policies exist related to the protection and preservation of cultural and historical resources, including but not limited to: Policies OS-4.1 through OS-4.5 of Chapter 4 (Conservation, Open Space, Energy, and Parks) of the Coastal General Plan of the City of Fort Bragg (2008); Policies OS-4.1 through OS-4.5 of Chapter 4 (Conservation, Open Space, Energy, and Parks) of the Coastal General Plan of the City of Fort Bragg (2008) seek to protect and preserve cultural resources by requiring new development to be located and/or designed to avoid archaeological and paleontological resources, where feasible, archaeological resources reports for development in specific areas, and standard protocol in the event archaeological resources are uncovered during construction.

A *Cultural Resources Inventory Survey (Cultural Survey)* was prepared by Genesis Society on August 15, 2019, to evaluate the project’s potential to impact cultural resources in conformity with the City of Fort Bragg and Mendocino County rules and regulations, and in compliance with requirements of the California Environmental Quality Act of 1970, Public Resources Code Section 21000, et seq. (CEQA), and the California CEQA Environmental Quality Act Guidelines, California Administrative Code Section 15000 et seq. (Guidelines as amended). Due to the sensitive and confidential nature of the report, a copy of the *Cultural Survey* is not included as an appendix to this Initial Study.

According to the *Cultural Survey*, the region in which the Site is located was first inhabited more than 12,000 years ago. Prior to historic settlement, the lands surrounding the Noyo River were covered by a variety of coastal scrub and a mixed forest dominated by Bishop pine and including redwood, conifers, and hardwoods such as tanoak and madrone. The Site is located within the territory claimed by the Northern Pomo at the time of initial European-American entry into the region. The Northern Pomo consisted of multiple tribelets, which consisted of three (3) to five (5) primary villages, one (1) ethnographic village, *Kadiu*, was located immediately north of the Noyo River and is today identified immediately west of State Highway 1, west of the Site. Pomo cultural materials are documented in both ethnographic and archaeological records and artifacts include a wide variety of materials and expressions. Colonization of the region began in 1812 with the establishment of Fort Ross by Russia, approximately 80 miles south of the Site, and was followed by other European-American explorers who visited, then later settled, the Mendocino Coast beginning in the 1830s. In 1855, the federal government created the 25,000-acre Mendocino Indian Reservation adjacent to the north side of the Noyo River. In 1857, Fort Bragg was established between Pudding Creek and the Noyo River, to administer the large reservation until 1864 when the interred Native Americans were forcibly moved

to the Round Valley Indian Reservation near Covelo. Widespread settlement in Mendocino County was spurred by demand for both lumber and agricultural lands and led to the establishment of mills throughout the County and the 1891 formation of the Union Lumber Company in Fort Bragg, which closed in 1969 (Genesis Society, 2019).

A records search was conducted at the Northwest Information Center (NWIC) located on the Sonoma State University campus on July 16, 2019 (File No. 18-2464), which included a review of all records on file for lands within a 0.25-mile radius of the Site, including archaeological site and survey records, and numerous registries and inventories reviewed as part of the NWIC search, or evaluated separately. Topographic maps from 1943 through 1985 depict a school within the project area; however, aerial photographs show that no structures existed on the Site between 1943 and 1996. As such, the *Cultural Survey* deduced that the school icon visible on historic topographic maps represents an "artifact" from older topographic maps. A review of the historic registers and inventories indicated that no archaeological investigation had been previously prepared for the Site and no historic properties or cultural resources have been documented within the project area; however, eight (8) cultural resources have been documented within a 0.25-mile radius of the Site.

As noted in the *Cultural Survey*, fieldwork was conducted on August 10, 2019, by Genesis Society and entailed an intensive pedestrian survey by means of walking systematic transects, spaced at 10-meter intervals within the portions of the Site that did not contain existing impervious surface cover, including building, parking, roads, etc. In surfaced areas, structure and road margins were inspected for any native soils. The *Cultural Survey* notes that the majority of the Site has been subjected to intensive disturbance as a result of wholesale demolition, grading, and subsequent contemporary (post-1996) commercial building construction. No evidence of prehistoric or historic use or occupation was observed within the Site, most likely due to the degree of contemporary disturbance to which the Site has been subjected. Based on the findings of the records search and pedestrian survey, no significant historic resources or unique archaeological resources are present within the project area and none will be affected by the proposed project (Genesis, 2019).

On June 20, 2019, Genesis Society contacted the Native American Heritage Commission (NAHC) to request information concerning archaeological sites or traditional use areas for the project area. The NAHC response letter, dated June 28, 2019, indicated that a Sacred Lands File (SLF) search was completed and returned a negative result. The NAHC provided a list of 13 Native American contacts who may have knowledge of cultural resources in the project area and suggested that Genesis Society contact all of those indicated. The NAHC Native American Contacts List dated June 27, 2019, including the EPA Director and Chairperson of the Cahto Tribe; the Chairpersons of the Coyote Valley Band of Pomo Indians, Guidiville Band of Pomo Indians, Hopland Band of Pomo Indians, Kashia Band of Pomo Indians of the Stewarts Point Rancheria, Manchester Band of Pomo Indians, Noyo River Indian Community, Pinoleville Pomo Nation, Potter Valley Tribe, Redwood Valley or Little River Band of Pomo Indians, and Sherwood Valley Band of Pomo Indians; and the President of the Round Valley Reservation/Covelo Indian Community.

On July 22, 2019, Genesis Society sent letters to all representatives on the NAHC contact list, and those contacted were requested to supply any information they might have concerning prehistoric sites or traditional use areas within, adjacent, or near the project area. A follow-up email and telephone call were placed with Tina Sutherland of the Sherwood Valley Band of Pomo Indians on Saturday, August 10, 2019, prior to the pedestrian survey. No responses were received from the contacted parties. As no prehistoric cultural material was identified during the records search or pedestrian survey, no additional consultation was undertaken by Genesis Society or the City of Fort Bragg (City), and the City, as Lead Agency, has deemed the Tribal consultation process complete. Copies of the NAHC response and Native American Contacts List and an example of the letters sent to Tribal representatives are included in Appendix A.

V.a) As discussed above, the *Cultural Survey* (Genesis Society, 2019) found that no historical resources or historic properties have been documented within the project area. While the proposed project includes the demolition of an existing building, the existing building is a contemporary (post-1996) commercial building. As a result, no impact would occur.

V.b-c) The project is not anticipated to cause a substantial adverse change in the significance of an archaeological resource or disturb any human remains. As noted above, based on the records search conducted at the NWIC, the consultation undertaken with the NAHC, and the Tribal consultation effort completed by Genesis Society (2019), no unique archaeological resources or prehistoric cultural material was identified in the project area. The *Cultural Survey* recommends archaeological clearance for the proposed project, with the inclusion of general provisions that recommend consultation and protocol in the event of inadvertent discovery. A standard condition of approval to that effect has been applied to the project. The proposed project is found consistent with policies of the City of Fort Bragg for protection of cultural resources, including human remains. A less than significant impact would occur.

#### **MITIGATION MEASURES**

No mitigation required.

#### **FINDINGS**

The proposed project would have a **Less Than Significant Impact** on Cultural Resources.

VI. ENERGY. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Thresholds of Significance:** The project would have a significant effect on energy if it would result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources, during project construction or operation.

**DISCUSSION**

On October 7, 2015, Governor Edmund G. Brown, Jr. signed into law Senate Bill (SB) 350, known as the Clean Energy and Pollution Reduction Act of 2015, which sets ambitious annual targets for energy efficiency and renewable electricity aimed at reducing greenhouse gas (GHG) emissions. According to the Final Commission Report of the California Energy Commission (CEC), dated October 2017, SB 350 requires the CEC to establish annual energy efficiency targets that will achieve a cumulative doubling of statewide energy efficiency savings and demand reductions in electricity and natural gas final end uses by January 1, 2030. This mandate is one of the primary measures to help the state achieve its long-term climate goal of reducing GHG emissions to 40 percent below 1990 levels by 2030. The proposed SB 350 doubling target for electricity increases from 7,286 gigawatt-hours (GWh) in 2015 up to 82,870 GWh in 2029. For natural gas, the proposed SB 350 doubling target increases from 42 million therms (MM) in 2015 up to 1,174 MM in 2029 (CEC, 2017).

Under the proposed project, BRR Architecture (Applicant) is proposing to construct a 16,157 square-foot Grocery Outlet (retail store) and associated improvements including a 53-space parking lot, landscaping, and infrastructure. Construction of the proposed project would be subject to the 2016 California Energy Code, Part 6 of Title 24 of the California Code of Regulations, which contains energy conservation standards applicable to residential and non-residential buildings throughout California (CEC, 2020).

XIX.a-b) The proposed project would not be anticipated to result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy or wasteful use of energy resources, nor would the proposed project conflict with or obstruct a State or local plan for renewable energy or energy efficiency. The consumption of energy would occur during construction through the use of fossil fuels and electricity in construction equipment and vehicles. Construction would occur during normal business hours, typically 8:00 AM to 6:00 PM, Monday through Friday, and would be temporary in nature. The contractor would keep all construction equipment in good working order and would limit idling of vehicles and equipment during construction, in accordance with California Code of Regulations, Title 13, Section 2485: *Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling* (adopted 2005), which limits idling from both on-road and off-road diesel-powered equipment and is enforced by the California Air Resources Board (ARB). Therefore, it is anticipated that the construction phase of the project would not result in wasteful, inefficient, and unnecessary consumption of energy.

Operation of the project would be subject to the 2016 California Energy Code, Part 6 of Title 24 of the California Code of Regulations, which contains energy conservation standards applicable to residential and non-residential buildings throughout California to ensure new and existing buildings achieve energy

efficiency and preserve outdoor and indoor environmental quality. Therefore, a less than significant impact would occur.

**MITIGATION MEASURES**

No mitigation required.

**FINDINGS**

The proposed project would have a **Less Than Significant Impact** on Energy.



VII. GEOLOGY AND SOILS. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Thresholds of Significance:** The project would have a significant effect on geology and soils if it would directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault, strong seismic ground shaking, seismic-related ground failure, including liquefaction, or landslides; result in substantial soil erosion or the loss of topsoil; be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse; be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property; have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater; or directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

**DISCUSSION**

The City of Fort Bragg (City) is located in the Coast Ranges geologic province, an area dominated by north-west trending mountain ranges, which have been cut by major river valleys (Google Maps, 2020). As provided in Chapter 7 (Safety) of the City of Fort Bragg Coastal General Plan, the City is located approximately 9 miles east of the San Andreas Fault Zone and 22 miles west of the Maacama Fault Zone,

which are the two (2) major fault systems capable of generating significant earthquakes in the region (City, 2008).

As provided in Chapter 3, The Land Use Plan: Resources and Development Issues and Policies of the Mendocino County Coastal Element, the Coastal Zone is seismically active and vulnerable to earthquake hazards which include surface rupture, ground shaking, liquefaction, and differential settlement (County, 1985). The Site is not located within an Alquist-Priolo special studies zone nor do any known faults traverse the Site (CGS, 2019). Since the Site is located within a seismically active region and per the Earthquake Shaking Potential for California map, there is a high likelihood of experiencing large earthquakes that display strong shaking to occur during the economic lifespan (50 years) of any development on the Site (CGS, 2016). The specific soil type underlying the Site is classified as Urban land, 0 to 15 percent slopes (Soil Type #219). This soil type is predominantly covered by impervious surfaces or has been altered by cutting, filling, and grading. About 25 percent consists of unaltered soils that are extremely variable and require an onsite investigation to evaluate the potential and limitations for any proposed use (USDA, 2006). No historic landslides have been mapped in the vicinity nor within the boundaries of the Site. Additionally, the Site is not mapped for liquefaction potential, although geologic maps indicate the Site is underlain by Pleistocene aged marine and marine terrace deposits that are potentially susceptible to liquefaction (DMG, 1960). The project Site is relatively flat with gentle slopes of less than 15 percent to the northwest and southwest towards the neighboring property, in the developed portion of the Site.

VII.a.i.ii) The Site is not located within an Earthquake Fault Zone or an area currently designated as a "Seismic Hazard Zone" by the State and the nearest active fault to the project Site is the San Andreas Fault Zone, located approximately 9 miles west of the Site (City, 2008). However since the Site is located within a seismically active region proximal to multiple seismic sources (the Maacama Fault Zone and San Andreas Fault) capable of generating moderate to large ground motions, it is expected that the project area would likely experience large earthquakes that display strong shaking during the economic life span of any Site development, including the proposed project. Given the proximity of the proposed project to active seismic sources within the region currently and based on the distance between the Site and the closest active fault, the San Andreas Fault zone, the potential for surface rupture at the Site is considered moderate. Since construction of the proposed project at the Site would be subject to requirements of the latest version of the CBC to reduce any potential geological risks, a less than significant impact would occur.

VII.a.iii) The Site is not mapped for liquefaction potential, although geologic maps indicate the Site is underlain by Pleistocene aged marine and marine terrace deposits that are potentially susceptible to liquefaction (DMG, 1960). Since the proposed project would be subject to the requirements of the latest version of the CBC to reduce any potential geological risks, a less than significant impact would occur.

VII.a.iv) Landslides generally occur on relatively steep slopes and/or on slopes underlain by weak sediments. As previously discussed, no historic landslides have been mapped in the vicinity nor within the boundaries of the Site. As seen from Google Earth imagery, the Site is relatively flat with gentle slopes of less than 15 percent to the northwest and southwest towards the neighboring property, in the developed portion of the Site and elevations ranging from approximately 117 feet and 122 feet amsl. Given the relatively low slopes, both on and adjacent to the Site, and no historic landslides mapped in the vicinity of the Site, no impact would occur.

VII.b) On-site development would require demolition, excavation, and groundbreaking activities. All development activities, including the proposed retail store, would be subject to the site development regulations in Article 6, Chapter 17.60 of the City's CLUDC, which include environmental protection and Best Management Practices (BMPs) for minimizing erosion resulting from construction, avoiding runoff into sensitive

habitat areas, limiting ground disturbance to the minimum necessary, and stabilizing disturbed surfaces as soon as feasible after construction is complete. In compliance with these regulations, the project contractor would be required to implement the BMPs provided on the approved Erosion and Sediment Control Plan (ESCP) prepared for the project, which may include, but are not limited, to straw bales, fiber rolls, and/or silt fencing structures. As a result, a less than significant impact would occur.

VII.c) As previously discussed, landslides are not known to have previously occurred on or in the immediate vicinity of the Site, as no historic landslides have been mapped in the vicinity nor within the boundaries of the Site. Additionally, the majority of the Site contains gentle slopes, and the potential for liquefaction at the Site is low since the Site is not located within a mapped liquefaction zone. As a result, the potential for lateral spreading and subsidence at the Site is considered low.

As described above, the Site is not located within a mapped Alquist-Priolo special studies zone; however, the Site is located within a seismically active region and would experience large earthquakes that display strong shaking during the economic life span of any development on the Site. The proposed project would be subject to the requirements of the latest version of the CBC in order to minimize potential geological risks. A less than significant impact would occur.

VII.d) No known expansive soils are located at the Site. Expansive soils generally consist of cohesive fine-grained clay soils and represent a significant structural hazard to buildings founded on them as they have a tendency to undergo volume changes (shrink or swell) with changes in moisture content, especially where seasonal fluctuations in soil moisture occur at the foundation-bearing depth. As described above, the soils at the Site are predominantly covered by impervious surfaces or have been altered by cutting, filling, and grading. About 25 percent consists of unaltered soils that are extremely variable and require an onsite investigation to evaluate the potential and limitations for any proposed use (USDA, 2006). The Site contains existing development primarily within the northern half, the subsurface soils are predominately covered by impervious surfaces or have been altered by cutting, filling, and grading, and would be unlikely to be affected by seasonal wetting and drying. The southern-most lot is vacant and has been heavily disturbed, with one-third bare soil and two-thirds covered with annual grasses and forbs with scattered shrubs. A less than significant impact would occur.

VII.e) The Site is currently and would continue to be served by community water and sanitary sewer systems, provided by the City of Fort Bragg's Public Works Department, which would be modified to serve the proposed retail store. Since the project would not require the use of septic tanks or alternative wastewater disposal systems, no impact would occur.

VII.f) Per Element 4 (Conservation, Open Space, Energy, and Parks) of the City's Coastal General Plan, Map OS-2 indicates that the project Site is not within a special review area, areas of known or potential archaeological or paleontological resources. As such, the probability of a unique paleontological resource or site or unique geologic feature at the Site is low. However, as the southern-most lot on the Site has not been excavated, there is the possibility that unique paleontological resources or sites of unique geologic features could exist on the Site. Mitigation Measure GEO-1, which includes halting construction until the resource can be evaluated and mitigated for if needed, has been included to prevent significant impacts to fossils or fossil-bearing deposits in the event they are encountered during project construction. With mitigation incorporated, a less than significant impact would occur.

## **MITIGATION MEASURES**

**GEO-1:** In the event that fossils or fossil-bearing deposits are discovered during project construction, the contractor shall notify a qualified paleontologist to examine the discovery, and excavations within 50 feet of the find shall be temporarily halted or diverted. The area of discovery shall be protected to ensure that fossils are not removed, handled, altered, or damaged until the Site is properly evaluated, and further action is determined. The paleontologist shall document the discovery as needed, in accordance with the Society of Vertebrate Paleontology standards (Society of Vertebrate Paleontology 1995), evaluate the potential resource, and assess the significance of the finding under the criteria set forth in CEQA Guidelines Section 15064.5. The paleontologist shall notify the appropriate agencies to determine procedures that would be followed before construction is allowed to resume at the location of the find. If the project proponent determines that avoidance is not feasible, the paleontologist shall prepare an excavation plan for mitigating the effect of the project based on the qualities that make the resource important. The plan shall be submitted to the City of Fort Bragg for review and approval prior to implementation.

## **FINDINGS**

The proposed project would have a **Less Than Significant Impact with Mitigation Incorporated** on Geology and Soils.

VIII. GREENHOUSE GAS EMISSIONS. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions (GHG), either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Thresholds of Significance:** The project would have a significant effect on greenhouse gas emissions if it would generate greenhouse gas emissions (GHG), either directly or indirectly, that may have a significant impact on the environment; or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

### DISCUSSION

The Global Warming Solutions Act of 2006, also known as Assembly Bill (AB) 32, is a State law that establishes a comprehensive program to reduce greenhouse gas (GHG) emissions from all sources throughout the State. AB 32 requires the State to reduce its total GHG emissions to 1990 levels by 2020, a reduction of approximately 15 percent below emissions expected under a "business as usual" scenario. Pursuant to the AB 32 Scoping Plan (last reviewed in 2018), the California Air Resources Board (ARB) must adopt regulations to achieve the maximum technologically feasible and cost-effective GHG emission reductions. The following major GHGs and groups of GHGs being emitted into the atmosphere are included under AB 32: carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF<sub>6</sub>), and nitrogen trifluoride (NF<sub>3</sub>). The 2020 GHG emissions statewide limit set by AB 32, equal to the 1990 level, is 431 million metric tons of carbon dioxide (CO<sub>2</sub>) equivalent (MMTCO<sub>2</sub>e). In addition, in 2016, Senate Bill (SB) 32 was signed into law to codify the reduction target to reduce GHG emissions to 40 percent below the 1990 levels by 2030 (ARB, 2018). The 2019 edition of ARB's *California Greenhouse Gas Emissions for 2000 to 2017* (California GHG Emission Inventory) states that GHG emissions within the State of California have followed a declining trend since 2007. In 2017, statewide GHG emissions were 424 MMTCO<sub>2</sub>e, which was 5 MMTCO<sub>2</sub>e lower than 2016 levels and lower than the 2020 statewide GHG limit of 431 MMTCO<sub>2</sub>e. The transportation section remains the largest source of GHG emissions in the State, accounting for 41 percent of the State's GHG emissions in 2017 (CARB, 2019).

In 2012, the City of Fort Bragg adopted a Climate Action Plan. The plan sets GHG reduction goals, including a 30 percent reduction in GHG for the municipality by 2020, and a 7 percent reduction goal for the community by 2020. As noted in Section III (Air Quality) above, the Site is located within the North Coast Air Basin (NCAB) and is subject to the requirements of the Mendocino County Air Quality Management District (MCAQMD). The MCAQMD is responsible for monitoring and enforcing federal, state, and local air quality standards in Mendocino County.

Since the proposed project would result in the new development of a retail store on all three (3) lots, where the Site is currently developed with an office building and parking lot on the northern portion of the Site but has been vacant since 2010, it is anticipated that emissions in the vicinity of the project Site would increase. A *Traffic Impact Analysis* was prepared by KD Anderson & Associates, Inc., dated October 22, 2019, describing the proposed project as a discount grocery store located near the center of the population center of the City of Fort Bragg, which is expected to provide a majority of its customer base. Based on the location of comparable competing retail outlets located north and south of the Noyo River (i.e. Harvest Market, Safeway, and Purity Market), the most likely effect on regional travel associated with the

development of the project is to slightly reduce the length of trips from areas south of the Noyo River off of State Highway 20 or State Highway 1 that are today made northbound and to offer another option for shopping trips made by residents of areas to the north. As the proposed project is relatively close to other stores, the regional effect on vehicle miles traveled (VMT) is likely to be small, but generally will be reduced by offering a closer option for northbound traffic. The Governor's Office of Planning and Research (OPR) released *Technical Advisory on Evaluating Transportation Impacts in CEQA* dated April 2018, which was used in preparing the *Traffic Impact Analysis*. This document indicates that by adding retail opportunities into the urban fabric and thereby improving retail destination proximity, local-serving retail development tends to shorten trips and reduce VMT, thus lead agencies generally may presume such development creates a less than significant transportation impact. As such, although the results of CalEEMod indicate an increase in CO<sub>2</sub> related to the operational mobile category, VMT will generally be reduced under the proposed project as indicated in the *Traffic Impact Analysis*, and therefore should not result in an increase in CO<sub>2</sub> over the baseline conditions.

VIII.a) By adding retail opportunities into the urban fabric and thereby improving retail destination proximity, local-serving retail development tends to shorten trips and reduce VMT, thus lead agencies generally may presume such development creates a less than significant transportation impact. VMT will generally be reduced under the proposed project as indicated in the *Traffic Impact Analysis*, and therefore should not result in an increase in CO<sub>2</sub>. As previously discussed, compliance with MCAQMD standards and regulations, including obtaining all necessary permits for equipment through the MCAQMD, and California Code of Regulations, Title 13, Section 2485: *Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling* (adopted 2005), which limits idling of both on-road and off-road diesel-powered equipment and is enforced by the California Air Resources Board (CARB), would limit the potential for GHG emissions during construction. Compliance would require that the contractor keep all construction equipment in good working order and limit idling of vehicles and equipment during construction. Therefore, a less than significant impact would occur.

VIII.b) The proposed project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. As noted above, in 2012, the City of Fort Bragg adopted a Climate Action Plan that sets GHG reduction goals for the municipality and the community. Existing vegetation including a small area of annual grasses, forbs, and scattered shrubs in the southern portion of the Site and shrubbery planted as landscaping around the existing parking lot in the northeast corner of the Site would be removed during the demolition phase of the project; however, the proposed project includes the installation of landscaping throughout the proposed parking area and along the edges of the Site, which would include approximately 37 new trees and numerous shrubs. As the project includes the installation of numerous trees throughout the currently vacant developed Site, the proposed project would help with carbon sequestration and would therefore not be anticipated to conflict with the 2012 City of Fort Bragg Climate Action Plan. In addition, the proposed project would not conflict with local, MCAQMD, State, or federal regulations pertaining to GHG emissions. A less than significant impact would occur.

#### **MITIGATION MEASURES**

No mitigation required.

#### **FINDINGS**

The proposed project would have a **Less Than Significant Impact** on Greenhouse Gas Emissions.

IX. HAZARDS AND HAZARDOUS MATERIALS. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Impair implementation of, or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Thresholds of Significance:** The project would have a significant effect on hazards and hazardous materials if it were to create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment; emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school; be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment; result in a safety hazard or excessive noise for people residing or working in the project area if located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport; or impair the implementation of, or physically interfere with an adopted emergency response plan or emergency evacuation plan; or expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

**DISCUSSION**

A material is considered hazardous if it appears on a list of hazardous materials prepared by a federal, state, or local agency, or has characteristics defined as hazardous by a federal, state, or local agency. Chemical and physical properties such as toxicity, ignitability, corrosiveness, and reactivity cause a substance to be considered hazardous. These properties are defined in the California Code of Regulations, Title 22, Article 3: Characteristics of Hazardous Waste (effective July 1, 1991). A "hazardous waste" includes any hazardous material that is discarded, abandoned, or will be recycled. The criteria that render a material hazardous also

cause a waste to be classified as hazardous, per California Health and Safety Code, Chapter 6.5, Section 25117 (effective January 1, 1997).

The Site does not include any known hazardous waste sites, as mapped by the State Water Resources Quality Control Board (SWRQCB) or the California Department of Toxic Substances Control (DTSC). The Site or immediate vicinity does not include any known hazardous waste sites as mapped by the California Department of Toxic Substances Control (DTSC). As provided on the SWRQCB's GeoTracker, 8 listed sites are located within one-quarter mile of the Site, as provided in Table 3, below.

Table 3: GeoTracker-Listed Hazardous Materials Sites within Close Proximity (0.2135 miles) to Site

ID	Name & Case No.	Case Type	Location	Distance & Direction to Site	Cleanup Status
1	Chevron #9-3892 [T0604500037; RB Case #: 1TMC043]	LUST Cleanup Site	1004 Main Street, South	175 feet SW of Site	Completed – Case Closed
2	Cummings Trust–Lot #2 [T0604530112; RB Case #: 1TMC558]	LUST Cleanup Site	32100 Harbor Drive, North	550 feet SE of Site	Completed – Case Closed
3	CDOT Noyo Bridge [T0604593397; RB Case #: 1NMC328]	Cleanup Program Site	Highway 1 / Noyo Bridge	715 feet SW of Site	Completed – Case Closed
4	Texaco, R&F [T0604500059; RB Case #: 1TMC068]	LUST Cleanup Site	700 Main Street, South	725 feet NW of Site	Completed – Case Closed
5	Cummings Trust–Lot #3 [T0604559616; RB Case #: 1TMC553]	LUST Cleanup Site	32200 Harbor Drive, North	730 feet SE of Site	Completed – Case Closed
6	Private Residence [T0604548745; RB Case #: 1TMC544]	LUST Cleanup Site	Private Residence	825 feet N of Site	Completed – Case Closed
7	Wharf Restaurant, The [T0604593496; RB Case #: 1TMC446]	LUST Cleanup Site	32260 Harbor Drive, North	905 feet SE of Site	Completed – Case Closed
8	Mendocino Coast District Hospital [T0604500352; RB Case #: 1TMC429]	LUST Cleanup Site	700 River Drive	995 feet NE of Site	Completed – Case Closed

LUST = Leaking Underground Storage Tank

Source: SWRCB, 2020

The project would require the transport, use, storage, and disposal of small quantities of hazardous materials common for equipment and property maintenance and operation, such as gasoline, diesel fuel, hydraulic fluids, oils, lubricants, and cleaning solvents and supplies. All hazardous materials would be utilized and disposed of in accordance with all applicable federal and state regulations.

IX.a-b) The project proposes the construction and operation of a retail store that would be anticipated to require the routine transport, use, or disposal of hazardous materials common to construction and operations of retail stores. During construction, common hazardous materials such as gasoline, diesel fuel, hydraulic fluids, oils, lubricants, and cleaning solvents would be anticipated to be utilized on-site. However, the types and quantities of hazardous materials to be used are not expected to pose a significant risk to the public



and/or environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

Operation of the proposed project may require the use of hazardous materials such as materials utilized in the routine cleaning of the building or for landscaping maintenance, and hazardous materials, including but not limited to cleaning supplies and batteries, would be anticipated to be sold on-site. In accordance with the guidance in *The Permit Place* of the Mendocino County Division of Environmental Health (EH) (2008), a business that handles a hazardous material or a mixture containing a hazardous material in a quantity equal to or greater than 55 gallons liquid, 500 pounds solid material, or 200 cubic feet gaseous material at any one time during the year may be required to obtain a Certified Unified Program Agency (CUPA) Permit through EH, the approved CUPA for Mendocino County. As part of the CUPA Permit process, a Hazardous Materials Management Plan (HMMP) would be required to be prepared, implemented, and filed with EH. Any hazardous materials transported, used, sold, or disposed of on-site would be managed in accordance with federal, state, and local regulations. A less than significant impact would occur.

IX.c) The schools closest to the Site include Sprouts Montessori Children's located approximately 0.49 miles southwest of the Site, Three Rivers Charter School located approximately 0.53 miles southwest of the Site, both located across the Noyo River from the Site, and Redwood Elementary School located approximately 0.64 miles northeast of the Site. The Site is not located within one-quarter mile of a school. No impact would occur.

IX.d) As shown in Table 3, above, eight (8) listed hazardous materials sites listed on the SWRCB's GeoTracker database are located within one-quarter mile of the Site and no hazardous materials sites within the vicinity of the Site are included on DTSC's EnviroStor database. Of the eight (8) total sites, seven (7) are LUST sites, and the case has been completed and closed for each. The Site is not included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5. No impact would occur.

IX.e) The Site is located approximately 2.8 miles southwest of the Fort Bragg airport. As the proposed project is not located within the vicinity of an airport, the project would not the project result in a safety hazard or excessive noise for people residing or working in the project area. No impact would occur.

VIII.f) The City of Fort Bragg and County of Mendocino has adopted numerous plans related to hazard management and mitigation, and emergency response, including but not limited to: the City of Fort Bragg Emergency Operations Plan (2010), the Mendocino County Community Wildfire Protection Plan (2005), Hazardous Waste Management Plan, Mendocino County Operational Area Emergency Operations Plan (2016), and Mendocino County Multi-Jurisdictional Hazard Mitigation Plan (2014), in which the City of Fort Bragg (City) is a participant. In addition, the Safety Element of the City of Fort Bragg Coastal General Plan aims at protecting people and property from natural hazards and other locally relevant safety issues.

The County of Mendocino adopted the *Mendocino County Operational Area Emergency Operations Plan* (County EOP) on September 13, 2016, under Resolution Number 16-119. As noted on the Plans and Publications webpage of the Mendocino County Office of Emergency Services (MCOES), the County EOP, which complies with local ordinances, state law, and state and federal emergency planning guidance, serves as the primary guide for coordinating and responding to all emergencies and disasters within the County. The purpose of the County EOP is to "facilitate multi-agency and multi-jurisdictional coordination during emergency operations, particularly between Mendocino County, local and tribal governments, special districts as well as state and federal agencies" (MCOES – Plans and Publications, 2019). The proposed development would be compatible with existing surrounding development and would be designed to

current standards with suitable road widths and turn radii to accommodate emergency vehicles. A less than significant impact would occur.

VIII.g) The proposed project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires. The Site is located within a “Low” Fuel Rank fire hazard severity zone per Figure C-13 of the 2014 Mendocino County Multi-Hazard Mitigation Plan, in an urban built-up environment within the City of Fort Bragg's city limits. Additionally, the Site is located within the Local Responsibility Area (LRA) (Mendocino County Maps – Fort Bragg – Fire Responsibility Areas, 2019) and, per the City of Fort Bragg website (Not Dated), is served by the Fort Bragg Fire Department, a Joint Powers Authority formed in 1990 by the City of Fort Bragg and the Fort Bragg Rural Fire Protection District to jointly provide fire services within the City of Fort Bragg and outlying rural areas. The nearest fire station to the Site is the Main Street Fire Station located at 141 N. Main Street, approximately 0.9 miles north of the Site. The proposed retail store would be constructed in accordance with state and local standards, including safety and emergency access requirements. By meeting current standards and design requirements and with sufficient fire protection services available to serve the Site, a less than significant impact would occur.

#### **MITIGATION MEASURES**

No mitigation required.

#### **FINDINGS**

The proposed project would have a **Less Than Significant Impact** on Hazards or Hazardous Materials.

<b>X. HYDROLOGY AND WATER QUALITY.</b> Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i) Result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Thresholds of Significance:** The project would have a significant effect on hydrology and water quality if it would violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality; substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin; substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner, which would result in substantial erosion or siltation on- or off-site, substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site, create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff, or impede or redirect flows; in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation; or conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

**DISCUSSION**

The National Pollutant Discharge Elimination System (NPDES) permit program of the U.S. Environmental Protection Agency (EPA) addresses water pollution by regulating point sources that discharge pollutants to waters of the United States. Created in 1972 by the Clean Water Act, the NPDES permit program grants authority to state governments to perform many permitting, administrative, and enforcement aspects of the program. Within California, the NPDES permit program is administered by the State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Boards. Construction projects that would disturb more than one acre of land, such as the proposed project, would be subject to the requirements of General

Construction Activity Stormwater Permit (Construction General Permit Order 2009-0009-DWQ, also known as the CGP), which requires operators of such construction sites to implement stormwater controls and develop a Stormwater Pollution Prevention Plan (SWPPP) identifying specific BMPs to be implemented to minimize the amount of sediment and other pollutants associated with construction sites from being discharged in stormwater runoff. Discharges of stormwater and non-stormwater from the Municipal Separate Storm Sewer System (MS4) within the jurisdictional boundary of the City of Fort Bragg are subject to Water Quality Order No. 2013-0001-DWQ, NPDES General Permit No. CAS00004, Waste Discharge Requirements for Storm Water Discharges from MS4s (Phase II MS4 Permit). The Phase II MS4 Permit authorizes the City to discharge stormwater runoff and certain non-stormwater discharges from its MS4 to waters of the United States and provides a framework and requirements for the implementation of the City MS4 Program.

All development activities proposed on-site would be subject to the regulations provided in Chapter 17.64 *Stormwater Runoff Pollution Control* of the City of Fort Bragg Coastal Land Use and Development Code (CLUDC). This chapter outlines standards for managing stormwater runoff water quality and discharge during and post-construction. Compliance with Chapter 17.64 of the CLUDC would require the preparation of a SWPPP, in accordance with the CLUDC and the CGP, described above, which would evaluate and minimize potential construction-phase impacts to water quality and coastal waters by specifying temporary Best Management Practices (BMPs) to minimize erosion and sedimentation during construction and prevent the contamination of runoff from the Site, and would require preliminary and final Runoff Mitigation Plans, which would describe post-construction BMPs that would be used in the project to minimize increases in stormwater runoff volume and to prevent polluted runoff from the built project. In addition, in accordance with Section 17.64.045 *Developments of Special Water Quality Concern* of the CLUDC, as the proposed project includes the construction of greater than 10,000 square feet of impervious surface area, it would be considered a "Development of Special Water Quality Concern" and would be subject to additional requirements designed to minimize potential adverse impacts to coastal water quality, including submittal of a Water Quality Management Plan, which would include BMPs to minimize post-construction water quality impacts.

As indicated in the City of Fort Bragg Public Works Department's referral dated September 2, 2020, as this development includes over one acre of disturbance, the Applicant is required to submit a Stormwater Pollution Prevention Plan (SWPPP) to the State Water Board to obtain a Construction General Permit. A Runoff Mitigation Plan (RMP) is required by the City to demonstrate the project meets the requirements established by local, state, and federal regulations. The City's RMP requirement can be fulfilled by a SWPPP instead. If using a SWPPP to fulfill the RMP, a draft version should be submitted to the City to ensure the project is in compliance prior to filing for a Notice of Intent (NOI) with the State. The draft SWPPP and/or RMP would be due prior to the issuance of a building permit. All drainage and LID features shall be constructed in accordance with the approved RMP and/or SWPPP.

The 1.63-acre Site consists of three (3) lots located on the west side of S. Franklin Street. The project Site contains existing development primarily within the northern half of the Site. The northern lot is 95 percent covered by a paved parking area with shrubbery planted around the edges of the lot. The existing 16,436 square-foot vacant former office building, locally referred to as the "Old Social Services Building" is located on the middle lot. The southern-most lot is vacant with one-third bare soil and two-thirds covered with annual grasses and forbs with scattered shrubs. The Site is not known to contain any creeks/streams, riparian areas, or wetlands on-site (USFWS, 2020). The Site is located in Zone "X" – area of minimal flood hazard – as shown on Federal Emergency Management Agency's (FEMA) National Flood Hazard Layer FIRMette map number 06045C1016G, effective July 18, 2017. As the topography of the Site is relatively flat, stormwater typically infiltrates in the undeveloped portion of the Site or flows to the northwest and southwest towards the neighboring property, in the developed portion of the Site. The nearest bodies of water are the Noyo River,

which is located approximately 600 feet south of the Site, and the Pacific Ocean, which is located approximately 1,200 feet west of the Site. Regional drainage is controlled by the Noyo River. The Noyo River is on the SWRCB's 303(d) list of impaired waterbodies for sediment. The listing was the result of water quality problems related to sedimentation throughout the watershed, which impacts the cold-water fishery utilized by cold-water fish such as coho salmon and steelhead trout (USEPA, 1999).

The proposed project includes the demolition of an existing 16,436 square-foot vacant former office building and associated 47-space parking lot and wooden fencing along the property line, and the construction and operation of a 16,157 square-foot, one-story, retail store with a 53-space parking lot and associated improvements and infrastructure. The project would include 51,650 square feet (1.18 acres) of hardscape area which includes the proposed store, parking lot, accessways, or sidewalks, and approximately 19,265 square feet (0.44 acres) of landscaped areas throughout the Site that would encourage natural stormwater infiltration. The existing planted ornamental trees along the South Street frontage would be removed and replaced with landscaping selected for the local climate and would include trees and vegetation along the north, south, and east boundaries, with a few along the west boundary, as well as one tree within each of the parking lot landscaping islands. Drainage improvements on-site would include post-construction BMPs, including bioretention basins located along the northwest and southwest boundaries, designed to capture stormwater and pre-treat it on-site to remove dirt, oil, and heavy metals. Off-site improvements, such as sidewalk curbs and gutters would be required to convey flows from the post-construction BMPs at the project Site to the existing Caltrans stormwater drainage system located west of the Site on State Highway 1.

X.a) The proposed project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality. As discussed above, the Site is located within the City of Fort Bragg and is located in the Coastal Zone. As such, the proposed project would be required to obtain a Coastal Development Permit (CDP), which requires conformance with all relevant regulations of the City of Fort Bragg, including Chapter 17.64 *Stormwater Runoff Pollution Control* and Chapter 12.14 *Drainage Facility Improvements* of the CLUDC. As described above, compliance with Chapter 17.64 and 12.14 of the CLUDC and the Statewide CGP, for projects disturbing over one acre, would ensure that the proposed project would minimize pollutant loading and erosive stormwater runoff flows both during and post-construction. Additionally, the proposed development would be provided water and wastewater collection service by the City of Fort Bragg. These service providers are required to operate in compliance with all water quality standards and waste discharge requirements. Through proper implementation of appropriate BMPs, and compliance with the aforementioned regulations required as part of the CDP process, the proposed project would not violate any water quality standards or waste discharge requirements. A less than significant impact would occur.

X.b) The proposed project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge. As noted above, the proposed development would be provided water and wastewater collection service by the City of Fort Bragg and would therefore not require the use of groundwater to serve the proposed development. As the Site is partially undeveloped, the proposed project would increase the amount of impervious surfaces on-site. However, the project proposal includes landscaping and post-construction BMPs, including bioretention facilities, designed to capture and treat runoff from the proposed impervious surfaces, and substantial landscaping that would allow for stormwater infiltration and groundwater recharge throughout the Site. With the incorporation of landscaping and post-construction BMPs, development of the 1.63-acre Site would not significantly impact groundwater recharge, and a less than significant impact would occur.

X.c.i-ii) The proposed project would not alter the existing drainage pattern of the Site in a manner which would result in substantial erosion or siltation on- or off-site or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site since any potential runoff from the Site would be controlled within the guidance of existing regulations. During construction, erosion would be minimized, and runoff would be managed through the implementation of project-specific BMPs detailed in the Stormwater Pollution Prevention Plan (SWPPP) prepared for the proposed project, which may include physical barriers such as straw bales, fiber rolls, and/or silt fencing structures, and preventative actions such as scheduling construction for the non-rainy season, if possible, soil compaction, and seeding/mulching disturbed areas. In addition, post-construction runoff and stormwater flows would be managed through stormwater facilities designed in accordance with Chapter 17.64 of the CLUDC. Off-site improvements, such as sidewalk curbs and gutters would be required to convey flows from the post-construction BMPs at the project Site to the existing Caltrans stormwater drainage system located west of the Site on State Highway 1, which does not currently exist in the vicinity of the Site. With the implementation of off-site improvements, a less than significant impact would occur.

X.c.iii) The proposed project would not be anticipated to create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. As previously discussed, drainage improvements on-site would include post-construction BMPs, including bioretention basins located along the northwest and southwest boundaries, designed to capture stormwater and pre-treat it on-site to remove dirt, oil, and heavy metals, in accordance with Chapter 17.64 of the CLUDC, and landscaped areas throughout the Site to encourage natural stormwater infiltration. Stormwater from the proposed impervious surfaces would be directed to landscaped areas and bioretention basins to maximize infiltration first and then any runoff exceeding the design storm would flow towards the Caltrans storm drain collection system. The Caltrans storm drain collection system is located west of the Site on State Highway 1, as no infrastructure related to the City of Fort Bragg stormwater drainage system exists in this area, off-site improvements such as sidewalk curbs and gutters, are required to be installed to adequately convey any surface water in excess of the design storm from the development to the nearest receiving inlet. Off-site improvements to the stormwater drainage system would be designed in accordance with the applicable sections of the CLUDC and would be reviewed and approved by Caltrans and the City of Fort Bragg Public Works Department, which would ensure runoff from the Site would not exceed the capacity of the stormwater drainage system. A less than significant impact would occur.

X.c.iv) As discussed above, the Site is located in Zone "X" – area of minimal flood hazard – as shown on Federal Emergency Management Agency's (FEMA) National Flood Hazard Layer FIRMette map number 06045C1016G, effective July 18, 2017. Based on the FEMA designation, the risk of flooding to occur at the Site is low. No impact would occur.

X.d) The Site is located approximately 600 feet north of the Noyo River and 1,200 feet east of the Pacific Ocean. As shown on the Tsunami Inundation Map for Emergency Planning for the Fort Bragg Quadrangle, the Site is not located in a tsunami inundation area (DOC, 2009). As noted above, the Site is located in an area of minimal flood hazard (FEMA, 2017). No impact would occur.

X.e) The proposed project would not conflict with or obstruct the implementation of a water quality control plan or sustainable groundwater management plan. As discussed above, the proposed project would be subject to the Statewide CGP and the standards outlined in Chapter 17.64 of the CLUDC, which would ensure that the proposed project would minimize pollutant loading and erosive stormwater runoff flows both during and post-construction. Compliance with these regulations would facilitate the implementation of water quality control efforts at the local and state levels. In addition, there is currently no sustainable groundwater

management plan for the Fort Bragg Terrace Area in which the proposed project would be located. A less than significant impact would occur.

**MITIGATION MEASURES**

No mitigation required.

**FINDINGS**

The proposed project would have a **Less Than Significant Impact** on Hydrology and Water Quality.

XI. LAND USE AND PLANNING. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**THRESHOLDS OF SIGNIFICANCE:** The project would have a significant effect on land use and planning if it would physically divide an established community or cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

**DISCUSSION**

BRR Architecture (Applicant) is proposing to construct a Grocery Outlet (retail store) on a 1.63-acre site located at 825, 845, and 851 S. Franklin Street, Fort Bragg, and identified by Assessor's Parcel Numbers (APNs) 018-120-47, 018-120-48, and 018-120-49 (Site). The Site is owned by Dominic and Juliette Affinito and is located in the Coastal Zone within the City of Fort Bragg city limits. The Site has a City of Fort Bragg land use designation of Highway Visitor Commercial (CH) (2008) and a zoning designation of Highway Visitor Commercial (CH) per the City of Fort Bragg Zoning Map (2016). No changes to the Site's current land use or zoning designations are proposed under the project.

The project includes the demolition of an existing 16,436 square-foot vacant former office building and associated 47-space parking lot and wooden fencing along the property line, and the construction and operation of a 16,157 square-foot, one-story, retail store with a 53-space parking lot and associated improvements and infrastructure. The project would include 51,650 square feet (1.18 acres) of hardscape areas that would be covered with the proposed store, parking lot, accessways, or sidewalks. Associated improvements and infrastructure on-site would include a loading dock and trash enclosure on the west side of the store, a parking area with 53 parking spaces on the south side of the store, an internal system of walkways and crosswalks, two (2) bicycle racks, two (2) driveways, a new fire connection, replacement of an existing sewer connection, connection to underground utilities, landscaping for stormwater capture and treatment, illuminated signage, and landscaping throughout the Site. The project would be operated by 15 to 25 full-time staff and two (2) managers and would be open from 9:00 AM to 10:00 PM, 7 days per week with two (2) different shifts covering operating hours.

Per the Coastal Land Use and Development Code (CLUDC) Article 2, Policy No. 17.22.020 D, the Highway, and Visitor Commercial (CH) zoning district's allowable land uses include lodging, restaurants, and retail stores. The City of Fort Bragg CLUDC (2018) defines a "Groceries, specialty foods" as "a retail business where the majority of the floor area open to the public is occupied by food products packaged for preparation and consumption away from the store. Includes retail bakeries, where any on-site baking is only for on-site sales" and defines "General retail - 5,000 sf or larger" as "stores and shops selling many lines of merchandise." These are both permitted land uses in the CH district and have no "special use regulations"; therefore, the proposed retail store would be a permitted use on-site, subject to the approval of a Zoning Clearance (ZC) and Coastal Development Permit (CDP). The Site is located in an urban built-up environment and is surrounded by commercial businesses to the north, west, and south, and residences and two (2) vacant lots to the east, of similar scale to the proposed project.



XI.a) The project is proposed on a currently developed Site located in an urban built-up environment. No aspect of the proposed project would physically divide the community; therefore, no impact would occur.

XI.b) The proposed project would not conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect as the project is consistent with all applicable land use plans, policies, and regulations, including the City of Fort Bragg's Coastal Land Use and Development Code (CLUDC). As noted above, CLUDC Article 2, Policy No. 17.22.020 D, indicated that the Highway and Visitor Commercial (CH) zoning district's allowable land uses include lodging, restaurants, and retail stores. As such, the proposed project would be a permitted use on-site, subject to the approval of a ZC, and CDP. A less than significant impact would occur.

**MITIGATION MEASURES**

No mitigation required.

**FINDINGS**

The proposed project would have a **Less than Significant Impact** on Land Use and Planning.

<b>XII. MINERAL RESOURCES.</b> Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**THRESHOLDS OF SIGNIFICANCE:** The project would have a significant effect on mineral resources if it would result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state or result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.

**DISCUSSION**

The proposed project is not located in an area of known rock, aggregate, sand, or other mineral resource deposits of local, regional, or state residents. There are no known mineral resources of significance on the Site that would be made unavailable by the proposed project. Furthermore, the project Site is not utilized for Surface Mining and Reclamation Act (SMARA) activities.

XII.a-b) The proposed project area does not contain mineral resources that are of value locally, to the region, or to residents of the City, County, or state. According to the Mineral Land Classification Studies Index of the California Department of Conservation (DOC, 2015), the proposed project is not located in an area with known mineral resources. The proposed project area is not identified as a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. Therefore, the proposed project would not interfere with materials extraction or otherwise cause a short-term or long-term decrease in the availability of mineral resources. No impact would occur.

**MITIGATION MEASURES**

No mitigation required.

**FINDINGS**

The proposed project would have **No Impact** on Mineral Resources.

<b>XIII. NOISE.</b> Would the project result in:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) For a project located within the vicinity of private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**THRESHOLDS OF SIGNIFICANCE:** The project would have a significant effect on noise if it would result in the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies; or generation of excessive groundborne vibration or groundborne noise levels; or expose people residing or working in the project area to excessive noise levels (for a project located within the vicinity of a private airstrip or an airport or an airport land use plan, or where such as plan has not been adopted, within two miles of a public airport or public use airport).

**DISCUSSION**

Noise is typically defined as unwanted sound. In any one location, the noise level will vary over time, from the lowest background or ambient noise level to temporary increases caused by traffic or other sources. Acceptable levels of noise vary depending on the land use. Generally speaking, land uses considered noise-sensitive are those in which noise can adversely affect the people performing general activities on the land. For example, a residential land use where people live, sleep, and study is generally considered sensitive to noise because noise can disrupt these activities. Churches, schools, and certain kinds of outdoor recreation are also usually considered noise-sensitive. State and federal standards have been established as guidelines for determining the compatibility of a particular use with its noise environment.

The Noise Element of the City of Fort Bragg Coastal General Plan (Noise Element) (2008) contains policies and programs to reduce the community's exposure to excessive noise and establishes exterior noise level standards for affected land uses, which is utilized to determine whether the noise exposure for the intended land use requires mitigation in order to achieve a compatible noise environment. According to the Noise Element (2008), Fort Bragg experiences noise from autos and trucks on State Highway 1, State Highway 20, local arterials, the railroad, and several industrial uses. As shown in Table N-4, below, Business Commercial land uses are considered to be "normally acceptable" where the exterior noise levels are below 70 dB, "conditionally acceptable" where the noise levels are between 70 and 80 dB, and "unacceptable" where the noise levels are greater than 80 dB.

**TABLE N-4  
NOISE AND LAND USE COMPATIBILITY STANDARDS**

Land Use Category	Exterior Noise Exposure L <sub>dn</sub> dB					
	55	60	65	70	75	80
Residential, Hotels and Motels		■	■	■	■	■
Outdoor Sports and Recreation, Neighborhood Parks and Playgrounds			■	■	■	■
"Noise Sensitive" - Schools, Libraries, Museums, Hospitals, Personal Care, Meeting Halls, Churches		■	■	■	■	■
Office Buildings, Business Commercial and Professional				■	■	■
Auditoriums, Concert Halls, Amphitheaters	■	■	■	■	■	■

- Normally Acceptable**  
Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal, conventional construction, without any special insulation requirements.
- Conditionally Acceptable**  
Specified land use may be permitted only after a detailed analysis of the noise reduction requirements and needed noise insulation features included in the design.
- Unacceptable**  
New construction or development should generally not be undertaken because mitigation is usually not feasible to comply with noise element policies.

Source: Illingworth & Rodkin, Inc., March, 2002

Additionally, the City of Fort Bragg Noise Ordinance (Title 9, Chapter 9.44, Section 9.44.020) of the City of Fort Bragg Municipal Code (passed 1972) establishes special restrictions on noise sources in residential areas. Pertinent policies from the City of Fort Bragg Noise Ordinance (1972) include:

- A. *Between the hours of 10:00 PM of one (1) day and 7:00 AM of the following day, it is unlawful for any person within a residential zone, or within a radius of 500 feet therefrom, to create, cause to be created or maintain sources of noise which cause annoyance or discomfort to a reasonable person of normal sensitiveness in the neighborhood.*
- B. *The sources include, but are not limited to, the following:*
  - 2. *Operation of equipment or performance of any outside construction or repair work on buildings, structures, or projects or operation of construction-type devices;*
  - 4. *Excessively loud noise caused by the operation of any machinery, chain saw, equipment, device, pump, fan compressor, air conditioning apparatus, or similar mechanical device;*

The approximately 1.63-acre Site is currently partially developed, with a 16,436 square-foot vacant former office building and associated 47-space parking lot on the northern portion of the Site and a vacant and undeveloped lot comprising the southern portion of the Site. The Site is bordered to the north by South Street, to the south by N. Harbor Drive, to the east by S. Franklin Street, and to the west by a motel and gas station. Nearby uses include single-family and multi-family residences adjacent to the east, motels to the north and south, restaurants to the northwest and southwest, a gas station to the southwest, and Mendocino County Government offices to the northeast. The Site is located approximately 245 feet to the east of State Highway 1. Sensitive receptors that could be affected by noise from the Site include the motels located adjacent to the west and directly north and south of the Site and single-family and multi-family residences located directly east and southeast of the Site.

The noise environment surrounding the Site is influenced by traffic on State Highway 1, South Street, N. Harbor Drive, and S. Franklin Street, and activity associated with the nearby commercial business, governmental facilities, and residences. In addition, occasional noise from the Mendocino Coast District Hospital, which includes a helipad and is located approximately 950 feet northeast of the Site would be anticipated. Ambient noise levels would be anticipated to be relatively high during business hours, typically 7:00 am to 7:00 pm, due to the amount and proximity of traffic on State Highway 1 and surrounding roads and businesses. As provided in the Noise Element (2008), in 2011 a noise measurement was taken from State Highway 1 between Cypress Street and Ocean View Drive. The noise measurement registered a noise level of between 65 and 60 dB at a distance of 165 feet to 350 feet from the centerline of the Highway, respectively (Table N-2, General Plan, 2008). As the Site is located between these two (2) streets approximately 245 feet east of State Highway 1, ambient noise levels at the Site may be approximated to fall between 65 and 60 dB, due to the proximity of State Highway 1.

Construction of the proposed project would generate short-term noise corresponding to the demolition and construction phases of the project and the noise generating equipment used during those phases. Construction activities may involve demolition, excavation, grading, drilling, trenching, earth movement, and vehicle travel to and from the Site. Operation of the proposed project would generate noise during operating hours due to vehicular traffic accessing the store, grounds maintenance equipment, heating, ventilation, and air conditioning (HVAC) units, and delivery trucks traveling to and from the Site.

XIII.a) The proposed project would result in a temporary increase in noise levels surrounding the Site during construction and would be anticipated to increase ambient noise levels in the vicinity of the currently vacant Site, but would not increase noise levels in excess of standards established by the City of Fort Bragg Coastal General Plan (2008) and City of Fort Bragg Noise Ordinance (1972).

During construction, temporary noise would be anticipated as a result of utilizing standard heavy equipment, which may include, but is not limited to the following: excavator, cement mixer, dump truck, water truck, and backhoe. These noise impacts would be temporary in nature; however, construction-generated noise may irritate nearby sensitive receptors, including guests at the adjacent and nearby motels and nearby residents. As noted above, the City of Fort Bragg Noise Ordinance (1972) regulates noise within a radius of 500 feet therefrom a residential zone. As the Site is located directly west and northwest of existing single-family and multi-family residences, the special restrictions of the City of Fort Bragg Noise Ordinance (1972) noted above, would be applicable during construction activities at the Site, and would prohibit noise-generating construction activities between 10:00 PM and 7:00 AM. In addition, Table N-5 of the City of Fort Bragg Coastal General Plan (2008), shown below, establishes noise level performance standards for new projects that include non-transportation noise sources.

**TABLE N-5  
NOISE LEVEL PERFORMANCE STANDARDS FOR NEW PROJECTS AFFECTED BY OR INCLUDING  
NON-TRANSPORTATION NOISE SOURCES**

Noise Level Descriptor	Daytime (7 A.M. to 10 P.M.)	Nighttime (10 P.M. to 7 A.M.)
Hourly Leq dB	55	45
Maximum level, dB	75	65

Note: These noise levels apply to the residential property line nearest the project. Each of the noise levels shall be lowered by five dB for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises. These noise level standards do not apply to residential units established in conjunction with industrial or commercial uses (e.g., caretaker dwellings).

Short-term construction noise may potentially temporarily exceed acceptable noise thresholds. To limit the potential impact of the noise associated with project construction on the nearby sensitive receptors, hours of construction shall be limited and noise reducing Best Management Practices (BMPs) shall be implemented during the period of project construction, as detailed in Mitigation Measure NOISE-1.

Upon build-out of the Site, operational noise would be associated with vehicular travel of employees and clients accessing the store, grounds maintenance equipment, HVAC units, and delivery trucks traveling to and from the Site. As discussed above, the Site is surrounded by roads to the north, east, and south, and is located in close proximity to commercial, residential, and public service development, and State Highway 1, which generate operational noise due to vehicle traffic and facility operation. Noise generated by the employees and customers is expected to be consistent with noise levels typical of commercial development and will not exceed City standards for a commercial development located near residential development, as shown in Table N-5, above (General Plan, 2008). Therefore, operational activities would not be anticipated to significantly impact the surrounding land uses. With mitigation incorporated for construction-related noise impacts, a less than significant impact would occur.

XIII.b) Groundborne vibrations and noise may be generated during construction due to operation of heavy equipment, but potential impacts would be temporary in nature and cease upon completion of construction. Groundborne vibrations generated during construction would be anticipated to decrease in magnitude as the distance from the source increases. Occupants of the adjacent motel may temporarily be impacted by groundborne vibrations during construction; however, with implementation of Mitigation Measure NOISE-1, which limits hours of construction to 7:00 AM to 7:00 PM, Monday through Saturday, impacts would be less than significant. Groundborne vibrations generated during construction would not be anticipated to impact the nearby single-family and multi-family residences as the residential land uses would be separated from the Site by S. Franklin Street. Operation of the proposed project is not anticipated to generate groundborne vibrations or noise. With mitigation incorporated, a less than significant impact would occur.

XIII.c) The Site is located approximately 2.8 miles southwest of the Fort Bragg airport. As the proposed project is not located within the vicinity of an airport, the project would not expose people residing or working in the project area to excessive noise levels due to an airport. No impact would occur.

#### **MITIGATION MEASURES**

**NOISE-1:** Implementation of the following measures are required during the duration of the project construction period to reduce potential noise impacts on the nearby sensitive receptors:

- Construction shall be limited to between the hours of 7:00 AM to 7:00 PM, Monday through Saturday, with no construction activities permitted on Sunday, or holidays;
- All internal combustion engine-driven equipment shall be equipped with intake and exhaust mufflers that are in good condition and appropriate for the equipment. Air compressors and pneumatic equipment shall be equipped with mufflers and impact tools shall be equipped with shrouds or shields.
- All unnecessary idling of internal combustion engines on-site shall be prohibited.

#### **FINDINGS**

The proposed project would have a **Less Than Significant Impact with Mitigation Incorporated** on Noise.

<b>XIV. POPULATION AND HOUSING.</b> Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and/or businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**THRESHOLDS OF SIGNIFICANCE:** The project would have a significant effect on population and housing if it would induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and/or businesses) or indirectly (e.g., through extension of roads or other infrastructure); or displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

**DISCUSSION**

Based on the U.S. Census Bureau Quick Facts, Fort Bragg city, a census-designated place had a population of approximately 7,291 persons as of July 1, 2019, a decrease of approximately 0.2 percent since April 1, 2018. There were an estimated 2,775 households between 2014 and 2018, with 2.56 persons per household. Approximately 8 percent of the persons living in Mendocino County reside in the City of Fort Bragg, based on estimates provided by the U.S. Census Bureau.

The project includes the construction and operation of a 16,157 square-foot, one-story, Grocery Outlet (retail store). The proposed retail store would serve as a grocery and retail store for the City of Fort Bragg and surrounding area. The retail store would be equipped with 11,189 square feet of merchandising space and 2,231 square feet of stock space and be operated by 15 to 25 full-time staff and two (2) managers and would be open from 9:00 AM to 10:00 PM, 7 days per week with two (2) different shifts covering operating hours.

XIV.a) The proposed project would not induce substantial unplanned population growth in the area as the project entails the construction and operation of a retail store and up to a total of 15 to 25 employees are anticipated under operation of the project. While some employees may relocate to the Fort Bragg area to work at the proposed retail store, a portion of the employees may commute from their current residences within the City of Fort Bragg and surrounding communities. In addition, customers who would shop at the proposed retail store would largely be those who reside in Fort Bragg and surrounding communities. As previously discussed, under Section III (Air Quality), above, for the purposes of this Initial Study, it is assumed that the proposed project would break ground on May 3, 2021, and be constructed over an approximately 11-month period until the entire project is completed by approximately April of 2022. Because construction of the project would be temporary in nature, it is anticipated that most, if not all, of the construction workers, would be local, although some workers may relocate to the area for the duration of the construction period. In addition, the Site is located in an urban built-up environment within the City of Fort Bragg and has a vacant former office building and paved parking lot with utility connections existing on-site. Although there may be a minimal increase in employees and population in the area as a result of the project, changes would be limited, and no significant infrastructure improvements would be required to serve the project. As such, a less than significant impact would occur.

XIV.b). The proposed project would not displace any residents or housing, as the Site contains a vacant former office building and paved parking lot, and no residential units are currently located on-site; therefore, no impact would occur.

**MITIGATION MEASURES**

No mitigation required.

**FINDINGS**

The proposed project would have a **Less Than Significant Impact** on Population and Housing.



<b>XV. PUBLIC SERVICES.</b> Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**THRESHOLDS OF SIGNIFICANCE:** The project would have a significant effect on public services if it would result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or result in the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for (a) fire protection, (b) police protection, (c) schools, (d) parks, or (e) other public facilities.

**DISCUSSION**

There are no elements of the proposed project that would impact the ability of the City of Fort Bragg or other local service providers to provide public services to the Site or local community. The project includes the demolition of an existing 16,436 square foot vacant former office building and associated 47-space parking lot and wooden fencing along the property line, and the construction and operation of a 16,157 square-foot, one-story, retail store with a 53-space parking lot and associated improvements and infrastructure. Associated improvements and infrastructure on-site would include a loading dock and trash enclosure on the west side of the store, a parking area with 53 parking spaces on the south side of the store, an internal system of walkways and crosswalks, two (2) bicycle racks, two (2) driveways, a new fire connection, replacement of an existing sewer connection, connection to underground utilities, landscaping for stormwater capture and treatment, illuminated signage, and landscaping throughout the Site. The Site would be landscaped and permeable to stormwater as the project would be designed to capture stormwater and pre-treat it on-site to remove dirt, oil, and heavy metals using bioretention basins located along the northwest and southwest boundaries. The proposed driveways and parking area would be designed to current standards with suitable road widths and turn radii to accommodate emergency vehicles.

While it is expected that most, if not all, of the Site's employees (25 maximum) would already live locally, it is possible that some workers may relocate from another location or may commute from their current residences in the surrounding communities. In addition, customers who would shop at the proposed retail store would largely be those who reside in the City of Fort Bragg and surrounding communities. Since a significant population is not expected as a result of the project, significant impacts on public services are also not anticipated.

XV.a) As previously discussed, the Site is located within the Local Responsibility Area (LRA) (Mendocino County Maps – Fort Bragg – Fire Responsibility Areas, 2019) and is mapped as located within an area with

"Moderate" Fuel Rank fire hazard severity zone per Figure C-13 of the 2014 Mendocino County Multi-Hazard Mitigation Plan. Per the City of Fort Bragg website (Not Dated), the Site is served by the Fort Bragg Fire Department. The City of Fort Bragg (City) and the Fort Bragg Rural Fire Protection District formed a Joint Powers Authority in 1990 to jointly provide fire services within the City and outlying rural areas. As detailed on the City's website, the Fort Bragg Fire Department is a volunteer fire department with 36 firefighters and four (4) auxiliary members. Currently, there are four (4) paid positions in the department: a full-time Fire Chief, an Office Manager, a Maintenance Engineer, and a Fire Prevention Officer. The nearest fire station to the Site is the Main Street Fire Station located at 141 N. Main Street, approximately 0.9 miles north of the Site.

As the project would entail further developing a currently developed but vacant Site, a significant population increase is not anticipated as a result of the project and the project would be located within the service boundaries of the Fort Bragg Fire Department. A less than significant impact would occur.

XV.b) Since the Site is located within the City of Fort Bragg, the Site and surrounding area are currently and would continue to be served by the Fort Bragg Police Department (Fort Bragg PD). The Fort Bragg PD is located at 250 Cypress Street, in Fort Bragg, California, approximately 0.30 miles north of the Site. As the project would entail developing a currently developed but vacant Site, a significant population increase is not anticipated as a result of the project and the project would be located within the service boundaries of the Fort Bragg PD. A less than significant impact would occur.

XV.c) The Site is located within the Fort Bragg Unified School District (FBUSD), which is comprised of two (2) elementary schools, one (1) middle school, one (1) high school, and one (1) alternative school. Mendocino College, which is not affiliated with the FBUSD, is located approximately 0.9 miles southwest of the Site, and Redwood Elementary School, which is affiliated with the FBUSD, is located approximately 1.11 miles northeast of the Site. The proposed project does not involve the development of any residential units; however, some employees may relocate to the City of Fort Bragg (City) area to work at the proposed retail store. However, as discussed under Section XIV (Population and Housing), above, while some employees may relocate to the City to work at the proposed retail store, some employees may commute from their current residences within the City surrounding communities. In addition, customers who would shop at the proposed retail store would largely be those who reside in the City and surrounding communities. As a result, the proposed project would not be anticipated to result in substantial population growth or a significant increase in the student population. Therefore, it is anticipated that any new students as a result of the proposed project could be adequately accommodated by the existing schools within the FBUSD, and a less than significant impact would occur.

XV.d) As detailed in Section XVI (Recreation), below, 14 parks and recreational facilities are located within 4.5 miles of the Site, including C.V. Starr Community and Aquatic Center, and Fort Bragg Dog Park, which is located approximately 1.2 miles northeast of the Site, and Harold O. Bainbridge Park, located approximately 1.3 miles northeast of the Site. The amount of development would not substantially increase at the currently developed but vacant Site, and no residential units are proposed nor is a significant population increase anticipated as a result of the project. As a result, the use of the existing park and recreational facilities would not substantially increase as a result of the project and there would not be a need for a new or physically altered park facility. A less than significant would occur.

XV.e) There are no elements of the proposed project that would impact other public facilities, such as regional hospitals. The project involves the demolition of an existing vacant building and the construction and operation of a Grocery Outlet (retail store) that would serve customers who reside in the City of Fort Bragg and surrounding community. A less than significant impact would occur.

**MITIGATION MEASURES**

No mitigation required.

**FINDINGS**

The proposed project would have a **Less than Significant Impact** on Public Services.

<b>XVI. RECREATION.</b> Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**THRESHOLDS OF SIGNIFICANCE:** The project would have a significant effect on recreation if it would increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated, or include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

**DISCUSSION**

The Site is located within the vicinity of the following neighborhood parks and recreational facilities:

- C.V. Starr Community and Aquatic Center, located approximately 1.2 miles northeast of the Site;
- Fort Bragg Dog Park, located approximately 1.2 miles northeast of the Site;
- Harold O. Bainbridge Park, located approximately 1.3 miles northeast of the Site;
- Fort Bragg Skatepark, located approximately 1.4 miles northeast of the Site;
- Otis R. Johnson Wilderness Park, located approximately 1.6 miles northeast of the Site;
- Noyo Beach Off-Leash Dog Area, located approximately 1 mile southwest of the Site;
- Noyo Headlands Park, located approximately 2 miles west of the Site;
- Todds Point, located approximately 1.2 miles southwest of the Site;
- Pomo Bluffs Park, located approximately 1.3 miles southwest of the Site;
- Glass Beach, located approximately 2 miles northwest of the Site;
- Ka Kahleh Trail, located approximately 2 miles northwest of the Site;
- Coastal Trail, located approximately 2 miles northwest of the Site;
- Pudding Creek Beach, located approximately 2.3 miles northwest of the Site; and
- Mac Kerricher State Park, located approximately 4.5 miles north of the Site.

XVI.a-b) No residential units would be constructed, nor is the population expected to substantially increase, as a result of the proposed project. While some employees may relocate to the Fort Bragg area to work at the proposed Grocery Outlet (retail store), some employees may commute from their current residences within surrounding communities. In addition, customers who would shop at the proposed retail store would largely be those who reside in the City of Fort Bragg and surrounding communities. As a result, a substantial population increase is not anticipated and use of the existing park and recreational facilities would not be expected to substantially increase as a result of the project. Therefore, there would not be a need for a new or physically-altered park or recreational facility. No impact would occur.

**MITIGATION MEASURES**

No mitigation required.

**FINDINGS**

The proposed project would have a **No Impact** on Recreation.

<b>XVII. TRANSPORTATION.</b> Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**THRESHOLDS OF SIGNIFICANCE:** The project would have a significant effect on transportation if it would conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities; conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b); substantially increase hazards due to a geometric design features (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or result in inadequate emergency access.

**DISCUSSION**

On September 27, 2013, Governor Jerry Brown signed Senate Bill (SB) 743 into law, initiating an update to the CEQA Guidelines to change how lead agencies evaluate transportation impacts under CEQA, with the goal to better measure the actual transportation-related environmental impacts of a given project. Traditionally, transportation impacts had been evaluated by using Level of Service (LOS) analysis. Starting July 1, 2020, lead agencies are required to analyze the transportation impacts of new projects using vehicle miles traveled (VMT), instead of LOS. According to the SB 743 *Frequently Asked Questions* provided by the Governor's Office of Planning and Research (OPR), VMT measures how much actual auto travel (additional miles driven) a proposed project would create on California roads. If the project adds excessive car travel onto the roads, the project may cause a significant transportation impact. VMT analysis is intended to promote the state's goals of reducing greenhouse gas emissions and traffic-related air pollution, promoting the development of a multimodal transportation system, and providing clean, efficient access to destinations (OPR, 2020). On May 20, 2020, Fehr & Peers, on behalf of the Mendocino Council of Governments (MCOG), prepared a *Senate Bill 743 Vehicle Miles Traveled Regional Baseline Study* (SB 743 Baseline Study) to provide an overview of SB 743, summarize VMT data available for Mendocino County, discuss alternatives for and recommend VMT measurement methods and thresholds for lead agencies in Mendocino County, and recommend transportation demand management (TDM) strategies for reducing VMT on projects in Mendocino County.

A *Traffic Impact Analysis* (see Appendix C) was prepared by KD Anderson & Anderson Associates on October 22, 2019, for the Grocery Outlet Store project (retail store) located in Fort Bragg, California. The analysis addresses both current and future background conditions at key intersections in the vicinity of the Site. To assess traffic impacts, the characteristics of the proposed project have been determined, including estimated trip generation and the directional distribution/assignment of project generated traffic. That traffic was added to current and future background traffic levels, and project impacts have been evaluated using the methods and significance criteria adopted by the City of Fort Bragg and Caltrans.

As noted in the *Traffic Impact Analysis*, the Site is bordered to the east by S. Franklin Street, a major collector street, and between South Street to the north, a minor collector street and N. Harbor Drive to the south, a local street, all managed by the City of Fort Bragg Public Works, and located a short distance from Main Street or State Highway 1, an arterial street managed by Caltrans, to the west. Currently, the Site is accessed on the north end via a paved entrance to South Street and an existing dirt driveway runs across the southern parcel from S. Franklin Street to N. Harbor Drive. Two (2) bus routes provided by the Mendocino Transit Authority (MTA) pass the project site and traverse the community and have a stop near the Mendocino County Social Services building at the South Street/S. Franklin Street intersection, approximately 528 feet north of the Site. In addition, there are sidewalks in many locations on the street surrounding the Site, where crosswalks are striped at intersections, and ADA ramps have been provided at most locations.

The proposed project includes construction of new, defined entrances to S. Franklin Street and N. Harbor Drive on the south and east end of the Site to accommodate the retail store entrance. The existing driveway on the north end of the Site would be removed as part of the project. The project will additionally include an internal system of walkways and crosswalks to provide pedestrian connectivity between the parking lot, building, and sidewalk. The pedestrian improvements would be Americans with Disabilities Act (ADA)-compliant. A sidewalk would be constructed along the South Street, S. Franklin Street, and N. Harbor Drive frontages, as required by City standards and to provide pedestrian access around the Site. Where required, existing sidewalks would be upgraded to meet City standards. A total of 53 standard parking spaces, including three (3) ADA-accessible spaces would be provided on-site to serve the retail store, in addition to two (2) bicycle racks. Per the *Traffic Impact Analysis*, the proposed project may result in pedestrians in two small roadway sections near the project where sidewalks do not exist. The City should therefore consider installing No Parking signs in these areas.

Anticipated trip generation associated with the proposed project was modeled using the Institute of Transportation Engineers (ITE) publication "*Trip Generation, 10<sup>th</sup> Edition*" as indicated in the *Traffic Impact Analysis* and provides information on the characteristics of various retail uses. Based on Table 4, below, and provided in the *Traffic Impact Analysis* (see Appendix C), the project is expected to generate a total of 1,709-weekday trips and 2,842 daily trips on a Saturday. Roughly 6 percent (165 trips) of the Saturday traffic occurs in the midday peak hour and 9 percent (148 trips) of the weekday trips occur during the weekday p.m. peak hour. The ITE *Trip Generation Handbook, 3<sup>rd</sup> Edition* notes that 36 percent of the weekday trips generated by supermarkets are typically "pass-by", and this rate had been used for both study time periods. After discounting for pass-by trips already occurring on State Highway 1 near the Site, the project is projected to generate 105 new primary trips in the Saturday midday peak hours, and 95 new primary trips in the weekday p.m. peak hours.

Table 4: Trip Generation Rates

Land Use/Source	Unit	Saturday Peak Hour			Weekday PM Peak Hour		
		In	Out	Total	In	Out	Total
Supermarket (code 850)	kSF	51%	49%	10.34	51%	49%	9.24
Grocery Outlet	16kSF	84	81	165	75	73	148
Pass-by Trips	36%	<30>	<30>	<60>	<27>	<26>	<53>
Net Primary Trips		54	51	105	48	47	95

Source: ITE Trip Generation 10<sup>th</sup> Edition – Traffic Impact Analysis, 2019

Per the *Traffic Impact Analysis*, the distribution of project traffic was determined based on consideration of the demographic distribution of residences and competing stores in this area of Mendocino County, on the

typical trade area characteristics of Grocery Outlet Stores, and on assumptions made for other retail projects in previous Fort Bragg traffic studies. The retail store in rural communities can attract customers from a relatively broad area that extends beyond the limits of the community, particularly on weekends. Based on assumptions made for other studies, it was assumed that 50 percent of trips specifically made to visit the retail store will have origins or destinations south of the Noyo River and use State Highway 1 and State Highway 20 to reach the Site. The balance will be oriented to the north and to areas of the community east of S. Franklin Street. Because the volume of peak hour traffic headed northbound and southbound on State Route 1 is relatively even, pass-by trips have been assumed to be diverted equally from each direction.

As previously mentioned, as of July 1, 2020, VMT replaced Level of Service (LOS) as the required metric to determine significant transportation impacts within the State under SB 743. However, the City of Fort Bragg has yet adopted VMT thresholds of significance.

**Vehicle Miles Traveled**

As previously stated, SB 743 requires agencies to move from a Level of Service (LOS) based impacts analysis under CEQA to analysis based on regional Vehicle Miles Traveled (VMT). Current direction regarding methods to identify VMT and comply with state requirements is provided by the California Governor's Office of Planning and Research (OPR) December 2018 publication, *Technical Advisory on Evaluating Transportation Impact in CEQA*. The *Traffic Impact Analysis* indicates that OPR provided the following direction for retail projects:

***Retail Projects.** Generally, lead agencies should analyze the effects of a retail project by assessing the change in total VMT because retail projects typically reroute travel from other retail destinations. A retail project might lead to increases or decreases in VMT, depending on previously existing retail travel patterns.*

As discussed in the *Traffic Impact Analysis*, based on the location of competing stores (i.e. Harvest Market south of the Noyo River, with Safeway and Purity Market north of the Noyo River) the most likely effect on regional travel associated with the development of the project is to slightly reduce the length of trips from areas south of the river off of State Highway 20 or State Highway 1 that are today made northbound and to offer another option for shopping trips made by residents of areas to the north. As the proposed project is relatively close to other stores, the regional effect on VMT is likely to be small, but generally will be reduced by offering a closer option for northbound traffic.

XVII.a) The proposed project would not conflict with a plan, ordinance, or policy addressing the circulation system, including transit, roadways, bicycle lanes, and pedestrian paths. It is expected that construction of the project will result in a slight increase in traffic to and from the Site, as construction workers arrive and leave the Site at the beginning and end of the day, in addition to minor interruption of traffic on adjacent streets when heavy equipment necessary for project construction is brought to and removed from the Site. However, once construction is complete, the construction workers and equipment would no longer be required at the Site.

As discussed above, VMT replaced LOS on July 1, 2020, and became the required metric to determine significant transportation impacts within the State under SB 743. As of the date of this Initial Study, the County of Mendocino and City of Fort Bragg have not established thresholds of significance for VMT consistent with SB 743 and CEQA Guidelines Section 15064.3, subdivision (b). Although the City of Fort Bragg has not

established thresholds of significance for VMT, the SB 743 Baseline Study (MCOG, 2020) recommends that lead agencies in Mendocino County implement screening criteria to simplify analysis for smaller projects.

Furthermore, according to the Office of Planning and Research, Even if a general plan contains an LOS standard and a project is found to exceed that standard, that conflict should be analyzed under CEQA. CEQA is focused on planning conflicts that lead to environmental impacts (*The Highway 68 Coalition v. County of Monterey* (2017))

As previously discussed, upon build-out of the Site, staff (25 maximum) travel to and leave the Site at the end of their shifts. As for customers traveling to and from the Site, after discounting for pass-by trips already occurring on State Highway 1 near the Site, the project is projected to generate 105 new primary trips in the Saturday midday peak hours, and 95 new primary trips in the weekday p.m. peak hours. The temporary traffic increases during construction and vehicle and pedestrian traffic increases during operation of the project are not anticipated to significantly impact the capacity of the street system or the overall effectiveness of the circulation system. Additionally, the project is not anticipated to substantially impact alternative transportation facilities, such as transit, bicycle, or pedestrian facilities, as the Site is located between South Street to the north, a minor collector street and N. Harbor Drive to the south, a local street, all managed by the City of Fort Bragg Public Works. Nor will it substantially impact the two (2) bus routes provided by the Mendocino Transit Authority (MTA) passes the project site and has a stop in close vicinity to the Site at the South Street/S. Franklin Street intersection. As indicated in the *Traffic Impact Analysis*, the proposed project may result in pedestrians in two roadway areas locations near the project where sidewalks do not exist. Therefore, the City should consider installing No Parking signs in these areas. As the project proposes to construct a sidewalk along the South Street, S. Franklin Street, and N. Harbor Drive frontages, as required by City standards to provide pedestrian access around the Site, and where required, existing sidewalks would be upgraded to meet City standards, the project would provide additional pedestrian connectivity in the area. A less than significant impact would occur.

XVII.b) CEQA Guidelines Section 15064.3, subdivision (b) indicates that a land use project would have a significant impact if the project results in vehicle miles traveled (VMT) exceeding an applicable threshold of significance, but that projects within one-half mile of either an existing major transit stop or a stop along an existing high-quality transit corridor should be presumed to cause a less than significant impact. CEQA Guidelines Section 15064.3 further notes that if existing models or methods are not available to estimate a project's expected VMTs, a lead agency may analyze the project's expected VMT qualitatively. As of the date of this Initial Study, the City of Fort Bragg has not established thresholds of significance for VMT consistent with SB 743 and CEQA Guidelines Section 15064.3, subdivision (b). Although the the City of Fort Bragg has not established thresholds of significance for VMT, the SB 743 Baseline Study (MCOG, 2020) recommends that lead agencies in Mendocino County implement screening criteria to simplify analysis for smaller projects.

Although the Site is currently developed, the former office building has been vacant since 2010; therefore, any development on-site will increase VMT. Under the proposed project, VMT will be attributed to employees and customers traveling to and from the Site, with the majority of daily trips attributed to customers. Using the recommending screening criteria adapted from the OPR *Technical Advisory* for the SB 743 Baseline Study (MCOG, 2020), the project may be presumed to cause a less-than-significant VMT impact as the project is anticipated to generate less than 640 VMT per day, as described above, and is consistent with the City of Fort Bragg General Plan and the 2017 Mendocino County Regional Transportation Plan. In addition, the Site is located in an urban built-up environment in close proximity to major roadways of the City Fort Bragg and Caltrans. The Site is located between South Street and N. Harbor Drive and a short distance from Main Street (State Highway 1), as well as a Mendocino Transit Authority (MTA) bus stop. Consistent with CEQA Guidelines



Section 15064.3, described above, as the Site is located within one-half mile of a transit stop and principal transit corridors of the surrounding community, the project should be presumed to cause a less than significant impact. Based on the analysis presented above, a less than significant impact would occur.

XVII.c) The proposed project is not anticipated to substantially increase hazards due to design features or incompatible uses. As discussed above, the Site is accessed on the north end via a paved entrance to South Street, and an existing dirt driveway runs across the southern parcel from S. Franklin Street to N. Harbor Drive. The proposed project includes construction of new, defined entrances to S. Franklin Street and N. Harbor Drive on the south and east end of the Site to accommodate the retail store entrance. The existing driveway on the north end of the Site would be removed as part of the project. The project will additionally include an internal system of walkways and crosswalks to provide pedestrian connectivity between the parking lot, building, and sidewalk. A sidewalk would be constructed along the South Street, S. Franklin Street, and N. Harbor Drive frontages, as required by City standards to provide pedestrian access around the Site, and where required, existing sidewalks would be upgraded to meet City standards. As indicated in the *Traffic Impact Analysis*, the proposed project may result in pedestrians in two roadway locations near the project where sidewalks do not exist. Therefore, the City should consider installing No Parking signs in these areas. As demonstrated by the proposed design improvements shown on the attached Site Plan (see Figure 4), the Site has been designed to provide ample access, driveway width, and turning radii. A less than significant impact would occur.

XVII.d) The proposed project will not result in inadequate emergency access, as the project has been designed to meet pertinent design criteria to provide adequate emergency access. The attached project Site Plan (see Figure 4) proposes a general site layout with ample space surrounding the retail store to provide adequate emergency access. A less than significant impact would occur.

#### **MITIGATION MEASURES**

No mitigation required.

#### **FINDINGS**

The proposed project would have a **Less Than Significant Impact** on Transportation.

<b>XVIII. TRIBAL CULTURAL RESOURCES.</b> Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code §21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code §5020.1(k)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code §5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code §5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Thresholds of Significance:** The project would have a significant effect on Tribal Cultural Resources if it would cause a substantial adverse change in the significance of a cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code §21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is listed or eligible for listing in the California Register of Historical Places or in a local register of historical resources as defined in Public Resources Code §5020.1(k), or is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code §5024.1.

**DISCUSSION**

A *Cultural Resources Inventory Survey (Cultural Survey)* was prepared by Genesis Society on August 15, 2019, to evaluate the project's potential to impact cultural resources in conformity with City of Fort Bragg and Mendocino County rules and regulations, and in compliance with requirements of the California Environmental Quality Act of 1970, Public Resources Code Section 21000, et seq. (CEQA), and the California CEQA Environmental Quality Act Guidelines, California Administrative Code Section 15000 et seq. (Guidelines as amended). Due to the sensitive and confidential nature of the report, a copy of the *Cultural Survey* is not included as an appendix to this Initial Study.

According to the *Cultural Survey*, the region in which the Site is located was first inhabited more than 12,000 years ago. Prior to historic settlement, the lands surrounding the Noyo River were covered by a variety of coastal scrub and a mixed forest dominated by Bishop pine and including redwood, conifers, and hardwoods such as tanoak and madrone. The Site is located within the territory claimed by the Northern Pomo at the time of initial European-American entry into the region. The Northern Pomo consisted of multiple tribelets, which consisted of three (3) to five (5) primary villages, one (1) ethnographic village, *Kadiu*, was located immediately north of the Noyo River and is today identified immediately west of State Highway 1,

west of the Site. Pomo cultural materials are documented in both ethnographic and archaeological records and artifacts include a wide variety of materials and expressions. Colonization of the region began in 1812 with the establishment of Fort Ross by Russia, approximately 80 miles south of the Site, and was followed by other European-American explorers who visited, then later settled, the Mendocino Coast beginning in the 1830s. In 1855, the federal government created the 25,000-acre Mendocino Indian Reservation adjacent to the north side of the Noyo River. In 1857, Fort Bragg was established between Pudding Creek and the Noyo River, to administer the large reservation until 1864 when the interred Native Americans were forcibly moved to the Round Valley Indian Reservation near Covelo. Widespread settlement in Mendocino County was spurred by demand for both lumber and agricultural lands and led to the establishment of mills throughout the County and the 1891 formation of the Union Lumber Company in Fort Bragg, which closed in 1969 (Genesis Society, 2019).

A records search was conducted at the Northwest Information Center (NWIC) located on the Sonoma State University campus on July 16, 2019 (File No. 18-2464), which included a review of all records on file for lands within a 0.25-mile radius of the Site, including archaeological site and survey records, and numerous registries and inventories reviewed as part of the NWIC search, or evaluated separately. Topographic maps from 1943 through 1985 depict a school within the project area; however, aerial photographs show that no structures existed on the Site between 1943 and 1996. As such, the *Cultural Survey* deduced that the school icon visible on historic topographic maps represents an “artifact” from older topographic maps. A review of the historic registers and inventories indicated that no archaeological investigation had been previously prepared for the Site and no historic properties or cultural resources have been documented within the project area; however, eight (8) cultural resources have been documented within a 0.25-mile radius of the Site.

As noted in the *Cultural Survey*, fieldwork was conducted on August 10, 2019, by Genesis Society and entailed an intensive pedestrian survey by means of walking systematic transects, spaced at 10-meter intervals within the portions of the Site that did not contain existing impervious surface cover, including building, parking, roads, etc. In surfaced areas, structure and road margins were inspected for any native soils. The *Cultural Survey* notes that the majority of the Site has been subjected to intensive disturbance as a result of wholesale demolition, grading, and subsequent contemporary (post-1996) commercial building construction. No evidence of prehistoric or historic use or occupation was observed within the Site, most likely due to the degree of contemporary disturbance to which the Site has been subjected. Based on the findings of the records search and pedestrian survey, no significant historic resources or unique archaeological resources are present within the project area and none will be affected by the proposed project (Genesis, 2019).

On June 20, 2019, Genesis Society contacted the Native American Heritage Commission (NAHC) to request information concerning archaeological sites or traditional use areas for the project area. The NAHC response letter, dated June 28, 2019, indicated that a Sacred Lands File (SLF) search was completed and returned a negative result. The NAHC provided a list of 13 Native American contacts who may have knowledge of cultural resources in the project area and suggested that Genesis Society contact all of those indicated. The NAHC Native American Contacts List dated June 27, 2019, including the EPA Director and Chairperson of the Cahto Tribe; the Chairpersons of the Coyote Valley Band of Pomo Indians, Guidiville Band of Pomo Indians, Hopland Band of Pomo Indians, Kashia Band of Pomo Indians of the Stewarts Point Rancheria, Manchester Band of Pomo Indians, Noyo River Indian Community, Pinoleville Pomo Nation, Potter Valley Tribe, Redwood Valley or Little River Band of Pomo Indians, and Sherwood Valley Band of Pomo Indians; and the President of the Round Valley Reservation/ Covelo Indian Community.

On July 22, 2019, Genesis Society sent letters to all representatives on the NAHC contact list, and those contacted were requested to supply any information they might have concerning prehistoric sites or

traditional use areas within, adjacent, or near the project area. A follow-up email and telephone call were placed with Tina Sutherland of the Sherwood Valley Band of Pomo Indians on Saturday, August 10, 2019, prior to the pedestrian survey. No responses were received from the contacted parties. As no prehistoric cultural material was identified during the records search or pedestrian survey, no additional consultation was undertaken by Genesis Society or the City of Fort Bragg (City), and the City, as Lead Agency, has deemed the Tribal consultation process complete. Copies of the NAHC response and Native American Contacts List and an example of the letters sent to Tribal representatives are included in Appendix A.

a.i-ii) As discussed above, no Tribal Cultural Resources were identified at or near the Site during the records review and pedestrian survey. While the proposed project includes the demolition of an existing building, the existing building is a contemporary (post-1996) commercial building. In addition, no responses were received from the Tribal consultation effort and there are no known Tribal cultural resources in the project area. A less than significant impact would occur.

#### **MITIGATION MEASURES**

No mitigation required.

#### **FINDINGS**

The proposed project would have a **Less Than Significant Impact** on Tribal Cultural Resources.

<b>XVIX. UTILITIES AND SERVICE SYSTEMS.</b> Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**THRESHOLDS OF SIGNIFICANCE:** The project would have a significant effect on utilities and service systems if it would require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects; not have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years; result in a determination by the wastewater treatment provider, which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments; generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals; or not comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

**DISCUSSION**

The Site is located within the service boundaries of the City of Fort Bragg water and wastewater collection. There are currently on-site utility connections; however, the recorded use of the building was for office space and the proposed use is retail grocery – water and sewer capacity fees would be associated with the proposed increase in use. The existing water connection on South Street includes a 6-inch fire service and is proposed to be the main water service to the building, with a new 8-inch fire connection to be constructed to the east of the existing connection. There is an existing 4-inch sewer lateral extending from the existing manhole on South Street that is proposed to be removed and replaced with the construction of a new 6-inch sewer lateral per City standards. On-site drainage will be managed utilizing post-construction Best Management Practices (BMPs), including bioretention facilities sized to capture and treat runoff from the proposed impervious surfaces produced by the 24 hour 85<sup>th</sup> percentile rain event, and landscaped areas throughout the Site to encourage natural stormwater infiltration. Post-construction BMPs will connect to

proposed curbs and gutters along the perimeter of the Site. Additionally, a connection will be established to the existing utility feed currently located underground, with electricity provided by Pacific Gas and Electric Company (PG&E). An electric utility box is located on the northeast corner of the Site.

Waste Management would provide solid waste collection services, which would be collected from a trash bin enclosure to be installed in the western portion of the Site.

### **Electricity**

Electricity would be provided to the Site by Pacific Gas and Electric Company (PG&E). As noted above, a connection would be established to the existing utility feed which is currently underground. An electric utility box is located on the northeast corner of the Site.

### **Water Service**

Water would be provided to the Site by the City of Fort Bragg's Public Works Department, Water Enterprise Division. According to Chapter 3 (Public Facilities Element) of the Coastal General Plan of the City of Fort Bragg (2008), the City of Fort Bragg's water supply system consists of the Newman Reservoir, the Simpson Lane Reservoir, the Waterfall Gulch pond, and a direct diversion in the Noyo River (which includes a wet well in the Noyo River, a pump station at the Noyo River, and various conveyances to the water treatment plant). The City currently obtains about 50 percent of its water from the Noyo River. Under its existing temporary license, the City is entitled to draw up to 1,500 acre-feet of water per year from the Noyo River so long as withdrawals do not exceed 3.0 cubic feet per second and specified amounts are maintained in the river to meet the needs of the fish population. The City currently uses about 36 percent of this entitlement. The City's Water Permit contains limits on how much water can be pumped from the Noyo River. These conditions were established in the past by the State Department of Health Services because, at the time, it was concluded that the City could not withdraw sufficient water from the Noyo River to meet its needs while retaining the required flows within the river necessary to support the fish population. To comply with these Permit conditions, the City requires that new development implement measures that limit new water demand (City of Fort Bragg, 2008).

As described in the project's staff report, the City developed a new 45-acre-foot raw water reservoir called Summers Lane Reservoir to ensure adequate water storage during years of severe drought and to meet the water quality needs for the Fort Bragg Water Service District. The new reservoir draws water from an existing water line which previously ran from Waterfall Gulch to Newman Gulch and stores raw water for the City's potable water use. With the development of Summers Lane Reservoir, the City was also able to obtain additional water storage capacity to meet the needs of a buildout development scenario in the City of Fort Bragg. The City has a temporary license water right to divert water from the Noyo River as well as permanent license to divert water from both Newman Gulch and Waterfall Gulch, a tributary to Hare Creek. The water is piped from Summers Lane Reservoir to the Newman Reservoir and on to the treatment plant (City of Fort Bragg, 2014).

The City currently has the ability to store 6,300,000 gallons of treated water, including two 1,500,000 gallon tanks at the Corporation Yard and one across the street and a smaller tank at the Highway 20 Fire Station. Additional untreated water storage of 3,300,000 gallons is accommodated within the two raw water storage ponds at the Water Treatment Plant, Newman Reservoir, and the Waterfall Gulch pond. There is also a significant volume of water stored within the City's distribution system. The new Summers Lane Reservoir holds approximately 14,700,000 gallons of raw water for a total storage of approximately 22,800,000 gallons. City water customers use about 600,000 to a million gallons of water per day in the summer. Water supply analyses indicate that although the City has sufficient water supply to serve the projected buildout of the City of Fort

Bragg as currently zoned within the existing City Limits through 2040, it does not have sufficient water storage or a right that allows for storage to serve buildout in a drought year. However, the new water storage facilities will ensure that sufficient water is available in extended drought conditions, such as the 1977 or 2015 droughts, to serve existing development (City of Fort Bragg, 2014). New development in the City will be required to pay its fair share of new water system improvements (City of Fort Bragg, 2008).

### **Wastewater Collection Service**

Wastewater generated on-site would be collected, treated, and disposed of by the City of Fort Bragg Municipal Improvement District No. 1. The District is larger than the City and includes much of the proposed Sphere of Influence. Currently, the District facility serves residences and businesses within the City. The treatment and disposal facility currently disposes of about 540,000 gallons of treated wastewater per day (Average Dry Weather Flow - ADWF). Information provided by the District indicates that the current water plant production amounts compared to 2008 (282.171 million gallons) are in fact much less; therefore, the wastewater plant is receiving less water as well.

The plant has a rated capacity of 800,000 gallons per day ADWF which is sufficient to meet the demand of the projected population increase. However, due to spikes in the inflow to the facility during extended rain events (caused by infiltration and inflow into the collection lines), the plant's wet weather design flow is frequently exceeded. The City has added two equalization basins to address peak flows further protecting the treatment train. The District is able to meet projected wastewater treatment and disposal demands; though major development will need to pay its fair share of any additional improvements that are needed.

In 2020, the City completed construction of the new Wastewater Treatment Plant Upgrade Project which included excavation to accommodate a 128-foot-wide by 164-foot long Biological Treatment Facility. This work also included the addition of two equalization basins, new solids handling system, onsite stormwater capture and treatment, and relocated the biosolids storage area.

### **Storm Drainage System**

Per the City of Fort Bragg's website, the Coastal Mendocino County Storm Water Resource Plan (SWRP) encompasses three (3) coastal watersheds in Mendocino County, Northern California: Pudding Creek-Frontal Pacific Ocean Watershed, Noyo River Watershed, and Big River Watershed. The purpose of the SWRP is to identify potential projects that utilize stormwater as a resource for multi-benefit projects that augment water supply, identify areas of concern, enhance water quality, reduce localized flooding, and create environmental and community benefits within the three coastal watersheds. According to Chapter 3 (Public Facilities Element) of the Coastal General Plan of the City of Fort Bragg (2008), the City of Fort Bragg manages a series of drainage inlets throughout the City from Pudding Creek to Noyo River, which flow directly into local creeks and rivers, and eventually the Pacific Ocean. As the topography of the Site is relatively flat, stormwater typically infiltrates in the undeveloped portion of the Site or flows to the northwest and southwest towards the neighboring property, in the developed portion of the Site. The nearest bodies of water are the Noyo River, which is located approximately 600 feet south of the Site, and the Pacific Ocean, which is located approximately 1,200 feet west of the Site. Regional drainage is controlled by the Noyo River. Frontage improvements including curbs, gutters, and sidewalks, will be located on South Street, S. Franklin Street, and N. Harbor Street.

Drainage improvements proposed to be developed as part of the project include post-construction BMPs, which include bioretention facilities sized to capture and treat runoff from the proposed impervious surfaces produced by the 24 hour 85<sup>th</sup> percentile rain event and landscaped areas throughout the Site to encourage natural stormwater infiltration. The project additionally includes the construction of pedestrian facilities,

including curbs, gutters, and sidewalks along the north, south, and east side of the Site. Off-site improvements, such as sidewalk, curbs and gutters would be required to convey flows from the post-construction BMPs at the project Site to the existing Caltrans stormwater drainage system located west of the Site on State Highway 1, which does not currently exist in the vicinity of the Site.

### **Solid Waste Service**

As noted above, Waste Management, provides weekly curbside residential and commercial garbage, recycling, and green waste collection within the City of Fort Bragg. Waste collected by Waste Management is taken to Fort Bragg Disposal located at 219 Pudding Creek Road in Fort Bragg for processing and transport.

### **Telecommunications**

According to the City of Fort Bragg's website, Xfinity (Comcast) provides cable TV and internet services to the City of Fort Bragg. Additionally, various telecommunication companies provide land-line telephone service to the surrounding area.

XVIX.a) As noted above, the proposed project will require a new connection to the City of Fort Bragg water distribution system, an upgrade to the existing wastewater system connection, a new connection to the existing electric utility lines, and construction of new off-site improvements to convey surface flows to the existing Caltrans stormwater drainage systems located west of the Site on State Highway 1. The Site is currently developed and new infrastructure will be required to establish these connections; however, the Site is located in an urban built-up environment in which connections to each of these utilities exist on or within the vicinity of the Site, and as discussed above, the City has ample capacity to supply the needed utilities to the Site. Additionally, as discussed in Section IX (Hydrology and Water Quality), above, in order to ensure significant environmental effects would not occur, the respective utility providers and installers would implement applicable Best Management Practices (BMPs) to reduce the potential for impacts, including but not limited to erosion during construction. As such, a less than significant impact would occur.

XVIX.b) Water to the Site would be provided by the City of Fort Bragg's Public Works Department, Water Enterprise Division. As discussed above, Chapter 3 (Public Facilities Element) of the Coastal General Plan of the City of Fort Bragg (2008), and the Summers Lane Reservoir staff report, the City of Fort Bragg will have sufficient water supply to meet demand any minimal increase associated with this project. New development in the City will be required to pay its fair share of new water system improvements; therefore, a less than significant impact would occur.

XVIX.c) Wastewater collection service at the Site would be provided by the City of Fort Bragg Municipal Improvement District No. 1. As noted above, wastewater collected by the City is treated at the Wastewater Treatment Plant. There is an existing 4-inch sewer lateral extending from the existing manhole on South Street which is proposed to be removed and replaced with the construction of a new 6-inch sewer lateral per City standards. As such, a less than significant impact would occur.

XVIX.d-e) A significant amount of solid waste is not anticipated under the project and all solid waste generated under the project would be disposed of in accordance with all federal, state, and local statutes and regulations related to solid waste including state and local waste diversion requirements. As noted above, the project would be served by Waste Management, located within the City of Fort Bragg. A trash enclosure for collecting solid waste generated on-site would be located on the western portion of the Site. Solid waste collected by Waste Management would eventually be disposed of at Fort Bragg Disposal. As such, the proposed project would not negatively impact the provision of solid waste services or impair the attainment of solid waste reduction goals. A less than significant impact would occur.



**MITIGATION MEASURES**

No mitigation required.

**FINDINGS**

The proposed project would have a **Less Than Significant Impact** on Utilities and Service Systems.

<b>XX. WILDFIRE.</b> If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage challenges?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**THRESHOLDS OF SIGNIFICANCE:** The project would have a significant effect on wildfire if it would impair an adopted emergency response plan or emergency evacuation plan; due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire; require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment; or expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage challenges.

**DISCUSSION**

The Site is located within the Local Responsibility Area (LRA) (Mendocino County Maps – Fort Bragg – Fire Responsibility Areas, 2019) and per the City of Fort Bragg website (Not Dated), is served by the Fort Bragg Fire Department a Joint Powers Authority formed in 1990 by the City of Fort Bragg and the Fort Bragg Rural Fire Protection District to jointly provide fire services within the City of Fort Bragg and outlying rural areas. The Site is mapped as located within an area with “Moderate” Fuel Rank fire hazard severity zone per Figure C-13 of the 2014 Mendocino County Multi-Hazard Mitigation Plan. The nearest fire station to the Site is the Fort Bragg Fire Department, located approximately 1-mile northwest of the Site.

XX.a) The City of Fort Bragg approved an Emergency Plan on January 11, 2016, under Resolution Number 3881-2016. The purpose of the City’s Emergency Plan is to “bring a renewed focus on what emergencies can happen here (Fort Bragg) and how we (community) can respond to them – together.”

The County of Mendocino County also adopted a *Mendocino County Operational Area Emergency Operations Plan* (County EOP) on September 13, 2016, under Resolution Number 16-119. As noted on the Plans and Publications webpage of the Mendocino County Office of Emergency Services (MCOES), the County EOP, which complies with local ordinances, state law, and state and federal emergency planning guidance, serves as the primary guide for coordinating and responding to all emergencies and disasters within the County. The purpose of the County EOP is to “facilitate multi-agency and multi-jurisdictional coordination during emergency operations, particularly between Mendocino County, local and tribal governments, special districts as well as state and Federal agencies” (MCOES – Plans and Publications, 2019).

As discussed under Section IX (Hazards and Hazardous Materials), above, there are no components of the project that would impair an adopted emergency response plan or emergency evacuation plan, including the adopted County EOP. The Site is located within the LRA and within a "Moderate" Fuel Rank fire hazard severity zone per Figure C-13 of the 2014 Mendocino County Multi-Hazard Mitigation Plan. The facility would be constructed in accordance with state and local standards, including safety and emergency access requirements. As such, there are no components of the project that would impair the implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. A less than significant impact would occur.

XX.b) Under the proposed project, it is not anticipated that wildfire risks would be exacerbated due to slope, prevailing winds, and other factors. The Site is relatively flat, with elevations at the Site ranging between approximately 117 feet and 122 feet above mean sea level. In addition, the Site is located in an urban built-up environment where there is a low threat of wildfire. No impact would occur.

XX.c) The Site would be served with electricity from Pacific Gas & Electric (PG&E), propane by an existing tank on-site, and water and wastewater service by the City of Fort Bragg, and solid waste services by a local waste hauler. There are existing utility connections located on Site that served the vacant former office building. These existing water and wastewater utility connections would require new connections to the proposed retail store as part of the project. Under the proposed project, all utility lines would be underground. As such, the project would not require the installation or maintenance of infrastructure that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. No impact would occur.

XX.d) The proposed project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage challenges, as the Site is relatively flat, with elevations at the Site ranging between approximately 117 and 122 feet above mean sea level, and is surrounded by an urban built-up environment. In addition, bioretention basins would be constructed on-site to capture and treat increased stormwater flows due to the proposed increase in impervious surfaces. As such, a less than significant impact would occur.

#### **MITIGATION MEASURES**

No mitigation required.

#### **FINDINGS**

The proposed project would have a **Less than Significant Impact** on Wildfire.

<b>XXI. MANDATORY FINDINGS OF SIGNIFICANCE.</b>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects).	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**THRESHOLDS OF SIGNIFICANCE:** The project would have a significant effect on mandatory findings of significance if it would have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory; have impacts that are individually limited, but cumulatively considerable ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.); or have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly.

**DISCUSSION**

Certain mandatory findings of significance must be made to comply with CEQA Guidelines §15065. The proposed project has been analyzed and it has been determined that it would not:

- Substantially degrade environmental quality;
- Substantially reduce fish or wildlife habitat;
- Cause a fish or wildlife population to fall below self-sustaining levels;
- Threaten to eliminate a plant or animal community;
- Reduce the numbers or range of a rare, threatened, or endangered species;
- Eliminate important examples of the major periods of California history or pre-history;
- Achieve short term goals to the disadvantage of long term goals;
- Have environmental effects that will directly or indirectly cause substantial adverse effects on human beings; or
- Have possible environmental effects that are individually limited but cumulatively considerable when viewed in connection with past, current, and reasonably anticipated future projects.

Potential environmental impacts from the construction and operation of a 16,157 square-foot, one-story, Grocery Outlet (retail store) with 53 paved parking spaces and associated improvements and infrastructure, have been analyzed in this document, and mitigation measures have been included in the document to ensure impacts would be held to a less than significant level.

XXI.a) The project does not have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory. The developed Site does not provide habitat for any fish or wildlife species, nor does the Site support any notable plant or animal communities. There are no important examples of California Pre-history or history located on the Site. Mitigation has been applied to reduce any potential environmental impacts to levels that are less than significant.

XXI.b) No cumulative impacts have been identified as a result of the proposed project. The project is a 16,157 square-foot retail store with associated improvements and infrastructure and will be served by community services. Individual impacts from the project would not significantly contribute to cumulative impacts in the area. The project is anticipated with the expected level of growth and density of use on the Site. A less than significant impact would occur.

XXI.c) The project will not have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly. Concerns related to the possible discovery of unique paleontological resources on Site are mitigated by Mitigation Measures GEO-1, which reduce the significant impacts to fossils or fossil-bearing deposits in the event they are encountered during project construction to a level that is less than significant and concerns related to the impact of construction noise on nearby sensitive receptors are mitigated by Mitigation Measure NOISE-1. A less than significant impact would occur.

#### **MITIGATION MEASURES**

Refer to Mitigation Measures BIO-1 in Section IV (Biological Resources), GEO-1 in Section VII (Geology and Soils), and NOISE-1 in Section XIII (Noise), above.

#### **FINDINGS**

The proposed project would have a **Less Than Significant Impact with Mitigation Incorporated** on Mandatory Findings of Significance.

## VI. REFERENCES

- Branum, D., Chen, R., Petersen, M., and Wills, C., California Geological Survey. 2016. *Earthquake Shaking Potential for California Map*. Map Sheet 48 (Revised 2016).
- California Air Resources Board (CARB). 2018. AB 32 Scoping Plan. Accessed September 10, 2020. Available at: <https://ww3.arb.ca.gov/cc/scopingplan/scopingplan.htm>.
- California Air Resources Board (CARB). 2019. GHG Current California Emission Inventory Data. *California Greenhouse Gas Emissions for 2000 to 2017*. Accessed September 10, 2020. Available at: [https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000\\_2017/ghg\\_inventory\\_trends\\_00-17.pdf](https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2017/ghg_inventory_trends_00-17.pdf).
- California Department of Conservation (DOC). 2016. Farmland Mapping & Monitoring Program. *California Important Farmland Finder*. Accessed September 11, 2020. Available at: <https://maps.conservation.ca.gov/DLRP/CIFF/>.
- California Department of Conservation (DOC). 2019. California Geological Survey. *EQ Zapp: California Earthquake Hazards Zone Application*. Accessed September 16, 2020. Available at: <https://maps.conservation.ca.gov/cgs/EQZApp/app/>.
- California Department of Conservation (DOC). 2015. California Geological Survey. *Mineral Land Classification Studies Index*. Accessed September 14, 2020. Available at: <https://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=mlc>.
- California Department of Conservation (DOC). 2009. California Geological Survey. *Tsunami Inundation Map for Emergency Planning – Fort Bragg Quadrangle*. Accessed September 15, 2020. Available at: [https://www.conservation.ca.gov/cgs/Documents/Publications/Tsunami-Maps/Tsunami\\_Inundation\\_FortBragg\\_Quad\\_Mendocino.pdf](https://www.conservation.ca.gov/cgs/Documents/Publications/Tsunami-Maps/Tsunami_Inundation_FortBragg_Quad_Mendocino.pdf).
- California Department of Transportation (Caltrans). 2020. *Scenic Highways*. Accessed September 11, 2020. Available at: <https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways>.
- California Department of Toxic Substances Control (DTSC). 2020. *EnviroStor*. Accessed September 10, 2020. Available at: <https://www.envirostor.dtsc.ca.gov/public/>.
- California Energy Commission (CEC). 2020. *2019 Building Energy Efficiency Standards*. Accessed September 10, 2020. Available at: <https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2019-building-energy-efficiency>.
- California Energy Commission (CEC). October 2017. *California Energy Commission Final Commission Report - Senate Bill 350: Doubling Energy Efficiency Savings by 2020*. Accessed September 10, 2020. Available at: [http://docketpublic.energy.ca.gov/PublicDocuments/17-IEPR-06/TN221631\\_20171026T102305\\_Senate\\_Bill\\_350\\_Doubling\\_Energy\\_Efficiency\\_Savings\\_by\\_2030.pdf](http://docketpublic.energy.ca.gov/PublicDocuments/17-IEPR-06/TN221631_20171026T102305_Senate_Bill_350_Doubling_Energy_Efficiency_Savings_by_2030.pdf).
- California Legislative Information. July 12, 2019. *Assembly Bill No. 998*. Accessed September 10, 2020. Available at: [https://leginfo.ca.gov/faces/billNavClient.xhtml?bill\\_id=201920200AB998](https://leginfo.ca.gov/faces/billNavClient.xhtml?bill_id=201920200AB998).

California Legislative Information. January 1, 2015. *Public Resources Code – PRC Chapter 21071*. Accessed September 8, 2020. Available at: [https://leginfo.legislature.ca.gov/faces/codes\\_displayText.xhtml?lawCode=PRC&division=13.&title=&part=&chapter=2.5.&article=.](https://leginfo.legislature.ca.gov/faces/codes_displayText.xhtml?lawCode=PRC&division=13.&title=&part=&chapter=2.5.&article=)

California Legislative Information. September 27, 2006. *Assembly Bill No. 32*. Accessed September 10, 2020. Available at: [https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill\\_id=200520060AB32](https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200520060AB32).

California Legislative Information. Effective January 1, 1997. *Health and Safety Code (HSC). Division 20, Chapter 6.5 Hazardous Waste Control, Article 2. Section 25117*. Accessed September 10, 2020. Available at: [https://leginfo.legislature.ca.gov/faces/codes\\_displaySection.xhtml?lawCode=HSC&sectionNum=25117](https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=HSC&sectionNum=25117).

California Legislative Information. October 7, 2015. *Senate Bill No. 350*. Accessed September 10, 2020. Available at: [https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill\\_id=201520160SB350](https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB350).

California Native Plant Society (CNPS), Rare Plant Program. 2020. *Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Fort Bragg Quad*. Accessed September 14, 2020. Available at: <http://www.rareplants.cnps.org>.

CalRecycle. 2019. *SWIS Facility/Site Activity Details – Fort Bragg Disposal (23-AA-0036)*. Accessed September 18, 2020. Available at: <https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/2859?siteID=1814>.

City of Fort Bragg. 2020. *Fort Bragg Fire Department*. Accessed: September 15, 2020. Available at: <https://fortbraggfire.specialdistrict.org/>.

City of Fort Bragg. 2014. *City of Fort Bragg Design Guidelines – Chapter 2 Commercial District Design Guidelines*. Accessed October 7, 2020. Available at: <https://city.fortbragg.com/DocumentCenter/View/1213/Chapter-2--Commercial-District-Design-Guidelines-PDF>.

City of Fort Bragg. Last updated November 13, 2018. *Fort Bragg Coastal Land Use and Development Code*. Accessed September 8, 2020. Available at: <https://www.codepublishing.com/CA/FortBragg/#!/LUC17/FortBraggNT.html>.

City of Fort Bragg. July 23, 2014. *Grading Permit 2013-08 (GP 2013-08) Agenda Item Summary Report*. Accessed October 9, 2020. Available at: <https://cityfortbragg.legistar.com/View.ashx?M=F&ID=3176938&GUID=B53382A3-BF87-4927-92E7-8BBD8040362D>.

City of Fort Bragg. Not Dated. *Aquatic Center & Parks (Various)*. Accessed September 15, 2020. Available at: <https://city.fortbragg.com/415/Local-Parks-Aquatic-Center>.

City of Fort Bragg. Not Dated. *City Services. Cable TV/Internet Services (Comcast)*. Accessed September 10, 2020. Available at: <https://city.fortbragg.com/436/City-Services>.

City of Fort Bragg. Not Dated. *Fort Bragg Coastal General Plan (July 2008)*. Accessed September 8, 2020. Available at: <https://city.fortbragg.com/284/Coastal-General-Plan>.

- City of Fort Bragg. Not Dated. *Police Department*. Accessed September 17, 2020. Available at: <https://city.fortbragg.com/226/Police-Department>.
- County of Mendocino. 2020. Executive Office: Office of Emergency Services. *Plans and Publications*. Accessed September 15, 2020. Available at: <https://www.mendocinocounty.org/government/executive-office/office-of-emergency-services/plans-and-publications>.
- County of Mendocino. 1987. *Code of Ordinances: Chapter 22.12 – Archaeological Resources*. Accessed September 10, 2020. Available at: [https://library.municode.com/ca/mendocino\\_county/codes/code\\_of\\_ordinances?nodeId=MECOCO\\_TIT22LAUS\\_CH22.12ARRE](https://library.municode.com/ca/mendocino_county/codes/code_of_ordinances?nodeId=MECOCO_TIT22LAUS_CH22.12ARRE).
- County of Mendocino. 2020. Department of Planning & Building Services. *Mendocino County Maps (Various)*. Accessed September 14, 2020. Available at: <https://www.mendocinocounty.org/government/planning-building-services/county-maps>.
- Federal Emergency Management Agency (FEMA). No Date. *FEMA Flood Map Service Center: Search by Address*. Accessed September 10, 2020. Available at: <https://msc.fema.gov/portal/search>.
- Genesis Society. August 15, 2019. *Grocery Outlet Development Project, Mendocino County, Cultural Resources Inventory Survey*. Circa 1.6 acres, Fort Bragg, Mendocino County, California.
- Google Earth Pro v7.3.3.7786. July 2, 2018. 851 S. Franklin Street, Fort Bragg, CA, USA. 38° 25' 46.19" N, 123° 48' 18.57" W, Eye alt 120 feet. Accessed September 8, 2020. Available at: <http://www.earth.google.com>.
- Google Maps. 2020. *California Geomorphic Province Areas*. Accessed September 16, 2020. Available at: [https://www.google.com/maps/d/viewer?mid=1gv8\\_j62Fex\\_PVCFTgkfUiGPrHf0&hl=en&ll=37.41380016608167%2C-119.23461750000001&z=6](https://www.google.com/maps/d/viewer?mid=1gv8_j62Fex_PVCFTgkfUiGPrHf0&hl=en&ll=37.41380016608167%2C-119.23461750000001&z=6).
- Governor's Office of Planning and Research, State of California. April 2018. *Technical Advisory on Evaluating Transportation Impacts in CEQA*. Accessed September 29, 2020. Available at: [https://www.opr.ca.gov/docs/20180416-743\\_Technical\\_Advisory\\_4.16.18.pdf](https://www.opr.ca.gov/docs/20180416-743_Technical_Advisory_4.16.18.pdf)
- Jennings, C.W., and Strand, R.G., Division of Mines and Geology. 1960. *Geologic Map of California Ukiah Sheet*. State of California Department of Natural Resources.
- KD Anderson & Associates, Inc. October 22, 2019. *Traffic Impact Analysis for Grocery Outlet Store*. Fort Bragg, California.
- Mendocino Council of Governments (MCOG). May 20, 2020. *Senate Bill 743 Vehicle Miles Traveled Regional Baseline Study*. Prepared by Fehr & Peers. Accessed September 7, 2020. Available at: <https://www.mendocinocog.org/files/60111f0bd/SB743+VMT+Regional+Baseline+Study-accepted%28w-links%29.pdf>.



Mendocino County Air Quality Management District (MCAQMD). June 2, 2010. *Adopted Air Quality CEQA thresholds of Significance*. Accessed September 10, 2020. Available at: [http://www.co.mendocino.ca.us/aqmd/pdf\\_files/MCAQMDCEQARecomendations.pdf](http://www.co.mendocino.ca.us/aqmd/pdf_files/MCAQMDCEQARecomendations.pdf).

Mendocino County Air Quality Management District (MCAQMD). January 2005. *Particulate Matter Attainment Plan*. Accessed September 10, 2020. Available at: [http://www.co.mendocino.ca.us/aqmd/pdf\\_files/Attainment%20Plan\\_DRAFT.pdf](http://www.co.mendocino.ca.us/aqmd/pdf_files/Attainment%20Plan_DRAFT.pdf).

Mendocino County Air Quality Management District (MCAQMD). February 2011. *Rules and Regulations. Regulation 1 – Air Pollution Control Rules*. Accessed September 10, 2020. Available at: <http://www.co.mendocino.ca.us/aqmd/district-regulation-4.html>.

State Water Resources Control Board (SWRCB). February 5, 2013. *National Pollutant Discharge Elimination System (NPDES) General Permit for Waste Discharge Requirements for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4s)*. Order No. 2013-0001-DWQ. Accessed September 15, 2020. Available at: [https://www.waterboards.ca.gov/water\\_issues/programs/stormwater/docs/remediated\\_phase2ms4\\_permit\\_v2.pdf](https://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/remediated_phase2ms4_permit_v2.pdf).

State Water Resources Control Board (SWRCB). 2020. *GeoTracker*. Accessed September 10, 2020. Available at: <https://geotracker.waterboards.ca.gov/>.

Thomson Reuters Westlaw. 2005. *California Code of Regulations. Title 13, Division 3, Chapter 10, Article 1, Section 2485: Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling*. Accessed September 10, 2020. Available at: [https://govt.westlaw.com/calregs/Document/16DACC2EF0D6441DDA5B788DFEDCD1A22?viewType=FullText&originationContext=documenttoc&transitionType=CategoryPageItem&contextData=\(sc.Default\)](https://govt.westlaw.com/calregs/Document/16DACC2EF0D6441DDA5B788DFEDCD1A22?viewType=FullText&originationContext=documenttoc&transitionType=CategoryPageItem&contextData=(sc.Default)).

Thomson Reuters Westlaw. 1991. *California Code of Regulations. Title 22, Division 4.5, Chapter 11, Article 3: Characteristics of Hazardous Waste*. Accessed September 10, 2020. Available at: [https://govt.westlaw.com/calregs/Document/1A3C90780D4BA11DE8879F88E8B0DAAAE?viewType=FullText&originationContext=documenttoc&transitionType=CategoryPageItem&contextData=\(sc.Default\)](https://govt.westlaw.com/calregs/Document/1A3C90780D4BA11DE8879F88E8B0DAAAE?viewType=FullText&originationContext=documenttoc&transitionType=CategoryPageItem&contextData=(sc.Default)).

United States Census Bureau. Not Dated. *Quick Facts. Fort Bragg city, California*. Accessed September 14, 2020. Available at: <https://www.census.gov/quickfacts/fact/table/fortbraggcitycalifornia>.

United States Census Bureau. Not Dated. *Quick Facts. Mendocino County, California*. Accessed September 14, 2020. Available at: <https://www.census.gov/quickfacts/mendocinocountycalifornia>.

United States Department of Agriculture (USDA). 2006. *Natural Resources Conservation Service (NRCS). Soil Survey of Mendocino County, California, Western Part*. Accessed September 16, 2020. Available at: [https://www.blogs.nrcs.usda.gov/Internet/FSE\\_MANUSCRIPTS/california/CA694/0/MendocinoWP\\_CA.pdf](https://www.blogs.nrcs.usda.gov/Internet/FSE_MANUSCRIPTS/california/CA694/0/MendocinoWP_CA.pdf).

United States Department of Agriculture (USDA). 2019. Natural Resources Conservation Service (NRCS). *Web Soil Survey*. Accessed September 16, 2020. Available at:  
<https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>.

United States Environmental Protection Agency (USEPA) Region IX. December 16, 1999. *Noyo River Total Maximum Daily Load for Sediment*. Accessed September 15, 2020. Available at:  
[https://www.waterboards.ca.gov/northcoast/water\\_issues/programs/tmdls/noyo\\_river/pdf/noyo.pdf](https://www.waterboards.ca.gov/northcoast/water_issues/programs/tmdls/noyo_river/pdf/noyo.pdf).

United States Fish and Wildlife Service (USFWS). No Date. Information for Planning and Consulting (IPaC). Accessed September 14, 2020. Available at: <https://ecos.fws.gov/ipac/>.

United States Fish and Wildlife Service (USFWS). Last updated 2018, February 21. National Wetlands Inventory. Wetlands Mapper. Accessed September 14, 2020. Available at:  
<https://www.fws.gov/wetlands/data/mapper.html>.

USS United Sign Systems. March 6, 2019. *Grocery Outlet Fort Bragg – Signage Package*.

Waste Management (WM). 2020. *Commercial Services*. Accessed September 10, 2020. Available at:  
<https://www.wm.com/location/california/cabay/fort-bragg/commercial.jsp>.

Wildland Resource Managers. August 2019. *Grocery Outlet Fort Bragg, California Property Biological Review*.

## FIGURES

<b>Figure 1</b>	<b>Location Map</b>
<b>Figure 2</b>	<b>City of Fort Bragg Land Use Designation</b>
<b>Figure 3</b>	<b>City of Fort Bragg Zoning Designation</b>
<b>Figure 4</b>	<b>Site Plans</b>

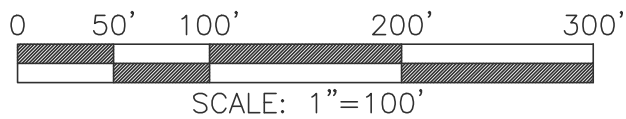
# LACO

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1-800-515-5054 WWW.LACOASSOCIATES.COM

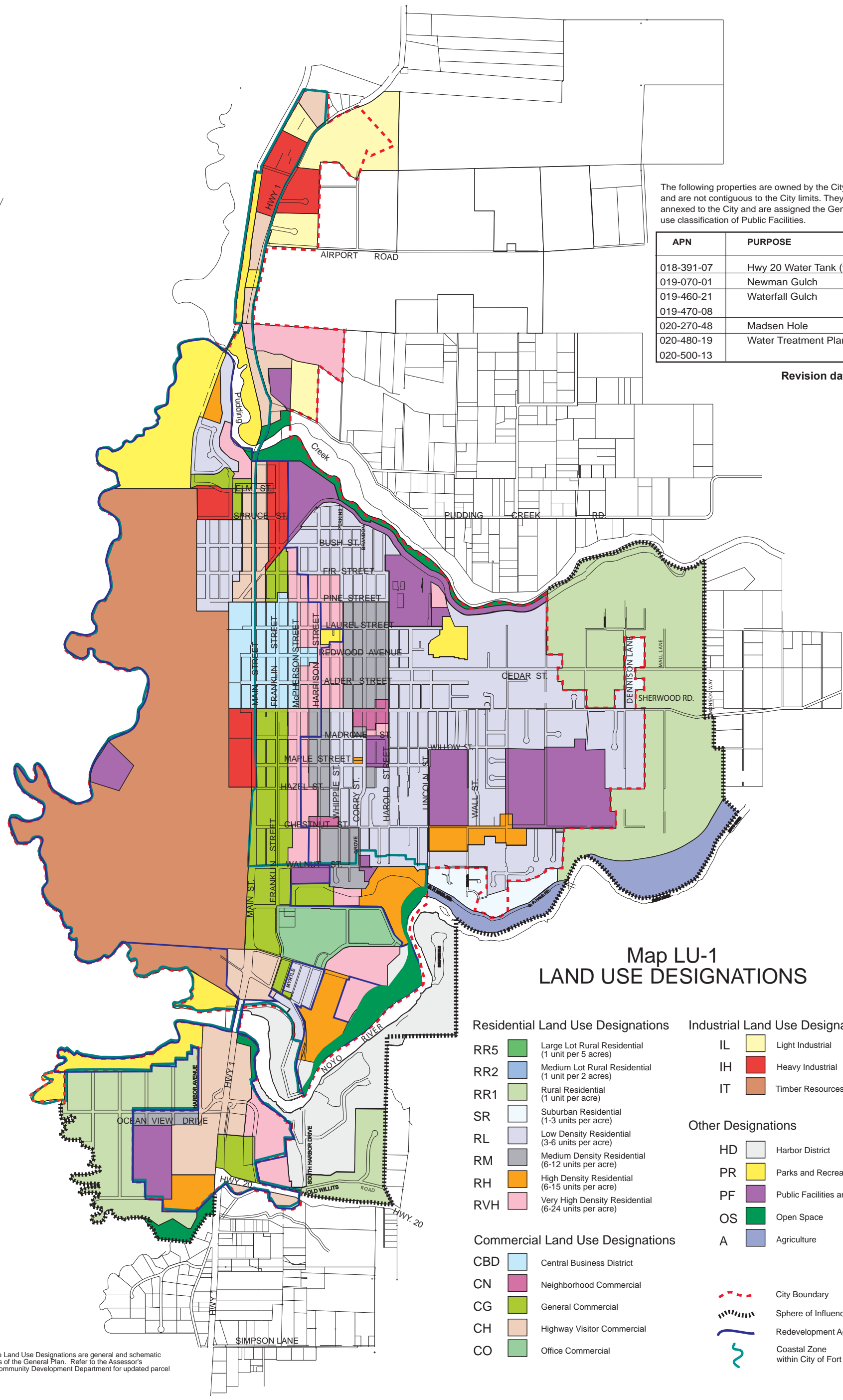
PROJECT	GROCERY OUTLET	BY	CRG	FIGURE	1
CLIENT	CITY OF FORT BRAGG	DATE	10/6/20	JOB NO.	
LOCATION	SOUTH FRANKLIN STREET, FORT BRAGG	CHECK	SCT		8135.14
	PROJECT LOCATION MAP	SCALE	AS SHOWN		

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N

Ocean Pacific



The following properties are owned by the City of Fort Bragg and are not contiguous to the City limits. They have been annexed to the City and are assigned the General Plan land use classification of Public Facilities.

APN	PURPOSE
018-391-07	Hwy 20 Water Tank (fire station)
019-070-01	Newman Gulch
019-460-21	Waterfall Gulch
019-470-08	
020-270-48	Madsen Hole
020-480-19	Water Treatment Plant/Corp. Yard
020-500-13	

Revision date: July 2008

### Map LU-1 LAND USE DESIGNATIONS

- Residential Land Use Designations**
    - RR5 Large Lot Rural Residential (1 unit per 5 acres)
    - RR2 Medium Lot Rural Residential (1 unit per 2 acres)
    - RR1 Rural Residential (1 unit per acre)
    - SR Suburban Residential (1-3 units per acre)
    - RL Low Density Residential (3-6 units per acre)
    - RM Medium Density Residential (6-12 units per acre)
    - RH High Density Residential (6-15 units per acre)
    - RVH Very High Density Residential (6-24 units per acre)
  - Commercial Land Use Designations**
    - CBD Central Business District
    - CN Neighborhood Commercial
    - CG General Commercial
    - CH Highway Visitor Commercial
    - CO Office Commercial
  - Industrial Land Use Designations**
    - IL Light Industrial
    - IH Heavy Industrial
    - IT Timber Resources Industrial
  - Other Designations**
    - HD Harbor District
    - PR Parks and Recreation
    - PF Public Facilities and Services
    - OS Open Space
    - A Agriculture
- City Boundary  
 Sphere of Influence  
 Redevelopment Agency  
 Coastal Zone within City of Fort Bragg

The boundaries of the Land Use Designations are general and schematic illustrating the policies of the General Plan. Refer to the Assessor's Parcel Maps at the Community Development Department for updated parcel boundary maps.

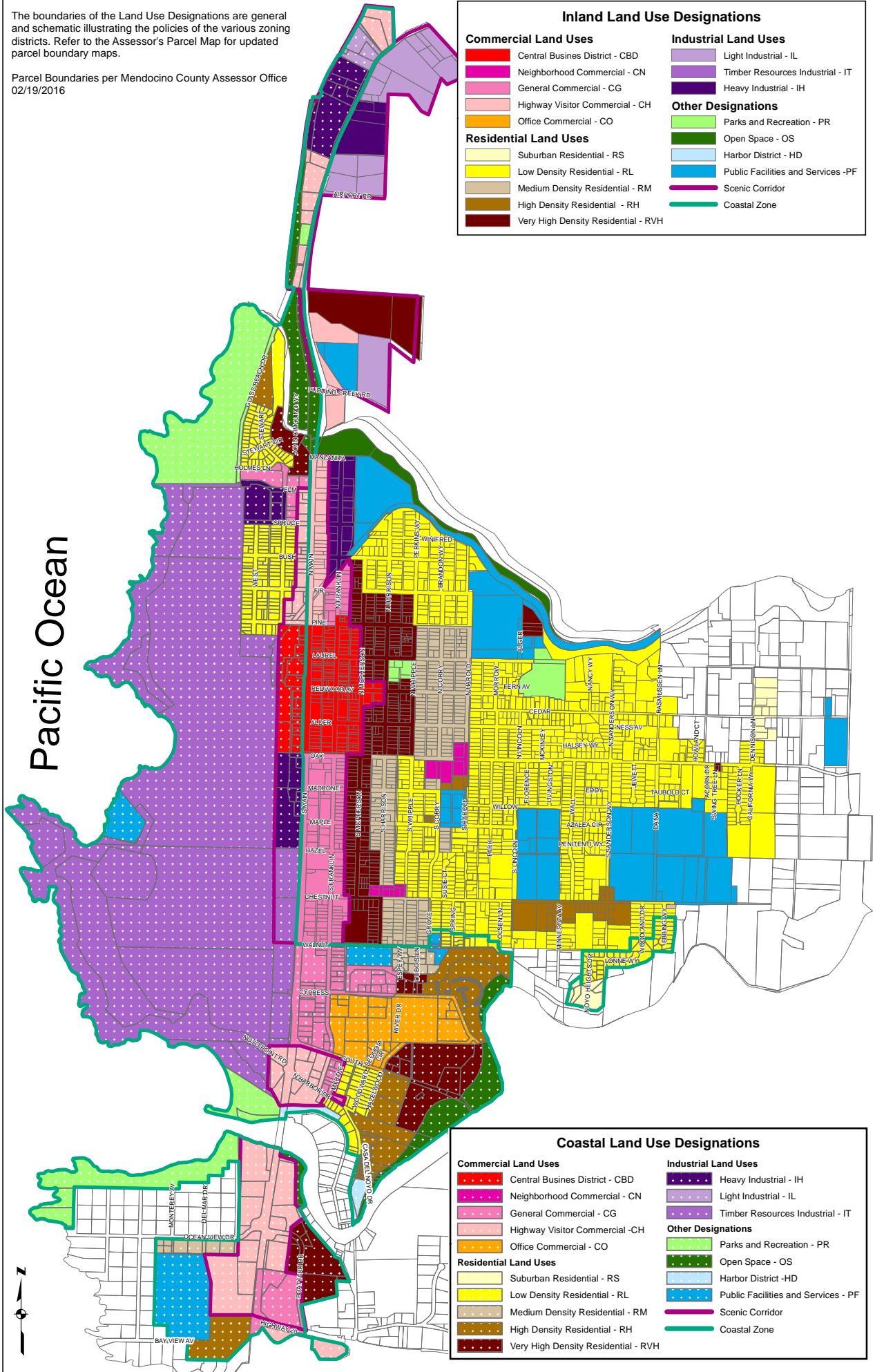
The boundaries of the Land Use Designations are general and schematic illustrating the policies of the various zoning districts. Refer to the Assessor's Parcel Map for updated parcel boundary maps.

Parcel Boundaries per Mendocino County Assessor Office 02/19/2016

Pacific Ocean

### Inland Land Use Designations

<b>Commercial Land Uses</b>	<b>Industrial Land Uses</b>
Central Business District - CBD	Light Industrial - IL
Neighborhood Commercial - CN	Timber Resources Industrial - IT
General Commercial - CG	Heavy Industrial - IH
Highway Visitor Commercial - CH	<b>Other Designations</b>
Office Commercial - CO	Parks and Recreation - PR
<b>Residential Land Uses</b>	Open Space - OS
Suburban Residential - RS	Harbor District - HD
Low Density Residential - RL	Public Facilities and Services - PF
Medium Density Residential - RM	Scenic Corridor
High Density Residential - RH	Coastal Zone
Very High Density Residential - RVH	



### Coastal Land Use Designations

<b>Commercial Land Uses</b>	<b>Industrial Land Uses</b>
Central Business District - CBD	Heavy Industrial - IH
Neighborhood Commercial - CN	Light Industrial - IL
General Commercial - CG	Timber Resources Industrial - IT
Highway Visitor Commercial - CH	<b>Other Designations</b>
Office Commercial - CO	Parks and Recreation - PR
<b>Residential Land Uses</b>	Open Space - OS
Suburban Residential - RS	Harbor District - HD
Low Density Residential - RL	Public Facilities and Services - PF
Medium Density Residential - RM	Scenic Corridor
High Density Residential - RH	Coastal Zone
Very High Density Residential - RVH	









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**GROCERY OUTLET**  
*paragrain market*  
 825 SOUTH FRANKLIN STREET  
 FORT BRAGG, CA 95437

**ISSUE BLOCK**

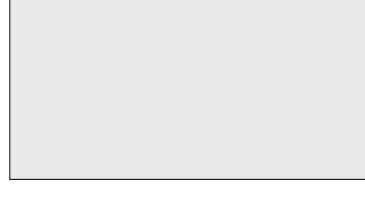
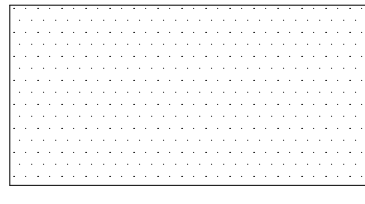
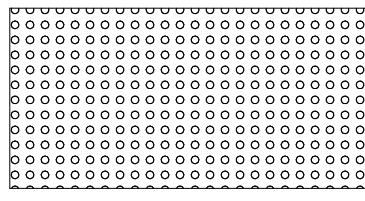


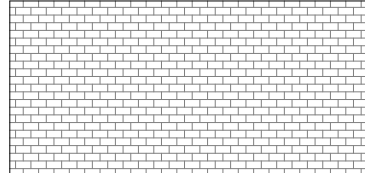
NO.	DATE	DESCRIPTION

DATE: 03/17/20  
 DRAWN BY: JMM  
 CHECKED BY:  
 JOB #62930192

SHEET TITLE  
 SITE PLAN

SHEET NO.  
**SP1**

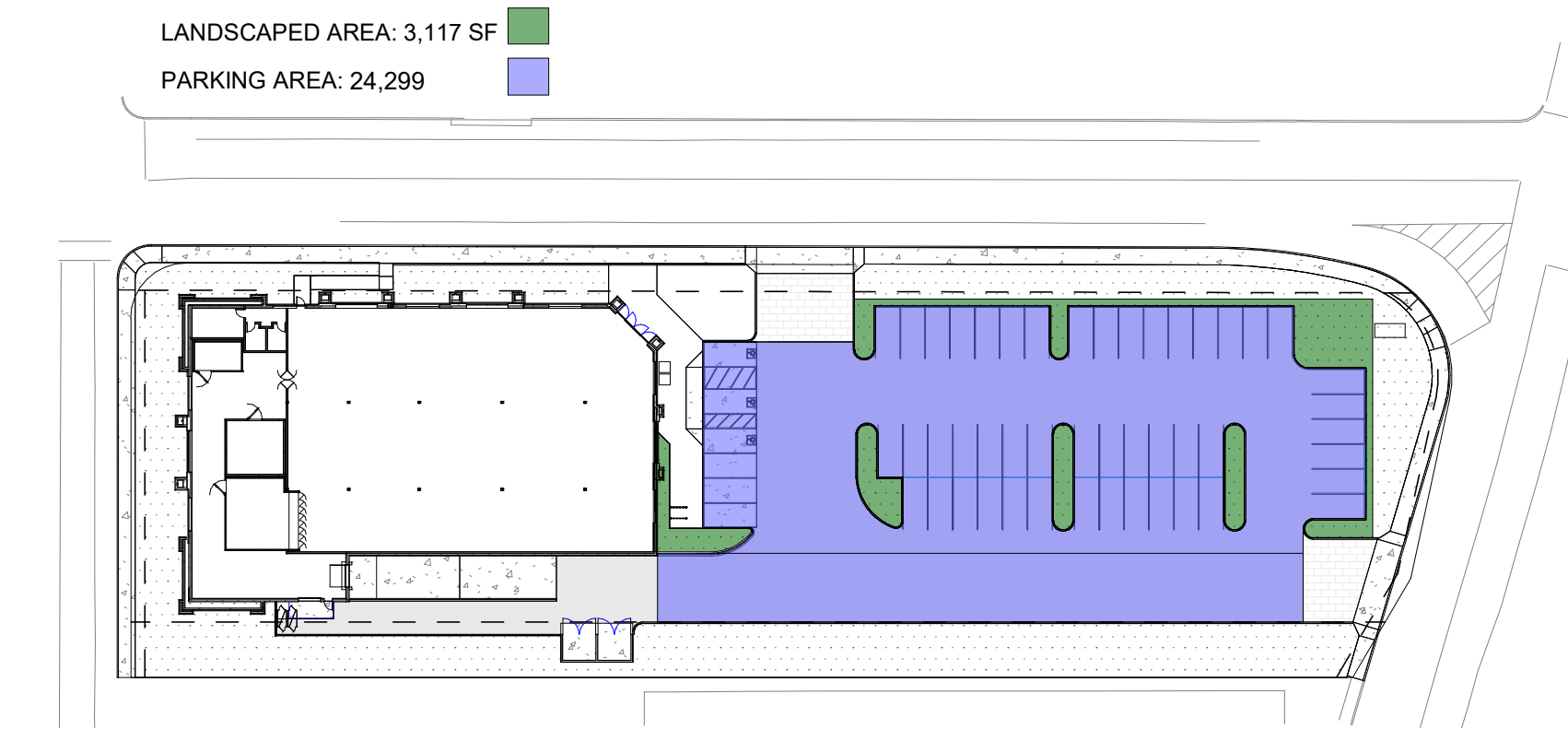
**LEGEND**

-  AC PAVEMENT
-  LANDSCAPE AREA
-  TRUNCATED DOMES
-  PROPERTY LINE
-  SET BACK
-  DECORATIVE PAVING

**SITE INFORMATION**

**ZONE:** GENERAL COMMERCIAL  
**COMBINED PARCEL SIZE:** 1.63 ACRES  
 70,915 SQFT  
**BUILDING AREA:** 16,157 SQFT  
**LANDSCAPE AREA REQUIRED:** 10%  
**LANDSCAPE AREA PROVIDED:** 27% (19,256 SQFT)  
**PARKING LOT LANDSCAPE AREA REQUIRED:** 10%  
**PARKING LOT LANDSCAPE AREA PROVIDED:** 12%  
**CALCULATION:** 3,117 SF LANDSCAPED AREA / 27,416 SF TOTAL PARKING AREA (24,299 + 3,117) = 12% = 12%  
**HARDSCAPE AREA:** 30,669 SQFT NOT INCLUDING BUILDING  
**LOT COVERAGE:** 43%

**LANDSCAPE KEY PLAN**



**PARKING REQUIREMENTS**

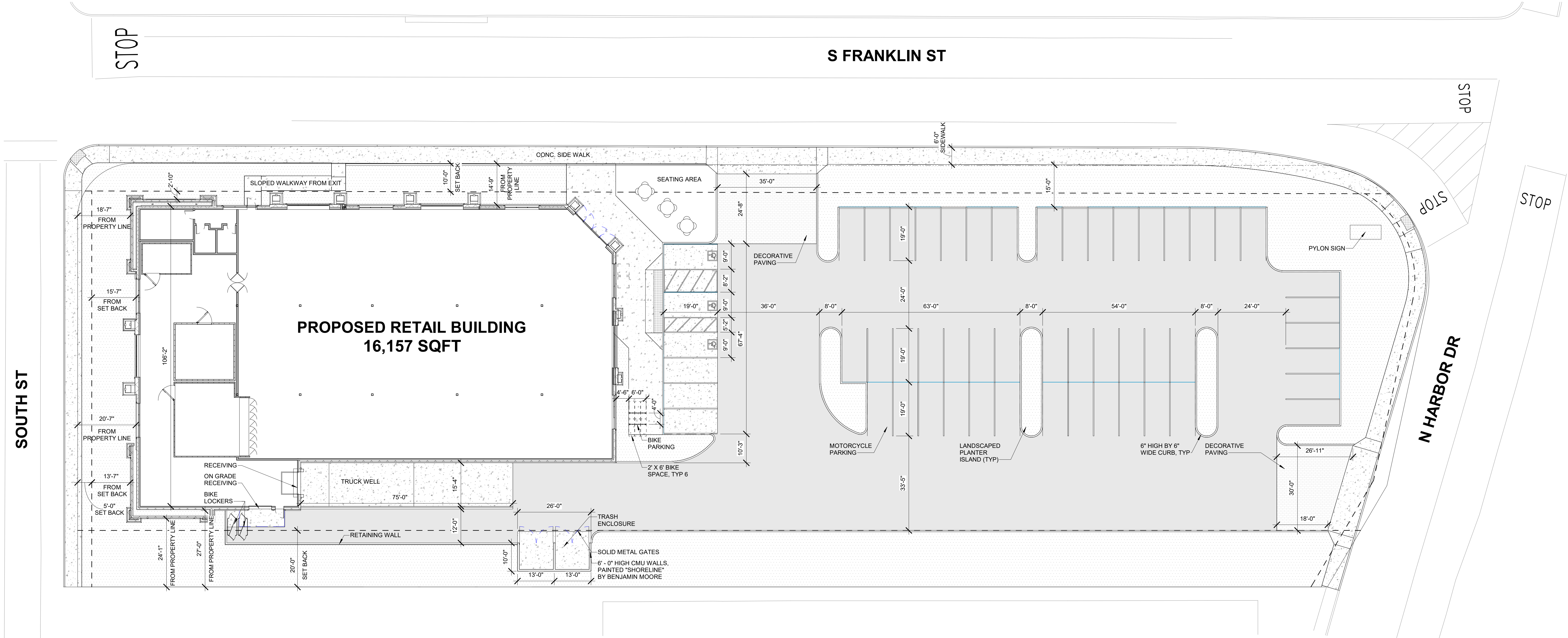
**PARKING REQUIRED:** 53 (RETAIL 1,300 SQFT)  
 53  
**PARKING PROVIDED:** 53  
**HANDICAP STALLS REQUIRED:** 3 (3:51-75 STALLS)  
 3 (1 VAN)  
**HANDICAP STALLS PROVIDED:** 3  
**BIKE PARKING REQUIRED:** 3 (5% PARKING STALLS)  
**BIKE PARKING CALCULATION:** 53 REQUIRED PARKING X 5% (.05) = 2.65 = 3

**SITE PLAN NOTES**

**LIGHTING**  
 1. OUTDOOR LIGHT FIXTURES SHALL BE LIMITED TO A MAXIMUM HEIGHT OF 18' AND WILL UTILIZE ENERGY-EFFICIENT FIXTURES AND LAMPS  
 2. LIGHTING FIXTURES WILL BE SHIELDED OR RECESSED TO REDUCE LIGHT BLED TO ADJOINING PROPERTIES BY ENSURING THAT THE LIGHT SOURCE IS NOT VISIBLE FROM OFF SITE AND CONFINING GLARE AND REFLECTIONS WITHIN THE BOUNDARIES OF THE SITE TO THE MAXIMUM EXTENT FEASIBLE.  
 3. EACH LIGHT FIXTURE SHALL BE DIRECTED DOWNWARD AND AWAY FROM ADJOINING PROPERTIES AND PUBLIC RIGHT-OF-WAY, SO THAT NO ON-SITE LIGHT FIXTURE DIRECTLY ILLUMINATES AN AREA OFF THE SITE.  
 4. NO PERMANENTLY INSTALLED LIGHTING SHALL BLINK, FLASH, OR BE OF UNUSUALLY HIGH INTENSITY OR BRIGHTNESS, AS DETERMINED BY THE DIRECTOR.

**LANDSCAPING**  
 1. REFER TO LANDSCAPE PLAN FOR ENTIRE LIST OF SPECIES AND DESIGN  
 2. VEGETATION PROPOSED WITHIN THE TRAFFIC VISIBILITY AREA WILL NOT EXCEED A HEIGHT OF 42"

**GENERAL**  
 1. ALL ACTIVITIES THAT MAY GENERATE DUST EMISSIONS SHALL BE CONDUCTED TO LIMIT THE EMISSIONS BEYOND THE SITE BOUNDARY TO THE MAXIMUM EXTENT FEASIBLE. METHODS WILL INCLUDE SCHEDULING, DUST CONTROL, REVEGETATION, CONTAINMENT, ETC.  
 2. ALL UTILITIES WILL BE UNDERGROUND  
 3. ALL CURBS 6" HIGH AND 6" WIDE UNLESS OTHERWISE NOTED  
 4. DUST CONTROL MEASURES WILL BE OUTLINED IN THE CONSTRUCTION DOCUMENTS THAT WILL BE SUBMITTED TO THE BUILDING DEPARTMENT TO BE REVIEWED AND APPROVED BY THE CITY ENGINEER PRIOR TO ISSUING A PERMIT, AND WILL FOLLOW THE GUIDELINES STATED IN THE SPECIAL CONDITION MEMO PREPARED BY PUBLIC WORKS DATED 12/9/20.



**A5 PROPOSED SITE PLAN**  
 1/16" = 1'-0"

4/15/2020 7:10:46 AM





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**CONSULTANT**

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**GROCERY OUTLET**  
*paragon market*  
825 SOUTH FRANKLIN STREET  
FORT BRAGG, CA 95437

**ISSUE BLOCK**

NO.	DATE	DESCRIPTION

*(Empty box for issue block details)*

DATE: 03/17/20

DRAWN BY: JMM

CHECKED BY:

JOB #62930192

**SHEET TITLE**

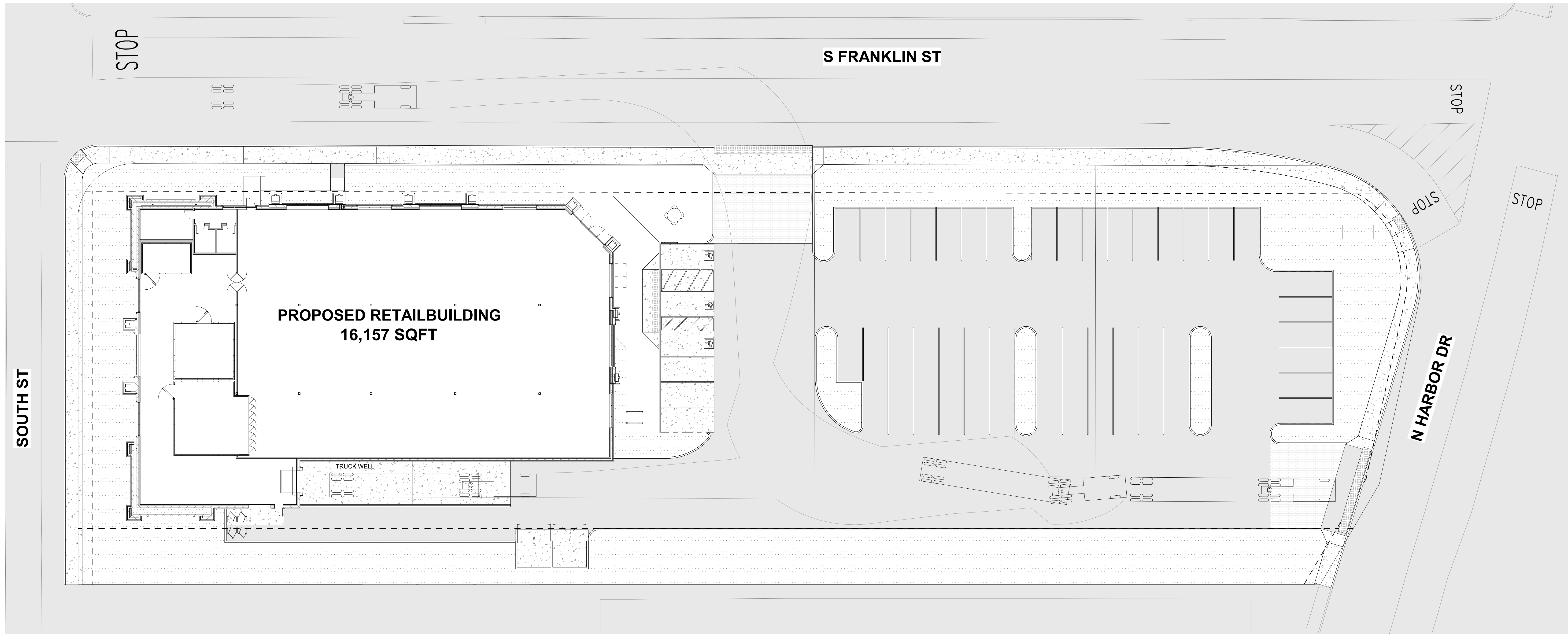
TRUCK TURN STUDY

**SHEET NO.**

**SP1.1**

**LEGEND**

- AC PAVEMENT
- LANDSCAPE AREA
- TRUNCATED DOMES
- PROPERTY LINE
- TRUCK STUDY



4/9/2020 10:22:31 AM

**A5 PROPOSED SITE PLAN**  
1/16" = 1'-0"



# PRELIMINARY GRADING & DRAINAGE PLAN

## BEST DEVELOPMENT GROUP

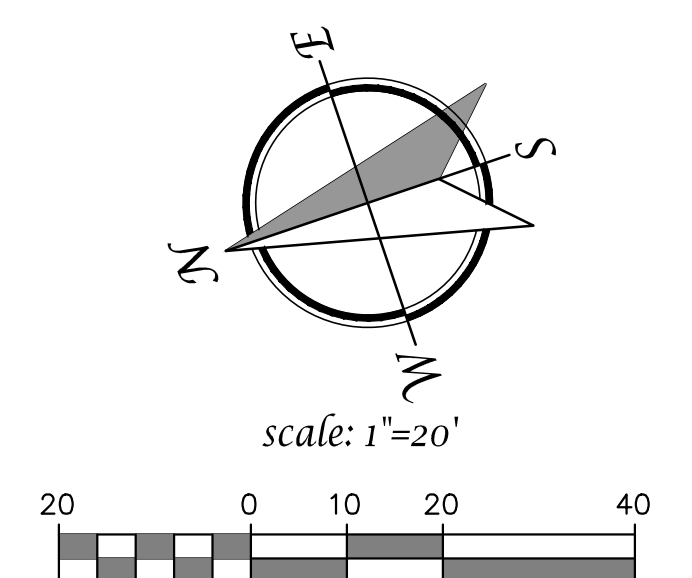
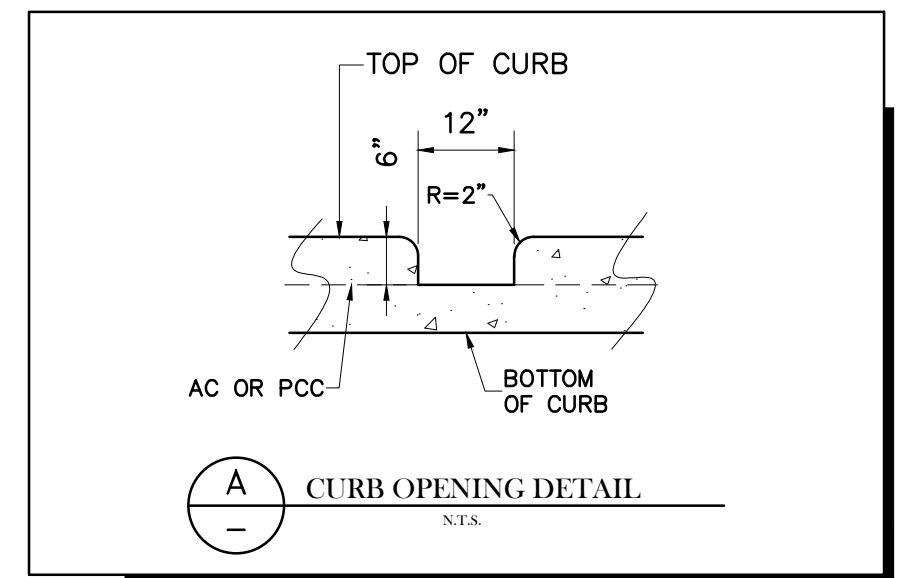
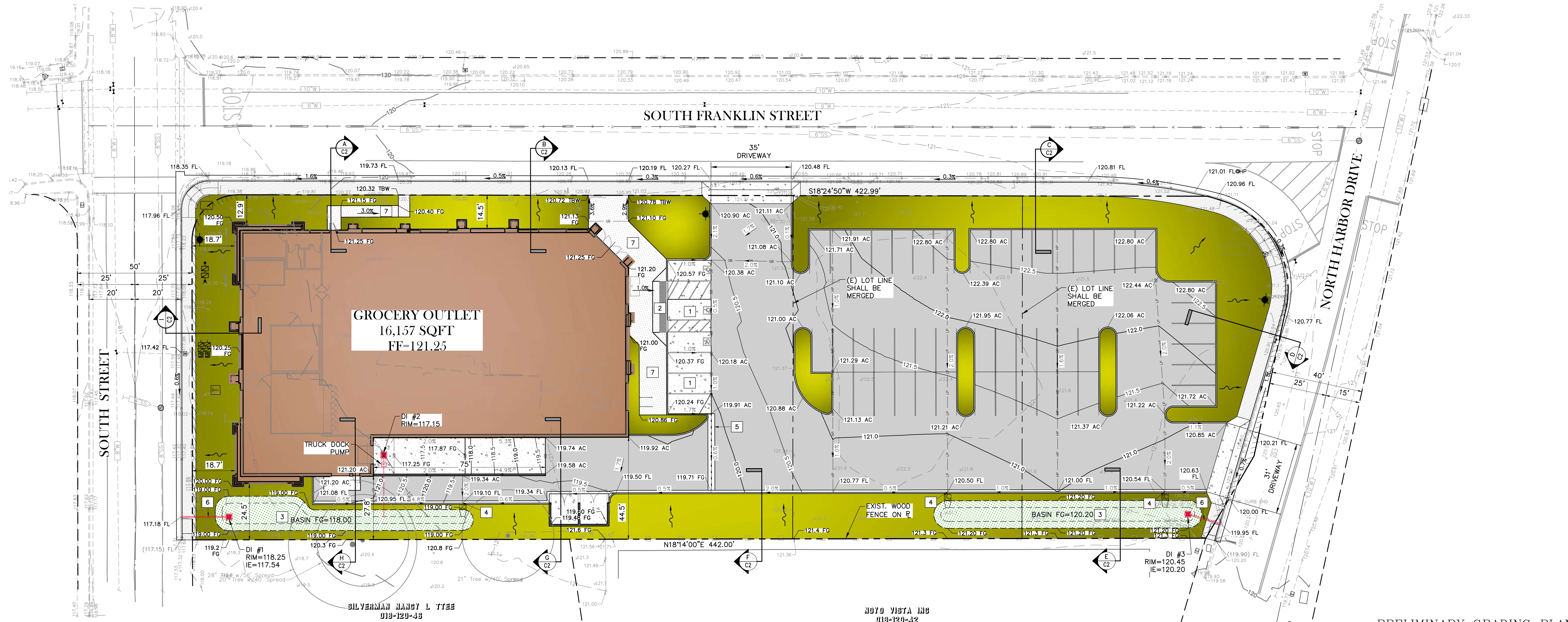
### GROCERY OUTLET

825, 845, 851 SOUTH FRANKLIN STREET  
FORT BRAGG, CA

- GRADING CONSTRUCTION NOTES**
- 1 ACCESSIBLE PARKING/LOADING ZONE
  - 2 ACCESSIBLE CURB RAMP
  - 3 BIO-RETENTION BASIN
  - 4 1-FOOT CURB OPENING INTO BASIN
  - 5 CONCRETE VALLEY GUTTER
  - 6 (2) 3" PVC SIDEWALK DRAIN PIPE
  - 7 SIDEWALK

**SITE LEGEND**

PROPOSED	EXISTING
168.0 AC	ELEVATION (165.5) FL
	SIDEWALK DRAIN
	DRAINAGE INLET
	ASPHALT PAVEMENT
	BUILDING AREA
	LANDSCAPE AREA
	P.C.C. CONCRETE
	BIO RETENTION BASIN
	CONCRETE SIDEWALK
	DRAINAGE DIRECTION



PRELIMINARY GRADING PLAN  
SEPTEMBER 17, 2020

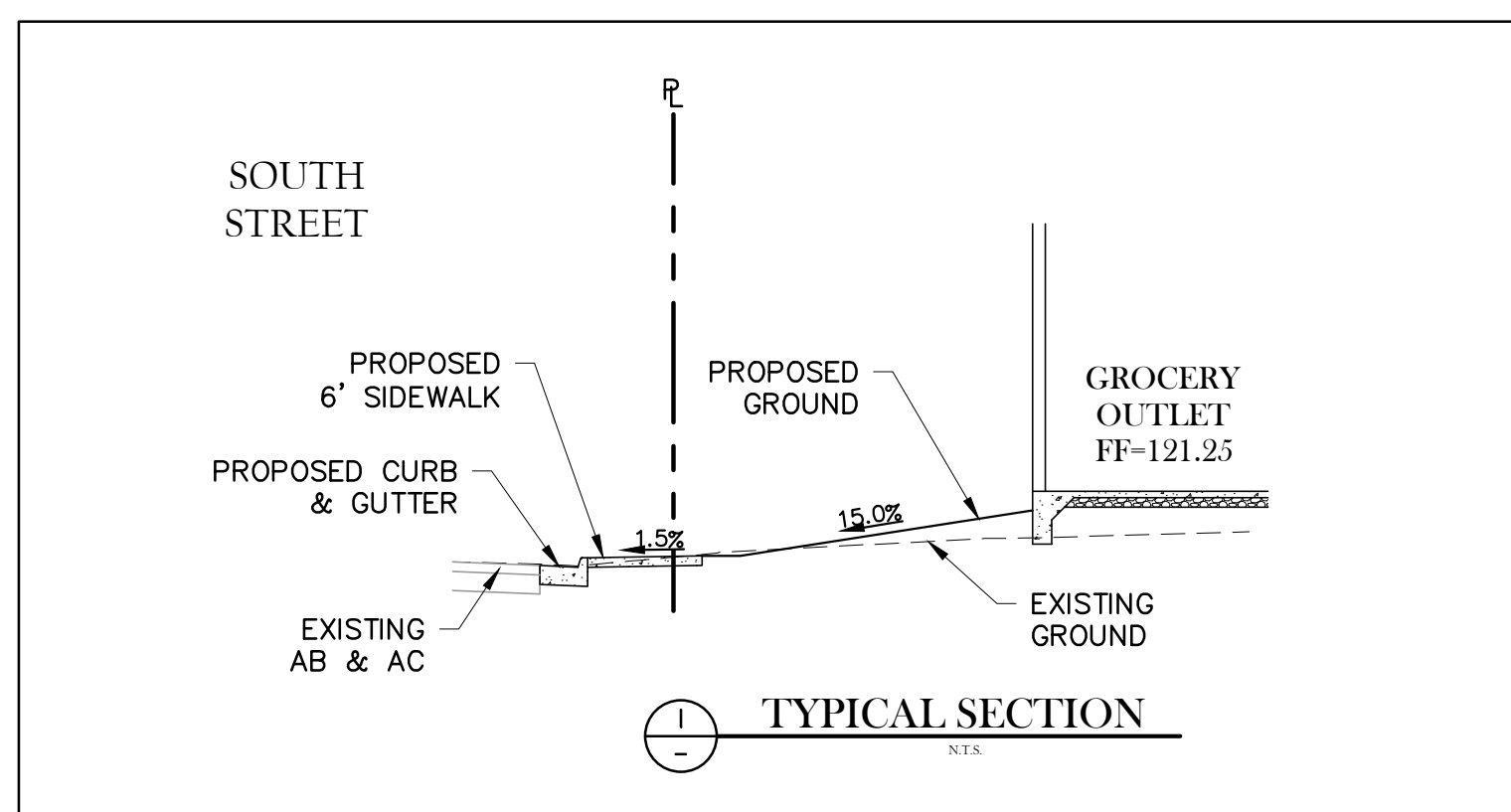
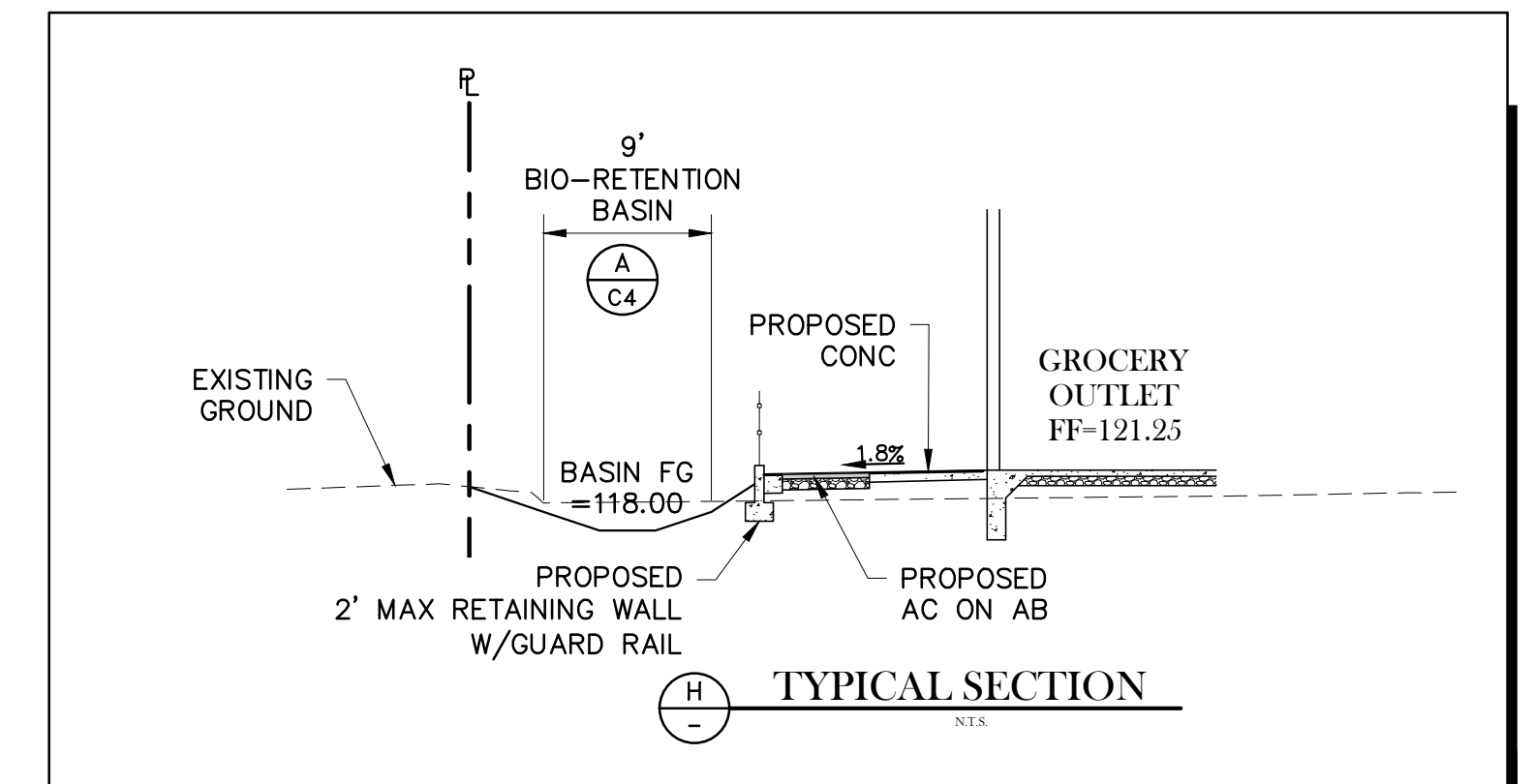
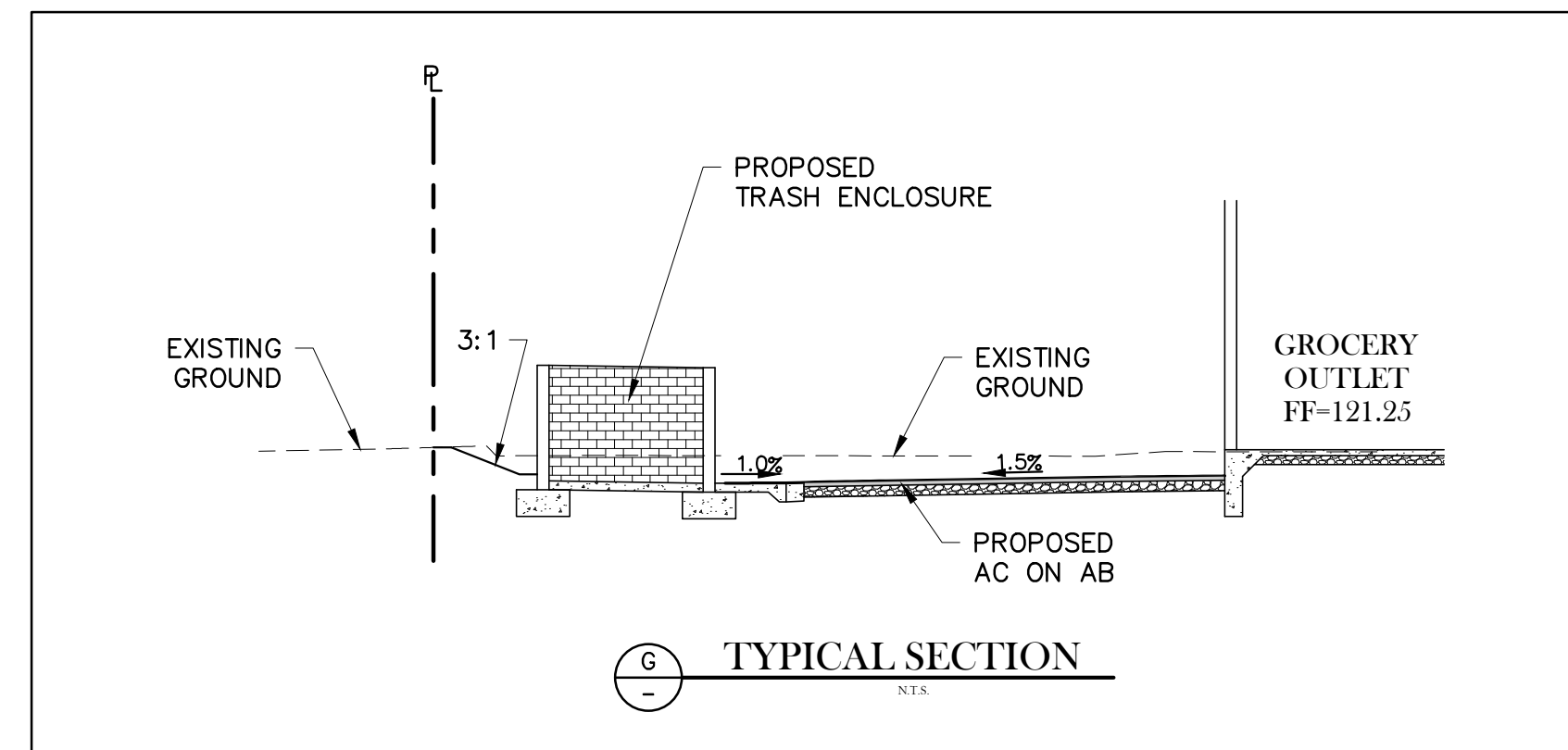
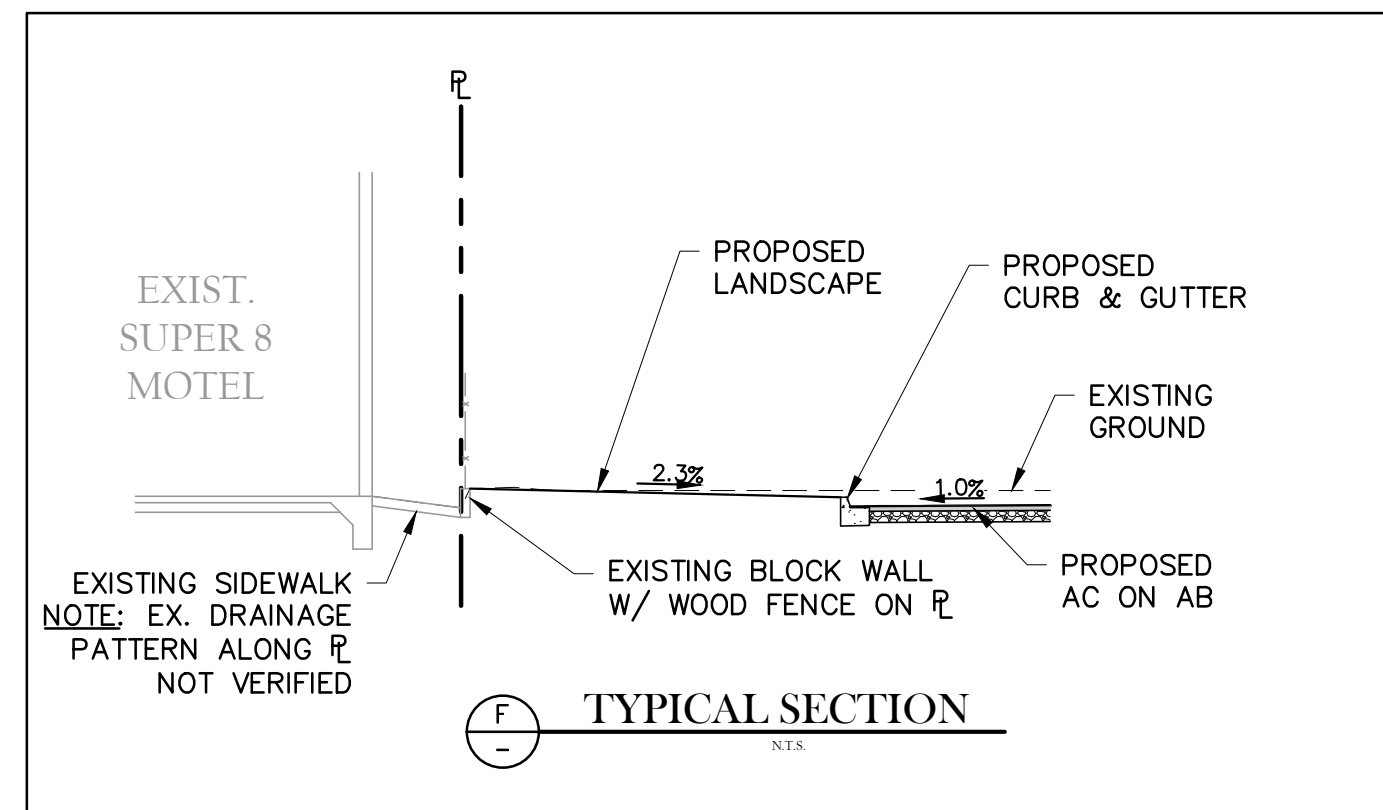
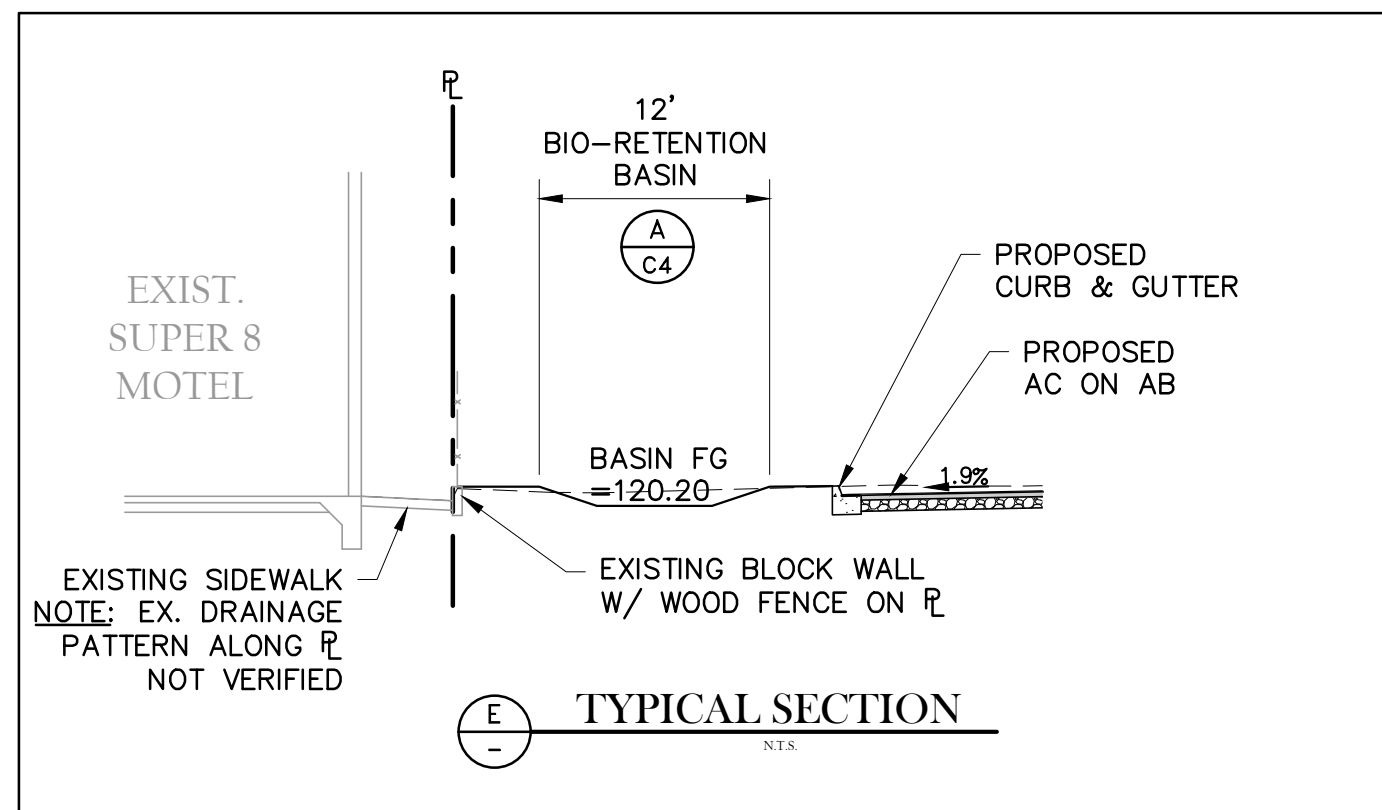
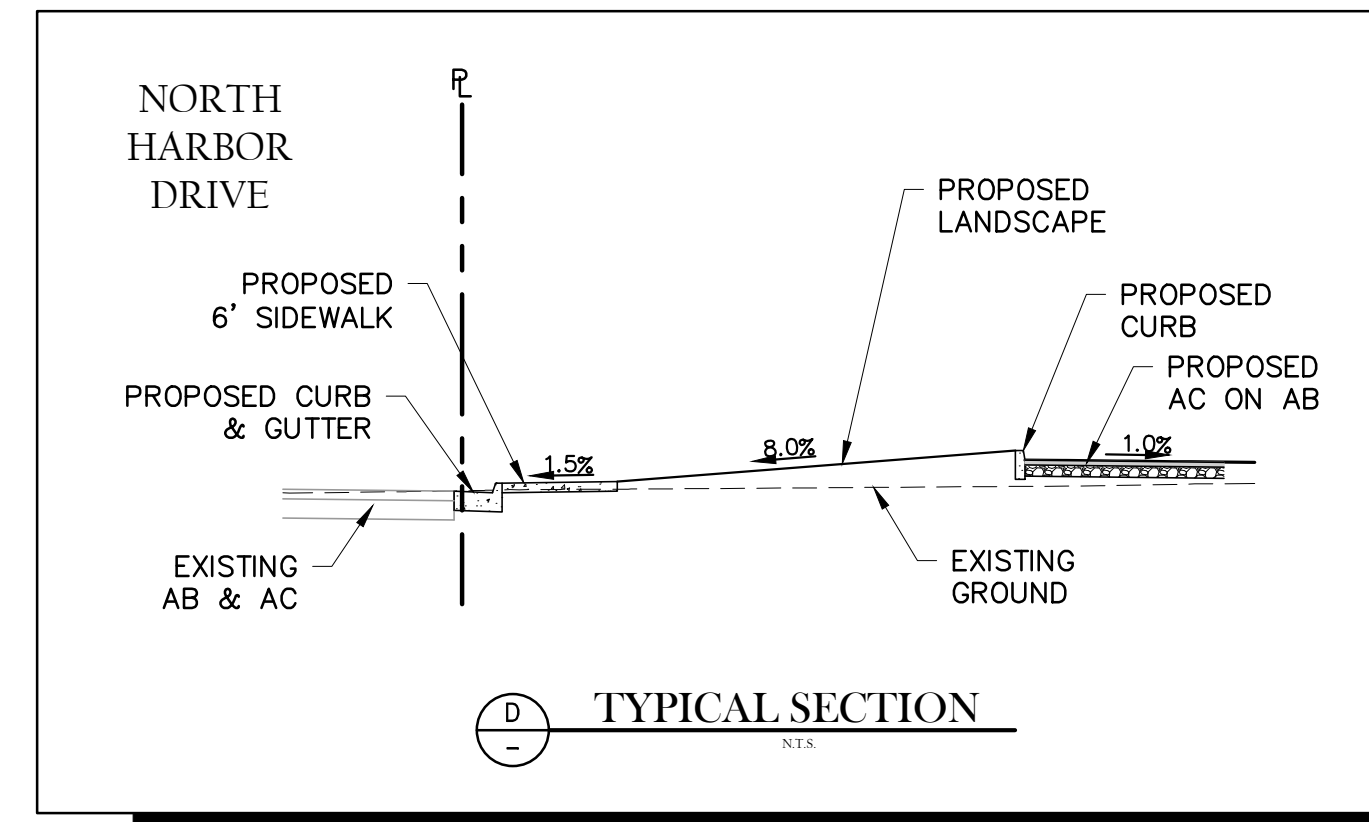
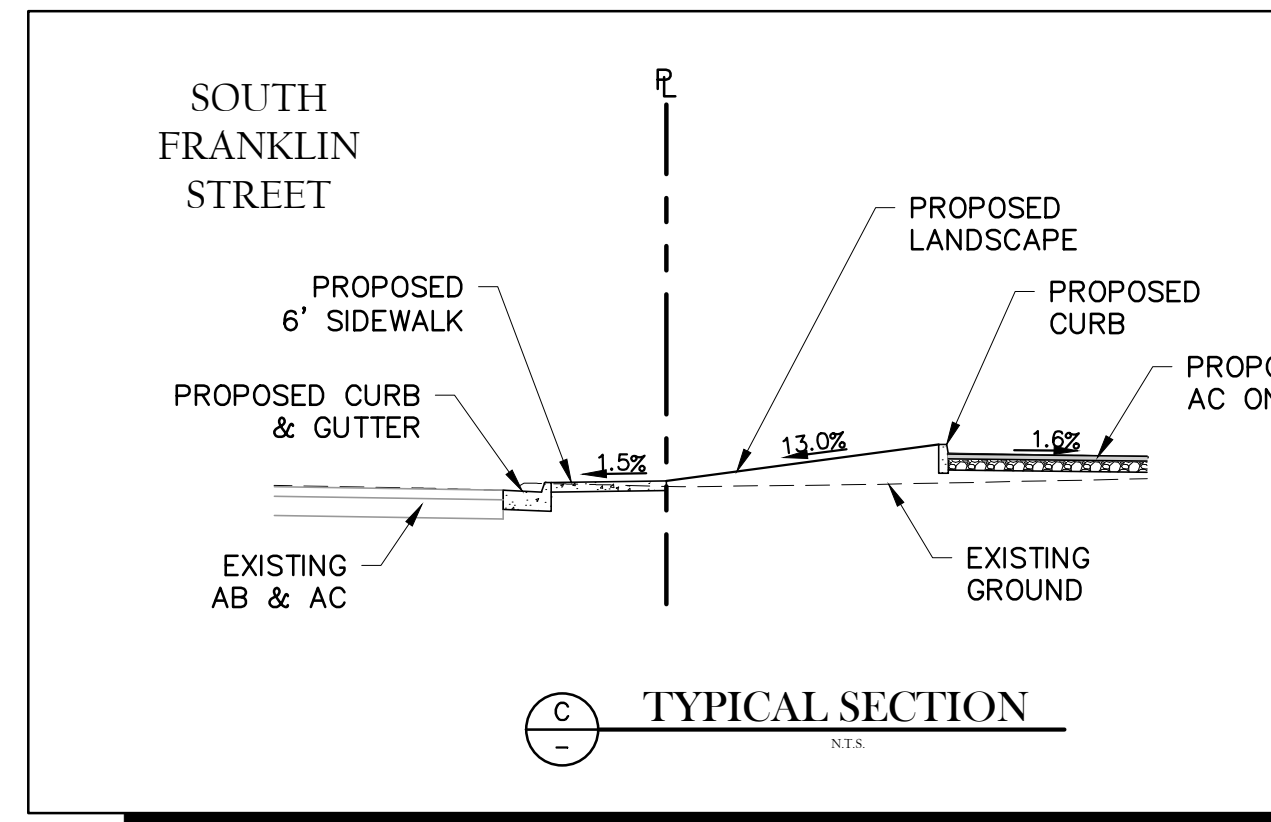
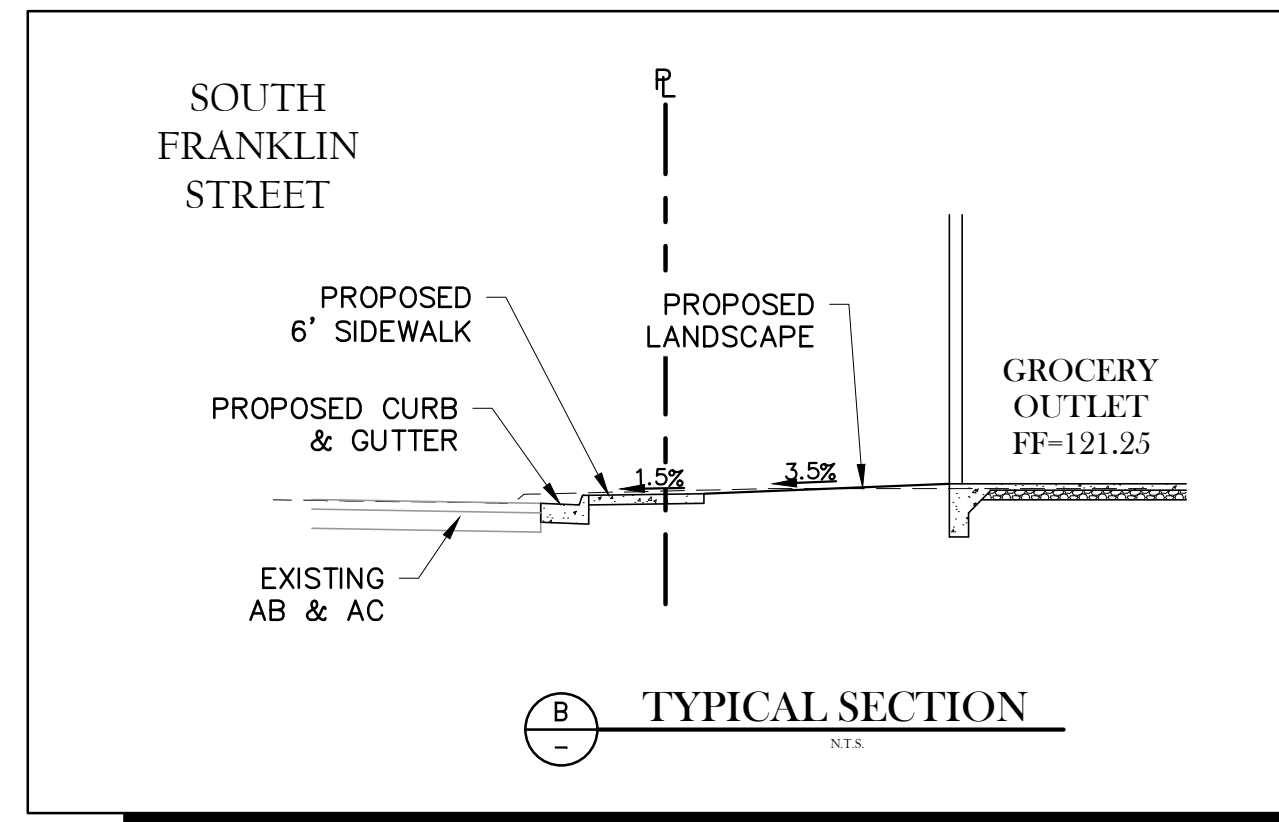
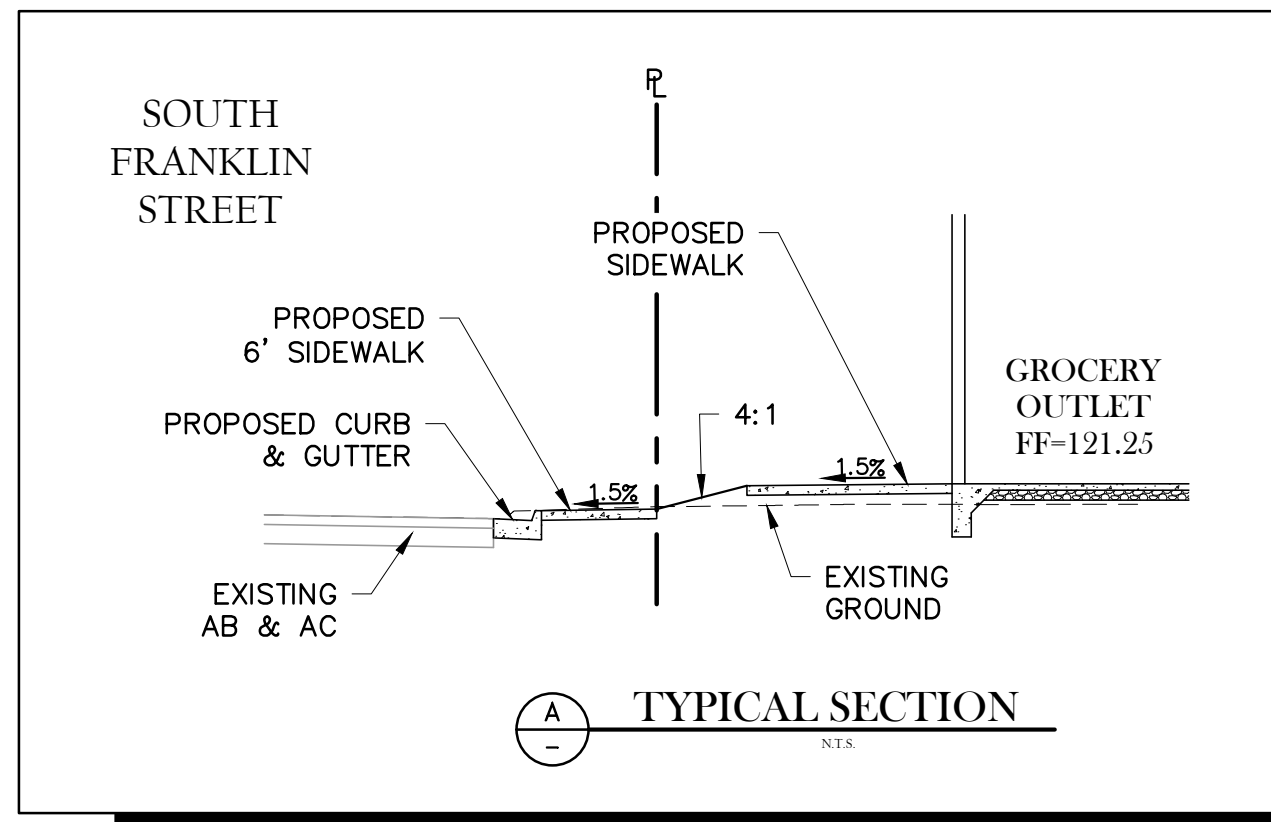
**TSD ENGINEERING, INC.**  
expect more.

785 Orchard Drive, Suite #110  
Folsom, CA 95630  
Phone: (916) 608-0707  
Fax: (916) 608-0701

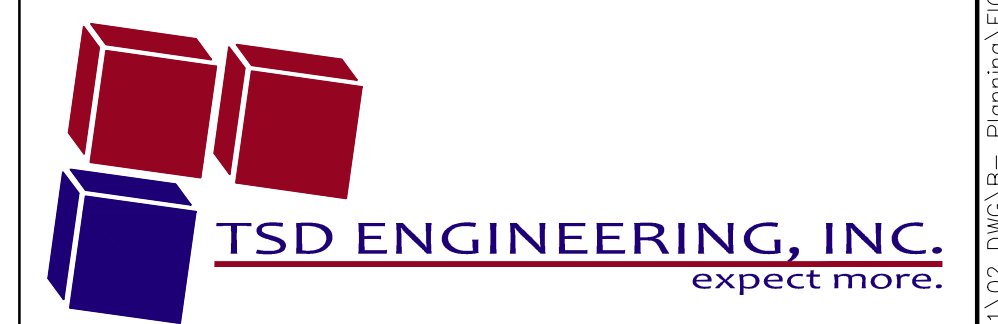
C1

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PRELIMINARY GRADING SECTIONS  
**BEST DEVELOPMENT GROUP**  
**GROCERY OUTLET**  
 825, 845, 851 SOUTH FRANKLIN STREET  
 FORT BRAGG, CA



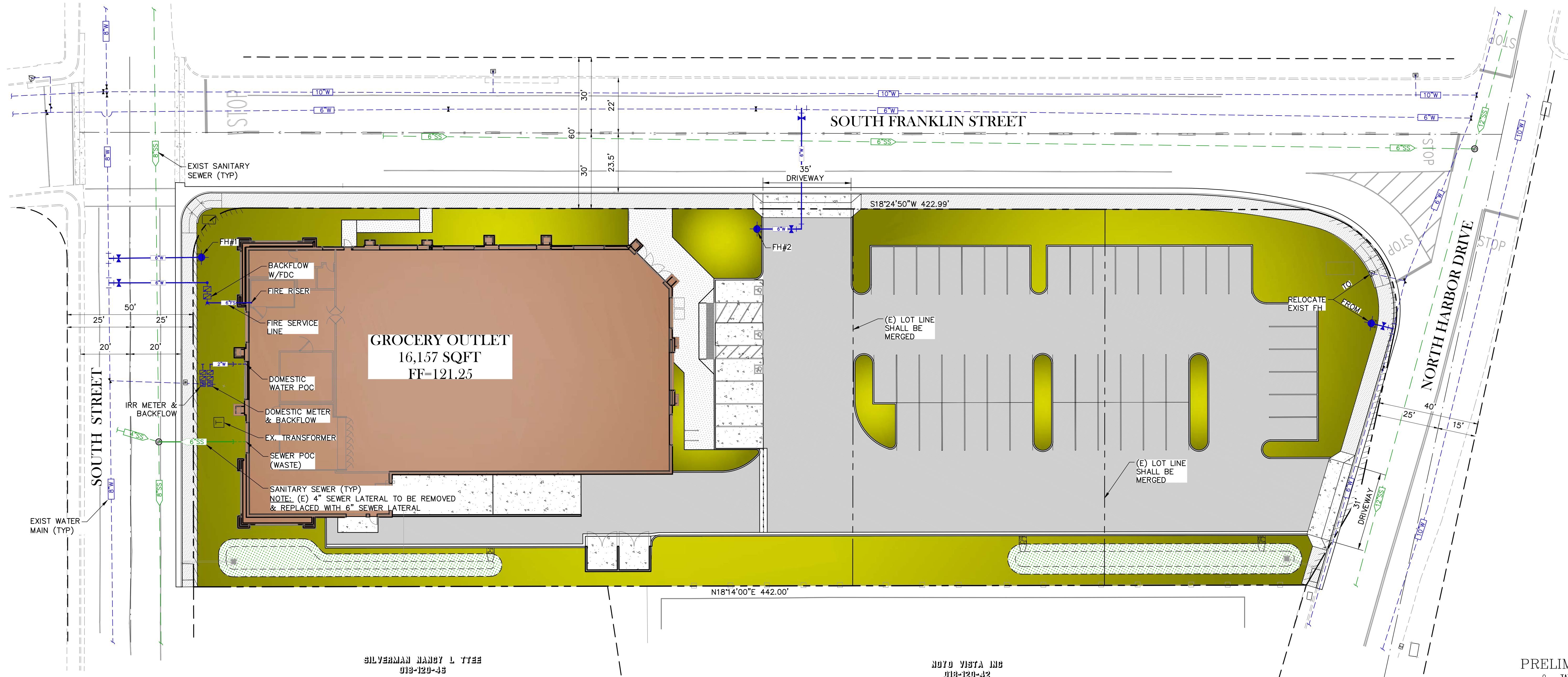
PRELIMINARY SECTIONS  
 SEPTEMBER 17, 2020



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PRELIMINARY SEWER & WATER PLAN  
**BEST DEVELOPMENT GROUP**  
**GROCERY OUTLET**  
 825, 845, 851 SOUTH FRANKLIN STREET  
 FORT BRAGG, CA

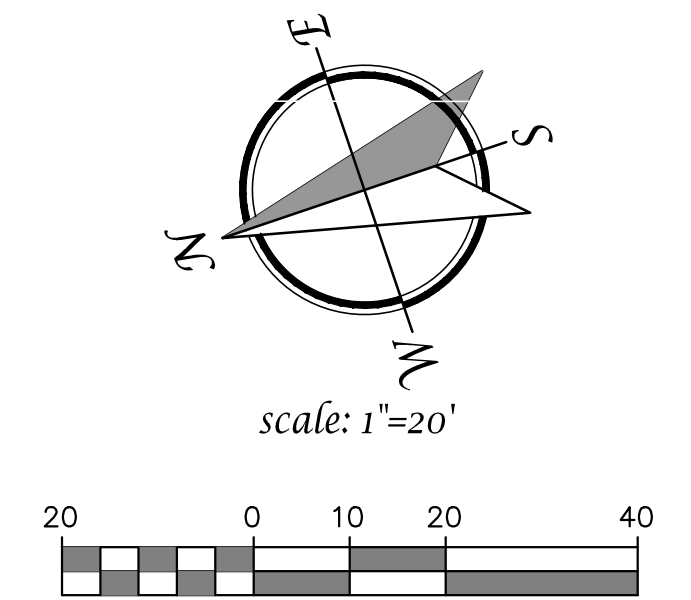
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	ASPHALT PAVEMENT
	BUILDING AREA
	LANDSCAPE AREA
	CONCRETE SIDEWALK
	BIO RETENTION BASIN
	WATER MAIN
	FIRE SERVICE
	FIRE DEPARTMENT CONNECTION (FDC)
	METER & BACKFLOW
	SANITARY SEWER



SILVERMAN NANCY L TTEE  
 918-120-38

NOYO VISTA INC  
 918-120-32

PRELIMINARY SEWER  
 & WATER PLAN  
 SEPTEMBER 17, 2020



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 Folsom, CA 95630  
 Phone: (916) 608-0707  
 Fax: (916) 608-0701

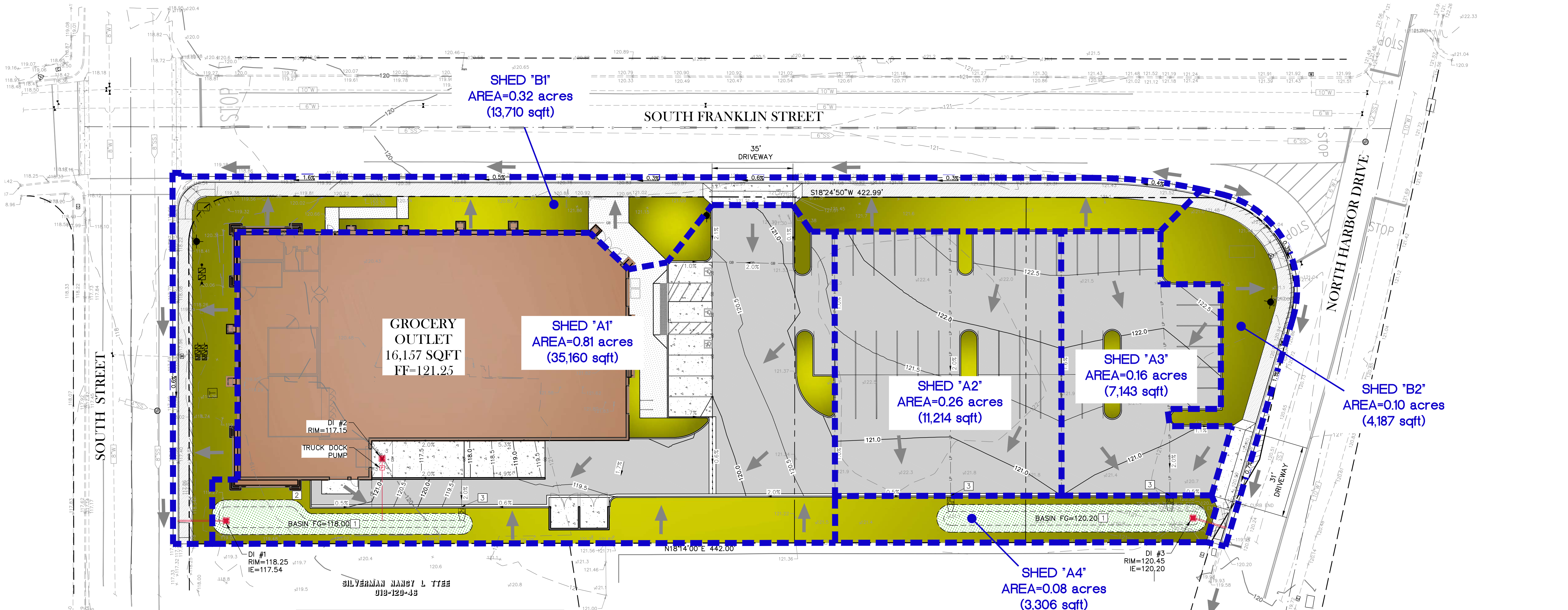
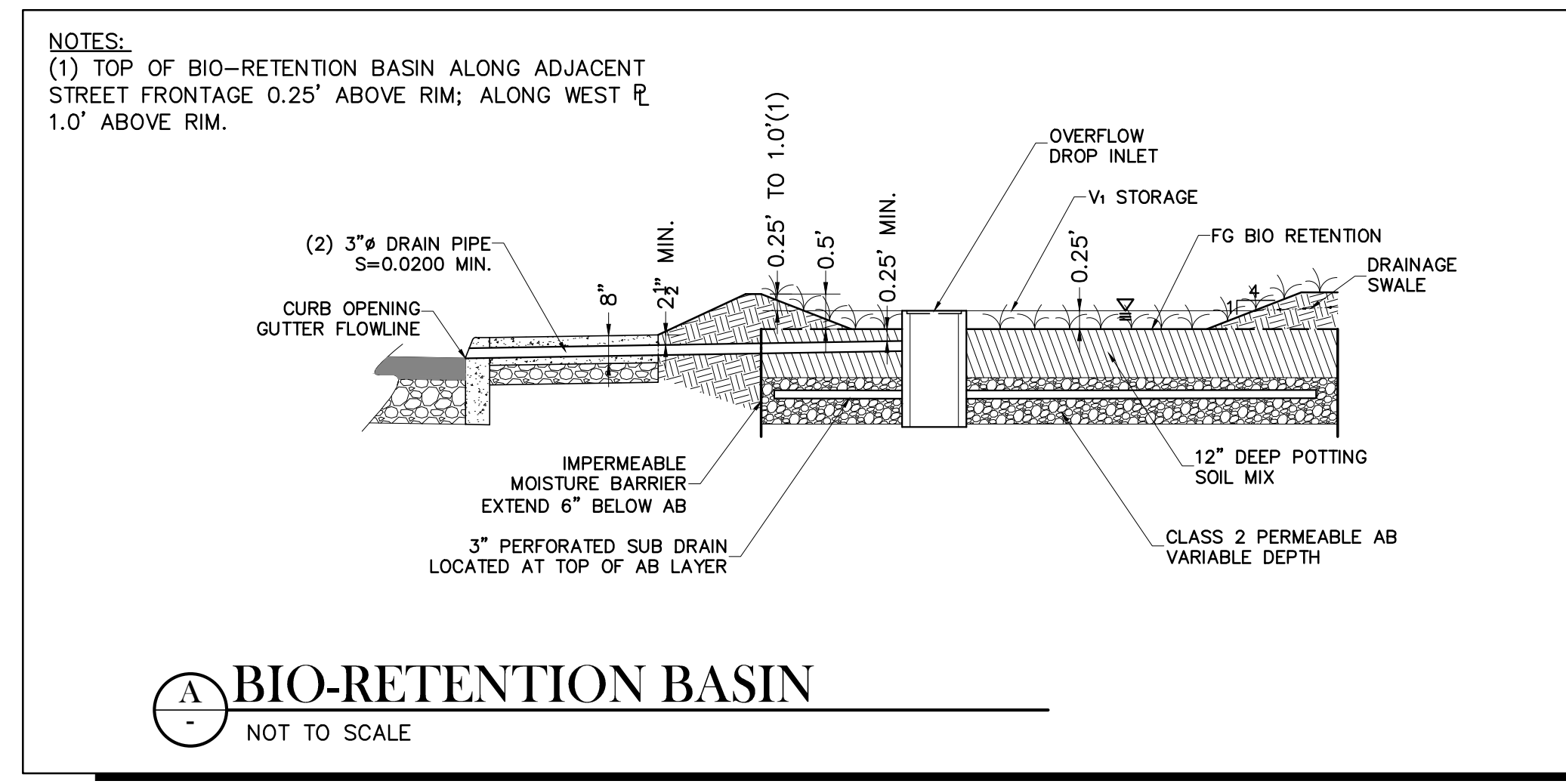
C3

P:\Projects\161-011\02\_DWG\B- Planning\FIG\CI-3 Preliminary Exhibits.dwg, Acom, 15:00:52, 09-17-20

PRELIMINARY STORM WATER MANAGEMENT PLAN  
**BEST DEVELOPMENT GROUP**  
**GROCERY OUTLET**  
 825, 845, 851 SOUTH FRANKLIN STREET  
 FORT BRAGG, CA

**SITE LEGEND**

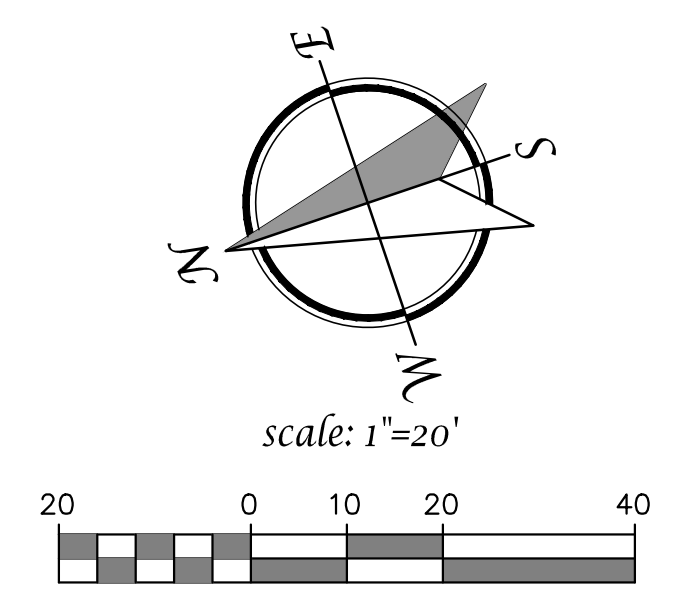
- DRAINAGE INLET
- ASPHALT PAVEMENT
- BUILDING AREA
- LANDSCAPE AREA
- P.C.C. CONCRETE
- BIO RETENTION BASIN
- CONCRETE SIDEWALK
- ← OVERLAND RELEASE



**PERVIOUS & IMPERVIOUS AREA CALCULATIONS**

Category	Area	Area (SF)	Percentage
<b>PERVIOUS SURFACE:</b>			
BIOBASINS & LANDSCAPING	0.44 ACRES	19,265 SF	27%
<b>IMPERVIOUS SURFACE:</b>			
<b>ONSITE:</b>			
AC/CONC PARKING & DRIVE AISLES		27,416 SF	
CONC TRUCK DOCK		1,252 SF	
TRASH ENCLOSURE		314 SF	
SIDEWALKS & HARDSCAPE		1,687 SF	
BUILDING FOOTPRINT		16,157 SF	
<b>TOTAL ONSITE</b>	<b>1.07 ACRES</b>	<b>46,826 SF</b>	<b>66%</b>
<b>OFFSITE:</b>			
PUBLIC SIDEWALK		4,070 SF	
DRIVEWAYS		734 SF	
<b>TOTAL OFFSITE</b>	<b>0.11 ACRES</b>	<b>4,824 SF</b>	<b>7%</b>
<b>TOTAL AREA (PERVIOUS &amp; IMPERVIOUS):</b>	<b>1.63 ACRES</b>	<b>70,915 SF</b>	<b>100%</b>

- STORM WATER BMP NOTES**
- 1 BIO-RETENTION BASIN (A/C4)
  - 2 RWL DISCHARGE TO LANDSCAPE ROOF RAINWATER DISCONNECT
  - 3 LANDSCAPE DISCONNECT - PAVEMENT DISCONNECT PRIOR TO BIO-RETENTION



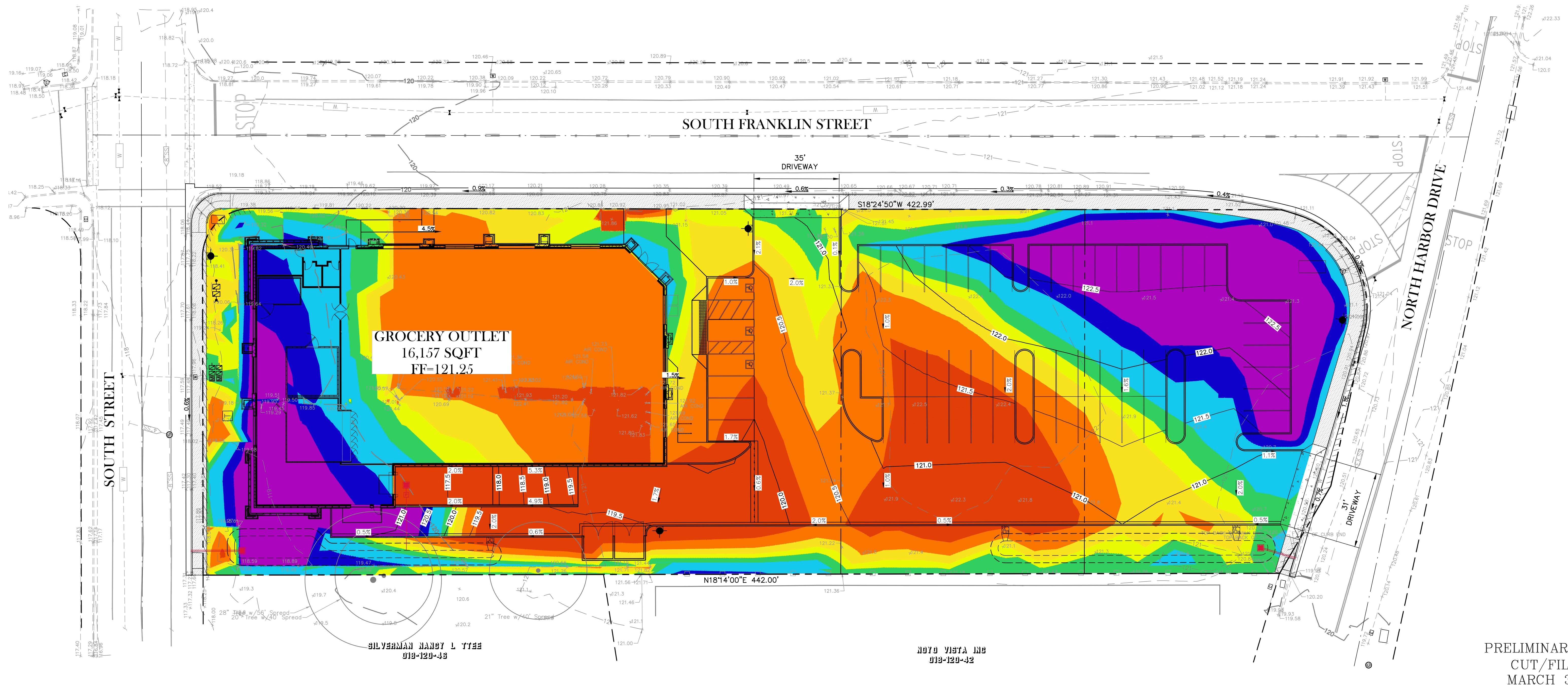
PRELIMINARY STORMWATER MANAGEMENT PLAN  
 SEPTEMBER 17, 2020

**TSD ENGINEERING, INC.**  
 expect more.

785 Orchard Drive, Suite #110  
 Folsom, CA 95630  
 Phone: (916) 608-0707  
 Fax: (916) 608-0701

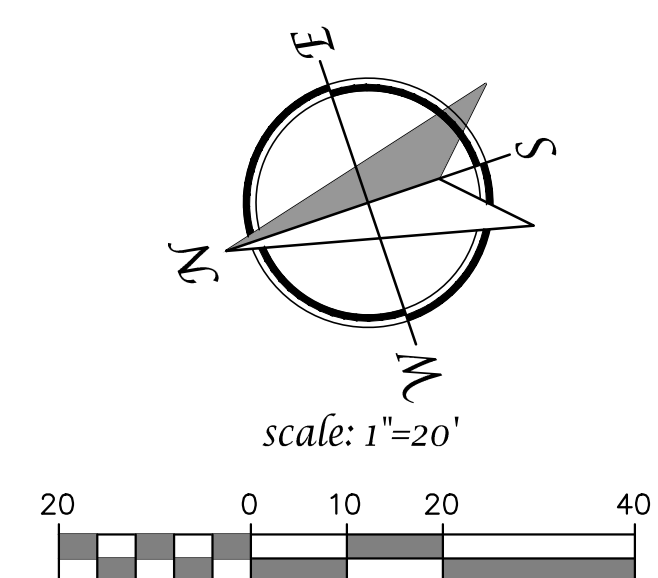
PRELIMINARY GRADING CUT/FILL PLAN  
**BEST DEVELOPMENT GROUP**  
**GROCERY OUTLET**  
 825, 845, 851 SOUTH FRANKLIN STREET  
 FORT BRAGG, CA

Elevations Table				
Number	Minimum Elevation	Maximum Elevation	Area	Color
1	-2.92	-0.82	11702.46	Red
2	-0.82	-0.47	17034.80	Orange
3	-0.47	-0.25	7682.08	Yellow
4	-0.25	-0.11	5443.01	Light Green
5	-0.11	0.06	5602.66	Green
6	0.06	0.39	6895.74	Cyan
7	0.39	0.64	4471.51	Blue
8	0.64	1.76	9258.96	Purple

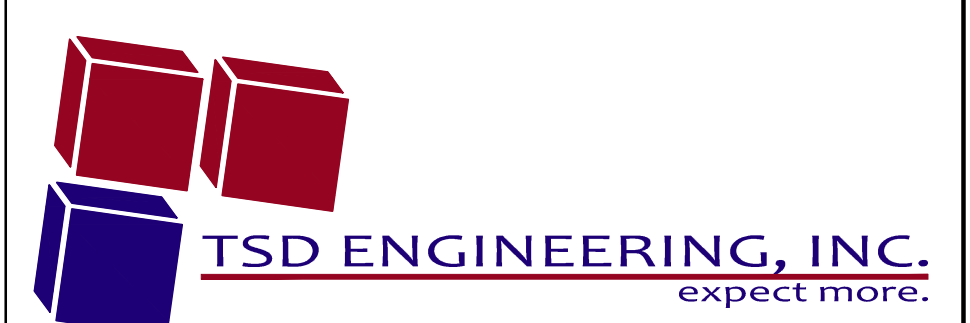


**GROCERY OUTLET**  
 16,157 SQFT  
 FF=121.25

**GRADING NOTE**  
 CUT/FILL PLAN ELEVATIONS SHOWN ARE A REPRESENTATION OF EXISTING GRADE SURFACE TO PROPOSED FINISHED GRADE SURFACE ONLY.



PRELIMINARY GRADING  
 CUT/FILL PLAN  
 MARCH 31, 2020



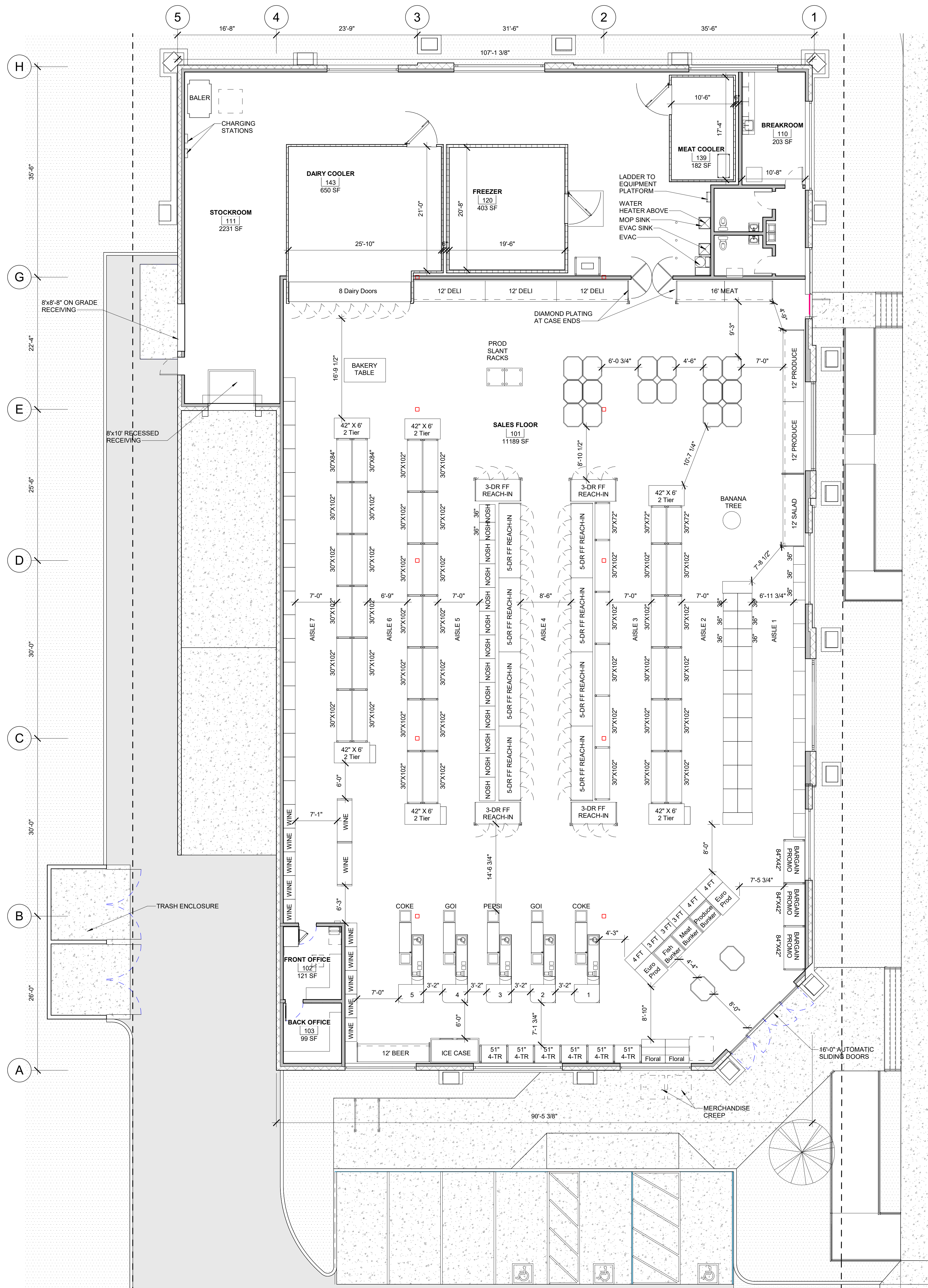
785 Orchard Drive, Suite #110  
 Folsom, CA 95630  
 Phone: (916) 608-0707  
 Fax: (916) 608-0701

C5





3/17/2020 1:52:11 PM



**A4** FIXTURE PLAN  
1/8" = 1'-0"

FORT BRAGG, CA -  
FIXTURE PLAN - 03/17/20  
VERSION 4  
BUILDING AREAS (GROSS):  
SALES = 11,927 SF  
B.O.H. = 4,230 SF  
SHELL = 16,157 SF

MERCHANDISING (NET) = 11,189 SF  
STOCK (NET) = 2,231 SF

LEGEND

SYMBOL	DESCRIPTION
	BRASS BELL ( AT CHECKSTAND #1)
	ECO BAG GRIDS (3 PER PLAN)
	ABS BROOM HOLDERS (4 PER PLAN AT CLEANER AISLE)
	APPAREL RACKS (PROMOTIONAL EVENTS)
<b>BUMP</b>	BUMP OUT SECTIONS (12 @ HBC - PER PLAN)
	SECURITY CAMERA ( SINGLE DIRECTION)
	SECURITY CAMERA (360 DEGREE)

<b>GENERAL MERCH</b> BASE DECKS 28" SHELVES 24" SAHARA COLOR	<b>HBC PERIMETER</b> BASE DECKS 24" SHELVES 24" SAHARA COLOR
<b>SEASONAL</b> BASE DECKS 28" SHELVES 24" SAHARA COLOR	<b>CANDY PERIMETER</b> BASE DECKS 24" SHELVES 24" SAHARA COLOR
<b>INT. SIGNAGE:</b> USE 4'-0" PACKAGE (LIGHTING @ 14'-0")	<b>WINE PERIMETER</b> BASE DECKS 24" SHELVES 24" BLACK COLOR
	<b>HOLDING BOXES</b> FREEZER: 403 SF DAIRY: 650 SF MEAT: 183 SF

**brr**

ARCHITECT OF RECORD:  
JAMES A. HAILEY  
6700 ANTIOCH PLAZA  
SUITE 300  
MERRIAM, KS 66204  
www.brrarch.com  
TEL: 913-262-8095  
FAX: 913-262-9044

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**CONSULTANT**

**GROCERYOUTLET**  
 *bargain market*  
825 SOUTH FRANKLIN STREET  
FORT BRAGG, CA 95437

**ISSUE BLOCK**

NO.	DATE	DESCRIPTION
1	03/17/20	Fixture Plan
2	03/06/19	Fixture Plan
3	03/07/19	Fixture Plan
4	03/17/20	Fixture Plan

**DATE:** 05/29/19  
**DRAWN BY:** SEW  
**CHECKED BY:**  
**JOB #** 62930117

**SHEET TITLE**  
FIXTURE PLAN

**SHEET NO.**  
FX1.0

ISSUE BOOK  
NO. DATE DESCRIPTION

DATE: 03/17/20  
DRAWN BY: EAB  
CHECKED BY:  
JOB # 62930192

ELEVATION NOTES

1. ALL BUILDING HEIGHTS ARE ABOVE INTERIOR FINISH FLOOR NOT ADJACENT GRADES.

LEGEND

Legend table with material swatches: SMOOTH FACE CMU, HARDI BOARD COMPOSITE WOOD PANELING, HARDI BOARD COMPOSITE HALF ROUND 'FISH SCALE' PANELING, WOOD ROOF SHINGLES, SOLID WOOD FOR FUTURE MURALS.

FINISH KEYNOTES

Finish Keynotes table: P5 HERITAGE RED, BENJAMIN MOORE #PM-18; P6 SHORELINE, BENJAMIN MOORE #1471; P7 GRAYSTONE, BENJAMIN MOORE #1475; P8 KENDALL CHARCOAL, BENJAMIN MOORE #HC-166; P10 WYTHE BLUE, BENJAMIN MOORE #HC-143

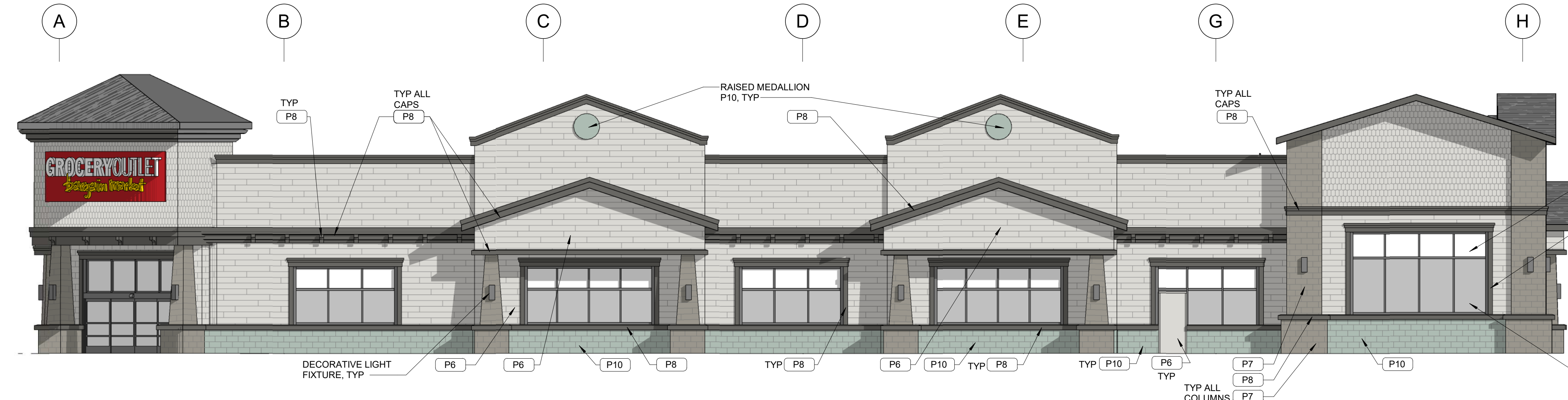
WINDOW RATIO CALCULATION:

TOTAL AREA OF WINDOWS / TOTAL AREA OF WALLS  
1,516 SF / 7,562 SF = 20%

FRONT FACADE WINDOW RATIO CALCULATION:

TOTAL AREA OF WINDOWS / TOTAL AREA OF WALLS  
160 SF / 345 SF = 46%

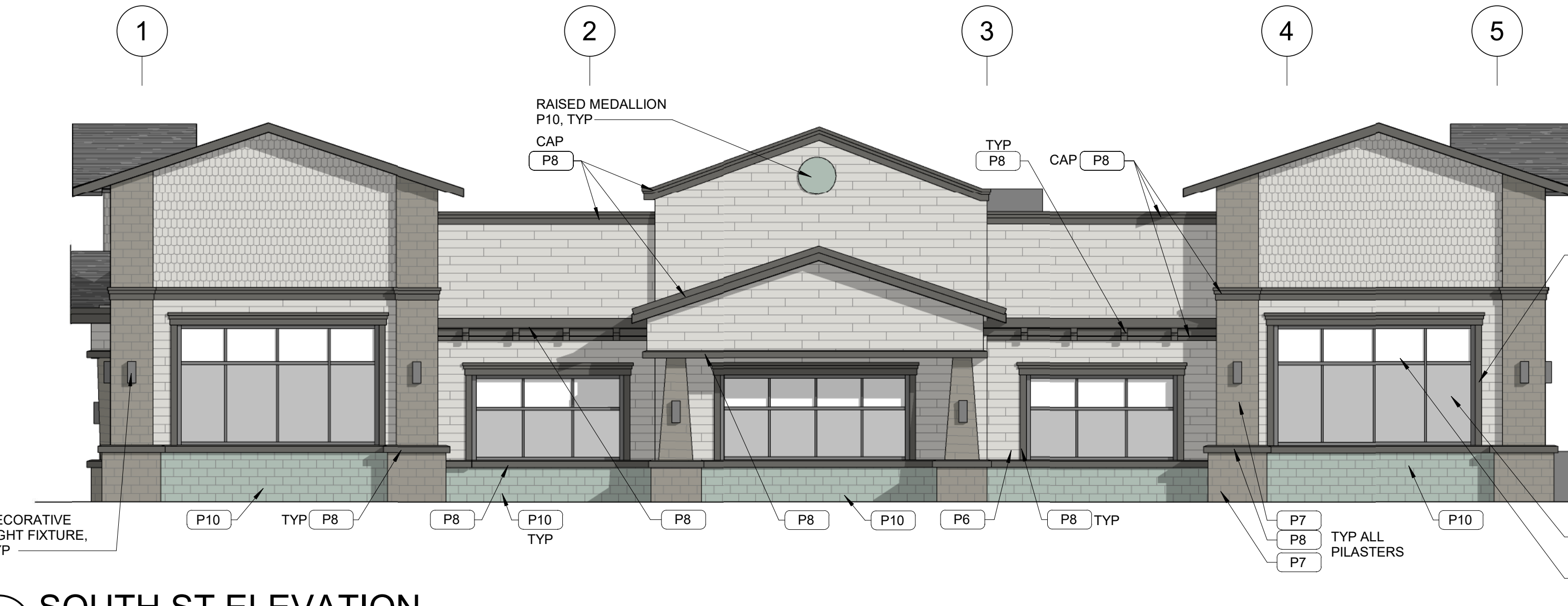
- TOP OF ENTRANCE CANOPY 132'-3"
- TOP OF CORNER ROOF 130'-0"
- TOP OF PARAPET 123'-0"
- WINDOWS TO BE LOW-E GLAZING AND INSET FROM THE 3" FROM THE WALL, TYP
- THE WINDOWS AND DOORS FRAMING WILL BE TREATED 2X6 WOOD PANELING, TYP
- TOP OF GLAZING 110'-0"
- TOP OF TRIM 103'-4"
- FINISHED FLOOR 100'-0"
- SOLID WINDOW TO BE USED AS CANVAS FOR MURALS, TYP



D5 S FRANKLIN ELEVATION

1/8" = 1'-0"

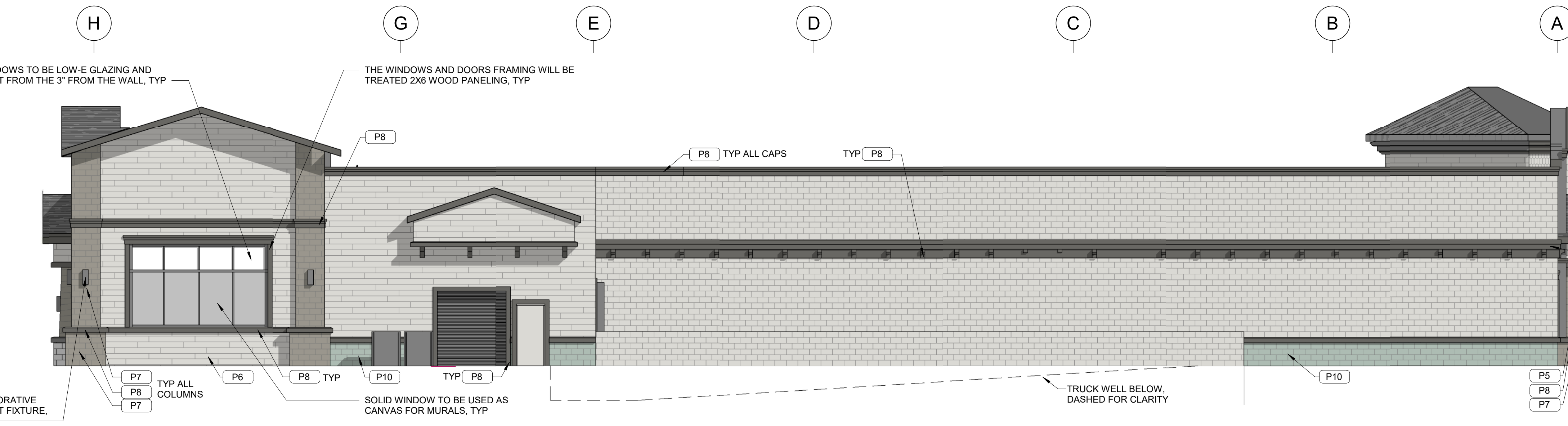
- TOP OF CORNER ROOF 130'-0"
- TOP OF PARAPET 123'-0"
- THE WINDOWS AND DOORS FRAMING WILL BE TREATED 2X6 WOOD PANELING, TYP
- TOP OF ACCENT BAND 114'-7"
- BOTTOM OF CANOPY 111'-5"
- TOP OF GLAZING 110'-0"
- TOP OF TRIM 103'-4"
- FINISHED FLOOR 100'-0"
- SOLID WINDOW TO BE USED AS CANVAS FOR MURALS, TYP
- WINDOWS TO BE LOW-E GLAZING AND INSET FROM THE 3" FROM THE WALL, TYP



C5 SOUTH ST ELEVATION

1/8" = 1'-0"

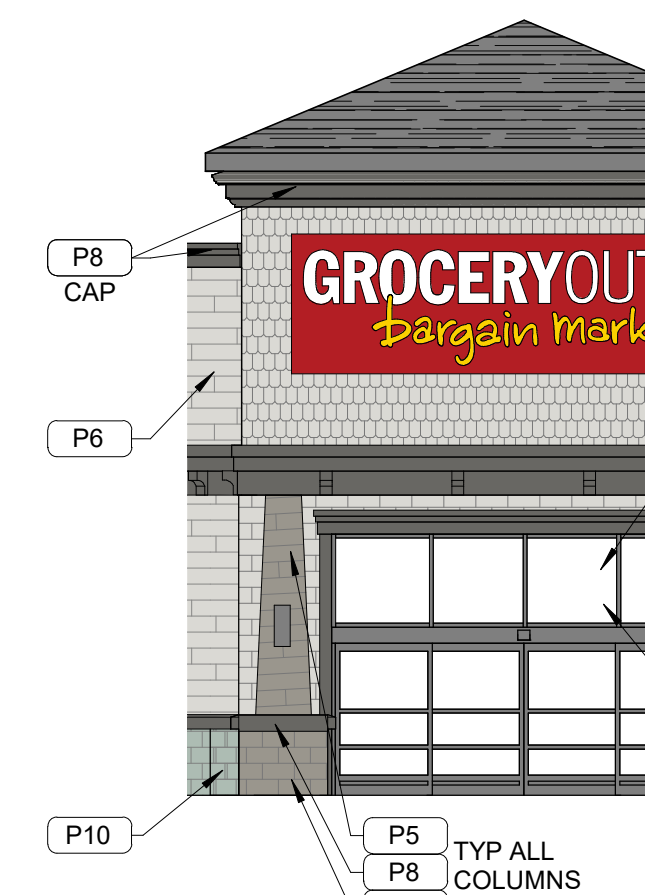
- TOP OF ENTRANCE CANOPY 132'-3"
- TOP OF CORNER ROOF 130'-0"
- TOP OF PARAPET 123'-0"
- TOP OF ACCENT BAND 114'-7"
- BOTTOM OF CANOPY 111'-5"
- TOP OF GLAZING 110'-0"
- TOP OF TRIM 103'-4"
- FINISHED FLOOR 100'-0"
- TRUCK WELL BELOW, DASHED FOR CLARITY



B5 RECEIVING ELEVATION

1/8" = 1'-0"

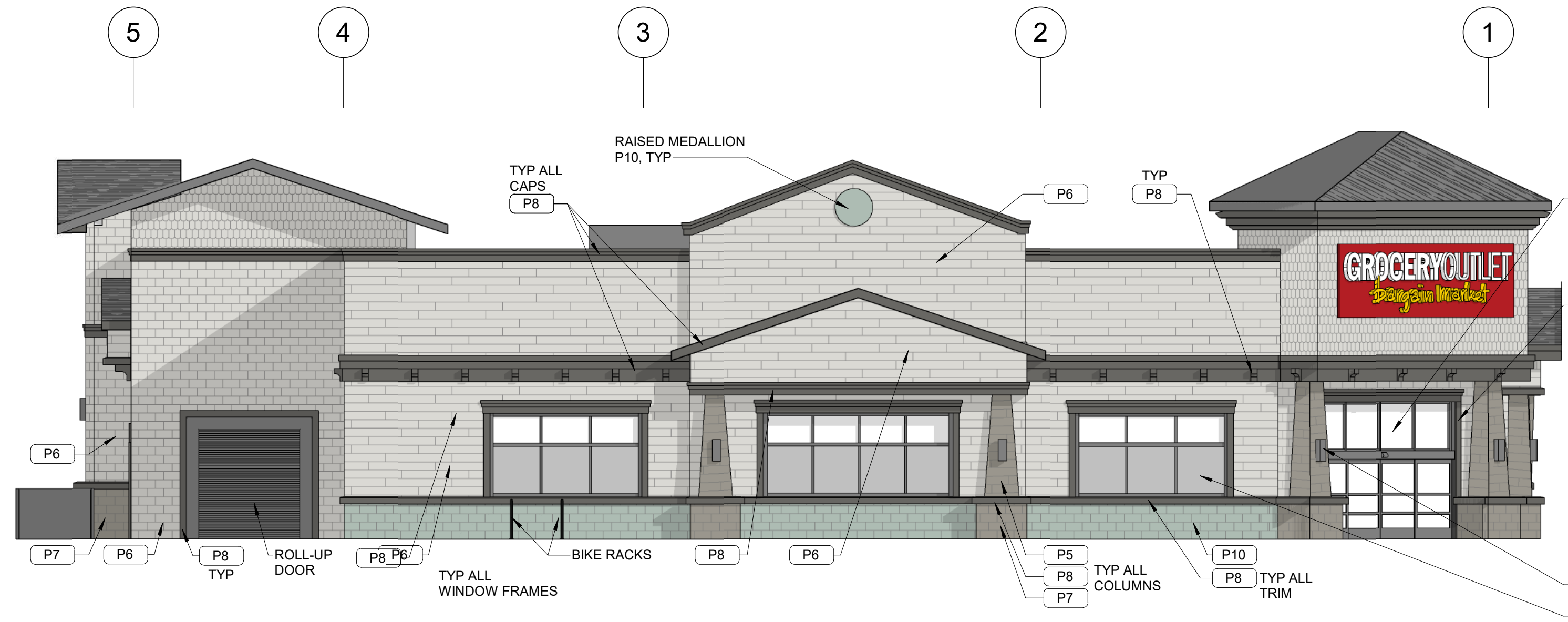
- TOP OF ENTRANCE CANOPY 132'-3"
- TOP OF CORNER ROOF 130'-0"
- TOP OF PARAPET 123'-0"
- WINDOWS TO BE LOW-E GLAZING AND INSET FROM THE 3" FROM THE WALL, TYP
- THE WINDOWS AND DOORS FRAMING WILL BE TREATED 2X6 WOOD PANELING, TYP
- TOP OF ACCENT BAND 114'-7"
- BOTTOM OF CANOPY 111'-5"
- TOP OF GLAZING 110'-0"
- TOP OF TRIM 103'-4"
- FINISHED FLOOR 100'-0"
- DECORATIVE LIGHT FIXTURE, TYP
- SOLID WINDOW TO BE USED AS CANVAS FOR MURALS, TYP



A3 ENTRANCE FACADE ELEVATION

1/8" = 1'-0"

- TOP OF ENTRANCE CANOPY 132'-3"
- TOP OF CORNER ROOF 130'-0"
- WINDOWS TO BE LOW-E GLAZING AND INSET FROM THE 3" FROM THE WALL, TYP
- TOP OF PARAPET 123'-0"
- THE WINDOWS AND DOORS FRAMING WILL BE TREATED 2X6 WOOD PANELING, TYP
- TOP OF ACCENT BAND 114'-7"
- BOTTOM OF CANOPY 111'-5"
- TOP OF GLAZING 110'-0"
- TOP OF TRIM 103'-4"
- FINISHED FLOOR 100'-0"
- DECORATIVE LIGHT FIXTURE, TYP
- SOLID WINDOW TO BE USED AS CANVAS FOR MURALS, TYP



A5 N HARBOR DR ELEVATION

1/8" = 1'-0"

4/14/2020 3:04:50 PM



ARCHITECT OF RECORD:  
 JAMES A. HAILEY  
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 SUITE 300  
 MERRIAM, KS 66204  
 www.brrarch.com  
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 FAX: 913-262-9044

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CONSULTANT

**GROCERYOUTLET**  
*bargain market*  
 825 SOUTH FRANKLIN STREET  
 FORT BRAGG, CA 95437

**ISSUE BLOCK**

NO.	DATE	DESCRIPTION

DATE: 03/17/20  
 DRAWN BY: JRZ  
 CHECKED BY:  
 JOB #62930192

SHEET TITLE  
 PERSPECTIVES

SHEET NO.  
**A2.0A**



**C5 SOUTH ST CORNER PERSPECTIVE**



**A5 ENTRANCE PERSPECTIVE**



**A3 PARKING LOT PERSPECTIVE**





ARCHITECT OF RECORD:  
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 www.brrarch.com  
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CONSULTANT

**GROCERY OUTLET**  
*bargain market*  
 825 SOUTH FRANKLIN STREET  
 FORT BRAGG, CA 95437

**ISSUE BLOCK**

NO.	DATE	DESCRIPTION

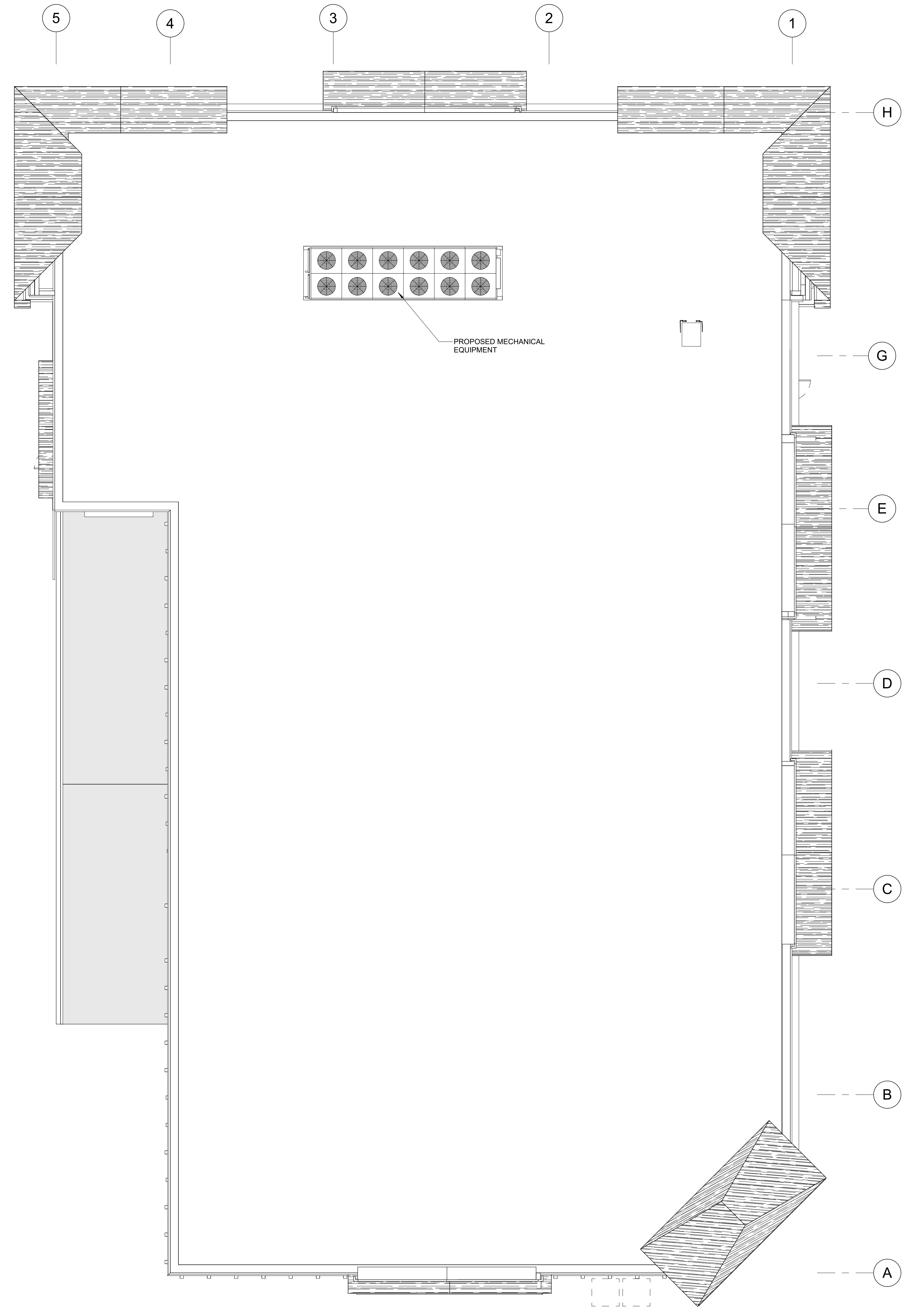
DATE: 03/17/20  
 DRAWN BY: JRZ  
 CHECKED BY:

JOB #62930192

SHEET TITLE  
**ROOF PLAN**

SHEET NO.  
**A3**

**1 ROOF PLAN**  
 1/8" = 1'-0"



4/2/2020 7:18:25 AM

## APPENDIX A

### **Cultural Resources Correspondence**

CALIFORNIA  
HISTORICAL  
RESOURCES  
INFORMATION  
SYSTEM



ALAMEDA  
COLUSA  
CONTRA COSTA  
DEL NORTE

HUMBOLDT  
LAKE  
MARIN  
MENDOCINO  
MONTEREY  
NAPA  
SAN BENITO

SAN FRANCISCO  
SAN MATEO  
SANTA CLATA  
SANTA CRUZ  
SOLANO  
SONOMA  
YOLO

**Northwest Information Center**  
Sonoma State University  
150 Professional Center Drive, Suite E  
Rohnert Park, California 94928-3609  
Tel: 707.588.8455  
nwic@sonoma.edu  
<http://www.sonoma.edu/nwic>

7/16/2019

NWIC File No.: 18-2464

Sean Jensen  
Genesis Society  
127 Estates Drive  
Chico, CA 95928

re: Grocery Outlet Project

The Northwest Information Center received your record search request for the project area referenced above, located on the Fort Bragg USGS 7.5' quad. The following reflects the results of the records search for the project area and a 0.25 mile radius:

Resources within project area:	None
Resources within 0.25 mile radius:	P-23-003389, 004305, 004385, 004991, 004447, 004448, 004466, & 006282.
Reports within project area:	S-34424.
Reports within 0.25 mile radius:	See enclosed database printout. A list of 'Other' reports is also included.

- |   |  |   |   |
|---|--|---|---|
| <b><u>Resource Database Printout (list):</u></b>            | <input type="checkbox"/> enclosed            | <input checked="" type="checkbox"/> not requested | <input type="checkbox"/> nothing listed |
| <b><u>Resource Database Printout (details):</u></b>         | <input checked="" type="checkbox"/> enclosed | <input type="checkbox"/> not requested            | <input type="checkbox"/> nothing listed |
| <b><u>Resource Digital Database Records:</u></b>            | <input type="checkbox"/> enclosed            | <input checked="" type="checkbox"/> not requested | <input type="checkbox"/> nothing listed |
| <b><u>Report Database Printout (list):</u></b>              | <input type="checkbox"/> enclosed            | <input checked="" type="checkbox"/> not requested | <input type="checkbox"/> nothing listed |
| <b><u>Report Database Printout (details):</u></b>           | <input checked="" type="checkbox"/> enclosed | <input type="checkbox"/> not requested            | <input type="checkbox"/> nothing listed |
| <b><u>Report Digital Database Records:</u></b>              | <input type="checkbox"/> enclosed            | <input checked="" type="checkbox"/> not requested | <input type="checkbox"/> nothing listed |
| <b><u>Resource Record Copies:</u></b>                       | <input checked="" type="checkbox"/> enclosed | <input type="checkbox"/> not requested            | <input type="checkbox"/> nothing listed |
| <b><u>Report Copies:</u></b>                                | <input checked="" type="checkbox"/> enclosed | <input type="checkbox"/> not requested            | <input type="checkbox"/> nothing listed |
| <b><u>OHP Historic Properties Directory:</u></b>            | <input checked="" type="checkbox"/> enclosed | <input type="checkbox"/> not requested            | <input type="checkbox"/> nothing listed |
| <b><u>Archaeological Determinations of Eligibility:</u></b> | <input checked="" type="checkbox"/> enclosed | <input type="checkbox"/> not requested            | <input type="checkbox"/> nothing listed |
| <b><u>CA Inventory of Historic Resources (1976):</u></b>    | <input checked="" type="checkbox"/> enclosed | <input type="checkbox"/> not requested            | <input type="checkbox"/> nothing listed |
| <b><u>Caltrans Bridge Survey:</u></b>                       | <input type="checkbox"/> enclosed            | <input checked="" type="checkbox"/> not requested | <input type="checkbox"/> nothing listed |
| <b><u>Ethnographic Information:</u></b>                     | <input type="checkbox"/> enclosed            | <input type="checkbox"/> not requested            | <input type="checkbox"/> nothing listed |
| <b><u>Historical Literature:</u></b>                        | <input type="checkbox"/> enclosed            | <input type="checkbox"/> not requested            | <input type="checkbox"/> nothing listed |
| <b><u>Historical Maps:</u></b>                              | <input checked="" type="checkbox"/> enclosed | <input type="checkbox"/> not requested            | <input type="checkbox"/> nothing listed |
| <b><u>Local Inventories:</u></b>                            | <input type="checkbox"/> enclosed            | <input type="checkbox"/> not requested            | <input type="checkbox"/> nothing listed |

**GLO and/or Rancho Plat Maps:**

enclosed    not requested    nothing listed

**Shipwreck Inventory:**

enclosed    not requested    nothing listed

**\*Notes:**

**\*\*** Current versions of these resources are available on-line:

Caltrans Bridge Survey: <http://www.dot.ca.gov/hq/structur/strmaint/historic.htm>

Soil Survey: <http://www.nrcs.usda.gov/wps/portal/nrcs/surveylist/soils/survey/state/?stateId=CA>

Shipwreck Inventory: <http://www.slc.ca.gov/Info/Shipwrecks.html>

Ethnographic & historical literature on file are published documents. No local inventories on file for the area.

Please forward a copy of any resulting reports from this project to the office as soon as possible. Due to the sensitive nature of archaeological site location data, we ask that you do not include resource location maps and resource location descriptions in your report if the report is for public distribution. If you have any questions regarding the results presented herein, please contact the office at the phone number listed above.

The provision of CHRIS Data via this records search response does not in any way constitute public disclosure of records otherwise exempt from disclosure under the California Public Records Act or any other law, including, but not limited to, records related to archeological site information maintained by or on behalf of, or in the possession of, the State of California, Department of Parks and Recreation, State Historic Preservation Officer, Office of Historic Preservation, or the State Historical Resources Commission.

Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the CHRIS Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

Should you require any additional information for the above referenced project, reference the record search number listed above when making inquiries. Requests made after initial invoicing will result in the preparation of a separate invoice.

Thank you for using the California Historical Resources Information System (CHRIS).

Sincerely,

Lisa C. Hagel  
Researcher

NATIVE AMERICAN HERITAGE COMMISSION  
Cultural and Environmental Department  
1550 Harbor Blvd., Suite 100  
West Sacramento, CA 95691  
Phone: (916) 373-3710  
Email: [nahc@nahc.ca.gov](mailto:nahc@nahc.ca.gov)  
Website: <http://www.nahc.ca.gov>  
Twitter: @CA\_NAHC



June 28, 2019

Sean Michael Jensen  
Genesis Society

VIA Email to: [seanjensen@comcast.net](mailto:seanjensen@comcast.net)

RE: Grocery Outlet Development Project, Mendocino County.

Dear Mr. Jensen:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we can assure that our lists contain current information. If you have any questions or need additional information, please contact me at my email address: [Katy.sanchez@nahc.ca.gov](mailto:Katy.sanchez@nahc.ca.gov).

Sincerely,

A handwritten signature in blue ink that reads "Katy Sanchez".

KATY SANCHEZ  
Associate Environmental Planner

Attachment



**Native American Heritage Commission  
Native American Contacts List  
6/27/2019**

<p>Cahto Tribe Sonny Elliot, EPA Director P.O. Box 1239 Laytonville CA 95454 Environmental@cahto.org (707) 984-6197, Ext. 111 (707) 984-6201 Fax</p>	<p>Cahto Kato Pomo</p>	<p>Kashia Band of Pomo Indians of the Stewarts Point Ranche Dino Franklin Jr., Chairperson 1420 Guerneville Rd. Ste 1 Santa Rosa CA 95403 dino@stewartspoint.org (707) 591-0580 Office (707) 591-0583 Fax</p>	<p>Pomo</p>
<p>Cahto Tribe Mary J. Norris, Chairperson P.O. Box 1239 Laytonville CA 95454 mjnorris@cahtotribe-nsn.gov (707) 984-6197 (707) 984-6201 Fax</p>	<p>Cahto Kato Pomo</p>	<p>Manchester Band of Pomo Indians Jaime Cobarrubia, Chairperson P.O. Box 623 Point Arena CA 95468 (707) 882-2788 (707) 882-3417 Fax</p>	<p>Pomo</p>
<p>Coyote Valley Band of Pomo Indians Michael Hunter, Chairperson P.O. Box 39/ 7901 Hwy 10, North Redwood Valley CA 95470 (707) 485-8723 (707) 485-1247 Fax</p>	<p>Pomo</p>	<p>Noyo River Indian Community Chairperson P.O. Box 91 Fort Bragg CA 95437</p>	<p>North Coastal Pomo Coast Yuki</p>
<p>Guidiville Band of Pomo Indians Merlene Sanchez, Chairperson P.O. Box 339 Talmage CA 95481 admin@guidiville.net (707) 462-3682 (707) 462-9183 Fax</p>	<p>Pomo</p>	<p>Pinoleville Pomo Nation Leona Williams, Chairperson 500 B Pinoleville Drive Ukiah CA 95482 (707) 463-1454 (707) 463-6601 Fax</p>	<p>Pomo</p>
<p>Hopland Band of Pomo Indians Sonny J. Elliott, Chairperson 3000 Shanel Road Hopland CA 95449 sjelliott@hoplandtribe.com (707) 472-2100 (707) 744-1506</p>	<p>Shokowa Sokow Shanel Pomo</p>	<p>Potter Valley Tribe Salvador Rosales, Chairperson 2251 South State Street Ukiah CA 95482 pottervalleytribe@pottervalleytribe.com (707) 462-1213 (707) 462-1240 - Fax</p>	<p>Pomo</p>

This list is current as of the date of this document and is based on the information available to the Commission on the date it was produced.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code, or Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans Tribes for the proposed: Grocery Outlet Development Project, Mendocino County.

**Native American Heritage Commission  
Native American Contacts List  
6/27/2019**

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**This list is current as of the date of this document and is based on the information available to the Commission on the date it was produced.**

**Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code, or Section 5097.98 of the Public Resources Code.**

**This list is only applicable for contacting local Native Americans Tribes for the proposed: Grocery Outlet Development Project, Mendocino County.**

# GENESIS SOCIETY

*a Corporation Sole*

127 ESTATES DRIVE  
CHICO, CALIFORNIA 95928  
(530) 680-6170  
seanjensen@comcast.net

July 22, 2019

## **Native American Individuals, Groups and Tribes**

***Subject: Grocery Outlet Development Project, 1.5-acres, Fort Bragg, Mendocino County, California.***

Dear Interested Native Americans:

Enclosed is a USGS topo-based map showing the location for a commercial development project within the City of Fort Bragg, Mendocino County, California.

We have been requested to conduct the archaeological survey, and are requesting any information you may have concerning archaeological sites or traditional use areas for this area. Any information you might supply will be used to supplement the archaeological and historical study being prepared for this project.

*Project Name:* Grocery Outlet Development Project  
*County:* Mendocino  
*Map:* USGS Fort Bragg.5'  
*Location:* Portion of T18N, R17W, Section 18

Thanks for your help. Please call with any questions.

Regards,

*Sean Michael Jensen*

**Sean Michael Jensen, Administrator**

*Genesis Society  
a Corporation Sole*

## APPENDIX B

### **Biological Review**

**Grocery Outlet Fort Bragg, California Property Biological Review**

Prepared for

Best Development Group,  
Sacramento, California

Prepared by



August 2019

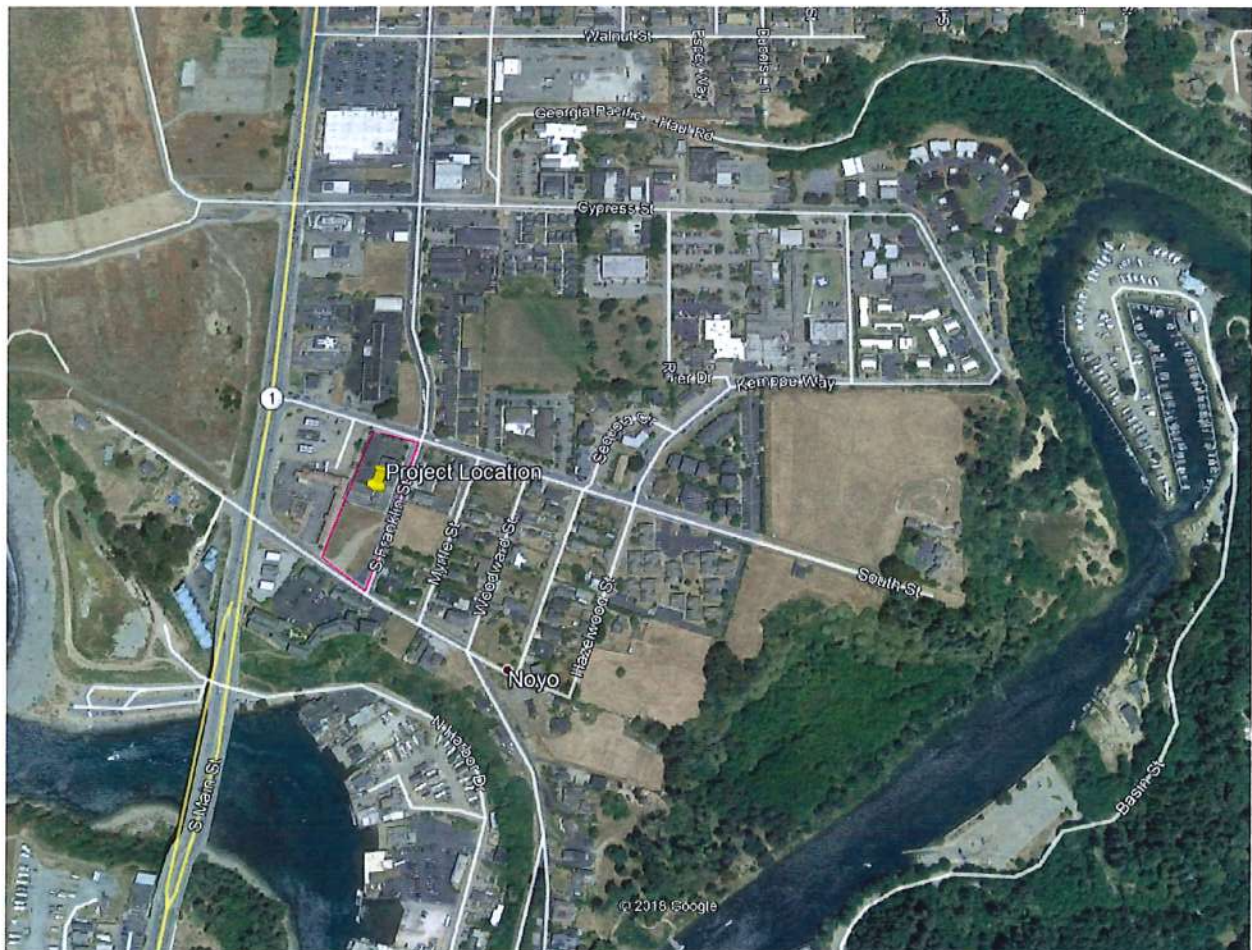
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## Introduction

This Biological Review has been prepared at the request of the Best Development Group of Sacramento, California for their project area located in downtown Fort Bragg of Mendocino County, California. The property consists of three lots located on the west side of South Franklin Street in the south central part of Fort Bragg. The legal location is portions of the northwest  $\frac{1}{4}$  of Section 18, Township 18 North, Range 17 West (see Figure 1). The southern-most lot is vacant with on third bare soil and two thirds covered with annual grasses and forbs with scattered shrubs. The middle lot contains an abandoned building and the northern lot is 95% covered by a paved parking area with shrubbery planted around the edges. The purpose of this review is to identify and assess the biological features of the project area inclusive of its soils, vegetation, wetlands, wildlife habitats, and the presence of sensitive species in order to comply with Mendocino County's planning requirements pursuant to the California Environmental Quality Act (CEQA).

Figure 1. Project Location



## **Methods**

Best Development Group provided WRM with project area and lot maps identifying the project's location, lot divisions, and surrounding streets. Background information was gathered for soils (Natural Resource Conservation Service web soil survey), general habitat descriptions (Mayer and Laudenslayer, Jr. 1988), listed plant and wildlife species (California Natural Diversity Data Base (CNDDDB)) and on-site reviews.

The site was visited by WRM staff on August 9<sup>th</sup> for the purpose of assessing the site for biological features and any unique habitat features and/or the presence of any listed plant or animal species. During this survey, vegetative species present were identified along with an estimate of percentage cover of the site. Presence of animal species in the form of visual observation or other evidence were noted. An evening bat survey was run from 1900 hours until dark by observing aerial activity around the project site. However, this survey was severely hampered by a tremendous thunderstorm with heavy rain that rolled through the area at dusk making visual observations nearly impossible.

## **Regulatory Setting**

Any development project must address the following federal, state and county environmental regulations.

### **A. Federal**

#### **1. Federal Endangered Species Act**

The Federal Endangered Species Act of 1973 (ESA) provides protection for federally listed endangered and threatened species and their habitats. An "endangered" species is a species in danger of extinction in a significant portion of its natural range. A "threatened" species is one that is likely to become endangered in the foreseeable future without protection. Other special status species include "proposed" species and "species of special concern." Proposed species are those that have been officially proposed (published in the Federal Register) for listing as threatened or endangered. "Species of concern" are those species for which not enough scientific information has been gathered to support a listing proposal, but still may be appropriate for listing in the future should evidence for listing be obtained. A "delisted" species is one whose population has reached its recovery goal and is no longer in jeopardy. The United States Fish and Wildlife Service (USFWS) administers the Federal ESA. Under the FESA, it is unlawful to "take" any listed species. "Take" is defined as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct." To "harm" has been broadly defined by regulation to include significant habitat modification that actually kills or injures wildlife (by significantly impairing essential behavior patterns like breeding, feeding or sheltering) (50 CFR 17.3). Protection under the FESA also extends to species and habitat proposed for listing.



Section 7(a) of the ESA requires that federal agencies responsible for authorizing projects (authorizing agencies) which could adversely affect a listed species or could adversely modify listed critical habitat designated for such a species, undertake consultation with the USFWS. Consultation could be informal or formal. Informal consultation is a process that includes all discussions and correspondence between the authorizing agency and the USFWS, and is designed to determine if formal consultation is required.

Unless it is readily apparent that formal consultation is necessary, the authorizing agency would typically first consult informally on all actions that could affect a listed species or its listed critical habitat. The authorizing agency would also typically seek recommendation for modification of actions that would avoid the likelihood of adverse effects and contribute to achieving recovery objectives for the listed species or its critical habitat.

Formal consultation is initiated by the authorizing agency through the preparation and submittal to the USFWS of a Biological Assessment prepared by the authorizing agency for the "proposed action." The Biological Assessment would be utilized in association with other informational resources by the USFWS to prepare a Biological Opinion. The Biological Opinion would make the determination of whether the proposed action is likely to jeopardize the continued existence of a listed species. A section of the Biological Opinion would specify the terms and conditions under which the listed species could be taken.

This section also determines appropriate levels of take, as defined by individuals of the species killed, injured or moved and the amount of critical habitat subject to temporary and or permanent disturbance. If the Biological Opinion determines that the proposed action could jeopardize the continued existence of a listed species, the authorizing agency must notify the USFWS in writing prior to its final decision on the proposed action.

## 2. Migratory Bird Treaty Act

Provisions of the Migratory Bird Treaty Act (1918) (16 USC 701.718h) are applicable to birds within the proposed area of operations. The act prohibits the killing of any migratory birds without a permit. Any activity which contributes to unnatural migratory bird mortality could be prosecuted under the Act. With few exceptions, most birds are considered migratory under the Act. Measures to prevent bird mortality must be incorporated into the project design.

## 3. Bald and Golden Eagle Protection Act

The Bald Eagle Protection Act (PL 92-535) provides federal protection to the bald eagle (*Haliaeetus leucocephalus*) and the golden eagle (*Aquila chrysaetos*). The act prohibits the direct or indirect take of an eagle, eagle part, product or nest. The golden eagle is not listed under the ESA as a threatened or endangered species, however, it is a protected species under the provisions of this act and under the California Endangered Species Act (CESA) as a look-alike species to the bald eagle. The proposed area of operations is within the range of the bald eagle.

#### 4. Clean Water Act

Section 404 of the Clean Water Act (CWA) charges the United States Army Corp of Engineers with the regulatory authority over the discharge of dredged or fill material into waters of the United States. "Waters of the United States" include a range of wet environments such as lakes, rivers, streams, mudflats, sandflats, wetlands, sloughs, and wet meadows. "Discharge or fill material" is defined as the addition of fill material into "waters of the U.S." including but not limited to the following: placement of fill that is necessary for the construction of any structure, or impoundment requiring rock, sand, dirt, or other material for its construction; site development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; fill for intake and outfall pipes and sub-aqueous utility lines (33 C.F.R. (s)328.2(f)). In addition, Section 401 of the CWA (33 U.S.C. 1341) requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into "waters of the U.S.", to obtain a certification that the discharge will comply with the applicable state effluent limitations and water quality standards.

#### B. State

##### 1. California Endangered Species Act

The California Endangered Species Act of 1984 (CESA) and the California Native Plant Protection Act of 1977 (CNPPA) provide the framework for protection of California's listed rare and endangered plant and animal species. The state also affords protection to candidate species which have been accepted for review for potential listing as rare, threatened or endangered species. CESA status definitions include:

**Endangered:** A native species or subspecies of a bird, mammal, fish, amphibian, reptile or plant which is in serious danger of becoming extinct throughout all, or a significant portion of its range due to one or more causes, including loss of habitat, change of habitat, over-exploitation, predation, competition, or disease.

**Threatened:** A native species or subspecies of a bird, mammal, fish, amphibian, reptile or plant that although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter (Fish and Game Code Chapter 1.5).

**Rare:** A species, subspecies or variety is rare when, although not presently threatened with extinction, it is in such small numbers throughout its range that it could become endangered if its present environment worsens.

**Candidate:** A native species or subspecies of a bird, mammal, fish, amphibian, reptile or plant that the Fish and Game Commission has given formal notice as being under review by the California Department of Fish and Wildlife (CDFW) for addition to either the list of endangered species or the list of threatened species, or a species for which the Commission has published a notice of proposed regulation to add the species to either list.

Species of Special Concern: Native species or subspecies that have become vulnerable to extinction because of declining population levels, limited ranges, or rarity. The goal is to prevent these species from becoming endangered by addressing the issues of concern early enough to secure long term viability for these species. The CESA prohibits a taking of species listed as endangered or threatened by the Fish and Game Commission (California Fish and Game Code

(s)2080). It also requires lead state agencies to consult with the CDFW to ensure that any actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of any T/E species or result in the destruction or adverse modification of habitat essential to the continued existence of any T/E species.

## 2. California Fish and Game Code

Several sections of the California Fish and Game Code apply to projects: sections 3511 (birds), 4700 (mammals), 5050 (reptiles and amphibians), and 5515 (fish) provide that designated fully protected species may not be taken or possessed without a permit. Incidental take of these species is not authorized by law. Pursuant to Section 3503.5 of the code, it is unlawful to take, possess or destroy any birds of prey; or to take, possess, or destroy any nest or eggs of such birds. Birds of prey refer to species in the orders of Falconiformes and Strigiformes.

Pursuant to Section 1602 of the code, CDFW regulates all diversions, obstructions or changes to the natural flow or bed, channel, or bank or any river, stream, or lake that supports fish or wildlife. Any changes in these areas require authorization from the CDFW by means of entering into an agreement pursuant to Section 1602 of the code.

## 3. Porter-Cologne Water Quality Control Act

California's primary statute governing water quality and water pollution issues (surface and groundwater) is the 1970 Porter-Cologne Water Quality Control Act. The act grants the State Water Board the power to protect water quality and is the primary vehicle for implementation of California's responsibilities under the federal CWA. The act grants the State Water Board authority and responsibility to adopt plans and policies regulating discharges of waste to surface and groundwater, to regulate waste disposal sites and to require cleanup of discharges of hazardous materials and other pollutants. It also establishes reporting requirements for unintended discharges of any hazardous substance, sewage, oil or petroleum products.

#### 4. Oak Woodlands

California public Resources Code Section 21083.4 requires a county, as part of the CEQA process, to consider whether a project would impact oak woodlands, including trees that are 5 inches or more in diameter at breast height. If a project may have a significant effect on oak woodlands (defined in the Fish and Game Code Section 1361 (h) as “an oak stand with a greater than 10% canopy cover or that may have historically supported greater than 10 percent canopy cover”) the code requires implementation of specific mitigation measures aimed at reducing impacts to oak woodlands, but also provides for mitigation through county-designed measures. Such measures include conservation of existing oaks woodlands, planting new trees, contribution of funds to the Oak Woodland Conservation Fund, or any other measures developed by the county.

#### 5. California Environmental Quality Act (CEQA)

CEQA requires identification of a project’s potentially significant impacts on biological resources and feasible mitigation measures and alternatives that could avoid or reduce significant impacts. The CEQA Environmental Checklist (Appendix G) (14 CCR 15000 et. Seq.) is used to analyze the potential significance of the project’s impacts. Candidate, sensitive or special status species are analyzed through Section IV(a) of Appendix G. This report considers the following special-status species: California SSC designated by CDFW, mammals and birds that are California fully protected species, and species designated by the USFWS as a general equivalent to SSCs. Section IV (b) of Appendix G also requires identification of a project’s potentially significant impacts on riparian habitats (such as wetland, bays, estuaries, and marshes) and other sensitive natural communities including habitats occupied by endangered, rare or threatened species.

#### 6. County

The Mendocino County General Plan states under Principles:

Principle2-1a; Conservation of Mendocino County’s natural resources, farmland, forest land and open spaces is essential to the rural quality of life desired by residents and visitors alike.

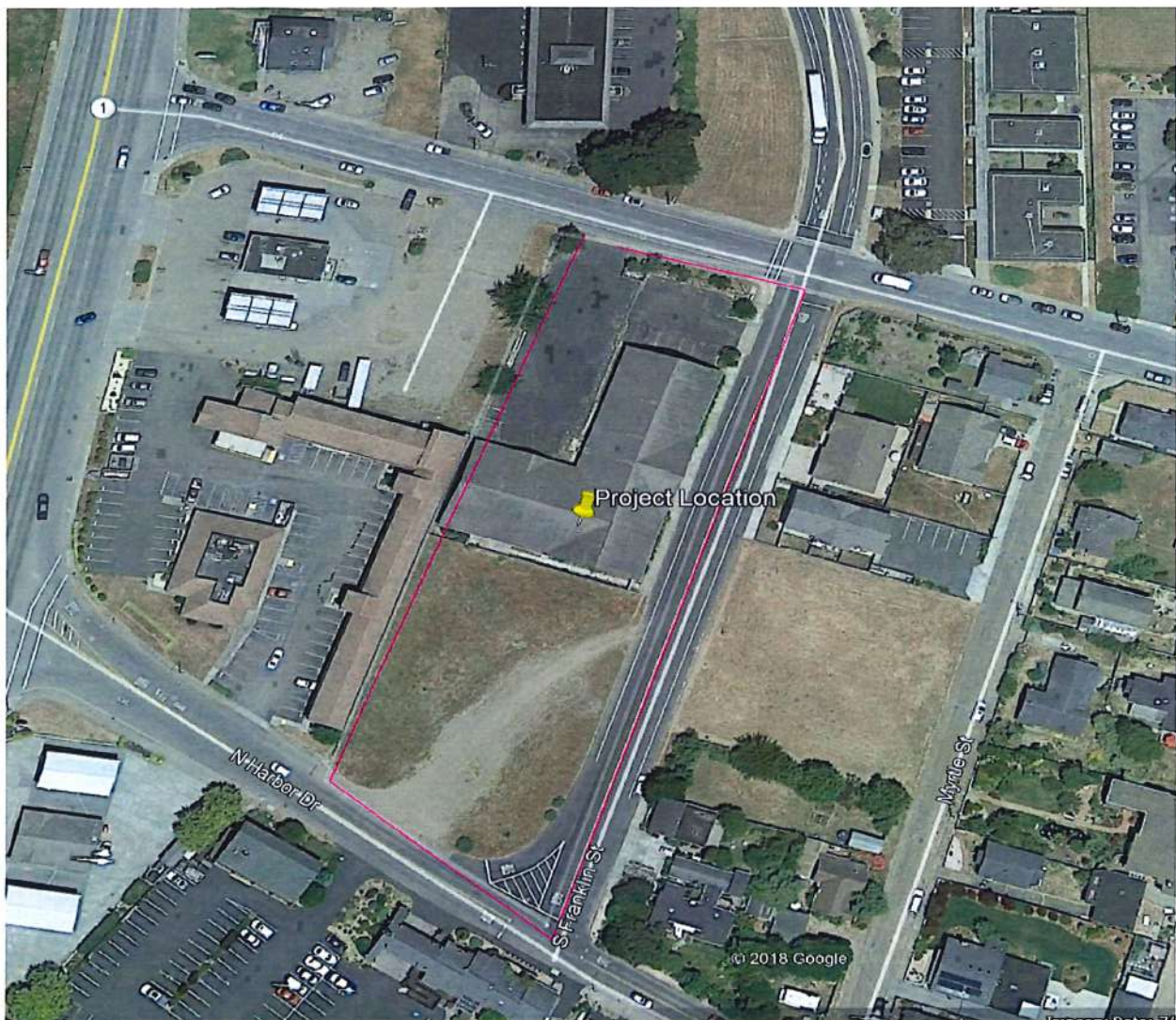
- Planned growth and compact development forms are essential to conserving environmental resources, farmland and open spaces.
- Direct new commercial and residential growth to cities and community areas where development can be supported by existing or planned infrastructure and public services and environmental impacts can be minimized.

## Results

### Description of site:

The project area is bordered on the south by North Harbor Drive which serves a motel complex. South Franklin Street borders the area on the east side with a small lot subdivision situated on the east side of that street. To the north is South Street with a vacant lot beyond. To the west is a motel complex and parking areas. As mentioned in the introduction, the southern-most lot is vacant and supporting short annual grasses, forbs and scattered shrubs. The center lot is completely occupied by a two-story abandoned structure and the north lot contains a paved parking lot with shrubbery planted along the edges between the lot and South Street and South Franklin Street. Figure 2 is a closeup view of the site showing the features of the area.

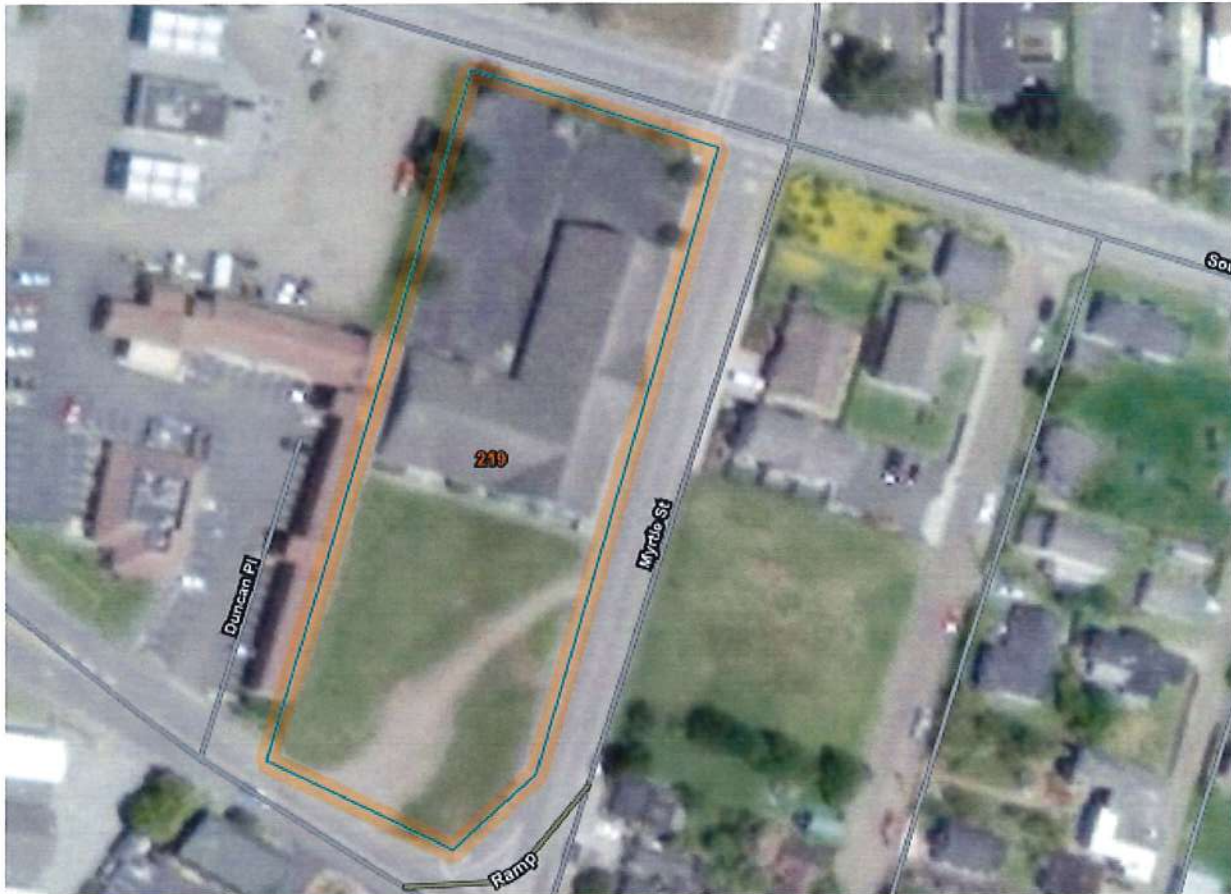
Figure 2.



Soils:

According to the Natural Resource Conservation Service web soil survey, there is one soil type found on the project site, classified as "Urban" land. This soil is described as found on marine terraces consisting of fluviomarine deposits derived from sedimentary rock, with a hydric soil rating: "yes." A "yes" indicates the soil is hydric and capable of supporting hydrophytic vegetation. Figure 2 is the NRCS soil map for the project area.

Figure 2



Source: Soil Survey data Mendocino County, version 10, September 12, 2018

### Vegetation:

As seen in Figure 2 on the previous page, the majority of the vegetation is limited to the southern-most parcel. Even here, vegetation is sparse and limited to approximately two-thirds of the property as across the middle of the area is bare soil. Plant species identified in this area are listed in Table 1 below.

Table 1. Plant species identified on the south parcel.

Common name	Scientific name	Dominant
Wild radish	<i>Raphanus sativa</i>	yes
Slender oats	<i>Avena barbata</i>	yes
California poppy	<i>Eschscholzia californica</i>	no
Blue grass	<i>Poa bulbosa</i>	yes
Perennial rye grass	<i>Lolium multiflorum</i>	no
vetch	<i>Vicia villosa</i>	no
Brome grass	<i>Bromus madritensis rubens</i>	no
Quaking grass	<i>Briza minor</i>	no
Dandelion	<i>Taraxacum officinale</i>	no
Queen Anne's lace	<i>Caucus carota</i>	no
Himalayan blackberry	<i>Rubus discolor</i>	no
Velvet grass	<i>Holcus lanatus</i>	yes
Hairgrass	<i>Aira caryophyllea</i>	no
Cypress	<i>Cupressaceac spp.</i>	no
Pampas grass	<i>Cortaderia selloana</i>	no

All the above plant species are associated with non-hydric soil conditions.

The north parcel is well over 98% covered by a paved parking lot and portions of the abandoned building. There is a row of planted shrubbery along the north side of the parking area that includes butterfly bushes, California rose, Himalayan blackberry, pampas grass and four unidentified ornamental trees.

### Hydrology and wetland features

There are no streams, wet swales or other wetland features on the project area. Storm water that falls on the site either seeps into the soil or sheet flows to roadside culverts and subsequent storm drains. Though the soil type is hydric, there is no evidence of wetland related plant species on the site.

### Wildlife Evidence

Sightings and other evidence of wildlife was very limited at the site. Gopher mounds were evident in the southern parcel and two crows were seen perched on the abandoned building and then flew south off-site within a minute after the surveyor's arrival. No other wildlife was seen during the survey. There were no scat, nests, burrows, whitewash or trails of any kind found on the site

### Query of the California Natural Diversity Data Base

A query of the CNDDDB for the Fort Bragg quadrangle was made to see if any special status plant or animal could be on the property given the current habitat conditions. Within the Fort Bragg Quadrangle the data base lists 25 animal species and 48 plant species. A listing of all 73 species may be found in the appendix. With the limited grass habitat and general surrounding urban conditions, there is no suitable habitat for any of the data base listed species on the three parcels and none were observed.

### Sensitive Species:

No sensitive species were detected on the site during the field visit.

### **Final Observations**

No species of listed plants or animals were found within the project site area and there are no wetland features within or around the immediate the area. There may be some rodent activity associated with the abandoned building (mice, rats) but none was detected. No wildlife activity was observed occupying the site other than gopher mounding and the crow flyover.

While not a popular rodent, pocket gophers (*Thomomys sp.*) are present (mounds) and do play an important role in the ecology of a landscape. Their mounds form a cultivated micro site for air born seeds and their underground excavations loosen compacted soils. However, there population numbers are not endangered and nor will they be by the loss of this habitat to the proposed project.

### **Recommendations:**

There is a remote possibility that bats may be present in the abandoned building, as several members of the species are known to use similar structures for diurnal roosting. Due to the untimely thunderstorm that occurred during the original survey, bat utilization of the site could not be determined. A follow-up survey to address that question is advisable. If bats are found to be utilizing the site, then consultation with CDFW is advised. If bats are not found there will be little loss of biological or ecological resources if the site is developed.



**For further information or questions, please contact:**

*Steven J. Kerns*

Steven J. Kerns, Certified Wildlife Biologist and Principal

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**References cited:**

Mayer and Laudenslayer, Jr. 1988. In "A Guide to Wildlife Habitats of California." USDA Forest Service, Pacific Southwest Forest and Range Experiment Station, California Department of Fish and Game, Pacific Gas and Electric Company, USDA Forest Service Region 5.

Mendocino County Soil Survey. 2018. United States Department of Agriculture Soil Conservation Service and Forest Service. On line soil survey.

**Appendix**

CNDDDB Quad Species List 73 records.

Element Type	Scientific Name	Common Name	Element Code	Federal Status	State Status	CDF W Status	CA Rare Plant Rank	Quad Code	Quad Name	Data Status	Taxonomic Sort
Animals - Amphibians	Ascaphus truei	Pacific tailed frog	AAABAO 1010	None	None	SSC	-	3912 347	Fort Bragg	Mapped	Animals - Amphibians - Ascaphidae - Ascaphus truei

Animals - Amphibians	Dicamptodonsatus	California giant salamander	AAAAH01020	None	None	SSC -	3912347	For t Bra gg	Unproc essed	Animals - Amphibians - Dicamptodontidae - Dicamptodonsatus
Animals - Amphibians	Rana aurora	northern red-legged frog	AAABH01021	None	None	SSC -	3912347	For t Bra gg	Mappe d and Unproc essed	Animals - Amphibians - Ranidae - Rana aurora
Animals - Amphibians	Rana boylei	foothill yellow-legged frog	AAABH01050	None	Candidate Threatened	SSC -	3912347	For t Bra gg	Mappe d	Animals - Amphibians - Ranidae - Rana boylei
Animals - Amphibians	Rhyacotritons	southern torrent salamander	AAAAJ01020	None	None	SSC -	3912347	For t Bra gg	Mappe d	Animals - Amphibians - Rhyacotritonidae - Rhyacotriton variegatus
Animals - Amphibians	Taricharivularis	red-bellied newt	AAAAF02020	None	None	SSC -	3912347	For t Bra gg	Unproc essed	Animals - Amphibians - Salamandridae - Taricharivularis
Animals - Birds	Circushudsonius	northern harrier	ABNKC11011	None	None	SSC -	3912347	For t Bra gg	Unproc essed	Animals - Birds - Accipitridae - Circushudsonius

Animals - Birds	Elanus leucurus	white-tailed kite	ABNKCO 6010	None	None	FP	3912 347	For t Bra gg	Unproc essed	Animals - Birds - Accipitridae - Elanus leucurus
Animals - Birds	Ardea herodias	great blue heron	ABNGA0 4010	None	None	-	3912 347	For t Bra gg	Unproc essed	Animals - Birds - Ardeidae - Ardea herodias
Animals - Birds	Charadrius alexandrinus nivosus	western snowy plover	ABNNB0 3031	Threat ened	None	SSC	3912 347	For t Bra gg	Mappe d	Animals - Birds - Charadriida e - Charadrius alexandrinu s nivosus
Animals - Birds	Agelaius tricolor	tricolored blackbird	ABPBXB 0020	None	Threat ened	SSC	3912 347	For t Bra gg	Unproc essed	Animals - Birds - Icteridae - Agelaius tricolor
Animals - Birds	Pandion haliaetus	osprey	ABNKCO 1010	None	None	WL	3912 347	For t Bra gg	Unproc essed	Animals - Birds - Pandionidae - Pandion haliaetus
Animals - Birds	Pelecanus occidentalis californicus	California brown pelican	ABNF00 1021	Deliste d	Deliste d	FP	3912 347	For t Bra gg	Unproc essed	Animals - Birds - Pelecanidae - Pelecanus occidentalis californicus

Animals - Fish	Eucyclogobius newberryi	tidewater goby	AFCQNO 4010	Endangered	None	SSC	-	3912 347	For t Bra gg	Mappe d and Unproc essed	Animals - Fish - Gobiidae - Eucyclogobi us newberryi
Animals - Fish	Entosphenus tridentatus	Pacific lamprey	AFBAAO 2100	None	None	SSC	-	3912 347	For t Bra gg	Unproc essed	Animals - Fish - Petromyzon tidae - Entosphenus tridentatus
Animals - Fish	Oncorhynchus gorbuscha	pink salmon	AFCHAO 2010	None	None	-	-	3912 347	For t Bra gg	Unproc essed	Animals - Fish - Salmonidae - Oncorhynch us gorbuscha
Animals - Fish	Oncorhynchus kisutch pop. 4	coho salmon - central California coast ESU	AFCHAO 2034	Endangered	Endangered	-	-	3912 347	For t Bra gg	Unproc essed	Animals - Fish - Salmonidae - Oncorhynch us kisutch pop. 4
Animals - Fish	Oncorhynchus mykiss irideus pop. 16	steelhead - northern California DPS	AFCHAO 209Q	Threatened	None	-	-	3912 347	For t Bra gg	Unproc essed	Animals - Fish - Salmonidae - Oncorhynch us mykiss irideus pop. 16

Animals - Fish	Oncorhynchus tshawytscha pop. 17	chinook salmon - California coastal ESU	AFCHA0205S	Threatened	None	-	-	3912347	For t Bra gg	Unproc essed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha pop. 17
Animals - Insects	Bombus caliginosus	obscure bumble bee	IIHYM24380	None	None	-	-	3912347	For t Bra gg	Mappe d	Animals - Insects - Apidae - Bombus caliginosus
Animals - Insects	Bombus occidentalis	western bumble bee	IIHYM24250	None	None	-	-	3912347	For t Bra gg	Mappe d	Animals - Insects - Apidae - Bombus occidentalis
Animals - Insects	Coelus globosus	globose dune beetle	IICOL4A010	None	None	-	-	3912347	For t Bra gg	Mappe d	Animals - Insects - Tenebrionidae - Coelus globosus
Animals - Mammals	Arborimus pomos	Sonoma tree vole	AMAFF23030	None	None	SSC	-	3912347	For t Bra gg	Unproc essed	Animals - Mammals - Muridae - Arborimus pomos
Animals - Mollusks	Noyo intersessa	Ten Mile shoulder band	IMGASC5070	None	None	-	-	3912347	For t Bra gg	Mappe d	Animals - Mollusks - Helminthoglyptidae - Noyo intersessa

Animals - Reptiles	Emys marmorata	western pond turtle	ARAADO2030	None	None	SSC	-	3912347	For t Bra gg	Mappe d and Unproc essed	Animals - Reptiles - Emydidae - Emys marmorata
Community - Terrestrial	Mendocino Pygmy Cypress Forest	Mendocino Pygmy Cypress Forest	CTT83161CA	None	None	-	-	3912347	For t Bra gg	Mappe d	Community - Terrestrial - Mendocino Pygmy Cypress Forest
Community - Terrestrial	Sphagnum Bog	Sphagnum Bog	CTT51110CA	None	None	-	-	3912347	For t Bra gg	Mappe d	Community - Terrestrial - Sphagnum Bog
Plants - Bryophytes	Triquetrella californica	coastal triquetrella	NBMUS7S010	None	None	-	1B .2	3912347	For t Bra gg	Mappe d	Plants - Bryophytes - Pottiaceae - Triquetrella californica
Plants - Lichens	Ramalina thrausta	angel's hair lichen	NLLEC3S340	None	None	-	2B .1	3912347	For t Bra gg	Mappe d	Plants - Lichens - Ramalinaceae - Ramalina thrausta
Plants - Vascular	Angelica lucida	sea-watch	PDAPI07OGO	None	None	-	4.2	3912347	For t Bra gg	Unproc essed	Plants - Vascular - Apiaceae - Angelica lucida

Plants - Vascular	Glehnia littoralis ssp. leiocarpa	American glehnia	PDAPI13 011	None	None	-	4.2	3912 347	For t Bra gg	Unproc essed	Plants - Vascular - Apiaceae - Glehnia littoralis ssp. leiocarpa
Plants - Vascular	Blennosp erma nanum var. robustum	Point Reyes blennosp erma	PDAST1 A022	None	Rare	-	1B .2	3912 347	For t Bra gg	Mappe d	Plants - Vascular - Asteraceae - Blennosp erma nanum var. robustum
Plants - Vascular	Hesperev ax sparsiflor a var. brevifolia	short- leaved evax	PDASTE 5011	None	None	-	1B .2	3912 347	For t Bra gg	Mappe d and Unproc essed	Plants - Vascular - Asteraceae - Hesperevax sparsiflora var. brevifolia
Plants - Vascular	Lasthenia californica ssp. bakeri	Baker's goldfield s	PDASTSL OC4	None	None	-	1B .2	3912 347	For t Bra gg	Mappe d	Plants - Vascular - Asteraceae - Lasthenia californica ssp. bakeri
Plants - Vascular	Lasthenia californica ssp. macranth a	perennia l goldfield s	PDASTSL OC5	None	None	-	1B .2	3912 347	For t Bra gg	Mappe d	Plants - Vascular - Asteraceae - Lasthenia californica ssp. macrantha

Plants - Vascular	Packera bolanderi var. bolanderi	seacoast ragwort	PDAST8 HOH1	None	None	-	2B .2	3912 347	For t Bra gg	Mappe d	Plants - Vascular - Asteraceae - Packera bolanderi var. bolanderi
Plants - Vascular	Erysimum concinnum	bluff wallflower	PDBRA1 60E3	None	None	-	1B .2	3912 347	For t Bra gg	Mappe d	Plants - Vascular - Brassicaceae - Erysimum concinnum
Plants - Vascular	Erysimum menziesii	Menzies' wallflower	PDBRA1 60R0	Endang ered	Endang ered	-	1B .1	3912 347	For t Bra gg	Mappe d and Unproc essed	Plants - Vascular - Brassicaceae - Erysimum menziesii
Plants - Vascular	Campanula californica	swamp harebell	PDCAMO 2060	None	None	-	1B .2	3912 347	For t Bra gg	Mappe d	Plants - Vascular - Campanulac eae - Campanula californica
Plants - Vascular	Calystegia purpurata ssp. saxicola	coastal bluff morning -glory	PDCON0 40D2	None	None	-	1B .2	3912 347	For t Bra gg	Mappe d	Plants - Vascular - Convolvulac eae - Calystegia purpurata ssp. saxicola



Plants - Vascular	Cuscuta pacifica var. papillata	Mendocino dodder	PDCUS011A2	None	None	-	1B .2	3912 347	For t Bra gg	Mappe d	Plants - Vascular - Convolvulaceae - Cuscuta pacifica var. papillata
Plants - Vascular	Cornus canadensis	bunchberry	PDCOR01040	None	None	-	2B .2	3912 347	For t Bra gg	Mappe d	Plants - Vascular - Cornaceae - Cornus canadensis
Plants - Vascular	Hesperocyparis pygmaea	pygmy cypress	PGCUP04032	None	None	-	1B .2	3912 347	For t Bra gg	Mappe d	Plants - Vascular - Cupressaceae - Hesperocyparis pygmaea
Plants - Vascular	Carex californica	California sedge	PMCYP032D0	None	None	-	2B .2	3912 347	For t Bra gg	Mappe d	Plants - Vascular - Cyperaceae - Carex californica
Plants - Vascular	Carex saliniformis	deceiving sedge	PMCYP03BY0	None	None	-	1B .2	3912 347	For t Bra gg	Mappe d	Plants - Vascular - Cyperaceae - Carex saliniformis
Plants - Vascular	Rhynchospora alba	white beaked-rush	PMCYP0N010	None	None	-	2B .2	3912 347	For t Bra gg	Mappe d and Unproc essed	Plants - Vascular - Cyperaceae - Rhynchospora alba

Plants - Vascular	Arctostaphylos nummularia ssp. mendocinensis	pygmy manzanita	PDERI04 280	None	None	-	1B .2	3912 347	For t Bra gg	Mappe d and Unproc essed	Plants - Vascular - Ericaceae - Arctostaphylos nummularia ssp. mendocinensis
Plants - Vascular	Hosackia gracilis	harlequin lotus	PDFAB2 A0D0	None	None	-	4.2	3912 347	For t Bra gg	Unproc essed	Plants - Vascular - Fabaceae - Hosackia gracilis
Plants - Vascular	Phacelia insularis var. continentis	North Coast phacelia	PDHYD0 C2B1	None	None	-	1B .2	3912 347	For t Bra gg	Mappe d	Plants - Vascular - Hydrophyllaceae - Phacelia insularis var. continentis
Plants - Vascular	Juncus supiniformis	hair-leaved rush	PMJUN0 12R0	None	None	-	2B .2	3912 347	For t Bra gg	Mappe d and Unproc essed	Plants - Vascular - Juncaceae - Juncus supiniformis
Plants - Vascular	Lilium maritimum	coast lily	PMLIL1A 0C0	None	None	-	1B .1	3912 347	For t Bra gg	Mappe d	Plants - Vascular - Liliaceae - Lilium maritimum
Plants - Vascular	Sidalcea malachroides	maple-leaved checkerbloom	PDMAL1 10E0	None	None	-	4.2	3912 347	For t Bra gg	Unproc essed	Plants - Vascular - Malvaceae - Sidalcea malachroides

Plants - Vascular	Sidalcea malviflora ssp. purpurea	purple- stemmed checkerb- loom	PDMAL1 10FL	None	None	-	1B .2	3912 347	For t Bra gg	Mappe d	Plants - Vascular - Malvaceae - Sidalcea malviflora ssp. purpurea
Plants - Vascular	Veratrum fimbriatu m	fringed false- hellebor e	PMLIL25 030	None	None	-	4.3	3912 347	For t Bra gg	Unproc essed	Plants - Vascular - Melanthiace ae - Veratrum fimbriatum
Plants - Vascular	Abronia umbellata var. breviflora	pink sand- verbena	PDNYCO 10N4	None	None	-	1B .1	3912 347	For t Bra gg	Mappe d	Plants - Vascular - Nyctaginace ae - Abronia umbellata var. breviflora
Plants - Vascular	Clarkia amoena ssp. whitneyi	Whitney' s farewell- to-spring	PDONA0 5025	None	None	-	1B .1	3912 347	For t Bra gg	Mappe d	Plants - Vascular - Onagraceae - Clarkia amoena ssp. whitneyi
Plants - Vascular	Castilleja ambigua var. ambigua	johnny- nip	PDSCRO D401	None	None	-	4.2	3912 347	For t Bra gg	Unproc essed	Plants - Vascular - Orobanchac eae - Castilleja ambigua var. ambigua

Plants - Vascular	Castilleja litoralis	Oregon coast paintbrush	PDSCRO D012	None	None	-	2B .2	3912 347	For t Bra gg	Mappe d	Plants - Vascular - Orobanchaceae - Castilleja litoralis
Plants - Vascular	Castilleja mendocinensis	Mendocino Coast paintbrush	PDSCRO D3N0	None	None	-	1B .2	3912 347	For t Bra gg	Mappe d and Unproc essed	Plants - Vascular - Orobanchaceae - Castilleja mendocinensis
Plants - Vascular	Pinus contorta ssp. bolanderi	Bolander's beach pine	PGPIN04 081	None	None	-	1B .2	3912 347	For t Bra gg	Mappe d and Unproc essed	Plants - Vascular - Pinaceae - Pinus contorta ssp. bolanderi
Plants - Vascular	Collinsia corymbosa	round-headed Chinese-houses	PDSCRO H060	None	None	-	1B .2	3912 347	For t Bra gg	Mappe d	Plants - Vascular - Plantaginaceae - Collinsia corymbosa
Plants - Vascular	Agrostis blasdalei	Blasdale's bent grass	PMPOAO 4060	None	None	-	1B .2	3912 347	For t Bra gg	Mappe d and Unproc essed	Plants - Vascular - Poaceae - Agrostis blasdalei
Plants - Vascular	Calamagrostis bolanderi	Bolander's reed grass	PMPOA1 7010	None	None	-	4.2	3912 347	For t Bra gg	Unproc essed	Plants - Vascular - Poaceae - Calamagrostis bolanderi

Plants - Vascular	Puccinellia pumila	dwarf alkali grass	PMPOAS 31L0	None	None	-	2B .2	3912 347	For t Bra gg	Mappe d	Plants - Vascular - Poaceae - Puccinellia pumila
Plants - Vascular	Gilia capitata ssp. pacifica	Pacific gilia	PDPLM0 40B6	None	None	-	1B .2	3912 347	For t Bra gg	Mappe d	Plants - Vascular - Polemoniaceae - Gilia capitata ssp. pacifica
Plants - Vascular	Gilia millefoliata	dark-eyed gilia	PDPLM0 4130	None	None	-	1B .2	3912 347	For t Bra gg	Mappe d	Plants - Vascular - Polemoniaceae - Gilia millefoliata
Plants - Vascular	Chorizanthe howellii	Howell's spineflower	PDPGN0 40C0	Endangered	Threatened	-	1B .2	3912 347	For t Bra gg	Mappe d	Plants - Vascular - Polygonaceae - Chorizanthe howellii
Plants - Vascular	Ceanothus gloriosus var. exaltatus	glory brush	PDRHA0 40F4	None	None	-	4.3	3912 347	For t Bra gg	Unproc essed	Plants - Vascular - Rhamnaceae - Ceanothus gloriosus var. exaltatus
Plants - Vascular	Ceanothus gloriosus var. gloriosus	Point Reyes ceanothus	PDRHA0 40F5	None	None	-	4.3	3912 347	For t Bra gg	Unproc essed	Plants - Vascular - Rhamnaceae - Ceanothus gloriosus var. gloriosus

Plants - Vascular	Horkelia marinensis	Point Reyes horkelia	PDROSO W0B0	None	None	-	1B .2	3912 347	For t Bra gg	Mappe d	Plants - Vascular - Rosaceae - Horkelia marinensis
Plants - Vascular	Sanguisor ba officinalis	great burnet	PDROS1 L060	None	None	-	2B .2	3912 347	For t Bra gg	Mappe d	Plants - Vascular - Rosaceae - Sanguisorba officinalis
Plants - Vascular	Mitellastr a caulescen s	leafy- stemme d mitrewo rt	PDSAXO N020	None	None	-	4.2	3912 347	For t Bra gg	Unproc essed	Plants - Vascular - Saxifragacea e - Mitellastra caulescens
Plants - Vascular	Viola palustris	alpine marsh violet	PDVIO04 1G0	None	None	-	2B .2	3912 347	For t Bra gg	Mappe d	Plants - Vascular - Violaceae - Viola palustris



## APPENDIX C

### **Traffic Impact Analysis**



**TRAFFIC IMPACT ANALYSIS**  
**FOR**  
**GROCERY OUTLET STORE**  
Fort Bragg, California

*Prepared For:*

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October 22, 2019

Job No. 0951-11

*Fort Bragg Grocery Outlet Store*

**TRAFFIC IMPACT ANALYSIS FOR  
GROCERY OUTLET STORE  
Fort Bragg, California**

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*KDA*

**TRAFFIC IMPACT ANALYSIS FOR  
GROCERY OUTLET STORE  
Fort Bragg, California**

**INTRODUCTION**

This report documents **KD Anderson & Associates'** analysis of the traffic impacts associated with developing a Grocery Outlet Store in the Mendocino County community of Fort Bragg, California. This assessment of traffic impacts has been required by City of Fort Bragg to confirm that the project will not result in conditions in excess of adopted General Plan minimum Level of Service standards. The analysis identifies both current and future background conditions at key intersections in the vicinity of the site. To assess traffic impacts, the characteristics of the proposed project have been determined, including estimated trip generation and the directional distribution / assignment of project generated traffic. The significance of project impacts has been determined with regard to Existing Plus Project and Cumulative Plus Project conditions. The extent of off-site impacts has been determined, and the adequacy of site access has been evaluated.

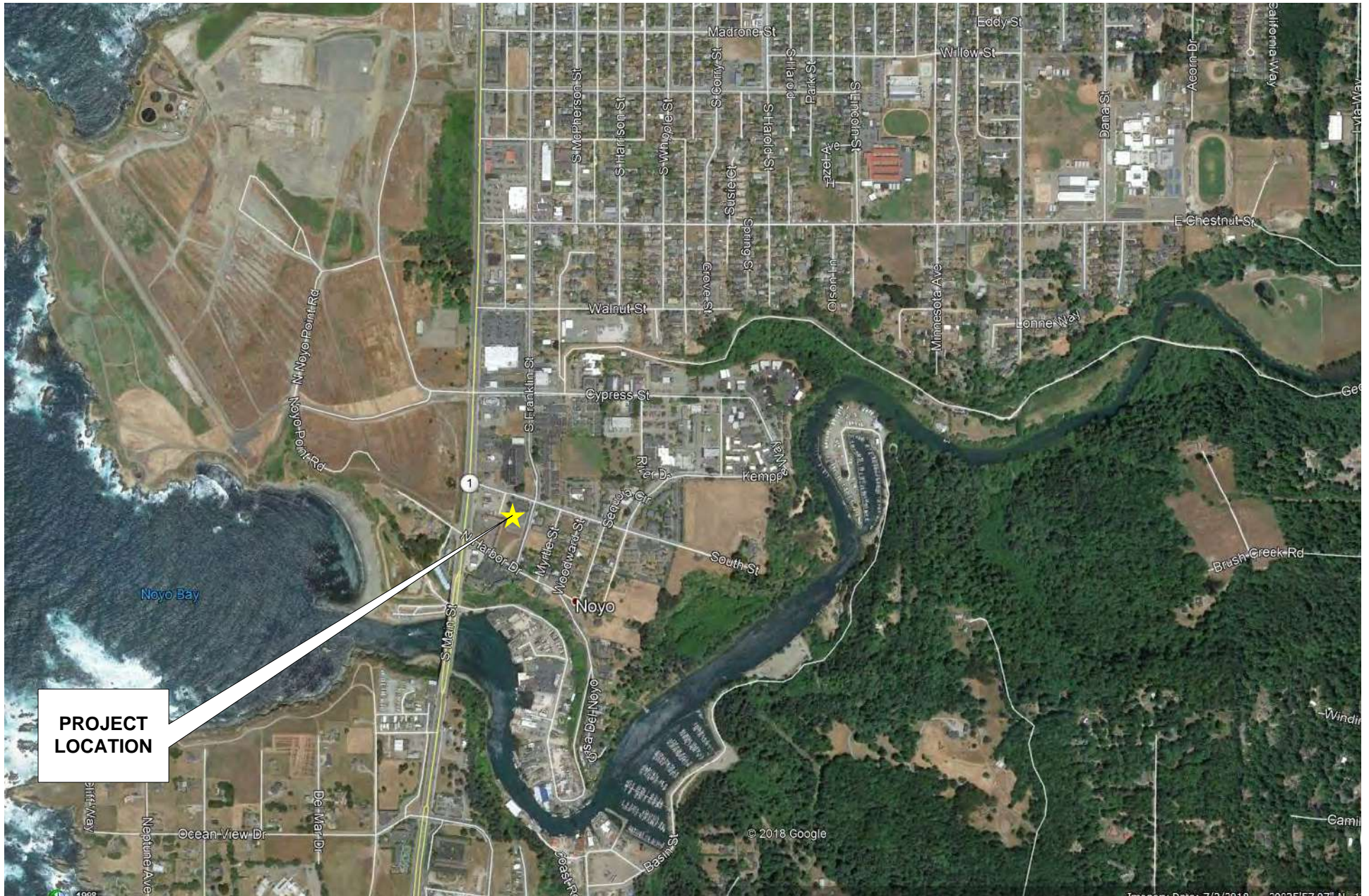
**Project Description**

The proposed project consists of a 16.0 ksf Grocery Outlet Store located on an approximately 1.6 acre site on the west side of Franklin Street between South Street and N. Harbor Drive, as noted in Figure 1. Access to the site will be provided via driveways on Franklin Street and on N. Harbor Drive, as shown in Figure 2. The Franklin Street driveway is about 270 feet from the South Street / Franklin Street intersection (measured centerline to centerline), and the N. Harbor Drive driveway is about 355 feet to the east of SR 1. Today the northern half of the project site is occupied by a vacant commercial building that will be demolished. Sidewalk exists along the site's South Street and northern Franklin Street frontage, and proposed frontage improvements will provide sidewalk along the balance of the site. The project site plan identifies 54 parking spaces. The project's truck loading is located on the west side of the building, and trucks would enter from Franklin Street and exit onto N. Harbor Drive or Franklin Street.

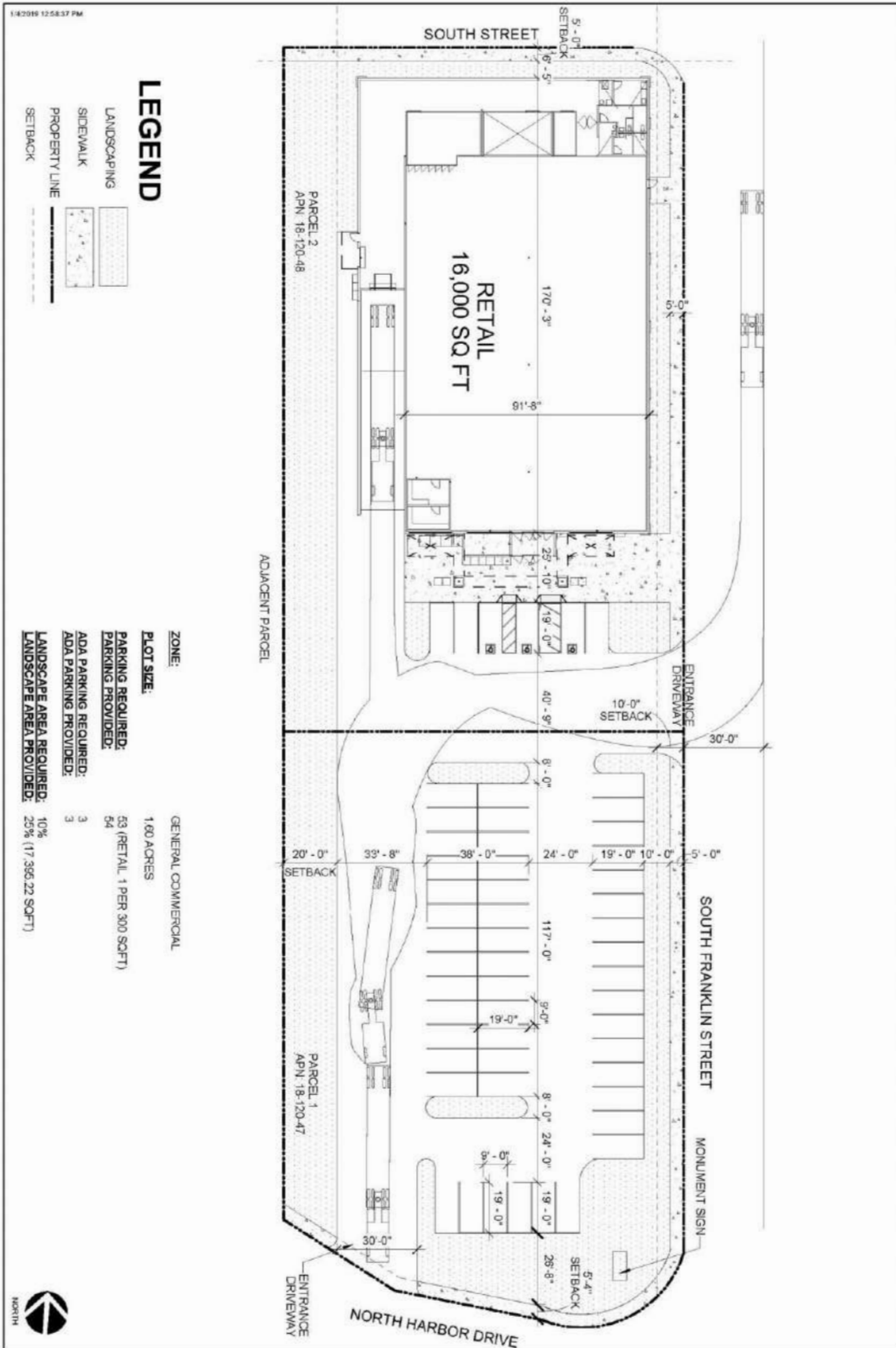
**Scope of Analysis**

The impact analysis conforms to the Caltrans traffic study guidelines and City of Fort Bragg requirements.

**Existing Setting.** Current roadway and intersection capacities and operating Levels of Service have been quantified. New 24-hour traffic counts were conducted over a three-day period to define the weekday and Saturday peak hours to be included in this study. New traffic count data will then be collected, and a weekday p.m. peak hour and Saturday midday peak hour traffic volume base was established for study area intersections.



VICINITY MAP



07/04/19  
Search No.  
SP1

**BEST DEVELOPMENT GROUP**  
APN: 018-120-47-00  
FORT BRAGG, CA 95437  
**PRELIMINARY SITE PLAN**

**btr**  
415-725-4100

Multiple 24 hr traffic counts were made on key roadway segments on a summer Thursday, Friday and Saturday to define the periods of intersection analysis. The counts were made at these locations:

- Cypress Street between Main Street and Franklin Street
- South Street between Main Street and Franklin Street
- Harbor Drive between Main Street and Franklin Street
- Franklin Street between Cypress Street and South Street
- Franklin Street between South Street and North Harbor Drive

New intersection turning movement counts (motor vehicles, pedestrians, bicycles) were then made on a weekday and on Saturday during the two-hour peak periods at these locations:

1. Main Street / Cypress Street
2. Main Street / South Street
3. Main Street / North Harbor Drive
4. Franklin Street / Cypress Street
5. Franklin Street / South Street
6. Franklin Street / Harbor Drive

Operating Levels of Service and roadway system performance were analyzed using methodologies that are acceptable to the City and Caltrans based on Highway Capacity Manual, 6<sup>th</sup> Edition methodologies using Synchro 10.0 software to calculate intersection Level of Service and identify turn lane queue lengths. MUTCD traffic signal warrants were assessed at unsignalized intersections. The existing setting was also described with regards to pedestrian, bicycle and transit facilities.

**Project Impacts** The extent to which the development of the project, by itself, impacts the area street system was determined. The number of automobile trips that may be generated by the Grocery Outlet Store was estimated through application of published trip generation rates available from the Institute of Transportation Engineers (ITE Trip Generation Manual 10<sup>th</sup> Edition). Appropriate “pass-by” trip rate assumptions were developed from the ITE Trip Generation Handbook, and the directional distribution of primary project trips was determined based on the location of residences within the project’s probable market area.

Traffic operating conditions were re-calculated under "Existing Plus Project Alone" conditions. Peak Hour Levels of Service were identified, the extent to which project development results in conditions in excess of adopted minimum Level of Service standards was determined, and the extent to which the project exacerbates current queuing deficiencies was evaluated. The adequacy of site access was evaluated with regard to truck turning requirements and driveway throat depth, etc. Impacts to alternative transportation modes were also evaluated.

**Cumulative Conditions.** Long Term Year 2040 conditions were assessed based on Caltrans local area growth rates and information available from the City of Fort Bragg regarding other approved projects in this area of the community. Resulting future twenty year “No Project” and “Plus Project” traffic volumes were created. Cumulative intersection Levels of Service and 95<sup>th</sup> percentile queue lengths, as applicable, were calculated and the significance of the project’s cumulative impacts was determined based on adopted significance criteria.

**Vehicle Miles Traveled (VMT).** The project’s relative effect on regional Vehicle Miles Traveled (VMT) has been discussed.

## EXISTING SETTING

This report section describes the facilities that are available today serving vehicular, pedestrian and bicycle traffic and transit users in Fort Bragg, as well as policies that guide consideration of traffic impacts.

### Study Area Circulation System - Roads

The text which follows provides information regarding the streets included in the study area.

**Main Street (SR 1).** State Route 1 runs north-south along the California coast and is a primary access to Mendocino County. Through Fort Bragg the route is Main Street and is designated an Arterial Street in the Circulation Element of the Fort Bragg Coastal General Plan. In the area of the project Main Street is a four-lane conventional highway with a center Two-Way Left-Turn (TWLT) lane. Paved shoulder exists on both sides of the road, and sidewalk is available on the east side of the highway. The posted speed limit is 40 mph. The most recent traffic volume data available for the California Department of Transportation (Caltrans) indicates that SR 1 carries an *Annual Average Daily Traffic (AADT)* volume of 21,200 vehicles per day (vpd) south of Cypress Street, with the daily volume rising to 24,200 vpd in the peak month. Trucks comprise about 3% of the daily traffic in this area.

**Franklin Street.** Franklin Street is a north-south route that lies about 450 feet east of Main Street. Franklin Street extends from an intersection on N. Harbor Drive for about 1½ miles to its northern terminus near Pudding Creek. The Circulation Element designates Franklin Street as a Major Collector. In the area of the project, Franklin Street is a two-lane roadway with paved shoulders, and sidewalk exists on both sides of the street in the area near the South Street intersection. A prima facie 25 mph speed limit is in effect. As noted in Table 1, Franklin Street was observed to carry 1,928 to 2,194 vpd in the area of the project and 2,394 to 3,540 vpd north of South Street.

TABLE 1 DAILY TRAFFIC VOLUMES ON FORT BRAGG STREETS				
Street	Location	Daily Traffic (vpd)		
		Thursday 7/18/2019	Friday 7/19/2019	Saturday 7/20/2019
Franklin Street	Cypress Street to South Street	3,540	3,497	2,394
	South Street to N. Harbor Drive	1,936	2,194	1,928
Cypress Street	Main Street to Franklin Street	5,078	5,214	3,529
South Street	Main Street to Franklin Street	2,449	2,345	1,665
N. Harbor Drive	Main Street to Franklin Street	2,488	2,949	3,200



**Cypress Street.** Cypress Street is an east-west street that extends east from Main Street for about ½ mile. The Circulation Element identifies Cypress Street as a Minor Collector. In the area immediately east of SR 1 Cypress Street is a two-lane street with a center TWLT lane. Sidewalk exists on both sides of the street, and the posted speed limit is 25 mph. Recent 24-hr traffic counts indicated that Cypress Street carried 3,529 to 5,214 vpd near Main Street.

**South Street.** South Street is an east-west street that extends easterly from Main Street for about ½ mile along the north boundary of the project site. The Circulation Element identifies South Street as a Minor Collector street. In the area of the project South Street is a two-lane street with paved shoulders and sidewalks. The posted speed limit is 25 mph. The traffic counts conducted for this study indicated that South Street carried 1,665 to 2,449 vpd.

**North Harbor Drive.** North Harbor Drive is a street that extends east from an intersection on Main Street to the city's Noyo River harbor area. This two-lane road is designated a local street in the Circulation Element. Sidewalk exists near Main Street but not at locations east of the project site. The posted speed limit is 25 mph. The daily traffic counts conducted for this analysis indicated that North Harbor Drive carried 2,488 to 3,200 vpd.

### **Study Area Intersections**

The quality of traffic flow is often governed by the operation of key intersections. The following intersections have been identified for evaluation in this study in consultation with City of Fort Bragg staff.

The **SR 1 (Main Street) / Cypress Street intersection** is a four-way intersection controlled by traffic signal. The west leg of the intersection opposite Cypress Street is the access to the Georgia Pacific Mill site. Each approach has a separate left turn lane with protected left turn phasing. Crosswalks are striped on each leg of the intersection, and pedestrian indications and push buttons are present. Street lights exist on each corner.

The **Cypress Street / Franklin Street intersection** is a four-way intersection controlled by an all-way stop. Separate left turn lanes are provided on Cypress Street, but the Franklin Street approaches are single lanes. Crosswalks are striped across each leg of the intersection, and there is a street light on the southeast corner.

The **SR 1 (Main Street) / South Street intersection** is a "tee" controlled by a stop sign on the South Street approach. A continuous TWLT lane is present on SR 1. The westbound South Street approach is a single travel lane, and a crosswalk is striped across the South Street approach. Street lights are available on each corner.

The **South Street / Franklin Street intersection** is a four-way intersection controlled by a stop sign on northbound and southbound Franklin Street approaches. Each approach has a single travel lane. A crosswalk is striped across the north Franklin Street leg, and there is a streetlight on the northeast corner.

The **SR 1 (Main Street) / North Harbor Drive intersection** is a four-way intersection controlled by stop signs on the eastbound and westbound approaches. The west leg of the intersection is Noyo Point Road. Both eastbound and westbound approaches are signed RIGHT TURN ONLY, and a painted median on the westbound approach aligns motorists towards right turns. A crosswalk is striped across North Harbor Drive, and streetlights exist at the intersection.

The **North Harbor Drive / Franklin Street intersection** is a “tee” controlled by an all-way stop. The North Harbor Drive approaches are single travel lanes, but the Franklin Street approach has a separate right turn lane. There are no crosswalks striped at the intersection, and a streetlight is present on the southeast corner.

### **Standards of Significance: Levels of Service - Methodology**

To assess the quality of existing traffic conditions, Levels of Service were calculated at study area intersections. "Level of Service" is a qualitative measure of traffic operating conditions whereby a letter grade "A" through "F", corresponding to progressively worsening traffic operating conditions, is assigned to an intersection or roadway segment. Table 2 presents the characteristics associated with each LOS grade. As shown in Table 2, LOS "A", "B" and "C" are considered acceptable to most motorists, while LOS "D" is marginally acceptable. LOS "E" and "F" are associated with severe congestion and delay and are unacceptable to most motorists.

**Minimum Standards.** Local agencies and Caltrans adopt minimum Level of Service standards for their facilities.

**Coastal General Plan.** The City's Coastal General Plan identifies acceptable Levels of Service for regular non-summer conditions based on location and traffic control, as noted in Table 3. As noted, LOS D is the minimum on SR 1 at intersections controlled by a traffic signal or all-way stop, while LOS C is the minimum at other City street intersections with similar controls. Minimum Level of Service at intersections controlled by side street stops is based on the delay experienced by motorists on the side street approaches and is similarly LOS D on state highways and LOS C at intersections on city streets. However, allowance is made for low volume approaches which do not carry volumes that do not satisfy traffic signal warrants.

The Circulation Element acknowledges the effects of peak summer weekend traffic along SR 1. The maximum allowable LOS standards for Main Street identified above apply to the p.m. peak hour weekdays during the summer and to the p.m. peak hour on weekdays and weekends during the remainder of the year. During the peak hours on summer weekends and holidays, Main Street can operate at LOS F.

**SR 1 Transportation Concept Report.** The Caltrans SR 1 Transportation Concept Report (SR 1 TCR) indicates that agencies expectations for the performance of the state highway. The SR 1 TCR is currently unavailable on the Caltrans website as that source undergoes accessibility updates.

**Methods.** Levels of Service were calculated for different intersection control types using the respective methods presented in the Highway Capacity Manual, 6<sup>th</sup> Edition (HCM 6 Ed). Intersection Levels of Service were calculated using SYNCHRO 10.0 software. For intersections controlled by side street stop signs, the reported Level of Service reflects the “worst case” movement, which is typically those motorists waiting to enter the major street.

**TABLE 2  
LEVEL OF SERVICE DEFINITIONS**

<b>Level of Service</b>	<b>Signalized Intersection</b>	<b>Unsignalized Intersection</b>	<b>Roadway (Daily)</b>
"A"	Uncongested operations, all queues clear in a single-signal cycle. Ave Delay $\leq$ 10 seconds per vehicle	Little or no delay. Ave Delay $\leq$ 10 sec/veh	Completely free flow.
"B"	Uncongested operations, all queues clear in a single cycle. Delay $>$ 10 sec/veh and $\leq$ 20 sec/veh	Short traffic delays. Delay $>$ 10 sec/veh and $\leq$ 15 sec/veh	Free flow, presence of other vehicles noticeable.
"C"	Light congestion, occasional backups on critical approaches. Delay $>$ 20 sec/veh and $<$ 35 sec/veh	Average traffic delays. Delay $>$ 15 sec/veh and $\leq$ 25 sec/veh	Ability to maneuver and select operating speed affected.
"D"	Significant congestions of critical approaches but intersection functional. Cars required to wait through more than one cycle during short peaks. No long queues formed. Delay $>$ 35 sec/veh and $<$ 55 sec/veh	Long traffic delays. Delay $>$ 25 sec/veh and $\leq$ 35 sec/veh	Unstable flow, speeds and ability to maneuver restricted.
"E"	Severe congestion with some long standing queues on critical approaches. Blockage of intersection may occur if traffic signal does not provide for protected turning movements. Traffic queue may block nearby intersection(s) upstream of critical approach(es). Delay $>$ 55 sec and $\leq$ 80 sec/veh	Very long traffic delays, failure, extreme congestion. Delay $>$ 35 sec/veh and $\leq$ 50 sec/veh	At or near capacity, flow quite unstable.
"F"	Total breakdown, stop-and-go operation. Delay $>$ 80 sec/veh	Intersection often blocked by external causes. Delay $>$ 50 sec/veh	Forced flow, breakdown.

Sources: Highway Capacity Manual, 6<sup>th</sup> Edition, and Transportation Research Board (TRB) Special Report 209.

<b>TABLE 3<sup>1</sup></b>	
<b>CITY OF FORT BRAGG MINIMUM LEVEL OF SERVICE STANDARDS</b>	
<b>Location</b>	<b>Minimum Standard</b>
Signalized and All-Way Stop Intersection along SR 1	LOS D
Side Street Stop Controlled Intersections on SR 1 (side street approach)	LOS D, or LOS F IF there are less than 15 vehicles per hour (vph) left turns and through movements from the side street AND the intersection volumes do not exceed Caltrans rural peak hour signal warrant criteria levels
Signalized and All-way Stop intersections not on SR 1	LOS C
Side Street Stop controlled Intersections not along SR 1 (side street approach)	LOS C, or LOS IF there are less than 15 vehicles per hour (vph) left turns and through movements from the side street AND the intersection volumes do not exceed Caltrans rural peak hour signal warrant criteria levels
<sup>1</sup> Source: City of Fort Bragg Coastal General Plan Circulation Element Goal C-1.1	

**Traffic Signal Warrants.** The extent to which a traffic signal may be justified is determined based on many factors. From the standpoint of traffic impact analysis, signal warrant criteria contained in the *California Manual of Uniform Traffic Control Devices (CA MUTCD)* are employed in order to assess the relative impact of the additional traffic accompanying a development proposal. For this analysis, Warrant 3 (Peak Hour Traffic) has been employed, and based on the speed limit on SR 1 (40 mph) and Circulation Element policy, rural criteria have been employed.

**Vehicle Queues.** The extent to which traffic operations at intersections result in vehicle queues that exceed available storage has been assessed. Statistically, the 95<sup>th</sup> percentile queue has been evaluated. This represents the queue length that would only be exceeded 5% of the time during the peak period. The 95<sup>th</sup> percentile queues are a byproduct of HCM LOS analysis.

**Existing Traffic Volumes / Levels of Service**

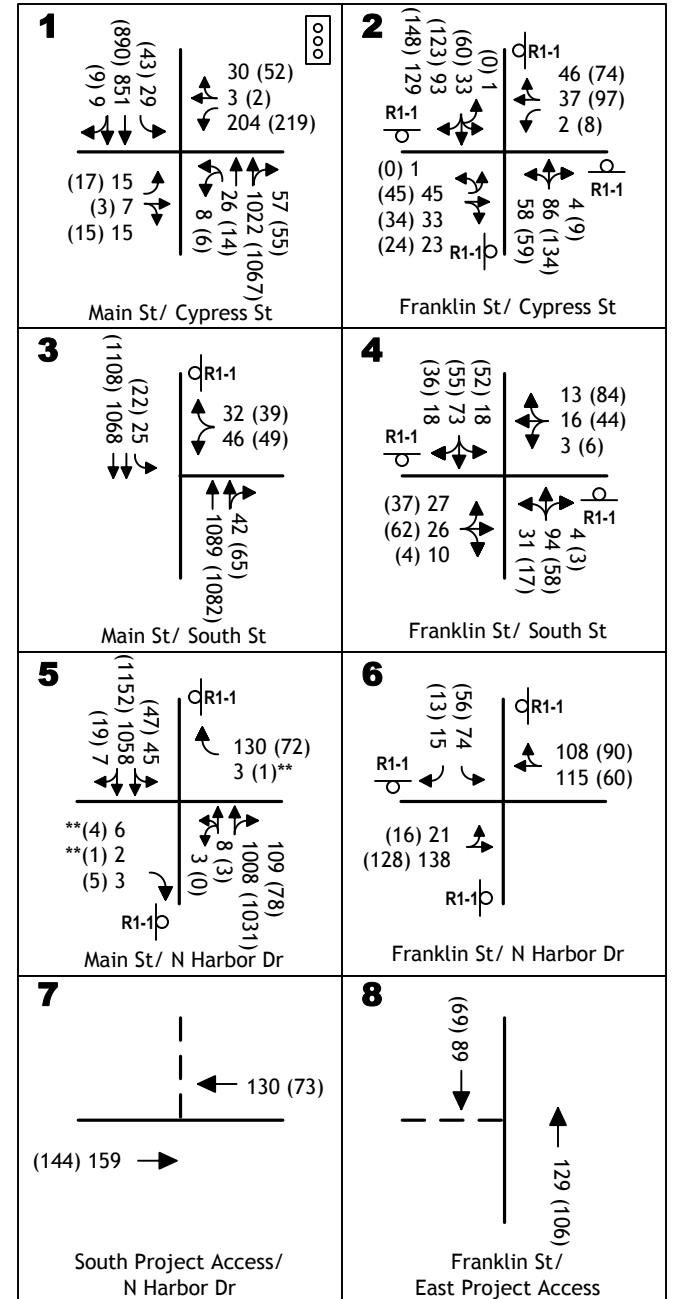
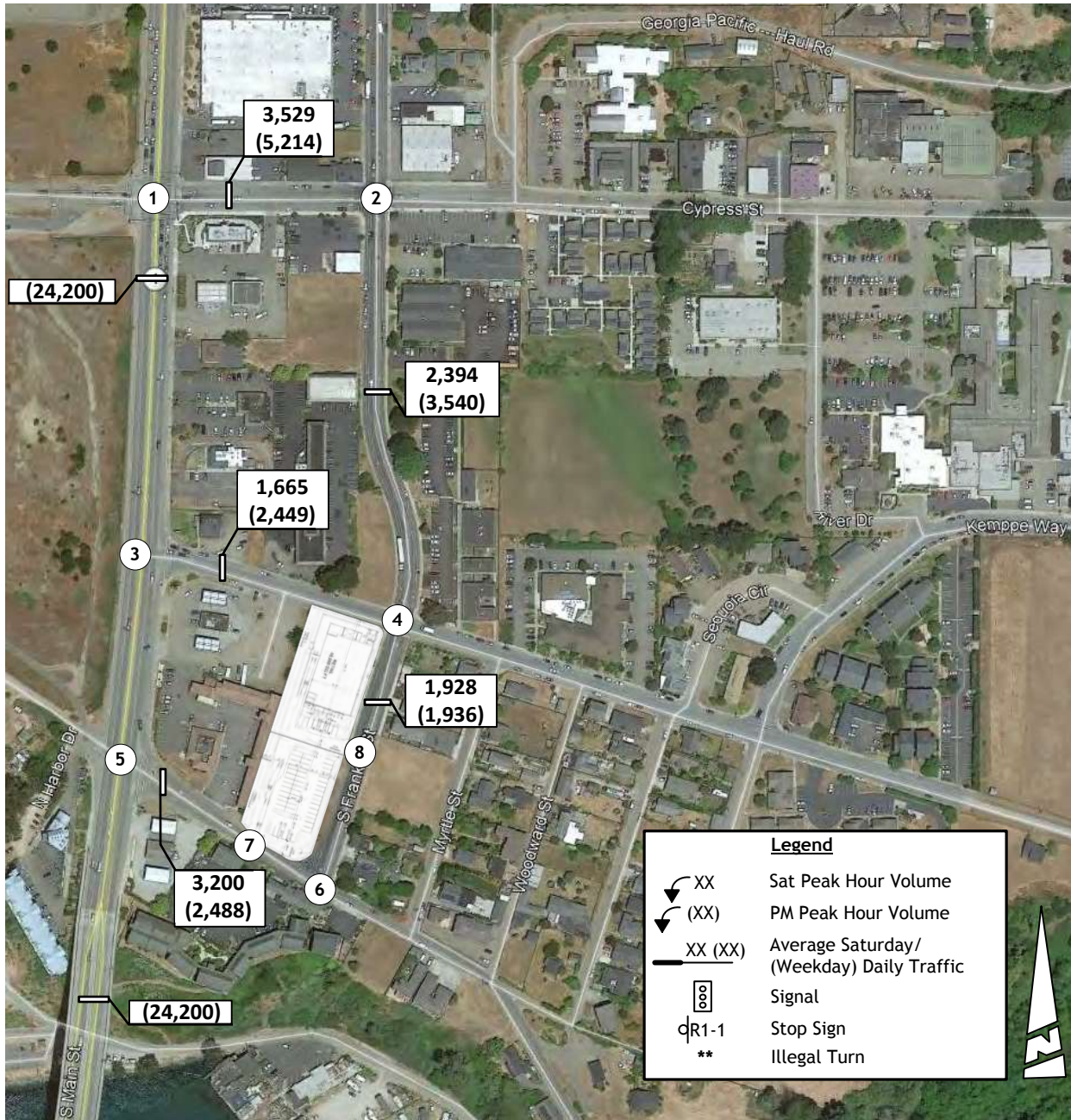
**Traffic Volume Counts.** The periods for intersection analysis were selected based on review of the hourly results from daily traffic volume counts. For this study during the weekday p.m. peak hour (4:00 to 6:00 pm) and Saturday midday peak hour (noon to 2:00 pm) were the highest volume periods. The highest hourly traffic volume period within each two hour window was identified as the peak hour and used for this analysis.

Figure 3 illustrates the intersection turning movement count data for study intersections. This figure also notes the geometric layout of each intersection and the location of traffic controls. This data has been used to determine the operating Level of Service (LOS) at each intersection.

As indicated in Table 4, each intersection delivers a peak hour Level of Service that satisfies minimum City of Fort Bragg requirements. It is worthwhile to note that at the SR 1 / North Harbor Drive intersection a few left turns and through traffic movements were made contrary to posted turn prohibitions. These movements were excluded from the LOS calculations.

**TABLE 4  
EXISTING INTERSECTION LEVEL OF SERVICE**

Intersection	Control	Weekday PM Peak Hour			Saturday Peak Hour			
		Min	Observed		Min	Observed		
			LOS	Average Delay (sec/veh)		LOS	Average Delay (sec/veh)	
SR 1 - Main Street / Cypress Street	Signal	D	B	14	D <sup>1</sup>	B	13	
Cypress Street / Franklin Street	AWS	C	B	12	C	A	9	
SR 1 – Main Street / South Street	WB Stop	D	Southbound left turn	B	11	D <sup>1</sup>	B	11
Westbound approach			C	23	C		22	
South Street / Franklin Street	NB/SB Stop	C	Westbound left turn	A	7	C	A	7
Eastbound left turn			A	8	A		7	
Northbound approach			B	12	B		11	
Southbound approach			B	12	B		11	
SR 1 – Main Street / No Harbor Drive	WB Stop	D	Northbound left turn	B	11	D <sup>1</sup>	B	11
Southbound left turn			B	11	B		11	
Eastbound approach <sup>2</sup>			C	17	B		13	
Westbound approach <sup>2</sup>			B	14	C		16	
No Harbor Drive / Franklin Street	AWS	C	A	8	C	A	9	
<sup>1</sup> LOS F accepted on Saturday summer peak hour <sup>2</sup> existing left turn and through traffic contrary to posted traffic controls is not included in LOS calculation <b>Bold</b> indicates conditions in excess of adopted standard								



**Peak Period Queues**

Table 5 identifies the 95<sup>th</sup> percentile queue lengths occurring at the signaled SR 1 (Main Street) / Cypress Street intersection during the weekday p.m. peak hour and Saturday peak hour. As noted, the westbound queue length exceeds the length of the striped left turn lane on that approach. In this case the queue extends back into the 40-foot long transition area between the westbound lane at the SR 1 intersection and the TWLT lane that continues towards the Cypress Street / Franklin Street intersection. The 95<sup>th</sup> percentile queue would not block access to the existing driveway served by the TWLT lane.

TABLE 5 EXISTING INTERSECTION QUEUES						
Intersection	Movement	Storage (feet)	Weekday PM Peak Hour		Saturday Peak Hour	
			Volume (vph)	95 <sup>th</sup> % Queue (feet)	Volume (vph)	95 <sup>th</sup> % Queue (feet)
SR 1 - Main Street / Cypress Street	NB left	120	20	35	34	50
	SB left	130	43	55	29	45
	EB left	80	17	<25	15	<25
	WB left	100	219	140	204	130
Cypress Street / Franklin Street	EB left	75	45	<25	46	<25
	WB left	55	8	<25	2	<25
<b>Highlighted</b> values exceed available storage						

**Traffic Signal Warrants**

The volume of traffic occurring at unsignalized intersections was compared to peak hour traffic warrants, and the results are noted in Table 6. As shown, the current volume at the SR 1 (Main Street) / South Street intersection is close to satisfying warrants, but the volumes at this location remain below the minimum requirements for the side street approach (i.e., 100 vph). On Saturday, the peak hour volumes at the SR 1 (Main Street) / North Harbor Drive intersection reach the level that satisfy peak hour warrants, but because the approach is limited to right-turns-only, a traffic signal is not justified.

**TABLE 6  
CURRENT TRAFFIC SIGNAL WARRANTS**

Intersection	Weekday PM Peak Hour		Warrant Met? <sup>1</sup>	Saturday Peak Hour		Warrant Met? <sup>1</sup>
	Volume (vph)			Volume (vph)		
	Major	Minor		Major	Minor	
Cypress Street / Franklin Street	533	179	No	404	102	No
SR 1 – Main Street / South Street	2,277	88	No	2,224	78	No
South Street / Franklin Street	237	143	No	238	63	No
SR 1 – Main Street / No. Harbor Drive	2,330	72	No	2,338	130	Yes
No Harbor Drive / Franklin Street	299	69	No	382	89	No

<sup>1</sup>based on Rural Peak Hour volume warrant only

**Alternative Transportation Modes**

**Pedestrian Facilities.** There are sidewalks in many locations on the street surrounding the project. Sidewalk is present at these locations:

- both sides of Franklin Street from a point about 250 feet south of South Street northerly to Cypress Street
- east side of Franklin Street for 100 feet north of North Harbor Drive
- both sides of Cypress Street
- both sides of South Street
- north side of North Harbor Drive from SR 1 to the project site (230 feet)
- south side of North Harbor Drive from SR 1 to 160 feet east
- east side of Main Street (SR 1)

Crosswalks are striped at intersections as noted earlier, and ADA ramps have been provided at most locations.

**Bicycle Facilities.** The SR 1 along the Pacific coast is a popular area for recreational cyclists. The *City of Fort Bragg 2009 Bicycle Master Plan (2009)* outlines the location and nature of existing bicycle facilities in the community. Bicycle facilities are categorized within three classifications:

- Class I Bikeway: trails or paths that are separated from automobile traffic,
- Class II Bikeway: bicycle lanes that are on street but delineated by striping, and
- Class III Bikeway: bicycle routes where bicycles and automobiles share the road.



There are currently Class II striped bicycle lanes on the east and west side of Franklin Street north of South Street to the Oak Street intersection.

Main Street (SR 1) is designated a Class III bike route through Fort Bragg.

The plan suggests that South Street and North Harbor Drive south of Woodward Street should be developed as Class II bike routes.

**Transit Facilities.** The Mendocino Transit Authority (MTA) provides transit service to the Mendocino and Sonoma county areas. Two routes pass the project site. Route 5 (Braggabout) and Route 60 (The Coaster) traverse the community and have a stop near the County Social Services building at the South Street / Franklin Street intersection. Route 5 provides service on one hour headways from 7:00 to 6:00 p.m. Monday thru Friday, with service extending to 8:30 on Saturdays. Route 60 runs four circuits on weekdays at 7:30 a.m., 11:57 a.m., 2:57 p.m. and 3:57 p.m., and this route also extends later on Saturdays.

## PROJECT CHARACTERISTICS

The relative impacts of developing the Grocery Outlet Store and the adequacy of site access is dependent on the physical characteristics of the adjoining street system, as well as the amount of traffic generated by the proposed project. The amount of additional traffic on a particular section of the street network is dependent upon two factors:

- I. Trip Generation, the number of new trips generated by the project, and
- II. Trip Distribution and Assignment, the specific routes that the new traffic takes.

### Trip Generation

**Trip Generation Rates.** This analysis considered trip generation rates derived from several sources. The Institute of Transportation Engineers (ITE) publication “*Trip Generation, 10<sup>th</sup> Edition*” provides information on the characteristics of various retail uses. The use most similar to a Grocery Outlet Store is “Supermarket” (Code 850). Table 7 identifies the average trip generation rates reported by ITE.

Land Use / Source	Unit	Saturday Peak Hour			Weekday PM Peak Hour		
		In	Out	Total	In	Out	Total
Supermarket (code 850)	ksf	51%	49%	10.34	51%	49%	9.24
Grocery Outlet	16 ksf	84	81	165	75	73	148
Pass-by Trips	36%	<30>	<30>	<60>	<27>	<26>	<53>
Net Primary Trips		54	51	105	48	47	95

Source: ITE Trip Generation, 10<sup>th</sup> Edition

**Trip Generation Forecasts.** Table 7 displays the Saturday midday and p.m. peak hour trip generation forecasts for the project. As indicated, the project would generate 165 Saturday and 148 p.m. peak hour trips at its driveways. A portion of the traffic drawn to these stores would be drawn from the stream of traffic already passing the site. The ITE *Trip Generation Handbook, 3<sup>rd</sup> Edition* notes that 36% of the weekday trips generated by supermarkets are typically “pass-by”, and this rate has been used for both study time periods.

As noted in Table 7, the project is expected to generate 105 “primary” trips during the Saturday peak hour, and 95 during the p.m. peak hour.

ITE data is also available for daily traffic volumes. On a daily basis, a 16,000 sf Grocery Outlet Store could generate 1,709 weekday daily trips, with 2,842 trips on Saturday. After discounting for “pass-by trips”, the proposed project may generate 1,094 new daily trips (½ inbound and ½ outbound) on a weekday and 1,818 on a Saturday.

**Vehicle Trip Distribution**

The distribution of project traffic was determined based on consideration of the demographic distribution of residences and competing stores in this area of Mendocino County, on the typical trade area characteristics of Grocery Outlet Stores, and on assumptions made for other retail projects in previous Fort Bragg traffic studies. Grocery Outlet Stores in rural communities can attract customers from a relatively broad area that extends beyond the limits of the community, particularly on weekends. Based on assumptions made for other traffic studies, we assumed that 50% of the trips specifically made to visit the Grocery Outlet Store (i.e., primary trips) will have origins / destination south of the Noyo River and use SR 1 and SR 20 to reach the site. The balance will be oriented to the north and to areas of the community east of Franklin Street. Table 8 summarizes the assumed distribution of new trips.

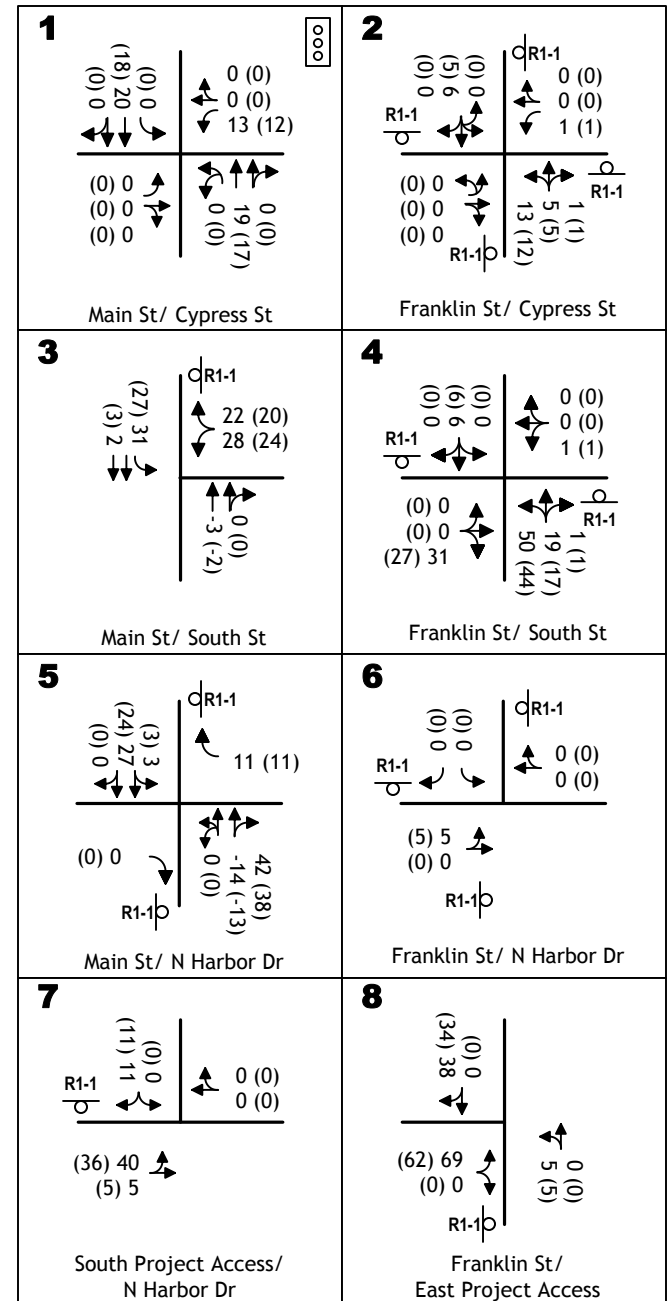
<b>TABLE 8 DIRECTIONAL TRIP DISTRIBUTION (PRIMARY TRIPS)</b>		
<b>Direction</b>	<b>Route</b>	<b>Percentage of New Trips</b>
North	SR 1 beyond Cypress Street	36%
	Franklin Street north of Cypress Street	10%
East	Harbor Drive, South Street and Cypress Street east of Franklin Street	4%
South	SR 1 beyond Noyo River	50%
<b>Total</b>		100%

Pass-by trips will be drawn from traffic already passing the site as part of another trips. In this case, because the volume of traffic on Main Street (SR 1) is much greater than that occurring on Franklin Street or North Harbor Drive adjoining the site, it has been assumed that pass-by traffic will mainly be diverted from the state highway. Because the volume of peak hour traffic headed northbound and southbound on SR 1 is relatively even, pass-by trips have been assumed to be diverted equally from each direction.

**Trip Assignment**

Using the trip generation and distribution assumptions described above, the trips generated by the proposed project were assigned to the study area street system. In this case consideration was given to the relative travel time along alternative routes to the same destination. This

consideration particularly involved traffic leaving the project to headed south on SR 1 and reflect the left turn prohibition at the North Harbor Drive intersection, the stop controls at the South Street intersection and the availability of signaled access to southbound SR 1 at the Cypress Street intersection. City staff report that on peak weekend many drivers elect to drive north past South Street to Cypress and turn onto SR 1 at that location. This analysis assumes this maneuver will be attractive, and 1/3 of the exiting project traffic headed south of SR 1 has been assigned along that route. Figure 4 presents resulting peak hour volumes accompanying the Grocery Outlet project. As indicated, based on the layout of the site and these assumptions we anticipate that the Franklin Street driveway will be the primary access to the site, and 70% of the project's total traffic in and out is shown to use that driveway.



## PROJECT TRAFFIC IMPACTS

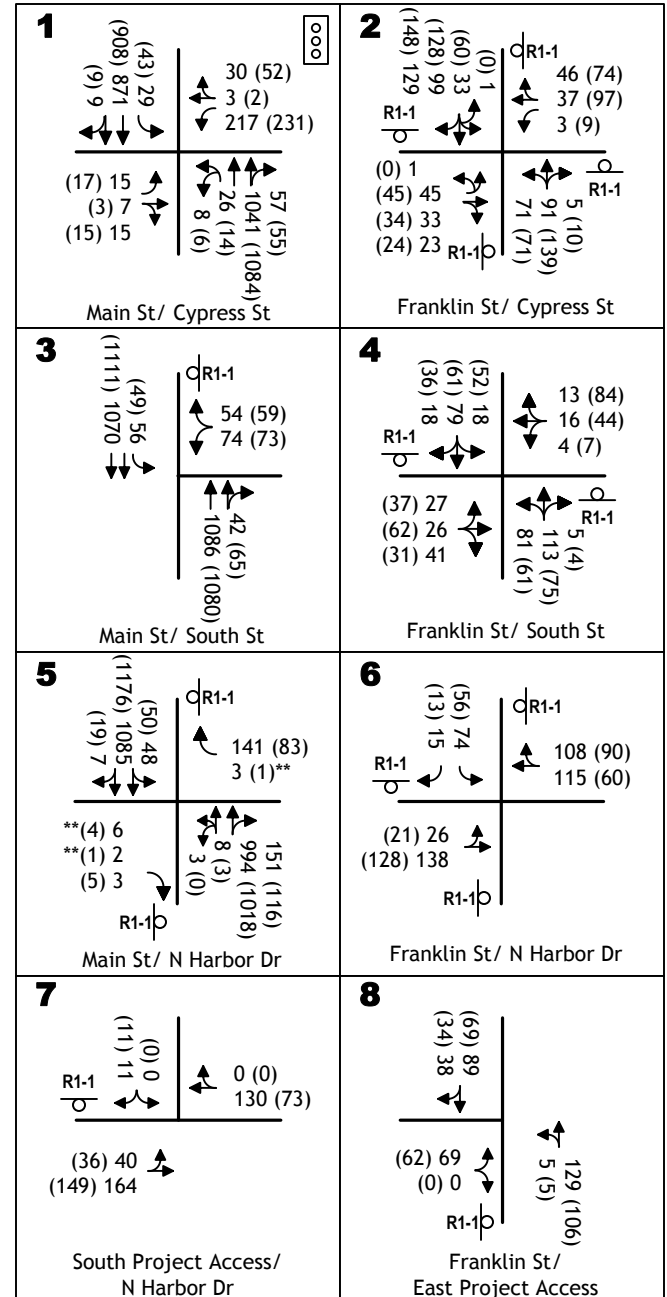
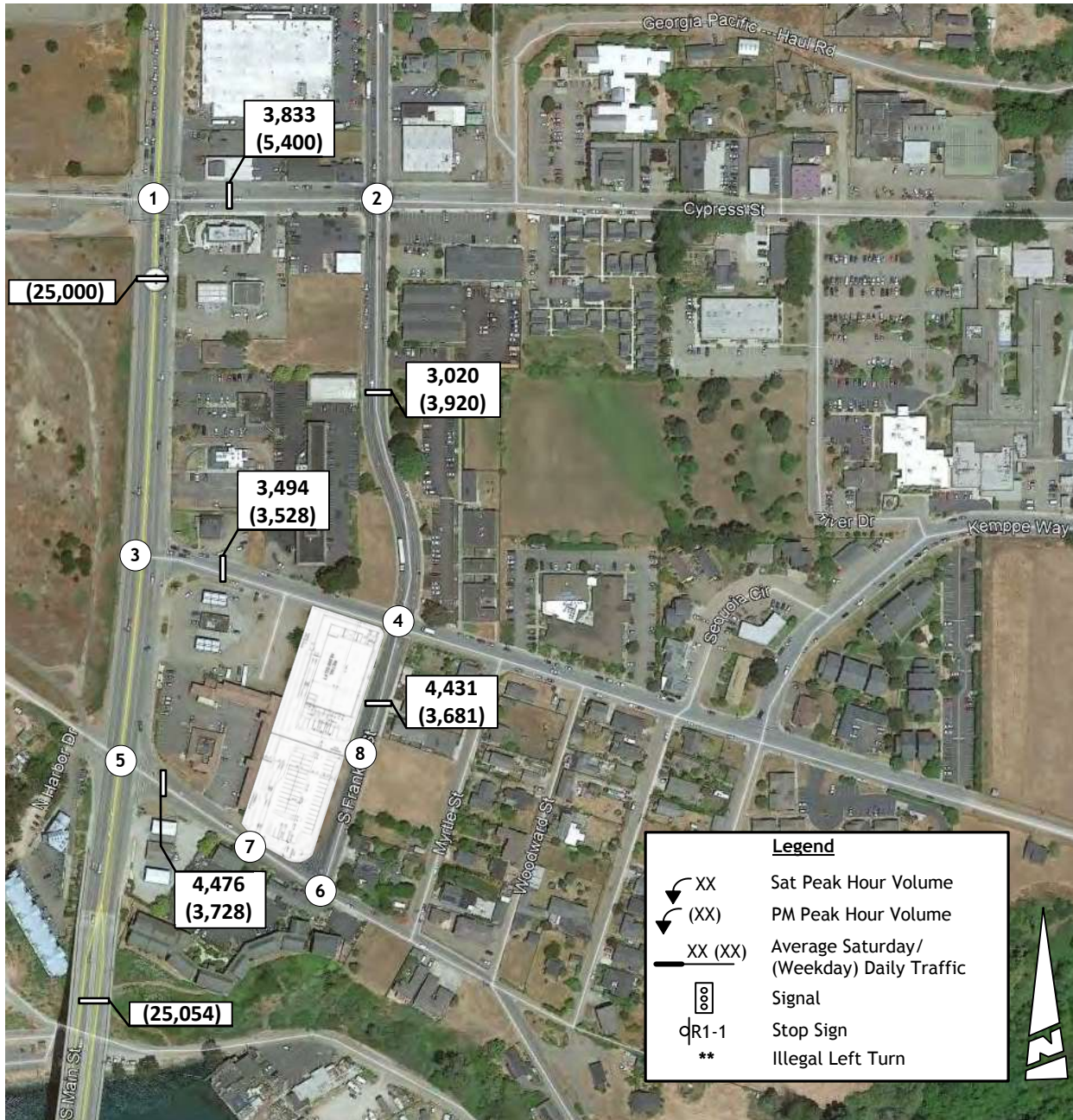
### Existing Plus Project Traffic Conditions and Levels of Service

Figure 5 superimposes project trips onto the current background traffic volumes to create the “Existing plus Project” condition. Subsequent tables compare the “Existing” and “Existing plus Project” Levels of Service.

**Project Traffic Impacts to Level of Service at Intersections.** As shown in Table 9, the addition of project traffic would not appreciably increase the length of delays already occurring at most study intersections, but the project does change the Level of Service at one location. At the Main Street / South Street intersection the addition of project trips will result in LOS D conditions on the westbound approach. However, LOS D is considered acceptable on approaches to the state highway, and as a result the project’s impact is not significant.

**Project Impacts based on Peak Period Queue Lengths.** As noted in Table 10, the project will add traffic at some locations where turn lane queues are a consideration. At the Main Street / Cypress Street intersection the project will add westbound left turns, and the 95<sup>th</sup> percentile queue may increase by about 10 feet during peak periods. As noted in the discussion of existing conditions, the queue will continue to extend into the transition area between the left turn lane and the adjoining TWLT lane but will not spillover into the adjoining through lane. Because the through travel lane is not affected, the project’s impact is not significant

**Traffic Signal Warrants.** The volume of traffic occurring at each intersection with development of the project was again compared to the CA MUTCD peak hour signal warrant thresholds, as noted in Table 11. With the project peak hour traffic signal warrants are met at the SR 1 (Main Street) / South Street intersection during the weekday p.m. and Saturday peak period. However, under General Plan policy this is not a significant impact because the approach Level of Service is acceptable (i.e., LOS D). The SR 1 (Main Street) / North Harbor Drive intersection would continue to carry volumes that satisfy peak hour warrants on Saturday, but because the Level of Service remains acceptable, the project’s impact is not significant.



**TABLE 9  
EXISTING PLUS GROCERY OUTLET STORE INTERSECTION LEVEL OF SERVICE**

Intersection	Control	Weekday PM Peak Hour					Saturday Peak Hour				
		Min	Existing		Ex Plus Project		Min	Existing		Ex Plus Project	
			LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)		LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)
SR 1 - Main Street / Cypress Street	Signal	D	B	14	B	14	D <sup>1</sup>	B	13	B	13
Cypress Street / Franklin Street	AWS	C	B	12	B	12	C	A	9	B	10
SR 1 – Main Street / South Street	WB Stop	D	B	11	B	12	D <sup>1</sup>	B	11	B	12
Southbound left turn			C	23	D	29		C	22	D	29
South Street / Franklin Street	NB/SB Stop	C	A	7	A	7	C	A	7	A	7
Westbound left turn			A	8	A	8		A	7	A	7
Eastbound left turn			B	12	B	14		B	11	B	12
Northbound approach			B	12	B	13		B	11	B	11
Southbound approach											
SR 1 – Main Street / No Harbor Drive	WB Stop	D	B	11	B	11	D <sup>1</sup>	B	11	B	11
Northbound left turn			B	11	B	12		B	11	B	12
Southbound left turn			B	13	B	13		B	13	B	13
Eastbound approach <sup>2</sup>			B	14	B	15		C	16	C	17
Westbound approach <sup>2</sup>											
No Harbor Drive / Franklin Street	AWS	C	A	8	A	8	C	A	9	A	9

<sup>1</sup>LOS F accepted on Saturday summer peak hour  
<sup>2</sup> existing left turn and through traffic contrary to posted traffic controls is not included in LOS calculation  
**Bold** indicates conditions in excess of adopted standard. **Highlighted** values are a significant impact



**TABLE 10  
EXISTING PLUS GROCERY OUTLET STORE INTERSECTION QUEUES**

Intersection	Movement	Storage (feet)	Weekday PM Peak Hour					Saturday Peak Hour				
			Existing		Existing Plus Project			Existing		Existing Plus Project		
			Volume (vph)	95 <sup>th</sup> % Queue (feet)	Volume (vph)		95 <sup>th</sup> % Queue (feet)	Volume (vph)	95 <sup>th</sup> Queue (feet)	Volume (vph)		95 <sup>th</sup> % Queue (feet)
					Project only	Total				Project only	Total	
SR 1 - Main Street / Cypress Street	NB left	120	20	35	0	20	35	34	50	0	34	50
	SB left	130	43	55	0	43	55	29	45	0	29	45
	EB left	80	17	<25	0	0	<25	15	<25	0	15	<25
	WB left	100	219	140	12	231	150	204	130	13	217	140
Cypress Street / Franklin Street	EB left	75	45	<25	0	45	<25	46	<25	0	46	<25
	WB left	55	8	<25	0	9	<25	2	<25	0	2	<25

**Highlighted** values exceed available storage

**TABLE 11  
EXISTING PLUS GROCERY OUTLET STORE TRAFFIC SIGNAL WARRANTS**

Intersection	Weekday PM Peak Hour			Saturday Peak Hour		
	Volume (vph)		Warrant Met? <sup>1</sup>	Volume (vph)		Warrant Met? <sup>1</sup>
	Major	Minor		Major	Minor	
Cypress Street / Franklin Street	556	180	No	429	102	No
SR 1 – Main Street / South Street	2,305	132	Yes	2,254	128	Yes
South Street / Franklin Street	289	135	No	314	94	No
SR 1 – Main Street / No Harbor Drive	2,382	83	No	2,296	141	Yes
No Harbor Drive / Franklin Street	299	69	No	387	89	No

<sup>1</sup>based on Rural Peak Hour volume warrant only

**Project Impacts to Alternative Transportation Modes**

Development of the proposed Grocery Outlet may incrementally contribute to the demand for facilities to serve pedestrians, cyclists and transit riders in this area of Mendocino County, but this demand is expected to be relatively minor.

**Pedestrian Impacts.** It is possible employees or customers of this project will elect to walk in appreciable numbers to and from the site, as there is residential or commercial development near the site. However, sidewalk exists on the streets adjoining the site, and with frontage improvements sidewalks will generally provide a complete path of travel to and from the site. There are two locations where gaps in the pedestrian system may remain, including:

- The south side of South Street from Franklin Street easterly to Myrtle Street (150 feet)
- The north side of North Harbor Drive between Franklin Street and Myrtle Street (100 feet)

The gaps exist at locations where it appears that residences were constructed prior to the City of Fort Bragg requiring frontage improvements. Privately maintained landscaping exists near the road. The availability of right of way to construct improvements is unknown.

While it is not the responsibility of the project proponents to install sidewalks along these areas it would be appropriate for the City of Fort Bragg to considered installing NO PARKING signs in the area to preserve the edge of roadway for pedestrians.

**Bicycle Impacts.** The use of bicycles may be an option for employees or customers to the site. Typically, grocery stores do not attract large numbers of cyclists due to the need to carry goods purchased, however it is likely that current bicycle activity by visitors to the Mendocino coast leads to greater use of that mode in the community. The number of cyclists associated with this project is not likely to create any appreciable safety impacts on adjoining streets, as Class II bike lanes exist on Franklin Street north of the site, and Franklin Street along the project frontage is wide enough to accommodate shared bicycle and automobile activity. While the project's off-site impact is not significant, applicable short-term bicycle storage facilities should be installed on site, as required by the City of Fort Bragg.

**Transit Impacts.** Project employees or customers will be able to use MTA service as it already passes the project site and stops near the corner of South Street and Franklin Street. The project's impact is not significant, and mitigation is not required.

### **Site Access**

**Throat Depth.** Access to the site is proposed via driveways on Franklin Street and on North Harbor Drive. The Franklin Street driveway is 30 feet wide, and the main parking aisle is separated from the street by about 40 feet of throat. Two waiting vehicles can queue in this area prior to blocking inbound access to those parking spaces. Because the background traffic volume on Franklin Street is low, HCM Level of Service calculations completed for the access indicate that the 95<sup>th</sup> percentile queue at the exit will be one (1) vehicle or less during peak periods, and this queue can be accommodated. Thus, the access is adequate from this standpoint.

The North Harbor Drive driveway is also 30 feet wide, and has a 50 foot throat. Based on HCM calculations, the peak queue is also less than one (1) vehicle, and queuing is not an issue at this location.

**Sight Distance.** The adequacy of sight distance at each driveway was reviewed from the standpoint of the minimum requirements of the Caltrans Highway Design Manual (HDM). HDM Table 201.1 notes that for a 25 mph design speed a minimum of 150 feet of sight distance is needed. Review of the proposed driveway locations reveals that the view in both directions from each location is unobstructed, and that the minimum require will clearly be satisfied.

## CUMULATIVE IMPACTS

The impacts of the Grocery Outlet Store project have also been considered within the context of future traffic conditions in this area of Fort Bragg. Long term traffic conditions have been forecast and evaluated based on growth assumptions made in other recent traffic studies and based on understanding of other approved projects in this area.

### Year 2040 Long Term Background Cumulative Conditions

**Approach to Developing Traffic Volume Forecasts.** Future traffic volumes were created based on long term future traffic volumes growth rates provide by Caltrans. *Caltrans 2014 Growth Factors (2014)* have been employed for recent Fort Bragg traffic studies and have been used herein. These 20-year growth factors were developed from California Air Resources Board traffic growth projections and historic traffic growth data. A growth factor of 1.15 has been employed, which is equivalent to roughly 0.7% annual growth.

The extent to which other approved projects should be considered in future forecasts in addition to the growth rate was considered. City of Fort Bragg staff reported that one approved project exists in the area of the Grocery Outlet Store that would be expected to result in traffic volume increases beyond that already addressed by the assumed background growth rate. *The Plateau Housing Project* is located on the east end of South Street south of Kempee Way.

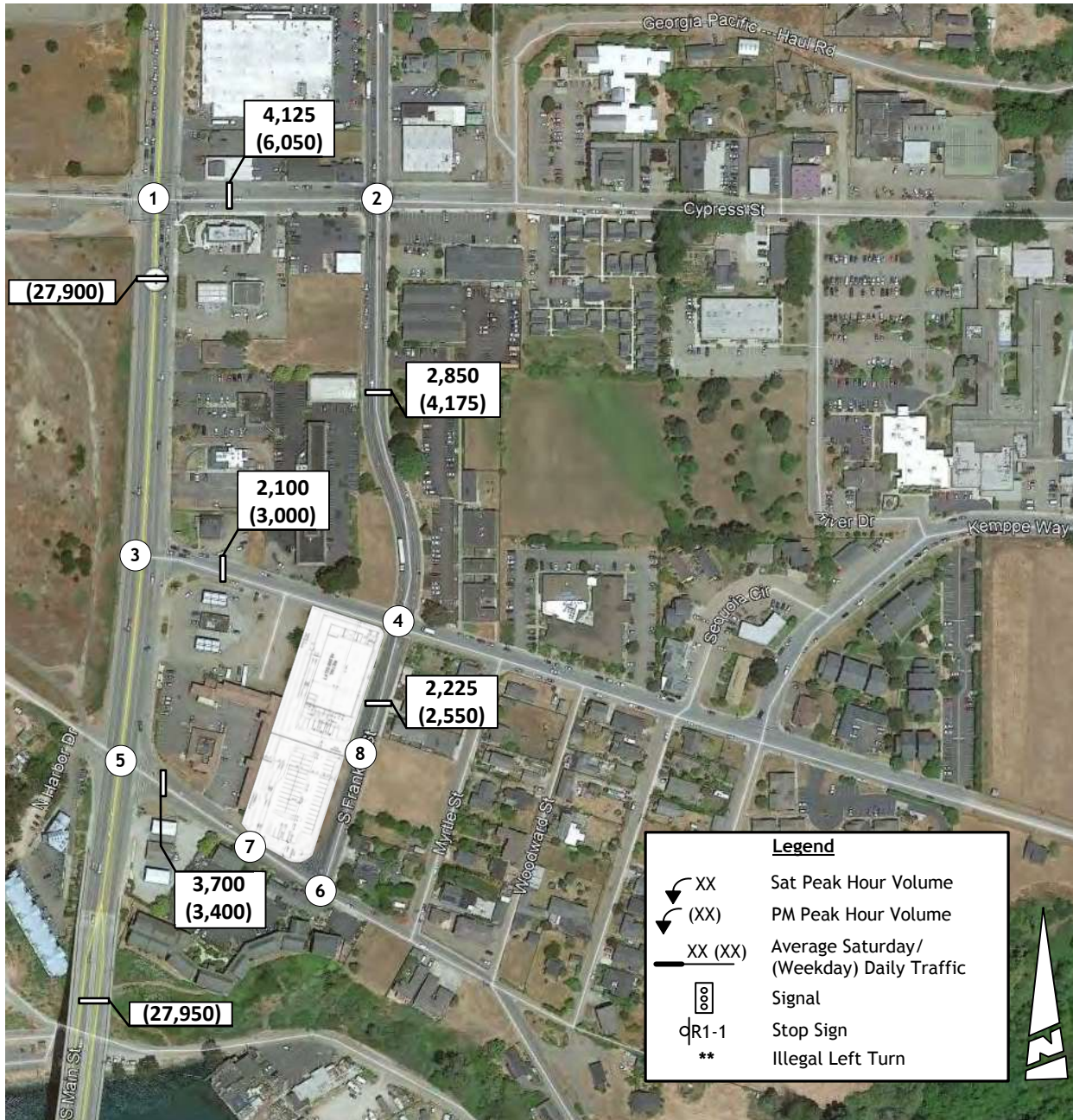
This project totals 68 residences, divided between 20 units of permanent supportive housing, 25 units of affordable senior housing and 23 units of workforce / family housing. Based on ITE rates for Detached Senior Residences (code 215) and Multiple Family Residences (code 220) the project could generate 432 weekday and 418 Saturday daily trips, with 32 trips in the weekday p.m. peak hour and 36 trips in the Saturday midday peak. These trips were assigned to the study area street system based on current travel patterns, and subsequently superimposed onto the cumulative background forecast.

**Traffic Volume Forecasts.** Figure 6 identifies “No Project” background Year 2040 traffic volumes created by applying the identified growth rate to observed traffic volumes and adding trips from the approved project. Peak hour data was rounded to the nearest five (5) vehicles. Figure 7 identifies Year 2040 volumes with Grocery Outlet Store that were created by superimposing project traffic onto the No Project background condition.

**No Project Conditions.** Future conditions without the project were reviewed as noted in the text which follows.

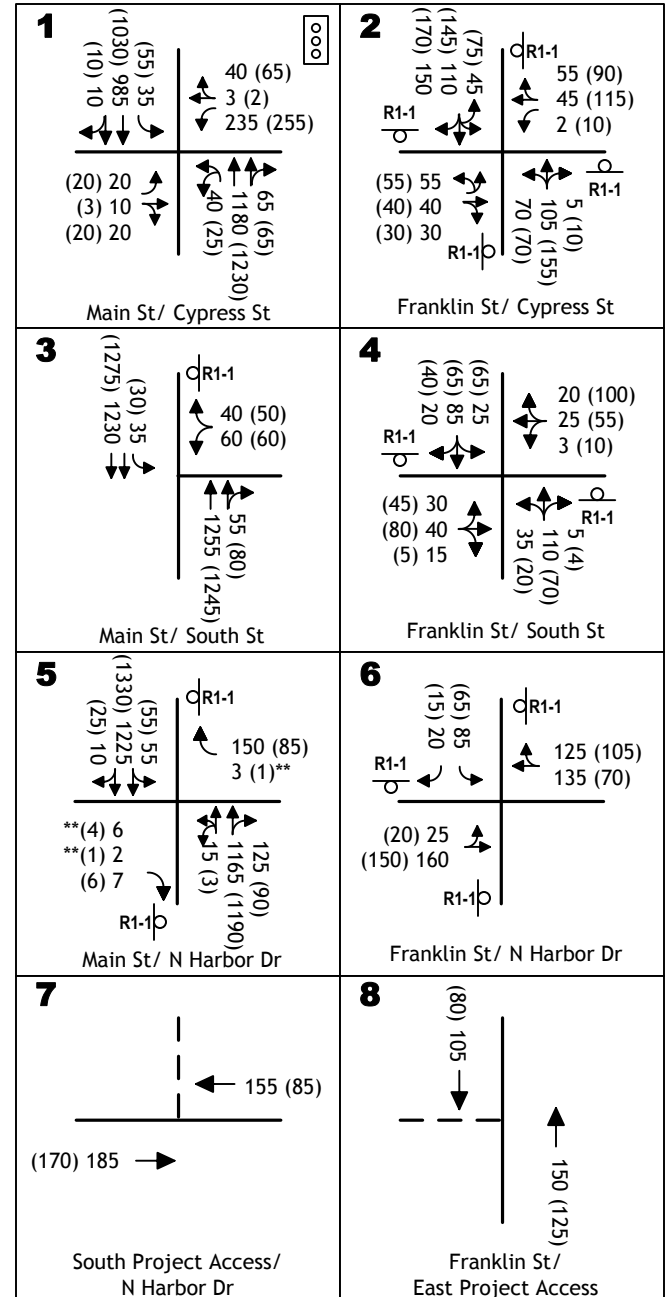
**Levels of Service.** Peak hour intersection Levels of Service were recalculated for the future background condition assuming no change to current intersection geometries. As shown in Table 12, without the project all study intersections will continue to operate with Levels of Service that satisfy minimum LOS D standard at intersections on SR 1 and LOS C at other locations.

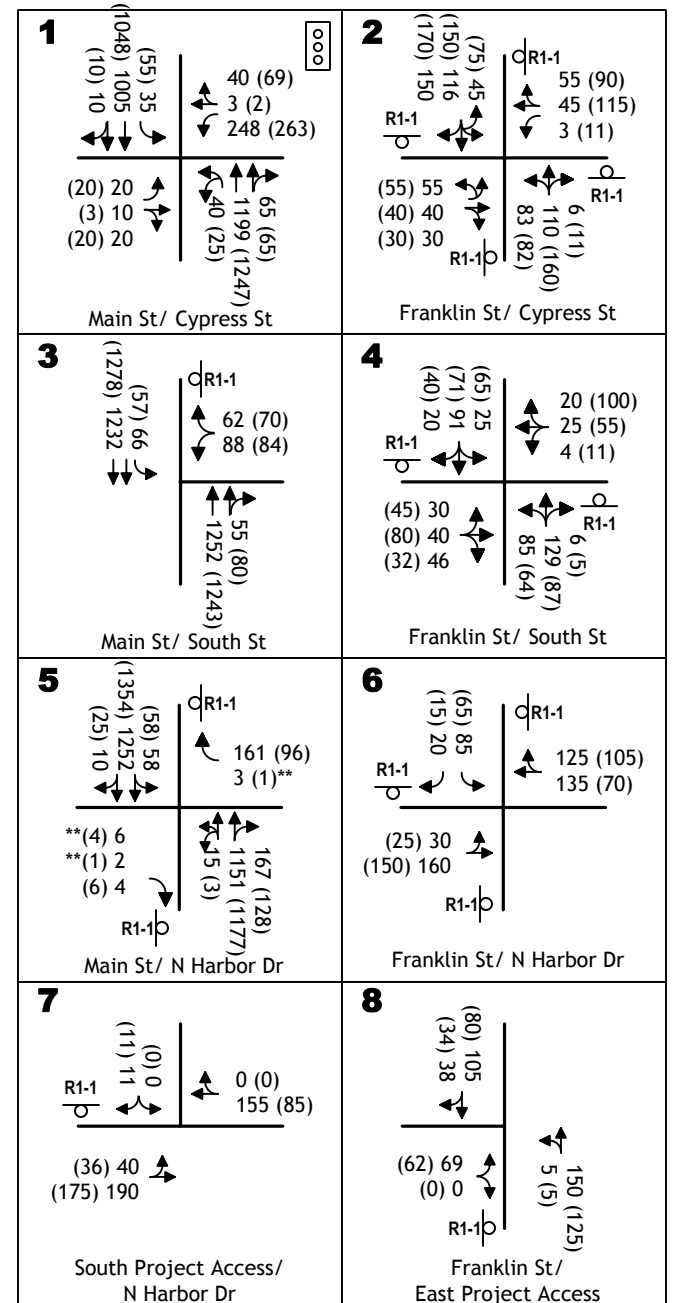
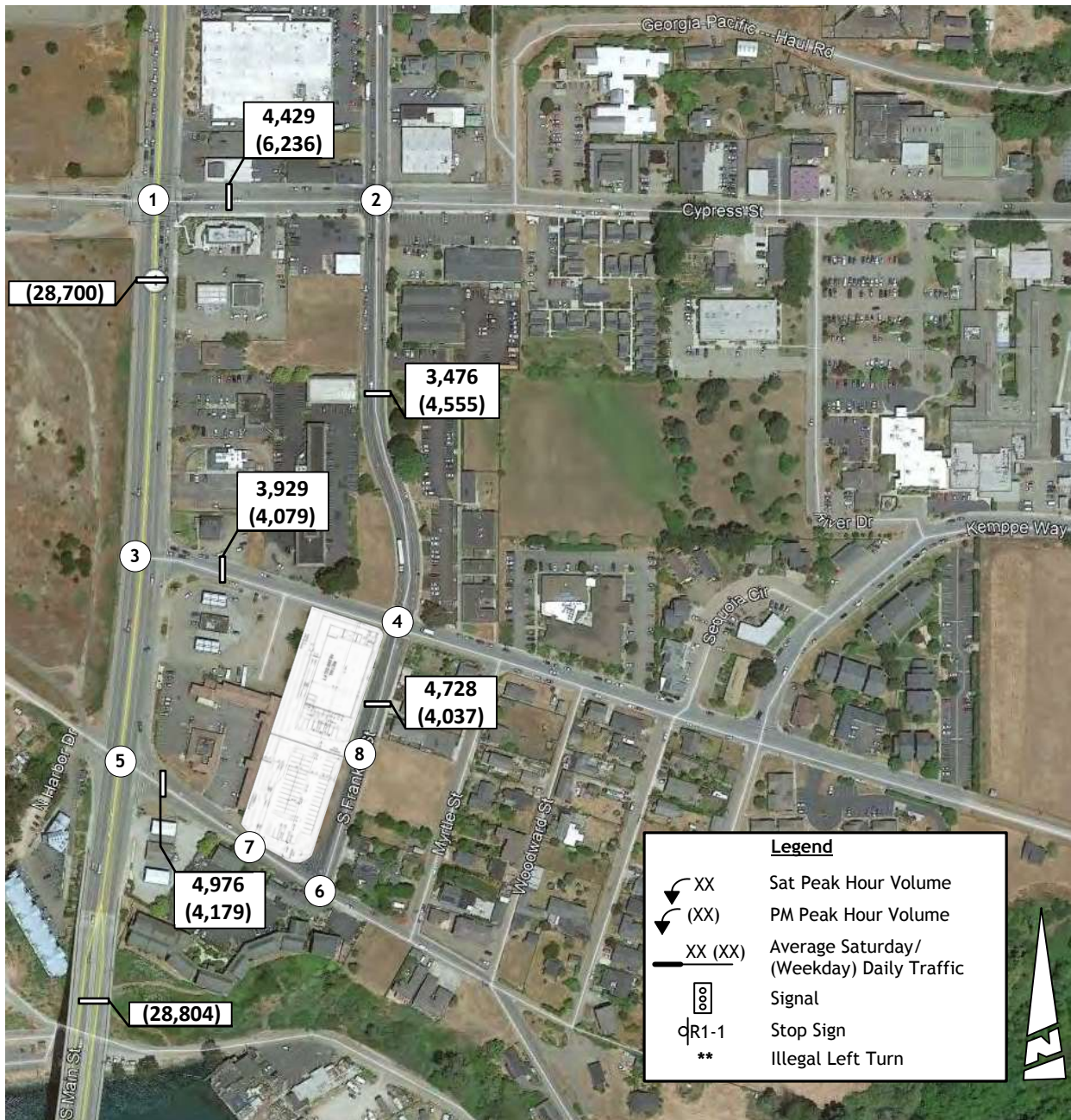
**Peak Queues.** As noted in Table 13, background traffic growth will result in longer queues at the intersections on Cypress Street. At the Main Street / Cypress Street intersection the 95<sup>th</sup> percentile queue in the westbound left turn lane may increase to 165 feet during peak periods. However as noted in the discussion of existing conditions, the queue will continue to extend into the transition area between the left turn lane and the adjoining TWLT lane but will not spillover into the adjoining through lane. Because the through travel lane is not affected, background conditions would be acceptable.



**Legend**

- ↔ XX Sat Peak Hour Volume
- ↔ (XX) PM Peak Hour Volume
- XX (XX) Average Saturday/ (Weekday) Daily Traffic
- Signal
- R1-1 Stop Sign
- \*\* Illegal Left Turn





**TABLE 12  
YEAR 2040 PLUS GROCERY OUTLET STORE INTERSECTION LEVEL OF SERVICE**

Intersection	Control	Weekday PM Peak Hour					Saturday Peak Hour				
		Min	Year 2040 Base		Base Plus Project		Min	Year 2040 Base		Base Plus Project	
			LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)		LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)
SR 1 - Main Street / Cypress Street	Signal	D	B	19	B	20	D <sup>1</sup>	B	16	B	17
Cypress Street / Franklin Street	AWS	C	B	15	B	15	C	B	11	B	11
SR 1 – Main Street / South Street Southbound left turn Westbound approach	WB Stop	D	B	13	<b>B</b>	<b>13</b>	D <sup>1</sup>	B	13	B	13
WB right turn only <sup>2</sup>					C	20					
All-way stop					<b>F</b>	<b>176</b>					
Roundabout					A	9					
Traffic Signal					A	10					
South Street / Franklin Street Westbound left turn Eastbound left turn Northbound approach Southbound approach	NB/SB Stop	C	A	7	A	8	C	A	7	A	7
			A	8	A	8		A	7	A	7
			B	14	B	16		B	12	B	13
			B	14	B	15		B	11	B	12
SR 1 – Main Street / No Harbor Drive Northbound left turn Southbound left turn Eastbound approach <sup>3</sup> Westbound approach <sup>3</sup>	WB Stop	D	B	12	B	13	D <sup>1</sup>	B	12	B	12
			B	13	B	13		B	13	B	13
			C	15	B	15		B	14	B	14
			C	16	B	17		C	19	C	20
No Harbor Drive / Franklin Street	AWS	C	A	9	A	9	C	A	9	A	9

<sup>1</sup>LOS F accepted on Saturday summer peak hour

<sup>2</sup> the SR 1 / Cypress Street intersection will operate at LOS C with 21.0 seconds of delay

<sup>3</sup> existing left turn and through traffic contrary to posted traffic controls is not included in LOS calculation

**Bold** indicates conditions in excess of adopted standard. **Highlighted** values are a significant impact



**TABLE 13  
YEAR 2040 PLUS GROCERY OUTLET STORE INTERSECTION QUEUES**

Intersection	Movement	Storage (feet)	Weekday PM Peak Hour					Saturday Peak Hour				
			Year 2040 Base		Existing Plus Project			Existing		Existing Plus Project		
			Volume (vph)	95 <sup>th</sup> % Queue (feet)	Volume (vph)		95 <sup>th</sup> % Queue (feet)	Volume (vph)	95 <sup>th</sup> Queue (feet)	Volume (vph)		95 <sup>th</sup> % Queue (feet)
					Project only	Total				Project only	Total	
SR 1 - Main Street / Cypress Street	NB left	120	25	40	0	25	40	40	55	0	40	55
	SB left	130	55	70	0	55	70	35	50	0	35	50
	EB left	80	20	<25	0	20	<25	20	<25	0	20	<25
	WB left	100	255	165	12	267	170	235	150	13	248	160
Cypress Street / Franklin Street	EB left	75	55	<25	0	55	<25	55	<25	0	55	<25
	WB left	55	10	<25	0	10	<25	2	<25	0	2	<25

**Highlighted** values exceed available storage

**Traffic Signal Warrants.** Table 14 notes Year 2040 background traffic volumes and identifies the status of resulting peak hour traffic signal warrants. As indicated, the SR 1 (Main Street) / South Street intersection carries volumes that satisfy warrants in the weekday p.m. peak hour, while the SR 1 (Main Street) / North Harbor Drive intersection satisfies peak hour warrants in the Saturday peak hour.

<b>Intersection</b>	<b>Weekday PM Peak Hour</b>		<b>Warrant Met?<sup>1</sup></b>	<b>Saturday Peak Hour</b>		<b>Warrant Met?<sup>1</sup></b>
	<b>Volume (vph)</b>			<b>Volume (vph)</b>		
	<b>Major</b>	<b>Minor</b>	<b>Major</b>	<b>Minor</b>	<b>Major</b>	<b>Minor</b>
Cypress Street / Franklin Street	615	205	No	465	120	No
SR 1 – Main Street / South Street	2,620	100	<b>Yes</b>	2,565	90	No
South Street / Franklin Street	271	165	No	275	70	No
SR 1 – Main Street / No Harbor Dr	2,678	85	No	2,575	150	<b>Yes</b>
No Harbor Drive / Franklin Street	345	80	No	445	105	No

<sup>1</sup>based on Rural Peak Hour volume warrant only

**Plus Project Conditions.** Year 2040 conditions with the addition of Grocery Outlet Store were evaluated and the significance of project impacts was determined.

**Level of Service.** As noted in Table 12, the addition of project trips increases delays somewhat and at one intersection the operating Level of Service will be in excess of the LOS D minimum. At the SR 1 (Main Street) / South Street intersection the Level of Service on the westbound approach will drop to LOS E in the weekday p.m. peak hour and in the peak Saturday hour. LOS E exceeds the weekday p.m. peak hour standard of LOS D, but is accepted under the General Plan policy for peak summer conditions.

**Peak Queues.** As noted in Table 13, the project will add westbound left turns at the SR 1 (Main Street) / Cypress Street intersection, and the 95<sup>th</sup> percentile queue may increase by about 10 feet during peak periods. However as noted in the discussion of existing plus project impacts, the queue will continue to extend into the transition area between the left turn lane and the adjoining TWLT lane but will not spillover into the adjoining through lane. Because the through travel lane is not affected, the project’s impact is not significant.

**Traffic Signal Warrants.** Table 15 notes Year 2040 Plus Project traffic volumes and identifies the status of resulting peak hour traffic signal warrants. As indicated, peak hour traffic signal warrants would be satisfied at the same intersections identified under the background Year 2040 conditions. The SR 1 (Main Street) / South Street intersection would carry volumes that

satisfy warrants in both the weekday p.m. peak hour and Saturday peak hour, while the SR 1 (Main Street) / North Harbor Drive intersection satisfies peak hour warrants in the Saturday peak hour.

<b>Intersection</b>	<b>Weekday PM Peak Hour</b>		<b>Warrant Met?<sup>1</sup></b>	<b>Saturday Peak Hour</b>		<b>Warrant Met?<sup>1</sup></b>
	<b>Volume (vph)</b>			<b>Volume (vph)</b>		
	<b>Major</b>	<b>Minor</b>	<b>Major</b>	<b>Minor</b>	<b>Major</b>	<b>Minor</b>
Cypress Street / Franklin Street	638	206	No	490	120	No
SR 1 – Main Street / South Street	2,648	144	<b>Yes</b>	2,595		<b>Yes</b>
South Street / Franklin Street	321	152	No	351	101	No
SR 1 – Main Street / No Harbor Dr	2,730	96	No	2,633	161	<b>Yes</b>
No Harbor Drive / Franklin Street	350	65	No	450	85	No

<sup>1</sup>based on Rural Peak Hour volume warrant only

**Project Impacts / Mitigation Options.** Based on General Plan policy, the project’s cumulative impact is significant at the SR 1 (Main Street) / South Street intersection since the project will cause the intersection to operate at LOS E, which exceeds the LOS D minimum, and peak hour traffic signal warrants are met. The project’s impact is significant, and mitigation is required based on Level of Service.

To address future conditions at this location it would be necessary to consider alternatives such as:

- **Prohibit westbound left turns**, as is the case at the SR 1 (Main Street) / North Harbor Drive intersection.
- Install traffic controls that stop the flow of traffic on SR 1 in order to allow side street traffic to enter, such as an **all-way stop**, a **traffic signal** or a **roundabout**.

Table 12 also presents the Levels of Service occurring during the weekday p.m. peak hour with the Grocery Outlet Store as these treatments are pursued. As indicated, prohibiting left turns would result in LOS C at the intersection. While traffic diverted will likely make a right turn before making a u-turn at Cypress Street, the SR 1 (Main Street) / Cypress Street intersection would still operate at LOS C with this additional traffic. The cost to sign and stripe the intersection for these new controls would be minimal. Either a traffic signal or roundabout would yield LOS A, a Level of Service that satisfies the City’s minimum standard, but the feasibility of either option at an intersection that is only 700 feet from the Cypress Street traffic signal will need to be confirmed. The cost of a traffic signal on the state highway would likely be about \$500,000, depending on the extent of ancillary intersection improvements required under

Caltrans standards. The cost to retrofit an existing intersection to a two-lane roundabout would likely be in the range of \$1.5 to \$2.5 million.

Because any improvements within the state right of way require Caltrans approval, it is important to consider the steps needed to gain approval for any mitigation. Caltrans policy regarding applicable traffic controls has recently been expanded based on *Traffic Operations Policy Directive 13-02*. This directive requires that Caltrans consider the relative merits of alternative traffic controls when it becomes necessary to stop traffic on state highways. Roundabouts are the default intersection control, but all-way stops and traffic signals are to be considered. The policy directive requires preparation of an *Intersection Control Evaluation (ICE)* to determine the preferred traffic control. A preliminary ICE report would consider issues such as comparative traffic operations, right of way requirements, effects on adjoining access, etc. City of Fort Bragg preferences amongst feasible alternatives can also be considered. After an applicable solution is identified and funded, work would be completed in the Caltrans right of way under an encroachment permit from Caltrans.

**Mitigations.** The Grocery Outlet Store project proponents should contribute their fair share to the cost of regional circulation improvements by paying adopted fees and making frontage improvements. In addition, the project should contribute its fair share to the cost of cumulatively needed improvements to the SR 1 (Main Street) / South Street intersection.

Table 16 notes the Grocery Outlet Store project’s relative contribution to future traffic volumes at each study intersection based on the method recommended in Caltrans traffic study guidelines. As shown, project trips represent 16.1% of the future new traffic at the SR 1 / South Street intersection. Assuming a \$500,000 traffic signal, the project’s contribution could be \$84,500.

Location	Weekday PM Peak Hour Traffic (vph)				Project Only	Net Future Growth	Fair Share (C-B)/(C-A)
	Existing	Year 2040					
		No Project	Plus Project				
A	B	C	C-B	C-A			
SR 1 / Cypress St	2,392	2,780	2,827	47	435	10.8%	
Cypress St / Franklin St	815	965	989	24	175	13.7%	
SR 1 / South St	2,365	2,740	2,812	72	447	16.1%	
South St / Franklin St	458	559	655	96	197	48.7%	
SR 1 / No Harbor Dr	2,413	2,788	2,851	63	438	14.4%	
No Harbor Dr / Franklin St	363	425	430	5	67	7.5%	

## VEHICLE MILES TRAVELED (VMT)

### Background

Starting in July 2020 SB 743 requires agencies to move from a Level of Service based impacts analysis under CEQA to analysis based on regional Vehicle Miles Traveled (VMT). Current direction regarding methods to identify VMT and comply with state requirements is provide by the California Governor’s Office of Planning and Research (OPR)’ December 2018 publication, *Technical Advisory on Evaluating Transportation Impacts in CEQA*.

This advisory contains technical recommendations regarding assessment of VMT, thresholds of significance, and mitigation measures. Again, OPR provides this Technical Advisory as a resource for the public to use at their discretion. OPR is not enforcing or attempting to enforce any part of the recommendations contained herein. (Gov. Code, § 65035 [“It is not the intent of the Legislature to vest in the Office of Planning and Research any direct operating or regulatory powers over land use, public works, or other state, regional, or local projects or programs.”].)

OPR provides this direction for retail projects:

***Retail Projects.** Generally, lead agencies should analyze the effects of a retail project by assessing the change in total VMT because retail projects typically re-route travel from other retail destinations. A retail project might lead to increases or decreases in VMT, depending on previously existing retail travel patterns.*

### Project Impacts

The project is a discount grocery store located near the center of the population center of Fort Bragg, which is expected to provide a majority of its customer base. The most comparable retail outlets are located:

South of Noyo River

- Harvest Market

North of Noyo River

- Safeway
- Purity Market

Based on the location of competing stores, the most likely effect on regional travel associated with the development of the project is to slightly reduce the length of trips from areas south of the river off of SR 20 or SR 1 that are today made northbound, and to offer another option for shopping trips made by residents of areas to the north. As the proposed project is relatively close to other stores, the regional effect on VMT is likely to be small, but generally will be reduced by offering a closer option for northbound traffic.

## SUMMARY AND CONCLUSIONS

This report documents **KD Anderson & Associates'** analysis of the traffic impacts associated with developing a Grocery Outlet Store in Fort Bragg, California. The analysis addresses both current and future background conditions at key intersections in the vicinity of the site. To assess traffic impacts, the characteristics of the proposed project have been determined, including estimated trip generation and the directional distribution / assignment of project generated traffic. That traffic was added to current and future background traffic levels, and project impacts have been evaluated using the methods and significance criteria adopted by the City of Fort Bragg and Caltrans.

**Project Description.** The proposed project consists of a 16.0 ksf Grocery Outlet Store located on a site on the west side of Franklin Street between South Street and North Harbor Drive. The project will include development of 54 parking spaces, and access to the site will be provided via new driveways on Franklin Street and North Harbor Drive. The northern half of the site frontage has sidewalks, and planned frontage improvements will be completed on the balance of the site.

**Trip Generation.** The project is expected to generate a total of 1,709 weekday daily trips and 2,842 daily trips on a Saturday. Roughly 6% (165 trips) of the Saturday traffic occurs in the midday peak hour and 9% (148 trips) of the weekday trips occur during the weekday p.m. peak hour. After discounting for pass-by trips already occurring on SR 1 (Main Street) near the site, the project is projected to generate 105 new primary trips in the Saturday midday peak hours, and 95 new primary trips in the weekday p.m. peak hours.

**Existing Conditions.** The traffic study considered three adjoining intersections on SR 1 (Main Street) and three intersections on Franklin Street. Current Levels of Service at study intersections satisfy the City of Fort Bragg Coast General Plan minimum Level of Service D standard for SR 1 and LOS C elsewhere. Peak hour traffic signal warrants are met at one intersection on SR 1, but because the side street approach is limited to right turns only, Level of Service is acceptable and a traffic signal is not justified.

**Existing Plus Project Traffic Conditions.** Development of the project alone does not result in a significant impact to traffic based on the Level of Service criteria adopted by the City of Fort Bragg. Projected volumes would satisfy peak hour traffic signal warrants at the SR 1 (Main Street) / South Street intersection, but because Level of Service meets the minimum LOS D standard, the project's impact is not significant.

The project may result in pedestrians in two short locations near the project where sidewalks do not exist. The City of Fort Bragg should consider installing NO PARKING signs in these areas.

**Long Term Cumulative Traffic Impacts.** Without the Grocery Outlet Store the study intersections are projected to operate with Level of Service that satisfy the minimum LOS D standard in the future with the existing traffic controls. With the addition of the project's traffic the westbound approach to the SR 1 (Main Street) / South Street intersection will operate at LOS E during the weekday p.m. peak hour and during the Saturday peak hour. Peak hour traffic

signal warrants will be satisfied at this location. While the City of Fort Bragg Coastal General Plan accepts LOS E conditions on peak summer weekends, exceeding LOS D on weekdays is a significant impact when traffic signal warrants are met, and mitigation is required.

**Cumulative Mitigations.** Alternative mitigation measures were considered, and three possibilities exist (i.e., left turn prohibition, traffic signal or roundabout). Any improvements within the state right of way require Caltrans approval. Under **Traffic Operations Policy Directive 13-02**, Caltrans will consider the relative merits of alternative traffic controls when it becomes necessary to stop traffic on state highways. The policy directive requires preparation of an **Intersection Control Evaluation (ICE)** to determine the preferred traffic control.

The Grocery Outlet Store project proponents should contribute their fair share to the cost of regional circulation improvements by paying adopted fees and making frontage improvements. In addition, the project should contribute its fair share to the cost of cumulatively needed improvements to the SR 1 (Main Street) / South Street intersection. Based on the method recommended in Caltrans traffic study guidelines, project trips represent 16.9% of the future new traffic at the SR 1 / South Street intersection. Assuming a \$500,000 traffic signal, the project's contribution could be \$84,500.

**Vehicle Miles Traveled (VMT).** Based on the location of competing stores, the most likely effect on regional travel associated with the development of the project is to slightly reduce the length of trips from areas south of the Noyo River off of SR 20 or SR 1 that are today made northbound, and to offer another option for shopping trips made by residents of areas to the north. As the proposed project is relatively close to other stores, the regional effect on VMT is likely to be small, but generally will be reduced by offering a closer option for northbound traffic.

**APPENDIX**

(Traffic Counts, LOS Calculations)

**KDA**



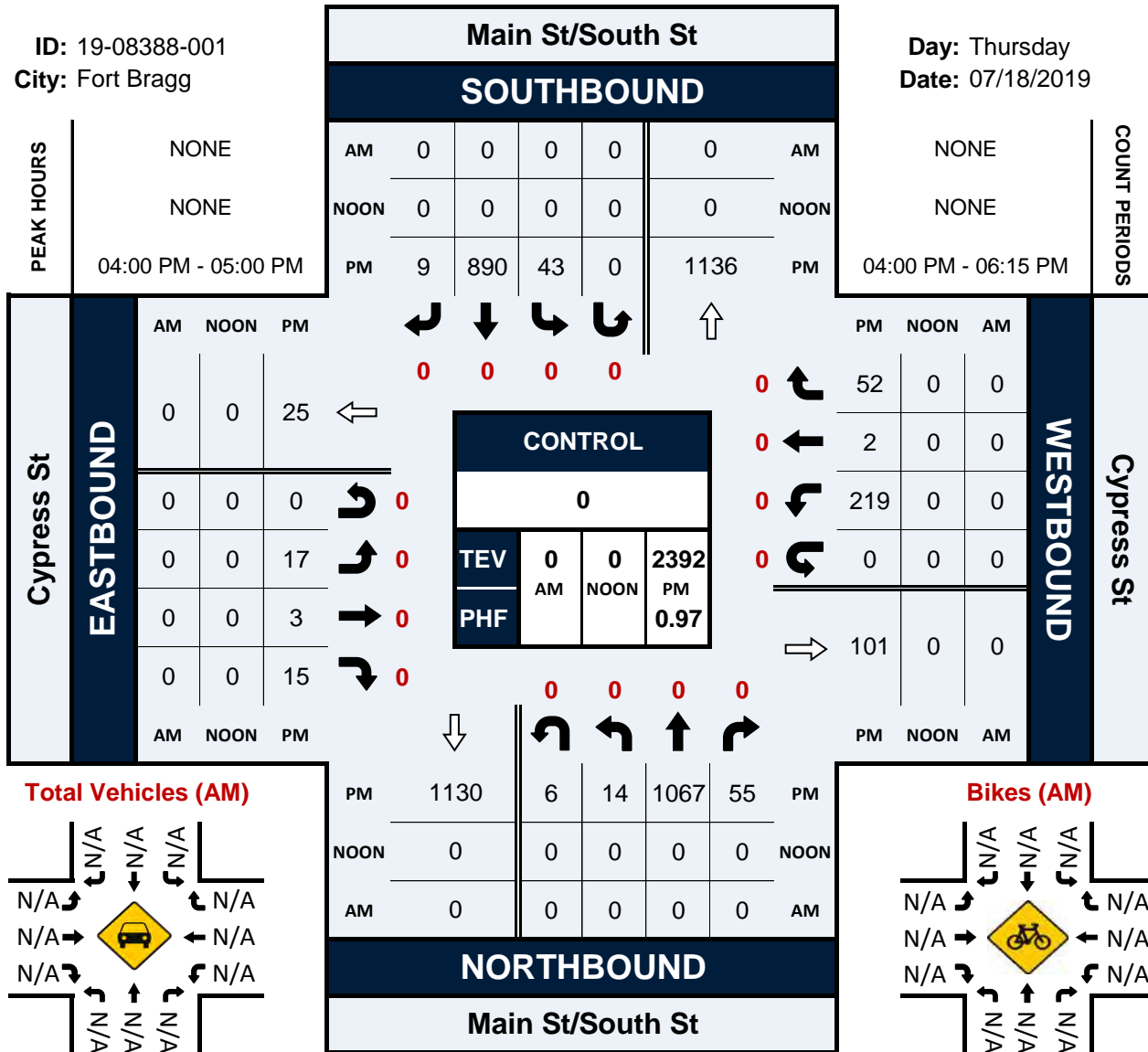
Prepared by National Data & Surveying Services

# Main St/South St & Cypress St

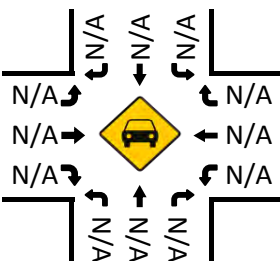
## Peak Hour Turning Movement Count

ID: 19-08388-001  
City: Fort Bragg

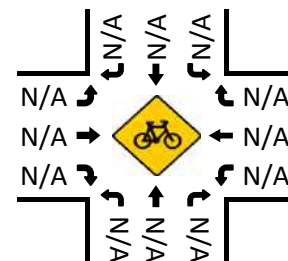
Day: Thursday  
Date: 07/18/2019



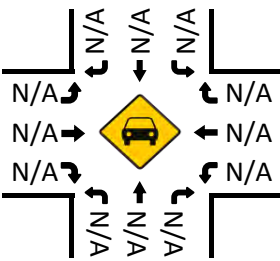
**Total Vehicles (AM)**



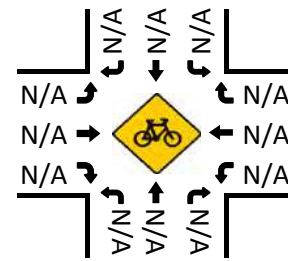
**Bikes (AM)**



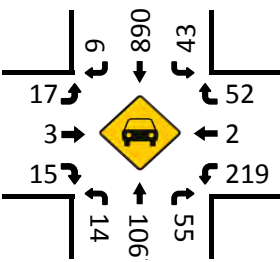
**Total Vehicles (Noon)**



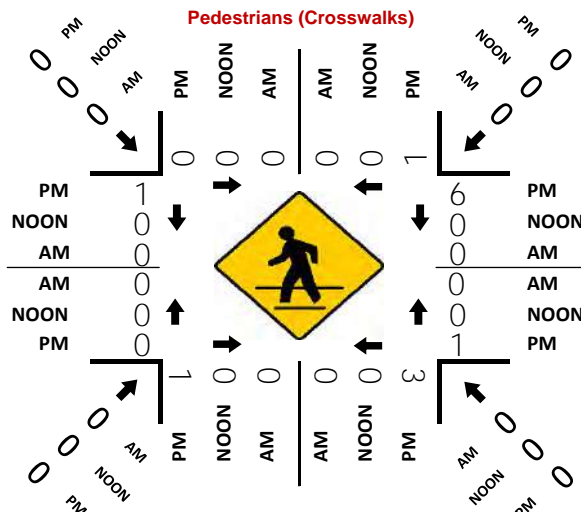
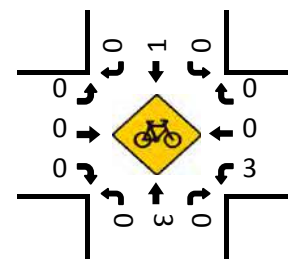
**Bikes (NOON)**



**Total Vehicles (PM)**



**Bikes (PM)**



National Data & Surveying Services

# Intersection Turning Movement Count

Location: Main St/South St & Cypress St

City: Fort Bragg

Control:

Project ID: 19-08388-001

Date: 2019-07-18

**Total**

NS/EW Streets:	Main St/South St				Main St/South St				Cypress St				Cypress St				TOTAL				
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND								
PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU					
4:00 PM	2	266	22	1	10	218	3	0	6	0	6	0	57	1	21	0					613
4:15 PM	2	272	12	3	11	232	2	0	3	0	4	0	47	0	12	0					600
4:30 PM	3	265	9	0	9	244	3	0	3	1	3	0	65	0	13	0					618
4:45 PM	7	264	12	2	13	196	1	0	5	2	2	0	50	1	6	0					561
5:00 PM	3	210	7	1	10	233	2	0	6	2	5	0	69	2	20	0					570
5:15 PM	7	239	14	1	14	244	3	0	1	2	7	0	56	1	11	0					600
5:30 PM	6	220	8	0	9	211	5	0	1	1	6	0	75	2	16	0					560
5:45 PM	1	213	10	0	6	180	3	0	2	0	4	0	50	1	12	0					482
6:00 PM	5	167	8	0	10	167	3	0	3	4	4	0	49	2	8	0					430
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU					TOTAL
<b>APPROACH %'s :</b>	36	2116	102	8	92	1925	25	0	30	12	41	0	518	10	119	0					5034
	1.59%	93.55%	4.51%	0.35%	4.51%	94.27%	1.22%	0.00%	36.14%	14.46%	49.40%	0.00%	80.06%	1.55%	18.39%	0.00%					
<b>PEAK HR :</b>	<b>04:00 PM - 05:00 PM</b>																<b>TOTAL</b>				
<b>PEAK HR VOL :</b>	14	1067	55	6	43	890	9	0	17	3	15	0	219	2	52	0					2392
<b>PEAK HR FACTOR :</b>	0.500	0.981	0.625	0.500	0.827	0.912	0.750	0.000	0.708	0.375	0.625	0.000	0.842	0.500	0.619	0.000					0.968
		0.981				0.920				0.729				0.864							

# National Data & Surveying Services

## Intersection Turning Movement Count

**Location:** Main St/South St & Cypress St  
**City:** Fort Bragg  
**Control:** 0

**Project ID:** 19-08388-001  
**Date:** 2019-07-18

### Bikes

NS/EW Streets:	Main St/South St				Main St/South St				Cypress St				Cypress St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
4:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	3	0	0	0	4
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	2	0	0	3
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	1	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	3
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	<b>TOTAL</b>
<b>APPROACH %'s :</b>	1	3	1	0	0	3	0	0	0	2	0	0	3	2	0	0	15
	20.00%	60.00%	20.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	60.00%	40.00%	0.00%	0.00%	
<b>PEAK HR :</b>	<b>04:00 PM - 05:00 PM</b>																<b>TOTAL</b>
<b>PEAK HR VOL :</b>	0	3	0	0	0	1	0	0	0	0	0	0	3	0	0	0	7
<b>PEAK HR FACTOR :</b>	0.00	0.375	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.438
	0.375				0.250				0.250								

## National Data & Surveying Services

# Intersection Turning Movement Count

**Location:** Main St/South St & Cypress St  
**City:** Fort Bragg

**Project ID:** 19-08388-001  
**Date:** 2019-07-18

### Pedestrians (Crosswalks)

NS/EW Streets:	Main St/South St		Main St/South St		Cypress St		Cypress St		
PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
4:00 PM	0	0	0	0	0	1	0	0	1
4:15 PM	0	0	0	0	1	5	0	0	6
4:30 PM	0	1	1	3	0	0	0	1	6
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	1	3	0	0	4
5:30 PM	0	0	1	3	0	0	0	0	4
5:45 PM	0	0	0	0	1	1	1	0	3
6:00 PM	0	3	0	2	2	0	0	0	7
<b>TOTAL VOLUMES :</b>	EB 0	WB 4	EB 2	WB 8	NB 5	SB 10	NB 1	SB 1	TOTAL 31
<b>APPROACH %'s :</b>	0.00%	100.00%	20.00%	80.00%	33.33%	66.67%	50.00%	50.00%	
<b>PEAK HR :</b>	<b>04:00 PM - 05:00 PM</b>								TOTAL
<b>PEAK HR VOL :</b>	0	1	1	3	1	6	0	1	13
<b>PEAK HR FACTOR :</b>		0.250	0.250	0.250	0.250	0.300		0.250	0.542
	0.250		0.250		0.292		0.250		

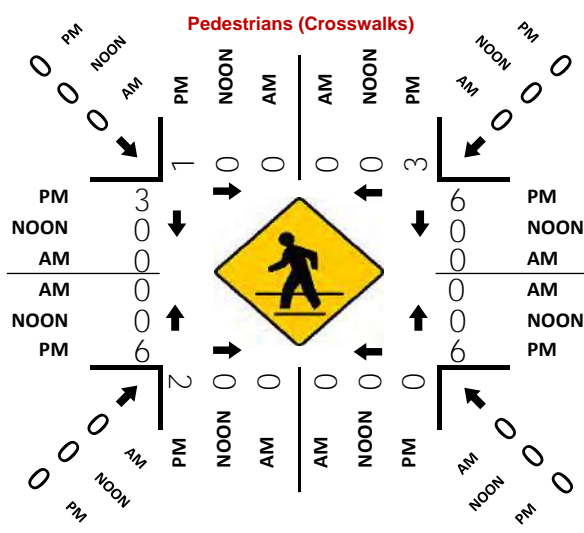
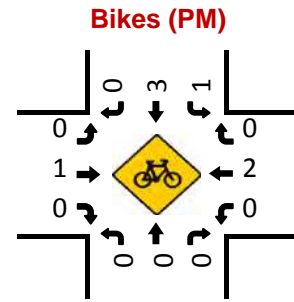
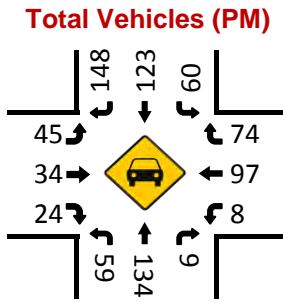
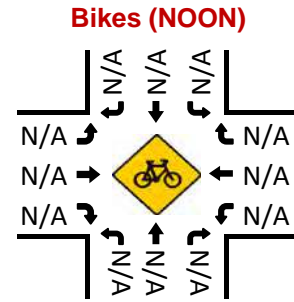
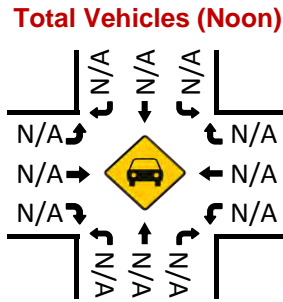
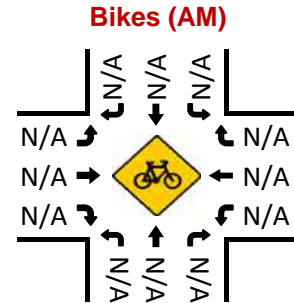
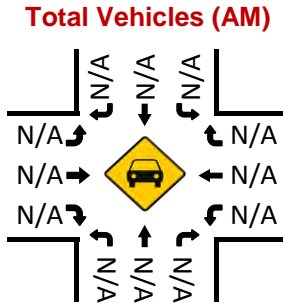
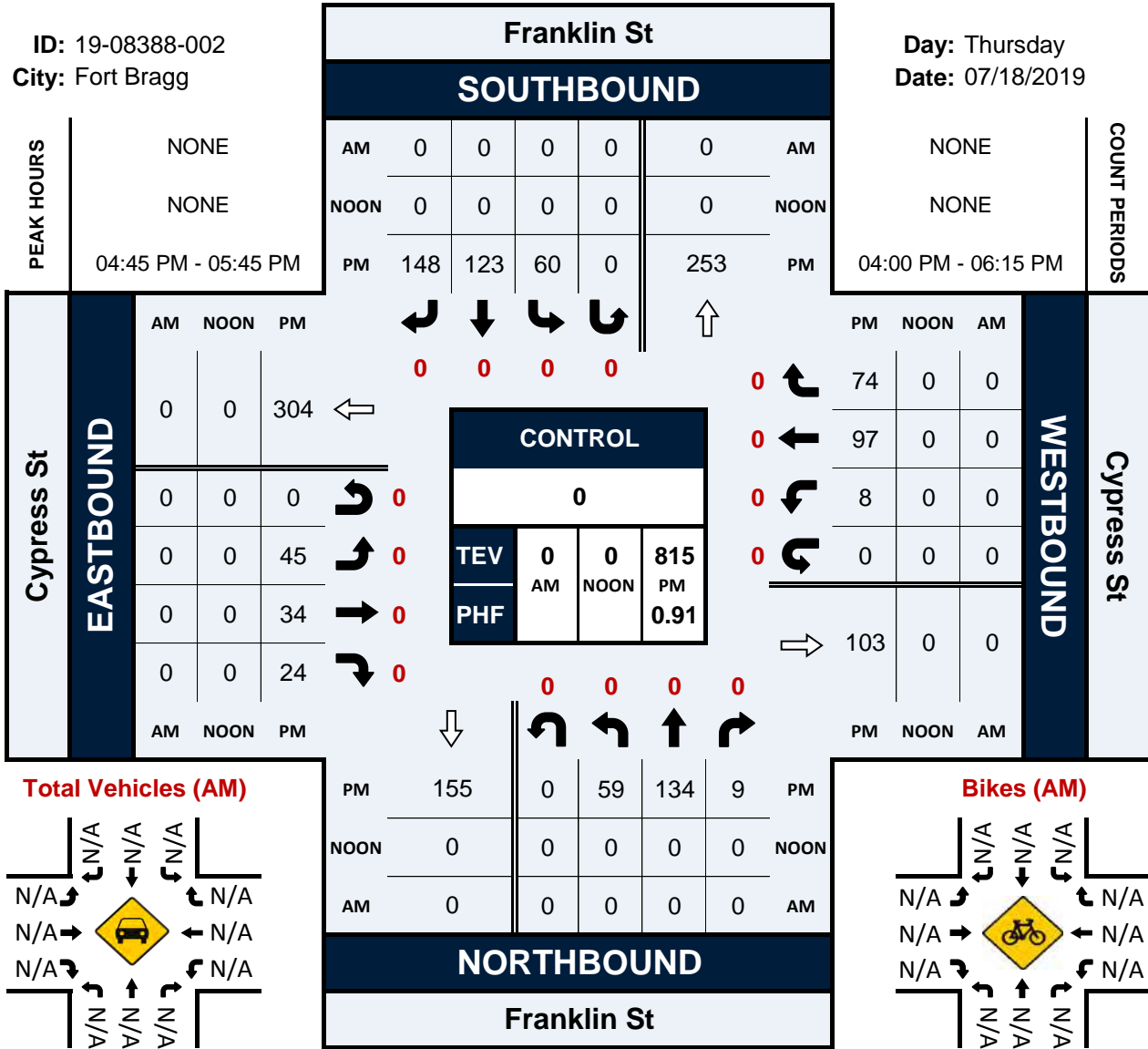
Prepared by National Data & Surveying Services

# Franklin St & Cypress St

## Peak Hour Turning Movement Count

ID: 19-08388-002  
City: Fort Bragg

Day: Thursday  
Date: 07/18/2019



National Data & Surveying Services

# Intersection Turning Movement Count

Location: Franklin St & Cypress St  
 City: Fort Bragg  
 Control:

Project ID: 19-08388-002  
 Date: 2019-07-18

**Total**

NS/EW Streets:	Franklin St				Franklin St				Cypress St				Cypress St				TOTAL				
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND								
PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU					
4:00 PM	15	19	4	0	10	26	33	0	21	9	8	0	1	29	19	0					194
4:15 PM	14	24	3	0	10	38	27	0	15	9	4	0	3	17	24	0					188
4:30 PM	8	36	3	0	11	28	42	0	5	12	2	0	4	23	18	0					192
4:45 PM	16	19	4	0	12	29	31	0	7	12	6	0	1	17	17	0					171
5:00 PM	18	50	3	0	11	22	32	0	16	8	5	0	3	29	26	0					223
5:15 PM	11	38	0	0	19	36	39	0	14	10	8	0	3	25	18	0					221
5:30 PM	14	27	2	0	18	36	46	0	8	4	5	0	1	26	13	0					200
5:45 PM	19	23	0	0	12	16	26	0	9	7	1	0	1	16	10	0					140
6:00 PM	16	32	1	0	5	13	22	0	12	10	3	1	1	21	9	0					146
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU					TOTAL
<b>APPROACH %'s :</b>	131	268	20	0	108	244	298	0	107	81	42	1	18	203	154	0					1675
	31.26%	63.96%	4.77%	0.00%	16.62%	37.54%	45.85%	0.00%	46.32%	35.06%	18.18%	0.43%	4.80%	54.13%	41.07%	0.00%					
<b>PEAK HR :</b>	<b>04:45 PM - 05:45 PM</b>																				TOTAL
<b>PEAK HR VOL :</b>	59	134	9	0	60	123	148	0	45	34	24	0	8	97	74	0					815
<b>PEAK HR FACTOR :</b>	0.819	0.670	0.563	0.000	0.789	0.854	0.804	0.000	0.703	0.708	0.750	0.000	0.667	0.836	0.712	0.000					0.914
		0.711				0.828				0.805				0.772							

# National Data & Surveying Services

## Intersection Turning Movement Count

**Location:** Franklin St & Cypress St  
**City:** Fort Bragg  
**Control:** 0

**Project ID:** 19-08388-002  
**Date:** 2019-07-18

### Bikes

NS/EW Streets:	Franklin St				Franklin St				Cypress St				Cypress St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	0	2	0	0	0	1	0	0	0	0	0	0	0	0	1	0	4
4:15 PM	0	1	2	0	0	0	0	0	0	0	0	0	0	1	0	0	4
4:30 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3
5:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	3
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
6:00 PM	0	1	0	0	0	1	0	0	0	2	0	0	0	0	0	0	4
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
<b>APPROACH %'s :</b>	0	4	2	0	1	7	0	0	0	3	0	0	0	3	2	0	22
	0.00%	66.67%	33.33%	0.00%	12.50%	87.50%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	60.00%	40.00%	0.00%	
<b>PEAK HR :</b>	<b>04:45 PM - 05:45 PM</b>																<b>TOTAL</b>
<b>PEAK HR VOL :</b>	0	0	0	0	1	3	0	0	0	1	0	0	0	2	0	0	7
<b>PEAK HR FACTOR :</b>	0.00	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.583
						0.333				0.250				0.250			

## National Data & Surveying Services

# Intersection Turning Movement Count

**Location:** Franklin St & Cypress St  
**City:** Fort Bragg

**Project ID:** 19-08388-002  
**Date:** 2019-07-18

### Pedestrians (Crosswalks)

NS/EW Streets:	Franklin St		Franklin St		Cypress St		Cypress St		
PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
4:00 PM	1	1	0	0	2	1	2	1	8
4:15 PM	1	2	0	0	0	0	2	3	8
4:30 PM	1	1	0	1	0	1	3	7	14
4:45 PM	1	0	0	0	0	2	0	0	3
5:00 PM	0	0	0	0	1	0	4	0	5
5:15 PM	0	3	0	0	5	4	0	1	13
5:30 PM	0	0	2	0	0	0	2	2	6
5:45 PM	1	1	0	1	0	0	0	2	5
6:00 PM	0	3	0	0	2	0	0	0	5
<b>TOTAL VOLUMES :</b>	EB 5	WB 11	EB 2	WB 2	NB 10	SB 8	NB 13	SB 16	TOTAL 67
<b>APPROACH %'s :</b>	31.25%	68.75%	50.00%	50.00%	55.56%	44.44%	44.83%	55.17%	
<b>PEAK HR :</b>	04:45 PM - 05:45 PM								TOTAL
<b>PEAK HR VOL :</b>	1	3	2	0	6	6	6	3	27
<b>PEAK HR FACTOR :</b>	0.250	0.250	0.250	0.250	0.300	0.375	0.375	0.375	0.519
	0.333		0.250		0.333		0.563		



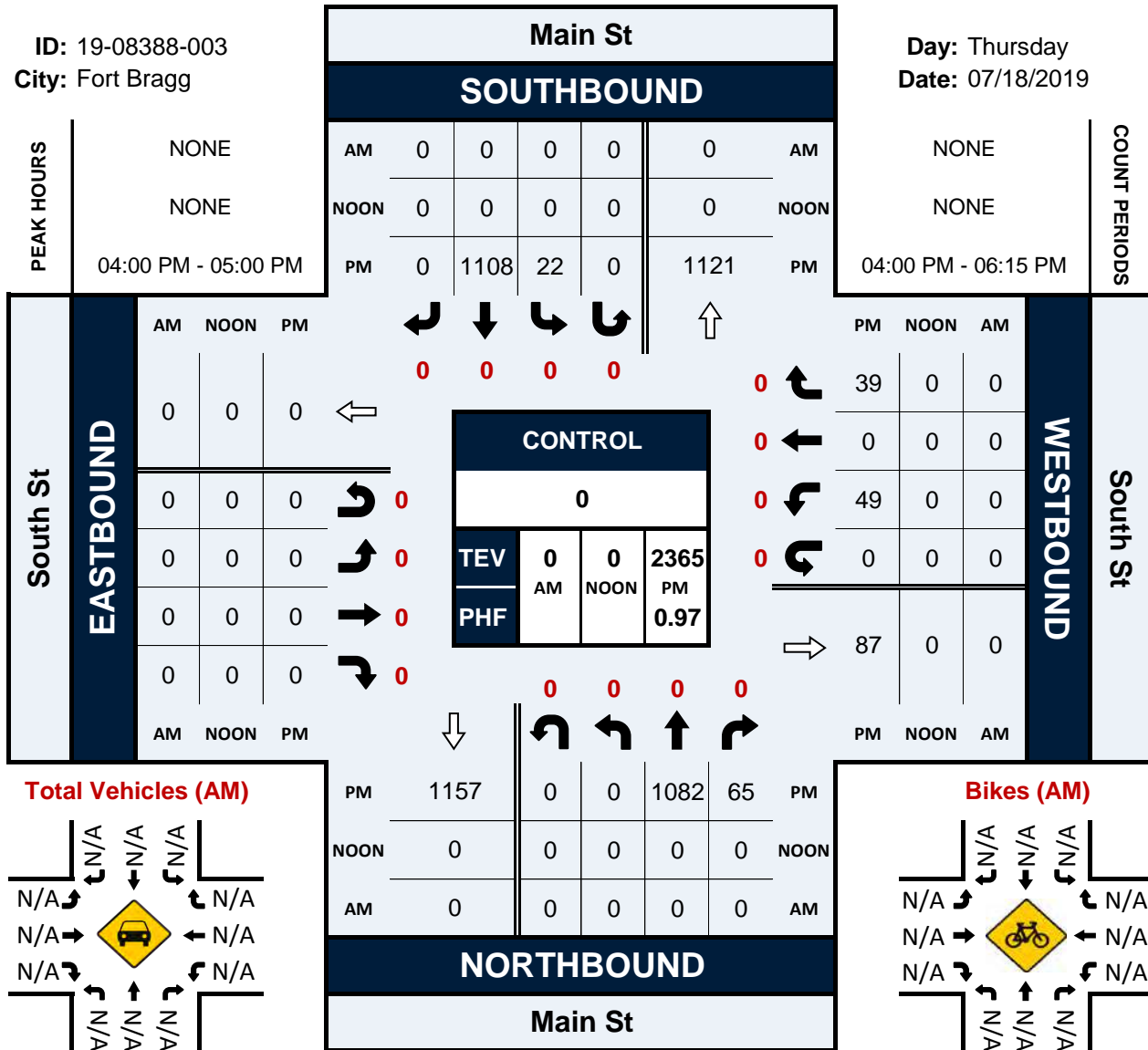
Prepared by National Data & Surveying Services

# Main St & South St

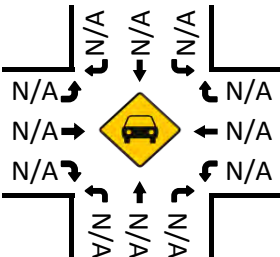
## Peak Hour Turning Movement Count

ID: 19-08388-003  
City: Fort Bragg

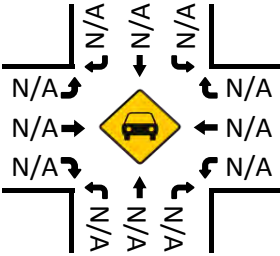
Day: Thursday  
Date: 07/18/2019



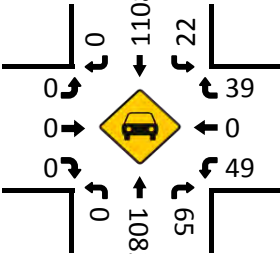
**Total Vehicles (AM)**



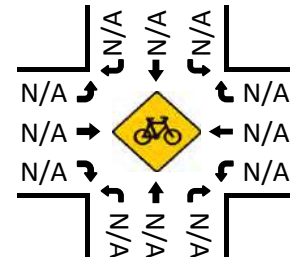
**Total Vehicles (Noon)**



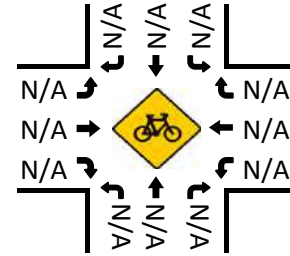
**Total Vehicles (PM)**



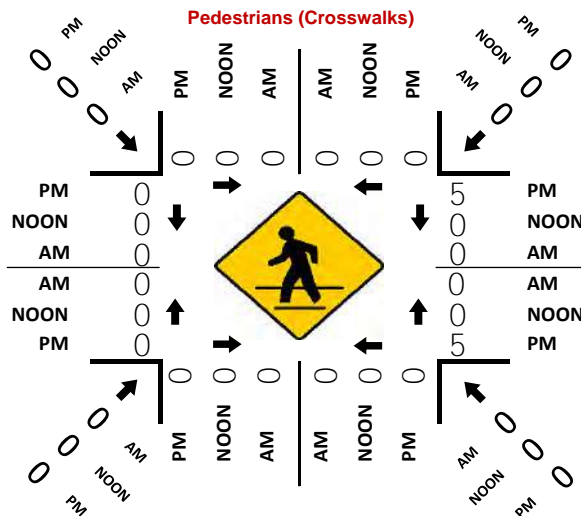
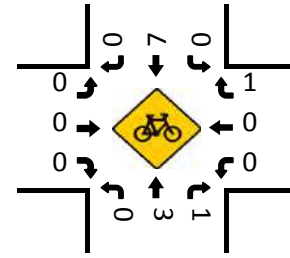
**Bikes (AM)**



**Bikes (Noon)**



**Bikes (PM)**



National Data & Surveying Services

# Intersection Turning Movement Count

Location: Main St & South St  
 City: Fort Bragg  
 Control:

Project ID: 19-08388-003  
 Date: 2019-07-18

**Total**

NS/EW Streets:	Main St				Main St				South St				South St				TOTAL				
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND								
PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU					
4:00 PM	0	277	16	0	6	283	0	0	0	0	0	0	14	0	11	0					607
4:15 PM	0	258	12	0	3	269	0	0	0	0	0	0	10	0	10	0					562
4:30 PM	0	265	17	0	9	300	0	0	0	0	0	0	6	0	11	0					608
4:45 PM	0	282	20	0	4	256	0	0	0	0	0	0	19	0	7	0					588
5:00 PM	0	236	14	0	8	310	0	0	0	0	0	0	8	0	7	0					583
5:15 PM	0	249	12	1	5	294	0	0	0	0	0	0	12	0	12	0					585
5:30 PM	0	233	9	0	4	279	0	0	0	0	0	0	13	0	11	0					549
5:45 PM	0	212	10	0	3	244	0	0	0	0	0	0	9	0	6	0					484
6:00 PM	0	181	4	0	3	219	0	0	0	0	0	0	14	0	9	0					430
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU					TOTAL
<b>APPROACH %'s :</b>	0	2193	114	1	45	2454	0	0	0	0	0	0	105	0	84	0					4996
	0.00%	95.02%	4.94%	0.04%	1.80%	98.20%	0.00%	0.00%					55.56%	0.00%	44.44%	0.00%					
<b>PEAK HR :</b>	<b>04:00 PM - 05:00 PM</b>																<b>TOTAL</b>				
<b>PEAK HR VOL :</b>	0	1082	65	0	22	1108	0	0	0	0	0	0	49	0	39	0					2365
<b>PEAK HR FACTOR :</b>	0.000	0.959	0.813	0.000	0.611	0.923	0.000	0.000	0.000	0.000	0.000	0.000	0.645	0.000	0.886	0.000					0.972
		0.950				0.914									0.846						

# National Data & Surveying Services

## Intersection Turning Movement Count

**Location:** Main St & South St  
**City:** Fort Bragg  
**Control:** 0

**Project ID:** 19-08388-003  
**Date:** 2019-07-18

### Bikes

NS/EW Streets:	Main St				Main St				South St				South St				TOTAL				
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND								
PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU					
4:00 PM	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
4:15 PM	0	0	0	0	0	3	0	0	0	0	0	0	0	0	1	0	0	0	0	0	4
4:30 PM	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
4:45 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:00 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2
5:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU					TOTAL
<b>APPROACH %'s :</b>	0	6	1	0	1	9	0	0	0	0	0	0	1	0	1	0					19
	0.00%	85.71%	14.29%	0.00%	10.00%	90.00%	0.00%	0.00%					50.00%	0.00%	50.00%	0.00%					
<b>PEAK HR :</b>	<b>04:00 PM - 05:00 PM</b>																TOTAL				
<b>PEAK HR VOL :</b>	0	3	1	0	0	7	0	0	0	0	0	0	0	0	1	0					12
<b>PEAK HR FACTOR :</b>	0.00	0.375	0.250	0.000	0.000	0.583	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000					0.750
			0.333				0.583								0.250						

## National Data & Surveying Services

# Intersection Turning Movement Count

**Location:** Main St & South St  
**City:** Fort Bragg

**Project ID:** 19-08388-003  
**Date:** 2019-07-18

### Pedestrians (Crosswalks)

NS/EW Streets:	Main St		Main St		South St		South St		
PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
4:00 PM	0	0	0	0	1	0	0	0	1
4:15 PM	0	0	0	0	1	1	0	0	2
4:30 PM	0	0	0	0	3	2	0	0	5
4:45 PM	0	0	0	0	0	2	0	0	2
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	4	2	0	0	6
5:30 PM	0	0	0	0	1	3	0	0	4
5:45 PM	0	0	0	0	1	1	0	0	2
6:00 PM	0	0	0	0	2	4	0	0	6
<b>TOTAL VOLUMES :</b>	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
<b>APPROACH %'s :</b>	0	0	0	0	13	15	0	0	28
					46.43%	53.57%			
<b>PEAK HR :</b>	<b>04:00 PM - 05:00 PM</b>								TOTAL
<b>PEAK HR VOL :</b>	0	0	0	0	5	5	0	0	10
<b>PEAK HR FACTOR :</b>					0.417	0.625			0.500
					0.500				

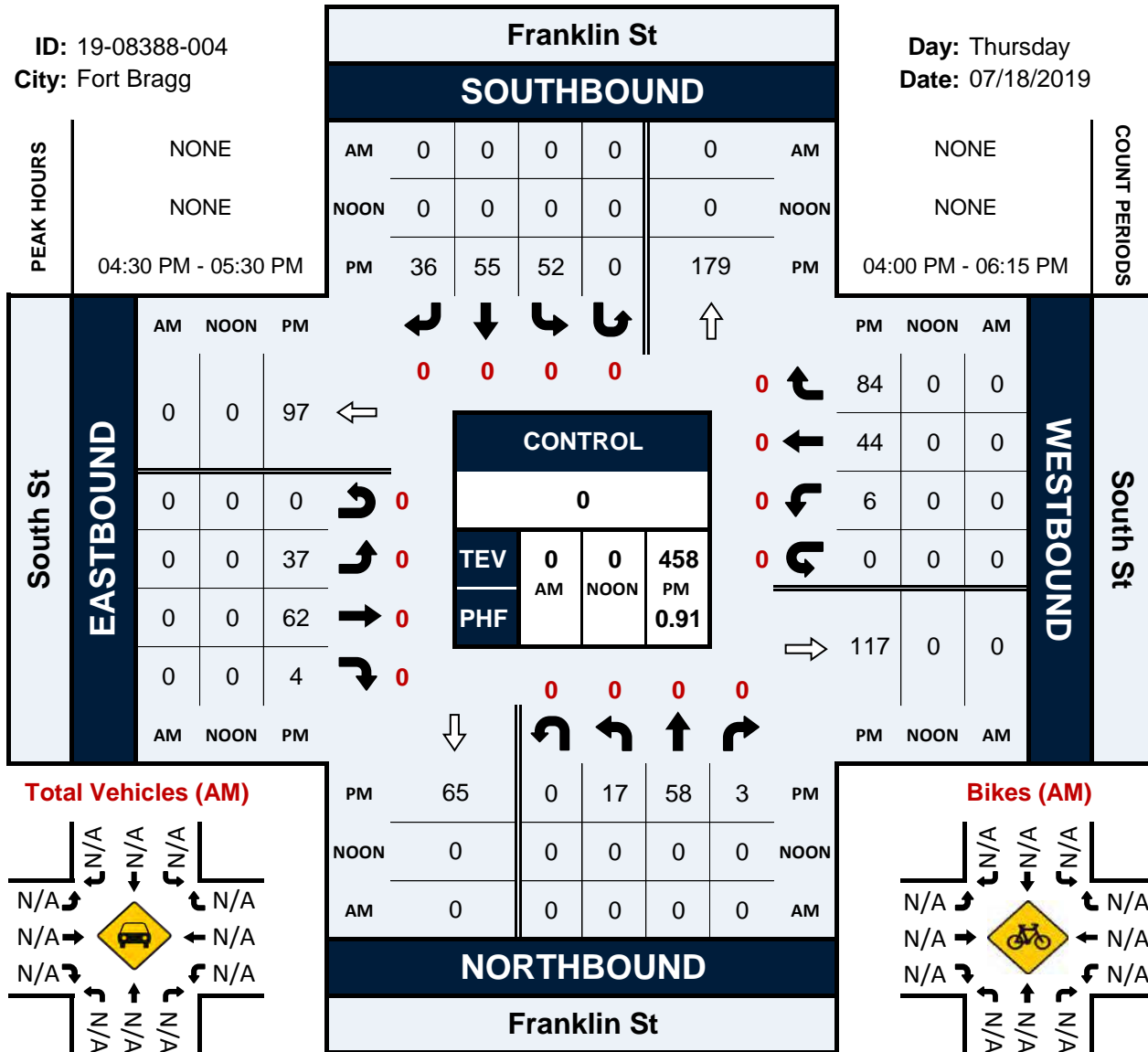
Prepared by National Data & Surveying Services

# Franklin St & South St

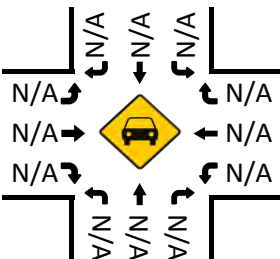
## Peak Hour Turning Movement Count

ID: 19-08388-004  
City: Fort Bragg

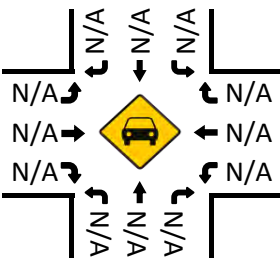
Day: Thursday  
Date: 07/18/2019



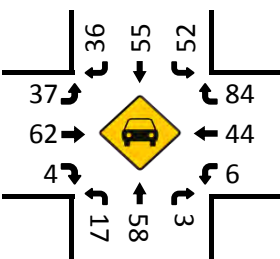
**Total Vehicles (AM)**



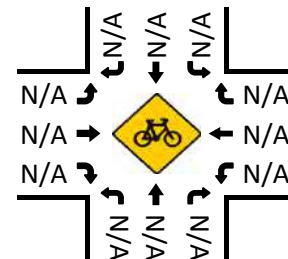
**Total Vehicles (Noon)**



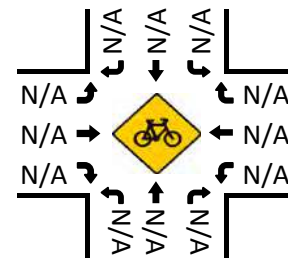
**Total Vehicles (PM)**



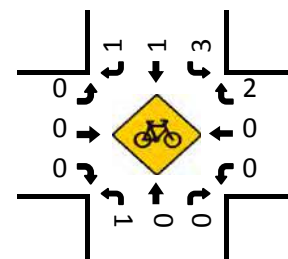
**Bikes (AM)**



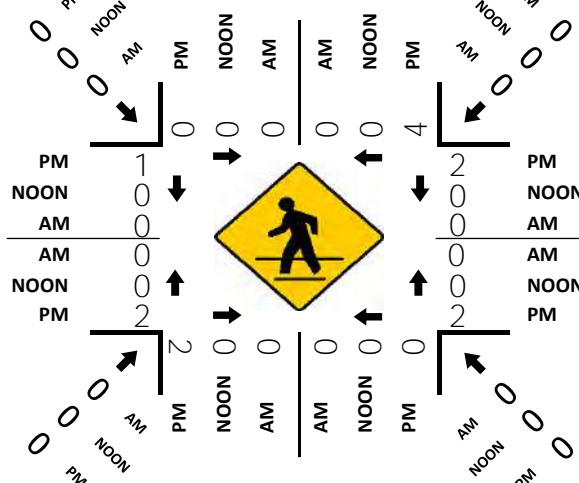
**Bikes (NOON)**



**Bikes (PM)**



**Pedestrians (Crosswalks)**



National Data & Surveying Services

# Intersection Turning Movement Count

Location: Franklin St & South St  
 City: Fort Bragg  
 Control:

Project ID: 19-08388-004  
 Date: 2019-07-18

**Total**

NS/EW Streets:	Franklin St				Franklin St				South St				South St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	7	9	4	0	12	15	9	0	5	16	3	0	1	9	19	0	109
4:15 PM	8	19	1	0	18	16	10	0	7	11	1	0	1	7	13	0	112
4:30 PM	2	12	0	0	10	15	8	0	12	14	0	0	1	10	23	0	107
4:45 PM	8	10	3	0	15	11	9	0	7	16	1	0	0	11	17	0	108
5:00 PM	2	17	0	0	12	11	9	0	10	21	3	0	2	9	30	0	126
5:15 PM	5	19	0	0	15	18	10	0	8	11	0	0	3	14	14	0	117
5:30 PM	9	21	0	0	10	26	9	0	4	4	3	0	0	8	13	0	107
5:45 PM	3	16	2	0	4	9	6	0	8	11	0	0	2	6	14	0	81
6:00 PM	8	24	0	0	4	10	4	0	7	2	1	0	1	11	17	0	89
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
<b>APPROACH %'s :</b>	52	147	10	0	100	131	74	0	68	106	12	0	11	85	160	0	956
	24.88%	70.33%	4.78%	0.00%	32.79%	42.95%	24.26%	0.00%	36.56%	56.99%	6.45%	0.00%	4.30%	33.20%	62.50%	0.00%	
<b>PEAK HR :</b>	<b>04:30 PM - 05:30 PM</b>																<b>TOTAL</b>
<b>PEAK HR VOL :</b>	17	58	3	0	52	55	36	0	37	62	4	0	6	44	84	0	458
<b>PEAK HR FACTOR :</b>	0.531	0.763	0.250	0.000	0.867	0.764	0.900	0.000	0.771	0.738	0.333	0.000	0.500	0.786	0.700	0.000	0.909
	0.813				0.831				0.757				0.817				

# National Data & Surveying Services

## Intersection Turning Movement Count

**Location:** Franklin St & South St  
**City:** Fort Bragg  
**Control:** 0

**Project ID:** 19-08388-004  
**Date:** 2019-07-18

### Bikes

NS/EW Streets:	Franklin St				Franklin St				South St				South St				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	1	0	0	0	0	1	0	0	0	2	0	0	0	1	0	5
4:15 PM	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
4:30 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
4:45 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	4
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	3
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
<b>APPROACH %'s :</b>	1	5	0	0	3	2	2	0	0	0	2	0	0	0	3	0	18
	16.67%	83.33%	0.00%	0.00%	42.86%	28.57%	28.57%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	
<b>PEAK HR :</b>	<b>04:30 PM - 05:30 PM</b>																<b>TOTAL</b>
<b>PEAK HR VOL :</b>	1	0	0	0	3	1	1	0	0	0	0	0	0	0	2	0	8
<b>PEAK HR FACTOR :</b>	0.25	0.000	0.000	0.000	0.375	0.250	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.500
			0.250				0.417								0.250		

## National Data & Surveying Services

# Intersection Turning Movement Count

**Location:** Franklin St & South St  
**City:** Fort Bragg

**Project ID:** 19-08388-004  
**Date:** 2019-07-18

### Pedestrians (Crosswalks)

NS/EW Streets:	Franklin St		Franklin St		South St		South St		
PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
4:00 PM	0	1	0	0	0	5	2	1	9
4:15 PM	2	0	0	0	1	0	2	0	5
4:30 PM	0	0	0	0	0	1	0	1	2
4:45 PM	0	0	0	0	0	1	2	0	3
5:00 PM	0	0	0	0	2	0	0	0	2
5:15 PM	0	4	2	0	0	0	0	0	6
5:30 PM	0	1	0	0	0	0	0	1	2
5:45 PM	0	1	0	0	0	0	0	0	1
6:00 PM	0	0	0	0	0	0	0	0	0
<b>TOTAL VOLUMES :</b>	EB 2	WB 7	EB 2	WB 0	NB 3	SB 7	NB 6	SB 3	TOTAL 30
<b>APPROACH %'s :</b>	22.22%	77.78%	100.00%	0.00%	30.00%	70.00%	66.67%	33.33%	
<b>PEAK HR :</b>	04:30 PM - 05:30 PM								TOTAL
<b>PEAK HR VOL :</b>	0	4	2	0	2	2	2	1	13
<b>PEAK HR FACTOR :</b>	0.250		0.250		0.500		0.375		0.542



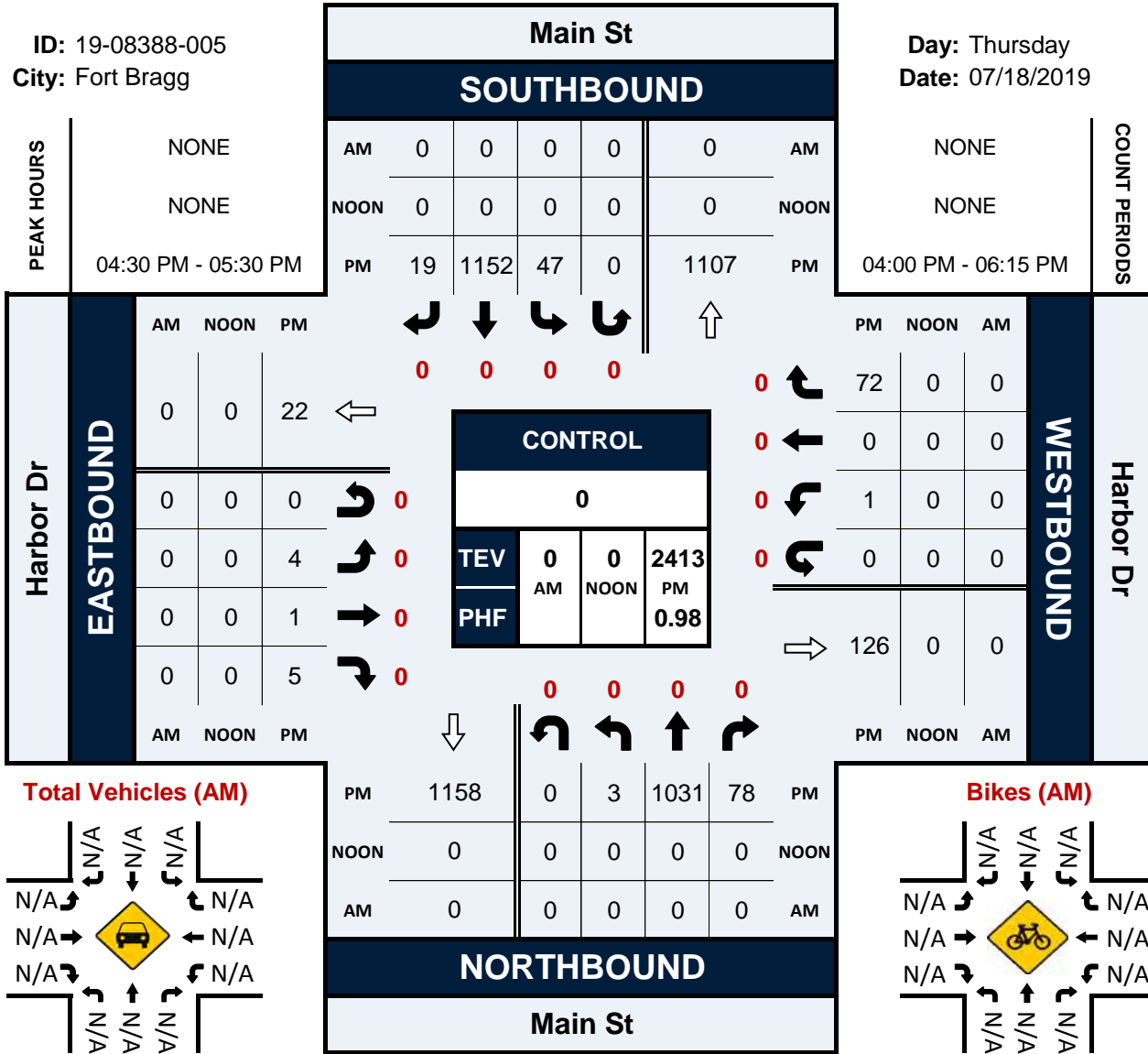
Prepared by National Data & Surveying Services

# Main St & Harbor Dr

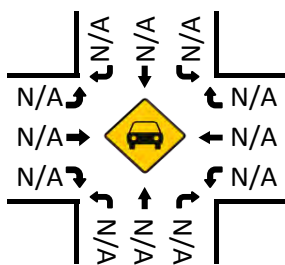
## Peak Hour Turning Movement Count

ID: 19-08388-005  
 City: Fort Bragg

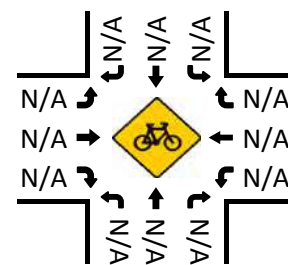
Day: Thursday  
 Date: 07/18/2019



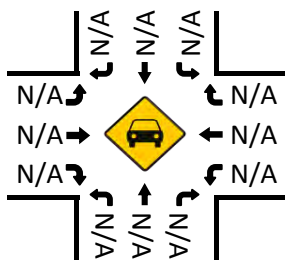
Total Vehicles (AM)



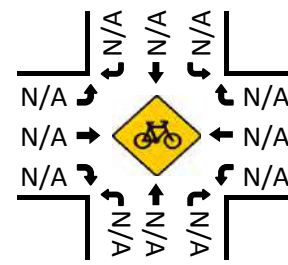
Bikes (AM)



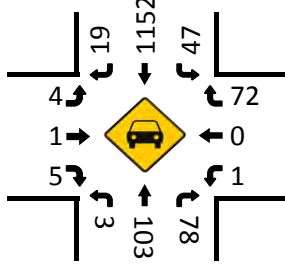
Total Vehicles (Noon)



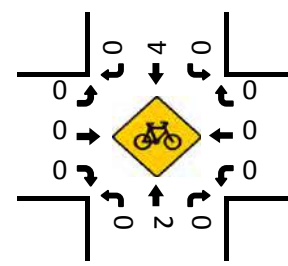
Bikes (NOON)



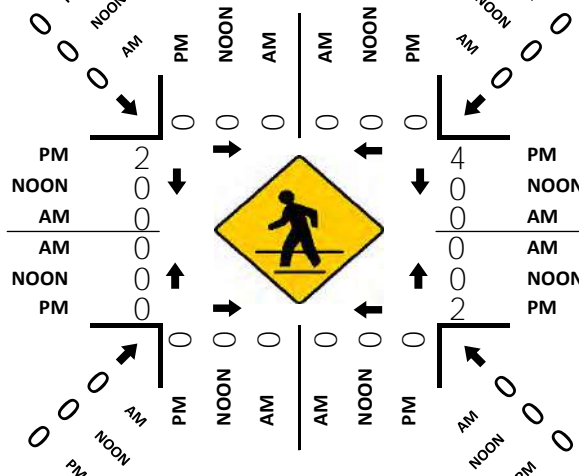
Total Vehicles (PM)



Bikes (PM)



Pedestrians (Crosswalks)



# National Data & Surveying Services

## Intersection Turning Movement Count

**Location:** Main St & Harbor Dr  
**City:** Fort Bragg  
**Control:**

**Project ID:** 19-08388-005  
**Date:** 2019-07-18

### Total

NS/EW Streets:	Main St				Main St				Harbor Dr				Harbor Dr				TOTAL				
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND								
PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU					
4:00 PM	1	274	17	0	12	284	0	0	1	0	1	0	0	0	14	0					604
4:15 PM	1	260	17	0	10	267	1	0	0	0	0	0	0	0	12	0					568
4:30 PM	2	269	20	0	9	296	6	0	1	0	1	0	0	0	14	0					618
4:45 PM	0	282	16	0	13	258	4	0	1	0	2	0	1	0	25	0					602
5:00 PM	0	239	22	0	12	300	7	0	1	1	1	0	0	0	10	0					593
5:15 PM	1	241	20	0	13	298	2	0	1	0	1	0	0	0	23	0					600
5:30 PM	0	226	16	0	13	273	3	0	1	1	0	0	0	0	16	0					549
5:45 PM	2	201	22	0	11	239	1	0	0	0	0	0	0	0	15	0					491
6:00 PM	0	168	22	0	22	208	2	0	1	0	5	0	0	0	15	0					443
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU					TOTAL
<b>APPROACH %'s :</b>	7	2160	172	0	115	2423	26	0	7	2	11	0	1	0	144	0					5068
	0.30%	92.35%	7.35%	0.00%	4.49%	94.50%	1.01%	0.00%	35.00%	10.00%	55.00%	0.00%	0.69%	0.00%	99.31%	0.00%					
<b>PEAK HR :</b>	<b>04:30 PM - 05:30 PM</b>																<b>TOTAL</b>				
<b>PEAK HR VOL :</b>	3	1031	78	0	47	1152	19	0	4	1	5	0	1	0	72	0					2413
<b>PEAK HR FACTOR :</b>	0.375	0.914	0.886	0.000	0.904	0.960	0.679	0.000	1.000	0.250	0.625	0.000	0.250	0.000	0.720	0.000					0.976
			0.933				0.955				0.833				0.702						

# National Data & Surveying Services

## Intersection Turning Movement Count

**Location:** Main St & Harbor Dr  
**City:** Fort Bragg  
**Control:** 0

**Project ID:** 19-08388-005  
**Date:** 2019-07-18

### Bikes

NS/EW Streets:	Main St				Main St				Harbor Dr				Harbor Dr				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	0	2	1	0	0	0	0	0	0	1	0	0	0	0	0	0	4
4:15 PM	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	2	0	0	0	1	0	0	0	0	0	4	0	0	0	0	7
5:00 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
5:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
<b>APPROACH %'s :</b>	0	5	1	0	0	9	0	0	0	1	0	4	0	0	0	0	20
	0.00%	83.33%	16.67%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	20.00%	0.00%	80.00%					
<b>PEAK HR :</b>	<b>04:30 PM - 05:30 PM</b>																<b>TOTAL</b>
<b>PEAK HR VOL :</b>	0	2	0	0	0	4	0	0	0	0	0	4	0	0	0	0	10
<b>PEAK HR FACTOR :</b>	0.00	0.250	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.357
		0.250				0.500					0.250						

## National Data & Surveying Services

# Intersection Turning Movement Count

**Location:** Main St & Harbor Dr  
**City:** Fort Bragg

**Project ID:** 19-08388-005  
**Date:** 2019-07-18

### Pedestrians (Crosswalks)

NS/EW Streets:	Main St		Main St		Harbor Dr		Harbor Dr		
PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
4:00 PM	0	0	0	0	1	1	0	0	2
4:15 PM	0	0	0	0	1	1	1	0	3
4:30 PM	0	0	0	0	1	0	0	1	2
4:45 PM	0	0	0	0	0	2	0	0	2
5:00 PM	0	0	0	0	0	0	0	1	1
5:15 PM	0	0	0	0	1	2	0	0	3
5:30 PM	0	1	0	0	1	0	0	1	3
5:45 PM	0	0	0	0	1	1	0	0	2
6:00 PM	0	0	0	0	0	1	0	0	1
<b>TOTAL VOLUMES :</b>	EB 0	WB 1	EB 0	WB 0	NB 6	SB 8	NB 1	SB 3	TOTAL 19
<b>APPROACH %'s :</b>	0.00%	100.00%			42.86%	57.14%	25.00%	75.00%	
<b>PEAK HR :</b>	04:30 PM - 05:30 PM								TOTAL
<b>PEAK HR VOL :</b>	0	0	0	0	2	4	0	2	8
<b>PEAK HR FACTOR :</b>					0.500	0.500	0.500	0.500	0.667

Prepared by National Data & Surveying Services

# Franklin St & Harbor Dr

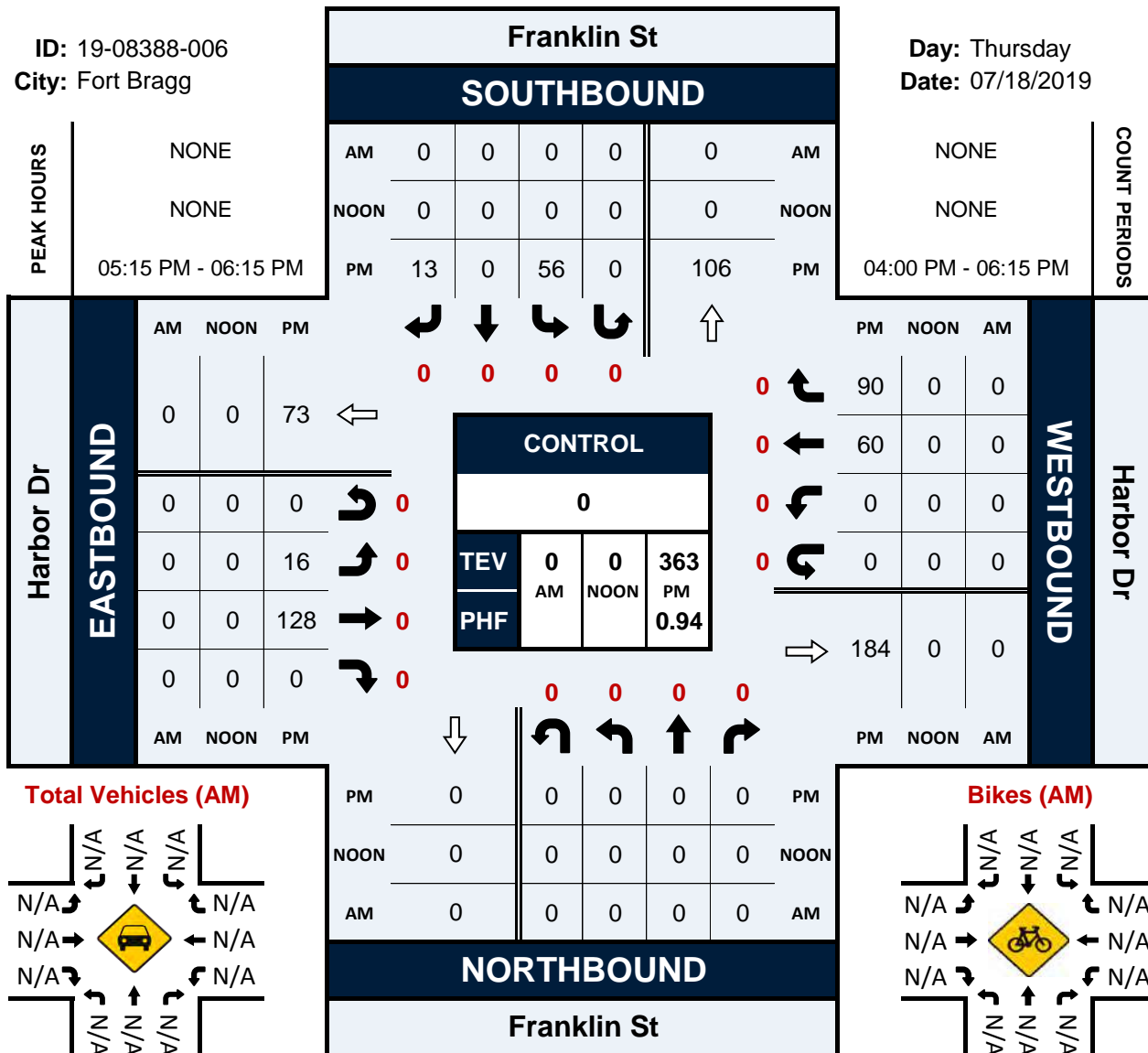
## Peak Hour Turning Movement Count

ID: 19-08388-006

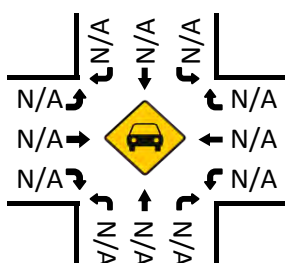
City: Fort Bragg

Day: Thursday

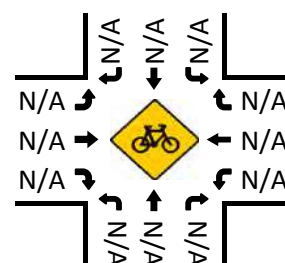
Date: 07/18/2019



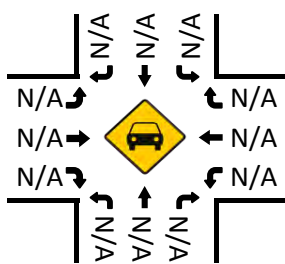
**Total Vehicles (AM)**



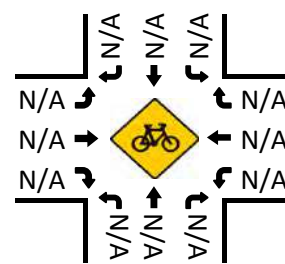
**Bikes (AM)**



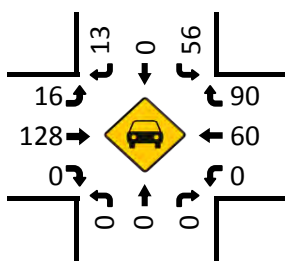
**Total Vehicles (Noon)**



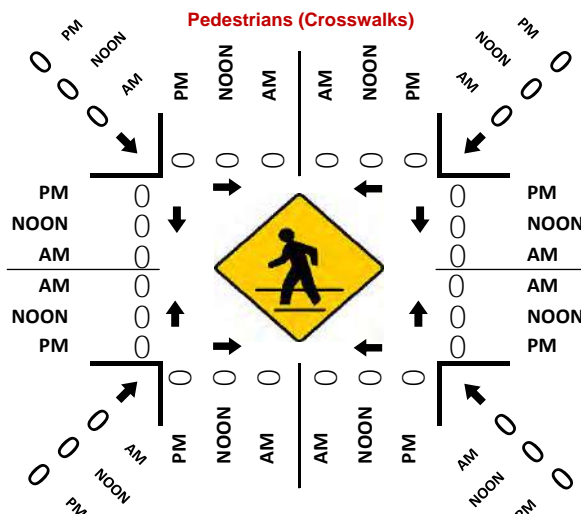
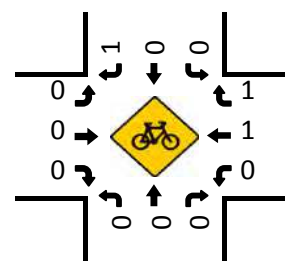
**Bikes (NOON)**



**Total Vehicles (PM)**



**Bikes (PM)**



National Data & Surveying Services

# Intersection Turning Movement Count

Location: Franklin St & Harbor Dr  
 City: Fort Bragg  
 Control:

Project ID: 19-08388-006  
 Date: 2019-07-18

**Total**

NS/EW Streets:	Franklin St				Franklin St				Harbor Dr				Harbor Dr				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	0	0	0	0	15	0	2	0	2	22	0	1	0	10	16	0	68
4:15 PM	0	0	0	0	13	0	3	0	7	20	0	0	0	14	19	0	76
4:30 PM	0	0	0	0	14	0	2	0	4	25	0	0	0	12	10	0	67
4:45 PM	0	0	0	0	11	0	1	0	6	22	0	0	0	23	15	0	78
5:00 PM	0	0	0	0	15	0	0	0	6	27	0	0	0	12	14	0	74
5:15 PM	0	0	0	0	13	0	7	0	3	29	0	0	0	16	20	0	88
5:30 PM	0	0	0	0	21	0	4	0	6	30	0	0	0	14	22	0	97
5:45 PM	0	0	0	0	11	0	2	0	1	31	0	0	0	16	20	0	81
6:00 PM	0	0	0	0	11	0	0	0	6	38	0	0	0	14	28	0	97
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
<b>APPROACH %'s :</b>	0	0	0	0	124	0	21	0	41	244	0	1	0	131	164	0	726
<b>PEAK HR :</b>	<b>05:15 PM - 06:15 PM</b>				85.52%	0.00%	14.48%	0.00%	14.34%	85.31%	0.00%	0.35%	0.00%	44.41%	55.59%	0.00%	
<b>PEAK HR VOL :</b>	0	0	0	0	56	0	13	0	16	128	0	0	0	60	90	0	363
<b>PEAK HR FACTOR :</b>	0.000	0.000	0.000	0.000	0.667	0.000	0.464	0.000	0.667	0.842	0.000	0.000	0.000	0.938	0.804	0.000	0.936
					0.690				0.818				0.893				

# National Data & Surveying Services

## Intersection Turning Movement Count

**Location:** Franklin St & Harbor Dr  
**City:** Fort Bragg  
**Control:** 0

**Project ID:** 19-08388-006  
**Date:** 2019-07-18

### Bikes

NS/EW Streets:	Franklin St				Franklin St				Harbor Dr				Harbor Dr				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	0	0	2	0	1	0	0	0	0	0	0	0	3
4:15 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
<b>APPROACH %'s :</b>	0	0	0	0	0	0	3	0	2	0	0	0	0	1	2	0	8
					0.00%	0.00%	100.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	33.33%	66.67%	0.00%	
<b>PEAK HR :</b>	<b>05:15 PM - 06:15 PM</b>																<b>TOTAL</b>
<b>PEAK HR VOL :</b>	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	3
<b>PEAK HR FACTOR :</b>	0.00	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.750
							0.250								0.500		





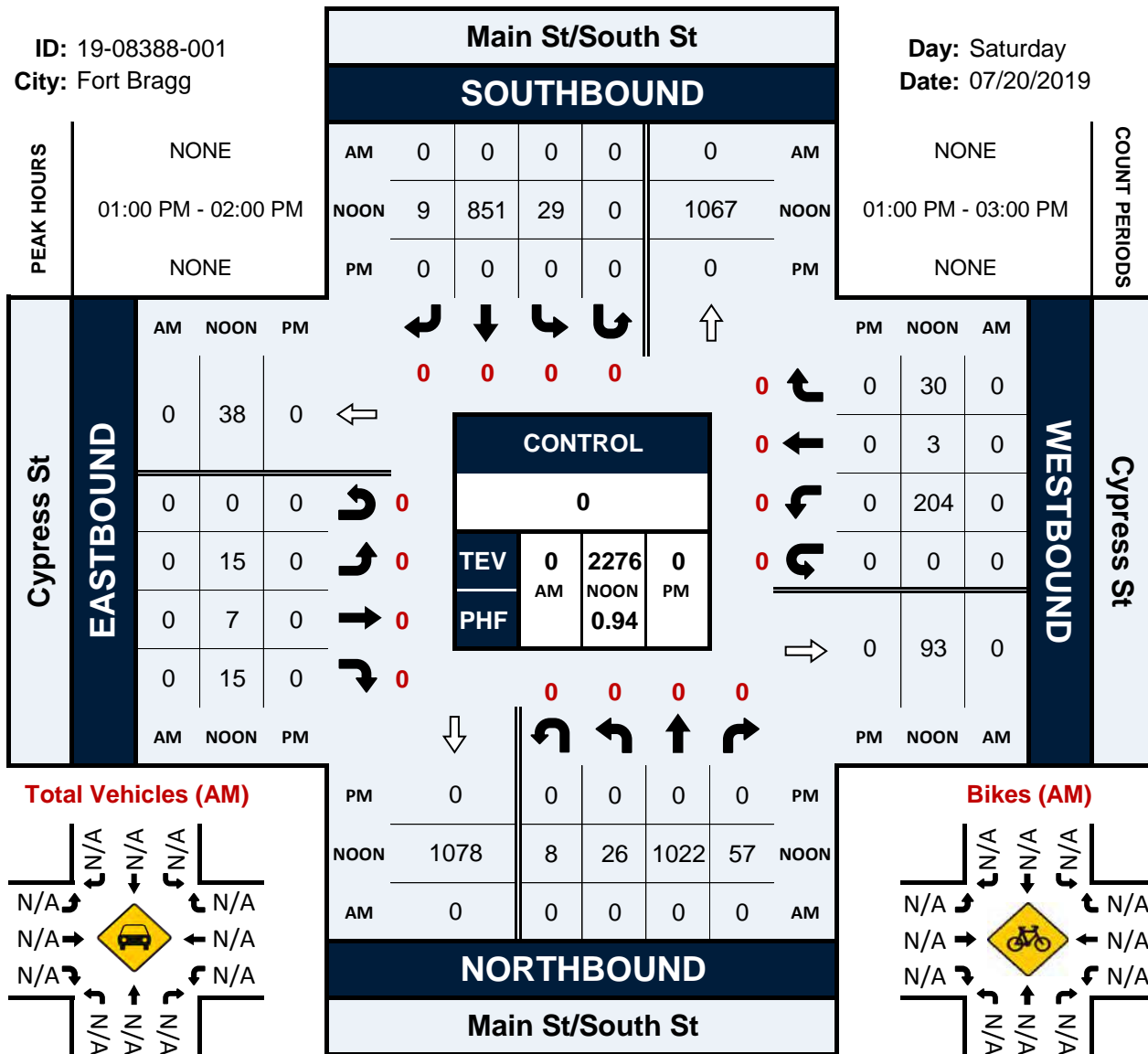
Prepared by National Data & Surveying Services

# Main St/South St & Cypress St

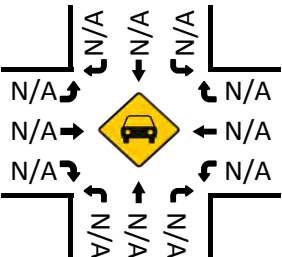
## Peak Hour Turning Movement Count

ID: 19-08388-001  
City: Fort Bragg

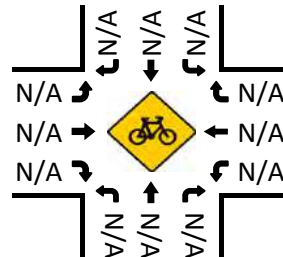
Day: Saturday  
Date: 07/20/2019



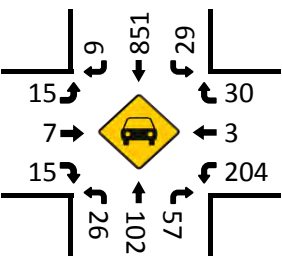
**Total Vehicles (AM)**



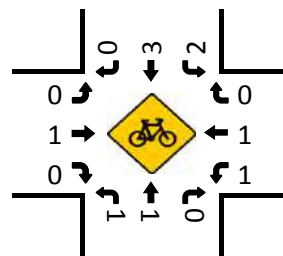
**Bikes (AM)**



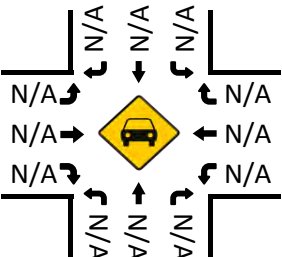
**Total Vehicles (Noon)**



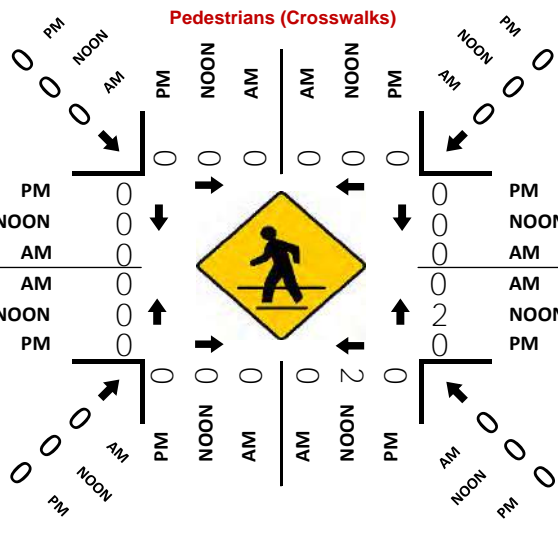
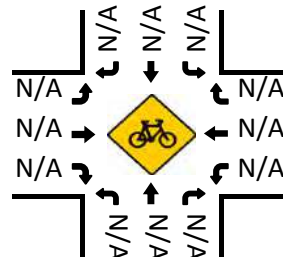
**Bikes (NOON)**



**Total Vehicles (PM)**



**Bikes (PM)**



National Data & Surveying Services

# Intersection Turning Movement Count

**Location:** Main St/South St & Cypress St  
**City:** Fort Bragg  
**Control:**

**Project ID:** 19-08388-001  
**Date:** 7/20/2019

**Total**

NS/EW Streets:	Main St/South St				Main St/South St				Cypress St				Cypress St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
<b>NOON</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
1:00 PM	2	263	15	4	8	239	1	0	3	2	4	0	58	0	7	0	606
1:15 PM	5	234	18	3	9	216	4	0	2	2	2	0	60	1	7	0	563
1:30 PM	5	252	15	0	8	206	1	0	2	3	4	0	43	1	9	0	549
1:45 PM	14	273	9	1	4	190	3	0	8	0	5	0	43	1	7	0	558
2:00 PM	6	239	11	2	7	218	0	0	4	2	5	0	46	0	5	0	545
2:15 PM	4	242	7	1	8	202	7	0	2	0	4	0	46	1	4	0	528
2:30 PM	3	228	22	3	9	190	8	0	4	0	3	0	41	0	11	0	522
2:45 PM	11	257	17	0	5	209	4	0	7	1	8	0	38	2	8	0	567
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
<b>APPROACH %'s :</b>	50	1988	114	14	58	1670	28	0	32	10	35	0	375	6	58	0	4438
	2.31%	91.78%	5.26%	0.65%	3.30%	95.10%	1.59%	0.00%	41.56%	12.99%	45.45%	0.00%	85.42%	1.37%	13.21%	0.00%	
<b>PEAK HR :</b>	<b>01:00 PM - 02:00 PM</b>																<b>TOTAL</b>
<b>PEAK HR VOL :</b>	26	1022	57	8	29	851	9	0	15	7	15	0	204	3	30	0	2276
<b>PEAK HR FACTOR :</b>	0.464	0.936	0.792	0.500	0.806	0.890	0.563	0.000	0.469	0.583	0.750	0.000	0.850	0.750	0.833	0.000	0.939
	0.937				0.896				0.712				0.871				

# National Data & Surveying Services

## Intersection Turning Movement Count

**Location:** Main St/South St & Cypress St  
**City:** Fort Bragg  
**Control:** 0

**Project ID:** 19-08388-001  
**Date:** 7/20/2019

### Bikes

NS/EW Streets:	Main St/South St				Main St/South St				Cypress St				Cypress St				TOTAL
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
1:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	3	0	0	0	0	0	0	1	1	0	0	5
1:45 PM	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	4
2:00 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
2:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	3
2:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	2
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	1	2	2	0	2	4	0	0	0	1	0	0	1	3	2	0	18
<b>APPROACH %'s :</b>	20.00%	40.00%	40.00%	0.00%	33.33%	66.67%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	16.67%	50.00%	33.33%	0.00%	
<b>PEAK HR :</b>	<b>01:00 PM - 02:00 PM</b>																<b>TOTAL</b>
<b>PEAK HR VOL :</b>	1	1	0	0	2	3	0	0	0	1	0	0	1	1	0	0	10
<b>PEAK HR FACTOR :</b>	0.25	0.250	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.250	0.250	0.000	0.000	0.500
	0.250				0.417				0.250				0.250				

## National Data & Surveying Services

# Intersection Turning Movement Count

**Location:** Main St/South St & Cypress St

**Project ID:** 19-08388-001

**City:** Fort Bragg

**Date:** 7/20/2019

### Pedestrians (Crosswalks)

NS/EW Streets:	Main St/South St		Main St/South St		Cypress St		Cypress St		
NOON	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
1:00 PM	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	1	0	0	0	1
1:45 PM	0	0	0	2	1	0	0	0	3
2:00 PM	2	0	0	0	0	5	0	0	7
2:15 PM	0	0	0	0	2	1	0	0	3
2:30 PM	0	0	0	1	4	1	0	0	6
2:45 PM	0	0	0	0	1	0	0	0	1
<b>TOTAL VOLUMES :</b>	EB 2	WB 0	EB 0	WB 3	NB 9	SB 7	NB 0	SB 0	TOTAL 21
<b>APPROACH %'s :</b>	100.00%	0.00%	0.00%	100.00%	56.25%	43.75%			
<b>PEAK HR :</b>	<b>01:00 PM - 02:00 PM</b>								TOTAL
<b>PEAK HR VOL :</b>	0	0	0	2	2	0	0	0	4
<b>PEAK HR FACTOR :</b>			0.250	0.250	0.500	0.500			0.333

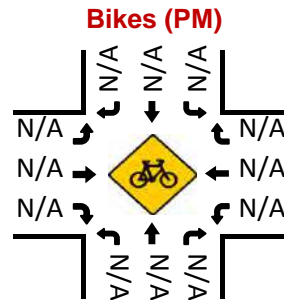
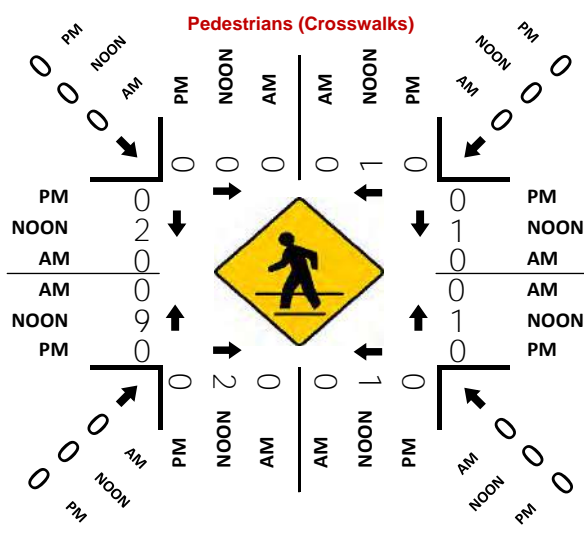
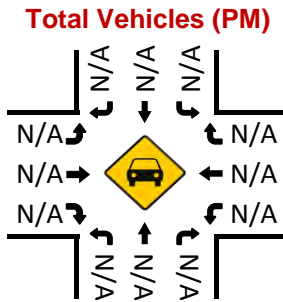
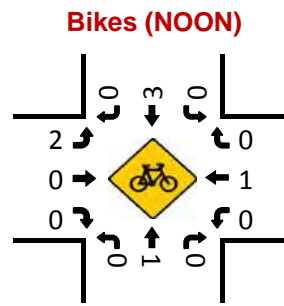
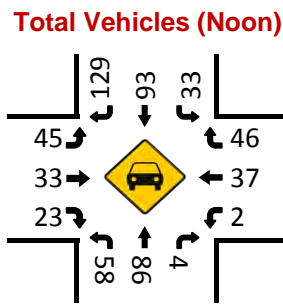
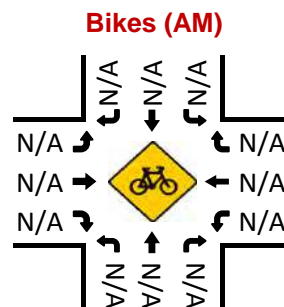
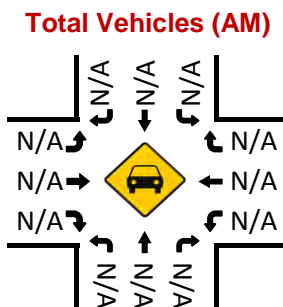
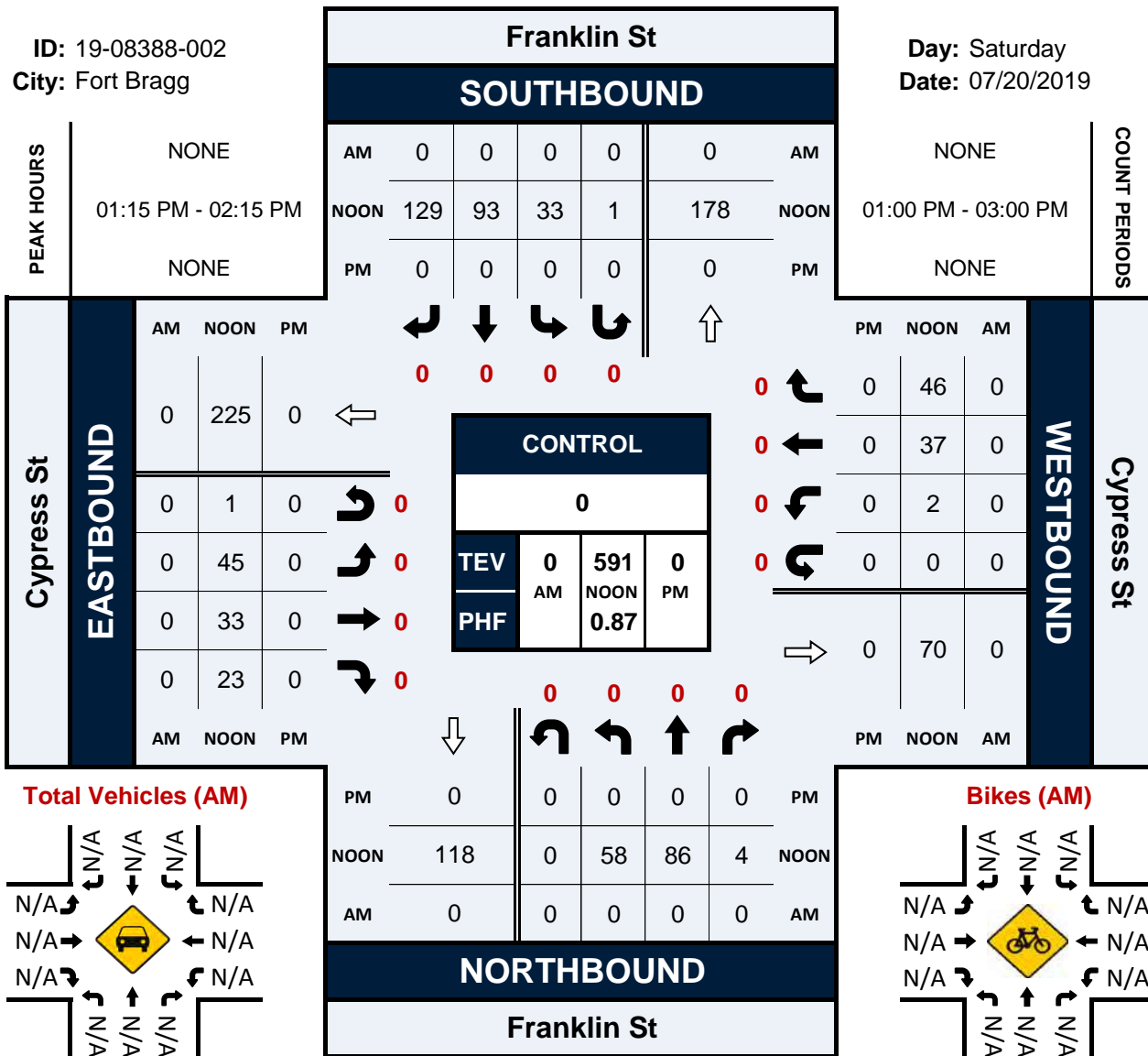
Prepared by National Data & Surveying Services

# Franklin St & Cypress St

## Peak Hour Turning Movement Count

ID: 19-08388-002  
City: Fort Bragg

Day: Saturday  
Date: 07/20/2019



National Data & Surveying Services

# Intersection Turning Movement Count

Location: Franklin St & Cypress St  
 City: Fort Bragg  
 Control:

Project ID: 19-08388-002  
 Date: 7/20/2019

**Total**

NS/EW Streets:	Franklin St				Franklin St				Cypress St				Cypress St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
<b>NOON</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
1:00 PM	19	16	2	0	7	24	31	0	10	10	3	0	1	6	4	0	133
1:15 PM	17	24	1	0	5	29	37	0	12	11	4	1	1	10	18	0	170
1:30 PM	18	18	2	0	13	21	29	0	13	9	6	0	1	7	10	0	147
1:45 PM	10	20	0	0	8	26	27	1	8	7	3	0	0	13	8	0	131
2:00 PM	13	24	1	0	7	17	36	0	12	6	10	0	0	7	10	0	143
2:15 PM	7	15	0	0	7	7	34	0	5	5	4	0	0	4	5	0	93
2:30 PM	12	22	1	0	11	18	34	0	20	12	4	0	2	4	9	0	149
2:45 PM	11	19	2	0	8	16	33	0	11	9	3	0	0	7	3	0	122
<b>TOTAL VOLUMES :</b>	107	158	9	0	66	158	261	1	91	69	37	1	5	58	67	0	1088
<b>APPROACH %'s :</b>	39.05%	57.66%	3.28%	0.00%	13.58%	32.51%	53.70%	0.21%	45.96%	34.85%	18.69%	0.51%	3.85%	44.62%	51.54%	0.00%	
<b>PEAK HR :</b>	<b>01:15 PM - 02:15 PM</b>																<b>TOTAL</b>
<b>PEAK HR VOL :</b>	58	86	4	0	33	93	129	1	45	33	23	1	2	37	46	0	591
<b>PEAK HR FACTOR :</b>	0.806	0.896	0.500	0.000	0.635	0.802	0.872	0.250	0.865	0.750	0.575	0.250	0.500	0.712	0.639	0.000	0.869
	0.881				0.901				0.911				0.733				

# National Data & Surveying Services

## Intersection Turning Movement Count

**Location:** Franklin St & Cypress St  
**City:** Fort Bragg  
**Control:** 0

**Project ID:** 19-08388-002  
**Date:** 7/20/2019

### Bikes

NS/EW Streets:	Franklin St				Franklin St				Cypress St				Cypress St				
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
1:00 PM	0	1	0	0	0	1	0	0	1	0	0	0	0	0	0	0	3
1:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
1:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	2
1:45 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
2:00 PM	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
2:15 PM	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
<b>APPROACH %'s :</b>	0	4	0	0	1	4	1	0	3	0	0	0	0	1	0	0	14
	0.00%	100.00%	0.00%	0.00%	16.67%	66.67%	16.67%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
<b>PEAK HR :</b>	<b>01:15 PM - 02:15 PM</b>																<b>TOTAL</b>
<b>PEAK HR VOL :</b>	0	1	0	0	0	3	0	0	2	0	0	0	0	1	0	0	7
<b>PEAK HR FACTOR :</b>	0.00	0.250	0.000	0.000	0.000	0.750	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.875
	0.250				0.750				0.250				0.250				

## National Data & Surveying Services

# Intersection Turning Movement Count

**Location:** Franklin St & Cypress St  
**City:** Fort Bragg

**Project ID:** 19-08388-002  
**Date:** 7/20/2019

### Pedestrians (Crosswalks)

NS/EW Streets:	Franklin St		Franklin St		Cypress St		Cypress St		
NOON	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
1:00 PM	1	0	1	0	0	2	1	7	12
1:15 PM	0	1	1	0	0	1	2	2	7
1:30 PM	0	0	0	0	0	0	7	0	7
1:45 PM	0	0	0	1	1	0	0	0	2
2:00 PM	0	0	1	0	0	0	0	0	1
2:15 PM	1	0	0	0	1	0	0	1	3
2:30 PM	0	0	0	0	0	1	0	1	2
2:45 PM	0	0	0	1	2	2	0	1	6
<b>TOTAL VOLUMES :</b>	EB 2	WB 1	EB 3	WB 2	NB 4	SB 6	NB 10	SB 12	TOTAL 40
<b>APPROACH %'s :</b>	66.67%	33.33%	60.00%	40.00%	40.00%	60.00%	45.45%	54.55%	
<b>PEAK HR :</b>	<b>01:15 PM - 02:15 PM</b>								
<b>PEAK HR VOL :</b>	0	1	2	1	1	1	9	2	TOTAL 17
<b>PEAK HR FACTOR :</b>		0.250	0.500	0.250	0.250	0.250	0.321	0.250	0.607
	0.250		0.750		0.500		0.393		



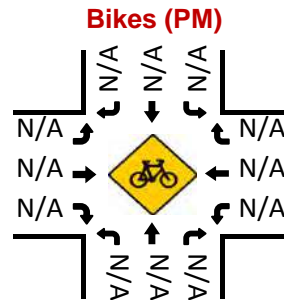
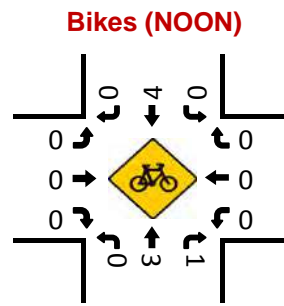
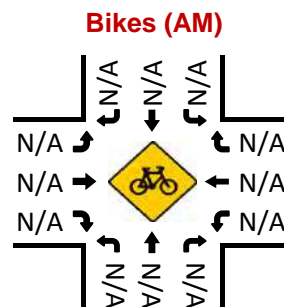
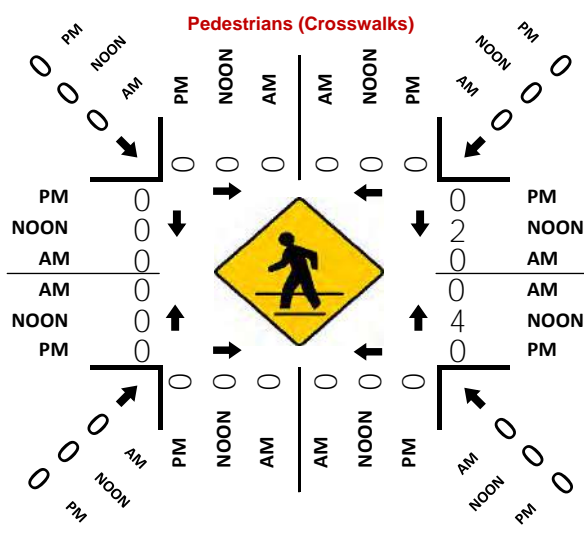
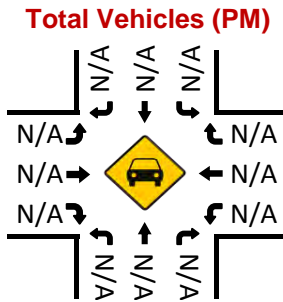
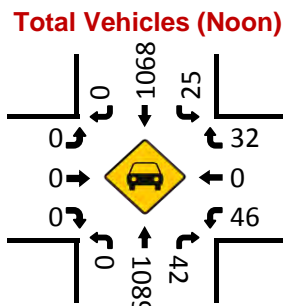
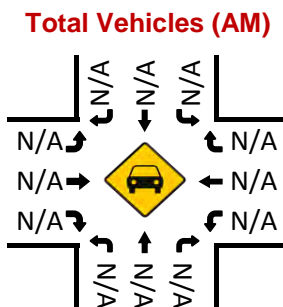
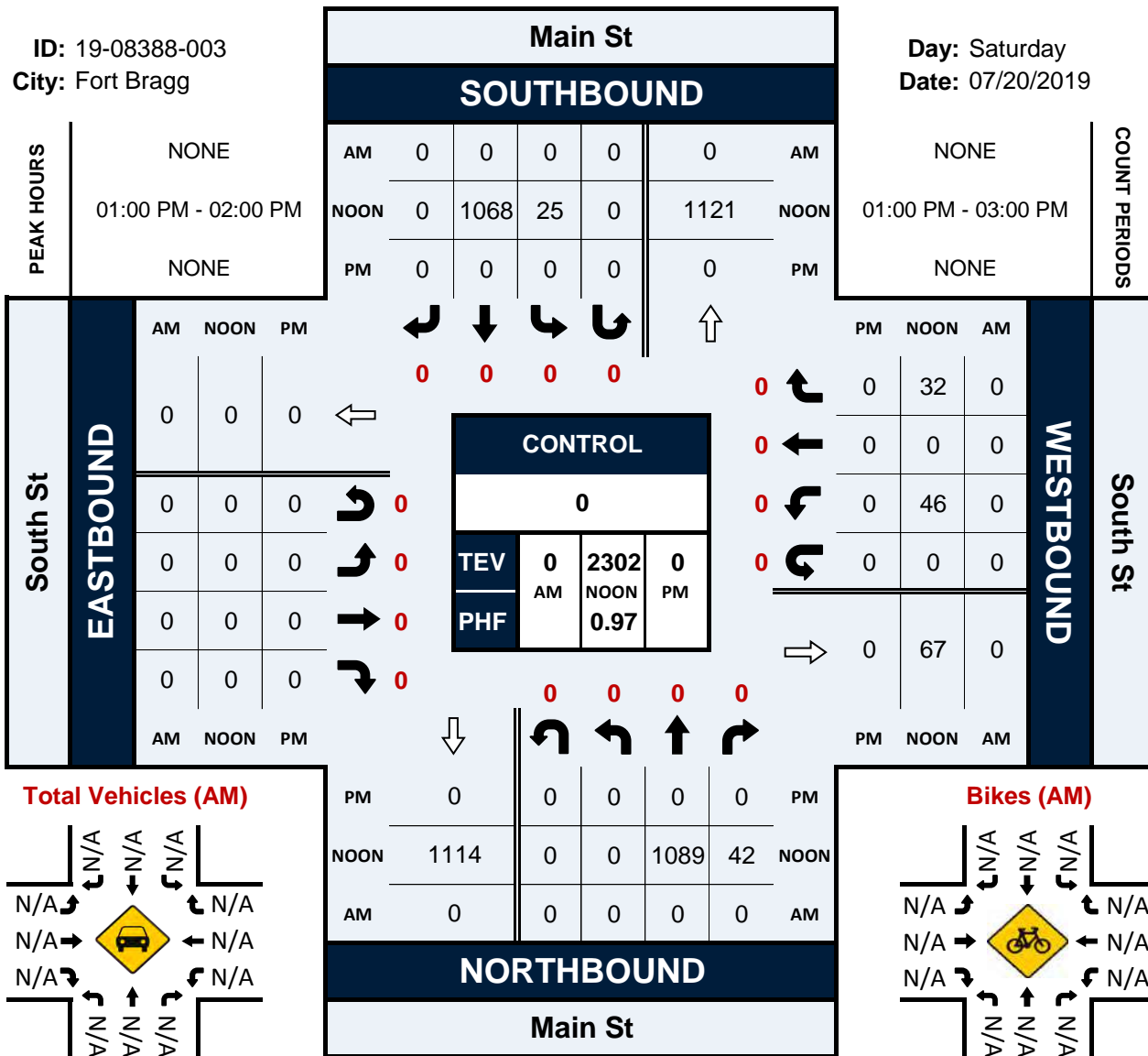
Prepared by National Data & Surveying Services

# Main St & South St

## Peak Hour Turning Movement Count

ID: 19-08388-003  
City: Fort Bragg

Day: Saturday  
Date: 07/20/2019



National Data & Surveying Services

# Intersection Turning Movement Count

Location: Main St & South St  
 City: Fort Bragg  
 Control:

Project ID: 19-08388-003  
 Date: 7/20/2019

**Total**

NS/EW Streets:	Main St				Main St				South St				South St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
<b>NOON</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
1:00 PM	0	269	13	0	4	292	0	0	0	0	0	0	10	0	7	0	595
1:15 PM	0	259	14	0	9	280	0	0	0	0	0	0	13	0	7	0	582
1:30 PM	0	265	7	0	5	249	0	0	0	0	0	0	9	0	7	0	542
1:45 PM	0	296	8	0	7	247	0	0	0	0	0	0	14	0	11	0	583
2:00 PM	0	252	7	0	3	259	0	0	0	0	0	0	16	0	9	0	546
2:15 PM	0	244	5	0	3	252	0	0	0	0	0	0	12	0	9	0	525
2:30 PM	0	256	6	0	3	247	0	0	0	0	0	0	8	0	6	0	526
2:45 PM	0	282	7	0	7	253	0	0	0	0	0	0	10	0	5	0	564
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
<b>APPROACH %'s :</b>	0.00%	96.94%	3.06%	0.00%	1.93%	98.07%	0.00%	0.00%	0	0	0	0	60.13%	0.00%	39.87%	0.00%	4463
<b>PEAK HR :</b>	<b>01:00 PM - 02:00 PM</b>																TOTAL
<b>PEAK HR VOL :</b>	0	1089	42	0	25	1068	0	0	0	0	0	0	46	0	32	0	2302
<b>PEAK HR FACTOR :</b>	0.000	0.920	0.750	0.000	0.694	0.914	0.000	0.000	0.000	0.000	0.000	0.000	0.821	0.000	0.727	0.000	0.967
	0.930				0.923								0.780				

# National Data & Surveying Services

## Intersection Turning Movement Count

**Location:** Main St & South St  
**City:** Fort Bragg  
**Control:** 0

**Project ID:** 19-08388-003  
**Date:** 7/20/2019

### Bikes

NS/EW Streets:	Main St				Main St				South St				South St				
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
1:00 PM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
1:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1:30 PM	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	4
1:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2:00 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
2:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
<b>APPROACH %'s :</b>	0	6	1	0	0	5	0	0	0	0	0	0	0	0	0	0	12
	0.00%	85.71%	14.29%	0.00%	0.00%	100.00%	0.00%	0.00%									
<b>PEAK HR :</b>	<b>01:00 PM - 02:00 PM</b>																TOTAL
<b>PEAK HR VOL :</b>	0	3	1	0	0	4	0	0	0	0	0	0	0	0	0	0	8
<b>PEAK HR FACTOR :</b>	0.00	0.750	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500
	0.500				0.250												

# National Data & Surveying Services

## Intersection Turning Movement Count

**Location:** Main St & South St  
**City:** Fort Bragg

**Project ID:** 19-08388-003  
**Date:** 7/20/2019

### Pedestrians (Crosswalks)

NS/EW Streets:	Main St		Main St		South St		South St		
NOON	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
1:00 PM	0	0	0	0	1	1	0	0	2
1:15 PM	0	0	0	0	0	1	0	0	1
1:30 PM	0	0	0	0	1	0	0	0	1
1:45 PM	0	0	0	0	2	0	0	0	2
2:00 PM	0	0	0	0	0	4	0	0	4
2:15 PM	0	0	0	0	3	0	0	0	3
2:30 PM	0	0	0	0	3	1	0	0	4
2:45 PM	0	0	0	0	0	1	0	0	1
<b>TOTAL VOLUMES :</b>	0	0	0	0	10	8	0	0	18
<b>APPROACH %'s :</b>					55.56%	44.44%			
<b>PEAK HR :</b>	<b>01:00 PM - 02:00 PM</b>								TOTAL
<b>PEAK HR VOL :</b>	0	0	0	0	4	2	0	0	6
<b>PEAK HR FACTOR :</b>					0.500	0.500			0.750

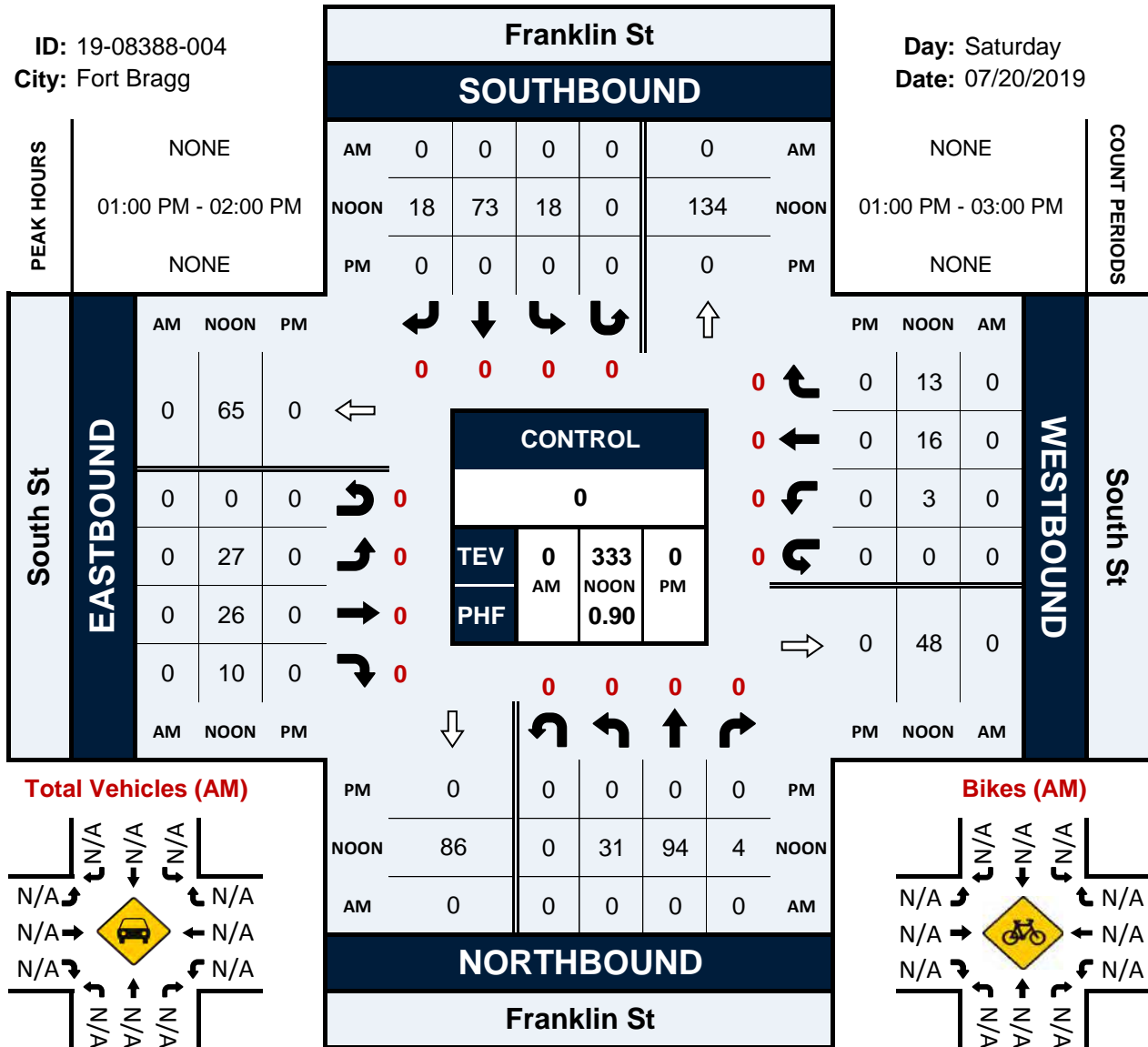
Prepared by National Data & Surveying Services

# Franklin St & South St

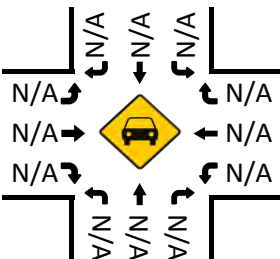
## Peak Hour Turning Movement Count

ID: 19-08388-004  
City: Fort Bragg

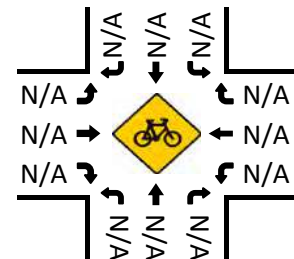
Day: Saturday  
Date: 07/20/2019



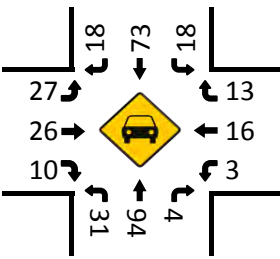
**Total Vehicles (AM)**



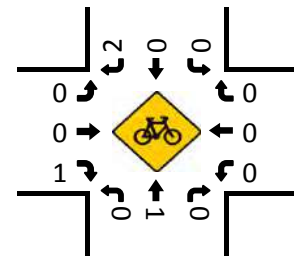
**Bikes (AM)**



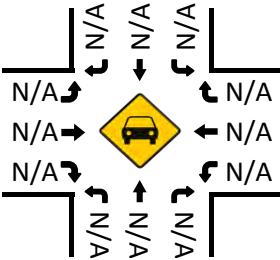
**Total Vehicles (Noon)**



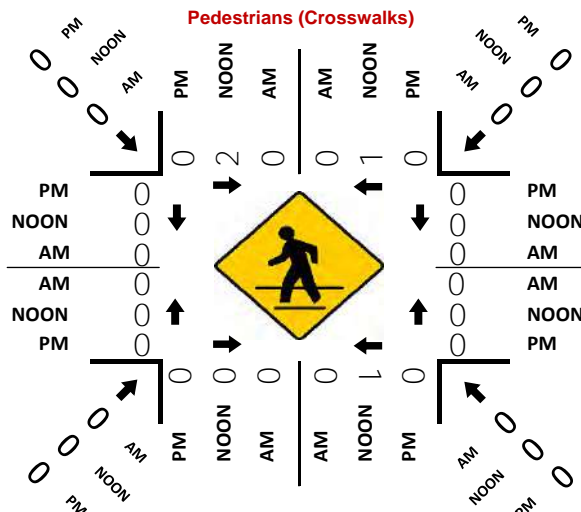
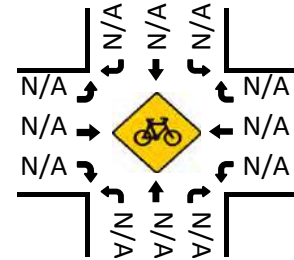
**Bikes (NOON)**



**Total Vehicles (PM)**



**Bikes (PM)**



National Data & Surveying Services

# Intersection Turning Movement Count

Location: Franklin St & South St  
 City: Fort Bragg  
 Control:

Project ID: 19-08388-004  
 Date: 7/20/2019

**Total**

NS/EW Streets:	Franklin St				Franklin St				South St				South St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
<b>NOON</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
1:00 PM	8	23	0	0	1	21	1	0	6	12	0	0	1	0	5	0	78
1:15 PM	5	31	2	0	5	21	6	0	4	5	5	0	0	5	4	0	93
1:30 PM	8	21	1	0	7	13	4	0	10	5	2	0	1	6	4	0	82
1:45 PM	10	19	1	0	5	18	7	0	7	4	3	0	1	5	0	0	80
2:00 PM	9	23	1	0	2	16	5	0	6	5	0	0	1	4	6	0	78
2:15 PM	7	19	2	0	1	7	2	0	2	1	0	0	1	4	1	0	47
2:30 PM	4	25	0	0	2	17	3	1	2	5	2	0	1	4	5	0	71
2:45 PM	2	20	1	0	7	8	3	0	4	6	0	0	0	3	5	0	59
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	53	181	8	0	30	121	31	1	41	43	12	0	6	31	30	0	588
<b>APPROACH %'s :</b>	21.90%	74.79%	3.31%	0.00%	16.39%	66.12%	16.94%	0.55%	42.71%	44.79%	12.50%	0.00%	8.96%	46.27%	44.78%	0.00%	
<b>PEAK HR :</b>	<b>01:00 PM - 02:00 PM</b>																TOTAL
<b>PEAK HR VOL :</b>	31	94	4	0	18	73	18	0	27	26	10	0	3	16	13	0	333
<b>PEAK HR FACTOR :</b>	0.775	0.758	0.500	0.000	0.643	0.869	0.643	0.000	0.675	0.542	0.500	0.000	0.750	0.667	0.650	0.000	0.895
	0.849				0.852				0.875				0.727				

# National Data & Surveying Services

## Intersection Turning Movement Count

**Location:** Franklin St & South St  
**City:** Fort Bragg  
**Control:** 0

**Project ID:** 19-08388-004  
**Date:** 7/20/2019

### Bikes

NS/EW Streets:	Franklin St				Franklin St				South St				South St				
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0	3
1:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
<b>APPROACH %'s :</b>	0	3	0	0	0	0	2	0	0	0	1	0	1	0	0	0	7
	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100.00%	0.00%	0.00%	0.00%	
<b>PEAK HR :</b>	<b>01:00 PM - 02:00 PM</b>																TOTAL
<b>PEAK HR VOL :</b>	0	1	0	0	0	0	2	0	0	0	1	0	0	0	0	0	4
<b>PEAK HR FACTOR :</b>	0.00	0.250	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.333
	0.250				0.250				0.250								

## National Data & Surveying Services

# Intersection Turning Movement Count

**Location:** Franklin St & South St  
**City:** Fort Bragg

**Project ID:** 19-08388-004  
**Date:** 7/20/2019

### Pedestrians (Crosswalks)

NS/EW Streets:	Franklin St		Franklin St		South St		South St		
NOON	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
1:00 PM	0	0	0	0	0	0	0	0	0
1:15 PM	2	0	0	0	0	0	0	0	2
1:30 PM	0	1	0	0	0	0	0	0	1
1:45 PM	0	0	0	1	0	0	0	0	1
2:00 PM	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	1	0	1
2:45 PM	0	0	0	0	0	0	1	0	1
<b>TOTAL VOLUMES :</b>	EB 2	WB 1	EB 0	WB 1	NB 0	SB 0	NB 0	SB 2	TOTAL 6
<b>APPROACH %'s :</b>	66.67%	33.33%	0.00%	100.00%			0.00%	100.00%	
<b>PEAK HR :</b>	<b>01:00 PM - 02:00 PM</b>								TOTAL
<b>PEAK HR VOL :</b>	2	1	0	1	0	0	0	0	4
<b>PEAK HR FACTOR :</b>	0.250	0.250	0.250	0.250					0.500
	0.375		0.250						



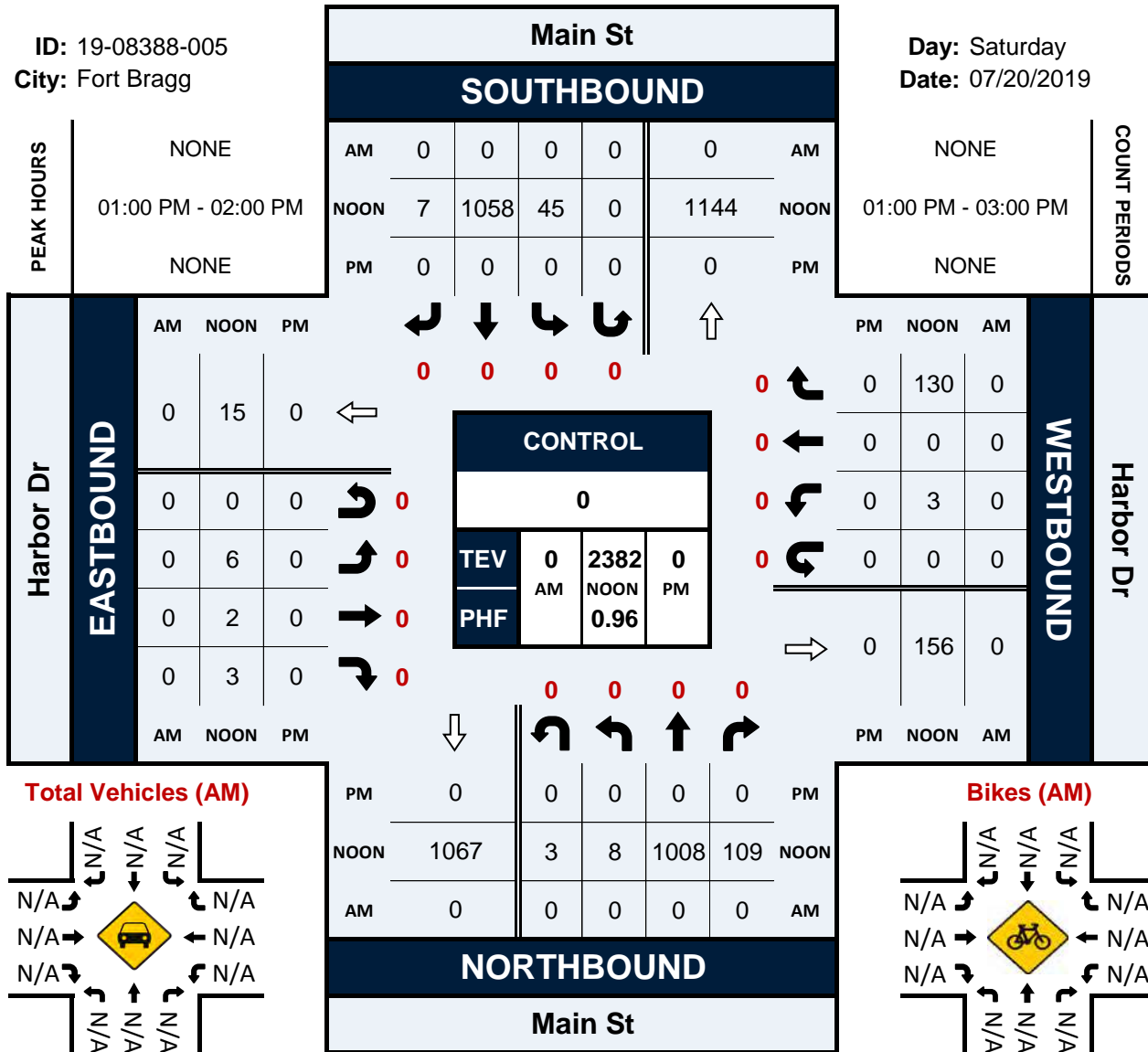
Prepared by National Data & Surveying Services

# Main St & Harbor Dr

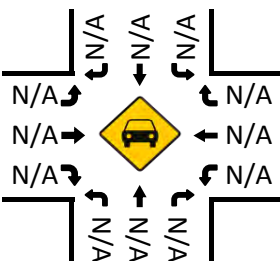
## Peak Hour Turning Movement Count

ID: 19-08388-005  
City: Fort Bragg

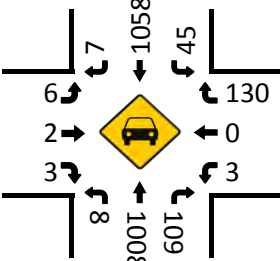
Day: Saturday  
Date: 07/20/2019



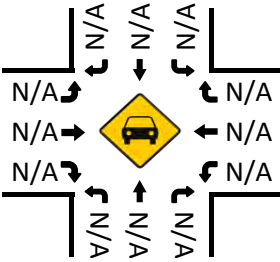
**Total Vehicles (AM)**



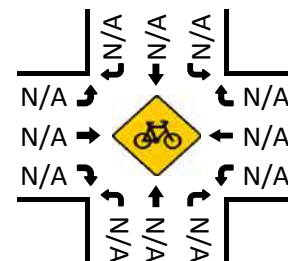
**Total Vehicles (Noon)**



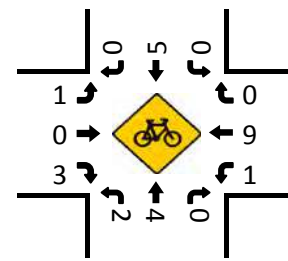
**Total Vehicles (PM)**



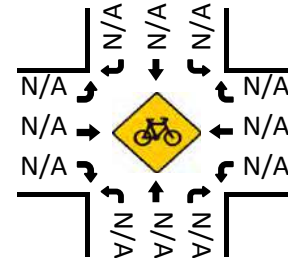
**Bikes (AM)**



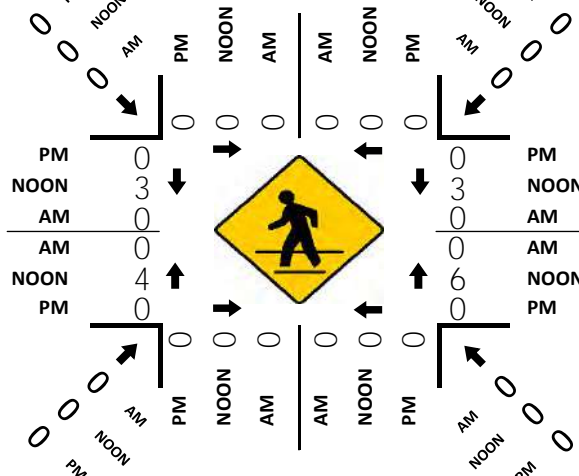
**Bikes (NOON)**



**Bikes (PM)**



**Pedestrians (Crosswalks)**



National Data & Surveying Services

# Intersection Turning Movement Count

**Location:** Main St & Harbor Dr  
**City:** Fort Bragg  
**Control:**

**Project ID:** 19-08388-005  
**Date:** 7/20/2019

**Total**

NS/EW Streets:	Main St				Main St				Harbor Dr				Harbor Dr				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
<b>NOON</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
1:00 PM	1	255	19	0	16	286	2	0	2	1	1	0	1	0	34	0	618
1:15 PM	2	239	32	1	6	288	1	0	1	0	0	0	1	0	41	0	612
1:30 PM	3	245	29	1	11	242	3	0	2	1	1	0	0	0	22	0	560
1:45 PM	2	269	29	1	12	242	1	0	1	0	1	0	1	0	33	0	592
2:00 PM	2	236	24	2	9	264	5	0	5	0	3	0	0	0	25	0	575
2:15 PM	2	227	25	0	23	235	1	0	1	0	2	0	0	0	28	0	544
2:30 PM	1	228	20	0	16	238	2	0	0	0	1	0	2	0	35	0	543
2:45 PM	0	253	23	0	14	246	0	1	1	1	2	0	2	0	37	0	580
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	13	1952	201	5	107	2041	15	1	13	3	11	0	7	0	255	0	4624
<b>APPROACH %'s :</b>	0.60%	89.91%	9.26%	0.23%	4.94%	94.32%	0.69%	0.05%	48.15%	11.11%	40.74%	0.00%	2.67%	0.00%	97.33%	0.00%	
<b>PEAK HR :</b>	<b>01:00 PM - 02:00 PM</b>																TOTAL
<b>PEAK HR VOL :</b>	8	1008	109	3	45	1058	7	0	6	2	3	0	3	0	130	0	2382
<b>PEAK HR FACTOR :</b>	0.667	0.937	0.852	0.750	0.703	0.918	0.583	0.000	0.750	0.500	0.750	0.000	0.750	0.000	0.793	0.000	0.964
	0.937				0.913				0.688				0.792				

# National Data & Surveying Services

## Intersection Turning Movement Count

**Location:** Main St & Harbor Dr  
**City:** Fort Bragg  
**Control:** 0

**Project ID:** 19-08388-005  
**Date:** 7/20/2019

### Bikes

NS/EW Streets:	Main St				Main St				Harbor Dr				Harbor Dr				
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
1:00 PM	0	2	0	0	0	0	0	0	1	0	3	0	0	0	0	0	6
1:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2
1:30 PM	2	0	0	0	0	5	0	0	0	0	0	0	0	9	0	0	16
1:45 PM	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2
2:00 PM	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	2
2:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2:30 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2:45 PM	2	0	0	0	0	1	0	0	0	2	1	0	0	0	0	0	6
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
<b>APPROACH %'s :</b>	5	5	1	0	0	6	0	0	1	2	5	1	1	9	0	0	36
	45.45%	45.45%	9.09%	0.00%	0.00%	100.00%	0.00%	0.00%	11.11%	22.22%	55.56%	11.11%	10.00%	90.00%	0.00%	0.00%	
<b>PEAK HR :</b>	<b>01:00 PM - 02:00 PM</b>																TOTAL
<b>PEAK HR VOL :</b>	2	4	0	0	0	5	0	0	1	0	3	1	1	9	0	0	26
<b>PEAK HR FACTOR :</b>	0.25	0.500	0.000	0.000	0.000	0.250	0.000	0.000	0.250	0.000	0.250	0.250	0.250	0.250	0.000	0.000	0.406
	0.750				0.250				0.313				0.278				

## National Data & Surveying Services

# Intersection Turning Movement Count

**Location:** Main St & Harbor Dr  
**City:** Fort Bragg

**Project ID:** 19-08388-005  
**Date:** 7/20/2019

### Pedestrians (Crosswalks)

NS/EW Streets:	Main St		Main St		Harbor Dr		Harbor Dr		
NOON	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
1:00 PM	0	0	0	0	1	1	2	3	7
1:15 PM	0	0	0	0	4	1	2	0	7
1:30 PM	0	0	0	0	1	0	0	0	1
1:45 PM	0	0	0	0	0	1	0	0	1
2:00 PM	0	0	0	0	1	0	0	2	3
2:15 PM	0	0	0	0	2	0	0	0	2
2:30 PM	0	0	0	0	4	0	0	0	4
2:45 PM	0	0	0	0	0	1	0	0	1
<b>TOTAL VOLUMES :</b>	0	0	0	0	13	4	4	5	26
<b>APPROACH %'s :</b>					76.47%	23.53%	44.44%	55.56%	
<b>PEAK HR :</b>	<b>01:00 PM - 02:00 PM</b>								TOTAL
<b>PEAK HR VOL :</b>	0	0	0	0	6	3	4	3	16
<b>PEAK HR FACTOR :</b>					0.375	0.750	0.500	0.250	0.571
					0.450		0.350		

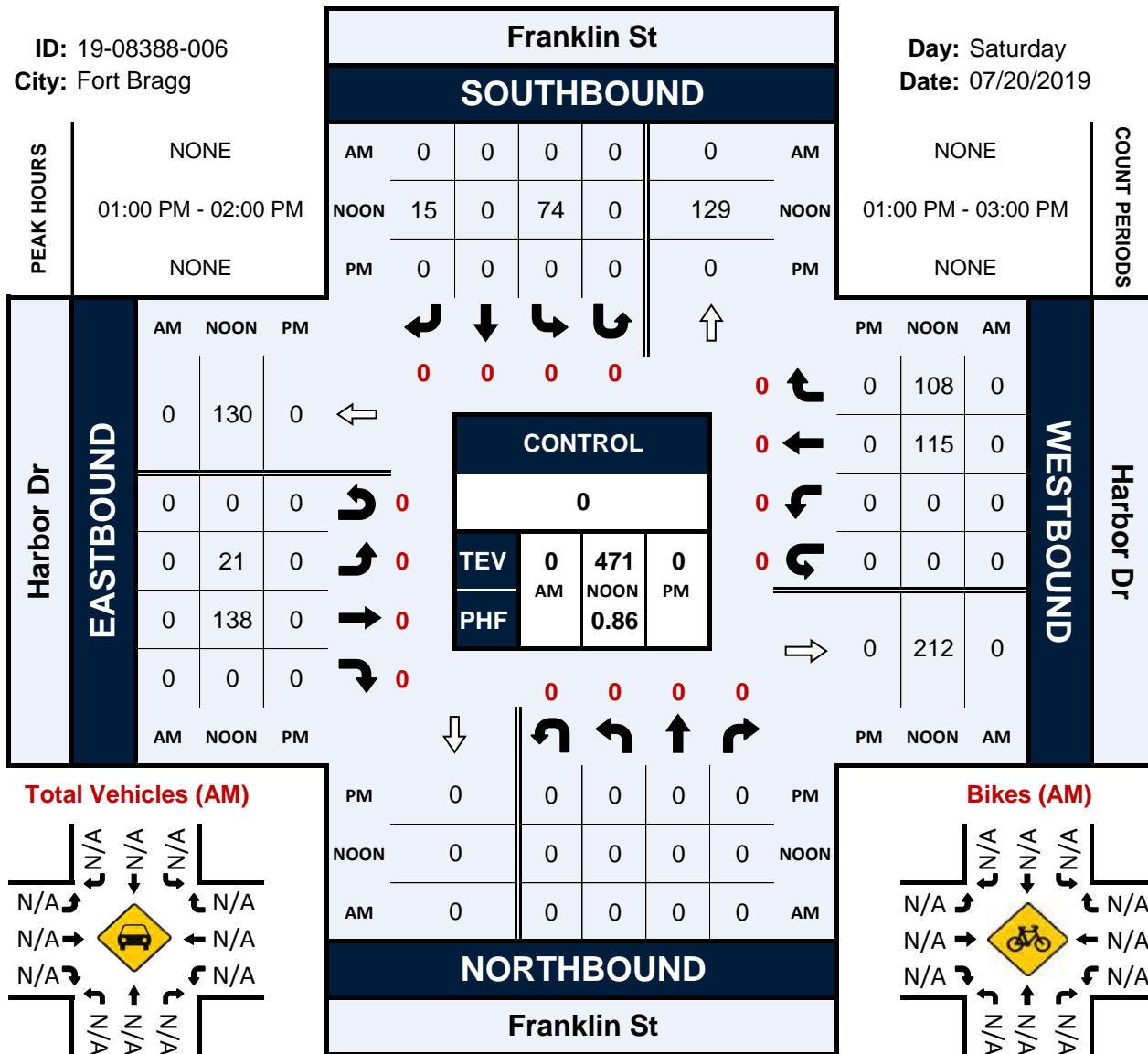
Prepared by National Data & Surveying Services

# Franklin St & Harbor Dr

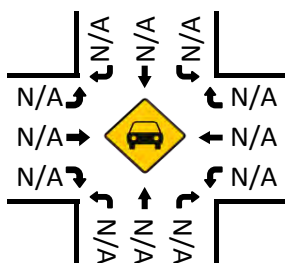
## Peak Hour Turning Movement Count

ID: 19-08388-006  
City: Fort Bragg

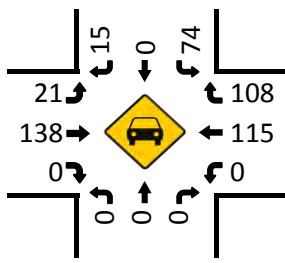
Day: Saturday  
Date: 07/20/2019



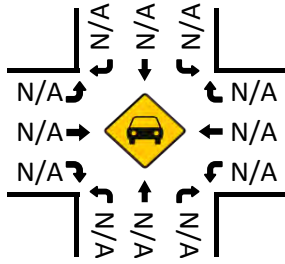
**Total Vehicles (AM)**



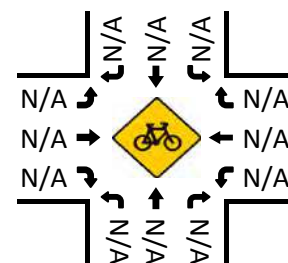
**Total Vehicles (Noon)**



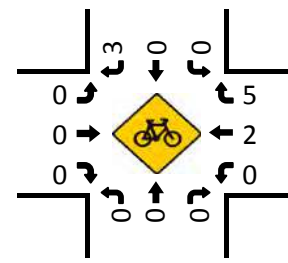
**Total Vehicles (PM)**



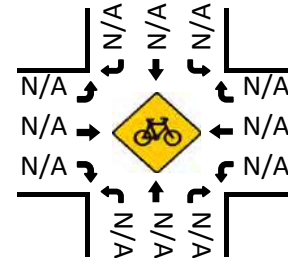
**Bikes (AM)**



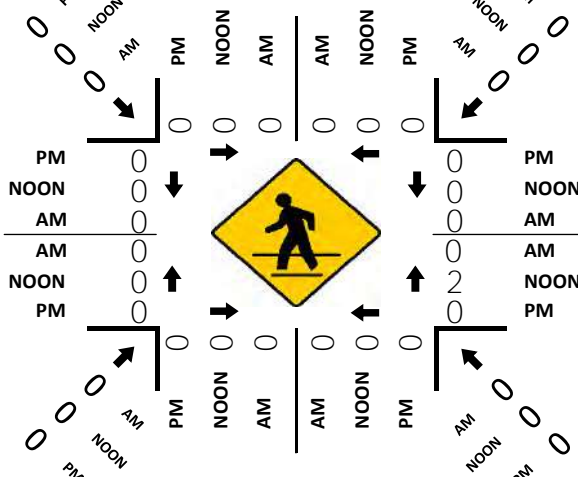
**Bikes (NOON)**



**Bikes (PM)**



**Pedestrians (Crosswalks)**



National Data & Surveying Services

# Intersection Turning Movement Count

Location: Franklin St & Harbor Dr  
 City: Fort Bragg  
 Control:

Project ID: 19-08388-006  
 Date: 7/20/2019

**Total**

NS/EW Streets:	Franklin St				Franklin St				Harbor Dr				Harbor Dr				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
<b>NOON</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
1:00 PM	0	0	0	0	19	0	4	0	6	35	0	0	0	30	23	0	117
1:15 PM	0	0	0	0	23	0	3	0	5	33	0	0	0	39	34	0	137
1:30 PM	0	0	0	0	14	0	3	0	5	33	0	0	0	20	24	0	99
1:45 PM	0	0	0	0	18	0	5	0	5	37	0	0	0	26	27	0	118
2:00 PM	0	0	0	0	11	0	3	0	5	27	0	0	0	29	26	0	101
2:15 PM	0	0	0	0	8	0	2	0	6	39	0	0	0	31	21	0	107
2:30 PM	0	0	0	0	16	0	4	0	8	32	0	0	0	33	21	0	114
2:45 PM	0	0	0	0	5	0	3	0	3	35	0	0	0	37	20	0	103
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
<b>APPROACH %'s :</b>	0	0	0	0	114	0	27	0	43	271	0	0	0	245	196	0	896
					80.85%	0.00%	19.15%	0.00%	13.69%	86.31%	0.00%	0.00%	0.00%	55.56%	44.44%	0.00%	
<b>PEAK HR :</b>	<b>01:00 PM - 02:00 PM</b>																<b>TOTAL</b>
<b>PEAK HR VOL :</b>	0	0	0	0	74	0	15	0	21	138	0	0	0	115	108	0	471
<b>PEAK HR FACTOR :</b>	0.000	0.000	0.000	0.000	0.804	0.000	0.750	0.000	0.875	0.932	0.000	0.000	0.000	0.737	0.794	0.000	0.859
					0.856				0.946				0.764				

# National Data & Surveying Services

## Intersection Turning Movement Count

**Location:** Franklin St & Harbor Dr  
**City:** Fort Bragg  
**Control:** 0

**Project ID:** 19-08388-006  
**Date:** 7/20/2019

### Bikes

NS/EW Streets:	Franklin St				Franklin St				Harbor Dr				Harbor Dr				
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	2	5	0	8
1:45 PM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
2:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
2:15 PM	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
<b>APPROACH %'s :</b>	0	0	0	0	0	0	4	0	2	2	0	0	0	2	5	0	15
					0.00%	0.00%	100.00%	0.00%	50.00%	50.00%	0.00%	0.00%	0.00%	28.57%	71.43%	0.00%	
<b>PEAK HR :</b>	<b>01:00 PM - 02:00 PM</b>																<b>TOTAL</b>
<b>PEAK HR VOL :</b>	0	0	0	0	0	0	3	0	0	0	0	0	0	2	5	0	10
<b>PEAK HR FACTOR :</b>	0.00	0.000	0.000	0.000	0.000	0.000	0.375	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.313
							0.375							0.250	0.250		

## National Data & Surveying Services

# Intersection Turning Movement Count

**Location:** Franklin St & Harbor Dr  
**City:** Fort Bragg

**Project ID:** 19-08388-006  
**Date:** 7/20/2019

### Pedestrians (Crosswalks)

NS/EW Streets:	Franklin St		Franklin St		Harbor Dr		Harbor Dr		
NOON	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
1:00 PM	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	2	0	0	0	2
1:30 PM	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	1	0	1
2:15 PM	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	1	0	0	1
2:45 PM	0	0	0	0	0	0	0	0	0
<b>TOTAL VOLUMES :</b>	0	0	0	0	2	1	1	0	4
<b>APPROACH %'s :</b>					66.67%	33.33%	100.00%	0.00%	
<b>PEAK HR :</b>	<b>01:00 PM - 02:00 PM</b>								TOTAL
<b>PEAK HR VOL :</b>	0	0	0	0	2	0	0	0	2
<b>PEAK HR FACTOR :</b>					0.250	0.250			0.250



Prepared by National Data & Surveying Services

### VOLUME

Cypress St Bet. Main St & Franklin St

Day: Thursday  
Date: 7/18/2019

City: Fort Bragg  
Project #: CA19\_8387\_001

DAILY TOTALS					NB	SB	EB	WB	Total					
					0	0	1,701	3,377	5,078					
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL			
00:00			1	2	3	12:00			37	85	122			
00:15			1	3	4	12:15			34	90	124			
00:30			0	0	0	12:30			42	97	139			
00:45			0	2	1	6	12:45		44	157	74	346	118	503
01:00			0	0	0	13:00			53	85	138			
01:15			0	0	0	13:15			44	78	122			
01:30			0	0	0	13:30			55	64	119			
01:45			1	1	4	4	13:45		52	204	80	307	132	511
02:00			1	3	4	14:00			41	84	125			
02:15			0	1	1	14:15			40	70	110			
02:30			0	2	2	14:30			30	74	104			
02:45			0	1	0	6	14:45		34	145	68	296	102	441
03:00			0	2	2	15:00			27	75	102			
03:15			0	0	0	15:15			34	70	104			
03:30			1	0	1	15:30			28	63	91			
03:45			0	1	5	7	15:45		25	114	80	288	105	402
04:00			0	0	0	16:00			33	81	114			
04:15			5	2	7	16:15			23	64	87			
04:30			2	2	4	16:30			21	72	93			
04:45			5	12	3	7	16:45		29	106	57	274	86	380
05:00			4	2	6	17:00			21	98	119			
05:15			8	1	9	17:15			35	80	115			
05:30			8	2	10	17:30			18	73	91			
05:45			3	23	5	10	17:45		16	90	57	308	73	398
06:00			6	5	11	18:00			22	65	87			
06:15			6	3	9	18:15			20	48	68			
06:30			13	16	29	18:30			17	42	59			
06:45			15	40	9	33	18:45		19	78	44	199	63	277
07:00			7	13	20	19:00			10	43	53			
07:15			17	21	38	19:15			15	47	62			
07:30			22	20	42	19:30			12	37	49			
07:45			24	70	29	83	19:45		16	53	38	165	54	218
08:00			20	29	49	20:00			11	33	44			
08:15			37	33	70	20:15			9	36	45			
08:30			31	34	65	20:30			6	17	23			
08:45			36	124	38	134	20:45		17	43	19	105	36	148
09:00			30	44	74	21:00			12	20	32			
09:15			34	50	84	21:15			8	15	23			
09:30			35	61	96	21:30			9	10	19			
09:45			38	137	56	211	21:45		4	33	9	54	13	87
10:00			24	46	70	22:00			6	3	9			
10:15			25	49	74	22:15			3	8	11			
10:30			24	49	73	22:30			0	10	10			
10:45			41	114	71	215	22:45		1	10	2	23	3	33
11:00			37	74	111	23:00			2	3	5			
11:15			30	57	87	23:15			3	0	3			
11:30			27	86	113	23:30			1	0	1			
11:45			42	136	76	293	23:45		1	7	0	3	1	10
<b>TOTALS</b>			661	1009	1670	<b>TOTALS</b>			1040	2368	3408			
<b>SPLIT %</b>			39.6%	60.4%	32.9%	<b>SPLIT %</b>			30.5%	69.5%	67.1%			

DAILY TOTALS					NB	SB	EB	WB	Total
					0	0	1,701	3,377	5,078

AM Peak Hour			11:45	11:45	11:45	PM Peak Hour			13:00	12:00	12:15
AM Pk Volume			155	348	503	PM Pk Volume			204	346	519
Pk Hr Factor			0.923	0.897	0.905	Pk Hr Factor			0.927	0.892	0.933
7 - 9 Volume	0	0	194	217	411	4 - 6 Volume	0	0	196	582	778
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			16:00	16:45	16:30
7 - 9 Pk Volume	0	0	124	134	258	4 - 6 Pk Volume	0	0	106	308	413
Pk Hr Factor	0.000	0.000	0.838	0.882	0.872	Pk Hr Factor	0.000	0.000	0.803	0.786	0.868

### VOLUME

#### Cypress St Bet. Main St & Franklin St

Day: Friday  
Date: 7/19/2019

City: Fort Bragg  
Project #: CA19\_8387\_001

DAILY TOTALS					NB	SB	EB	WB	Total		
					0	0	1,683	3,531	5,214		
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			2	3	5	12:00			31	66	97
00:15			1	3	4	12:15			22	50	72
00:30			0	0	0	12:30			35	73	108
00:45			0	3	0	12:45		134	46	86	275
01:00			0	1	1	13:00			41	78	119
01:15			0	0	0	13:15			36	77	113
01:30			0	0	0	13:30			41	70	111
01:45			0	0	0	13:45		158	40	68	293
02:00			0	2	2	14:00			37	81	118
02:15			1	1	2	14:15			44	78	122
02:30			1	0	1	14:30			31	77	108
02:45			0	2	1	14:45		155	43	89	325
03:00			0	0	0	15:00			30	80	110
03:15			0	0	0	15:15			38	77	115
03:30			0	6	6	15:30			30	78	108
03:45			2	2	3	15:45		122	24	81	316
04:00			6	0	6	16:00			34	73	107
04:15			1	2	3	16:15			37	80	117
04:30			2	1	3	16:30			21	86	107
04:45			8	17	5	16:45		117	25	77	316
05:00			5	1	6	17:00			30	74	104
05:15			14	4	18	17:15			20	64	84
05:30			9	11	20	17:30			26	76	102
05:45			6	34	10	17:45		97	21	80	294
06:00			6	4	10	18:00			21	60	81
06:15			8	16	24	18:15			22	57	79
06:30			5	15	20	18:30			9	38	47
06:45			20	39	13	18:45		65	13	55	210
07:00			18	15	33	19:00			20	58	78
07:15			16	20	36	19:15			16	36	52
07:30			22	22	44	19:30			15	26	41
07:45			22	78	34	19:45		62	11	40	160
08:00			31	36	67	20:00			5	23	28
08:15			32	26	58	20:15			6	28	34
08:30			28	50	78	20:30			8	25	33
08:45			35	126	34	20:45		28	9	19	95
09:00			36	54	90	21:00			11	24	35
09:15			22	60	82	21:15			9	12	21
09:30			32	53	85	21:30			4	14	18
09:45			37	127	61	21:45		25	1	8	58
10:00			34	47	81	22:00			10	7	17
10:15			20	53	73	22:15			8	9	17
10:30			34	78	112	22:30			4	4	8
10:45			27	115	72	22:45		27	5	9	29
11:00			42	77	119	23:00			3	4	7
11:15			33	72	105	23:15			2	6	8
11:30			29	73	102	23:30			5	2	7
11:45			34	138	107	23:45		12	2	2	14
<b>TOTALS</b>			681	1146	1827	<b>TOTALS</b>			1002	2385	3387
<b>SPLIT %</b>			37.3%	62.7%	35.0%	<b>SPLIT %</b>			29.6%	70.4%	65.0%

DAILY TOTALS					NB	SB	EB	WB	Total		
					0	0	1,683	3,531	5,214		
AM Peak Hour			11:00	11:00	11:00	PM Peak Hour			12:45	14:00	14:00
AM Pk Volume			138	329	467	PM Pk Volume			164	325	480
Pk Hr Factor			0.821	0.769	0.828	Pk Hr Factor			0.891	0.913	0.909
7 - 9 Volume	0	0	204	237	441	4 - 6 Volume	0	0	214	610	824
7 - 9 Peak Hour			08:00	07:45	08:00	4 - 6 Peak Hour			16:00	16:15	16:00
7 - 9 Pk Volume	0	0	126	146	272	4 - 6 Pk Volume	0	0	117	317	433
Pk Hr Factor	0.000	0.000	0.900	0.730	0.872	Pk Hr Factor	0.000	0.000	0.791	0.922	0.925

# VOLUME

Cypress St Bet. Main St & Franklin St

Day: Saturday  
Date: 7/20/2019

City: Fort Bragg  
Project #: CA19\_8387\_001

DAILY TOTALS					NB	SB	EB	WB	Total
					0	0	1,072	2,457	3,529

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL			
00:00			6	5	11	12:00			16	62	78			
00:15			1	2	3	12:15			28	48	76			
00:30			1	6	7	12:30			24	46	70			
00:45			1	9	1	14	12:45		20	88	74	230	94	318
01:00			0	0	0	13:00			24	57	81			
01:15			0	1	1	13:15			29	70	99			
01:30			1	0	1	13:30			27	57	84			
01:45			0	1	1	2	13:45		14	94	49	233	63	327
02:00			0	0	0	14:00			22	51	73			
02:15			0	2	2	14:15			12	47	59			
02:30			0	0	0	14:30			33	55	88			
02:45			0	0	2	14:45			21	88	58	211	79	299
03:00			0	4	4	15:00			31	70	101			
03:15			0	0	0	15:15			36	53	89			
03:30			0	0	0	15:30			22	46	68			
03:45			2	2	1	5	15:45		21	110	40	209	61	319
04:00			0	1	1	16:00			21	55	76			
04:15			0	1	1	16:15			22	48	70			
04:30			1	1	2	16:30			15	49	64			
04:45			2	3	3	6	16:45		22	80	51	203	73	283
05:00			0	2	2	17:00			21	43	64			
05:15			0	1	1	17:15			14	54	68			
05:30			1	4	5	17:30			18	41	59			
05:45			1	2	4	11	17:45		22	75	30	168	52	243
06:00			0	4	4	18:00			12	47	59			
06:15			0	1	1	18:15			15	29	44			
06:30			3	7	10	18:30			15	43	58			
06:45			5	8	3	15	18:45		15	57	26	145	41	202
07:00			7	6	13	19:00			10	26	36			
07:15			11	14	25	19:15			14	23	37			
07:30			4	19	23	19:30			13	15	28			
07:45			11	33	10	49	19:45		8	45	30	94	38	139
08:00			5	17	22	20:00			9	27	36			
08:15			5	28	33	20:15			12	23	35			
08:30			14	27	41	20:30			6	23	29			
08:45			21	45	28	100	20:45		5	32	23	96	28	128
09:00			12	34	46	21:00			18	13	31			
09:15			15	39	54	21:15			15	6	21			
09:30			16	30	46	21:30			5	14	19			
09:45			15	58	26	129	21:45		5	43	12	45	17	88
10:00			19	49	68	22:00			7	21	28			
10:15			17	58	75	22:15			4	8	12			
10:30			20	55	75	22:30			2	11	13			
10:45			30	86	56	218	22:45		5	18	9	49	14	67
11:00			19	43	62	23:00			4	6	10			
11:15			17	51	68	23:15			3	6	9			
11:30			22	61	83	23:30			1	2	3			
11:45			27	85	48	203	23:45		2	10	6	20	8	30
<b>TOTALS</b>			332	754	1086	<b>TOTALS</b>			740	1703	2443			
<b>SPLIT %</b>			30.6%	69.4%	30.8%	<b>SPLIT %</b>			30.3%	69.7%	69.2%			

DAILY TOTALS					NB	SB	EB	WB	Total
					0	0	1,072	2,457	3,529

AM Peak Hour	11:45	11:15	11:30	PM Peak Hour	14:30	12:45	12:45				
AM Pk Volume	95	222	312	PM Pk Volume	121	258	358				
Pk Hr Factor	0.848	0.895	0.940	Pk Hr Factor	0.840	0.872	0.904				
7 - 9 Volume	0	0	78	149	227	4 - 6 Volume	0	0	155	371	526
7 - 9 Peak Hour		08:00	08:00	08:00	4 - 6 Peak Hour		16:00	16:00	16:00	16:00	
7 - 9 Pk Volume	0	0	45	100	145	4 - 6 Pk Volume	0	0	80	203	283
Pk Hr Factor	0.000	0.000	0.536	0.893	0.740	Pk Hr Factor	0.000	0.000	0.909	0.923	0.931

Prepared by National Data & Surveying Services

# VOLUME

Franklin St Bet. Cypress St & S St

Day: Thursday  
Date: 7/18/2019

City: Fort Bragg  
Project #: CA19\_8387\_002

DAILY TOTALS					NB	SB	EB	WB	Total
					1,920	1,620	0	0	3,540

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	1	3			4	12:00	55	35			90
00:15	1	2			3	12:15	37	30			67
00:30	0	1			1	12:30	48	39			87
00:45	0	2	0	6	0	12:45	51	191	40	144	91
01:00	0	0			0	13:00	56	42			98
01:15	0	0			0	13:15	40	40			80
01:30	1	0			1	13:30	45	47			92
01:45	0	1	2	2	2	13:45	55	196	48	177	103
02:00	2	1			3	14:00	37	23			60
02:15	0	1			1	14:15	56	38			94
02:30	0	0			0	14:30	34	34			68
02:45	0	2	1	3	1	14:45	39	166	36	131	75
03:00	0	2			2	15:00	58	17			75
03:15	0	0			0	15:15	40	42			82
03:30	1	0			1	15:30	35	32			67
03:45	0	1	0	2	0	15:45	45	178	28	119	73
04:00	0	0			0	16:00	34	37			71
04:15	0	0			0	16:15	40	44			84
04:30	1	0			1	16:30	49	34			83
04:45	0	1	0		0	16:45	33	156	37	152	70
05:00	2	0			2	17:00	59	32			91
05:15	0	0			0	17:15	39	43			82
05:30	3	3			6	17:30	38	47			85
05:45	3	8	3	6	6	17:45	40	176	21	143	61
06:00	0	2			2	18:00	49	19			68
06:15	4	7			11	18:15	29	27			56
06:30	3	8			11	18:30	33	20			53
06:45	8	15	7	24	15	18:45	32	143	15	81	47
07:00	5	11			16	19:00	24	17			41
07:15	11	20			31	19:15	27	17			44
07:30	12	9			21	19:30	21	10			31
07:45	14	42	22	62	36	19:45	15	87	12	56	27
08:00	18	31			49	20:00	15	18			33
08:15	15	32			47	20:15	12	4			16
08:30	17	19			36	20:30	18	9			27
08:45	22	72	20	102	42	20:45	10	55	9	40	19
09:00	35	24			59	21:00	11	11			22
09:15	23	22			45	21:15	8	10			18
09:30	16	17			33	21:30	8	10			18
09:45	24	98	17	80	41	21:45	6	33	9	40	15
10:00	26	20			46	22:00	10	6			16
10:15	20	20			40	22:15	13	7			20
10:30	34	26			60	22:30	7	4			11
10:45	34	114	32	98	66	22:45	2	32	2	19	4
11:00	37	28			65	23:00	5	2			7
11:15	30	32			62	23:15	1	1			2
11:30	28	33			61	23:30	1	2			3
11:45	49	144	32	125	81	23:45	0	7	3	8	3
<b>TOTALS</b>	<b>500</b>	<b>510</b>			<b>1010</b>	<b>TOTALS</b>	<b>1420</b>	<b>1110</b>			<b>2530</b>
<b>SPLIT %</b>	<b>49.5%</b>	<b>50.5%</b>			<b>28.5%</b>	<b>SPLIT %</b>	<b>56.1%</b>	<b>43.9%</b>			<b>71.5%</b>

DAILY TOTALS					NB	SB	EB	WB	Total
					1,920	1,620	0	0	3,540

AM Peak Hour	11:45	11:45			11:45	PM Peak Hour	13:00	13:00			13:00
AM Pk Volume	189	136			325	PM Pk Volume	196	177			373
Pk Hr Factor	0.859	0.872			0.903	Pk Hr Factor	0.875	0.922			0.905
7 - 9 Volume	114	164	0	0	278	4 - 6 Volume	332	295	0	0	627
7 - 9 Peak Hour	08:00	07:45			08:00	4 - 6 Peak Hour	16:15	16:45			16:15
7 - 9 Pk Volume	72	104	0	0	174	4 - 6 Pk Volume	181	159	0	0	328
Pk Hr Factor	0.818	0.813	0.000	0.000	0.888	Pk Hr Factor	0.767	0.846	0.000	0.000	0.901





Prepared by National Data & Surveying Services

# VOLUME

S St Bet. Main St & Franklin St

Day: Thursday  
Date: 7/18/2019

City: Fort Bragg  
Project #: CA19\_8387\_003

DAILY TOTALS					NB	SB	EB	WB	Total					
					0	0	1,236	1,213	2,449					
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL			
00:00			3	3	6	12:00			19	31	50			
00:15			1	1	2	12:15			22	26	48			
00:30			0	1	1	12:30			28	31	59			
00:45			0	4	1	12:45			37	106	25	113	62	219
01:00			0	2	2	13:00			39	29	68			
01:15			0	0	0	13:15			31	23	54			
01:30			1	0	1	13:30			40	21	61			
01:45			0	1	1	13:45			31	141	25	98	56	239
02:00			0	0	0	14:00			18	19	37			
02:15			0	2	2	14:15			24	23	47			
02:30			0	1	1	14:30			18	25	43			
02:45			0	0	0	14:45			25	85	22	89	47	174
03:00			0	1	1	15:00			27	15	42			
03:15			1	0	1	15:15			24	24	48			
03:30			1	2	3	15:30			17	18	35			
03:45			0	2	1	15:45			33	101	19	76	52	177
04:00			0	0	0	16:00			22	25	47			
04:15			0	1	1	16:15			17	23	40			
04:30			3	1	4	16:30			26	21	47			
04:45			2	5	1	16:45			28	93	30	99	58	192
05:00			1	3	4	17:00			32	20	52			
05:15			2	1	3	17:15			15	28	43			
05:30			7	4	11	17:30			13	26	39			
05:45			2	12	1	17:45			23	83	17	91	40	174
06:00			5	5	10	18:00			7	23	30			
06:15			7	4	11	18:15			6	19	25			
06:30			6	9	15	18:30			7	19	26			
06:45			19	37	8	18:45			7	27	15	76	22	103
07:00			9	14	23	19:00			7	13	20			
07:15			7	18	25	19:15			7	12	19			
07:30			16	5	21	19:30			8	19	27			
07:45			28	60	21	19:45			6	28	14	58	20	86
08:00			33	18	51	20:00			7	9	16			
08:15			27	14	41	20:15			6	13	19			
08:30			36	19	55	20:30			7	12	19			
08:45			18	114	18	20:45			9	29	14	48	23	77
09:00			22	20	42	21:00			5	15	20			
09:15			16	16	32	21:15			11	9	20			
09:30			23	17	40	21:30			9	8	17			
09:45			32	93	14	21:45			6	31	8	40	14	71
10:00			20	19	39	22:00			2	2	4			
10:15			13	17	30	22:15			6	7	13			
10:30			18	25	43	22:30			6	2	8			
10:45			20	71	21	22:45			3	17	3	14	6	31
11:00			14	12	26	23:00			2	2	4			
11:15			22	15	37	23:15			1	3	4			
11:30			27	21	48	23:30			2	1	3			
11:45			24	87	26	23:45			4	9	1	7	5	16
<b>TOTALS</b>			486	404	890	<b>TOTALS</b>			750	809	1559			
<b>SPLIT %</b>			54.6%	45.4%	36.3%	<b>SPLIT %</b>			48.1%	51.9%	63.7%			

DAILY TOTALS					NB	SB	EB	WB	Total
					0	0	1,236	1,213	2,449

AM Peak Hour	07:45	11:45	11:45	PM Peak Hour	12:45	12:00	12:45				
AM Pk Volume	124	114	207	PM Pk Volume	147	113	245				
Pk Hr Factor	0.861	0.919	0.877	Pk Hr Factor	0.919	0.911	0.901				
7 - 9 Volume	0	0	174	127	301	4 - 6 Volume	0	0	176	190	366
7 - 9 Peak Hour	07:45	07:45	07:45	4 - 6 Peak Hour	16:15	16:45	16:30				
7 - 9 Pk Volume	0	0	124	72	196	4 - 6 Pk Volume	0	0	103	104	200
Pk Hr Factor	0.000	0.000	0.861	0.857	0.891	Pk Hr Factor	0.000	0.000	0.805	0.867	0.862

# VOLUME

S St Bet. Main St & Franklin St

Day: Friday  
Date: 7/19/2019

City: Fort Bragg  
Project #: CA19\_8387\_003

DAILY TOTALS					NB	SB	EB	WB	Total					
					0	0	1,131	1,214	2,345					
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL			
00:00			2	7	9	12:00			16	30	46			
00:15			3	0	3	12:15			19	24	43			
00:30			2	5	7	12:30			26	30	56			
00:45			1	8	0	12:45			26	87	20	104	46	191
01:00			0	0	0	13:00			22	16	38			
01:15			0	0	0	13:15			27	26	53			
01:30			0	0	0	13:30			29	22	51			
01:45			1	1	0	13:45			32	110	22	86	54	196
02:00			0	1	1	14:00			16	23	39			
02:15			3	1	4	14:15			29	31	60			
02:30			1	0	1	14:30			17	20	37			
02:45			1	5	0	14:45			19	81	23	97	42	178
03:00			0	0	0	15:00			17	28	45			
03:15			1	1	2	15:15			18	37	55			
03:30			0	1	1	15:30			15	23	38			
03:45			0	1	1	15:45			24	74	22	110	46	184
04:00			0	0	0	16:00			21	18	39			
04:15			0	1	1	16:15			20	19	39			
04:30			1	0	1	16:30			18	21	39			
04:45			1	2	3	16:45			18	77	23	81	41	158
05:00			1	5	6	17:00			17	21	38			
05:15			2	1	3	17:15			13	23	36			
05:30			2	3	5	17:30			14	26	40			
05:45			6	11	5	17:45			14	58	34	104	48	162
06:00			4	1	5	18:00			10	17	27			
06:15			6	8	14	18:15			13	22	35			
06:30			7	6	13	18:30			13	15	28			
06:45			12	29	6	18:45			7	43	13	67	20	110
07:00			11	11	22	19:00			13	20	33			
07:15			14	10	24	19:15			10	14	24			
07:30			16	9	25	19:30			10	11	21			
07:45			23	64	20	19:45			9	42	16	61	25	103
08:00			16	15	31	20:00			12	9	21			
08:15			28	8	36	20:15			6	10	16			
08:30			29	24	53	20:30			10	11	21			
08:45			18	91	16	20:45			15	43	12	42	27	85
09:00			26	16	42	21:00			2	11	13			
09:15			20	16	36	21:15			7	8	15			
09:30			14	13	27	21:30			5	10	15			
09:45			35	95	23	21:45			4	18	5	34	9	52
10:00			16	23	39	22:00			2	10	12			
10:15			21	19	40	22:15			6	6	12			
10:30			24	16	40	22:30			5	7	12			
10:45			19	80	25	22:45			2	15	6	29	8	44
11:00			23	17	40	23:00			4	1	5			
11:15			13	20	33	23:15			1	3	4			
11:30			24	19	43	23:30			1	2	3			
11:45			27	87	14	23:45			3	9	3	9	6	18
<b>TOTALS</b>			474	390	<b>864</b>	<b>TOTALS</b>			657	824	<b>1481</b>			
<b>SPLIT %</b>			54.9%	45.1%	<b>36.8%</b>	<b>SPLIT %</b>			44.4%	55.6%	<b>63.2%</b>			

DAILY TOTALS					NB	SB	EB	WB	Total
					0	0	1,131	1,214	2,345

AM Peak Hour	08:15	11:45	11:45	PM Peak Hour	13:00	14:45	13:30				
AM Pk Volume	101	98	186	PM Pk Volume	110	111	204				
Pk Hr Factor	0.871	0.817	0.830	Pk Hr Factor	0.859	0.750	0.850				
7 - 9 Volume	0	0	155	113	268	4 - 6 Volume	0	0	135	185	320
7 - 9 Peak Hour	07:45	07:45	07:45	4 - 6 Peak Hour	16:00	17:00	17:00				
7 - 9 Pk Volume	0	0	96	67	163	4 - 6 Pk Volume	0	0	77	104	162
Pk Hr Factor	0.000	0.000	0.828	0.698	0.769	Pk Hr Factor	0.000	0.000	0.917	0.765	0.844



# VOLUME

S St Bet. Main St & Franklin St

Day: Saturday  
Date: 7/20/2019

City: Fort Bragg  
Project #: CA19\_8387\_003

DAILY TOTALS					NB	SB	EB	WB	Total					
					0	0	755	910	1,665					
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL			
00:00			5	4	9	12:00			17	13	30			
00:15			1	0	1	12:15			12	15	27			
00:30			2	1	3	12:30			14	9	23			
00:45			0	8	0	12:45			16	59	12	49	28	108
01:00			2	3	5	13:00			20	9	29			
01:15			0	0	0	13:15			14	17	31			
01:30			1	3	4	13:30			12	17	29			
01:45			1	4	1	13:45			15	61	23	66	38	127
02:00			2	2	4	14:00			11	19	30			
02:15			1	0	1	14:15			6	12	18			
02:30			1	0	1	14:30			9	12	21			
02:45			0	4	1	14:45			14	40	8	51	22	91
03:00			2	0	2	15:00			10	14	24			
03:15			0	0	0	15:15			14	20	34			
03:30			0	0	0	15:30			16	10	26			
03:45			1	3	1	15:45			21	61	20	64	41	125
04:00			1	1	2	16:00			20	13	33			
04:15			0	1	1	16:15			16	20	36			
04:30			1	1	2	16:30			6	14	20			
04:45			0	2	1	16:45			13	55	10	57	23	112
05:00			0	0	0	17:00			10	17	27			
05:15			0	0	0	17:15			9	16	25			
05:30			0	2	2	17:30			13	22	35			
05:45			0	2	2	17:45			12	44	18	73	30	117
06:00			4	6	10	18:00			11	18	29			
06:15			6	5	11	18:15			11	12	23			
06:30			3	6	9	18:30			15	20	35			
06:45			8	21	8	18:45			9	46	14	64	23	110
07:00			4	8	12	19:00			9	11	20			
07:15			2	13	15	19:15			11	18	29			
07:30			9	6	15	19:30			9	8	17			
07:45			6	21	10	19:45			6	35	12	49	18	84
08:00			10	8	18	20:00			6	9	15			
08:15			3	6	9	20:15			19	13	32			
08:30			12	8	20	20:30			4	13	17			
08:45			7	32	9	20:45			11	40	9	44	20	84
09:00			5	19	24	21:00			9	8	17			
09:15			17	12	29	21:15			6	6	12			
09:30			8	18	26	21:30			8	10	18			
09:45			9	39	11	21:45			8	31	7	31	15	62
10:00			18	10	28	22:00			8	7	15			
10:15			19	15	34	22:15			4	6	10			
10:30			8	10	18	22:30			8	4	12			
10:45			14	59	18	22:45			3	23	6	23	9	46
11:00			8	23	31	23:00			4	0	4			
11:15			18	22	40	23:15			1	10	11			
11:30			15	24	39	23:30			3	5	8			
11:45			16	57	25	23:45			2	10	1	16	3	26
<b>TOTALS</b>			250	323	573	<b>TOTALS</b>			505	587	1092			
<b>SPLIT %</b>			43.6%	56.4%	34.4%	<b>SPLIT %</b>			46.2%	53.8%	65.6%			

DAILY TOTALS					NB	SB	EB	WB	Total		
					0	0	755	910	1,665		
AM Peak Hour			11:15	11:00	11:00	PM Peak Hour			15:30	13:15	15:30
AM Pk Volume			66	94	151	PM Pk Volume			73	76	136
Pk Hr Factor			0.917	0.940	0.921	Pk Hr Factor			0.869	0.826	0.829
7 - 9 Volume	0	0	53	68	121	4 - 6 Volume	0	0	99	130	229
7 - 9 Peak Hour			08:00	07:00	07:15	4 - 6 Peak Hour			16:00	17:00	17:00
7 - 9 Pk Volume	0	0	32	37	64	4 - 6 Pk Volume	0	0	55	73	117
Pk Hr Factor	0.000	0.000	0.667	0.712	0.889	Pk Hr Factor	0.000	0.000	0.688	0.830	0.836

Prepared by National Data & Surveying Services

# VOLUME

Franklin St Bet. S St & Harbor Dr

Day: Thursday  
Date: 7/18/2019

City: Fort Bragg  
Project #: CA19\_8387\_004

DAILY TOTALS					NB	SB	EB	WB	Total		
					1,204	732	0	0	1,936		
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	5	0			5	12:00	25	18			43
00:15	0	1			1	12:15	17	14			31
00:30	2	0			2	12:30	19	17			36
00:45	0	7	0	1	0	12:45	31	92	22	71	53
					8						163
01:00	1	1			2	13:00	39	18			57
01:15	1	0			1	13:15	34	15			49
01:30	2	0			2	13:30	21	22			43
01:45	0	4	1	2	1	13:45	44	138	15	70	59
					6						208
02:00	1	0			1	14:00	29	15			44
02:15	1	0			1	14:15	34	17			51
02:30	0	0			0	14:30	26	6			32
02:45	0	2	0		0	14:45	24	113	11	49	35
					2						162
03:00	0	0			0	15:00	37	19			56
03:15	0	0			0	15:15	23	13			36
03:30	0	0			0	15:30	23	18			41
03:45	0	0			0	15:45	21	104	15	65	36
											169
04:00	0	0			0	16:00	19	16			35
04:15	1	0			1	16:15	25	20			45
04:30	1	0			1	16:30	19	13			32
04:45	0	2	1	1	1	16:45	18	81	13	62	31
					3						143
05:00	0	0			0	17:00	20	15			35
05:15	0	1			1	17:15	27	15			42
05:30	0	0			0	17:30	26	19			45
05:45	1	1	2	3	3	17:45	22	95	21	70	43
					4						165
06:00	3	1			4	18:00	33	17			50
06:15	3	5			8	18:15	13	17			30
06:30	3	2			5	18:30	27	8			35
06:45	2	11	4	12	6	18:45	25	98	8	50	33
					23						148
07:00	5	0			5	19:00	23	10			33
07:15	5	3			8	19:15	20	14			34
07:30	7	7			14	19:30	15	6			21
07:45	15	32	7	17	22	19:45	19	77	8	38	27
					49						115
08:00	8	6			14	20:00	19	10			29
08:15	8	6			14	20:15	13	13			26
08:30	8	7			15	20:30	15	5			20
08:45	15	39	6	25	21	20:45	11	58	5	33	16
					64						91
09:00	21	5			26	21:00	13	6			19
09:15	16	7			23	21:15	12	4			16
09:30	9	8			17	21:30	9	4			13
09:45	6	52	9	29	15	21:45	12	46	1	15	13
					81						61
10:00	12	10			22	22:00	7	2			9
10:15	15	15			30	22:15	9	1			10
10:30	12	12			24	22:30	11	3			14
10:45	17	56	15	52	32	22:45	4	31	4	10	8
					108						41
11:00	11	10			21	23:00	4	2			6
11:15	10	15			25	23:15	0	2			2
11:30	19	11			30	23:30	3	0			3
11:45	17	57	17	53	34	23:45	1	8	0	4	1
					110						12
<b>TOTALS</b>	<b>263</b>	<b>195</b>			<b>458</b>	<b>TOTALS</b>	<b>941</b>	<b>537</b>			<b>1478</b>
<b>SPLIT %</b>	<b>57.4%</b>	<b>42.6%</b>			<b>23.7%</b>	<b>SPLIT %</b>	<b>63.7%</b>	<b>36.3%</b>			<b>76.3%</b>

DAILY TOTALS					NB	SB	EB	WB	Total		
					1,204	732	0	0	1,936		
AM Peak Hour	11:30	11:45			11:45	PM Peak Hour	13:00	12:45		13:00	
AM Pk Volume	78	66			144	PM Pk Volume	138	77		208	
Pk Hr Factor	0.780	0.917			0.837	Pk Hr Factor	0.784	0.875		0.881	
7 - 9 Volume	71	42	0	0	113	4 - 6 Volume	176	132	0	0	308
7 - 9 Peak Hour	07:45	07:30			07:45	4 - 6 Peak Hour	17:00	17:00			17:00
7 - 9 Pk Volume	39	26	0	0	65	4 - 6 Pk Volume	95	70	0	0	165
Pk Hr Factor	0.650	0.929	0.000	0.000	0.739	Pk Hr Factor	0.880	0.833	0.000	0.000	0.917

## VOLUME

Franklin St Bet. S St & Harbor Dr

Day: Friday  
Date: 7/19/2019

City: Fort Bragg  
Project #: CA19\_8387\_004

DAILY TOTALS					NB	SB	EB	WB	Total		
					1,398	796	0	0	2,194		
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	4	2			6	12:00	33	25			58
00:15	0	0			0	12:15	24	17			41
00:30	1	0			1	12:30	28	20			48
00:45	0	5	0	2	7	12:45	36	121	21	83	204
01:00	0	1			1	13:00	35	16			51
01:15	0	0			0	13:15	42	16			58
01:30	0	0			0	13:30	41	18			59
01:45	0	0	1		1	13:45	47	165	21	71	236
02:00	0	0			0	14:00	45	12			57
02:15	1	0			1	14:15	43	15			58
02:30	0	0			0	14:30	24	13			37
02:45	4	5	2	2	13	14:45	27	139	20	60	199
03:00	0	1			1	15:00	42	13			55
03:15	0	0			0	15:15	34	17			51
03:30	1	0			1	15:30	26	17			43
03:45	0	1	1	2	4	15:45	34	136	17	64	200
04:00	0	1			1	16:00	27	20			47
04:15	0	0			0	16:15	30	14			44
04:30	0	0			0	16:30	36	19			55
04:45	0	0	1		1	16:45	23	116	16	69	185
05:00	1	2			3	17:00	23	19			42
05:15	0	2			2	17:15	19	17			36
05:30	5	4			9	17:30	30	10			40
05:45	2	8	0	8	18	17:45	22	94	20	66	160
06:00	4	5			9	18:00	27	11			38
06:15	1	2			3	18:15	21	16			37
06:30	1	2			3	18:30	20	14			34
06:45	9	15	1	10	25	18:45	26	94	11	52	146
07:00	5	3			8	19:00	25	10			35
07:15	2	3			5	19:15	26	12			38
07:30	9	2			11	19:30	18	13			31
07:45	4	20	12	20	46	19:45	20	89	10	45	134
08:00	6	6			12	20:00	17	7			24
08:15	8	7			15	20:15	18	3			21
08:30	9	8			17	20:30	16	12			28
08:45	24	47	13	34	88	20:45	13	64	4	26	90
09:00	14	9			23	21:00	12	8			20
09:15	9	7			16	21:15	14	5			19
09:30	16	6			22	21:30	9	5			14
09:45	16	55	9	31	111	21:45	9	44	3	21	65
10:00	24	11			35	22:00	11	5			16
10:15	17	9			26	22:15	2	3			5
10:30	18	8			26	22:30	12	6			18
10:45	14	73	11	39	137	22:45	9	34	2	16	50
11:00	13	19			32	23:00	4	2			6
11:15	10	17			27	23:15	6	2			8
11:30	18	20			38	23:30	2	0			2
11:45	20	61	13	69	163	23:45	0	12	0	4	16
<b>TOTALS</b>	<b>290</b>	<b>219</b>			<b>509</b>	<b>TOTALS</b>	<b>1108</b>	<b>577</b>			<b>1685</b>
<b>SPLIT %</b>	<b>57.0%</b>	<b>43.0%</b>			<b>23.2%</b>	<b>SPLIT %</b>	<b>65.8%</b>	<b>34.2%</b>			<b>76.8%</b>

DAILY TOTALS					NB	SB	EB	WB	Total		
					1,398	796	0	0	2,194		
AM Peak Hour	11:45	11:15			11:45	PM Peak Hour	13:30	12:00	13:15		
AM Pk Volume	105	75			180	PM Pk Volume	176	83	242		
Pk Hr Factor	0.795	0.750			0.776	Pk Hr Factor	0.936	0.830	0.890		
7 - 9 Volume	67	54	0	0	121	4 - 6 Volume	210	135	0	0	345
7 - 9 Peak Hour	08:00	08:00			08:00	4 - 6 Peak Hour	16:00	16:30			16:00
7 - 9 Pk Volume	47	34	0	0	81	4 - 6 Pk Volume	116	71	0	0	185
Pk Hr Factor	0.490	0.654	0.000	0.000	0.547	Pk Hr Factor	0.806	0.934	0.000	0.000	0.841

# VOLUME

Franklin St Bet. S St & Harbor Dr

Day: Saturday  
Date: 7/20/2019

City: Fort Bragg  
Project #: CA19\_8387\_004

DAILY TOTALS					NB	SB	EB	WB	Total		
					1,165	763	0	0	1,928		
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	3	2			5	12:00	15	25			40
00:15	1	3			4	12:15	24	30			54
00:30	0	0			0	12:30	23	21			44
00:45	0	4	1	6	1	12:45	28	90	24	100	52
01:00	0	0			0	13:00	30	21			51
01:15	0	0			0	13:15	40	27			67
01:30	1	0			1	13:30	29	16			45
01:45	0	1	0		0	13:45	30	129	22	86	52
02:00	0	0			0	14:00	33	17			50
02:15	0	0			0	14:15	28	9			37
02:30	0	0			0	14:30	29	20			49
02:45	0	0			0	14:45	23	113	8	54	31
03:00	0	0			0	15:00	29	11			40
03:15	0	0			0	15:15	26	19			45
03:30	0	0			0	15:30	22	15			37
03:45	0	0			0	15:45	17	94	18	63	35
04:00	0	0			0	16:00	26	16			42
04:15	1	0			1	16:15	26	14			40
04:30	0	0			0	16:30	27	14			41
04:45	1	2	0		1	16:45	18	97	14	58	32
05:00	0	1			1	17:00	19	7			26
05:15	0	0			0	17:15	37	14			51
05:30	0	1			1	17:30	18	9			27
05:45	1	1	3	5	4	17:45	21	95	13	43	34
06:00	2	3			5	18:00	22	20			42
06:15	0	4			4	18:15	12	14			26
06:30	4	1			5	18:30	21	12			33
06:45	6	12	3	11	9	18:45	16	71	9	55	25
07:00	5	1			6	19:00	18	12			30
07:15	6	5			11	19:15	18	8			26
07:30	2	2			4	19:30	19	6			25
07:45	7	20	10	18	17	19:45	19	74	8	34	27
08:00	10	7			17	20:00	11	5			16
08:15	7	4			11	20:15	12	9			21
08:30	6	5			11	20:30	25	6			31
08:45	3	26	9	25	12	20:45	14	62	6	26	20
09:00	14	9			23	21:00	9	8			17
09:15	11	6			17	21:15	12	7			19
09:30	13	8			21	21:30	6	2			8
09:45	8	46	6	29	14	21:45	12	39	7	24	19
10:00	14	16			30	22:00	9	4			13
10:15	17	18			35	22:15	5	0			5
10:30	13	9			22	22:30	5	4			9
10:45	14	58	15	58	29	22:45	7	26	0	8	7
11:00	17	9			26	23:00	5	1			6
11:15	22	9			31	23:15	9	2			11
11:30	19	17			36	23:30	6	2			8
11:45	24	82	19	54	43	23:45	3	23	1	6	4
<b>TOTALS</b>	<b>252</b>	<b>206</b>			<b>458</b>	<b>TOTALS</b>	<b>913</b>	<b>557</b>			<b>1470</b>
<b>SPLIT %</b>	<b>55.0%</b>	<b>45.0%</b>			<b>23.8%</b>	<b>SPLIT %</b>	<b>62.1%</b>	<b>37.9%</b>			<b>76.2%</b>

DAILY TOTALS					NB	SB	EB	WB	Total
					1,165	763	0	0	1,928
AM Peak Hour	11:45	11:45			11:45	PM Peak Hour	13:15	12:00	12:45
AM Pk Volume	86	95			181	PM Pk Volume	132	100	215
Pk Hr Factor	0.896	0.792			0.838	Pk Hr Factor	0.825	0.833	0.802
7 - 9 Volume	46	43	0	0	89	4 - 6 Volume	192	101	0
7 - 9 Peak Hour	07:45	07:45			07:45	4 - 6 Peak Hour	16:30	16:00	0
7 - 9 Pk Volume	30	26	0	0	56	4 - 6 Pk Volume	101	58	0
Pk Hr Factor	0.750	0.650	0.000	0.000	0.824	Pk Hr Factor	0.682	0.906	0.000

Prepared by National Data & Surveying Services

### VOLUME

Harbor Dr Bet. Main St & Franklin St

Day: Thursday  
Date: 7/18/2019

City: Fort Bragg  
Project #: CA19\_8387\_005

DAILY TOTALS					NB	SB	EB	WB	Total					
					0	0	1,486	1,002	2,488					
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL			
00:00			3	0	3	12:00			35	16	51			
00:15			1	2	3	12:15			35	14	49			
00:30			0	0	0	12:30			31	12	43			
00:45			1	5	0	2	12:45		44	145	23	65	67	210
01:00			0	1	1	13:00			27	20	47			
01:15			0	0	0	13:15			32	25	57			
01:30			0	1	1	13:30			38	16	54			
01:45			0	0	2	13:45			46	143	21	82	67	225
02:00			1	0	1	14:00			25	16	41			
02:15			0	0	0	14:15			31	25	56			
02:30			0	2	2	14:30			35	18	53			
02:45			3	4	0	2	14:45		33	124	24	83	57	207
03:00			0	0	0	15:00			19	23	42			
03:15			0	1	1	15:15			30	26	56			
03:30			0	1	1	15:30			31	25	56			
03:45			0	0	2	15:45			26	106	28	102	54	208
04:00			1	0	1	16:00			30	15	45			
04:15			0	1	1	16:15			27	13	40			
04:30			2	0	2	16:30			29	12	41			
04:45			0	3	0	1	16:45		28	114	23	63	51	177
05:00			3	0	3	17:00			35	10	45			
05:15			5	2	7	17:15			34	25	59			
05:30			7	1	8	17:30			30	15	45			
05:45			9	24	0	3	17:45		33	132	15	65	48	197
06:00			4	3	7	18:00			44	15	59			
06:15			14	4	18	18:15			30	23	53			
06:30			7	5	12	18:30			26	26	52			
06:45			8	33	4	16	18:45		28	128	19	83	47	211
07:00			5	7	12	19:00			26	19	45			
07:15			4	3	7	19:15			31	16	47			
07:30			11	8	19	19:30			22	24	46			
07:45			20	40	4	22	19:45		16	95	20	79	36	174
08:00			11	8	19	20:00			18	18	36			
08:15			10	4	14	20:15			11	19	30			
08:30			8	12	20	20:30			10	13	23			
08:45			8	37	6	30	20:45		16	55	13	63	29	118
09:00			22	15	37	21:00			18	14	32			
09:15			16	11	27	21:15			6	17	23			
09:30			12	5	17	21:30			11	14	25			
09:45			19	69	18	49	21:45		6	41	8	53	14	94
10:00			22	14	36	22:00			6	7	13			
10:15			12	8	20	22:15			4	8	12			
10:30			17	13	30	22:30			3	2	5			
10:45			19	70	13	48	22:45		2	15	3	20	5	35
11:00			18	16	34	23:00			2	3	5			
11:15			18	15	33	23:15			1	3	4			
11:30			29	12	41	23:30			5	0	5			
11:45			29	94	17	60	23:45		1	9	1	7	2	16
<b>TOTALS</b>			379	237	616	<b>TOTALS</b>			1107	765	1872			
<b>SPLIT %</b>			61.5%	38.5%	24.8%	<b>SPLIT %</b>			59.1%	40.9%	75.2%			

DAILY TOTALS					NB	SB	EB	WB	Total
					0	0	1,486	1,002	2,488

AM Peak Hour	11:45	11:00	11:45	PM Peak Hour	12:00	15:00	12:45				
AM Pk Volume	130	60	189	PM Pk Volume	145	102	225				
Pk Hr Factor	0.929	0.882	0.926	Pk Hr Factor	0.824	0.911	0.840				
7 - 9 Volume	0	0	77	52	129	4 - 6 Volume	0	0	246	128	374
7 - 9 Peak Hour			07:30	08:00	07:45	4 - 6 Peak Hour			17:00	16:45	16:45
7 - 9 Pk Volume	0	0	52	30	77	4 - 6 Pk Volume	0	0	132	73	200
Pk Hr Factor	0.000	0.000	0.650	0.625	0.802	Pk Hr Factor	0.000	0.000	0.943	0.730	0.847

### VOLUME

Harbor Dr Bet. Main St & Franklin St

Day: Friday  
Date: 7/19/2019

City: Fort Bragg  
Project #: CA19\_8387\_005

DAILY TOTALS					NB	SB	EB	WB	Total		
					0	0	1,720	1,229	2,949		
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			2	1	3	12:00			34	18	52
00:15			1	1	2	12:15			32	16	48
00:30			0	0	0	12:30			33	19	52
00:45			0	3	0	12:45			45	144	61
01:00			1	2	3	13:00			36	24	60
01:15			0	0	0	13:15			48	37	85
01:30			1	0	1	13:30			28	27	55
01:45			0	2	0	13:45			39	151	70
02:00			0	0	0	14:00			32	31	63
02:15			0	2	2	14:15			39	26	65
02:30			0	0	0	14:30			45	33	78
02:45			0	0	0	14:45			19	135	43
03:00			1	1	2	15:00			43	29	72
03:15			1	0	1	15:15			27	33	60
03:30			0	1	1	15:30			51	21	72
03:45			1	3	1	15:45			33	154	61
04:00			1	1	2	16:00			28	20	48
04:15			2	0	2	16:15			27	29	56
04:30			0	0	0	16:30			35	22	57
04:45			2	5	2	16:45			30	120	49
05:00			1	0	1	17:00			47	32	79
05:15			4	0	4	17:15			37	20	57
05:30			2	2	4	17:30			51	22	73
05:45			11	18	12	17:45			36	171	67
06:00			9	4	13	18:00			38	22	60
06:15			7	2	9	18:15			46	17	63
06:30			12	3	15	18:30			32	20	52
06:45			11	39	17	18:45			31	147	53
07:00			8	2	10	19:00			25	20	45
07:15			11	10	21	19:15			35	26	61
07:30			2	9	11	19:30			23	12	35
07:45			20	41	29	19:45			26	109	42
08:00			11	6	17	20:00			30	24	54
08:15			5	14	19	20:15			20	24	44
08:30			9	12	21	20:30			10	20	30
08:45			18	43	32	20:45			9	69	30
09:00			11	18	29	21:00			14	17	31
09:15			15	12	27	21:15			15	12	27
09:30			18	13	31	21:30			10	21	31
09:45			17	61	30	21:45			5	44	13
10:00			22	17	39	22:00			8	13	21
10:15			15	18	33	22:15			6	3	9
10:30			12	11	23	22:30			7	6	13
10:45			22	71	38	22:45			5	26	9
11:00			25	16	41	23:00			3	5	8
11:15			36	15	51	23:15			3	1	4
11:30			39	19	58	23:30			1	0	1
11:45			57	157	72	23:45			0	7	1
<b>TOTALS</b>			<b>443</b>	<b>286</b>	<b>729</b>	<b>TOTALS</b>			<b>1277</b>	<b>943</b>	<b>2220</b>
<b>SPLIT %</b>			<b>60.8%</b>	<b>39.2%</b>	<b>24.7%</b>	<b>SPLIT %</b>			<b>57.5%</b>	<b>42.5%</b>	<b>75.3%</b>

DAILY TOTALS					NB	SB	EB	WB	Total
					0	0	1,720	1,229	2,949

AM Peak Hour	11:15	11:30	11:15	PM Peak Hour	17:00	13:15	13:45				
AM Pk Volume	166	68	233	PM Pk Volume	171	126	276				
Pk Hr Factor	0.728	0.895	0.809	Pk Hr Factor	0.838	0.851	0.885				
7 - 9 Volume	0	0	84	76	160	4 - 6 Volume	0	0	291	195	486
7 - 9 Peak Hour	07:45	08:00	08:00	4 - 6 Peak Hour	17:00	17:00	17:00				
7 - 9 Pk Volume	0	0	45	46	89	4 - 6 Pk Volume	0	0	171	105	276
Pk Hr Factor	0.000	0.000	0.563	0.821	0.695	Pk Hr Factor	0.000	0.000	0.838	0.820	0.873

# VOLUME

Harbor Dr Bet. Main St & Franklin St

Day: Saturday  
Date: 7/20/2019

City: Fort Bragg  
Project #: CA19\_8387\_005

DAILY TOTALS					NB	SB	EB	WB	Total					
					0	0	1,812	1,388	3,200					
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL			
00:00			2	1	3	12:00			40	21	61			
00:15			3	4	7	12:15			46	21	67			
00:30			0	1	1	12:30			43	24	67			
00:45			3	8	1	7	12:45		48	177	24	90	72	267
01:00			1	0	1	13:00			37	38	75			
01:15			2	1	3	13:15			39	42	81			
01:30			0	1	1	13:30			41	23	64			
01:45			0	3	0	2	13:45		42	159	33	136	75	295
02:00			0	1	1	14:00			32	36	68			
02:15			0	0	0	14:15			46	31	77			
02:30			0	0	0	14:30			38	35	73			
02:45			0	0	0	1	14:45		37	153	41	143	78	296
03:00			0	1	1	15:00			38	39	77			
03:15			0	1	1	15:15			42	31	73			
03:30			0	0	0	15:30			27	34	61			
03:45			0	0	0	2	15:45		32	139	15	119	47	258
04:00			1	1	2	16:00			34	34	68			
04:15			0	0	0	16:15			40	28	68			
04:30			1	0	1	16:30			38	18	56			
04:45			2	4	0	1	16:45		34	146	23	103	57	249
05:00			3	3	6	17:00			39	19	58			
05:15			4	0	4	17:15			51	32	83			
05:30			3	3	6	17:30			41	29	70			
05:45			5	15	1	7	17:45		49	180	23	103	72	283
06:00			11	2	13	18:00			37	16	53			
06:15			17	2	19	18:15			42	33	75			
06:30			16	7	23	18:30			36	24	60			
06:45			3	47	4	15	18:45		44	159	29	102	73	261
07:00			6	1	7	19:00			27	37	64			
07:15			7	8	15	19:15			24	22	46			
07:30			2	7	9	19:30			28	34	62			
07:45			10	25	1	17	19:45		31	110	27	120	58	230
08:00			14	5	19	20:00			30	19	49			
08:15			11	4	15	20:15			10	26	36			
08:30			5	9	14	20:30			16	23	39			
08:45			14	44	11	29	20:45		15	71	24	92	39	163
09:00			23	13	36	21:00			14	23	37			
09:15			9	19	28	21:15			12	17	29			
09:30			12	10	22	21:30			6	12	18			
09:45			19	63	7	49	21:45		11	43	18	70	29	113
10:00			25	17	42	22:00			7	18	25			
10:15			24	20	44	22:15			3	9	12			
10:30			20	14	34	22:30			2	3	5			
10:45			19	88	14	65	22:45		4	16	8	38	12	54
11:00			36	12	48	23:00			5	3	8			
11:15			47	22	69	23:15			7	4	11			
11:30			31	21	52	23:30			3	1	4			
11:45			31	145	13	68	23:45		2	17	1	9	3	26
<b>TOTALS</b>			442	263	705	<b>TOTALS</b>			1370	1125	2495			
<b>SPLIT %</b>			62.7%	37.3%	22.0%	<b>SPLIT %</b>			54.9%	45.1%	78.0%			

DAILY TOTALS					NB	SB	EB	WB	Total
					0	0	1,812	1,388	3,200

AM Peak Hour	11:45	11:45	11:45	PM Peak Hour	17:00	14:15	14:15
AM Pk Volume	160	79	239	PM Pk Volume	180	146	305
Pk Hr Factor	0.870	0.823	0.892	Pk Hr Factor	0.882	0.890	0.978
7 - 9 Volume	0	0	69	4 - 6 Volume	0	0	326
7 - 9 Peak Hour	08:00	08:00	08:00	4 - 6 Peak Hour	17:00	16:00	17:00
7 - 9 Pk Volume	0	0	44	4 - 6 Pk Volume	0	0	180
Pk Hr Factor	0.000	0.000	0.786	Pk Hr Factor	0.000	0.000	0.882
			0.659				0.757
			0.730				0.852

## LOS Calculations

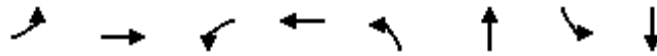


Queues

SAT EXISTING

1: S MAIN ST & CYPRESS ST

09/16/2019



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	15	22	210	34	35	1113	30	886
v/c Ratio	0.04	0.04	0.48	0.06	0.15	0.58	0.13	0.46
Control Delay	15.5	10.0	20.6	7.3	31.3	16.0	31.3	13.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.5	10.0	20.6	7.3	31.3	16.0	31.3	13.9
Queue Length 50th (ft)	3	1	45	1	8	97	7	71
Queue Length 95th (ft)	16	16	130	18	48	#422	43	282
Internal Link Dist (ft)		1618		348		639		2369
Turn Bay Length (ft)	80		100		150		400	
Base Capacity (vph)	583	721	590	703	236	2101	236	2109
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.03	0.36	0.05	0.15	0.53	0.13	0.42

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary  
 1: S MAIN ST & CYPRESS ST

SAT EXISTING  
 09/16/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	7	15	204	3	30	34	1022	57	29	851	9
Future Volume (veh/h)	15	7	15	204	3	30	34	1022	57	29	851	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1856	1856	1870	1856	1856
Adj Flow Rate, veh/h	15	7	15	210	3	31	35	1054	59	30	877	9
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	3	3	2	3	3
Cap, veh/h	415	107	229	427	29	296	70	1440	81	62	1500	15
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.04	0.42	0.42	0.03	0.42	0.42
Sat Flow, veh/h	1375	530	1136	1390	142	1465	1781	3394	190	1781	3575	37
Grp Volume(v), veh/h	15	0	22	210	0	34	35	547	566	30	432	454
Grp Sat Flow(s),veh/h/ln	1375	0	1666	1390	0	1607	1781	1763	1821	1781	1763	1849
Q Serve(g_s), s	0.4	0.0	0.5	6.4	0.0	0.8	0.9	11.5	11.5	0.7	8.4	8.4
Cycle Q Clear(g_c), s	1.2	0.0	0.5	6.9	0.0	0.8	0.9	11.5	11.5	0.7	8.4	8.4
Prop In Lane	1.00		0.68	1.00		0.91	1.00		0.10	1.00		0.02
Lane Grp Cap(c), veh/h	415	0	336	427	0	324	70	748	773	62	740	776
V/C Ratio(X)	0.04	0.00	0.07	0.49	0.00	0.10	0.50	0.73	0.73	0.48	0.58	0.58
Avail Cap(c_a), veh/h	583	0	539	596	0	520	204	1006	1039	204	1006	1055
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.0	0.0	14.4	17.2	0.0	14.5	20.9	10.7	10.7	21.1	9.9	9.9
Incr Delay (d2), s/veh	0.0	0.0	0.1	0.9	0.0	0.1	5.4	1.8	1.8	5.7	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.2	1.9	0.0	0.3	0.4	3.4	3.5	0.4	2.3	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.0	0.0	14.5	18.0	0.0	14.6	26.3	12.5	12.5	26.8	10.7	10.6
LnGrp LOS	B	A	B	B	A	B	C	B	B	C	B	B
Approach Vol, veh/h		37			244			1148			916	
Approach Delay, s/veh		14.7			17.6			12.9			11.2	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.6	24.3		13.6	6.9	24.1		13.6				
Change Period (Y+Rc), s	5.1	5.4		4.6	5.1	5.4		4.6				
Max Green Setting (Gmax), s	5.1	25.4		14.4	5.1	25.4		14.4				
Max Q Clear Time (g_c+I1), s	2.7	13.5		3.2	2.9	10.4		8.9				
Green Ext Time (p_c), s	0.0	5.3		0.1	0.0	4.6		0.4				

Intersection Summary

HCM 6th Ctrl Delay	12.8
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

<b>Intersection</b>												
Intersection Delay, s/veh	9.4											
Intersection LOS	A											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷			↕			↕	
Traffic Vol, veh/h	46	33	23	2	37	46	58	86	4	34	93	129
Future Vol, veh/h	46	33	23	2	37	46	58	86	4	34	93	129
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	51	36	25	2	41	51	64	95	4	37	102	142
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	9.1	8.9	9.3	9.8
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	39%	100%	0%	100%	0%	13%
Vol Thru, %	58%	0%	59%	0%	45%	36%
Vol Right, %	3%	0%	41%	0%	55%	50%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	148	46	56	2	83	256
LT Vol	58	46	0	2	0	34
Through Vol	86	0	33	0	37	93
RT Vol	4	0	23	0	46	129
Lane Flow Rate	163	51	62	2	91	281
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.22	0.087	0.092	0.004	0.134	0.344
Departure Headway (Hd)	4.86	6.165	5.369	6.201	5.302	4.404
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	735	578	662	573	670	813
Service Time	2.915	3.94	3.143	3.978	3.078	2.452
HCM Lane V/C Ratio	0.222	0.088	0.094	0.003	0.136	0.346
HCM Control Delay	9.3	9.5	8.7	9	8.9	9.8
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0.8	0.3	0.3	0	0.5	1.5

Intersection						
Int Delay, s/veh	0.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	46	32	1089	42	25	1068
Future Vol, veh/h	46	32	1089	42	25	1068
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	3	2	2	3
Mvmt Flow	47	33	1123	43	26	1101

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1748	583	0	0	1166
Stage 1	1145	-	-	-	-
Stage 2	603	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14
Critical Hdwy Stg 1	5.84	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22
Pot Cap-1 Maneuver	77	456	-	-	595
Stage 1	265	-	-	-	-
Stage 2	509	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	74	456	-	-	595
Mov Cap-2 Maneuver	228	-	-	-	-
Stage 1	265	-	-	-	-
Stage 2	487	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	22.4	0	0.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	287	595
HCM Lane V/C Ratio	-	-	0.28	0.043
HCM Control Delay (s)	-	-	22.4	11.3
HCM Lane LOS	-	-	C	B
HCM 95th %tile Q(veh)	-	-	1.1	0.1

Intersection												
Int Delay, s/veh	8.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	27	26	10	3	16	13	31	94	4	18	73	18
Future Vol, veh/h	27	26	10	3	16	13	31	94	4	18	73	18
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	30	29	11	3	18	14	34	103	4	20	80	20

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	32	0	0	40	0	0	176	133	35	179	131	25
Stage 1	-	-	-	-	-	-	95	95	-	31	31	-
Stage 2	-	-	-	-	-	-	81	38	-	148	100	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1580	-	-	1570	-	-	786	758	1038	783	760	1051
Stage 1	-	-	-	-	-	-	912	816	-	986	869	-
Stage 2	-	-	-	-	-	-	927	863	-	855	812	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1580	-	-	1570	-	-	696	742	1038	686	744	1051
Mov Cap-2 Maneuver	-	-	-	-	-	-	696	742	-	686	744	-
Stage 1	-	-	-	-	-	-	895	800	-	967	867	-
Stage 2	-	-	-	-	-	-	824	861	-	727	797	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	3.1			0.7			11			10.5		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	737	1580	-	-	1570	-	-	770
HCM Lane V/C Ratio	0.192	0.019	-	-	0.002	-	-	0.156
HCM Control Delay (s)	11	7.3	0	-	7.3	0	-	10.5
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.7	0.1	-	-	0	-	-	0.5

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕				↗	↖	↕		↖	↕	
Traffic Vol, veh/h	0	0	11	0	0	130	11	1008	109	47	1152	19
Future Vol, veh/h	0	0	11	0	0	130	11	1008	109	47	1152	19
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	120	-	-	120	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2	2	3	2	2	3	2
Mvmt Flow	0	0	11	0	0	133	11	1029	111	48	1176	19

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1819	2444	598	-	-	570	1195	0	0	1140	0	0
Stage 1	1282	1282	-	-	-	-	-	-	-	-	-	-
Stage 2	537	1162	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	-	-	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	-	-	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	48	31	445	0	0	465	580	-	-	609	-	-
Stage 1	175	234	-	0	0	-	-	-	-	-	-	-
Stage 2	496	267	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	32	28	445	-	-	465	580	-	-	609	-	-
Mov Cap-2 Maneuver	113	111	-	-	-	-	-	-	-	-	-	-
Stage 1	172	216	-	-	-	-	-	-	-	-	-	-
Stage 2	348	262	-	-	-	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	13.3		15.8		0.1		0.4	
HCM LOS	B		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	580	-	-	445	465	609	-
HCM Lane V/C Ratio	0.019	-	-	0.025	0.285	0.079	-
HCM Control Delay (s)	11.3	-	-	13.3	15.8	11.4	-
HCM Lane LOS	B	-	-	B	C	B	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	1.2	0.3	-

Intersection	
Intersection Delay, s/veh	8.7
Intersection LOS	A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↔		↕	↕
Traffic Vol, veh/h	21	138	115	108	74	15
Future Vol, veh/h	21	138	115	108	74	15
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	147	122	115	79	16
Number of Lanes	0	1	1	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	1
HCM Control Delay	8.7	8.6	9.2
HCM LOS	A	A	A

Lane	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	13%	0%	100%	0%
Vol Thru, %	87%	52%	0%	0%
Vol Right, %	0%	48%	0%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	159	223	74	15
LT Vol	21	0	74	0
Through Vol	138	115	0	0
RT Vol	0	108	0	15
Lane Flow Rate	169	237	79	16
Geometry Grp	2	2	7	7
Degree of Util (X)	0.21	0.27	0.129	0.021
Departure Headway (Hd)	4.471	4.101	5.907	4.698
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	805	878	607	761
Service Time	2.49	2.118	3.641	2.432
HCM Lane V/C Ratio	0.21	0.27	0.13	0.021
HCM Control Delay	8.7	8.6	9.5	7.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.8	1.1	0.4	0.1



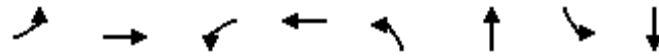


## Queues

PM EXISTING

09/16/2019

## 1: S MAIN ST &amp; CYPRESS ST



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	18	18	226	56	21	1157	44	927
v/c Ratio	0.05	0.04	0.56	0.11	0.11	0.75	0.23	0.56
Control Delay	15.6	9.1	23.0	6.0	31.9	19.3	32.9	13.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.6	9.1	23.0	6.0	31.9	19.3	32.9	13.7
Queue Length 50th (ft)	4	1	52	0	5	108	11	79
Queue Length 95th (ft)	18	13	140	21	33	#450	56	299
Internal Link Dist (ft)		1618		348		639		2369
Turn Bay Length (ft)	80		100		150		400	
Base Capacity (vph)	474	586	491	598	190	1906	190	2031
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.03	0.46	0.09	0.11	0.61	0.23	0.46

## Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary  
 1: S MAIN ST & CYPRESS ST

PM EXISTING  
 09/16/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↕	↗	↖	↕	↗
Traffic Volume (veh/h)	17	3	15	219	2	52	20	1067	55	43	890	9
Future Volume (veh/h)	17	3	15	219	2	52	20	1067	55	43	890	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1856	1856	1870	1856	1856
Adj Flow Rate, veh/h	18	3	15	226	2	54	21	1100	57	44	918	9
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	3	3	2	3	3
Cap, veh/h	397	57	286	434	12	324	45	1447	75	83	1592	16
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.03	0.42	0.42	0.05	0.45	0.45
Sat Flow, veh/h	1348	271	1355	1395	57	1537	1781	3410	177	1781	3577	35
Grp Volume(v), veh/h	18	0	18	226	0	56	21	568	589	44	452	475
Grp Sat Flow(s),veh/h/ln	1348	0	1626	1395	0	1594	1781	1763	1824	1781	1763	1849
Q Serve(g_s), s	0.5	0.0	0.4	7.3	0.0	1.4	0.6	13.0	13.0	1.1	9.1	9.1
Cycle Q Clear(g_c), s	1.9	0.0	0.4	7.7	0.0	1.4	0.6	13.0	13.0	1.1	9.1	9.1
Prop In Lane	1.00		0.83	1.00		0.96	1.00		0.10	1.00		0.02
Lane Grp Cap(c), veh/h	397	0	343	434	0	336	45	748	774	83	785	823
V/C Ratio(X)	0.05	0.00	0.05	0.52	0.00	0.17	0.46	0.76	0.76	0.53	0.58	0.58
Avail Cap(c_a), veh/h	522	0	494	563	0	484	191	944	976	191	944	990
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.1	0.0	14.9	18.0	0.0	15.3	22.8	11.6	11.6	22.1	9.8	9.8
Incr Delay (d2), s/veh	0.0	0.0	0.1	1.0	0.0	0.2	7.2	2.8	2.7	5.2	0.7	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.1	2.2	0.0	0.5	0.3	4.2	4.3	0.5	2.6	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.1	0.0	15.0	19.0	0.0	15.5	30.0	14.4	14.3	27.4	10.5	10.5
LnGrp LOS	B	A	B	B	A	B	C	B	B	C	B	B
Approach Vol, veh/h		36			282			1178			971	
Approach Delay, s/veh		15.6			18.3			14.6			11.2	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.3	25.5		14.6	6.3	26.5		14.6				
Change Period (Y+Rc), s	5.1	5.4		4.6	5.1	5.4		4.6				
Max Green Setting (Gmax), s	5.1	25.4		14.4	5.1	25.4		14.4				
Max Q Clear Time (g_c+I1), s	3.1	15.0		3.9	2.6	11.1		9.7				
Green Ext Time (p_c), s	0.0	5.1		0.1	0.0	4.8		0.4				

Intersection Summary

HCM 6th Ctrl Delay	13.7
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

Intersection

Intersection Delay, s/veh 11.8

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷			↕			↕	
Traffic Vol, veh/h	45	34	24	8	97	74	59	134	9	60	123	148
Future Vol, veh/h	45	34	24	8	97	74	59	134	9	60	123	148
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	49	37	26	9	107	81	65	147	10	66	135	163
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	9.9	11.3	11.2	13
HCM LOS	A	B	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	29%	100%	0%	100%	0%	18%
Vol Thru, %	66%	0%	59%	0%	57%	37%
Vol Right, %	4%	0%	41%	0%	43%	45%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	202	45	58	8	171	331
LT Vol	59	45	0	8	0	60
Through Vol	134	0	34	0	97	123
RT Vol	9	0	24	0	74	148
Lane Flow Rate	222	49	64	9	188	364
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.336	0.095	0.108	0.017	0.311	0.504
Departure Headway (Hd)	5.443	6.928	6.122	6.782	5.964	4.991
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	659	516	584	527	601	720
Service Time	3.484	4.68	3.874	4.527	3.709	3.027
HCM Lane V/C Ratio	0.337	0.095	0.11	0.017	0.313	0.506
HCM Control Delay	11.2	10.4	9.6	9.6	11.4	13
HCM Lane LOS	B	B	A	A	B	B
HCM 95th-tile Q	1.5	0.3	0.4	0.1	1.3	2.9

Intersection						
Int Delay, s/veh	0.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↑↓		↔	↑↑
Traffic Vol, veh/h	49	39	1082	65	22	1108
Future Vol, veh/h	49	39	1082	65	22	1108
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	3	2	2	3
Mvmt Flow	51	40	1115	67	23	1142

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1766	591	0	0	1182
Stage 1	1149	-	-	-	-
Stage 2	617	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14
Critical Hdwy Stg 1	5.84	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22
Pot Cap-1 Maneuver	75	450	-	-	587
Stage 1	264	-	-	-	-
Stage 2	501	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	72	450	-	-	587
Mov Cap-2 Maneuver	227	-	-	-	-
Stage 1	264	-	-	-	-
Stage 2	481	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	22.9	0	0.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	291	587
HCM Lane V/C Ratio	-	-	0.312	0.039
HCM Control Delay (s)	-	-	22.9	11.4
HCM Lane LOS	-	-	C	B
HCM 95th %tile Q(veh)	-	-	1.3	0.1

Intersection												
Int Delay, s/veh	6.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	37	62	4	6	44	84	17	58	3	52	55	36
Future Vol, veh/h	37	62	4	6	44	84	17	58	3	52	55	36
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	41	68	4	7	48	92	19	64	3	57	60	40

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	140	0	0	72	0	0	310	306	70	294	262	94
Stage 1	-	-	-	-	-	-	152	152	-	108	108	-
Stage 2	-	-	-	-	-	-	158	154	-	186	154	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1443	-	-	1528	-	-	642	608	993	658	643	963
Stage 1	-	-	-	-	-	-	850	772	-	897	806	-
Stage 2	-	-	-	-	-	-	844	770	-	816	770	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1443	-	-	1528	-	-	555	587	993	586	620	963
Mov Cap-2 Maneuver	-	-	-	-	-	-	555	587	-	586	620	-
Stage 1	-	-	-	-	-	-	825	749	-	870	802	-
Stage 2	-	-	-	-	-	-	745	766	-	722	747	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.7			0.3			12.2			12.1		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	589	1443	-	-	1528	-	-	666
HCM Lane V/C Ratio	0.146	0.028	-	-	0.004	-	-	0.236
HCM Control Delay (s)	12.2	7.6	0	-	7.4	0	-	12.1
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.5	0.1	-	-	0	-	-	0.9





Intersection										
Int Delay, s/veh	0.7									
Movement	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	NWL	NWR
Lane Configurations		↔	↔	↕		↕	↕			↕
Traffic Vol, veh/h	0	0	3	1031	78	47	1152	19	0	72
Future Vol, veh/h	0	0	3	1031	78	47	1152	19	0	72
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	-	-	-	None	-	-	None	-	None
Storage Length	-	0	120	-	-	120	-	-	-	0
Veh in Median Storage, #	1	-	-	0	-	-	0	-	1	-
Grade, %	0	-	-	0	-	-	0	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	3	2	2	3	2	2	2
Mvmt Flow	0	0	3	1052	80	48	1176	19	0	73

Major/Minor	Minor2	Major1	Major2	Minor1
Conflicting Flow All	-	598	1195	0
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	-	6.94	4.14	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	3.32	2.22	-
Pot Cap-1 Maneuver	0	445	580	-
Stage 1	0	-	-	-
Stage 2	0	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	-	445	580	-
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	NB	SB	NW
HCM Control Delay, s	13.3	0	0.4	14.1
HCM LOS	B			B

Minor Lane/Major Mvmt	NBL	NBT	NBRNWLn1	EBLn1	SBL	SBT	SBR
Capacity (veh/h)	580	-	-	467	445	613	-
HCM Lane V/C Ratio	0.005	-	-	0.157	0.023	0.078	-
HCM Control Delay (s)	11.2	-	-	14.1	13.3	11.4	-
HCM Lane LOS	B	-	-	B	B	B	-
HCM 95th %tile Q(veh)	0	-	-	0.6	0.1	0.3	-

Intersection	
Intersection Delay, s/veh	8.3
Intersection LOS	A

Movement	WBR	SBL	SBR	SEL
Lane Configurations				
Traffic Vol, veh/h	60	56	13	128
Future Vol, veh/h	60	56	13	128
Peak Hour Factor	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	64	60	14	136
Number of Lanes	1	1	1	1

Approach	WB	SB
Opposing Approach		
Opposing Lanes	0	0
Conflicting Approach Left		WB
Conflicting Lanes Left	0	1
Conflicting Approach Right	SB	SE
Conflicting Lanes Right	2	1
HCM Control Delay	7.7	8.7
HCM LOS	A	A

Lane	WBLn1	SELn1	SBLn1	SBLn2
Vol Left, %	0%	100%	100%	0%
Vol Thru, %	0%	0%	0%	0%
Vol Right, %	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	150	144	56	13
LT Vol	0	144	56	0
Through Vol	0	0	0	0
RT Vol	150	0	0	13
Lane Flow Rate	160	153	60	14
Geometry Grp	2	2	7	7
Degree of Util (X)	0.173	0.198	0.095	0.017
Departure Headway (Hd)	3.898	4.649	5.718	4.511
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	922	774	628	794
Service Time	1.913	2.669	3.442	2.235
HCM Lane V/C Ratio	0.174	0.198	0.096	0.018
HCM Control Delay	7.7	8.8	9	7.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.6	0.7	0.3	0.1



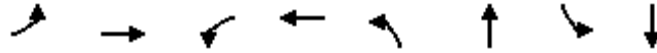


## Queues

## SAT EXISTING PLUS PROJECT

## 1: S MAIN ST &amp; CYPRESS ST

09/16/2019



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	15	22	224	34	35	1132	30	907
v/c Ratio	0.04	0.04	0.55	0.07	0.18	0.75	0.15	0.60
Control Delay	15.5	10.0	22.6	7.4	32.1	19.2	32.0	15.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.5	10.0	22.6	7.4	32.1	19.2	32.0	15.7
Queue Length 50th (ft)	3	1	49	1	9	104	7	77
Queue Length 95th (ft)	16	16	139	18	48	#435	43	291
Internal Link Dist (ft)		1618		348		639		2369
Turn Bay Length (ft)	80		100		150		400	
Base Capacity (vph)	492	611	498	598	194	1942	194	1951
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.04	0.45	0.06	0.18	0.58	0.15	0.46

## Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary  
1: S MAIN ST & CYPRESS ST

SAT EXISTING PLUS PROJECT

09/16/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↕		↖	↗	
Traffic Volume (veh/h)	15	7	15	217	3	30	34	1041	57	29	871	9
Future Volume (veh/h)	15	7	15	217	3	30	34	1041	57	29	871	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1856	1856	1870	1856	1856
Adj Flow Rate, veh/h	15	7	15	224	3	31	35	1073	59	30	898	9
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	3	3	2	3	3
Cap, veh/h	424	112	240	436	30	309	70	1442	79	62	1501	15
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.04	0.42	0.42	0.03	0.42	0.42
Sat Flow, veh/h	1375	530	1136	1390	142	1465	1781	3398	187	1781	3576	36
Grp Volume(v), veh/h	15	0	22	224	0	34	35	557	575	30	443	464
Grp Sat Flow(s),veh/h/ln	1375	0	1666	1390	0	1607	1781	1763	1822	1781	1763	1849
Q Serve(g_s), s	0.4	0.0	0.5	7.0	0.0	0.8	0.9	12.2	12.2	0.8	8.9	8.9
Cycle Q Clear(g_c), s	1.2	0.0	0.5	7.5	0.0	0.8	0.9	12.2	12.2	0.8	8.9	8.9
Prop In Lane	1.00		0.68	1.00		0.91	1.00		0.10	1.00		0.02
Lane Grp Cap(c), veh/h	424	0	352	436	0	339	70	748	773	62	740	776
V/C Ratio(X)	0.04	0.00	0.06	0.51	0.00	0.10	0.50	0.74	0.74	0.49	0.60	0.60
Avail Cap(c_a), veh/h	566	0	524	580	0	506	198	978	1011	198	978	1026
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.0	0.0	14.4	17.4	0.0	14.6	21.5	11.1	11.1	21.7	10.3	10.3
Incr Delay (d2), s/veh	0.0	0.0	0.1	0.9	0.0	0.1	5.4	2.2	2.2	5.8	0.8	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.2	2.1	0.0	0.3	0.4	3.7	3.8	0.4	2.5	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.1	0.0	14.5	18.4	0.0	14.7	27.0	13.3	13.2	27.5	11.1	11.0
LnGrp LOS	B	A	B	B	A	B	C	B	B	C	B	B
Approach Vol, veh/h		37			258			1167			937	
Approach Delay, s/veh		14.7			17.9			13.7			11.6	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.7	24.8		14.3	6.9	24.6		14.3				
Change Period (Y+Rc), s	5.1	5.4		4.6	5.1	5.4		4.6				
Max Green Setting (Gmax), s	5.1	25.4		14.4	5.1	25.4		14.4				
Max Q Clear Time (g_c+I1), s	2.8	14.2		3.2	2.9	10.9		9.5				
Green Ext Time (p_c), s	0.0	5.3		0.1	0.0	4.7		0.4				

Intersection Summary

HCM 6th Ctrl Delay	13.3
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

Intersection

Intersection Delay, s/veh 9.6

Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	46	33	23	3	37	46	71	91	5	34	99	129
Future Vol, veh/h	46	33	23	3	37	46	71	91	5	34	99	129
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	51	36	25	3	41	51	78	100	5	37	109	142
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	9.2	9	9.6	10
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %		43%	100%	0%	100%	0%
Vol Thru, %		54%	0%	59%	0%	45%
Vol Right, %		3%	0%	41%	0%	55%
Sign Control		Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane		167	46	56	3	83
LT Vol		71	46	0	3	0
Through Vol		91	0	33	0	37
RT Vol		5	0	23	0	46
Lane Flow Rate		184	51	62	3	91
Geometry Grp		2	7	7	7	7
Degree of Util (X)		0.249	0.088	0.093	0.006	0.136
Departure Headway (Hd)		4.879	6.235	5.438	6.27	5.371
Convergence, Y/N		Yes	Yes	Yes	Yes	Yes
Cap		730	571	653	566	661
Service Time		2.943	4.019	3.221	4.056	3.156
HCM Lane V/C Ratio		0.252	0.089	0.095	0.005	0.138
HCM Control Delay		9.6	9.6	8.8	9.1	9
HCM Lane LOS		A	A	A	A	A
HCM 95th-tile Q		1	0.3	0.3	0	0.5

Intersection						
Int Delay, s/veh	1.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↕↔		↔	↕↔
Traffic Vol, veh/h	74	54	1086	42	56	1070
Future Vol, veh/h	74	54	1086	42	56	1070
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	3	2	2	3
Mvmt Flow	76	56	1120	43	58	1103

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1810	582	0	0	1163
Stage 1	1142	-	-	-	-
Stage 2	668	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14
Critical Hdwy Stg 1	5.84	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22
Pot Cap-1 Maneuver	~ 70	456	-	-	596
Stage 1	266	-	-	-	-
Stage 2	471	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	~ 63	456	-	-	596
Mov Cap-2 Maneuver	220	-	-	-	-
Stage 1	266	-	-	-	-
Stage 2	425	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	28.7	0	0.6
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	281	596
HCM Lane V/C Ratio	-	-	0.47	0.097
HCM Control Delay (s)	-	-	28.7	11.7
HCM Lane LOS	-	-	D	B
HCM 95th %tile Q(veh)	-	-	2.4	0.3

Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Intersection												
Int Delay, s/veh	9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	27	26	41	4	16	13	81	113	5	18	79	18
Future Vol, veh/h	27	26	41	4	16	13	81	113	5	18	79	18
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	30	29	45	4	18	14	89	124	5	20	87	20

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	32	0	0	74	0	0	199	152	52	209	167	25
Stage 1	-	-	-	-	-	-	112	112	-	33	33	-
Stage 2	-	-	-	-	-	-	87	40	-	176	134	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1580	-	-	1526	-	-	760	740	1016	748	726	1051
Stage 1	-	-	-	-	-	-	893	803	-	983	868	-
Stage 2	-	-	-	-	-	-	921	862	-	826	785	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1580	-	-	1526	-	-	664	723	1016	635	709	1051
Mov Cap-2 Maneuver	-	-	-	-	-	-	664	723	-	635	709	-
Stage 1	-	-	-	-	-	-	875	787	-	963	865	-
Stage 2	-	-	-	-	-	-	811	859	-	678	769	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.1			0.9			12.4			10.9		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	703	1580	-	-	1526	-	-	733
HCM Lane V/C Ratio	0.311	0.019	-	-	0.003	-	-	0.172
HCM Control Delay (s)	12.4	7.3	0	-	7.4	0	-	10.9
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	1.3	0.1	-	-	0	-	-	0.6

Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕				↕	↕	↕		↕	↕	
Traffic Vol, veh/h	0	0	11	0	0	141	11	994	151	48	1085	7
Future Vol, veh/h	0	0	11	0	0	141	11	994	151	48	1085	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	120	-	-	120	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2	2	3	2	2	3	2
Mvmt Flow	0	0	11	0	0	144	11	1014	154	49	1107	7

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1738	2399	557	-	-	584	1114	0	0	1168	0	0
Stage 1	1209	1209	-	-	-	-	-	-	-	-	-	-
Stage 2	529	1190	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	-	-	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	-	-	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	56	33	474	0	0	455	623	-	-	594	-	-
Stage 1	194	254	-	0	0	-	-	-	-	-	-	-
Stage 2	501	259	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	35	30	474	-	-	455	623	-	-	594	-	-
Mov Cap-2 Maneuver	120	113	-	-	-	-	-	-	-	-	-	-
Stage 1	191	233	-	-	-	-	-	-	-	-	-	-
Stage 2	337	254	-	-	-	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	12.8		16.5		0.1		0.5	
HCM LOS	B		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	623	-	-	474	455	594	-	-
HCM Lane V/C Ratio	0.018	-	-	0.024	0.316	0.082	-	-
HCM Control Delay (s)	10.9	-	-	12.8	16.5	11.6	-	-
HCM Lane LOS	B	-	-	B	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	1.3	0.3	-	-

Intersection	
Intersection Delay, s/veh	8.7
Intersection LOS	A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↔		↕	↕
Traffic Vol, veh/h	26	138	115	108	74	15
Future Vol, veh/h	26	138	115	108	74	15
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	28	147	122	115	79	16
Number of Lanes	0	1	1	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	1
HCM Control Delay	8.7	8.6	9.2
HCM LOS	A	A	A

Lane	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	16%	0%	100%	0%
Vol Thru, %	84%	52%	0%	0%
Vol Right, %	0%	48%	0%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	164	223	74	15
LT Vol	26	0	74	0
Through Vol	138	115	0	0
RT Vol	0	108	0	15
Lane Flow Rate	174	237	79	16
Geometry Grp	2	2	7	7
Degree of Util (X)	0.217	0.271	0.129	0.021
Departure Headway (Hd)	4.477	4.107	5.921	4.712
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	803	875	605	759
Service Time	2.497	2.124	3.656	2.446
HCM Lane V/C Ratio	0.217	0.271	0.131	0.021
HCM Control Delay	8.7	8.6	9.5	7.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.8	1.1	0.4	0.1

Intersection						
Int Delay, s/veh	1.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	40	164	130	0	0	11
Future Vol, veh/h	40	164	130	0	0	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	43	178	141	0	0	12

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	141	0	-	0	405 141
Stage 1	-	-	-	-	141 -
Stage 2	-	-	-	-	264 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1442	-	-	-	602 907
Stage 1	-	-	-	-	886 -
Stage 2	-	-	-	-	780 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1442	-	-	-	582 907
Mov Cap-2 Maneuver	-	-	-	-	582 -
Stage 1	-	-	-	-	857 -
Stage 2	-	-	-	-	780 -

Approach	EB	WB	SB
HCM Control Delay, s	1.5	0	9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1442	-	-	-	907
HCM Lane V/C Ratio	0.03	-	-	-	0.013
HCM Control Delay (s)	7.6	0	-	-	9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0



Intersection						
Int Delay, s/veh	2.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	69	0	5	1229	89	38
Future Vol, veh/h	69	0	5	1229	89	38
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	75	0	5	1336	97	41

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1464	118	138	0	-	0
Stage 1	118	-	-	-	-	-
Stage 2	1346	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	141	934	1446	-	-	-
Stage 1	907	-	-	-	-	-
Stage 2	242	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	139	934	1446	-	-	-
Mov Cap-2 Maneuver	139	-	-	-	-	-
Stage 1	895	-	-	-	-	-
Stage 2	242	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	57.8	0	0
HCM LOS	F		

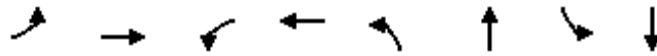
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1446	-	139	-	-
HCM Lane V/C Ratio	0.004	-	0.54	-	-
HCM Control Delay (s)	7.5	0	57.8	-	-
HCM Lane LOS	A	A	F	-	-
HCM 95th %tile Q(veh)	0	-	2.6	-	-

## Queues

## PM EXISTING PLUS PROJECT

## 1: S MAIN ST &amp; CYPRESS ST

09/16/2019



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	18	18	238	56	21	1175	44	945
v/c Ratio	0.05	0.04	0.58	0.11	0.11	0.76	0.24	0.57
Control Delay	15.6	9.1	23.7	6.0	32.1	19.8	33.2	14.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.6	9.1	23.7	6.0	32.1	19.8	33.2	14.0
Queue Length 50th (ft)	4	1	56	0	6	115	12	84
Queue Length 95th (ft)	18	13	148	21	33	#462	56	306
Internal Link Dist (ft)		1618		348		639		2369
Turn Bay Length (ft)	80		100		150		400	
Base Capacity (vph)	466	576	483	588	187	1869	187	1995
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.03	0.49	0.10	0.11	0.63	0.24	0.47

## Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary  
1: S MAIN ST & CYPRESS ST

PM EXISTING PLUS PROJECT

09/16/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↕		↖	↗	
Traffic Volume (veh/h)	17	3	15	231	2	52	20	1084	55	43	908	9
Future Volume (veh/h)	17	3	15	231	2	52	20	1084	55	43	908	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1856	1856	1870	1856	1856
Adj Flow Rate, veh/h	18	3	15	238	2	54	21	1118	57	44	936	9
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	3	3	2	3	3
Cap, veh/h	404	59	296	441	12	336	45	1449	74	82	1593	15
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.03	0.42	0.42	0.05	0.45	0.45
Sat Flow, veh/h	1348	271	1355	1395	57	1537	1781	3413	174	1781	3578	34
Grp Volume(v), veh/h	18	0	18	238	0	56	21	577	598	44	461	484
Grp Sat Flow(s),veh/h/ln	1348	0	1626	1395	0	1594	1781	1763	1824	1781	1763	1849
Q Serve(g_s), s	0.5	0.0	0.4	7.9	0.0	1.4	0.6	13.6	13.6	1.2	9.5	9.5
Cycle Q Clear(g_c), s	1.9	0.0	0.4	8.3	0.0	1.4	0.6	13.6	13.6	1.2	9.5	9.5
Prop In Lane	1.00		0.83	1.00		0.96	1.00		0.10	1.00		0.02
Lane Grp Cap(c), veh/h	404	0	355	441	0	348	45	748	774	82	785	823
V/C Ratio(X)	0.04	0.00	0.05	0.54	0.00	0.16	0.46	0.77	0.77	0.54	0.59	0.59
Avail Cap(c_a), veh/h	510	0	482	550	0	473	187	922	954	187	922	968
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.1	0.0	15.0	18.3	0.0	15.4	23.3	12.0	12.0	22.6	10.1	10.1
Incr Delay (d2), s/veh	0.0	0.0	0.1	1.0	0.0	0.2	7.2	3.3	3.2	5.3	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.1	2.4	0.0	0.5	0.3	4.5	4.6	0.6	2.7	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.2	0.0	15.1	19.3	0.0	15.6	30.6	15.2	15.1	28.0	10.8	10.8
LnGrp LOS	B	A	B	B	A	B	C	B	B	C	B	B
Approach Vol, veh/h		36			294			1196			989	
Approach Delay, s/veh		15.6			18.6			15.4			11.6	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.3	26.0		15.2	6.3	27.0		15.2				
Change Period (Y+Rc), s	5.1	5.4		4.6	5.1	5.4		4.6				
Max Green Setting (Gmax), s	5.1	25.4		14.4	5.1	25.4		14.4				
Max Q Clear Time (g_c+I1), s	3.2	15.6		3.9	2.6	11.5		10.3				
Green Ext Time (p_c), s	0.0	5.0		0.1	0.0	4.8		0.4				

Intersection Summary

HCM 6th Ctrl Delay	14.3
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

Intersection												
Intersection Delay, s/veh	12.1											
Intersection LOS	B											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	45	34	24	9	97	74	71	139	10	60	128	148
Future Vol, veh/h	45	34	24	9	97	74	71	139	10	60	128	148
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	49	37	26	10	107	81	78	153	11	66	141	163
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	10	11.5	11.7	13.4
HCM LOS	A	B	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %		32%	100%	0%	100%	0%
Vol Thru, %		63%	0%	59%	0%	57%
Vol Right, %		5%	0%	41%	0%	43%
Sign Control		Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane		220	45	58	9	171
LT Vol		71	45	0	9	0
Through Vol		139	0	34	0	97
RT Vol		10	0	24	0	74
Lane Flow Rate		242	49	64	10	188
Geometry Grp		2	7	7	7	7
Degree of Util (X)		0.368	0.096	0.11	0.019	0.316
Departure Headway (Hd)		5.475	7.017	6.21	6.863	6.045
Convergence, Y/N		Yes	Yes	Yes	Yes	Yes
Cap		655	509	576	521	594
Service Time		3.523	4.775	3.968	4.612	3.794
HCM Lane V/C Ratio		0.369	0.096	0.111	0.019	0.316
HCM Control Delay		11.7	10.5	9.7	9.7	11.6
HCM Lane LOS		B	B	A	A	B
HCM 95th-tile Q		1.7	0.3	0.4	0.1	1.3

Intersection						
Int Delay, s/veh	1.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↑↓		↔	↑↑
Traffic Vol, veh/h	73	59	1080	65	49	1111
Future Vol, veh/h	73	59	1080	65	49	1111
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	3	2	2	3
Mvmt Flow	75	61	1113	67	51	1145

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1822	590	0	0	1180
Stage 1	1147	-	-	-	-
Stage 2	675	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14
Critical Hdwy Stg 1	5.84	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22
Pot Cap-1 Maneuver	~ 69	451	-	-	588
Stage 1	265	-	-	-	-
Stage 2	467	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	~ 63	451	-	-	588
Mov Cap-2 Maneuver	220	-	-	-	-
Stage 1	265	-	-	-	-
Stage 2	426	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	28.7	0	0.5
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	285	588
HCM Lane V/C Ratio	-	-	0.477	0.086
HCM Control Delay (s)	-	-	28.7	11.7
HCM Lane LOS	-	-	D	B
HCM 95th %tile Q(veh)	-	-	2.4	0.3

Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Intersection												
Int Delay, s/veh	7.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	37	62	31	7	44	84	61	75	4	52	61	36
Future Vol, veh/h	37	62	31	7	44	84	61	75	4	52	61	36
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	41	68	34	8	48	92	67	82	4	57	67	40

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	140	0	0	102	0	0	331	323	85	320	294	94
Stage 1	-	-	-	-	-	-	167	167	-	110	110	-
Stage 2	-	-	-	-	-	-	164	156	-	210	184	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1443	-	-	1490	-	-	622	595	974	633	617	963
Stage 1	-	-	-	-	-	-	835	760	-	895	804	-
Stage 2	-	-	-	-	-	-	838	769	-	792	747	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1443	-	-	1490	-	-	531	574	974	546	595	963
Mov Cap-2 Maneuver	-	-	-	-	-	-	531	574	-	546	595	-
Stage 1	-	-	-	-	-	-	810	737	-	868	799	-
Stage 2	-	-	-	-	-	-	732	764	-	679	725	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.2			0.4			13.8			12.6		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	561	1443	-	-	1490	-	-	634
HCM Lane V/C Ratio	0.274	0.028	-	-	0.005	-	-	0.258
HCM Control Delay (s)	13.8	7.6	0	-	7.4	0	-	12.6
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	1.1	0.1	-	-	0	-	-	1

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕				↕	↕	↕		↕	↕	
Traffic Vol, veh/h	0	0	10	0	0	83	3	1018	116	50	1176	19
Future Vol, veh/h	0	0	10	0	0	83	3	1018	116	50	1176	19
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	120	-	-	120	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2	2	3	2	2	3	2
Mvmt Flow	0	0	10	0	0	85	3	1039	118	51	1200	19

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1838	2475	610	-	-	579	1219	0	0	1157	0	0
Stage 1	1312	1312	-	-	-	-	-	-	-	-	-	-
Stage 2	526	1163	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	-	-	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	-	-	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	47	29	437	0	0	458	568	-	-	600	-	-
Stage 1	167	227	-	0	0	-	-	-	-	-	-	-
Stage 2	503	267	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	36	26	437	-	-	458	568	-	-	600	-	-
Mov Cap-2 Maneuver	117	108	-	-	-	-	-	-	-	-	-	-
Stage 1	166	208	-	-	-	-	-	-	-	-	-	-
Stage 2	408	266	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.4	14.6	0	0.5
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	568	-	-	437	458	600	-
HCM Lane V/C Ratio	0.005	-	-	0.023	0.185	0.085	-
HCM Control Delay (s)	11.4	-	-	13.4	14.6	11.6	-
HCM Lane LOS	B	-	-	B	B	B	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.7	0.3	-

Intersection	
Intersection Delay, s/veh	8.2
Intersection LOS	A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↔		↕	↕
Traffic Vol, veh/h	21	128	60	90	56	13
Future Vol, veh/h	21	128	60	90	56	13
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	136	64	96	60	14
Number of Lanes	0	1	1	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	1
HCM Control Delay	8.3	7.8	8.7
HCM LOS	A	A	A

Lane	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	14%	0%	100%	0%
Vol Thru, %	86%	40%	0%	0%
Vol Right, %	0%	60%	0%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	149	150	56	13
LT Vol	21	0	56	0
Through Vol	128	60	0	0
RT Vol	0	90	0	13
Lane Flow Rate	159	160	60	14
Geometry Grp	2	2	7	7
Degree of Util (X)	0.19	0.175	0.094	0.017
Departure Headway (Hd)	4.321	3.945	5.71	4.504
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	834	913	629	796
Service Time	2.33	1.954	3.431	2.224
HCM Lane V/C Ratio	0.191	0.175	0.095	0.018
HCM Control Delay	8.3	7.8	9	7.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.7	0.6	0.3	0.1



Intersection						
Int Delay, s/veh	1.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	36	149	73	0	0	11
Future Vol, veh/h	36	149	73	0	0	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	39	162	79	0	0	12

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	79	0	-	0	319 79
Stage 1	-	-	-	-	79 -
Stage 2	-	-	-	-	240 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1519	-	-	-	674 981
Stage 1	-	-	-	-	944 -
Stage 2	-	-	-	-	800 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1519	-	-	-	655 981
Mov Cap-2 Maneuver	-	-	-	-	655 -
Stage 1	-	-	-	-	918 -
Stage 2	-	-	-	-	800 -

Approach	EB	WB	SB
HCM Control Delay, s	1.4	0	8.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1519	-	-	-	981
HCM Lane V/C Ratio	0.026	-	-	-	0.012
HCM Control Delay (s)	7.4	0	-	-	8.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0

Intersection						
Int Delay, s/veh	2.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	62	0	5	106	69	34
Future Vol, veh/h	62	0	5	106	69	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	67	0	5	115	75	37

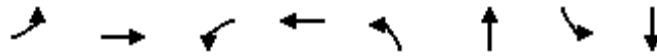
Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	219	94	112	0	0
Stage 1	94	-	-	-	-
Stage 2	125	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	769	963	1478	-	-
Stage 1	930	-	-	-	-
Stage 2	901	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	766	963	1478	-	-
Mov Cap-2 Maneuver	766	-	-	-	-
Stage 1	926	-	-	-	-
Stage 2	901	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.2	0.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1478	-	766	-	-
HCM Lane V/C Ratio	0.004	-	0.088	-	-
HCM Control Delay (s)	7.4	0	10.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Queues

1: S MAIN ST & CYPRESS ST



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	21	31	242	44	41	1283	36	1025
v/c Ratio	0.05	0.06	0.61	0.09	0.23	0.81	0.20	0.64
Control Delay	15.8	9.5	25.1	6.7	33.5	21.3	33.1	16.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.8	9.5	25.1	6.7	33.5	21.3	33.1	16.8
Queue Length 50th (ft)	4	2	60	1	11	135	10	97
Queue Length 95th (ft)	20	19	151	20	53	#528	49	#353
Internal Link Dist (ft)		1618		348		639		2369
Turn Bay Length (ft)	80		100		150		400	
Base Capacity (vph)	449	569	455	558	177	1770	177	1778
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.05	0.53	0.08	0.23	0.72	0.20	0.58























Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary  
1: S MAIN ST & CYPRESS ST

SAT CUMULATIVE 2040 BASE

10/22/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	10	20	235	3	40	40	1180	65	35	985	10
Future Volume (veh/h)	20	10	20	235	3	40	40	1180	65	35	985	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1856	1856	1870	1856	1856
Adj Flow Rate, veh/h	21	10	21	242	3	41	41	1216	67	36	1015	10
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	3	3	2	3	3
Cap, veh/h	419	121	255	432	25	337	77	1492	82	70	1557	15
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.04	0.44	0.44	0.04	0.44	0.44
Sat Flow, veh/h	1362	538	1129	1378	109	1493	1781	3398	187	1781	3577	35
Grp Volume(v), veh/h	21	0	31	242	0	44	41	630	653	36	500	525
Grp Sat Flow(s),veh/h/ln	1362	0	1667	1378	0	1602	1781	1763	1822	1781	1763	1849
Q Serve(g_s), s	0.6	0.0	0.7	8.6	0.0	1.1	1.2	15.9	16.0	1.0	11.4	11.4
Cycle Q Clear(g_c), s	1.8	0.0	0.7	9.3	0.0	1.1	1.2	15.9	16.0	1.0	11.4	11.4
Prop In Lane	1.00		0.68	1.00		0.93	1.00		0.10	1.00		0.02
Lane Grp Cap(c), veh/h	419	0	377	432	0	362	77	774	800	70	767	805
V/C Ratio(X)	0.05	0.00	0.08	0.56	0.00	0.12	0.53	0.81	0.82	0.52	0.65	0.65
Avail Cap(c_a), veh/h	495	0	470	510	0	452	178	877	906	178	877	920
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.4	0.0	15.6	19.3	0.0	15.7	23.9	12.5	12.5	24.1	11.4	11.4
Incr Delay (d2), s/veh	0.0	0.0	0.1	1.1	0.0	0.1	5.6	5.4	5.3	5.8	1.4	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.3	2.6	0.0	0.4	0.5	5.7	5.9	0.5	3.6	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.5	0.0	15.7	20.4	0.0	15.9	29.5	17.8	17.8	29.9	12.8	12.7
LnGrp LOS	B	A	B	C	A	B	C	B	B	C	B	B
Approach Vol, veh/h		52			286			1324			1061	
Approach Delay, s/veh		16.0			19.7			18.2			13.3	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.1	27.8		16.1	7.3	27.6		16.1				
Change Period (Y+Rc), s	5.1	5.4		4.6	5.1	5.4		4.6				
Max Green Setting (Gmax), s	5.1	25.4		14.4	5.1	25.4		14.4				
Max Q Clear Time (g_c+I1), s	3.0	18.0		3.8	3.2	13.4		11.3				
Green Ext Time (p_c), s	0.0	4.4		0.1	0.0	4.9		0.3				

Intersection Summary

HCM 6th Ctrl Delay	16.4
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

Intersection												
Intersection Delay, s/veh	10.5											
Intersection LOS	B											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↵		↵	↵			↕			↕	
Traffic Vol, veh/h	55	40	30	2	45	55	70	105	5	45	110	150
Future Vol, veh/h	55	40	30	2	45	55	70	105	5	45	110	150
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	60	44	33	2	49	60	77	115	5	49	121	165
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	9.7	9.6	10.2	11.2
HCM LOS	A	A	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	39%	100%	0%	100%	0%	15%
Vol Thru, %	58%	0%	57%	0%	45%	36%
Vol Right, %	3%	0%	43%	0%	55%	49%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	180	55	70	2	100	305
LT Vol	70	55	0	2	0	45
Through Vol	105	0	40	0	45	110
RT Vol	5	0	30	0	55	150
Lane Flow Rate	198	60	77	2	110	335
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.285	0.11	0.123	0.004	0.174	0.429
Departure Headway (Hd)	5.183	6.552	5.739	6.604	5.705	4.605
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	698	549	627	544	631	771
Service Time	3.183	4.267	3.454	4.32	3.421	2.701
HCM Lane V/C Ratio	0.284	0.109	0.123	0.004	0.174	0.435
HCM Control Delay	10.2	10.1	9.3	9.3	9.6	11.2
HCM Lane LOS	B	B	A	A	A	B
HCM 95th-tile Q	1.2	0.4	0.4	0	0.6	2.2

Intersection						
Int Delay, s/veh	1.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↑↓		↔	↑↑
Traffic Vol, veh/h	60	40	1255	55	35	1230
Future Vol, veh/h	60	40	1255	55	35	1230
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	3	2	2	3
Mvmt Flow	62	41	1294	57	36	1268

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	2029	676	0	0	1351
Stage 1	1323	-	-	-	-
Stage 2	706	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14
Critical Hdwy Stg 1	5.84	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22
Pot Cap-1 Maneuver	~ 50	396	-	-	505
Stage 1	213	-	-	-	-
Stage 2	450	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	~ 46	396	-	-	505
Mov Cap-2 Maneuver	183	-	-	-	-
Stage 1	213	-	-	-	-
Stage 2	418	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	32.2	0	0.4
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	233	505
HCM Lane V/C Ratio	-	-	0.442	0.071
HCM Control Delay (s)	-	-	32.2	12.7
HCM Lane LOS	-	-	D	B
HCM 95th %tile Q(veh)	-	-	2.1	0.2

Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Intersection												
Int Delay, s/veh	8.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	30	40	15	3	25	20	35	110	5	25	85	20
Future Vol, veh/h	30	40	15	3	25	20	35	110	5	25	85	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	33	44	16	3	27	22	38	121	5	27	93	22

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	49	0	0	60	0	0	220	173	52	225	170	38
Stage 1	-	-	-	-	-	-	118	118	-	44	44	-
Stage 2	-	-	-	-	-	-	102	55	-	181	126	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1558	-	-	1544	-	-	736	720	1016	730	723	1034
Stage 1	-	-	-	-	-	-	887	798	-	970	858	-
Stage 2	-	-	-	-	-	-	904	849	-	821	792	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1558	-	-	1544	-	-	636	703	1016	619	706	1034
Mov Cap-2 Maneuver	-	-	-	-	-	-	636	703	-	619	706	-
Stage 1	-	-	-	-	-	-	867	780	-	949	856	-
Stage 2	-	-	-	-	-	-	787	847	-	675	775	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.6			0.5			11.8			11.2		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	693	1558	-	-	1544	-	-	722
HCM Lane V/C Ratio	0.238	0.021	-	-	0.002	-	-	0.198
HCM Control Delay (s)	11.8	7.4	0	-	7.3	0	-	11.2
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.9	0.1	-	-	0	-	-	0.7

Intersection												
Int Delay, s/veh	1.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕				↗	↖	↕		↖	↕	
Traffic Vol, veh/h	0	0	15	0	0	150	15	1165	125	55	1225	10
Future Vol, veh/h	0	0	15	0	0	150	15	1165	125	55	1225	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	120	-	-	120	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2	2	3	2	2	3	2
Mvmt Flow	0	0	15	0	0	153	15	1189	128	56	1250	10

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1992	2714	630	-	-	659	1260	0	0	1317	0	0
Stage 1	1367	1367	-	-	-	-	-	-	-	-	-	-
Stage 2	625	1347	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	-	-	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	-	-	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	36	21	424	0	0	406	548	-	-	521	-	-
Stage 1	155	213	-	0	0	-	-	-	-	-	-	-
Stage 2	439	218	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	20	18	424	-	-	406	548	-	-	521	-	-
Mov Cap-2 Maneuver	89	86	-	-	-	-	-	-	-	-	-	-
Stage 1	151	190	-	-	-	-	-	-	-	-	-	-
Stage 2	266	212	-	-	-	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	13.8		19.1		0.1		0.5	
HCM LOS	B		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	548	-	-	424	406	521	-	-
HCM Lane V/C Ratio	0.028	-	-	0.036	0.377	0.108	-	-
HCM Control Delay (s)	11.8	-	-	13.8	19.1	12.7	-	-
HCM Lane LOS	B	-	-	B	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	1.7	0.4	-	-



Intersection	
Intersection Delay, s/veh	9.2
Intersection LOS	A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↔		↕	↕
Traffic Vol, veh/h	25	160	135	125	85	20
Future Vol, veh/h	25	160	135	125	85	20
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	27	170	144	133	90	21
Number of Lanes	0	1	1	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	1
HCM Control Delay	9.1	9.2	9.5
HCM LOS	A	A	A

Lane	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	14%	0%	100%	0%
Vol Thru, %	86%	52%	0%	0%
Vol Right, %	0%	48%	0%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	185	260	85	20
LT Vol	25	0	85	0
Through Vol	160	135	0	0
RT Vol	0	125	0	20
Lane Flow Rate	197	277	90	21
Geometry Grp	2	2	7	7
Degree of Util (X)	0.25	0.322	0.152	0.029
Departure Headway (Hd)	4.571	4.193	6.058	4.848
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	785	857	591	736
Service Time	2.599	2.216	3.806	2.596
HCM Lane V/C Ratio	0.251	0.323	0.152	0.029
HCM Control Delay	9.1	9.2	9.9	7.7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1	1.4	0.5	0.1

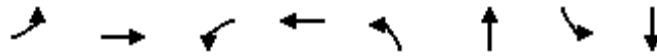


## Queues

PM CUMULATIVE 2040 BASE

## 1: S MAIN ST &amp; CYPRESS ST

10/22/2019



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	21	24	263	69	26	1335	57	1072
v/c Ratio	0.06	0.05	0.67	0.14	0.16	0.87	0.35	0.64
Control Delay	16.7	8.4	28.7	5.7	33.8	25.5	37.8	17.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.7	8.4	28.7	5.7	33.8	25.5	37.8	17.0
Queue Length 50th (ft)	6	1	89	1	9	224	20	103
Queue Length 95th (ft)	20	15	165	24	39	#561	#78	#398
Internal Link Dist (ft)		1618		348		639		2369
Turn Bay Length (ft)	80		100		150		400	
Base Capacity (vph)	414	520	431	542	165	1651	165	1776
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.05	0.61	0.13	0.16	0.81	0.35	0.60

## Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary  
1: S MAIN ST & CYPRESS ST

PM CUMULATIVE 2040 BASE

10/22/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↕	↗	↖	↕	↗
Traffic Volume (veh/h)	20	3	20	255	2	65	25	1230	65	55	1030	10
Future Volume (veh/h)	20	3	20	255	2	65	25	1230	65	55	1030	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1856	1856	1870	1856	1856
Adj Flow Rate, veh/h	21	3	21	263	2	67	26	1268	67	57	1062	10
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	3	3	2	3	3
Cap, veh/h	398	47	331	441	11	362	53	1482	78	95	1641	15
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.03	0.44	0.44	0.05	0.46	0.46
Sat Flow, veh/h	1332	202	1414	1387	46	1546	1781	3406	180	1781	3579	34
Grp Volume(v), veh/h	21	0	24	263	0	69	26	655	680	57	523	549
Grp Sat Flow(s),veh/h/ln	1332	0	1616	1387	0	1592	1781	1763	1823	1781	1763	1849
Q Serve(g_s), s	0.7	0.0	0.6	9.9	0.0	1.9	0.8	18.2	18.3	1.7	12.4	12.4
Cycle Q Clear(g_c), s	2.6	0.0	0.6	10.5	0.0	1.9	0.8	18.2	18.3	1.7	12.4	12.4
Prop In Lane	1.00		0.88	1.00		0.97	1.00		0.10	1.00		0.02
Lane Grp Cap(c), veh/h	398	0	378	441	0	373	53	767	793	95	808	848
V/C Ratio(X)	0.05	0.00	0.06	0.60	0.00	0.19	0.49	0.85	0.86	0.60	0.65	0.65
Avail Cap(c_a), veh/h	439	0	428	484	0	422	167	823	852	167	823	864
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.7	0.0	16.2	20.3	0.0	16.7	26.0	13.8	13.8	25.2	11.3	11.3
Incr Delay (d2), s/veh	0.1	0.0	0.1	1.7	0.0	0.2	6.8	8.3	8.2	6.0	1.7	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.2	3.2	0.0	0.7	0.4	7.2	7.4	0.8	4.0	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.8	0.0	16.3	22.0	0.0	16.9	32.8	22.1	22.0	31.2	13.1	13.0
LnGrp LOS	B	A	B	C	A	B	C	C	C	C	B	B
Approach Vol, veh/h		45			332			1361			1129	
Approach Delay, s/veh		17.0			20.9			22.3			14.0	
Approach LOS		B			C			C			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.0	29.1		17.3	6.7	30.3		17.3				
Change Period (Y+Rc), s	5.1	5.4		4.6	5.1	5.4		4.6				
Max Green Setting (Gmax), s	5.1	25.4		14.4	5.1	25.4		14.4				
Max Q Clear Time (g_c+I1), s	3.7	20.3		4.6	2.8	14.4		12.5				
Green Ext Time (p_c), s	0.0	3.4		0.1	0.0	4.9		0.3				

Intersection Summary

HCM 6th Ctrl Delay	18.8
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

Intersection												
Intersection Delay, s/veh	14.7											
Intersection LOS	B											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷			↕			↕	
Traffic Vol, veh/h	55	40	30	10	115	90	70	155	10	75	145	170
Future Vol, veh/h	55	40	30	10	115	90	70	155	10	75	145	170
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	60	44	33	11	126	99	77	170	11	82	159	187
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	10.9	13.3	13.2	17.5
HCM LOS	B	B	B	C

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %		30%	100%	0%	100%	0%
Vol Thru, %		66%	0%	57%	0%	56%
Vol Right, %		4%	0%	43%	0%	44%
Sign Control		Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane		235	55	70	10	205
LT Vol		70	55	0	10	0
Through Vol		155	0	40	0	115
RT Vol		10	0	30	0	90
Lane Flow Rate		258	60	77	11	225
Geometry Grp		2	7	7	7	7
Degree of Util (X)		0.421	0.125	0.141	0.022	0.4
Departure Headway (Hd)		5.875	7.431	6.611	7.222	6.396
Convergence, Y/N		Yes	Yes	Yes	Yes	Yes
Cap		607	479	538	493	559
Service Time		3.96	5.231	4.409	5.007	4.18
HCM Lane V/C Ratio		0.425	0.125	0.143	0.022	0.403
HCM Control Delay		13.2	11.3	10.5	10.2	13.4
HCM Lane LOS		B	B	B	B	B
HCM 95th-tile Q		2.1	0.4	0.5	0.1	1.9

Intersection						
Int Delay, s/veh	1.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↑↓		↔	↑↑
Traffic Vol, veh/h	60	50	1245	80	30	1275
Future Vol, veh/h	60	50	1245	80	30	1275
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	3	2	2	3
Mvmt Flow	62	52	1284	82	31	1314

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	2044	683	0	0	1366
Stage 1	1325	-	-	-	-
Stage 2	719	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14
Critical Hdwy Stg 1	5.84	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22
Pot Cap-1 Maneuver	~ 49	392	-	-	499
Stage 1	213	-	-	-	-
Stage 2	444	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	~ 46	392	-	-	499
Mov Cap-2 Maneuver	183	-	-	-	-
Stage 1	213	-	-	-	-
Stage 2	416	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	32.3	0	0.3
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	242	499
HCM Lane V/C Ratio	-	-	0.469	0.062
HCM Control Delay (s)	-	-	32.3	12.7
HCM Lane LOS	-	-	D	B
HCM 95th %tile Q(veh)	-	-	2.3	0.2

Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Intersection												
Int Delay, s/veh	7.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	45	80	5	10	55	100	20	70	4	65	65	40
Future Vol, veh/h	45	80	5	10	55	100	20	70	4	65	65	40
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	49	88	5	11	60	110	22	77	4	71	71	44

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	170	0	0	93	0	0	384	381	91	366	328	115
Stage 1	-	-	-	-	-	-	189	189	-	137	137	-
Stage 2	-	-	-	-	-	-	195	192	-	229	191	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1407	-	-	1501	-	-	574	552	967	590	591	937
Stage 1	-	-	-	-	-	-	813	744	-	866	783	-
Stage 2	-	-	-	-	-	-	807	742	-	774	742	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1407	-	-	1501	-	-	478	527	967	504	564	937
Mov Cap-2 Maneuver	-	-	-	-	-	-	478	527	-	504	564	-
Stage 1	-	-	-	-	-	-	783	716	-	834	777	-
Stage 2	-	-	-	-	-	-	693	736	-	662	715	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.6			0.4			13.5			13.8		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	526	1407	-	-	1501	-	-	593
HCM Lane V/C Ratio	0.196	0.035	-	-	0.007	-	-	0.315
HCM Control Delay (s)	13.5	7.7	0	-	7.4	0	-	13.8
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.7	0.1	-	-	0	-	-	1.3

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕				↗	↖	↕		↗	↕	↖
Traffic Vol, veh/h	0	0	10	0	0	85	3	1190	90	55	1330	25
Future Vol, veh/h	0	0	10	0	0	85	3	1190	90	55	1330	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	120	-	-	120	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2	2	3	2	2	3	2
Mvmt Flow	0	0	10	0	0	87	3	1214	92	56	1357	26

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2095	2794	692	-	-	653	1383	0	0	1306	0	0
Stage 1	1482	1482	-	-	-	-	-	-	-	-	-	-
Stage 2	613	1312	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	-	-	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	-	-	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	30	18	386	0	0	410	491	-	-	526	-	-
Stage 1	131	187	-	0	0	-	-	-	-	-	-	-
Stage 2	446	227	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	22	16	386	-	-	410	491	-	-	526	-	-
Mov Cap-2 Maneuver	91	84	-	-	-	-	-	-	-	-	-	-
Stage 1	130	167	-	-	-	-	-	-	-	-	-	-
Stage 2	350	226	-	-	-	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	14.6		16.1		0		0.5	
HCM LOS	B		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	491	-	-	386	410	526	-	-
HCM Lane V/C Ratio	0.006	-	-	0.026	0.212	0.107	-	-
HCM Control Delay (s)	12.4	-	-	14.6	16.1	12.7	-	-
HCM Lane LOS	B	-	-	B	C	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.8	0.4	-	-



Intersection	
Intersection Delay, s/veh	8.5
Intersection LOS	A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↔		↕	↕
Traffic Vol, veh/h	20	150	70	105	65	15
Future Vol, veh/h	20	150	70	105	65	15
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	21	160	74	112	69	16
Number of Lanes	0	1	1	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	1
HCM Control Delay	8.6	8.1	8.9
HCM LOS	A	A	A

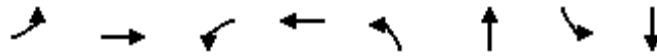
Lane	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	12%	0%	100%	0%
Vol Thru, %	88%	40%	0%	0%
Vol Right, %	0%	60%	0%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	170	175	65	15
LT Vol	20	0	65	0
Through Vol	150	70	0	0
RT Vol	0	105	0	15
Lane Flow Rate	181	186	69	16
Geometry Grp	2	2	7	7
Degree of Util (X)	0.22	0.207	0.112	0.02
Departure Headway (Hd)	4.382	4.009	5.817	4.609
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	821	897	617	777
Service Time	2.395	2.021	3.544	2.336
HCM Lane V/C Ratio	0.22	0.207	0.112	0.021
HCM Control Delay	8.6	8.1	9.3	7.4
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.8	0.8	0.4	0.1



## Queues

## 1: S MAIN ST &amp; CYPRESS ST

10/22/2019



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	21	31	256	44	41	1303	36	1046
v/c Ratio	0.05	0.06	0.64	0.09	0.24	0.82	0.21	0.65
Control Delay	15.8	9.5	26.0	6.7	33.6	21.9	33.2	17.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.8	9.5	26.0	6.7	33.6	21.9	33.2	17.2
Queue Length 50th (ft)	4	2	64	1	11	138	10	100
Queue Length 95th (ft)	20	19	161	20	53	#541	49	#382
Internal Link Dist (ft)		1618		348		639		2369
Turn Bay Length (ft)	80		100		150		400	
Base Capacity (vph)	441	559	447	549	173	1734	173	1741
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.06	0.57	0.08	0.24	0.75	0.21	0.60

## Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary  
1: S MAIN ST & CYPRESS ST

SAT CUMULATIVE PLUS PROJECT

10/22/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	10	20	248	3	40	40	1199	65	35	1005	10
Future Volume (veh/h)	20	10	20	248	3	40	40	1199	65	35	1005	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1856	1856	1870	1856	1856
Adj Flow Rate, veh/h	21	10	21	256	3	41	41	1236	67	36	1036	10
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	3	3	2	3	3
Cap, veh/h	427	126	264	440	26	350	76	1490	81	69	1553	15
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.04	0.44	0.44	0.04	0.43	0.43
Sat Flow, veh/h	1362	538	1129	1378	109	1493	1781	3401	184	1781	3578	35
Grp Volume(v), veh/h	21	0	31	256	0	44	41	640	663	36	510	536
Grp Sat Flow(s),veh/h/ln	1362	0	1667	1378	0	1602	1781	1763	1822	1781	1763	1849
Q Serve(g_s), s	0.6	0.0	0.8	9.3	0.0	1.1	1.2	16.7	16.8	1.0	12.1	12.1
Cycle Q Clear(g_c), s	1.8	0.0	0.8	10.1	0.0	1.1	1.2	16.7	16.8	1.0	12.1	12.1
Prop In Lane	1.00		0.68	1.00		0.93	1.00		0.10	1.00		0.02
Lane Grp Cap(c), veh/h	427	0	390	440	0	375	76	772	798	69	765	803
V/C Ratio(X)	0.05	0.00	0.08	0.58	0.00	0.12	0.54	0.83	0.83	0.52	0.67	0.67
Avail Cap(c_a), veh/h	483	0	459	497	0	441	174	856	885	174	856	898
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.5	0.0	15.6	19.6	0.0	15.8	24.5	13.0	13.0	24.7	11.8	11.8
Incr Delay (d2), s/veh	0.0	0.0	0.1	1.3	0.0	0.1	5.7	6.3	6.2	5.9	1.7	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.3	2.9	0.0	0.4	0.6	6.2	6.4	0.5	3.9	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.5	0.0	15.7	20.9	0.0	15.9	30.2	19.3	19.2	30.5	13.5	13.4
LnGrp LOS	B	A	B	C	A	B	C	B	B	C	B	B
Approach Vol, veh/h		52			300			1344			1082	
Approach Delay, s/veh		16.0			20.2			19.5			14.0	
Approach LOS		B			C			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.1	28.3		16.8	7.3	28.1		16.8				
Change Period (Y+Rc), s	5.1	5.4		4.6	5.1	5.4		4.6				
Max Green Setting (Gmax), s	5.1	25.4		14.4	5.1	25.4		14.4				
Max Q Clear Time (g_c+I1), s	3.0	18.8		3.8	3.2	14.1		12.1				
Green Ext Time (p_c), s	0.0	4.1		0.1	0.0	4.8		0.3				

Intersection Summary

HCM 6th Ctrl Delay	17.4
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

**Intersection**

Intersection Delay, s/veh 10.7

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷			↕			↕	
Traffic Vol, veh/h	55	40	30	3	45	55	83	110	6	45	116	150
Future Vol, veh/h	55	40	30	3	45	55	83	110	6	45	116	150
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	60	44	33	3	49	60	91	121	7	49	127	165
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	9.8	9.7	10.6	11.4
HCM LOS	A	A	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %		42%	100%	0%	100%	0%
Vol Thru, %		55%	0%	57%	0%	45%
Vol Right, %		3%	0%	43%	0%	55%
Sign Control		Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane		199	55	70	3	100
LT Vol		83	55	0	3	0
Through Vol		110	0	40	0	45
RT Vol		6	0	30	0	55
Lane Flow Rate		219	60	77	3	110
Geometry Grp		2	7	7	7	7
Degree of Util (X)		0.317	0.111	0.124	0.006	0.177
Departure Headway (Hd)		5.213	6.637	5.823	6.688	5.788
Convergence, Y/N		Yes	Yes	Yes	Yes	Yes
Cap		693	542	618	537	622
Service Time		3.213	4.354	3.541	4.406	3.505
HCM Lane V/C Ratio		0.316	0.111	0.125	0.006	0.177
HCM Control Delay		10.6	10.2	9.4	9.4	9.7
HCM Lane LOS		B	B	A	A	A
HCM 95th-tile Q		1.4	0.4	0.4	0	0.6

Intersection						
Int Delay, s/veh	3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↑↓		↔	↑↑
Traffic Vol, veh/h	88	62	1252	55	66	1232
Future Vol, veh/h	88	62	1252	55	66	1232
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	3	2	2	3
Mvmt Flow	91	64	1291	57	68	1270

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	2091	674	0	0	1348
Stage 1	1320	-	-	-	-
Stage 2	771	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14
Critical Hdwy Stg 1	5.84	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22
Pot Cap-1 Maneuver	~ 45	397	-	-	507
Stage 1	214	-	-	-	-
Stage 2	417	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	~ 39	397	-	-	507
Mov Cap-2 Maneuver	176	-	-	-	-
Stage 1	214	-	-	-	-
Stage 2	361	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	48.2	0	0.7
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	229	507
HCM Lane V/C Ratio	-	-	0.675	0.134
HCM Control Delay (s)	-	-	48.2	13.2
HCM Lane LOS	-	-	E	B
HCM 95th %tile Q(veh)	-	-	4.3	0.5

Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Intersection												
Int Delay, s/veh	9.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	30	30	46	4	25	20	85	129	6	25	91	20
Future Vol, veh/h	30	30	46	4	25	20	85	129	6	25	91	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	33	33	51	4	27	22	93	142	7	27	100	22

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	49	0	0	84	0	0	232	182	59	245	196	38
Stage 1	-	-	-	-	-	-	125	125	-	46	46	-
Stage 2	-	-	-	-	-	-	107	57	-	199	150	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1558	-	-	1513	-	-	723	712	1007	709	699	1034
Stage 1	-	-	-	-	-	-	879	792	-	968	857	-
Stage 2	-	-	-	-	-	-	898	847	-	803	773	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1558	-	-	1513	-	-	617	694	1007	583	682	1034
Mov Cap-2 Maneuver	-	-	-	-	-	-	617	694	-	583	682	-
Stage 1	-	-	-	-	-	-	860	775	-	947	854	-
Stage 2	-	-	-	-	-	-	774	844	-	637	756	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.1			0.6			13.4			11.6		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	667	1558	-	-	1513	-	-	695
HCM Lane V/C Ratio	0.362	0.021	-	-	0.003	-	-	0.215
HCM Control Delay (s)	13.4	7.4	0	-	7.4	0	-	11.6
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	1.7	0.1	-	-	0	-	-	0.8

Intersection												
Int Delay, s/veh	1.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕				↗	↖	↕		↗	↕	↖
Traffic Vol, veh/h	0	0	15	0	0	161	15	1151	167	58	1252	10
Future Vol, veh/h	0	0	15	0	0	161	15	1151	167	58	1252	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	120	-	-	120	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2	2	3	2	2	3	2
Mvmt Flow	0	0	15	0	0	164	15	1174	170	59	1278	10

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2018	2775	644	-	-	672	1288	0	0	1344	0	0
Stage 1	1401	1401	-	-	-	-	-	-	-	-	-	-
Stage 2	617	1374	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	-	-	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	-	-	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	34	19	416	0	0	398	534	-	-	509	-	-
Stage 1	147	205	-	0	0	-	-	-	-	-	-	-
Stage 2	444	211	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	18	16	416	-	-	398	534	-	-	509	-	-
Mov Cap-2 Maneuver	83	81	-	-	-	-	-	-	-	-	-	-
Stage 1	143	181	-	-	-	-	-	-	-	-	-	-
Stage 2	253	205	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14	20.3	0.1	0.6
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	534	-	-	416	398	509	-
HCM Lane V/C Ratio	0.029	-	-	0.037	0.413	0.116	-
HCM Control Delay (s)	11.9	-	-	14	20.3	13	-
HCM Lane LOS	B	-	-	B	C	B	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	2	0.4	-



Intersection	
Intersection Delay, s/veh	9.3
Intersection LOS	A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↔		↕	↕
Traffic Vol, veh/h	30	160	135	125	85	20
Future Vol, veh/h	30	160	135	125	85	20
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	32	170	144	133	90	21
Number of Lanes	0	1	1	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	1
HCM Control Delay	9.2	9.2	9.5
HCM LOS	A	A	A

Lane	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	16%	0%	100%	0%
Vol Thru, %	84%	52%	0%	0%
Vol Right, %	0%	48%	0%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	190	260	85	20
LT Vol	30	0	85	0
Through Vol	160	135	0	0
RT Vol	0	125	0	20
Lane Flow Rate	202	277	90	21
Geometry Grp	2	2	7	7
Degree of Util (X)	0.257	0.323	0.152	0.029
Departure Headway (Hd)	4.576	4.198	6.071	4.86
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	784	857	590	734
Service Time	2.605	2.223	3.82	2.609
HCM Lane V/C Ratio	0.258	0.323	0.153	0.029
HCM Control Delay	9.2	9.2	9.9	7.8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1	1.4	0.5	0.1

Intersection						
Int Delay, s/veh	1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	40	190	155	0	0	11
Future Vol, veh/h	40	190	155	0	0	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	43	207	168	0	0	12

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	168	0	-	0	461 168
Stage 1	-	-	-	-	168 -
Stage 2	-	-	-	-	293 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1410	-	-	-	559 876
Stage 1	-	-	-	-	862 -
Stage 2	-	-	-	-	757 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1410	-	-	-	540 876
Mov Cap-2 Maneuver	-	-	-	-	540 -
Stage 1	-	-	-	-	833 -
Stage 2	-	-	-	-	757 -

Approach	EB	WB	SB
HCM Control Delay, s	1.3	0	9.2
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1410	-	-	-	876
HCM Lane V/C Ratio	0.031	-	-	-	0.014
HCM Control Delay (s)	7.6	0	-	-	9.2
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0

Intersection						
Int Delay, s/veh	2.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	69	0	5	150	105	38
Future Vol, veh/h	69	0	5	150	105	38
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	75	0	5	163	114	41

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	308	135	155	0	-	0
Stage 1	135	-	-	-	-	-
Stage 2	173	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	684	914	1425	-	-	-
Stage 1	891	-	-	-	-	-
Stage 2	857	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	681	914	1425	-	-	-
Mov Cap-2 Maneuver	681	-	-	-	-	-
Stage 1	887	-	-	-	-	-
Stage 2	857	-	-	-	-	-

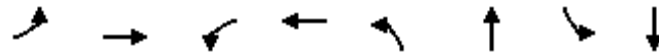
Approach	EB	NB	SB
HCM Control Delay, s	10.9	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1425	-	681	-	-
HCM Lane V/C Ratio	0.004	-	0.11	-	-
HCM Control Delay (s)	7.5	0	10.9	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.4	-	-

## Queues

## PM CUMULATIVE PLUS PROJECT

## 1: S MAIN ST &amp; CYPRESS ST



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	21	24	271	73	26	1353	57	1090
v/c Ratio	0.06	0.05	0.68	0.14	0.16	0.88	0.35	0.66
Control Delay	16.7	8.4	29.3	5.6	33.8	26.5	38.0	17.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.7	8.4	29.3	5.6	33.8	26.5	38.0	17.3
Queue Length 50th (ft)	6	1	93	1	9	229	20	106
Queue Length 95th (ft)	20	15	171	25	39	#572	#78	#410
Internal Link Dist (ft)		1618		348		639		2369
Turn Bay Length (ft)	80		100		150		400	
Base Capacity (vph)	408	514	426	540	163	1633	163	1756
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.05	0.64	0.14	0.16	0.83	0.35	0.62

## Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary  
1: S MAIN ST & CYPRESS ST

PM CUMULATIVE PLUS PROJECT



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	3	20	263	2	69	25	1247	65	55	1048	10
Future Volume (veh/h)	20	3	20	263	2	69	25	1247	65	55	1048	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1856	1856	1870	1856	1856
Adj Flow Rate, veh/h	21	3	21	271	2	71	26	1286	67	57	1080	10
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	3	3	2	3	3
Cap, veh/h	398	48	337	445	10	369	53	1483	77	94	1639	15
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.03	0.43	0.43	0.05	0.46	0.46
Sat Flow, veh/h	1327	202	1414	1387	44	1548	1781	3409	177	1781	3579	33
Grp Volume(v), veh/h	21	0	24	271	0	73	26	664	689	57	532	558
Grp Sat Flow(s),veh/h/ln	1327	0	1616	1387	0	1592	1781	1763	1824	1781	1763	1850
Q Serve(g_s), s	0.7	0.0	0.6	10.4	0.0	2.0	0.8	18.8	18.9	1.7	12.9	12.9
Cycle Q Clear(g_c), s	2.7	0.0	0.6	11.0	0.0	2.0	0.8	18.8	18.9	1.7	12.9	12.9
Prop In Lane	1.00		0.88	1.00		0.97	1.00		0.10	1.00		0.02
Lane Grp Cap(c), veh/h	398	0	385	445	0	380	53	767	793	94	807	847
V/C Ratio(X)	0.05	0.00	0.06	0.61	0.00	0.19	0.49	0.87	0.87	0.61	0.66	0.66
Avail Cap(c_a), veh/h	428	0	422	477	0	416	165	812	840	165	812	852
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.8	0.0	16.2	20.5	0.0	16.8	26.3	14.1	14.2	25.6	11.6	11.6
Incr Delay (d2), s/veh	0.1	0.0	0.1	2.0	0.0	0.2	6.8	9.4	9.3	6.1	2.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.2	3.3	0.0	0.7	0.4	7.7	7.9	0.8	4.2	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.9	0.0	16.3	22.5	0.0	17.0	33.2	23.5	23.5	31.7	13.6	13.5
LnGrp LOS	B	A	B	C	A	B	C	C	C	C	B	B
Approach Vol, veh/h		45			344			1379			1147	
Approach Delay, s/veh		17.0			21.3			23.7			14.4	
Approach LOS		B			C			C			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.0	29.4		17.8	6.7	30.7		17.8				
Change Period (Y+Rc), s	5.1	5.4		4.6	5.1	5.4		4.6				
Max Green Setting (Gmax), s	5.1	25.4		14.4	5.1	25.4		14.4				
Max Q Clear Time (g_c+I1), s	3.7	20.9		4.7	2.8	14.9		13.0				
Green Ext Time (p_c), s	0.0	3.1		0.1	0.0	4.8		0.2				

Intersection Summary

HCM 6th Ctrl Delay	19.7
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

Intersection												
Intersection Delay, s/veh	15.2											
Intersection LOS	C											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	55	40	30	11	115	90	82	160	11	75	150	170
Future Vol, veh/h	55	40	30	11	115	90	82	160	11	75	150	170
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	60	44	33	12	126	99	90	176	12	82	165	187
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	11.1	13.5	14	18.3
HCM LOS	B	B	B	C

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %		32%	100%	0%	100%	0%
Vol Thru, %		63%	0%	57%	0%	56%
Vol Right, %		4%	0%	43%	0%	44%
Sign Control		Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane		253	55	70	11	205
LT Vol		82	55	0	11	0
Through Vol		160	0	40	0	115
RT Vol		11	0	30	0	90
Lane Flow Rate		278	60	77	12	225
Geometry Grp		2	7	7	7	7
Degree of Util (X)		0.457	0.128	0.146	0.025	0.406
Departure Headway (Hd)		5.916	7.641	6.818	7.31	6.483
Convergence, Y/N		Yes	Yes	Yes	Yes	Yes
Cap		603	472	529	486	550
Service Time		4.016	5.341	4.518	5.108	4.281
HCM Lane V/C Ratio		0.461	0.127	0.146	0.025	0.409
HCM Control Delay		14	11.5	10.7	10.3	13.7
HCM Lane LOS		B	B	B	B	B
HCM 95th-tile Q		2.4	0.4	0.5	0.1	2

Intersection						
Int Delay, s/veh	2.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↕↔		↔	↕↔
Traffic Vol, veh/h	84	70	1243	80	57	1278
Future Vol, veh/h	84	70	1243	80	57	1278
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	3	2	2	3
Mvmt Flow	87	72	1281	82	59	1318

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	2099	682	0	0	1363
Stage 1	1322	-	-	-	-
Stage 2	777	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14
Critical Hdwy Stg 1	5.84	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22
Pot Cap-1 Maneuver	~ 45	392	-	-	500
Stage 1	213	-	-	-	-
Stage 2	414	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	~ 40	392	-	-	500
Mov Cap-2 Maneuver	177	-	-	-	-
Stage 1	213	-	-	-	-
Stage 2	365	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	46.8	0	0.6
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	236	500
HCM Lane V/C Ratio	-	-	0.673	0.118
HCM Control Delay (s)	-	-	46.8	13.2
HCM Lane LOS	-	-	E	B
HCM 95th %tile Q(veh)	-	-	4.3	0.4

Notes  
 -: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Intersection												
Int Delay, s/veh	8.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	45	80	32	11	55	100	64	87	5	65	71	40
Future Vol, veh/h	45	80	32	11	55	100	64	87	5	65	71	40
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	49	88	35	12	60	110	70	96	5	71	78	44

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	170	0	0	123	0	0	404	398	106	393	360	115
Stage 1	-	-	-	-	-	-	204	204	-	139	139	-
Stage 2	-	-	-	-	-	-	200	194	-	254	221	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1407	-	-	1464	-	-	557	540	948	566	567	937
Stage 1	-	-	-	-	-	-	798	733	-	864	782	-
Stage 2	-	-	-	-	-	-	802	740	-	750	720	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1407	-	-	1464	-	-	456	515	948	466	540	937
Mov Cap-2 Maneuver	-	-	-	-	-	-	456	515	-	466	540	-
Stage 1	-	-	-	-	-	-	768	705	-	831	775	-
Stage 2	-	-	-	-	-	-	681	733	-	620	693	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.2			0.5			16			14.8		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	496	1407	-	-	1464	-	-	561
HCM Lane V/C Ratio	0.346	0.035	-	-	0.008	-	-	0.345
HCM Control Delay (s)	16	7.7	0	-	7.5	0	-	14.8
HCM Lane LOS	C	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	1.5	0.1	-	-	0	-	-	1.5



Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕				↗	↖	↕		↗	↕	↖
Traffic Vol, veh/h	0	0	10	0	0	96	3	1177	128	58	1354	25
Future Vol, veh/h	0	0	10	0	0	96	3	1177	128	58	1354	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	120	-	-	120	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2	2	3	2	2	3	2
Mvmt Flow	0	0	10	0	0	98	3	1201	131	59	1382	26

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2120	2851	704	-	-	666	1408	0	0	1332	0	0
Stage 1	1513	1513	-	-	-	-	-	-	-	-	-	-
Stage 2	607	1338	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	-	-	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	-	-	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	29	17	379	0	0	402	481	-	-	514	-	-
Stage 1	125	181	-	0	0	-	-	-	-	-	-	-
Stage 2	450	220	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	20	15	379	-	-	402	481	-	-	514	-	-
Mov Cap-2 Maneuver	86	80	-	-	-	-	-	-	-	-	-	-
Stage 1	124	160	-	-	-	-	-	-	-	-	-	-
Stage 2	338	219	-	-	-	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	14.8		16.8		0		0.5	
HCM LOS	B		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	481	-	-	379	402	514	-	-
HCM Lane V/C Ratio	0.006	-	-	0.027	0.244	0.115	-	-
HCM Control Delay (s)	12.5	-	-	14.8	16.8	12.9	-	-
HCM Lane LOS	B	-	-	B	C	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.9	0.4	-	-

Intersection	
Intersection Delay, s/veh	8.5
Intersection LOS	A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↔		↕	↕
Traffic Vol, veh/h	25	150	70	105	65	15
Future Vol, veh/h	25	150	70	105	65	15
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	27	160	74	112	69	16
Number of Lanes	0	1	1	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	1
HCM Control Delay	8.7	8.1	8.9
HCM LOS	A	A	A

Lane	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	14%	0%	100%	0%
Vol Thru, %	86%	40%	0%	0%
Vol Right, %	0%	60%	0%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	175	175	65	15
LT Vol	25	0	65	0
Through Vol	150	70	0	0
RT Vol	0	105	0	15
Lane Flow Rate	186	186	69	16
Geometry Grp	2	2	7	7
Degree of Util (X)	0.227	0.208	0.112	0.02
Departure Headway (Hd)	4.388	4.015	5.832	4.624
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	821	897	615	774
Service Time	2.401	2.028	3.559	2.351
HCM Lane V/C Ratio	0.227	0.207	0.112	0.021
HCM Control Delay	8.7	8.1	9.3	7.4
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.9	0.8	0.4	0.1

Intersection						
Int Delay, s/veh	1.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	36	175	85	0	0	11
Future Vol, veh/h	36	175	85	0	0	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	39	190	92	0	0	12

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	92	0	-	0	360 92
Stage 1	-	-	-	-	92 -
Stage 2	-	-	-	-	268 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1503	-	-	-	639 965
Stage 1	-	-	-	-	932 -
Stage 2	-	-	-	-	777 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1503	-	-	-	620 965
Mov Cap-2 Maneuver	-	-	-	-	620 -
Stage 1	-	-	-	-	905 -
Stage 2	-	-	-	-	777 -

Approach	EB	WB	SB
HCM Control Delay, s	1.3	0	8.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1503	-	-	-	965
HCM Lane V/C Ratio	0.026	-	-	-	0.012
HCM Control Delay (s)	7.5	0	-	-	8.8
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0

Intersection						
Int Delay, s/veh	2.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	62	0	5	125	80	34
Future Vol, veh/h	62	0	5	125	80	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	67	0	5	136	87	37

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	252	106	124	0	0
Stage 1	106	-	-	-	-
Stage 2	146	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	737	948	1463	-	-
Stage 1	918	-	-	-	-
Stage 2	881	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	734	948	1463	-	-
Mov Cap-2 Maneuver	734	-	-	-	-
Stage 1	914	-	-	-	-
Stage 2	881	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.4	0.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1463	-	734	-	-
HCM Lane V/C Ratio	0.004	-	0.092	-	-
HCM Control Delay (s)	7.5	0	10.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Intersection	
Intersection Delay, s/veh	176
Intersection LOS	F

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	84	70	1243	80	57	1278
Future Vol, veh/h	84	70	1243	80	57	1278
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles, %	2	2	3	2	2	3
Mvmt Flow	87	72	1281	82	59	1318
Number of Lanes	1	0	2	0	1	2

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	3	2
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	2	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	3	1	0
HCM Control Delay	19.5	274.5	96.5
HCM LOS	C	F	F

Lane	NBLn1	NBLn2	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	0%	0%	55%	100%	0%	0%
Vol Thru, %	100%	84%	0%	0%	100%	100%
Vol Right, %	0%	16%	45%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	829	494	154	57	639	639
LT Vol	0	0	84	57	0	0
Through Vol	829	414	0	0	639	639
RT Vol	0	80	70	0	0	0
Lane Flow Rate	854	510	159	59	659	659
Geometry Grp	8	8	7	7	7	7
Degree of Util (X)	1.8	1.055	0.391	0.12	1.255	0.934
Departure Headway (Hd)	7.913	7.78	10.318	8.143	7.651	5.869
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	470	469	351	443	481	626
Service Time	5.613	5.48	8.018	5.843	5.351	3.569
HCM Lane V/C Ratio	1.817	1.087	0.453	0.133	1.37	1.053
HCM Control Delay	387.6	84.9	19.5	12	155	45.6
HCM Lane LOS	F	F	C	B	F	E
HCM 95th-tile Q	51.5	15.2	1.8	0.4	24.2	12.3



Queues  
1: S MAIN ST & CYPRESS ST



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	21	24	271	73	112	1353	57	1090
v/c Ratio	0.06	0.05	0.70	0.15	0.71	0.86	0.36	0.75
Control Delay	16.7	8.3	30.7	5.6	59.1	25.1	38.7	21.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.7	8.3	30.7	5.6	59.1	25.1	38.7	21.5
Queue Length 50th (ft)	6	1	93	1	41	229	20	165
Queue Length 95th (ft)	20	15	171	25	#167	#572	#78	#410
Internal Link Dist (ft)		1618		348		639		2369
Turn Bay Length (ft)	80		100		150		400	
Base Capacity (vph)	398	502	416	528	158	1672	158	1588
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.05	0.65	0.14	0.71	0.81	0.36	0.69

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary  
1: S MAIN ST & CYPRESS ST

PM CUMULATIVE PLUS PROJECT  
MITIGATION 1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↕		↖	↗	
Traffic Volume (veh/h)	20	3	20	263	2	69	109	1247	65	55	1048	10
Future Volume (veh/h)	20	3	20	263	2	69	109	1247	65	55	1048	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1856	1856	1870	1856	1856
Adj Flow Rate, veh/h	21	3	21	271	2	71	112	1286	67	57	1080	10
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	3	3	2	3	3
Cap, veh/h	398	48	337	445	10	369	143	1483	77	94	1458	13
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.08	0.43	0.43	0.05	0.41	0.41
Sat Flow, veh/h	1327	202	1414	1387	44	1548	1781	3409	177	1781	3579	33
Grp Volume(v), veh/h	21	0	24	271	0	73	112	664	689	57	532	558
Grp Sat Flow(s),veh/h/ln	1327	0	1616	1387	0	1592	1781	1763	1824	1781	1763	1850
Q Serve(g_s), s	0.7	0.0	0.6	10.4	0.0	2.0	3.4	18.8	18.9	1.7	14.1	14.1
Cycle Q Clear(g_c), s	2.7	0.0	0.6	11.0	0.0	2.0	3.4	18.8	18.9	1.7	14.1	14.1
Prop In Lane	1.00		0.88	1.00		0.97	1.00		0.10	1.00		0.02
Lane Grp Cap(c), veh/h	398	0	385	445	0	380	143	767	793	94	718	753
V/C Ratio(X)	0.05	0.00	0.06	0.61	0.00	0.19	0.78	0.87	0.87	0.61	0.74	0.74
Avail Cap(c_a), veh/h	428	0	422	477	0	416	165	812	840	165	812	852
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.8	0.0	16.2	20.5	0.0	16.8	24.9	14.1	14.2	25.6	13.9	13.9
Incr Delay (d2), s/veh	0.1	0.0	0.1	2.0	0.0	0.2	18.9	9.4	9.3	6.1	3.2	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.2	3.3	0.0	0.7	2.0	7.7	7.9	0.8	5.0	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.9	0.0	16.3	22.5	0.0	17.0	43.8	23.5	23.5	31.7	17.1	16.9
LnGrp LOS	B	A	B	C	A	B	D	C	C	C	B	B
Approach Vol, veh/h		45			344			1465			1147	
Approach Delay, s/veh		17.0			21.3			25.0			17.7	
Approach LOS		B			C			C			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.0	29.4		17.8	9.5	27.9		17.8				
Change Period (Y+Rc), s	5.1	5.4		4.6	5.1	5.4		4.6				
Max Green Setting (Gmax), s	5.1	25.4		14.4	5.1	25.4		14.4				
Max Q Clear Time (g_c+I1), s	3.7	20.9		4.7	5.4	16.1		13.0				
Green Ext Time (p_c), s	0.0	3.1		0.1	0.0	4.4		0.2				

Intersection Summary

HCM 6th Ctrl Delay	21.7
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



Intersection						
Int Delay, s/veh	1.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↑↓		↔	↑↑
Traffic Vol, veh/h	0	154	1243	80	57	1362
Future Vol, veh/h	0	154	1243	80	57	1362
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	3	2	2	3
Mvmt Flow	0	159	1281	82	59	1404

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	2142	682	0	0	1363
Stage 1	1322	-	-	-	-
Stage 2	820	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14
Critical Hdwy Stg 1	5.84	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22
Pot Cap-1 Maneuver	42	392	-	-	500
Stage 1	213	-	-	-	-
Stage 2	393	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	37	392	-	-	500
Mov Cap-2 Maneuver	174	-	-	-	-
Stage 1	213	-	-	-	-
Stage 2	347	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	20.3	0	0.5
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	392	500
HCM Lane V/C Ratio	-	-	0.405	0.118
HCM Control Delay (s)	-	-	20.3	13.2
HCM Lane LOS	-	-	C	B
HCM 95th %tile Q(veh)	-	-	1.9	0.4

Queues  
3: SOUTH ST & S MAIN ST



Lane Group	WBL	NBT	SBL	SBT
Lane Group Flow (vph)	159	1363	59	1318
v/c Ratio	0.37	0.69	0.31	0.56
Control Delay	13.7	18.4	34.3	10.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	13.7	18.4	34.3	10.5
Queue Length 50th (ft)	27	184	18	96
Queue Length 95th (ft)	63	#588	#78	393
Internal Link Dist (ft)	481	521		639
Turn Bay Length (ft)			100	
Base Capacity (vph)	1223	1978	189	2511
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.13	0.69	0.31	0.52

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary  
 3: SOUTH ST & S MAIN ST



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	84	70	1243	80	57	1278
Future Volume (veh/h)	84	70	1243	80	57	1278
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1856	1856	1870	1856
Adj Flow Rate, veh/h	87	72	1281	82	59	1318
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	3	3	2	3
Cap, veh/h	116	96	1634	104	103	2309
Arrive On Green	0.13	0.13	0.49	0.49	0.06	0.65
Sat Flow, veh/h	918	759	3457	215	1781	3618
Grp Volume(v), veh/h	160	0	670	693	59	1318
Grp Sat Flow(s),veh/h/ln	1688	0	1763	1817	1781	1763
Q Serve(g_s), s	4.2	0.0	14.4	14.5	1.5	9.4
Cycle Q Clear(g_c), s	4.2	0.0	14.4	14.5	1.5	9.4
Prop In Lane	0.54	0.45		0.12	1.00	
Lane Grp Cap(c), veh/h	213	0	856	882	103	2309
V/C Ratio(X)	0.75	0.00	0.78	0.79	0.57	0.57
Avail Cap(c_a), veh/h	1292	0	979	1009	199	2309
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.3	0.0	9.8	9.8	21.0	4.3
Incr Delay (d2), s/veh	5.2	0.0	3.7	3.7	5.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.0	4.8	5.0	0.7	1.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	24.5	0.0	13.4	13.4	26.0	4.7
LnGrp LOS	C	A	B	B	C	A
Approach Vol, veh/h	160		1363			1377
Approach Delay, s/veh	24.5		13.4			5.6
Approach LOS	C		B			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	7.7	27.6			35.3	10.4
Change Period (Y+Rc), s	5.1	5.4			5.4	4.6
Max Green Setting (Gmax), s	5.1	25.4			25.4	35.0
Max Q Clear Time (g_c+I1), s	3.5	16.5			11.4	6.2
Green Ext Time (p_c), s	0.0	5.7			8.1	0.5

Intersection Summary

HCM 6th Ctrl Delay	10.3
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

## APPENDIX D

### **Mitigation Monitoring and Reporting Program (MMRP)**

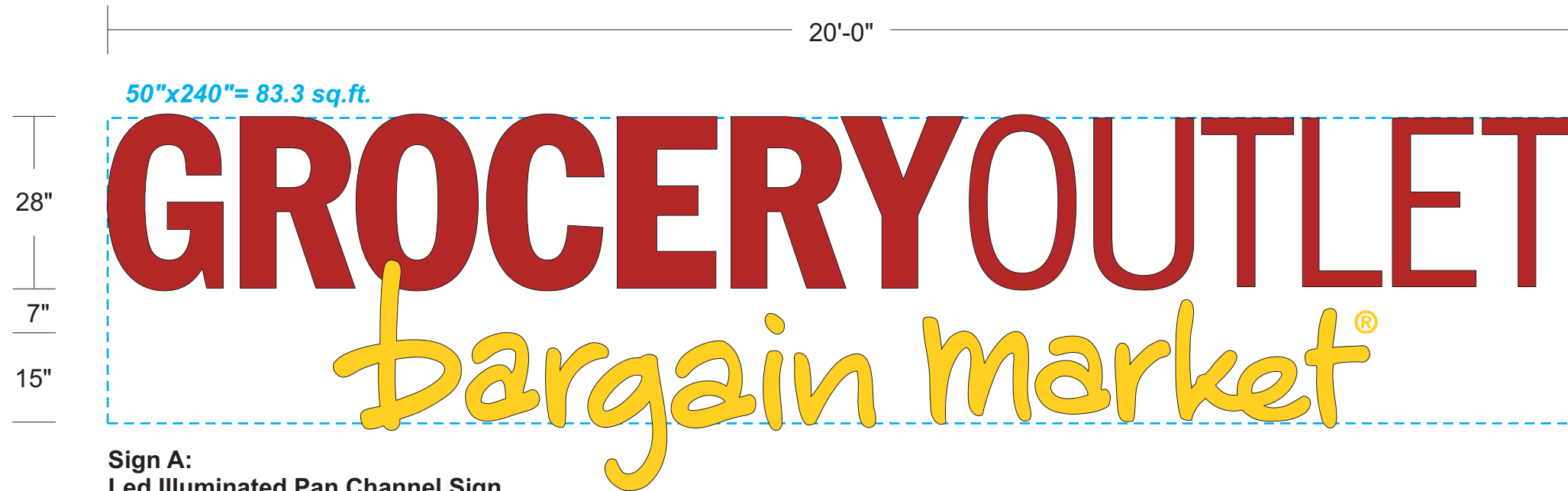
**Mitigation Monitoring and Reporting Program**  
**City of Fort Bragg**  
**Best Development Grocery Outlet**

Impact	Mitigation Measure	Implementation Responsibility	Monitoring/ Reporting Responsibility	Timing
<b>Biological Resources</b>	<b>BIO-1:</b> A bat survey shall be conducted prior to demolishing the existing building on-site. If no bats are found no further mitigation is required. If bats are discovered, prior to demolition the bats must be removed through live exclusion or similar means that do not harm bats. If bats are discovered no removal can occur during the maternity season (typically late May through mid-August) to protect flightless baby bats.	Project Contractor & Qualified Biologist	City of Fort Bragg & Qualified Biologist	Prior to demolition
<b>Geology and Soils</b>	<b>GEO-1:</b> In the event that fossils or fossil-bearing deposits are discovered during project construction, the contractor shall notify a qualified paleontologist to examine the discovery and excavations within 50 feet of the find shall be temporarily halted or diverted. The area of discovery shall be protected to ensure that fossils are not removed, handled, altered, or damaged until the Site is properly evaluated, and further action is determined. The paleontologist shall document the discovery as needed, in accordance with Society of Vertebrate Paleontology standards (Society of Vertebrate Paleontology 1995), evaluate the potential resource, and assess the significance of the finding under the criteria set forth in CEQA Guidelines Section 15064.5. The paleontologist shall notify the appropriate agencies to determine procedures	Project Contractor	City of Fort Bragg & Qualified Paleontologist	During construction

	<p>that would be followed before construction is allowed to resume at the location of the find. If the project proponent determines that avoidance is not feasible, the paleontologist shall prepare an excavation plan for mitigating the effect of the project based on the qualities that make the resource important. The plan shall be submitted to the City of Fort Bragg for review and approval prior to implementation.</p>			
<b>Noise</b>	<p><b>NOISE-1:</b> Implementation of the following measures are required during the duration of the project construction period to reduce potential noise impacts on the nearby sensitive receptors:</p> <ul style="list-style-type: none"> <li>• Construction shall be limited to between the hours of 7:00 a.m. to 7:00 p.m., Monday through Saturday, with no construction activities permitted on Sunday, or holidays;</li> <li>• All internal combustion engine-driven equipment shall be equipped with intake and exhaust mufflers that are in good condition and appropriate for the equipment. Air compressors and pneumatic equipment shall be equipped with mufflers and impact tools shall be equipped with shrouds or shields.</li> <li>• All unnecessary idling of internal combustion engines on-site shall be prohibited.</li> </ul>	Project Contractor	City of Fort Bragg	During construction

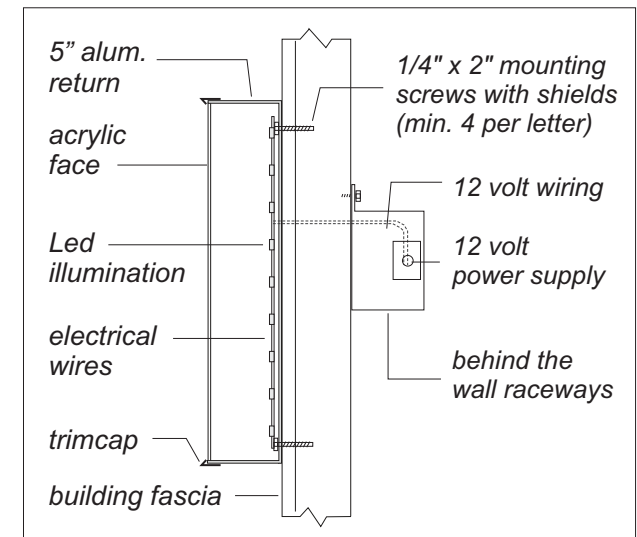
# APPENDIX E

## **Signage Package**



**Sign A:**  
**Led Illuminated Pan Channel Sign**  
 Scale 1/2"=1'-0"

clear acrylic letter faces with 2nd surface vinyl decoration;  
 white, golden yellow #3630-125. 5" deep black returns with black 1" trimcap.  
 ul approved white Led illumination.



Led P/C Letter Mount Detail



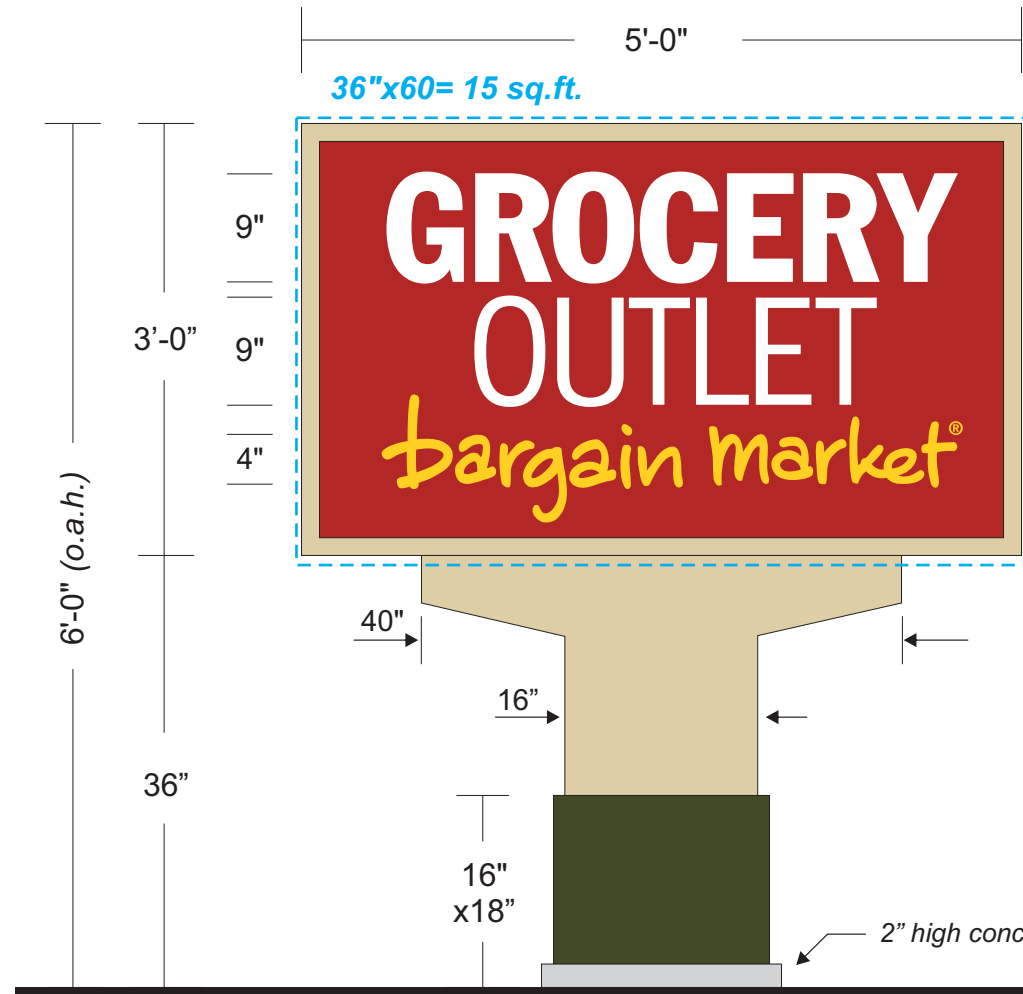
Building Front Elevation / Scale 3/32"=1'-0"

1) This sign is intended to be installed in accordance with the requirements of Article 600 of the National Electrical Code and/or other applicable local codes. This includes proper grounding and bonding of the sign.

2) The location of the disconnect switch after installation shall comply with the Srtical 600.6 (A)(1) of the National Electrical Code

 5201 Pentecost Drive Modesto, Calif. 95356 1-800-481-SIGN FAX (209) 543-1326 C.S.C.L. # 718965 DESIGN MANUFACTURING INSTALLATION MAINTENANCE	JOB #: 00000 CLIENT: GROCERY OUTLET CONTACT: DATE: 3-6-19 PROJECT LOCATION: 825 S. FRANKLIN ST FORT BRAGG, CA	SALESPERSON: SEAN CAMPBELL DRAWN BY: BAM PAGE 1 OF 3 CLIENT APPROVAL _____ DATE _____ LANDLORD APPROVAL _____ DATE _____	REVISIONS: 4-24-19 bam 3-15-17 bam 7-2-15 bam 7-7-15 bam 9-18-15 bam	SCALE: NOTED FILE NAME: GROCERY OUTLET fort bragg	ELECT. 120 Volt <input type="checkbox"/> 277 Volt <input type="checkbox"/> Other <input type="checkbox"/> one box above MUST be checked prior to any mfg.	SPECIFICATIONS See Drawing for Specifications
	<small>This Design Layout is specific to 120 volt electrical power for approved illuminated signage. Any other voltage at job site that requires additional install trips will be an extra charge. Copyright 2000 USS United Sign Systems This artwork/design is sole peoperty of USS United Sign Systems and cannot be reproduced without written permission of Johnson Sign Systems</small>					



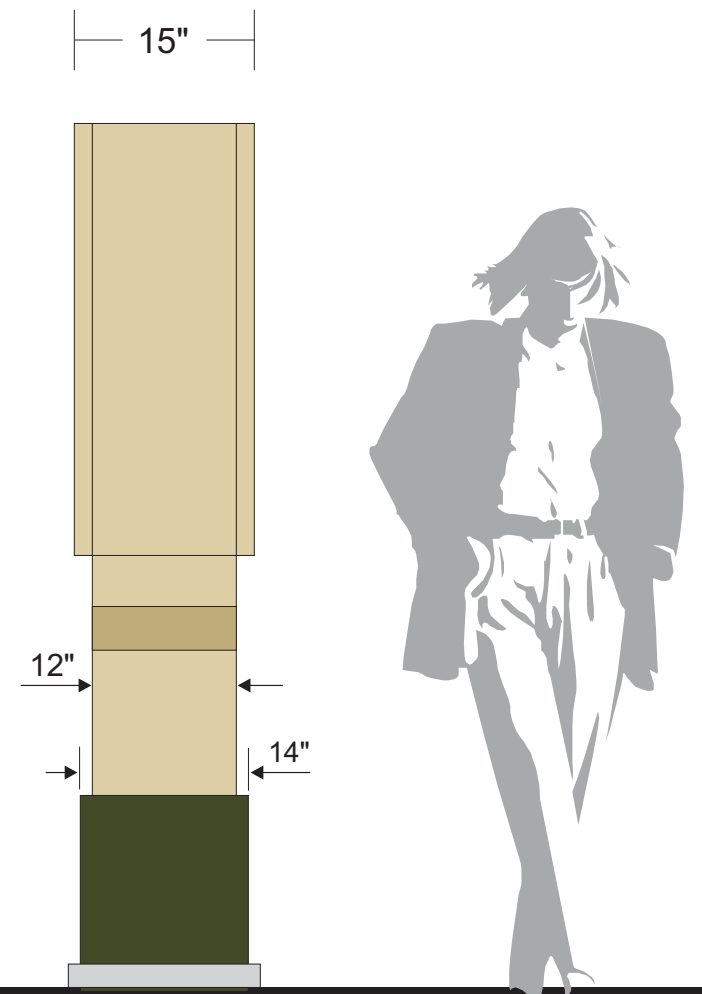


**cabinet:**  
aluminum construction  
paint to match BM Putnam Ivory HC-39

**sign face:**  
clear lexan with 2nd surface decoration;  
dark red #73 vinyl bkgd,  
golden yellow #125 & white vinyl copy

**pole cladding:**  
aluminum construction  
paint to match Benjamin-Moore  
Putnam Ivory HC-39

**base section painted to match;**  
Benjamin-Moore  
Guacamole #2144-10



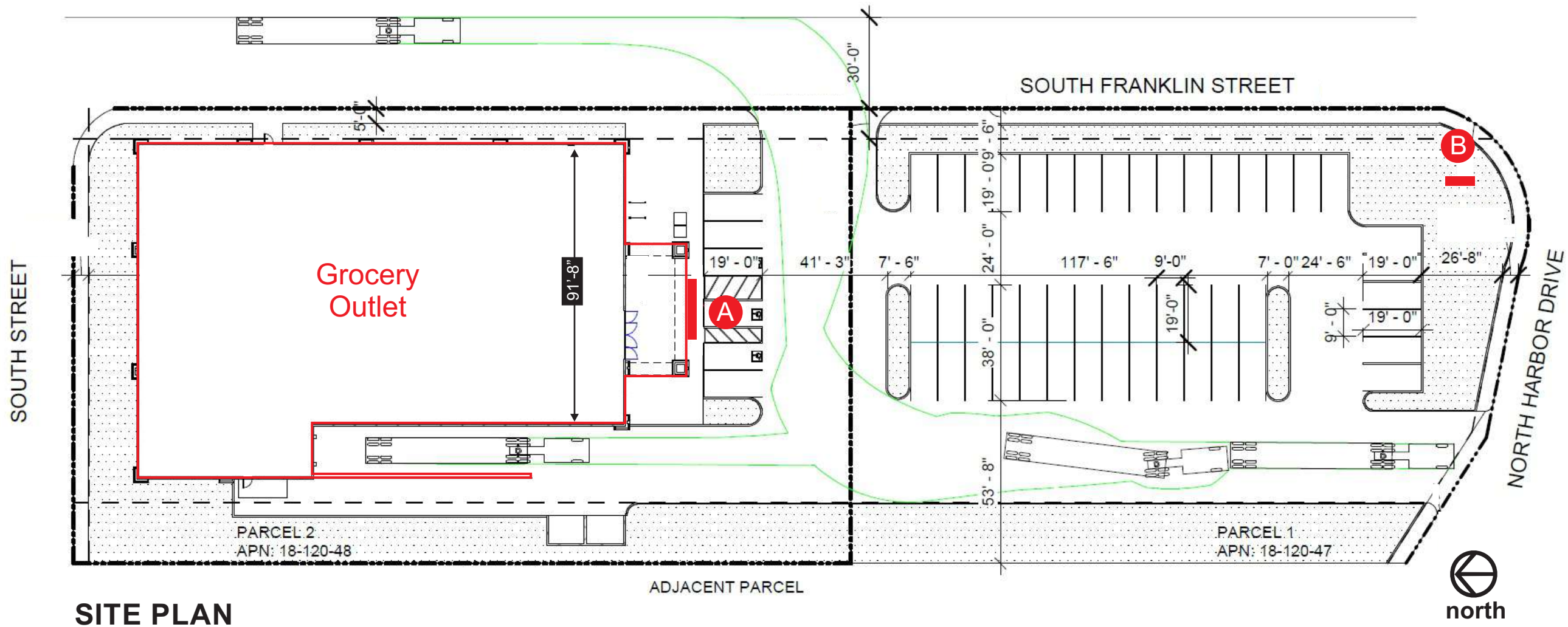
**Sign B:**  
**D/F Led Illuminated Monument Sign**  
Scale 1/2"=1'-0"

**End View**

1) This sign is intended to be installed in accordance with the requirements of Article 600 of the National Electrical Code and/or other applicable local codes. This includes proper grounding and bonding of the sign.  
2) The location of the disconnect switch after installation shall comply with the Srtical 600.6 (A)(1) of the National Electrical Code

<p>5201 Pentecost Drive Modesto, Calif. 95356 1-800-481-SIGN FAX (209) 543-1326 C.S.C.L. # 718965</p> <p>DESIGN MANUFACTURING INSTALLATION MAINTENANCE</p>	<p>JOB #: 00000 CLIENT: GROCERY OUTLET CONTACT: DATE: 3-6-19 PROJECT LOCATION: 825 S. FRANKLIN ST FORT BRAGG, CA</p>	<p>SALESPERSON: SEAN CAMPBELL DRAWN BY: BAM PAGE 2 OF 3</p> <p>CLIENT APPROVAL _____ DATE _____ LANDLORD APPROVAL _____ DATE _____</p>	<p>REVISIONS: 4-24-19 bam 3-15-17 bam 7-2-15 bam 7-7-15 bam 9-18-15 bam</p>	<p>SCALE: NOTED</p> <p>FILE NAME: GROCERY OUTLET fort bragg</p>	<p>ELECT. 120 Volt <input type="checkbox"/> 277 Volt <input type="checkbox"/> Other <input type="checkbox"/> one box above MUST be checked prior to any mfg.</p>	<p>SPECIFICATIONS</p> <p>See Drawing for Specifications</p>

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**SITE PLAN**

1) This sign is intended to be installed in accordance with the requirements of Article 600 of the National Electrical Code and/or other applicable local codes.

This includes proper grounding and bonding of the sign.  
 2) The location of the disconnect switch after installation shall comply with the Srtical 600.6 (A)(1) of the National Electrical Code

<p>5201 Pentecost Drive Modesto, Calif. 95356 1-800-481-SIGN FAX (209) 543-1326 C.S.C.L. # 718965 DESIGN MANUFACTURING INSTALLATION MAINTENANCE</p>	<p>JOB #: 00000 CLIENT: GROCERY OUTLET CONTACT: DATE: 3-6-19 PROJECT LOCATION: 825 S. FRANKLIN ST FORT BRAGG, CA</p>	<p>SALESPERSON: SEAN CAMPBELL DRAWN BY: BAM PAGE 3 OF 3</p> <p>CLIENT APPROVAL _____ DATE _____ LANDLORD APPROVAL _____ DATE _____</p>	<p>REVISIONS: 4-24-19 bam 3-15-17 bam 7-2-15 bam 7-7-15 bam 9-18-15 bam</p>	<p>SCALE: NOTED</p> <p>FILE NAME: GROCERY OUTLET fort bragg</p>	<p>ELECT. 120 Volt <input type="checkbox"/> 277 Volt <input type="checkbox"/> Other <input type="checkbox"/> one box above MUST be checked prior to any mfg.</p>	<p><b>SPECIFICATIONS</b></p> <p>See Drawing for Specifications</p>
						<p><small>This Design Layout is specific to 120 volt electrical power for approved illuminated signage. Any other voltage at job site that requires additional install trips will be an extra charge. Copyright 2000 USS United Sign Systems This artwork/design is sole property of USS United Sign Systems and cannot be reproduced without written permission of Johnson Sign Systems</small></p>