

MEMORANDUM

CITY/BOROUGH OF JUNEAU
155 South Seward Street, Juneau, Alaska 99801

DATE: September 16, 2013

TO: Planning Commission

FROM: Eric Feldt, Planner *EF*
Community Development Department

FILE NO.: USE2013 0029

PROPOSAL: A Conditional Use permit for 32 units at the corner of Cordova St. & Pioneer Ave.

GENERAL INFORMATION

Applicant: Island Hills Association/ Coogan

Property Owner: Island Hills Association/ Coogan

Property Address: 401 Cordova Street

Legal Description: Island Hills

Parcel Code Number: 1-D06-0-L04-003-1

Site Size: 5.3 Acres

Comprehensive Plan Future Land Use Designation: Medium Density Residential (MDR)

Zoning: D-18

Utilities: Public Water & Sewer

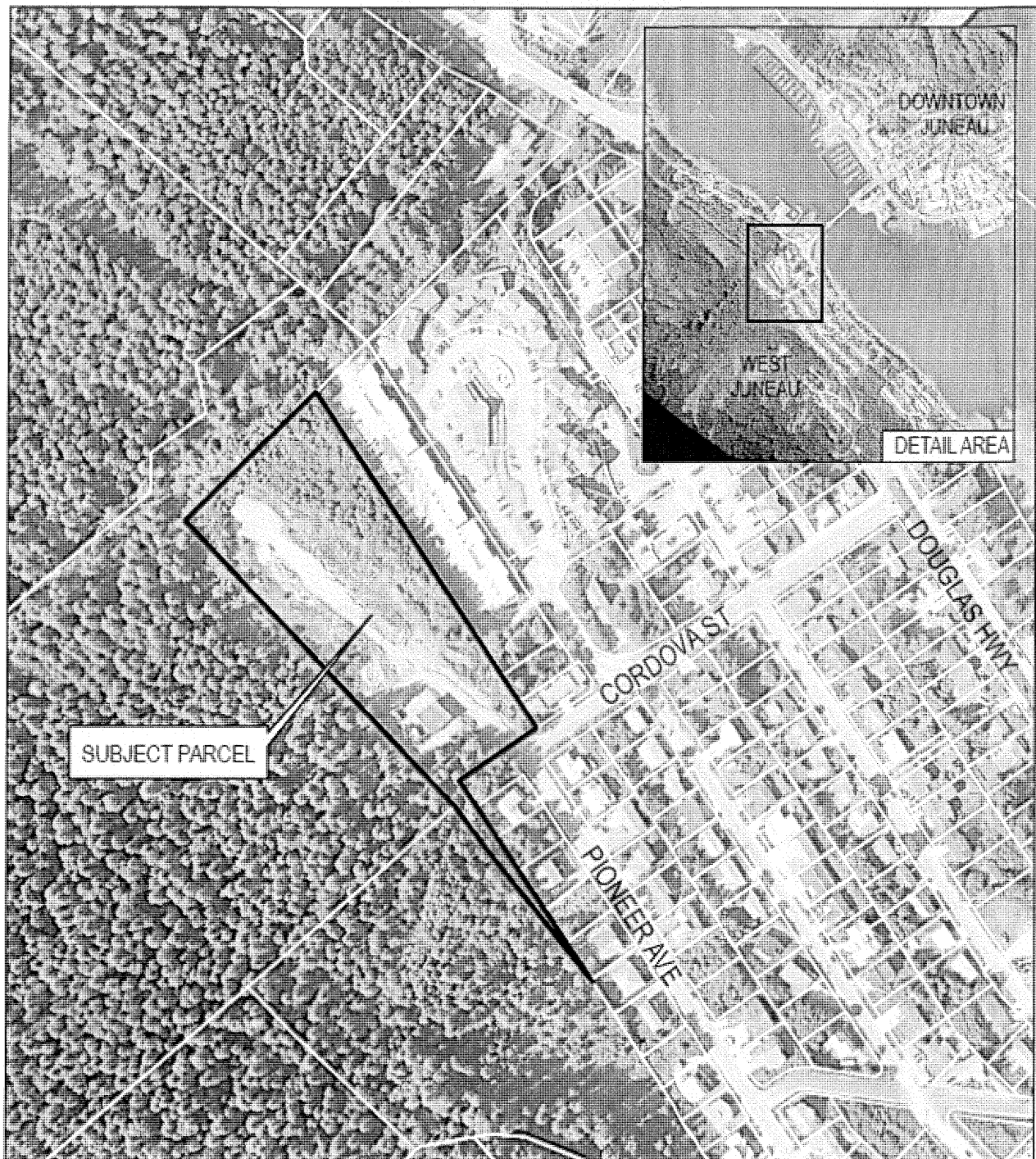
Access: Cordova Street

Existing Land Use: Multi-family Apartments

Surrounding Land Use:

- North - D-18; Vacant Private Land
- South - D-5; Single Family Home; Pioneer Ave.
- East - D-18; Cedar Park Apt.; Foster Ave.
- West - D-5(T)D-18; Vacant Private Land

VICINITY MAP



PROJECT LOCATION
USE20130029

0 125 250 Feet



Map created: September 16th, 2013

ATTACHMENTS

Attachment	A	2009 & 2011 Apt. Permit Decisions
Attachment	B	Site Plan
Attachment	C	24-Unit Building Plans
Attachment	D	4-Unit Building Plans
Attachment	E	Traffic Impact Analysis
Attachment	F	Lighting Fixture Designs

PROJECT DESCRIPTION

The applicant seeks a Conditional Use permit for the development of one, 24-unit apartment building and two, 4-unit apartment buildings for a total of 32 new multifamily units at the corner of Cordova Street and Pioneer Avenue in West Juneau. See Vicinity Map. These buildings will be constructed next to two existing apartment buildings.

BACKGROUND

In 2005, the applicant pursued an Allowable Use permit to build 97 units on the property (USE2005 00052). However, the Traffic Impact Analysis (TIA) forecasted future vehicle trips for the project was determined to be at the unacceptably high Level of Service rating 'D', and therefore, the project could not be permitted. At that time, a Level of Service rating 'C' or higher was allowed as being acceptable for traffic movement and safety. The TIA was updated two years later and concluded that only 24 units would raise the Level of Service to a 'C' rating.

In 2008, the Traffic chapter of the Land Use Code was modified to lower the acceptable Level of Service to a 'D' rating.

A year later the applicant received an approved Allowed Use permit for a 24-unit apartment building on the property (USE2009 00035). There were several conditions placed on this permit to lessen impacts on the single-family residences to the south. Noted in the report for this permit was a requirement for an additional TIA for any additional residential development. The decision of the Conditional Use permit is provided under Attachment A.

Approval of the 24-unit apartment building was gained in 2009, an extension was received in 2001 (USE2011 0002) and construction began in 2012. The building is nearly complete.

ANALYSIS

Project Site

As stated earlier, the property is located at the corner of Cordova Street and Pioneer Avenue in West Juneau on Douglas Island. There is one, 24-unit apartment building and one, 4-unit apartment building. See Figure 1. A single driveway provides the only access to the site from Cordova Avenue. A large area of the property has been cleared and prepped for future construction.

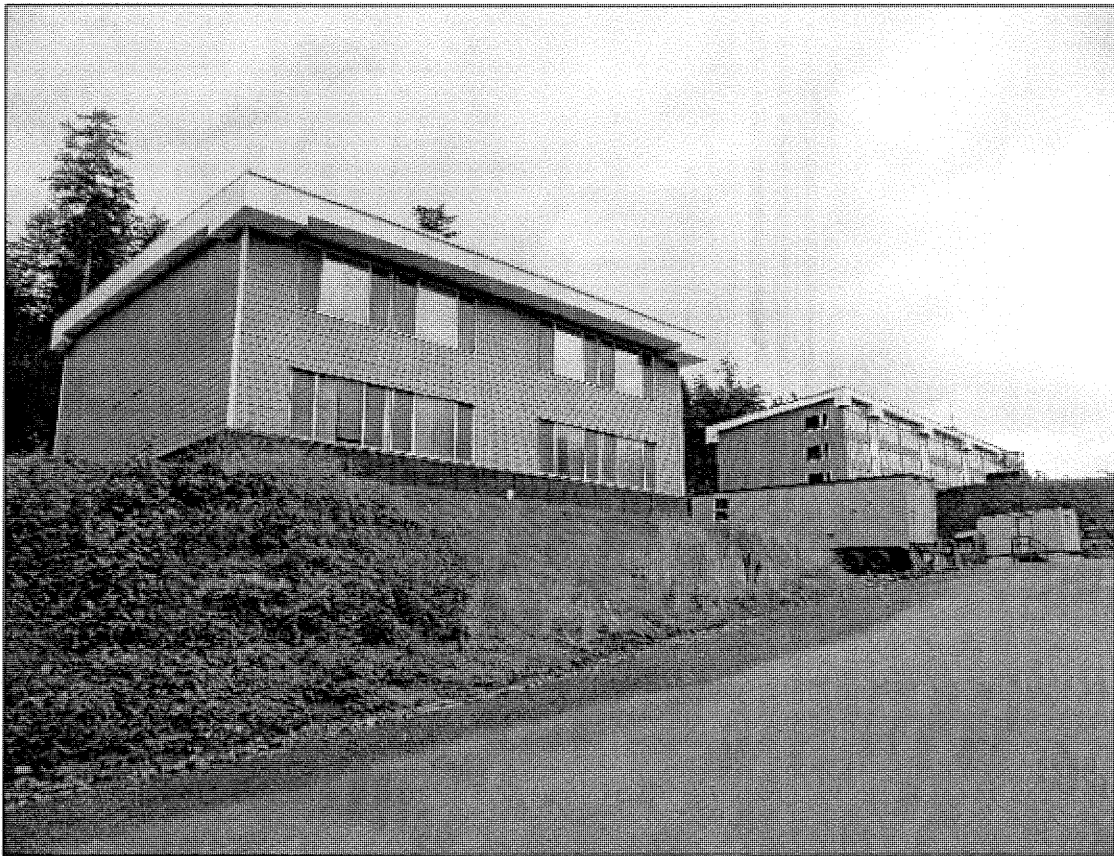


Figure 1. Picture of existing 4-unit apartment building in front of 24-unit apartment building in back. Picture taken by CDD staff 9-16-13

The property lies in a corner of the built neighborhood of West Juneau. To the east (downhill) are many apartment units which are zoned D-18 (multi-family residential). To the north and west lies vacant forested lands, which are zoned D-18 and D-5 (single-family) respectively. There are single-family homes across the street along Pioneer Avenue and Foster Avenue, which are both zoned D-5.

Project Design

Attachment A shows the proposed 24-unit building will be located towards to the back corner of the site and the two, 4-unit buildings are to be on each side of the existing 4-plex. The two existing buildings are also shown on the site plan.

The proposed 24-unit and 4-unit buildings will be designed to match the existing buildings. The 24-unit building will be 176 feet wide, approximately 35 feet tall (3 floors), and 50 feet deep. All apartments consist of two bedrooms and all other functional rooms of a dwelling unit. Staff notes that there is a 35-foot height maximum in this zoning district, and the height of this building will be confirmed during the Building permitting process to ensure height compliance. This building will be located as close as 17 feet to the back (west) property line and not near any other property lines. Since the building will be set back more than 10 feet away from the western lot line, it complies with required yard setbacks.

The two proposed 4-unit apartment buildings will also contain two-bedroom units. Each building will be nearly 50 feet X 50 feet with an overall height of approximately 18 feet. The location of both buildings will be far away from property lines and, therefore, complies with required yard setbacks.



Figure 2. Looking at driveway winding up hill into subject site. Picture taken from Pioneer Avenue on 9-16-13 by CDD staff.

The lighting fixtures for the parking lot and exterior wall mounts will match those permitted for the existing 24-unit building. Lighting fixture designs are provided under Attachment F.

Traffic

Given the high density and large lot site, the development potential is heavily predicated on achieving an acceptable Level of Service. As noted earlier, the Level of Service rating lowered from 'C' to 'D', which allows greater traffic volume and vehicle trips. As noted earlier, the applicant was informed in 2009 that an additional TIA was required additional residential development. The applicant submitted a new TIA for the additional 32-unit project. This is provided under Attachment E.

The new TIA indicates an overall average daily trip count of 325 for the total existing and proposed units (56). The TIA states the following about the LOS: *CBJ requires mitigation for developments where level of service (LOS) will drop below D by the build out year. The results of this analysis indicate that delay and level of service for the three intersections and site driveway will remain below CBJ mitigation threshold level. As such, no mitigation has been recommended.* Therefore, the TIA concludes an acceptable LOS for the proposed 32-unit project. Since the TIA was completed by a private company, CDD staff forwarded the document to the State Department of Transportation & Public Facilities (DOT/ PF) for review and comment. DOT/ PF said that they do not have any comments about the TIA nor of the overall project.

All traffic from the property accesses Cordova Street to reach Douglas Highway. Since all streets in the neighborhood dead end, all traffic leads to Cordova Street. This street is often congested during the AM rush hour due to congestion on Douglas Highway.

There are sidewalks in the neighborhood that guide pedestrians and bicyclists to a sidewalk and bike lane on Douglas Highway. There is a Capital City bus stop adjacent to the property and at the intersection of Cordova Street and Douglas Highway near the Breeze-Inn convenience store. Therefore, the additional users of the site can reach the neighborhood store as well as other places in the borough without relying on a personal vehicle.

Parking and Circulation

The site plan shows existing and proposed parking areas. The existing driveway will be extended to the proposed 24-unit building and a new parking lot. CBJ 49.40.210 requires 1.75 parking spaces per each 2-bedroom apartment unit. Therefore, a total of 56 parking spaces, including three handicap accessible, is required for the 32-unit project. The site plan shows 50 proposed spaces. Staff recommends as a condition of approval that the applicant submit a parking plan showing at least 56 spaces for the Building permitting process.

Noise

There will be an increase in vehicle noise with the 32 additional units but will not likely be substantially more than what currently exists along Cordova Street. Vehicle noise along Cordova Street is high for a residential neighborhood. With the parking lots located deep into the site, vehicle

noise will be mainly contained within the site.

Public Health or Safety

The proposed buildings are along the rear, up hill area of the site and away from nearby buildings. The TIA indicates acceptable traffic levels. Juneau Police Department (JPD) mentioned adding a traffic signal to the intersection of Cordova Street & Douglas Highway but believed it wouldn't happen due to its close proximity to the Douglas round-a-bout. JPD did not have other concerns. CDD staff also believes that a traffic signal would not be added to this intersection for the same reason. As mentioned earlier, Douglas Highway traffic becomes congested during the AM rush hour. As of the date of this memorandum, CDD staff did not receive comments from the Capital City Fire & Rescue Chief.

Habitat

There are no mapped habitats of the Land Use Code located on the property.



Figure 3. Looking down the driveway towards Pioneer Ave. The 4-plex is immediately downhill and to the right of the driveway. The 24-plex is to the right of the picture. Picture taken by CDD staff on 9-16-13.

Property Value or Neighborhood Harmony

The proposed buildings will be located along the rear of the property up hill from adjacent development. The elevation difference can be seen in Figure 3. Cedar Park Apartment complex is adjacent to and downhill of the site. The single family homes located along Cordova Street and at the corner of Pioneer Avenue could be affected by the increase in traffic noise and headlight glare.

During the review of the first 24-unit building, many nearby owners spoke against the apartment complex concerned about additional apartment buildings and traffic in the neighborhood. The permit for that building was approved with conditions to lessen the visibility of the apartments from the street side. However, the Planning Commission did not find that the additional traffic along Cordova Street resulting from the 24-plex would be significant enough to deny or further condition the permit.

The conditions placed on the previous 24-unit permit (USE2009 00035 & permit extension (USE2011 0002)) to lower impacts to adjacent residences are shown below.

USE2009 00035 Conditions 2 & 3

2) The contractor will not be allowed to operate any heavy construction equipment before 7:00 am or after 4:30 pm Monday through Friday, or before 9:00 am or after 4:30 pm Saturday and no heavy equipment on Sunday, unless a permit is obtained from the CBJ Building Official.

3) A 10 foot vegetated buffer along those property lines bordering the D-3 and D-5 zoning district. A site plan showing vegetated cover and the located and dimensions of the required screening will be submitted and approved prior to the issuance of a building permit.

Condition 2 relates to the construction period and ends with the completion of the building, while Condition 3 has no end date and continues to be active. CDD staff recommends Condition 2 be placed on the subject proposal to minimize noise levels during the construction of the three buildings. Condition 3 is enforceable regardless of the subject permit.

Therefore, with the recommended condition that restrict construction operating hours and the current condition in place that establishes a vegetative buffer to adjacent properties, the property value and neighborhood harmony will be preserved.

Conformity with Adopted Plans

The 2008 Comprehensive Plan designates this property as Medium Density Residential (MDR), which is characterized as urban development for multifamily units at densities between 5 and 20 units/ acre. As noted earlier, a total of 56 multi-family units would exist with the approval of the subject Conditional Use permit. With a lot size of 5.3 acres, D-18 density could permit up to 95 units on this site. The 32-unit multifamily project is consistent with the MDR definition.

The following policies of the Comprehensive Plan are germane to the proposal:

POLICY 3.1. IT IS THE POLICY OF THE CBJ TO BALANCE AVAILABILITY OF SUFFICIENT LAND WITHIN THE DESIGNATED URBAN SERVICE AREA BOUNDARY THAT IS SUITABLY LOCATED AND PROVIDED WITH THE APPROPRIATE PUBLIC SERVICES AND FACILITIES TO MEET THE COMMUNITY'S FUTURE GROWTH NEEDS AND THE PROTECTION OF NATURAL RESOURCES, FISH AND WILDLIFE HABITAT AND SCENIC CORRIDORS.

POLICY 4.8. IT IS THE POLICY OF THE CBJ TO BALANCE THE PROTECTION AND PRESERVATION OF THE CHARACTER AND QUALITY OF LIFE OF EXISTING NEIGHBORHOODS WITHIN THE URBAN SERVICE AREA WHILE PROVIDING OPPORTUNITIES FOR A MIXTURE OF NEW HOUSING TYPES.

POLICY 10.1 IT IS THE POLICY OF THE CBJ TO FACILITATE AVAILABILITY OF SUFFICIENT LAND WITH ADEQUATE PUBLIC FACILITIES AND SERVICES FOR A RANGE OF HOUSING TYPES AND DENSITIES TO ENABLE THE PUBLIC AND PRIVATE SECTORS TO PROVIDE AFFORDABLE HOUSING OPPORTUNITIES FOR ALL CBJ RESIDENTS.

POLICY 10.3 IT IS THE POLICY OF THE CBJ TO FACILITATE RESIDENTIAL DEVELOPMENTS OF VARIOUS TYPES AND DENSITIES THAT ARE APPROPRIATELY LOCATED IN RELATION TO SITE CONDITIONS, SURROUNDING LAND USES, AND CAPACITY OF PUBLIC FACILITIES AND TRANSPORTATION SYSTEMS.

Currently, Juneau is suffering from a lack of housing options and affordable housing choices. The project will provide additional housing in a time of very limited housing options and affordable housing choices. The property is located within in the Urban Service Boundary Area, has access to City water and sewer, is adjacent to public transit, and has non-motorized transportation amenities. The project is consistent with the policies of the 2008 Comprehensive Plan.

FINDINGS

CBJ §49.15.330 (e)(1), Review of Director's Determinations, states that the Planning Commission shall review the Director's report to consider:

1. Whether the application is complete;
2. Whether the proposed use is appropriate according to the Table of Permissible Uses;
and,
3. Whether the development as proposed will comply with the other requirements of this chapter.

The Commission shall adopt the Director's determination on the three items above unless it finds, by a preponderance of the evidence, that the Director's determination was in error, and states its reasoning for each finding with particularity.

CBJ §49.15.330 (f), Commission Determinations, states that even if the Commission adopts the Director's determination, it may nonetheless deny or condition the permit if it concludes, based upon its own independent review of the information submitted at the public hearing, that the development will more probably than not:

1. Materially endanger the public health or safety;
2. Substantially decrease the value of or be out of harmony with property in the neighboring area;
or,
3. Not be in general conformity with the comprehensive plan, thoroughfare plan, or other officially adopted plans.

Per CBJ §49.15.330 (e) & (f), Review of Director's & Commission's Determinations, the Director makes the following findings on the proposed development:

1. Is the application for the requested conditional use permit complete?

Yes. We find the application contains the information necessary to conduct full review of the proposed operations. The application submittal by the applicant, including the appropriate fees, substantially conforms to the requirements of CBJ Chapter 49.15.

2. Is the proposed use appropriate according to the Table of Permissible Uses?

Yes. The requested permit is appropriate according to the Table of Permissible Uses. The permit is listed at CBJ §49.25.300, Section 1.300 for the D-18 zoning district.

3. Will the proposed development comply with the other requirements of this chapter?

Yes. The proposed development complies with the other requirements of this chapter. Public notice of this project was provided in the September 13th and 23rd issues of the Juneau Empire's "Your Municipality" section, and a Notice of Public Hearing was mailed to all property owners within 500 feet of the subject parcel. Moreover, a Public Notice Sign was posted on the subject parcel, visible from the public Right of Way.

4. Will the proposed development materially endanger the public health or safety?

No. There is no evidence suggesting a decrease in or injurious situation resulting from the project.

5. Will the proposed development substantially decrease the value of or be out of harmony with property in the neighboring area?

No. With the recommended condition and other conditions currently in place on the property, property value and neighborhood harmony will not be substantially decreased.

6. Will the proposed development be in general conformity with the land use plan, thoroughfare plan, or other officially adopted plans?

Yes. The proposal of 32 units on a property located within the urban service boundary, zoned high density multi-family, with access to public water, sewer, and transit, and non-motorized amenities is consistent with the policies of the Comprehensive Plan and compliant with the Land Use Code.

Per CBJ §49.70.900 (b)(3), General Provisions, the Director makes the following Juneau Coastal Management Program consistency determination:

7. Will the proposed development comply with the Juneau Coastal Management Program?

N/A. The Juneau Coastal Management Program is not relevant to the proposal.

RECOMMENDATION

It is recommended that the Planning Commission adopt the Director's analysis and findings and grant the requested Conditional Use permit. The permit would allow the development of one, 24-unit building and two, 4-unit building. The approval is subject to the following conditions:

- 1) The contractor will not be allowed to operate any heavy construction equipment before 7:00 am or after 4:30 pm Monday through Friday, or before 9:00 am or after 4:30 pm Saturday and no heavy equipment on Sunday, unless a permit is obtained from the CBJ Building Official.
- 2) Prior to the issuance of a Building permit, a parking plan showing at least 56 spaces for the 32-units be submitted to the Permit Center.


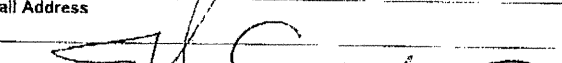
ALLOWABLE/CONDITIONAL USE PERMIT APPLICATION

Project Number USE 201300 29	Project Name (15 characters)	Case Number	Date Received 07/31/13	
TYPE OF ALLOWABLE OR CONDITIONAL USE PERMIT REQUESTED				
<input type="checkbox"/> Accessory Apartment*** (AAP) <input type="checkbox"/> Driveway in Right-of-Way (ADW)				
<input checked="" type="checkbox"/> Use Listed in §49.25.300 (USE) (Table of Permissible Uses)				
Please list the Table of Permissible Uses Category: 1,300 MULT DWELLING D18				
***An Accessory Apartment Application will also be required.				
DESCRIBE THE PROJECT FOR WHICH AN ALLOWABLE OR CONDITIONAL USE APPROVAL IS NEEDED.				
32-UNIT OF APARTMENT CONDOMINIUMS EXISTING 28-UNITS BRINGS TOTAL PROPOSED TO 60-UNITS				
IS THIS A MODIFICATION OF AN EXISTING APPROVAL? <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES - Case #				
CURRENT USE OF LAND OR BUILDING(S): APARTMENT CONDOMINIUMS				
PROPOSED USE OF LAND OR BUILDING(S): APARTMENT CONDOMINIUMS				
UTILITIES PROPOSED: WATER: <input checked="" type="checkbox"/> Public <input type="checkbox"/> On Site SEWER: <input checked="" type="checkbox"/> Public <input type="checkbox"/> On Site				
SITE AND BUILDING SPECIFICS:				
Total Area of Lot 244,804 square feet Total Area of Existing Structure(s) 28,000 square feet				
Total Area of Proposed Structure(s) 32,000 square feet				
EXTERNAL LIGHTING:				
Existing to remain <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes - Provide fixture information, cutoff sheets, and location of lighting fixtures				
Proposed <input type="checkbox"/> No <input type="checkbox"/> Yes - Provide fixture information, cutoff sheets, and location of lighting fixtures				
PROJECT NARRATIVE AND SUBMITTAL CHECKLIST:				
<input checked="" type="checkbox"/> Site Plan <input type="checkbox"/> Existing and proposed parking areas (including dimensions) and proposed traffic circulation				
<input type="checkbox"/> Floor Plan of proposed buildings <input type="checkbox"/> Existing Physical Features of the site (drainage, habitat, hazard areas, etc.)				
<input type="checkbox"/> Elevation view of existing and proposed buildings				
<input type="checkbox"/> Proposed Vegetative Cover				
For more information regarding the permitting process and the submittals required for a complete application, please see the reverse side.	ALLOWABLE/CONDITIONAL USE FEES			
	Fees	Check No.	Receipt	Date
If you need any assistance filling out this form, please contact the Permit Center at 586-0770.	Application Fees	\$ 1000.00		
	Admin. of Guarantee	\$		
	Adjustment	\$		
	Pub. Not. Sign Fee	\$ 80.00		
	Pub. Not. Sign Deposit	\$ 100.00		
	Total Fee	\$ 1180.00	045866	0004091 07/31/13

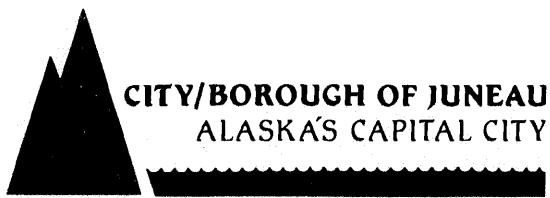
NOTE: MUST BE ACCOMPANIED BY DEVELOPMENT PERMIT APPLICATION FORM

DEVELOPMENT PERMIT APPLICATION

Project Number USE20130029	CITY and BOROUGH of JUNEAU	Date Received: 07/31/13
Project Name (City Staff to Assign Name)		

PROJECT / APPLICANT INFORMATION	Project Description 32-units of apartments. Adding to existing 4-units plus 24-units under construction currently will result in 60-units total with this application. The proposed 32-units of apartments will all be 2-bdrm 1000sf each.			
	PROPERTY LOCATION			
	Street Address 401 Cordova	City/Zip Juneau 99801		
	Legal Description(s) of Parcel(s) (Subdivision, Survey, Block, Tract, Lot) Island Hills PUD			
	Assessor's Parcel Number(s) 1D060L040031			
	LANDOWNER / LESSEE			
	Property Owner's Name Associates Coogan	Contact Person: Wayne Coogan	Work Phone: 907-780-6000	
	Mailing Address PO 34499 Juneau AK 99803	Home Phone: 907-723-7634	Fax Number: 907-780-6001	
	E-mail Address mail@cooganalaska.com	Other Contact Phone Number(s): Lloyd-cel-907-723-7634		
	<p>I am (we are) the owner(s) or lessee(s) of the property subject to this application and I (we) consent as follows:</p> <p>A. This application for a land use or activity review for development on my (our) property is made with my complete understanding and permission.</p> <p>B. I (we) grant permission for officials and employees of the City and Borough of Juneau to inspect my property as needed for purposes of this application.</p> <p>X <u></u> 2013 JAN 08 Landowner/Lessee Signature Date</p> <p>X <u>WAYNE A. COOGAN</u> Landowner/Lessee Signature Date</p> <p>NOTICE: The City and Borough of Juneau staff may need access to the subject property during regular business hours and will attempt to contact the landowner in addition to the formal consent given above. Further, members of the Planning Commission may visit the property before the scheduled public hearing date.</p>			
<p>APPLICANT (If the Applicant is OTHER than SAME as Landowner/Lessee, fill in below)</p> <p>Applicant's Name SAME</p>			Contact Person:	Work Phone:
Mailing Address		Home Phone:	Fax Number:	
E-mail Address		Other Contact Phone Number(s):		
X <u></u> Applicant's Signature		2013 JAN 08 Date of Application		

STAFF APPROVALS	OFFICE USE ONLY BELOW THIS LINE			
	<input checked="" type="checkbox"/>	Building/Grading Permit	Date Received	Application Number(s)
	<input type="checkbox"/>	City/State Project Review and City Land Action		
	<input type="checkbox"/>	Inquiry Case (Fee In Lieu, Letter of ZC, Use Not Listed)		
	<input type="checkbox"/>	Mining Case (Small, Large, Rural, Extraction, Exploration)		
	<input type="checkbox"/>	Sign Approval (If more than one, fill in all applicable permit #'s)		
	<input type="checkbox"/>	Subdivision (Minor, Major, PUD, St. Vacation, St. Name Change)		
	<input checked="" type="checkbox"/>	Use Approval (Allowable, Conditional, Cottage Housing, Mobile Home Parks, Accessory Apartment)	7/29/13	USE20130029
	<input type="checkbox"/>	Variance Case (De Minimis and all other Variance case types)		
	<input type="checkbox"/>	Wetlands Permits		
	<input type="checkbox"/>	Zone Change Application		
	<input type="checkbox"/>	Other (Describe)		
	<p>Comments:</p> <p>***Public Notice Sign Form filled out and in the file.</p>			



**PLANNING COMMISSION
NOTICE OF DECISION**

Date: August 26, 2009

File No.: USE2009-00035

Jeff Boman
PO Box 33052
Juneau, AK 99802

Application For: An Allowable Use permit for a proposed 24-unit multi-family complex.
Legal Description: West Juneau Block L Lots 14 - 25 & USMS 175
Parcel Code No.: 1-D06-0-L04-003-1
Hearing Date: August 25, 2009

The Planning Commission, at its regular public meeting, adopted the analysis and findings listed in the attached memorandum dated August 20, 2009 and approved the 24-unit multi-family complex to be conducted as described in the project description, project drawings submitted with the application and with the following conditions:

1. A parking plan be submitted and approved prior to the issuance of a building permit. The revised parking plan will show a total of 48 parking spaces, 2 of which will be ADA accessible, one van accessible. No parking will be located in the northeast corner of the site in the sliver of land adjacent to the Cordova Street right-of-way or the D-5 single family zoning district.
2. The contractor will not be allowed to operate any heavy construction equipment before 7:00 am or after 4:30 PM Monday through Friday, or before 9:00 am or after 4:30 PM Saturday and no heavy equipment on Sunday, unless a permit is obtained from the CBJ Building Official.
3. A 10 foot vegetated buffer along those property lines bordering the D-3 and D-5 zoning district. A site plan showing vegetated cover and the location and dimensions of the required screening will be submitted and approved prior to the issuance of a building permit.
4. A drainage plan will be reviewed by the CBJ Engineering Department and approved prior to the issuance of any building permits.
5. A lighting plan will be reviewed by the CBJ Community Development Department and approved prior to the issuance of any building permits.

Attachments: August 20, 2009 memorandum from Beth McKibben, Community Development, to the CBJ Planning Commission regarding USE2009-00035.

Jeff Boman
File No.: USE2009-00035
August 26, 2009
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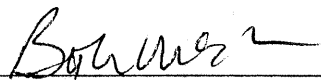
This Notice of Decision does not authorize construction activity. Prior to starting any project, it is the applicant's responsibility to obtain the required building permits.

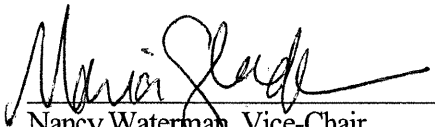
This Notice of Decision constitutes a final decision of the CBJ Planning Commission. Appeals must be brought to the CBJ Assembly in accordance with CBJ §01.50.030. Appeals must be filed by 4:30 P.M. on the day twenty days from the date the decision is filed with the City Clerk, pursuant to CBJ §01.50.030 (c). Any action by the applicant in reliance on the decision of the Planning Commission shall be at the risk that the decision may be reversed on appeal (CBJ §49.20.120).

Effective Date: The permit is effective upon approval by the Commission, August 25, 2009.

Expiration Date: The permit will expire 18 months after the effective date, or February 25, 2011, if no Building Permit has been issued and substantial construction progress has not been made in accordance with the plans for which the development permit was authorized. Application for permit extension must be submitted thirty days prior to the expiration date.

Project Planner:


Beth McKibben, Planner
Community Development Department

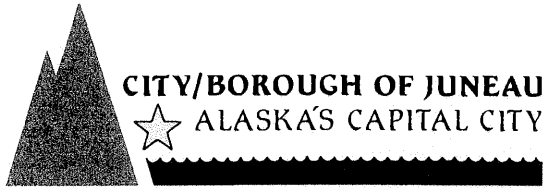

Nancy Waterman, Vice-Chair
Planning Commission


Filed With City Clerk

8/26/09
Date

cc: Plan Review

NOTE: The Americans with Disabilities Act (ADA) is a federal civil rights law that may affect this development project. ADA regulations have access requirements above and beyond CBJ-adopted regulations. Owners and designers are responsible for compliance with ADA. Contact an ADA - trained architect or other ADA trained personnel with questions about the ADA: Department of Justice (202) 272-5434, or fax (202) 272-5447, NW Disability Business Technical Center (800) 949-4232, or fax (360) 438-3208.



**PLANNING COMMISSION
NOTICE OF DECISION**

Date: March 9, 2011

File No.: USE2011-0002

Coogan General, LLC
PO Box 34499
Juneau, AK 99803

Application For: An extension of USE2009-00035:
An Allowable Use permit for a 24-unit multi-family complex.

Legal Description: Island Hills Subdivision, USMS 175, West Juneau Block L, Lots 14-25

Property Address: 401 Cordova St

Parcel Code No.: 1-D06-0-L04-003-1

Hearing Date: March 8, 2011

The Planning Commission, at its regular public meeting, adopted the analysis and findings listed in the attached memorandum dated March 2, 2011, and approved a 18 month extension of USE2009-00035 – 24 unit multi-family complex with the following conditions:

1. A parking plan be submitted and approved prior to the issuance of a building permit. The revised parking plan will show a total of 48 parking spaces, 2 will be ADA accessible and one will be van accessible. No parking will be located in the northeast corner of the site in the sliver of land adjacent to the Cordova Street right-of-way or the D-5 single family zoning district.
2. The contractor will not be allowed to operate any heavy construction equipment before 7:00 am or after 4:30 PM Monday through Friday, or before 9:00 am or after 4:30 PM Saturday. Additionally, heavy equipment will not be allowed to operate on Sunday unless a permit is obtained from the CBJ Building Official.
3. A 10 foot vegetated buffer along property lines bordering the D-3 and D-5 zoning district is required. A site plan showing vegetated cover and the location and dimensions of the required screening will be submitted and approved prior to the issuance of a building permit.
4. A drainage plan will be submitted to and reviewed by the CBJ Engineering Department and approved prior to the issuance of any building permits.
5. A lighting plan will be submitted to and reviewed by the CBJ Community Development Department and approved prior to the issuance of any building permits.

Attachments: March 2, 2011, memorandum from Beth McKibben, Community Development, to the CBJ Planning Commission regarding USE2011 0002.

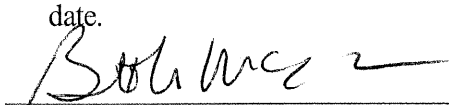
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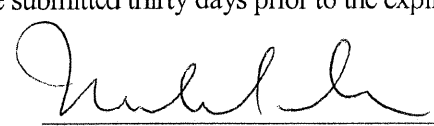
This Notice of Decision constitutes a final decision of the CBJ Planning Commission. Appeals must be brought to the CBJ Assembly in accordance with CBJ §01.50.030. Appeals must be filed by 4:30 P.M. on the day twenty days from the date the decision is filed with the City Clerk, pursuant to CBJ §01.50.030 (c). Any action by the applicant in reliance on the decision of the Planning Commission shall be at the risk that the decision may be reversed on appeal (CBJ §49.20.120).

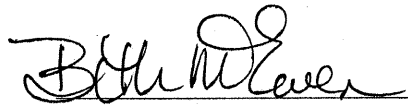
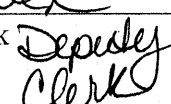
Effective Date: The permit is effective upon approval by the Commission, March 8, 2011.

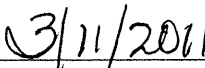
Expiration Date: The permit will expire 18 months after the effective date, or September 8, 2013, if no Building Permit has been issued and substantial construction progress has not been made in accordance with the plans for which the development permit was authorized. Application for permit extension must be submitted thirty days prior to the expiration date.

Project Planner:


Beth McKibben, Planner
Community Development Department

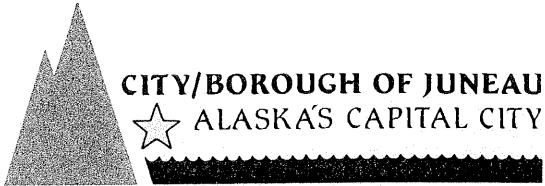

Mike Satre, Chair
Planning Commission


Filed With City Clerk 
Deputy
Clerk


Date

cc: Plan Review

NOTE: The Americans with Disabilities Act (ADA) is a federal civil rights law that may affect this development project. ADA regulations have access requirements above and beyond CBJ-adopted regulations. Owners and designers are responsible for compliance with ADA. Contact an ADA - trained architect or other ADA trained personnel with questions about the ADA: Department of Justice (202) 272-5434, or fax (202) 272-5447, NW Disability Business Technical Center (800) 949-4232, or fax (360) 438-3208.



**PLANNING COMMISSION
NOTICE OF DECISION**

Date: March 9, 2011

File No.: USE2011-0002

Coogan General, LLC
PO Box 34499
Juneau, AK 99803

Application For: An extension of USE2009-00035:
An Allowable Use permit for a 24-unit multi-family complex.

Legal Description: Island Hills Subdivision, USMS 175, West Juneau Block L, Lots 14-25

Property Address: 401 Cordova St

Parcel Code No.: 1-D06-0-L04-003-1

Hearing Date: March 8, 2011

The Planning Commission, at its regular public meeting, adopted the analysis and findings listed in the attached memorandum dated March 2, 2011, and approved a 18 month extension of USE2009-00035 – 24 unit multi-family complex with the following conditions:

1. A parking plan be submitted and approved prior to the issuance of a building permit. The revised parking plan will show a total of 48 parking spaces, 2 will be ADA accessible and one will be van accessible. No parking will be located in the northeast corner of the site in the sliver of land adjacent to the Cordova Street right-of-way or the D-5 single family zoning district.
2. The contractor will not be allowed to operate any heavy construction equipment before 7:00 am or after 4:30 PM Monday through Friday, or before 9:00 am or after 4:30 PM Saturday. Additionally, heavy equipment will not be allowed to operate on Sunday unless a permit is obtained from the CBJ Building Official.
3. A 10 foot vegetated buffer along property lines bordering the D-3 and D-5 zoning district is required. A site plan showing vegetated cover and the location and dimensions of the required screening will be submitted and approved prior to the issuance of a building permit.
4. A drainage plan will be submitted to and reviewed by the CBJ Engineering Department and approved prior to the issuance of any building permits.
5. A lighting plan will be submitted to and reviewed by the CBJ Community Development Department and approved prior to the issuance of any building permits.

Attachments: March 2, 2011, memorandum from Beth McKibben, Community Development, to the CBJ Planning Commission regarding USE2011 0002.

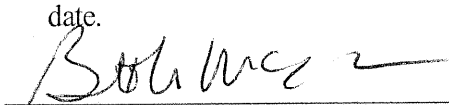
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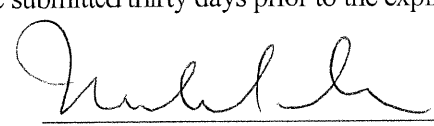
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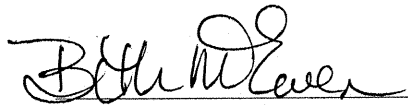
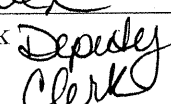
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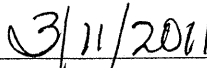
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Project Planner:


Beth McKibben, Planner
Community Development Department

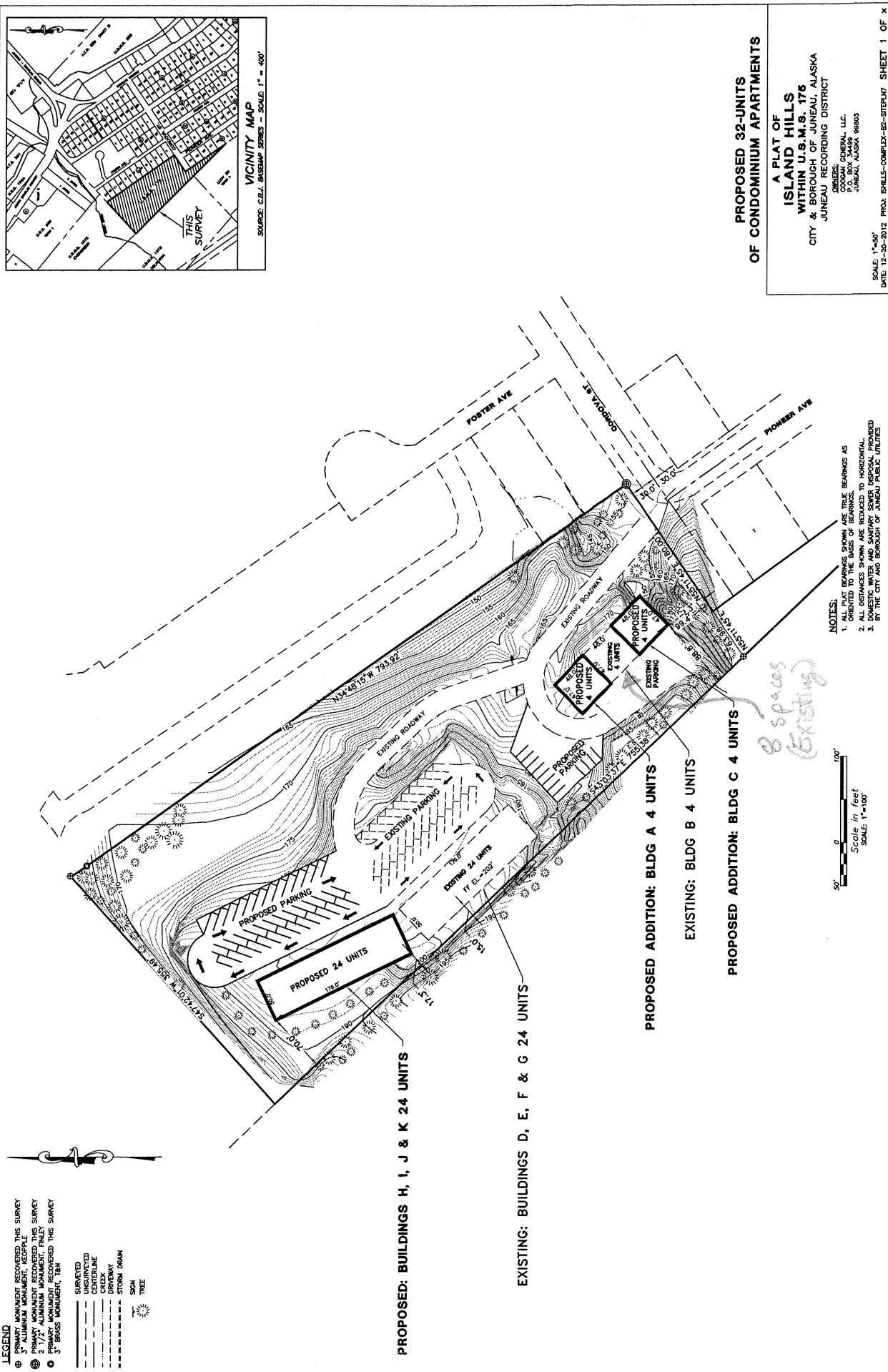

Mike Satre, Chair
Planning Commission


Filed With City Clerk 
Deputy
Clerk

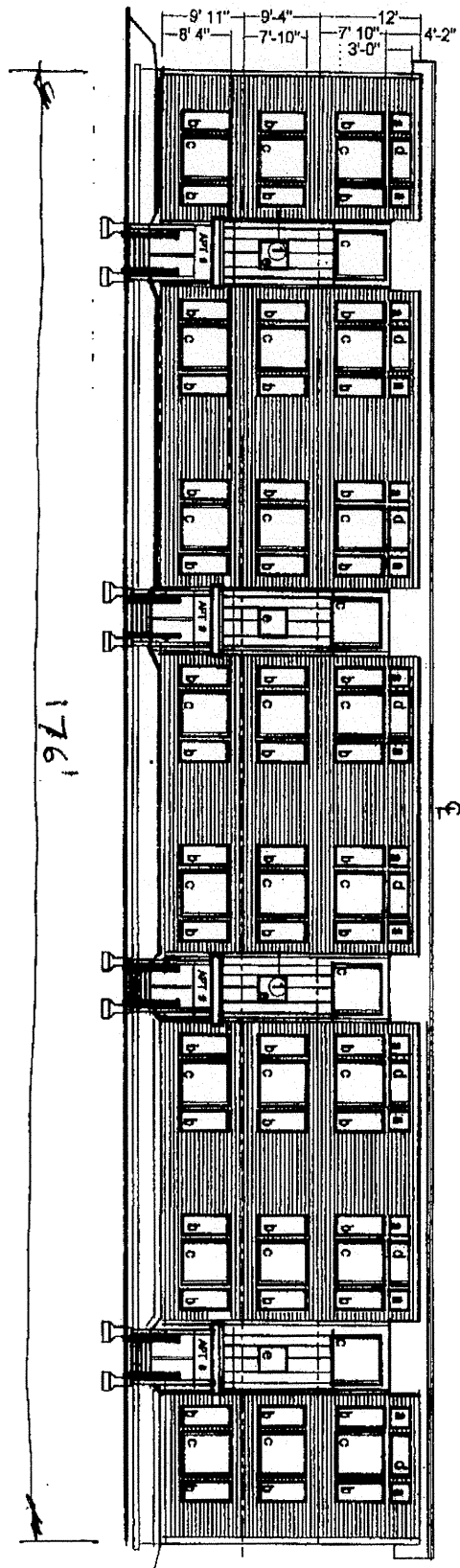

Date

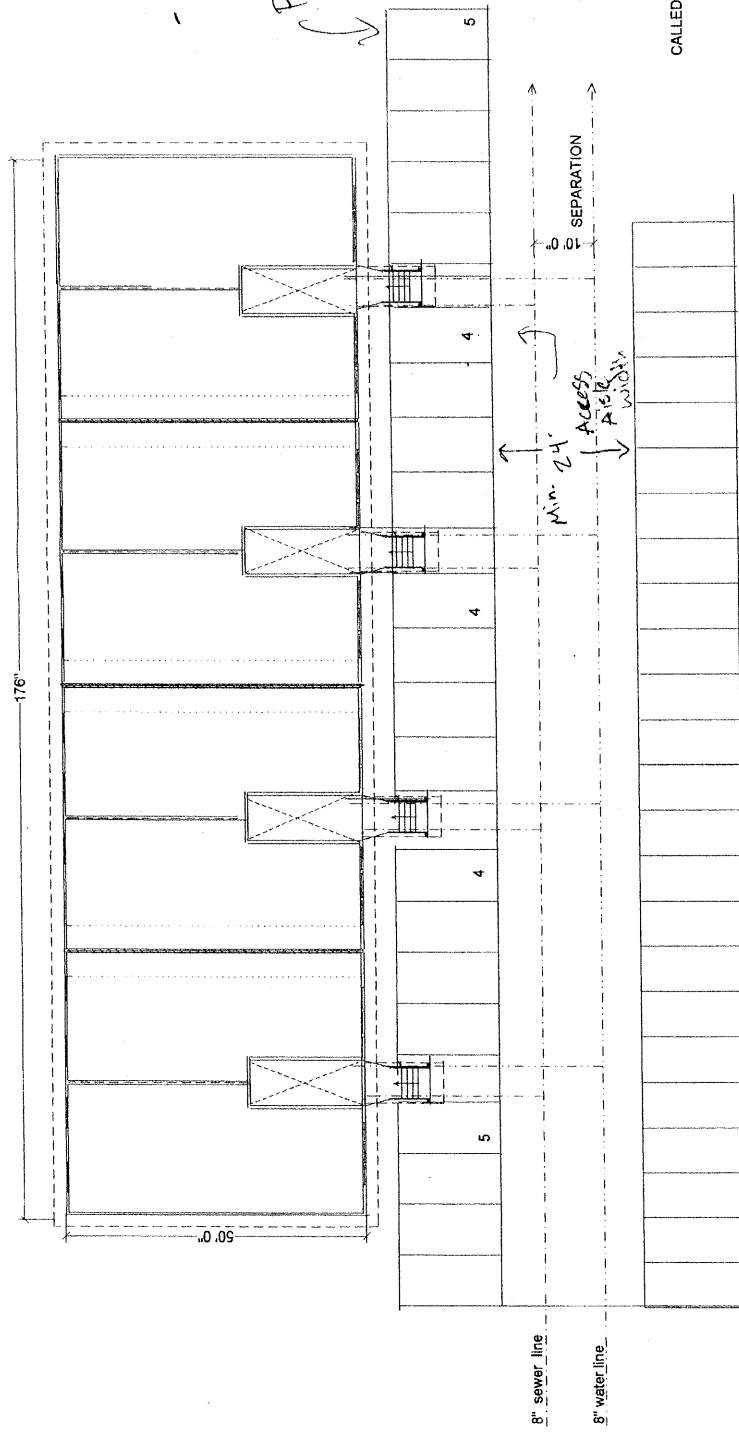
cc: Plan Review

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ISLAND HILLS 24-UNIT BUILDING FRONT ELEVATION





- Minimum of 48 Parking stalls shall be provided
 Parking Stall Dimension Minimum 8.5 ft wide 17 ft long
 1 Accessible Space
 1 Van Accessible Space

CALLED NORTH
 ↑

SITE PLAN

1"=20'
 NOTE
 SEE SITE PLAN AND GRADING PLANS
 BY OTHERS

All outdoor lighting fixtures shall have full cut off fixture heads.

2 FEB 2012

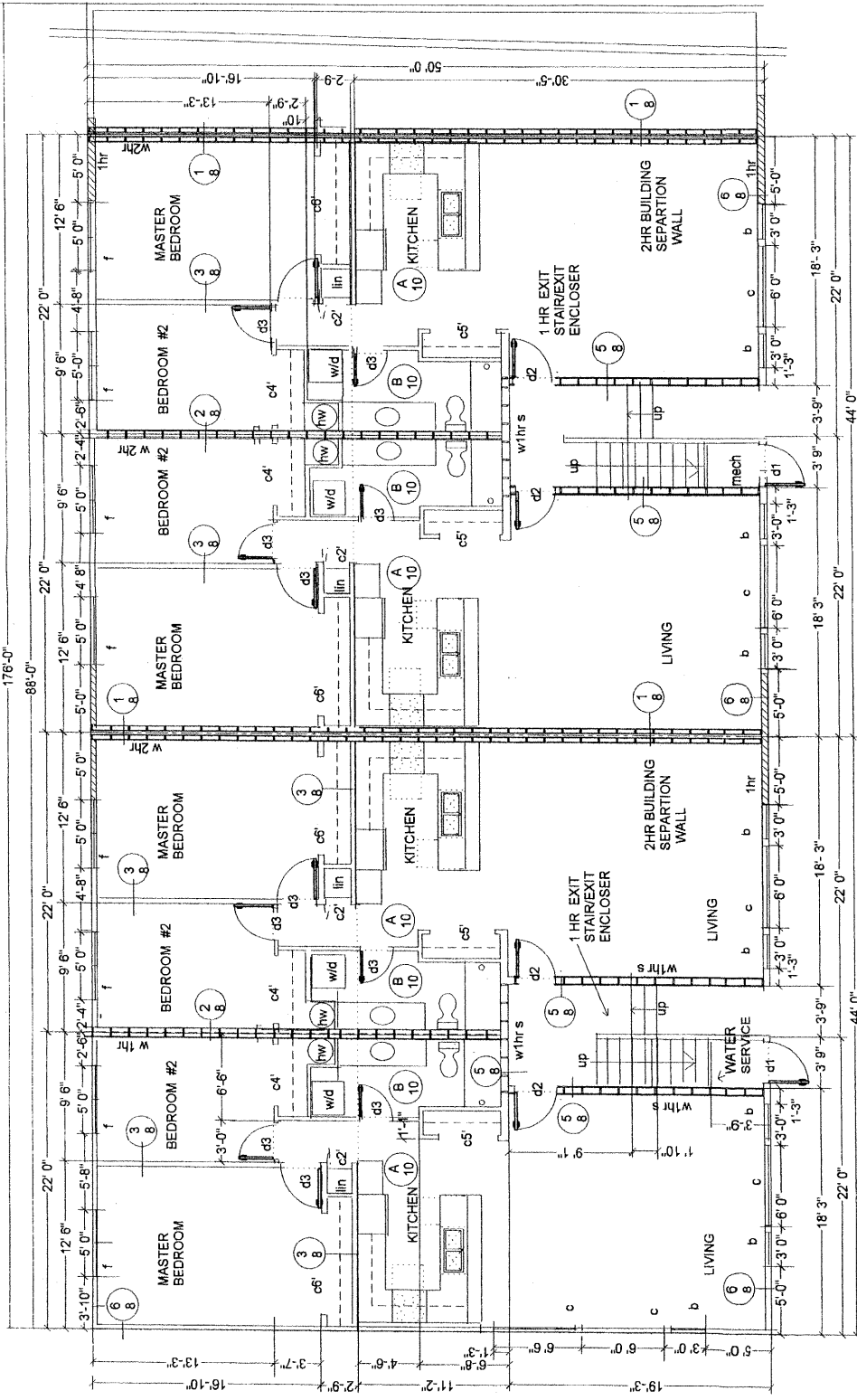
- Notes by
 EST
 2/14/12



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 COOGAN CONSTRUCTION
 P.O. BOX 34489
 JUNEAU, AK 99803

82 of 10
 2.06.2012

ABC/THOMAS HUNTINGTON, ARCHITECT
 2314 Douglas Highway-Douglas, AK 99824-907-364-3636 & fax



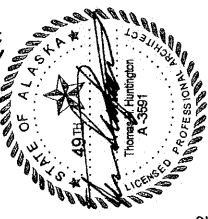
FIRST FLOOR PLAN 1/8"=1'-0"

DOOR SCHEDULE

- d1 NON RATED, 2-6x6-8" exterior, weather strip, threshold, key lock
- d2 RATED 1 HR, 3-0x6-8" exterior, weatherstrip, threshold, insulated, closer, key lock, dead bolt door nocker,
- d3 NON RATED, 2-6x6-8" hollow core, passage privacy @ bath & master bedroom
- c1 CLOSET DOOR, see plan for width,

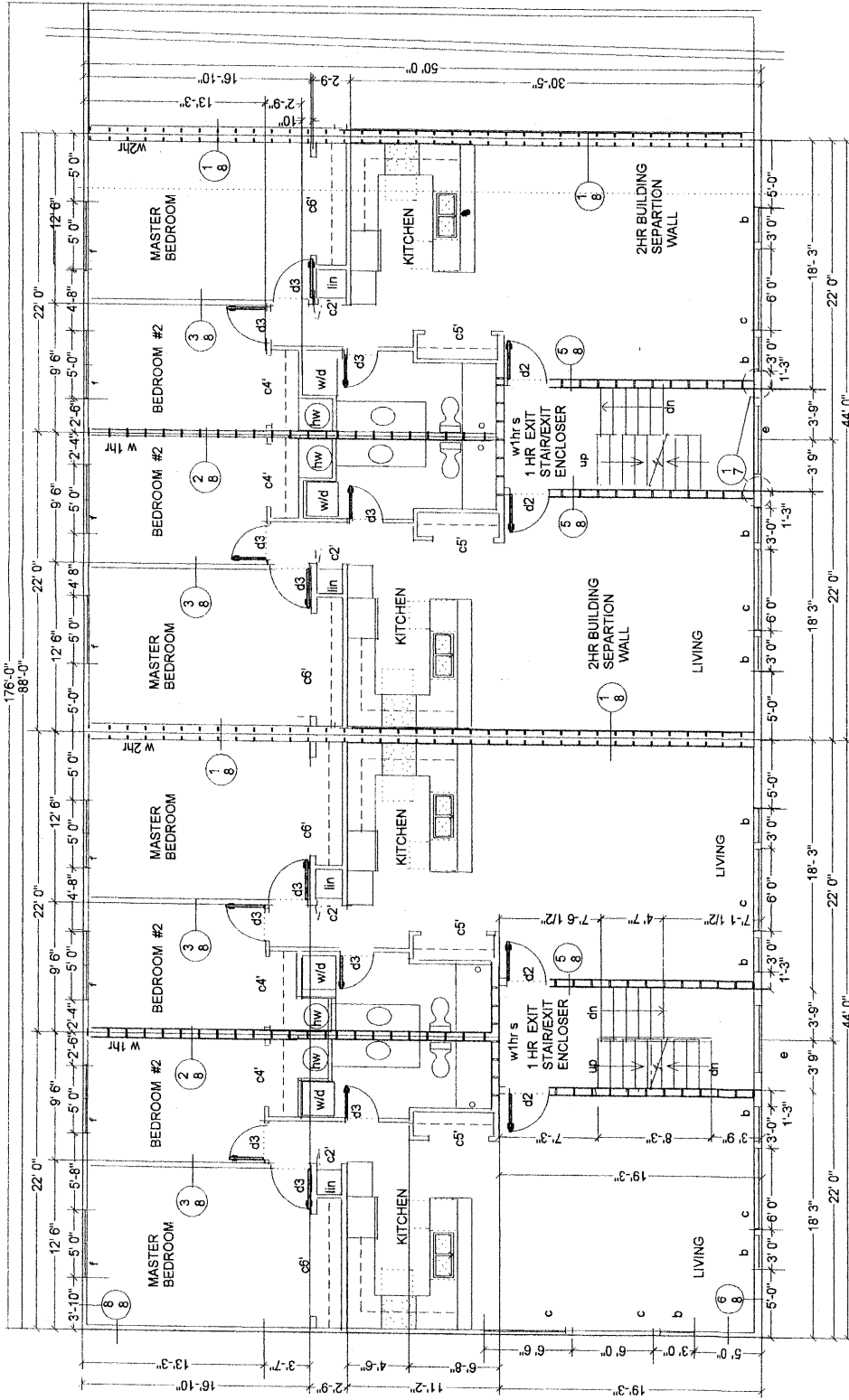
2314 Douglas Highway-Douglas, AK 99824-907-384-3838 & fax
ABC/ THOMAS HUNTINGTON, ARCHITECT

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2.07.2012

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SECOND FLOOR PLAN

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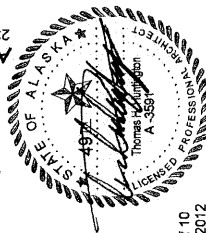
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COOGAN CONSTRUCTION
P.O. BOX 34499
JUNEAU, AK 99803

a4 of 10
2.06.2012



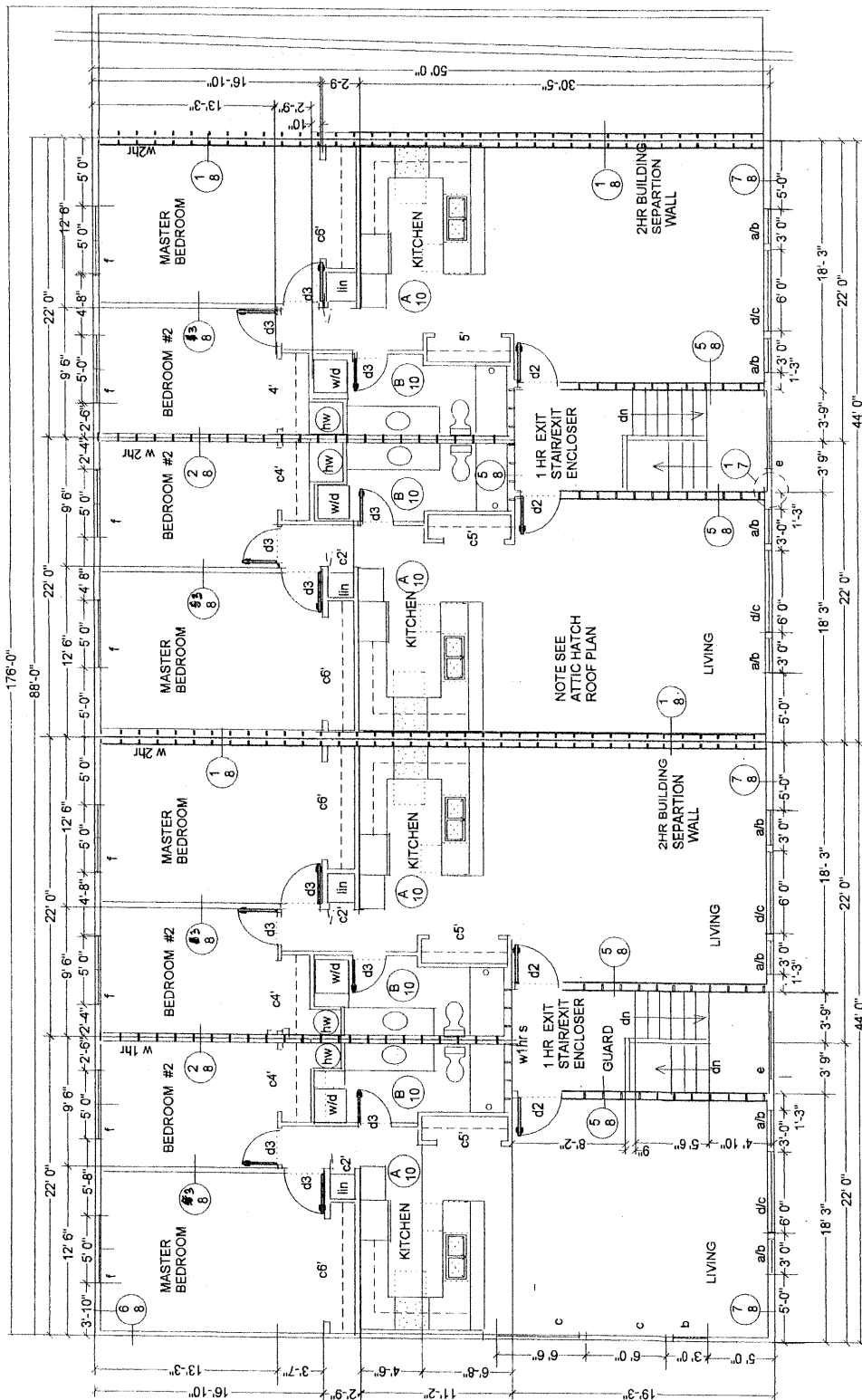
2314 Douglas Highway-Douglas, AK 99824-907-364-3636 & fax

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as of 10
2.06.2012

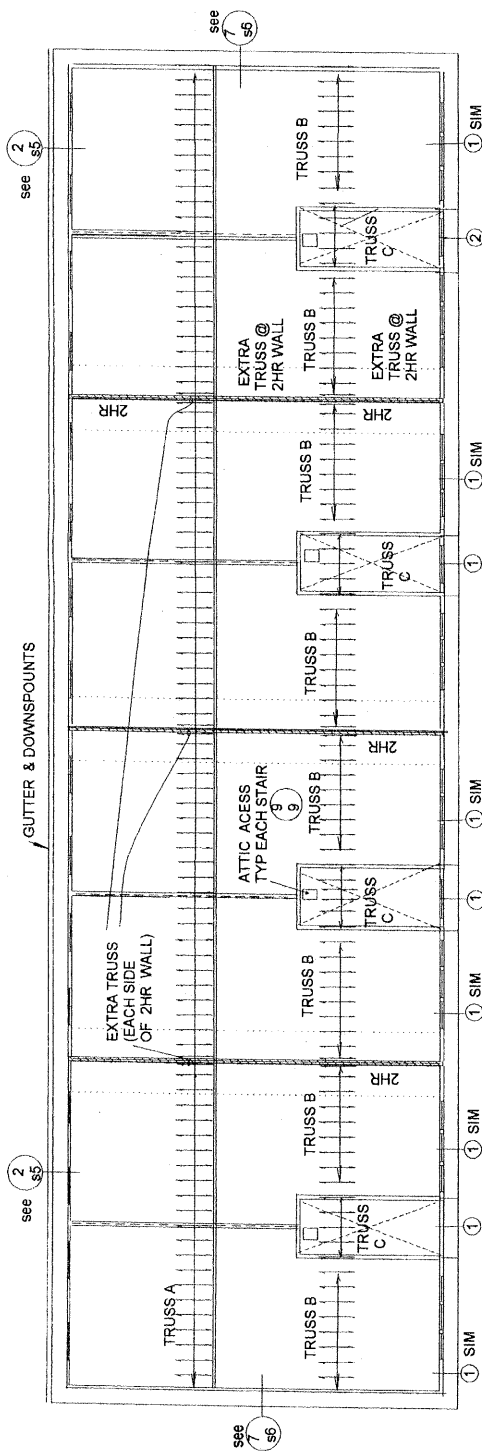
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COOGAN CONSTRUCTION
P.O. BOX 34499
JUNEAU, AK 99803



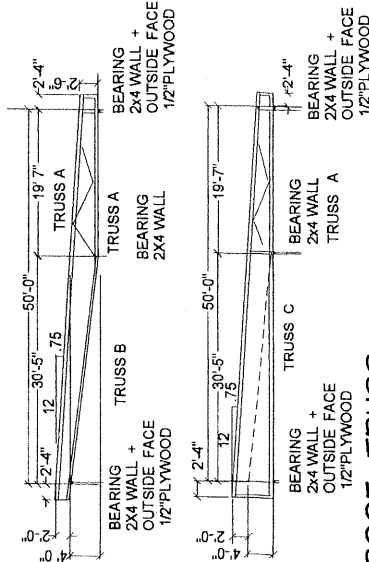
THIRD FLOOR PLAN

1/8"=1'-0"

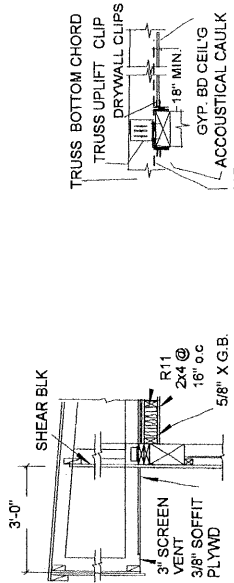
c copyright abc/huntington 8-4-11



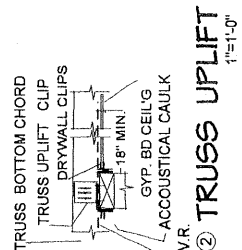
ROOF PLAN 1/16"=1'-0"



ROOF TRUSS 1/16"=1'-0"



1 ROOF @ STAIRWAY 3/8"=1'-0"



2 TRUSS UPLIFT 1"=1'-0"

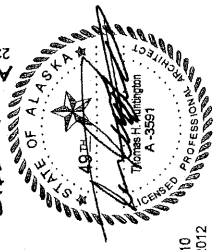
- ROOF PLAN NOTES**
- Standards... CONFORM TO NRCA ROOFING & WATERPROOFING MANUAL (NATIONAL ROOFING CONTRACTOR ASSOCIATION)
 - Roofing... 75 MIL NEPOM ROOFING CLASS C WITH METAL COATING.
 - Underlayment & details, PER ROOF MFG.
 - Flashing... TO BE RATED FOR 20 YEARS, NOTE PROVIDE FLASHING TO PROTECT ROOF SHEATING EDGE.
 - Drip Edge... MIN 28 GA G.I. OR NON CORROSIVE FLASHING, MIN. 3"x3" WITH NAIL NOT MORE

- Roof Penetration, NOT SHOWN, BUT ROOF CONTRACTOR TO VERIFY PENETRATIONS WITH ROOF MFG.
- Attic ventilation... PROVIDE AS SHOWN MIN. 1/150 OF ATTIC. PROTECT AGAINST WIND-DRIVEN SNOW. NOTE PROVIDE MAX. 40% & 45% HIGH ROOF RIDGE VENT VENTILATION AREA, & 60% & 55% EAVE VENTS AREA.
- Attic insulation... ATTACH TO MAINTAIN INSULATION INCLUDED FOR HIGH WINDS REQUIRED FOR HIGH WINDS
- Maintain attic ventilation... PROVIDE MIN 1 1/2" AIR SPACE ABOVE INSULATION BY BAFFLE UNTIL 5' CLEAR AIR SPACE IS PROVIDED ABOVE INSULATION. PROVIDE (2) 16"x 24" GABLE WALL LOUVER
- Roof Gutter & Downspouts, OWNER OPTION SEE PLAN FOR GUTTER AND DOWNSPOUTS (DS) PROVIDE APPROVED DRAINAGE
- Attic Access... 22"x30" (MIN. 30" HEAD ROOM ABOVE ACCESS) PROVIDE WEATHERSTRIPPING LOCATE PER OWNER
- Attic draft stop... PROVIDE PER CODE MAX 3000sf. MAINTAIN VENTILATION ACCESS 20"x40" ACCESS THRU DRAFT STOP REQUIRED SELF CLOSING LATCHING DOOR

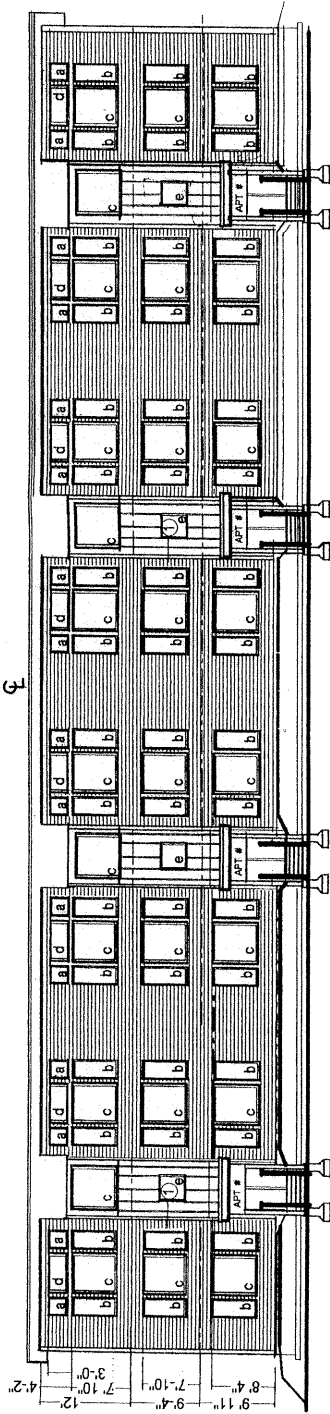
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2.07.2012

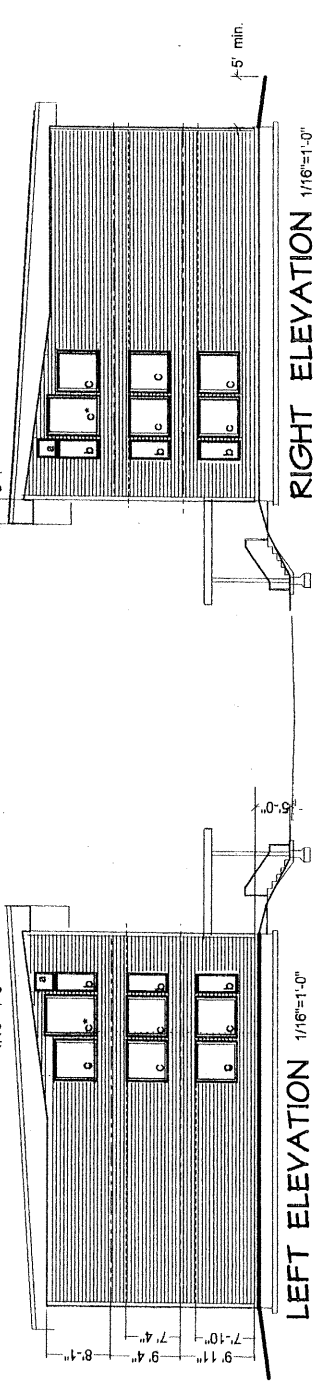
2 FEB 2012



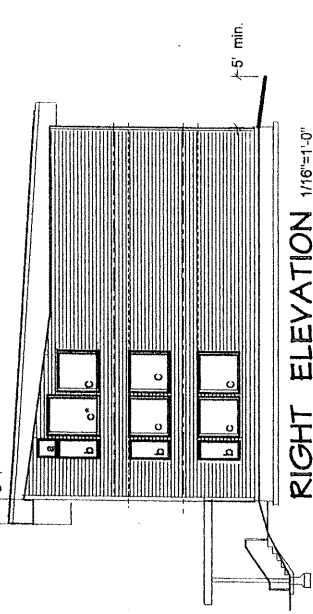
ABC/ THOMAS HUNTINGTON, ARCHITECT
2314 Douglas Highway- Douglas, AK 99824-907-364-3636 & fax



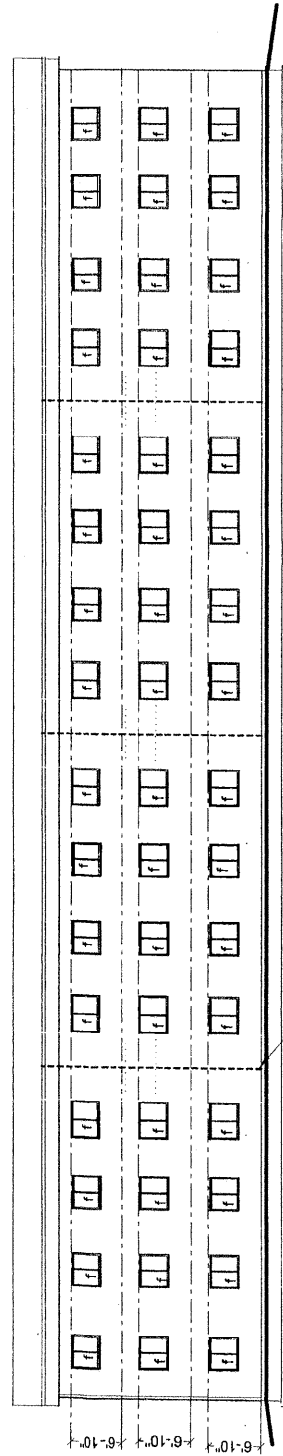
FRONT ELEVATION 1/16"=1'-0"



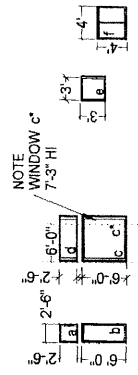
LEFT ELEVATION 1/16"=1'-0"



RIGHT ELEVATION 1/16"=1'-0"



REAR ELEVATION 1/16"=1'-0"



WINDOW SCHEDULE

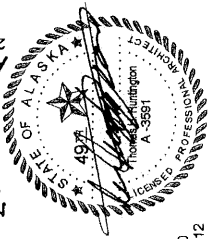
WINDOW SCHEDULE NOTES
1. Bedroom Window.. MEET EGRESS STANDARDS, ALSO VERIFY WINDOW OPENING SIDE FOR DISTANCE TO FANS, DRYER ETC.

1 WALL @ RECESS 1"=1'-0"

- ELEVATION PLAN NOTES
1. Roofing EPDM OR APPROVED
 2. Fascia.. CEDAR 1" 1/4"
 3. Siding A. BOARD & BATTENS VERTICAL, HORIZONTAL SIDING, METAL OR VINYL
 4. Exterior wood... WITHIN 6" OF EARTH
 5. Trim... CEDAR, PVC.
 6. Separation... PROVIDE 6" MIN SEPARATION FROM EARTH TO SIDING
 7. Gutter & downspout...SEE ROOF PLAN

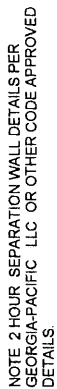
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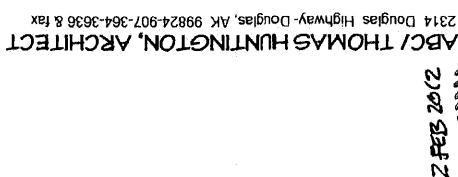
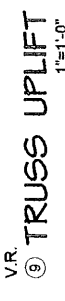
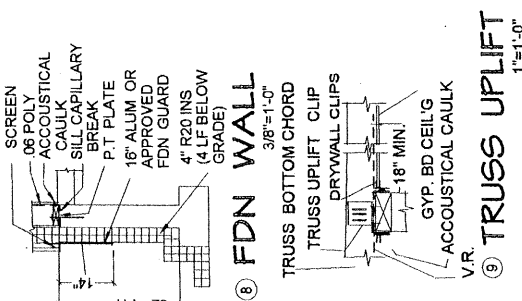
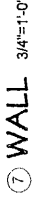
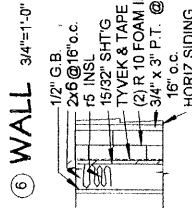
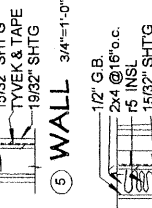
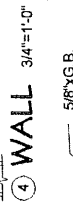
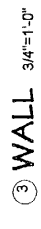
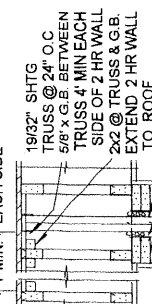
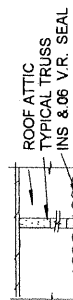


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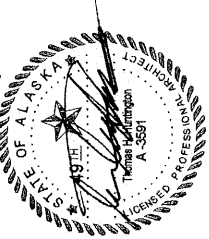
a7 of 10
2.07.2012



NOTE 2 HOUR SEPARATION WALL DETAILS PER
GEORGIA-PACIFIC LLC OR OTHER CODE APPROVED
DETAILS.

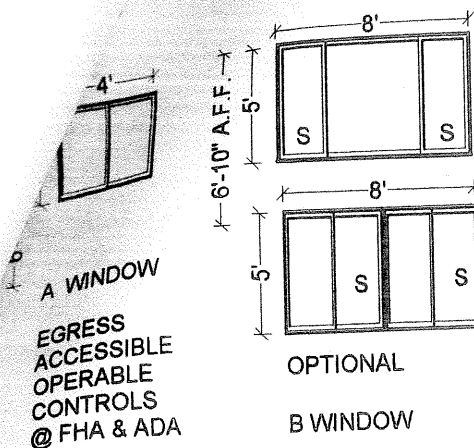


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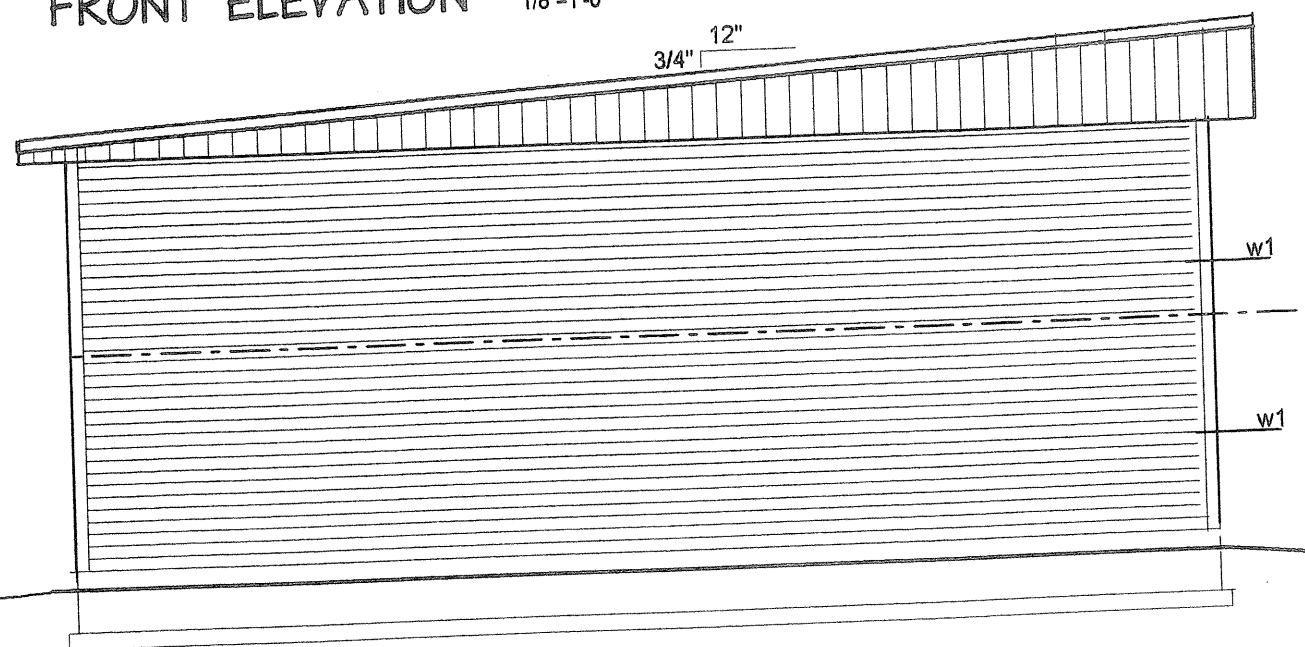


WINDOW SCHEDULE NOTES

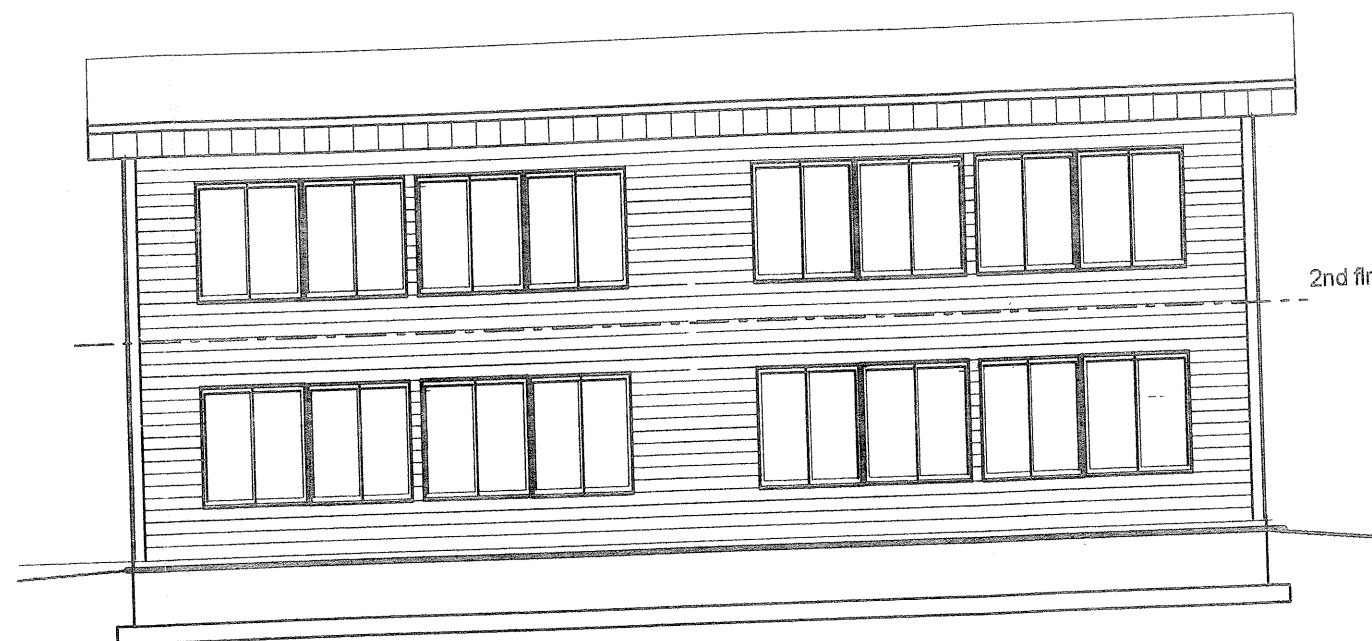
1. F=FIXED WINDOW, s = SAFETY GLAZING- PROVIDE ALSO PER CODE, S=SLIDING AS A MIN. (CONTRACTOR MAY SUBSTITUTE OTHER TYPES AS REQD)
2. EXTERIOR WINDOWS, WHITE VINYL R3 DUAL GLAZING, RATED FOR WIND VERIFY R.O., SAFETY GLAZING PER CODE, ACCESSIBLE OPENING HARDWARE, GRIDS ON EXTERIOR FACE OF GLASS, EGRESS WINDOW @ BEDROOM WINDOW HARDWARE TO BE OPERABLE BY ADA/FAIR HOUSING STANDARDS & WITHIN 44" OF AFF (ABOVE FINISH FLR)
3. INSTALL PER MFG, USE BITUMEN EDGING AROUND OPENING, FLASH AT HEADS, CONTINUOUS CAULK AND FLASH AT ALL EXTERIOR DOOR THRESHOLD
4. ADA THRESHOLD ON ALL ACCESSIBLE ENTRY DOORS



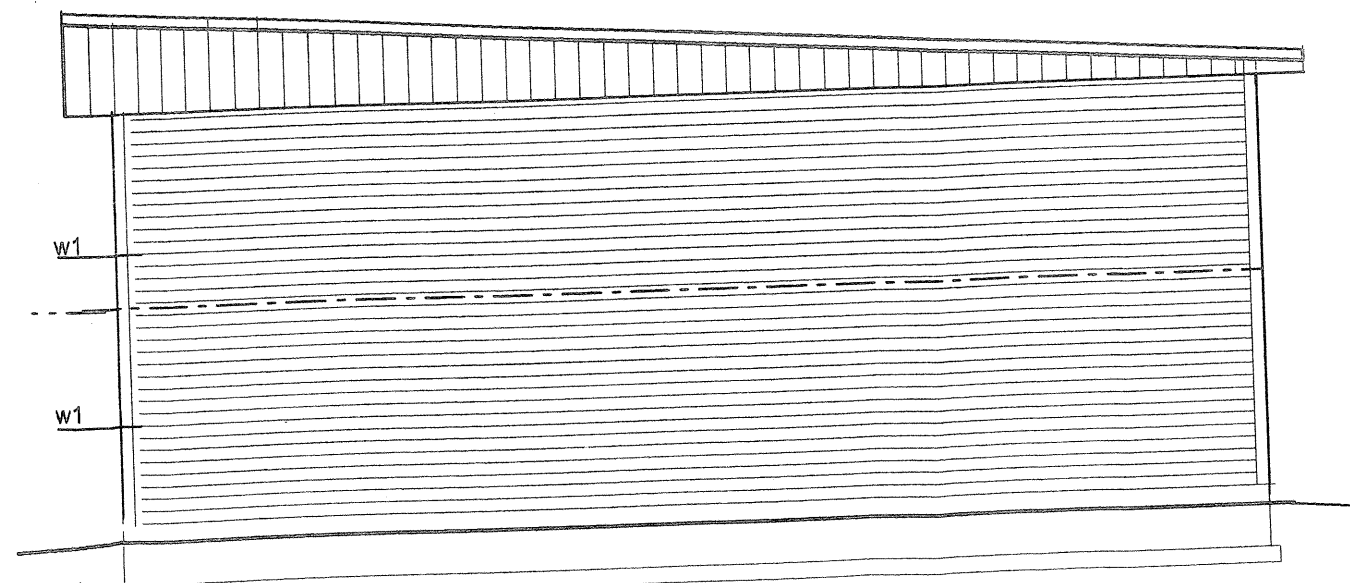
FRONT ELEVATION 1/8"=1'-0"



LEFT ELEVATION 1/8"=1'-0"



REAR ELEVATION 1/8"=1'-0"



RIGHT ELEVATION 1/8"=1'-0"

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APR 07 2005

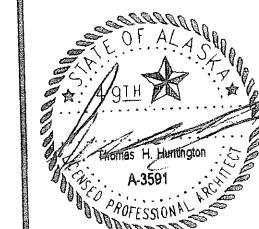
PERMIT CENTER / CDC

ELEVATIONS NOTES

1. Siding -FIBER CEMENT HORIZ SIDING WITH AIR SPACE BETHIND SIDING -ALT 5/8" TIII PLYWOOD
2. Underlayment.. 15# FELT, TYVEK, ALT. PROVIDE AIR SPACE BETWEEN SIDING AND SHEATING.
3. Corner board, COMPOSITE, PVC OR APPROVED
4. Fascia 1 1/4" CEDAR OR METAL
5. Roofing -CONCEALED FASTENERS METAL ROOF WITH SNOW HOLDERS (NOT REQUIRED IF SNOW WILL NOT HARM ANYBODY)
6. . Windows -WHITE VINYL, R3 OVERALL
7. Exterior Doors, FIBERGLASS, 18 GA GI FLASHING @ HEADS OR METAL INSULATED WHEN APPROVED
8. ...P.T. wood ... USE WHEN EXPOSED TO DIRECT WEATHER OR GROUND
- 9... Drainage swale ...PROVIDE MIN 5' SWALE FROM BUILDING FOR DRAINAGE 2% + SLOPE

ABC

ALASKA
BUILDING
CONSULTANTS
2314 Douglas Hiway
Douglas, AK 99824
907 364-3636 & FAX
IBUILDINAK@AOL.COM



FOUR PLEX
COOGAN CONSTRUCTION
P.O. BOX 34499
JUNEAU, AK 99803

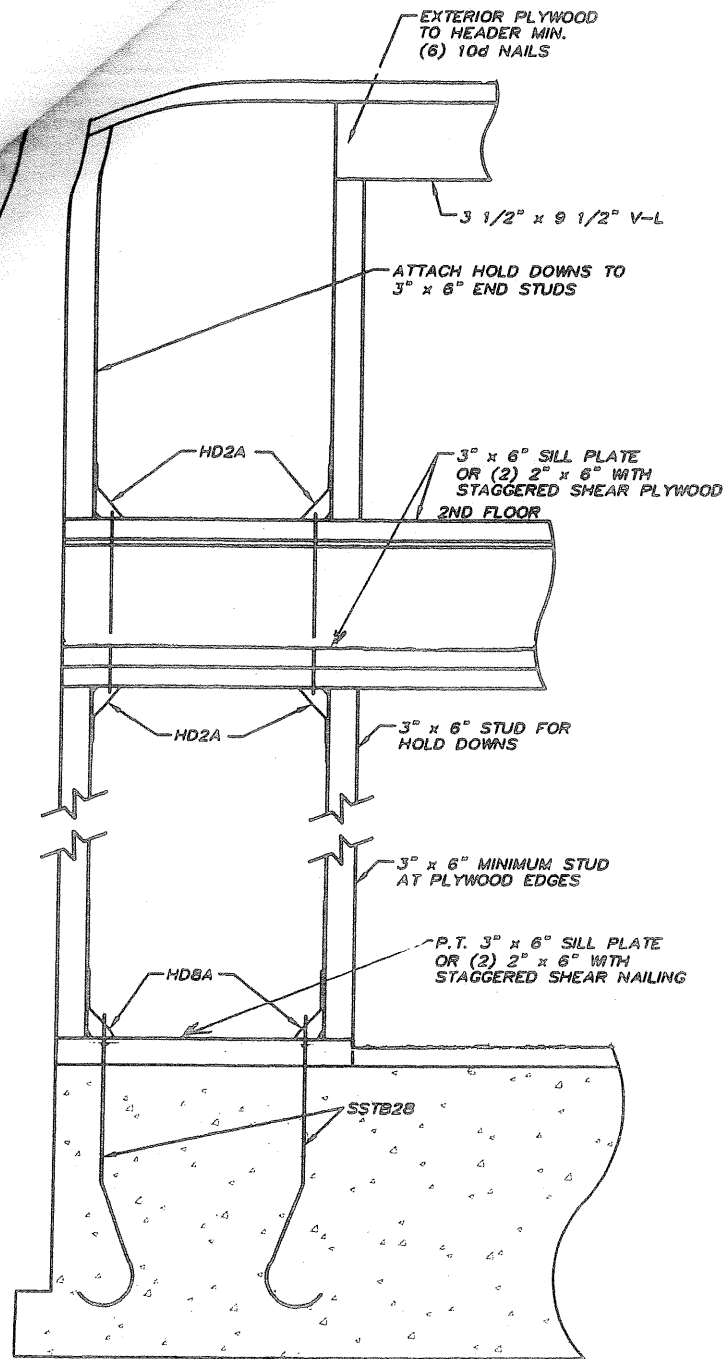
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Attachment D

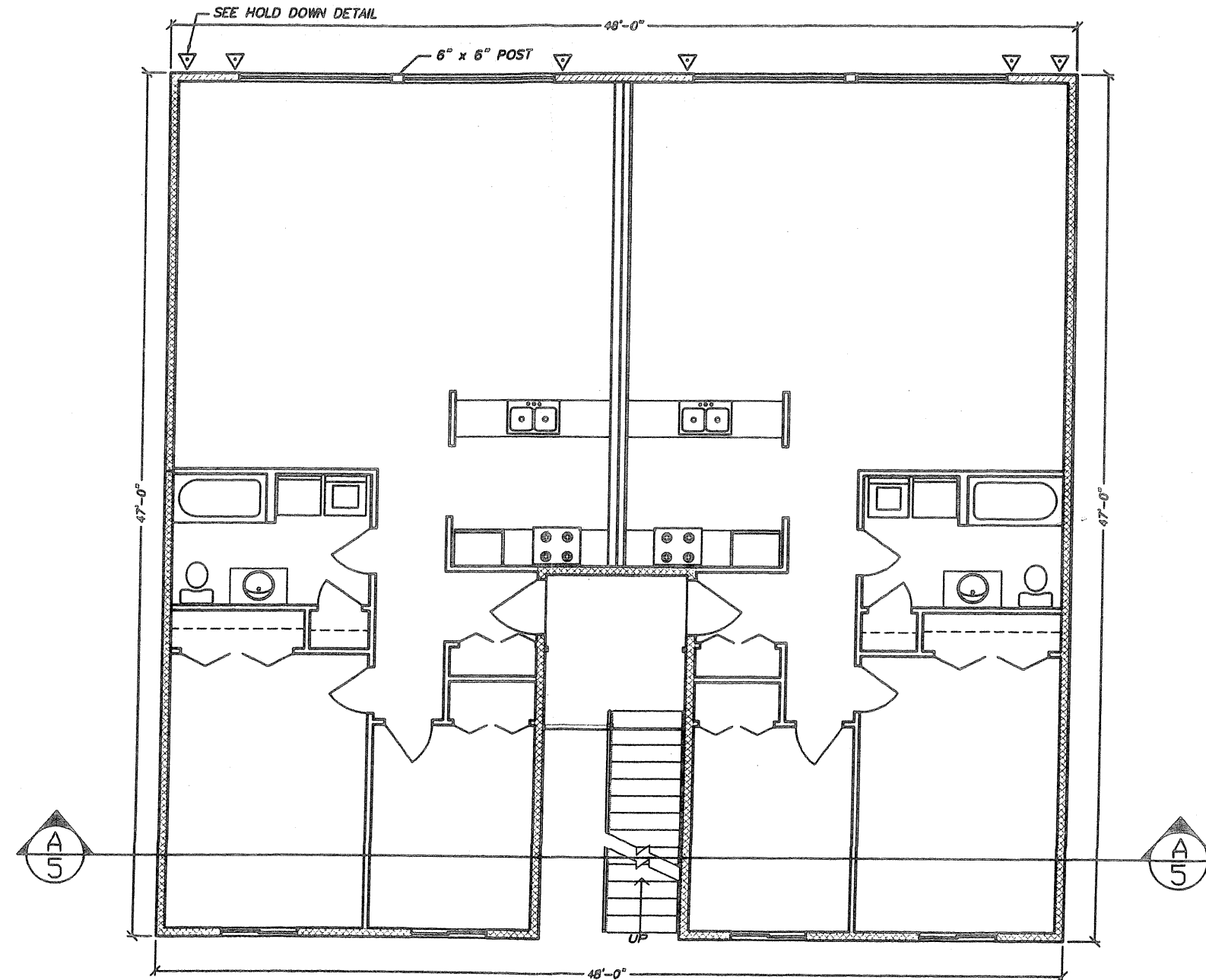
G:\Coogan\Island Hills\Condo-Bldg\2.dwg 03/31/05 4:10:49 PM ADT GDM Graphics (907) 789-3798 (907) 789-9091 (FAX)



HOLD DOWN DETAIL

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

- PLAIN EXTERIOR SHEAR WALL
5/8" T1-11 OR 1/2" PLYWOOD ONE SIDE OF 2" x 6" STUDS, FULLY BLOCKED
8d NAILS @ 6" O.C. EDGE, 12" O.C. FIELD
NAIL TOP PLATES & SILL PLATES WITH (4) 16d NAILS PER FOOT TO LAYER BELOW
- SPECIAL SHEAR WALL
1/2" PLYWOOD ON ONE SIDE OF 3" x 6" MIN. STUDS, T1-11 OVER EXTERIOR SHEAR PLYWOOD
10d NAILS @ 3" O.C. EDGE, 12" O.C. FIELD
PLACE T1-11 OVER SHEAR PLYWOOD
- HOLD DOWNS



LOWER FLOOR PLAN

SCALE: 1/8"=1'-0"

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PERMIT CENTER / CDC

Revisions:	By:

B² ENGINEERING, INC.
P.O. BOX 32478
JUNEAU, ALASKA 99803
(907) 586-1011
(907) 586-1011 (FAX)

COOGAN CONSTRUCTION
P.O. BOX 34499
JUNEAU, ALASKA 99803



Date: 3/31/05

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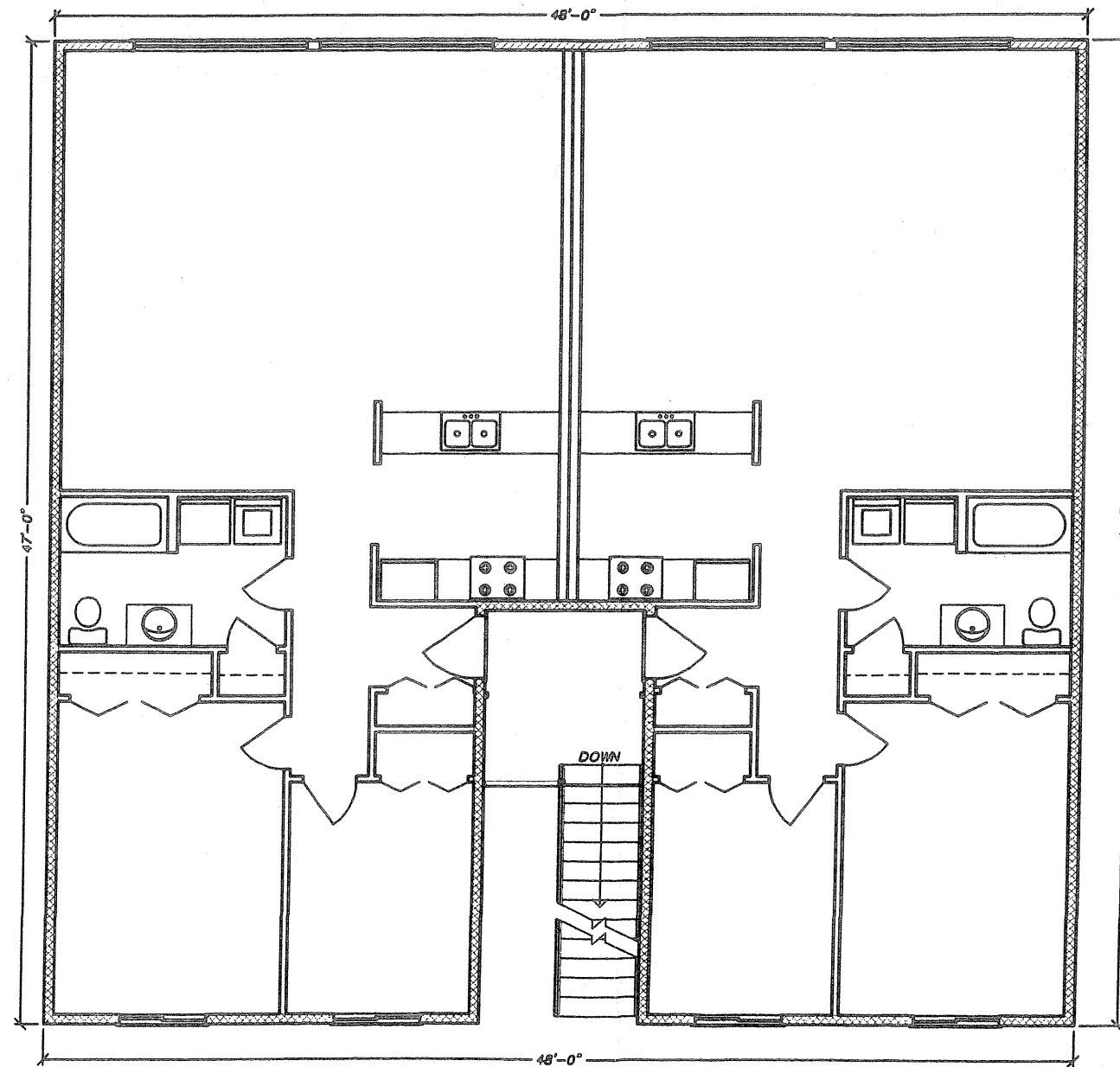
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Floor Plan

G:\Coogan\Island Hills\Condo-BluePlans2.dwg 03/31/05 4:10:49 PM ADT GDM Graphics (907) 789-5798 (907) 789-9091 (FAX)

PLAIN EXTERIOR SHEAR WALL
5/8" T1-11 OR 1/2" PLYWOOD ONE SIDE OF 2" x 6"
STUDS, FULLY BLOCKED
8d NAILS @ 6" O.C. EDGE, 12" O.C. FIELD
NAIL TOP PLATES & SILL PLATES WITH (4) 16d NAILS
PER FOOT TO LAYER BELOW

SPECIAL SHEAR WALL
1/2" PLYWOOD ON ONE SIDE OF 2" x 6" MIN. STUDS,
T1-11 OVER EXTERIOR SHEAR PLYWOOD
10d NAILS @ 6" O.C. EDGE, 12" O.C. FIELD
PLACE T1-11 OVER SHEAR PLYWOOD



UPPER FLOOR PLAN
SCALE: 1/8"=1'-0"

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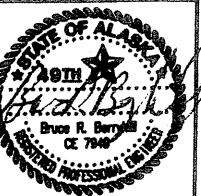
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COOGAN CONSTRUCTION
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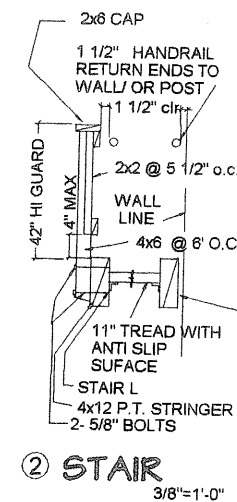
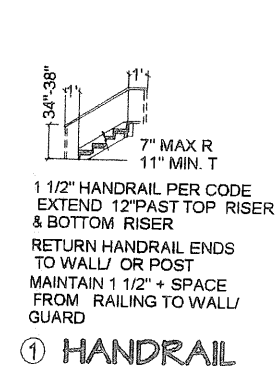
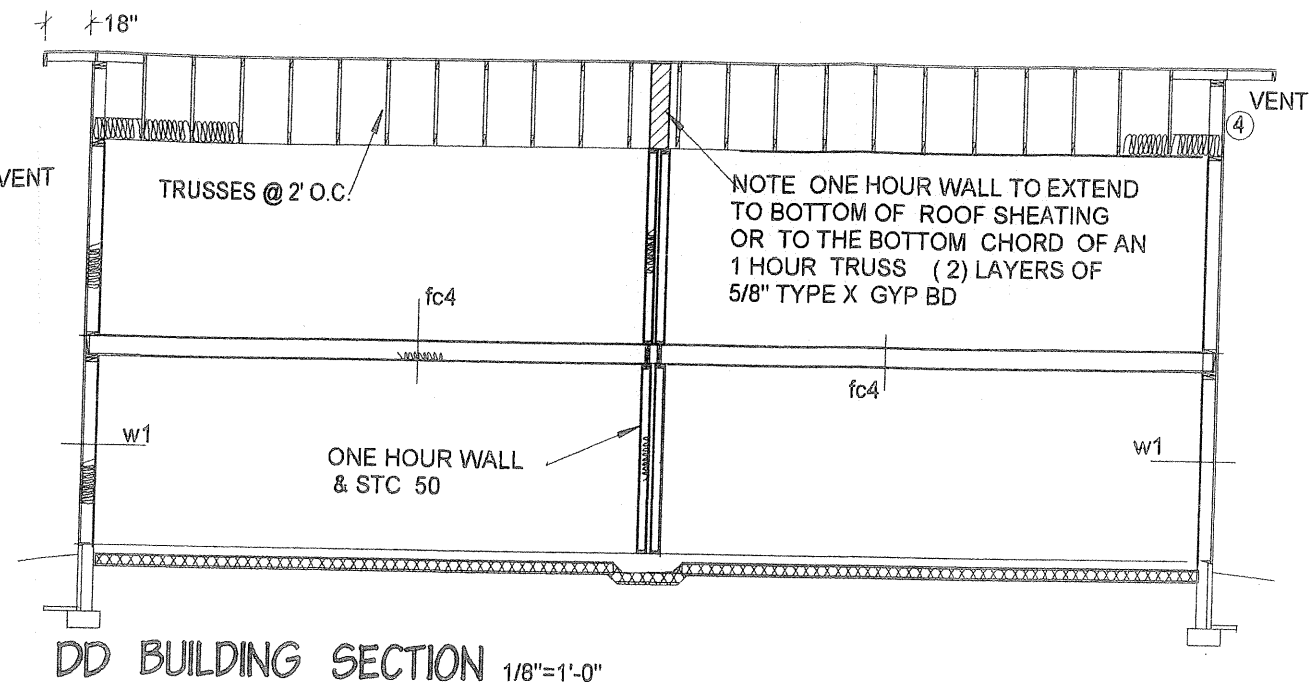
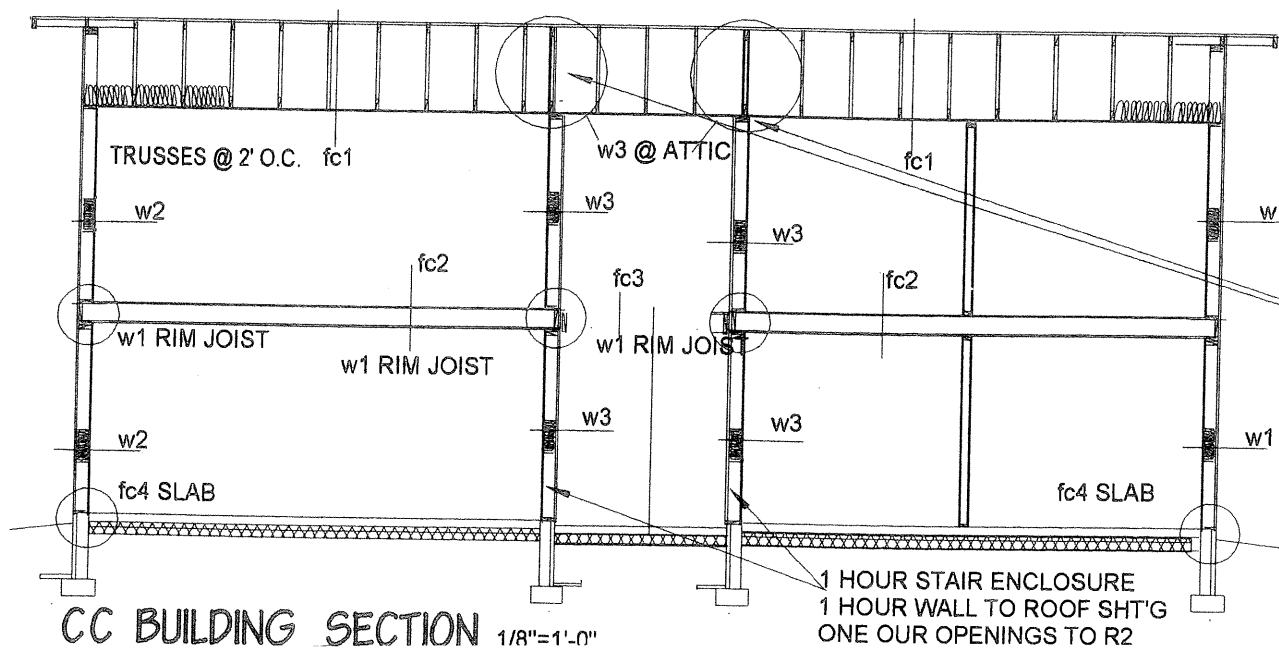
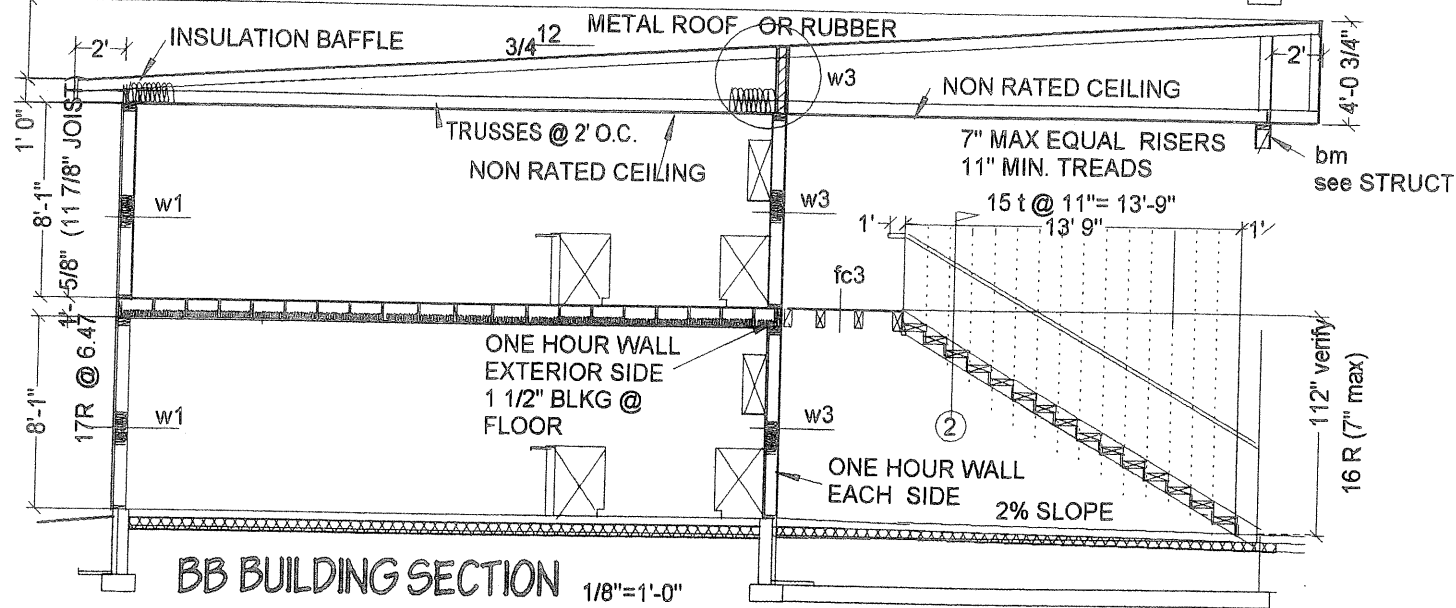
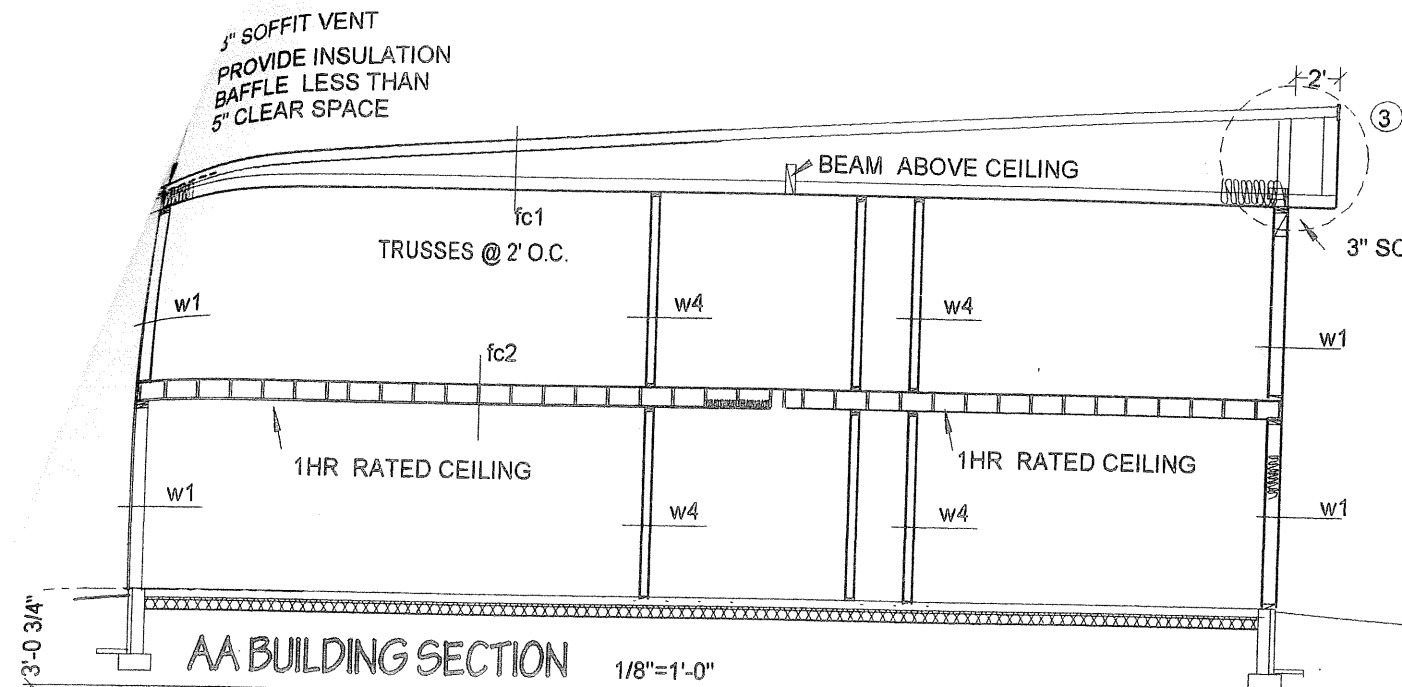
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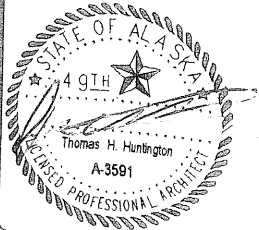
3 of 6



NOTE ONE HOUR WALL TO EXTEND
TO BOTTOM OF ROOF SHEATING
OR TO THE BOTTOM CHORD OF AN
1 HOUR TRUSS (2) LAYERS OF
5/8" TYPE X GYP BD

ABC

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TRAFFIC IMPACT ANALYSIS

ISLAND HILLS CONDOMINIUM BUILD OUT

Juneau, Alaska

USKH

SHARED VISION. UNIFIED APPROACH.

July 2013

Prepared for:
Coogan General, LLC
PO Box 34499
Juneau, Alaska 99803

Prepared by:
USKH Inc.
3031 Clinton Drive
Juneau, Alaska 99801
Phone (907) 790-2901



USKH WO# 1236402



SUMMARY

This Traffic Impact Analysis (TIA) estimates the traffic and transportation impacts expected due to the proposed build out of the Island Hills Condominium project in Juneau, Alaska. The proposed project will add 56 condominiums to the 4 that exist on the site northwest of Pioneer Avenue and Cordova Street. Currently, 24 units are under construction and 32 more units are planned for the site.

In accordance with CBJ code 49.40, article 3, the study area for this TIA extends to roads and intersections where the project would increase traffic volumes by 5 percent or more. This included Cordova Street and its intersections with Foster Avenue, Nowell Avenue, and Douglas Highway. Both AM and PM peak hour traffic was analyzed.

CBJ requires mitigation for developments where level of service (LOS) will drop below D by the build out year. The results of this analysis indicate that delay and level of service for the three intersections and site driveway will remain below CBJ mitigation threshold levels. As such, no mitigation has been recommended.



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APPENDICES

Appendix A Traffic Count Data
Appendix B LOS Worksheets



ACRONYMS

ADT	average daily traffic
AHFC	Alaska Housing Finance Corporation
CBJ	City and Borough of Juneau
DOT&PF	Department of Transportation and Public Facilities
HCM	Highway Capacity Manual
ITE	Institute of Transportation Engineers
LOS	level of service
MEV	million entering vehicles
mph	miles per hour
TIA	traffic impact analysis
USKH	USKH Inc



1 INTRODUCTION

This report documents the traffic impact analysis (TIA) performed for the Island Hills Condominium build out proposed in Juneau, Alaska. The analysis identifies transportation impacts of the proposed development on roadways near the site and, if needed, recommends improvements to mitigate these impacts.

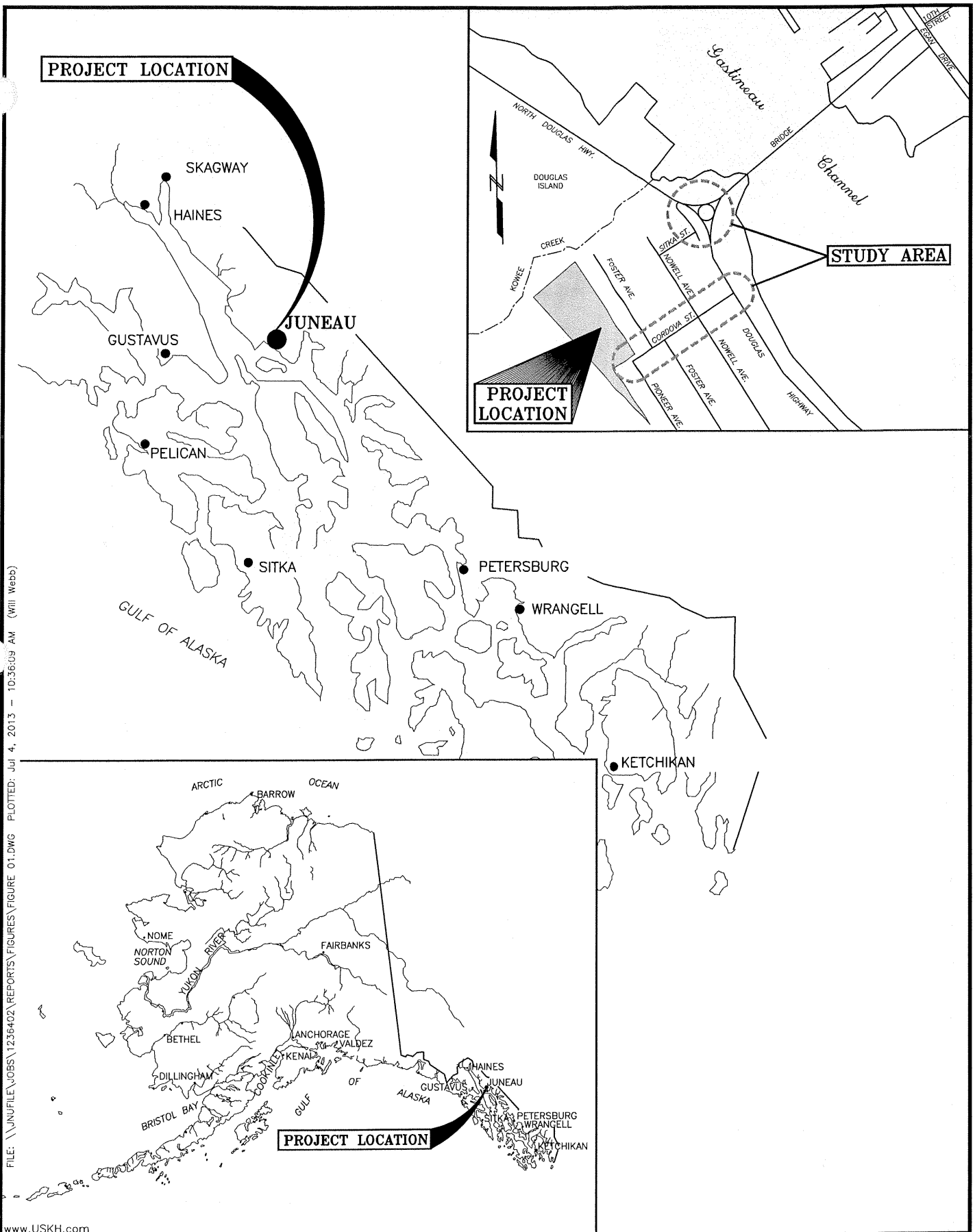
Since the proposed improvements have access off of City and Borough of Juneau (CBJ) streets, the TIA was performed to satisfy the requirements of CBJ ordinance 49.40, Article 3. The Department of Transportation and Public Facilities (DOT&PF) TIA requirements do not apply to this project because the project access is provided by CBJ streets and project trip generation is less than 100 cars per hour.

1.1 Project Description

The Island Hills project is northwest of the intersection of Pioneer Avenue and Cordova Street on Douglas Island in the CBJ. The site is approximately ¼ mile southwest of the Douglas Roundabout. The site is currently occupied by a 4 unit condominium building. This project proposes to construct another 56 units on the site (24 of which are under construction), for a total of 60 condominium units. The project site is 5.26 acres and is currently zoned D-18. Parcels surrounding the project site include undeveloped tracts, an Alaska Housing Finance Corporation (AHFC) apartment complex, and single family homes.

Access to the project site is proposed via a single driveway off of Cordova Street. Construction is expected to commence immediately following CBJ approval and should be completed by 2015. Figure 1 shows the project area, and Figure 2 shows the proposed site plan.

FILE: \\UNIFILE\JOBS\1236402\REPORTS\FIGURES\FIGURE 01.DWG PLOTTED: Jul 4, 2013 - 10:36:09 AM (Will Webb)



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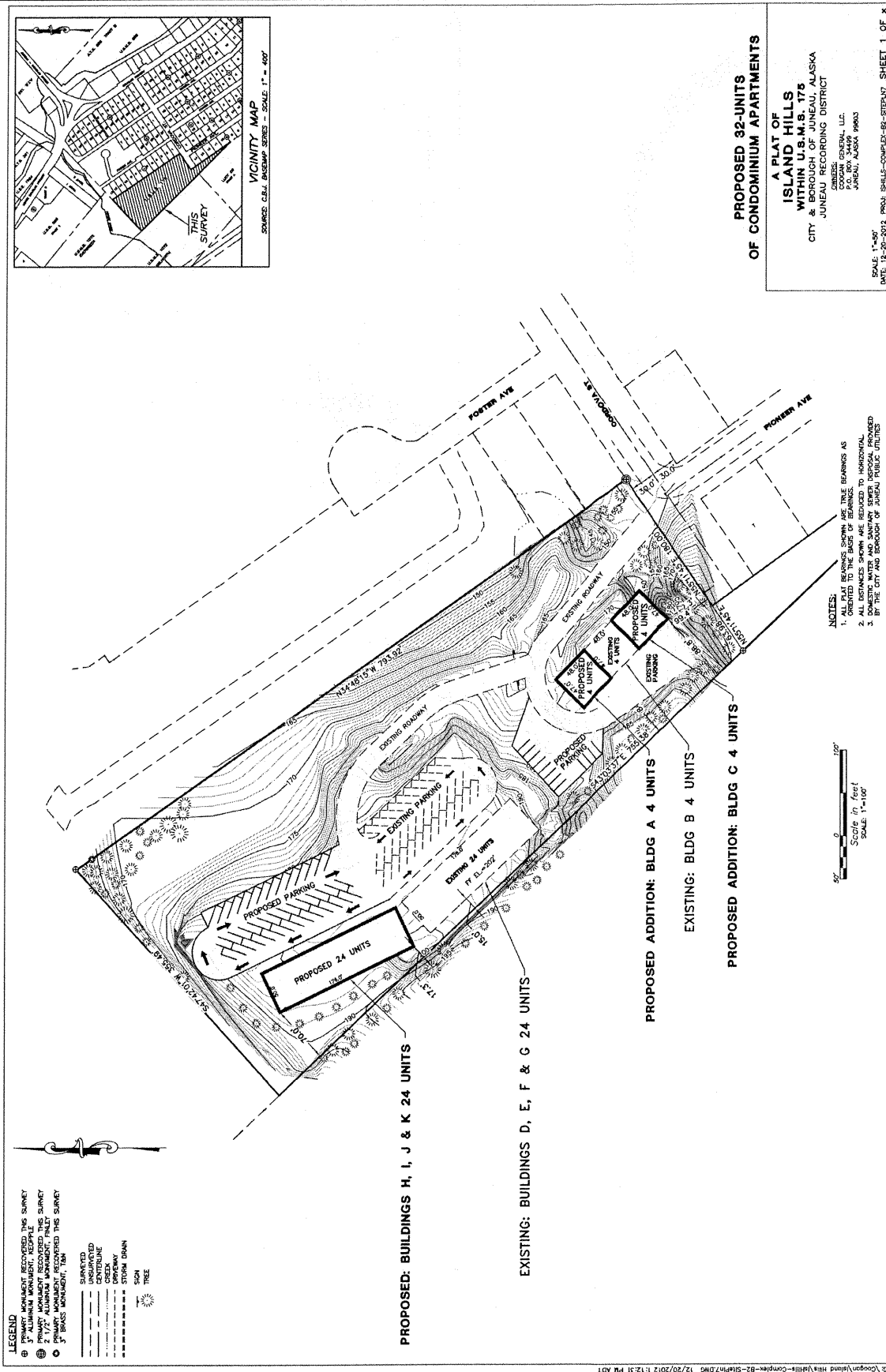
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VICINITY AND LOCATION MAP
 Island Hills Condominium Build Out
 Traffic Impact Analysis
 Coogan General, LLC
 Juneau, Alaska

Date July 2013
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Figure

1



1.2 Analysis Scope/Methodology

The purpose of a TIA is to determine the traffic impacts of a proposed development and recommend improvements to mitigate these impacts, as needed. This section describes the analysis scope and methods used to evaluate traffic conditions for this project.

1.2.1 Scope

The scope and study area for this analysis were developed based on the requirements listed in CBJ ordinance 49.40, which requires a TIA to look at roads and intersections where the proposed development will increase traffic by 5 percent or more. Intersections meeting this criterion include the intersections of Cordova Street with Douglas Highway, Nowell Avenue, and Foster Avenue. The roundabout at Douglas Highway/Douglas Bridge was included in the data collection effort since that intersection has been of concern in previous studies for this project, but the volume of project traffic approaching the roundabout did not warrant it be included in the analysis.

The time periods considered for analysis correspond to the morning and afternoon rush hours, since this is when traffic congestion is the worst on area roadways.

1.2.2 Intersection Operations

Standard local and regional TIA practices gauge the function and capacity of road networks by examining intersection operations. Intersection operations and capacity are typically more sensitive to traffic volume increases than roadway sections between intersections. This is due to the effect of conflicting turning movements on traffic flow at intersections. In most cases, adequate roadway function can be maintained if intersections function adequately.

Traffic conditions were evaluated for this TIA based on the LOS methodologies of the *Highway Capacity Manual* (Transportation Research Board, 2010). The *Highway Capacity Manual* (HCM) provides a nationally recognized and locally accepted method of measuring traffic flow and congestion at intersections. Criteria range from LOS A, indicating free-flow conditions with minimal vehicle delays, to LOS F, indicating congestion with significant vehicle delays.

LOS for stop controlled and roundabout intersections is a function of the average vehicle delay experienced by a particular approach or approach movement during a peak hour. Typically, the approach or movement experiencing the worst LOS is reported for the entire intersection. Table 1 outlines the LOS criteria for unsignalized intersections.

Table 1 – LOS Criteria

LOS	Average Vehicle Delay (sec/veh)	General Description
A	≤10	Free Flow
B	>10 - 15	Stable Flow (slight delays)
C	>15 - 25	Stable flow (acceptable delays)
D	>25 - 35	Approaching unstable flow (tolerable delay, occasionally wait through more than one signal cycle before proceeding)
E	>35 - 50	Unstable flow (intolerable delay)
F	>50	Forced flow (jammed)
Source: Highway Capacity Manual (TRB, 2010)		

CBJ recognizes LOS D as the minimum acceptable condition for intersections. Mitigation improvements are generally required to be developed for intersections that are pushed below this threshold by development traffic.

LOS calculations were performed using Synchro Version 8 (Trafficware, 2013). This software tool is based on the methodologies of HCM 2010.

2 EXISTING CONDITIONS

This section describes the existing condition of the road network in the project area. Traffic volumes listed are from the DOT&PF Average Daily Traffic (ADT) maps from reflecting 2011 volumes. These are the most recent ADT volumes available.

2.1 Road Network

Existing site area roads are as follows:

- **Douglas Highway** is an urban collector that extends south from the Douglas Roundabout with two 12-foot travel lanes, a 6-foot shoulder on the southbound side, and a 10-foot parking lane, curb and gutter, and sidewalk on the northbound side. The posted speed is 30 miles per hour (mph) in the project area. DOT&PF counts indicate ADT of 12,220 on Douglas Highway north of Cordova Street and 8,076 south of Cordova Street. The highway is maintained by DOT&PF.
- **North Douglas Highway** is an urban collector that extends north from the Douglas Roundabout. The highway has a cross section of two 12-foot travel lanes with 6-foot shoulders. The posted speed is 30 mph north of the roundabout for about 500 feet, then increases to 45 mph. About 5,354 ADT use the North Douglas Highway and the facility is maintained by DOT&PF.
- **Douglas Bridge** is the only crossing over Gastineau Channel between Douglas Island and Juneau. The bridge is classified as an urban minor arterial and has two, 12-foot travel lanes that carry about 10,482 ADT. The posted speed is 30 mph. Curb and sidewalk are located on the east side of the bridge. The bridge is maintained by the DOT&PF.
- **Cordova Street** is an urban collector maintained by the CBJ. The roadway has two 11-foot travel lanes with an additional turning lane at the intersection. The posted speed is 20 mph. Cordova Street serves as the main access to residential neighborhoods of about 160 homes dozens of apartments. Cordova Street has an ADT of 2,620

Existing project area intersections are as follows:

- **Douglas Roundabout** is a 3-leg, single lane roundabout connecting North Douglas Highway, Douglas Highway, and the Douglas Bridge. A right turn bypass lane exists for traffic going from the Douglas Bridge to the North Douglas Highway. Pedestrian crossings exist on all three legs.
- **Cordova Street/Douglas Highway** is a T intersection, with stop controls on the Cordova Street approach. There are no auxiliary lanes on Douglas Highway, and Cordova Street has right and left turn lanes. A marked crosswalk with pedestrian activated in-pavement lights exists on the north Douglas Highway leg of the intersection.

In addition to these main intersections, Cordova Street intersects with Nowell Avenue and Foster Avenue. These are local road intersections with stop controls on the Nowell Avenue and Foster Avenue approaches. No auxiliary lanes exist at these intersections. Both are 4 leg intersections, although the Foster Avenue approaches are offset from each other.



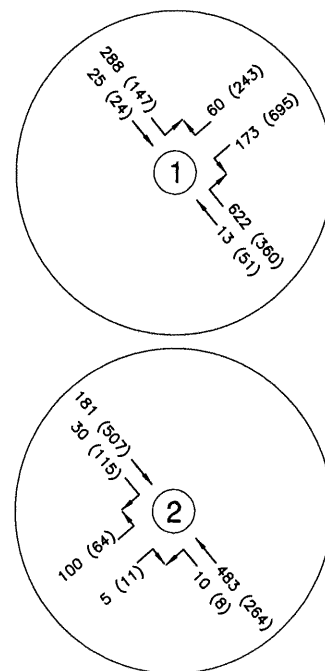
2.2 Traffic Volumes

The most recent DOT&PF turning movement data for the project intersections was collected in 2004 for the Cordova Street/Douglas Highway intersection and 2008 for the Douglas Roundabout. CBJ staff required new data be collected due to the age of the existing available data. Using the older DOT&PF data, we knew the peak periods were from 7 to 9 AM and 4 to 6 PM. USKH collected turning movement data during these time periods on July 19-21, 2011. The resulting AM and PM peak hour traffic volumes are shown in Figure 3. Note that traffic volumes were not collected on the local roads (Nowell Avenue, Foster Avenue). Since the volumes on Cordova Street are relatively low, it was our judgment that impacts to traffic on these roads would be minimal and would not justify the data collection effort.

Two years have passed since the traffic data was collected for this site. Over the past decade or so there has been little to now traffic growth on Douglas Highway, and we expect that trend to have continued over the past two years. However, we have adjusted the 2011 data by 0.5-percent per year to account for any growth that may have occurred. This growth factor is consistent with the growth factor DOT&PF uses for Juneau area planning purposes. Figure 3 shows the estimated existing 2013 turning movement data based on the turning movement counts USKH conducted in July 2011.

The traffic operations on these roads is discussed in more detail in Section 4.4.

FILE: \\JUNFILE\JOBS\1236402\REPORTS\FIGURES\FIGURE 03.DWG PLOTTED: Jul 4, 2013 - 10:29:08 AM (Will Webb)



AM (PM)

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2013 PEAK HOUR TURNING MOVEMENTS
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 Traffic Impact Analysis
 Coogan General, LLC
 Juneau, Alaska

Date July 2013
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Figure

3

3 PROJECT TRAFFIC

3.1 Trip Generation

Trip generation was determined for the proposed Island Hills condominium development using the Institute of Transportation Engineers (ITE) *Trip Generation* (8th Edition, 2008). *Trip Generation* is a nationally recognized resource for estimating trip generation for residential, commercial, and industrial developments. Trip generation rates are determined based on data collected from similar development projects located throughout the United States.

Trip generation for the proposed condominium development is based on ITE Land Use 230 – Residential Condominium/Townhouse. The manual describes these as “ownership units that have at least one other owned unit within the same building structure.” The manual provides rates that forecast trip generation based on the proposed number of dwelling units. Table 2 provides a summary of the project trip generation for the typical weekday, AM peak hour, and PM peak hour.

Table 2 – Trip Generation

Land Use	Units	Weekday	AM Peak Hour		PM Peak Hour	
			In	Out	In	Out
230 – Residential Condominium/Townhouse	56	325	4	21	19	10
Source:ITE Trip Generation, 8 th Edition						

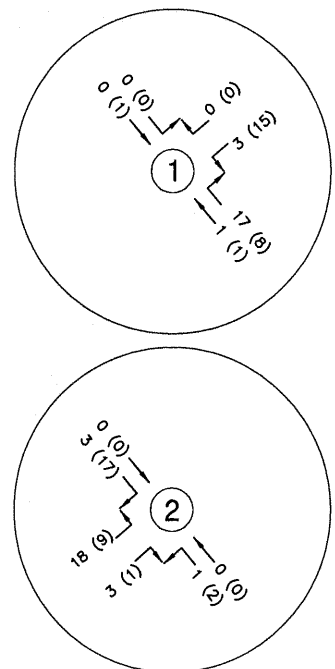
3.2 Trip Distribution

Trip distribution and assignment assumptions were developed based on the travel trends and characteristics evident through a review of the AM and PM peak hour traffic counts. A screen line was applied around the study area to cross Douglas Highway, North Douglas Highway, and the Douglas Bridge, as these constitute the primary approach routes to the project site. Peak hour volumes were then compared to estimate likely distribution patterns for site-generated traffic.

The existing traffic counts indicate that traffic arrival and departure patterns are similar for the AM and PM peak hours, but the volumes are reversed. That is to say, each approach direction provides a similar proportion of the entering or exiting volume. It works out to approximately 13 percent of traffic going to/from Douglas, 7 percent going to/from North Douglas, and 80 percent going to/from the Douglas Bridge. Peak hour trips from the proposed development were then assigned to the traffic network based on these distribution patterns, as shown in Figure 4.

When comparing the existing traffic volumes from Figure 3 with the traffic projected from this development shown in Figure 4, it becomes evident that the new traffic volumes are very low compared to existing traffic at the Douglas Roundabout. Since the proposed development traffic is less than 5 percent of the existing traffic on each approach to the roundabout, the impacts to that intersection fall below CBJ analysis requirements and it has been dropped from further discussion.

FILE: \\JNFILE\JOBS\1236402\REPORTS\FIGURES\FIGURE 03.DWG PLOTTED: Jul 4, 2013 - 10:24 AM (Will Webb)



AM (PM)

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PEAK HOUR DEVELOPMENT TRAFFIC

Island Hills Condominium Build Out

Traffic Impact Analysis

Coogan General, LLC
Juneau, Alaska

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Figure

4

4 TRAFFIC OPERATIONS

Traffic operations are defined by the LOS criteria defined previously. The LOS summary sheets are provided in Appendix B

4.1 Existing Traffic Operations

Existing traffic operations were quantified as a means for measuring/gauging forecast traffic operations. Evaluations were conducted based upon geometries (i.e. number of lanes, turn bay locations, etc.) and control type. Table 3 provides a summary of existing LOS at the study intersections for both the AM and PM peak hours.

Table 3 – Existing 2013 LOS

Location	LOS	Delay (seconds/vehicle)	Approach
AM Peak Hour			
Douglas Hwy/Cordova St	C	21	Cordova St
PM Peak Hour			
Douglas Hwy/Cordova St	C	20	Cordova St

The Douglas Highway/Cordova Street intersection operates acceptably during both the AM and PM peak hours.

4.2 Future Traffic Operations – Without Project

CBJ code requires an analysis of traffic operations when the project is fully developed. In this case, that is expected to occur in 2015. As mentioned previously, traffic growth in Juneau has traditionally been very slow, and in the past few years has even declined in some areas. The DOT&PF has recently been assuming 0.5% per year traffic growth in the Juneau area as a compromise growth rate that accounts for some growth while not burdening projects with unrealistic traffic projections. Table 4 provides a summary of LOS at the Douglas Hwy/Cordova Street intersection with projected 2015 traffic volumes.

Table 4– 2015 Without-Project LOS

Location	LOS	Delay (seconds/vehicle)	Approach
AM Peak Hour			
Douglas Hwy/Cordova St	C	21	Cordova St
PM Peak Hour			
Douglas Hwy/Cordova St	C	20	Cordova St

4.3 Future Traffic Operations – With Project

Table 5 provides a summary of traffic operations after adding traffic from the proposed Island Hills Condominium project to the projected 2015 traffic volumes.

Table 5– 2015 With-Project LOS

Location	LOS	Delay (seconds/vehicle)	Approach
AM Peak Hour			
Douglas Hwy/Cordova St	C	23	Cordova St
PM Peak Hour			
Douglas Hwy/Cordova St	C	21	Cordova St

As shown, the Cordova Street/Douglas Highway intersection is projected to operate at LOS C during both the AM and PM peak hours, which meets CBJ criteria.

4.4 Driveways and Side Streets

Data was not collected to analyze operations at the project driveway or at side streets approaching Cordova Street due to the relatively low volume of traffic on Cordova Street. However, operations at these locations are important, so we have considered them as discussed below.

At the site driveway, existing peak hour traffic should be composed of traffic generated by the 75 or so existing single family homes along Pioneer Avenue and in the Blueberry Hills development. *Trip Generation* indicates that would result in 56 trips in the AM peak hour and 76 trips in the PM peak hour. This is approximately a third of the total volume of traffic we counted at the Cordova Street/Douglas Highway intersection. Since just over half the homes and all of the apartments are below the site driveway, this may be a reasonable estimate. However, since we did not collect data at the driveway location, we have made a conservative analysis by assuming half of the traffic observed at the Cordova Street/Douglas Highway intersection originates above the project site. The anticipated LOS is shown below.

Table 6– 2015 Site Driveway LOS

Location	LOS	Delay (seconds/vehicle)	Approach
AM Peak Hour			
Cordova St/Site Driveway	A	9	Site Driveway
PM Peak Hour			
Cordova St/Site Driveway	A	9	Site Driveway

As you can see, the site driveway will operate well within CBJ standards, even with our conservative volume estimates.

For Nowell Avenue, we made a similar conservative analysis. We assumed all of the traffic counted on Cordova Street at Douglas Highway would continue past Nowell Street on Cordova Street. For the Nowell Street approaches, we assumed that 25 percent of the traffic from the Cordova Street/Douglas Highway intersection would access Nowell Street to the north and south. That is to say, our assumed volumes at the Cordova Street/Nowell Street intersections were 150% of the actual observed volumes at Cordova Street/Douglas Highway. The resulting LOS are shown below.



Table 7- 2015 Nowell Avenue LOS

Location	LOS	Delay (seconds/vehicle)	Approach
AM Peak Hour			
Cordova St/Nowell Avenue	B	11	Nowell Avenue
PM Peak Hour			
Cordova St/Nowell Avenue	B	11	Nowell Avenue

As you can see, the Nowell Avenue/Cordova Street intersection will operate within CBJ standards, even with our conservative volume estimates. We did not do a similar analysis for Foster Avenue since traffic there will be even lower than at Nowell Avenue.



5 NON-MOTORIZED TRANSPORTATION

Pedestrians in the area served by a sidewalk on the north side of Cordova Street, a continuous sidewalk on the east side of Douglas Highway, and a sidewalk north of Cordova Street on the west side of Douglas Highway. Cyclists can use the shoulders along Douglas Highway. On Cordova Street, the posted speed is 20 mph, so cyclists can safely ride with traffic.

Sidewalks will be provided within the site to provide connectivity to the existing sidewalk along Cordova Street.

The 2005-2009 American Community Survey reports that 9 percent of people walk to work in Juneau. Assuming all peak hour trips are commute trips, the new development would add 2 walkers during the AM peak hour and 3 walkers in the PM peak hour. These volumes are not high enough to impact the capacity of existing pedestrian facilities.

The Juneau transit system, Capital Transit, provides fixed route buses throughout the area. Route 5 includes a stop at the AHFC housing complex, within 2 blocks of this proposed development. Route 5 operates on 30 minute headways 7 days a week. Existing weekday boardings and alightings for the stop at the AHFC complex are 60 and 71 respectively. The American Community Survey reports 5.7 percent of commute trips are by transit, which means the new development would add about 1 person in the AM peak hour and 2 in the PM peak hour. We do not believe these added volumes are not high enough to impact the quality of transit service in the area.



6 SAFETY ANALYSIS

The three year crash history for the project area was requested from DOT&PF. The most recent three years' worth of data was for 2008-2010. The data available included the Cordova Street/Douglas Highway intersection. Overall there were 7 collisions at this intersection over the 3 year time frame, 4 of which were rear-end, 2 were angle crashes, and 1 involved a bicyclist.

To determine if an excessive crash issue exists, it is useful to compare the crash rate at this location to the statewide crash rates for similar locations. The first step is to normalize the data to account for exposure. That is to say, we divide the number of crashes by the total volume of traffic over the time period to determine the crash rate. If there is more traffic, it is reasonable to expect to see more collisions, so we use the rate to compare different locations. The Cordova Street/Douglas Highway intersection had 12.2 million entering vehicles (MEV) for the 3 year time period, based on AADT volumes. That results in a crash rate of 0.57 crashes per MEV. In comparison, the statewide average for a T-intersection with stop control on one approach is 0.48, according to the 2013 *Alaska HSIP Handbook*. However, when calculating for statistical variation in the data, as outlined in the *Alaska HSIP Handbook*, we find that the observed crash rate is so close to the statewide average that we cannot conclusively say that this intersection has an above average crash rate. That is to say, the difference between the observed crash rate and the statewide average could be due to random variations in the data. In addition, the low number of crashes does not reveal a distinct crash pattern that might be a target for correction.

Since the Island Hills development is not significantly changing traffic patterns at this intersection, the development traffic should not have an effect on the crash rate.



7 CONCLUSIONS

Based on our analyses, the proposed build out of the Island Hills Condominium project will not have significant impacts to traffic in the project area. LOS at area intersections will not be degraded by the additional traffic to such a degree that mitigation will be required.





Appendix A Traffic Count Data

Project: 1236401

North/South: Douglas Highway
East/West: Bridge

Date: 07/20/2011

Field Person: Ken Matson/MaryAnn Stuart

Notes:

V - Vehicles

B - Bus

T - Truck

PHF - Peak Hour Factor

Highlighting indicates peak hour

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Notes:

Highlighting indicates peak hour

[illegible]



Appendix B

LOS Worksheets

Intersection	
Intersection Delay, s/veh	2.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	100	5	10	483	181	30
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	160	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	118	6	12	568	213	35

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	823	231	248	0	0
Stage 1	231	-	-	-	-
Stage 2	592	-	-	-	-
Follow-up Headway	3.518	3.318	2.218	-	-
Pot Capacity-1 Maneuver	343	808	1318	-	-
Stage 1	807	-	-	-	-
Stage 2	553	-	-	-	-
Time blocked-Platoon, %				-	-
Mov Capacity-1 Maneuver	339	808	1318	-	-
Mov Capacity-2 Maneuver	339	-	-	-	-
Stage 1	807	-	-	-	-
Stage 2	546	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	20.6	0.2	0
HCM LOS	C		

Minor Lane / Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1318	-	339	808	-	-
HCM Lane V/C Ratio	0.009	-	0.347	0.007	-	-
HCM Control Delay (s)	7.756	0	21.2	9.5	-	-
HCM Lane LOS	A	A	C	A		
HCM 95th %tile Q(veh)	0.027	-	1.512	0.022	-	-

Notes	
~ : Volume Exceeds Capacity; \$: Delay Exceeds 300 Seconds; Error : Computation Not Defined	

Intersection						
Intersection Delay, s/veh	1.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	64	11	8	264	507	115
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	160	-	-	-	-
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	70	12	9	287	551	125
Major/Minor	Minor2	Major1			Major2	
Conflicting Flow All	918	614	676	0	-	0
Stage 1	614	-	-	-	-	-
Stage 2	304	-	-	-	-	-
Follow-up Headway	3.518	3.318	2.218	-	-	-
Pot Capacity-1 Maneuver	302	492	915	-	-	-
Stage 1	540	-	-	-	-	-
Stage 2	748	-	-	-	-	-
Time blocked-Platoon, %	-	-	-	-	-	-
Mov Capacity-1 Maneuver	298	492	915	-	-	-
Mov Capacity-2 Maneuver	298	-	-	-	-	-
Stage 1	540	-	-	-	-	-
Stage 2	739	-	-	-	-	-
Approach	EB	NB			SB	
HCM Control Delay, s	19.5	0.3			0	
HCM LOS	C					
Minor Lane / Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	915	-	298	492	-	-
HCM Lane V/C Ratio	0.01	-	0.233	0.024	-	-
HCM Control Delay (s)	8.972	0	20.7	12.5	-	-
HCM Lane LOS	A	A	C	B		
HCM 95th %tile Q(veh)	0.029	-	0.886	0.075	-	-
Notes						
~ : Volume Exceeds Capacity; \$: Delay Exceeds 300 Seconds; Error : Computation Not Defined						

Intersection						
Intersection Delay, s/veh		2.8				
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	101	5	10	488	183	31
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	160	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	119	6	12	574	215	36
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	832	234	252	0	-	0
Stage 1	234	-	-	-	-	-
Stage 2	598	-	-	-	-	-
Follow-up Headway	3.518	3.318	2.218	-	-	-
Pot Capacity-1 Maneuver	339	805	1313	-	-	-
Stage 1	805	-	-	-	-	-
Stage 2	549	-	-	-	-	-
Time blocked-Platoon, %	-	-	-	-	-	-
Mov Capacity-1 Maneuver	335	805	1313	-	-	-
Mov Capacity-2 Maneuver	335	-	-	-	-	-
Stage 1	805	-	-	-	-	-
Stage 2	542	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	20.9	0.2		0		
HCM LOS	C					
Minor Lane / Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1313	-	335	805	-	-
HCM Lane V/C Ratio	0.009	-	0.355	0.007	-	-
HCM Control Delay (s)	7.767	0	21.5	9.5	-	-
HCM Lane LOS	A	A	C	A	-	-
HCM 95th %tile Q(veh)	0.027	-	1.559	0.022	-	-
Notes						
~ : Volume Exceeds Capacity; \$: Delay Exceeds 300 Seconds; Error : Computation Not Defined						

Intersection						
Intersection Delay, s/veh	1.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	64	11	8	266	512	116
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	160	-	-	-	-
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	70	12	9	289	557	126
Major/Minor	Minor2	Major1			Major2	
Conflicting Flow All	927	620	683	0	-	0
Stage 1	620	-	-	-	-	-
Stage 2	307	-	-	-	-	-
Follow-up Headway	3.518	3.318	2.218	-	-	-
Pot Capacity-1 Maneuver	298	488	910	-	-	-
Stage 1	536	-	-	-	-	-
Stage 2	746	-	-	-	-	-
Time blocked-Platoon, %				-	-	-
Mov Capacity-1 Maneuver	294	488	910	-	-	-
Mov Capacity-2 Maneuver	294	-	-	-	-	-
Stage 1	536	-	-	-	-	-
Stage 2	737	-	-	-	-	-
Approach	EB	NB			SB	
HCM Control Delay, s	19.8	0.3			0	
HCM LOS	C					
Minor Lane / Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	910	-	294	488	-	-
HCM Lane V/C Ratio	0.01	-	0.237	0.025	-	-
HCM Control Delay (s)	8.994	0	21	12.6	-	-
HCM Lane LOS	A	A	C	B		
HCM 95th %tile Q(veh)	0.029	-	0.901	0.075	-	-
Notes						
~ : Volume Exceeds Capacity; \$: Delay Exceeds 300 Seconds; Error : Computation Not Defined						

Intersection	
Intersection Delay, s/veh	3.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	119	8	11	488	183	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	160	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	140	9	13	574	215	40

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	835	235	255	0	0
Stage 1	235	-	-	-	-
Stage 2	600	-	-	-	-
Follow-up Headway	3.518	3.318	2.218	-	-
Pot Capacity-1 Maneuver	338	804	1310	-	-
Stage 1	804	-	-	-	-
Stage 2	548	-	-	-	-
Time blocked-Platoon, %				-	-
Mov Capacity-1 Maneuver	333	804	1310	-	-
Mov Capacity-2 Maneuver	333	-	-	-	-
Stage 1	804	-	-	-	-
Stage 2	540	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	22.5	0.2	0
HCM LOS	C		

Minor Lane / Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1310	-	333	804	-	-
HCM Lane V/C Ratio	0.01	-	0.42	0.012	-	-
HCM Control Delay (s)	7.776	0	23.4	9.5	-	-
HCM Lane LOS	A	A	C	A		
HCM 95th %tile Q(veh)	0.03	-	2.009	0.036	-	-

Notes	
~ : Volume Exceeds Capacity; \$: Delay Exceeds 300 Seconds; Error : Computation Not Defined	

Intersection						
Intersection Delay, s/veh	1.9					
Movement	SEL	SER	NEL	NET	SWT	SWR
Vol, veh/h	21	0	0	53	20	4
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	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	25	0	0	62	24	5
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	88	26	28	0	-	0
Stage 1	26	-	-	-	-	-
Stage 2	62	-	-	-	-	-
Follow-up Headway	3.518	3.318	2.218	-	-	-
Pot Capacity-1 Maneuver	913	1050	1585	-	-	-
Stage 1	997	-	-	-	-	-
Stage 2	961	-	-	-	-	-
Time blocked-Platoon, %				-	-	-
Mov Capacity-1 Maneuver	913	1050	1585	-	-	-
Mov Capacity-2 Maneuver	913	-	-	-	-	-
Stage 1	997	-	-	-	-	-
Stage 2	961	-	-	-	-	-
Approach	SE	NE		SW		
HCM Control Delay, s	9.1	0		0		
HCM LOS	A					
Minor Lane / Major Mvmt	NEL	NET	SELn1	SWT	SWR	
Capacity (veh/h)	1585	-	913	-	-	
HCM Lane V/C Ratio	-	-	0.027	-	-	
HCM Control Delay (s)	0	-	9.1	-	-	
HCM Lane LOS	A		A			
HCM 95th %tile Q(veh)	0	-	0.083	-	-	
Notes						
~ : Volume Exceeds Capacity; \$: Delay Exceeds 300 Seconds; Error : Computation Not Defined						

Intersection												
Intersection Delay, s/veh	2.5											
Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Vol, veh/h	0	0	27	27	0	0	0	127	0	10	45	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	32	32	0	0	0	149	0	12	53	12
Major/Minor	Minor1		Minor2		Major1		Major2					
Conflicting Flow All	231	237	149	247	231	59	65	0	0	149	0	0
Stage 1	149	149	-	82	82	-	-	-	-	-	-	-
Stage 2	82	88	-	165	149	-	-	-	-	-	-	-
Follow-up Headway	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Capacity-1 Maneuver	724	664	898	707	669	1007	1537	-	-	1432	-	-
Stage 1	854	774	-	926	827	-	-	-	-	-	-	-
Stage 2	926	822	-	837	774	-	-	-	-	-	-	-
Time blocked-Platoon, %								-	-		-	-
Mov Capacity-1 Maneuver	719	658	898	677	663	1007	1537	-	-	1432	-	-
Mov Capacity-2 Maneuver	719	658	-	677	663	-	-	-	-	-	-	-
Stage 1	854	774	-	926	820	-	-	-	-	-	-	-
Stage 2	918	815	-	807	774	-	-	-	-	-	-	-
Approach	NB		SB		NE		SW					
HCM Control Delay, s	9.2		10.6		0		1.2					
HCM LOS	A		B									
Minor Lane / Major Mvmt	NEL	NET	NER	NBLn1	SBLn1	SWL	SWT	SWR				
Capacity (veh/h)	1537	-	-	898	677	1432	-	-				
HCM Lane V/C Ratio	-	-	-	0.035	0.047	0.008	-	-				
HCM Control Delay (s)	0	-	-	9.2	10.6	7.535	0	-				
HCM Lane LOS	A			A	B	A	A					
HCM 95th %tile Q(veh)	0	-	-	0.11	0.147	0.025	-	-				
Notes												
~ : Volume Exceeds Capacity; \$: Delay Exceeds 300 Seconds; Error : Computation Not Defined												

Intersection						
Intersection Delay, s/veh	1.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	73	13	11	266	512	133
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	160	-	-	-	-
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	79	14	12	289	557	145
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	942	629	701	0	-	0
Stage 1	629	-	-	-	-	-
Stage 2	313	-	-	-	-	-
Follow-up Headway	3.518	3.318	2.218	-	-	-
Pot Capacity-1 Maneuver	292	482	896	-	-	-
Stage 1	531	-	-	-	-	-
Stage 2	741	-	-	-	-	-
Time blocked-Platoon, %	-	-	-	-	-	-
Mov Capacity-1 Maneuver	287	482	896	-	-	-
Mov Capacity-2 Maneuver	287	-	-	-	-	-
Stage 1	531	-	-	-	-	-
Stage 2	729	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	20.8	0.4		0		
HCM LOS	C					
Minor Lane / Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	896	-	287	482	-	-
HCM Lane V/C Ratio	0.013	-	0.276	0.029	-	-
HCM Control Delay (s)	9.072	0	22.3	12.7	-	-
HCM Lane LOS	A	A	C	B	-	-
HCM 95th %tile Q(veh)	0.041	-	1.1	0.09	-	-
Notes						
~ : Volume Exceeds Capacity; \$: Delay Exceeds 300 Seconds; Error : Computation Not Defined						

Intersection						
Intersection Delay, s/veh		0.7				
Movement	SEL	SER	NEL	NET	SWT	SWR
Vol, veh/h	10	0	0	38	62	19
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	11	0	0	41	67	21
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	119	78	88	0	-	0
Stage 1	78	-	-	-	-	-
Stage 2	41	-	-	-	-	-
Follow-up Headway	3.518	3.318	2.218	-	-	-
Pot Capacity-1 Maneuver	877	983	1508	-	-	-
Stage 1	945	-	-	-	-	-
Stage 2	981	-	-	-	-	-
Time blocked-Platoon, %				-	-	-
Mov Capacity-1 Maneuver	877	983	1508	-	-	-
Mov Capacity-2 Maneuver	877	-	-	-	-	-
Stage 1	945	-	-	-	-	-
Stage 2	981	-	-	-	-	-
Approach	SE	NE		SW		
HCM Control Delay, s	9.2	0		0		
HCM LOS	A					
Minor Lane / Major Mvmt	NEL	NET	SELn1	SWT	SWR	
Capacity (veh/h)	1508	-	877	-	-	
HCM Lane V/C Ratio	-	-	0.012	-	-	
HCM Control Delay (s)	0	-	9.2	-	-	
HCM Lane LOS	A	A				
HCM 95th %tile Q(veh)	0	-	0.038	-	-	
Notes						
~ : Volume Exceeds Capacity; \$: Delay Exceeds 300 Seconds; Error : Computation Not Defined						

Intersection												
Intersection Delay, s/veh	1.9											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Vol, veh/h	19	0	0	0	0	19	0	85	0	32	143	32
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	0	0	0	0	21	0	92	0	35	155	35

Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	345	334	173	334	352	92	190	0	0	92	0	0
Stage 1	242	242	-	92	92	-	-	-	-	-	-	-
Stage 2	103	92	-	242	260	-	-	-	-	-	-	-
Follow-up Headway	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Capacity-1 Maneuver	609	586	871	620	573	965	1384	-	-	1503	-	-
Stage 1	762	705	-	915	819	-	-	-	-	-	-	-
Stage 2	903	819	-	762	693	-	-	-	-	-	-	-
Time blocked-Platoon, %								-	-		-	-
Mov Capacity-1 Maneuver	584	571	871	608	558	965	1384	-	-	1503	-	-
Mov Capacity-2 Maneuver	584	571	-	608	558	-	-	-	-	-	-	-
Stage 1	762	687	-	915	819	-	-	-	-	-	-	-
Stage 2	884	819	-	742	675	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	11.4	8.8	0	1.2
HCM LOS	B	A		

Minor Lane / Major Mvmt	NEL	NET	NER	NWLn1	SELn1	SWL	SWT	SWR
Capacity (veh/h)	1384	-	-	965	584	1503	-	-
HCM Lane V/C Ratio	-	-	-	0.021	0.035	0.023	-	-
HCM Control Delay (s)	0	-	-	8.8	11.4	7.452	0	-
HCM Lane LOS	A			A	B	A	A	
HCM 95th %tile Q(veh)	0	-	-	0.066	0.11	0.071	-	-

Notes

~ : Volume Exceeds Capacity; \$: Delay Exceeds 300 Seconds; Error : Computation Not Defined

TLI

Teron Lighting

ARCHITECTURAL OUTDOOR

CADDY M



COMPACT FLUORESCENT & HID

PROJECT:

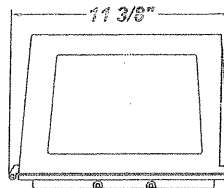
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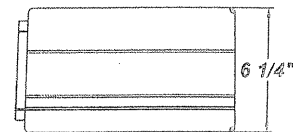
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FEATURES

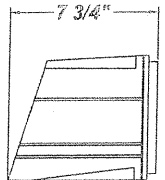
- Die-Cast Aluminum Housing w/ Textured Bronze Polyester Powder Coat Finish
- Clear Tempered Glass Lens
- Aluminum Hammered Reflectors
- Fully Gasketed
- Mounts Direct to Flat Surface w/Three #8 Wall Anchors (Not Included)
- Lamps Included
- Wet Location



BOTTOM VIEW



FRONT VIEW



SIDE VIEW

ORDERING INFORMATION

Example : (CDM50MH - 120H - TB)

Textured Bronze is Standard Finish

PRODUCT	SOURCE/WATTAGE	VOLTAGE	DIFFUSER	FINISH	OPTIONS
Caddy M	<p>CDM50MH - 50W MH CDM70MH - 70W MH</p> <p>CDM50 - 50W HPS CDM70 - 70W HPS</p> <p>CDM126X - (1) 26W TBX CDM132X - (1) 32W TBX CDM142X - (1) 42W TBX CDM213Q - (2) 13W QE CDM218X - (2) 18W TBX CDM226X - (2) 26W TBX</p>	<p>METAL HALIDE (MH)</p> <p>120H - MT HPF (Wired 120V) MTH - MT HPF (Wired 277V)</p> <p>HPS</p> <p>120V - 120V HPF 120H - MT HPF (Wired 120V) MTH - MT HPF (Wired 277V)</p> <p>(MT - Multi-Tap)</p> <p>FLUORESCENT (F)</p> <p>120E - Electronic 120V 277E - Electronic 277V</p>	Not Applicable	<p>SM - Matte Silver TB - Textured Black AC - Antique Copper AS - Antique Silver BT - Bronze Mist CP - Copper SN - Sand SW - Swedish Steel BZ - Textured Bronze TW - Textured White</p> <p>RAL Colors or Custom Match - Consult Factory</p>	<p>41K - 4100K Color Temp.* (Standard) 35K - 3500K Color Temp.* 27K - 2700K Color Temp.* F - Fused * (Electronic Wattages Only) EBR - Remote Mount Battery (Electronic Wattages Only) (Field Installed) **</p>

REPLACEMENT PARTS

PART NO.

Replacement Clear Tempered Glass Lens

37067

NOTES

*Electronic Only

**Emergency Battery Options

Initial light output in Emergency mode will last for a minimum of 90 minutes.

The following are suitable for indoor and damp locations.

Please refer to Bodine's specification sheet

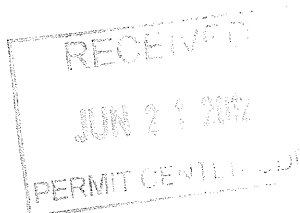
EBR:

Bodine's B94CG (Electronic) - Temperature Rating (Ambient) 32° F - 122° F

ARRA 2009



BUY AMERICA ACT



M-400A POWR/DOOR® LUMINAIRE WITH CUTOFF OPTICS



APPLICATIONS

- For street, highway and parking lot lighting

SPECIFICATION FEATURES

- Powr/Module ballast assembly
- Filtered optics
- Universal two or four-bolt slipfitter
- Standardized reflector
- "Dead back" tunnel type, FRP terminal board
- 2 in. pipe mounting only with MDCA
- Die-cast aluminum housing with electrocoat gray paint finish
- Adjustable mogul base socket (house side) – E39 standard
- ALGLAS® finish on reflector
- No-tool PE receptacle
- Plug-in ignitor available
- External paddle type stainless steel ball latch
- @/UL listed unit available—See Options
- True 90° cutoff—no light above 90° (meets RP8-2000 for full cutoff) with flat glass

ORDERING NUMBER LOGIC

MDCA	40	S	1	A	2	1	F	MC3	1	F
PRODUCT IDENT	WATTAGE	LIGHT SOURCE	VOLTAGE	BALLAST TYPE	PE FUNCTION	IGNITOR MOUNTING	LENS TYPE	IES DISTRIBUTION TYPE	FILTER	OPTIONS
XXXX	XX	X	X	X	X	X	X	XXX	X	XXX
MDCA = M-400A with Cutoff Optics 4-Bolt Slipfitter	10 = 100 15 = 150 (55V) 17 = 175 20 = 200 24 = 250/400	S = HPS M = MH C = Merc Standard: Lamp not included.	60Hz 0 = 120/208/ 240/277 Multivolt 1 = 120 2 = 208 3 = 240 4 = 277 5 = 480 7 = 120X240 8 = 240V Ballast 120V PE Receptacle not reconnectedable D = 347 F = 120X347 T = 220 W = 230 50Hz 6 = 220 R = 230 Y = 240 NOTE: Dual voltage connected for lower voltage only	See Ballast Selection Table A = Autoreg C = Merc-Reg H = HPF Reactor or Lag M = Mag-reg N = NPF Reactor or Lag P = CWI with Grounded Socket Shell	1 = None 2 = PE Receptacle NOTE: Receptacle connected same voltage as unit except as noted. Order PE Control separately.	1 = Non Plug-in/ None 2 = Plug-in base and Ignitor	A = Acrylic Clear Globe (250 watt Maximum) F = Flat Glass G = Shallow Glass Globe L = Polycarbonate Clear Globe (250 watt) HPS only	See Photometric Selection Table S = Short M = Medium C = Cutoff 1 = Type I 2 = Type II 3 = Type III	1 = Fiber gasket 2 = Charcoal with elastomer gasket	F = Fusing (Not available with multivolt or dual voltage) J = Line Surge Protector, Expulsion Type N = Meets ANSI C136.31 requirements for Bridge and Underpass Vibration U = UL Listed Glass Lens and (60Hz only)

PHOTOMETRIC SELECTION TABLE

CLEAR REFRACTORS All light sources are clear.

Wattage	Light Source	IES Distribution Type Photometric Curve Number 35-45xxxx							
		Flat Glass "F"				SAG Glass Globe "G"			Polycarbonate
		MC2	MC3	MC1	SC2	SC3	MC2	MC3	
150 (55V)	HPS	0386	0387	N/A	N/A	N/A	0547	0546	C/F
200-400	HPS	1001	1002	N/A	0101	0102	1003	1004	1045** (MC3)
175 & 250	MH	0343	0342	N/A	N/A	N/A	0544	0545	C/F
400	MH	452880*	452882*	0281	N/A	N/A	0280	N/A	N/A
400	Merc	N/A	N/A	N/A	N/A	N/A	0375	0376	N/A
400 (Coated)	Merc	N/A	N/A	N/A	0282	C/F	N/A	N/A	N/A

NOTE: N/A = Not Available C/F = Contact Factory

*Requires the use of ED-28 Lamp

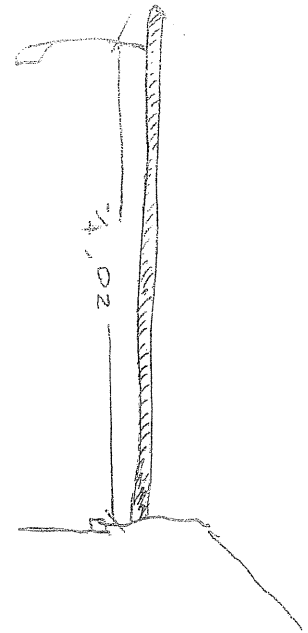
**250 watts maximum

GE Lighting Systems, Inc.

www.gelightingssystem.com

PARKING LOT LIGHTING LAYOUT

LOT 6A
BLOCK 1



TYPICAL LIGHT / POLE
CONFIGURATION

