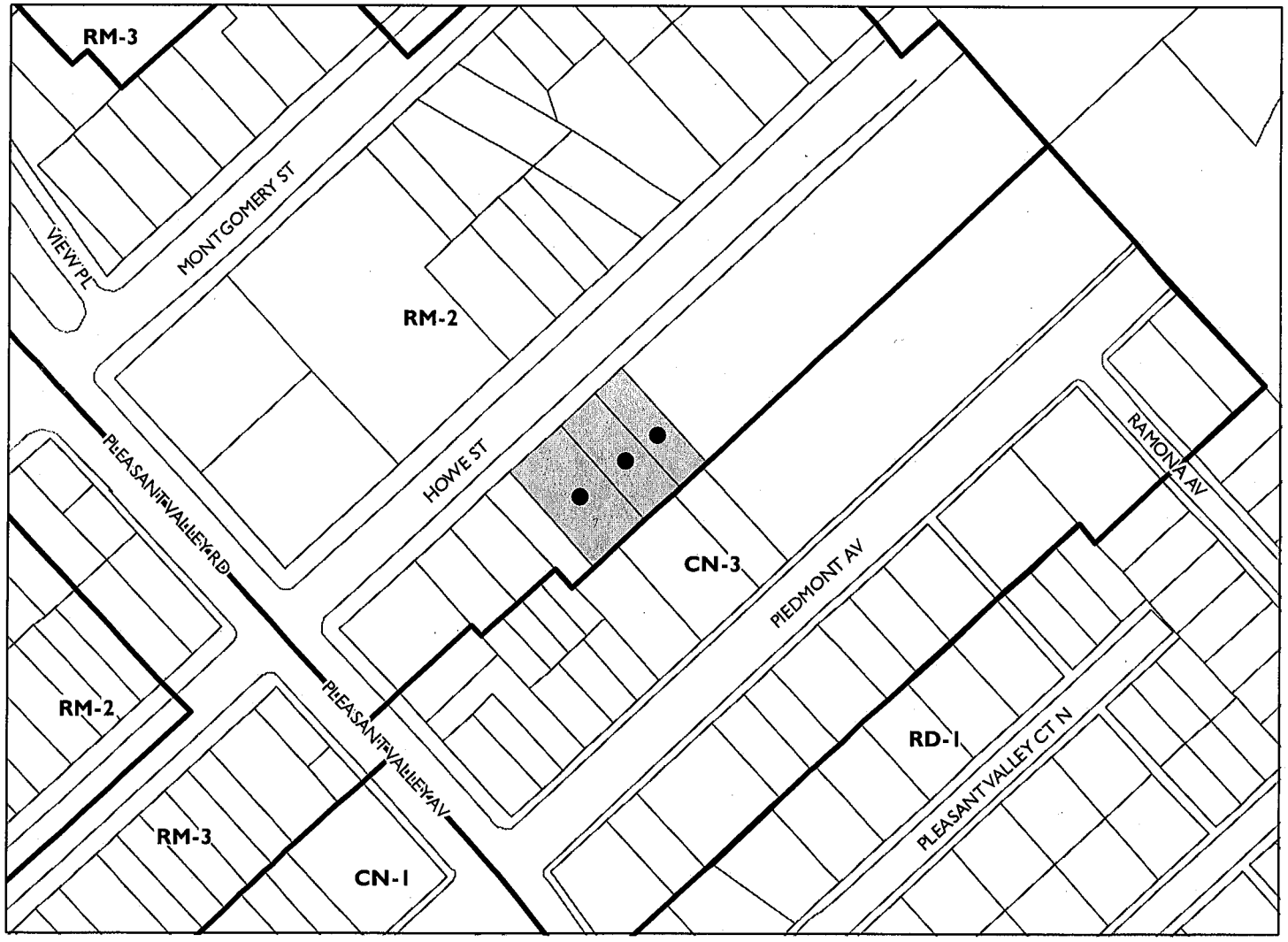
Location:	**4430 / 4440/ 4448 Howe Street**
Assessor's Parcel Number:	**013 -1128-018-00 / 013 -1128-019-00 / 013 -1128-020-00**
Proposal:	To subdivide a total of 18,750 square foot of parcels with three existing detached buildings and create mini-lot development with seven parcels. The project includes the demolition of one structure, renovation and remodel of two existing buildings and construction of five two-story residences (One unit per lot) with access provided through a shared access-facility. Each residence will contain one off-street parking space.
Contact Person:	Lisa Trujillo / Jarvis Architects
Phone Number:	(510) 654-675
Owner:	GC Carb LLC & 4430 Howe St. LLC
Planning Permits Required:	Major Conditional Use Permit for a project that results in 7 or more units in a RM zone (Sec. 17.134.020). Tentative Tract Map for a subdivision of one parcel into seven mini-lots (OMC Sec. 16.24.040); Minor Conditional Use Permit to create a seven (7) mini-lot development (OPC Sec. 17.134.050, 17.134.020 & 17.142.012); Minor Conditional Use Permit for Shared Access Facility (17.102.090 (B)). Regular Design Review for the construction of 6 new residential units (Sec. 17.136.050); and Minor Variance(s) to allow 100% of required open through private yards, balconies and decks (Sec.17.148.050).
General Plan:	Mixed Housing Type Residential
Zoning:	RM-2 Mixed Housing Type Residential 2 Zone
Environmental Determination:	Exempt, Section 15301 of the State CEQA Guidelines: Existing facilities; Section 15303 of the State CEQA Guidelines: New Construction of small structures; Exempt, Section 15332 of the State CEQA Guidelines: In-Fill Development Projects; Section 15183 of the State CEQA Guidelines: Projects Consistent with a Community Plan, General Plan or Zoning
Historic Status:	Not A Potentially Designated Historic Property (DHP); Survey rating: C3
City Council District:	1
Date Filed:	4/10/2017
Staff Recommendation:	Approve with the attached conditions
Finality of Decision:	*Appealable to City Council within 10 days*
For Further Information:	Contact case planner **Jose M. Herrera-Preza, Planner II** at **(510) 238-3808** or jherrera@oaklandnet.com

SUMMARY

The proposal will subdivide a 18,750 square feet area containing three parcels, each containing a detached single family residence, into a seven parcel mini-lot development. Each parcel of the mini-lot development would contain a single family home. The proposal involves the demolition of the residence at 4446 Howe Street, renovation and remodel of residences at 4430 & 4440 Howe Street, and construction of five two-story detached craftsman style homes. Each of the seven homes would include one parking space.

Staff recommends approval of the project for the reasons described in this report.

CITY OF OAKLAND PLANNING COMMISSION



Case File: PLN17095 / TTM8393
Applicant: Jarvis Architects, Lisa Trujillo
Address: 4430 / 4440 / 4448 Howe Street
Zone: RM-2

PROJECT DESCRIPTION

General

The proposal involves the subdivision of an 18,750 square foot interior rectangular (149' wide and 125' deep) lot (see Attachment A for a full set of plans). The subject property contains three existing two-story single family residences toward the front of the property. One of these homes would be demolished and five additional homes would be built, for a total of seven homes. Each home would be approximately 2,000 square feet and sit on its own lot in a mini-lot development. The homes would be in two rows, one row in the front of the property and one toward the rear. The proposal also includes:

- Façade improvements and interior remodel of existing residences at 4430 & 4440 Howe Street;
- Creation of a new 20-foot wide, 120-foot deep internal driveway between the rows of homes leading to parking spaces for the rear homes;
- Driveways from Howe Street for each of the homes at the front of the lot;
- Installation of landscaping throughout the site, including the replacement of existing trees; and
- Other miscellaneous minor site modifications.

The following table contains the dimensions of each lot.

	Lot Width	Lot Depth	Lot Size
Lot 1	60.42 ft.	60 ft.	3,625 sq. ft.
Lot 2	35 ft.	65.07 ft.	2,277 sq. ft.
Lot 3	40 ft.	65.07 ft.	2,603 sq. ft.
Lot 4	54.58 ft.	60 ft.	3,275 sq. ft.
Lot 5	35 ft.	60 ft.	2,100 sq. ft.
Lot 6	40 ft.	65.07 ft.	2,603 sq. ft.
Lot 7	35 ft.	65.07 ft.	2,277 sq. ft.

New Construction

The new buildings would be approximately 2,000 square feet, sited nine feet away from the existing buildings on the property, and separated by a new driveway. The buildings would be sited to be compatible with the neighborhood context in height and size, with special consideration given to the existing historic structure on the property. The proposed horizontal and shingle siding, prominent entrances, vertically hung windows, prominent window trim and sill, roof forms, and exposed rafters relate to the existing craftsman homes at the site and on the street.

Existing Buildings

44430 and 4440 Howe Street will be extensively remolded. As part of the remodel each building will undergo façade restoration and include new windows to be updated throughout the existing buildings. The Howe Street facade would be restored to its original character. Decorative lights, new sill trim, and landscape features would be installed. The building would be repainted.

Site Improvements

Curb cuts along Howe Street will be reduced in size and front yard paving would be reduced from existing condition. A fence and gate would be installed at 4446 Howe Street frontage. Infiltration planters would be installed on either side of the new building. Parking in the front of the property would be reduced and five parking spaces would be provided at the rear of the buildings. Front and side paths would be improved with decorative paving. A dedicated bike shed and bike parking would be provided.

Open Space

Usable open space, as defined by the Planning Code, would be provided in the form of yards/patios at the first floor, balconies at the second and third floors. Some of the open spaces would be interior to the site with a limited amount facing the street.

Trees and Landscaping

The site would plant several new trees and incorporate a landscape plan. No trees would be removed.

PROPERTY DESCRIPTION

The property is an 18,750 square-foot parcel along a block of Howe Street that terminates at the Mountain View Cemetery. The site is located adjacent to a two-story residence, across the street from a residential condominium development, and near several two to three-story multi-family buildings. The subject site contains three detached two-story residences, each on their own lot. The site has a gentle down slope from Howe Street. The Howe St. frontage measures 149 feet and the site is 145 feet deep.

GENERAL PLAN ANALYSIS

The property is in the Mixed Housing Type Residential area under the General Plan. The intent of the area is: "to create, maintain, and enhance residential areas typically located near the City's major arterials and characterized by a mix of single family homes, townhouses, small multi-unit buildings, and neighborhood businesses where appropriate." Desired character and uses is: "Future development within this classification should be primarily residential in character." The proposed new construction and addition to a multi-family facility is, therefore, consistent with the intent and desired character and uses of the General Plan as well as the following General Plan Policies:

Policy N3.2 Encouraging Infill Development.
In order to facilitate the construction of needed housing units, infill development that is consistent with the General Plan should take place throughout the City of Oakland.

Policy N3.8 Required High-Quality Design.
High-quality design standards should be required of all new residential construction. Design requirements and permitting procedures should be developed and implemented in a manner that is sensitive to the added costs of those requirements and procedures.

Policy N6.2- Increase Home Ownership.
Housing development that increase home ownership opportunities for households of all incomes are desirable. The proposal provides home ownership opportunities for a range of potential home buyers.

The mini-lot development approach will make the sixteen residential dwelling units more affordable due to the smaller lot sizes.

Policy N6.1 Mixing Housing Types.
The City will generally be supportive of a mix of projects that provide a variety of housing types, unit sizes, and lot sizes which are available to households with a range of incomes.

Policy N7.1 Ensuring Compatible Development.
New residential development in Mixed Housing Type areas should be compatible with the density, scale, design, and existing or desired character of surrounding development.

The proposal is a residential in-fill development project that reuses and enhances a long vacant Property as well as contributing to the mix of housing types in a residential area. These items are discussed further in the Key Issues and Impacts section of this report.

Staff finds that the proposal conforms to the General Plans intent, desired character and policies.

ZONING ANALYSIS

Intent of Zone

The property is in the RM-2 Mixed Housing Type Residential Zone. The intent of the RM-2 Zone is "to create, maintain, and enhance residential areas characterized by a mix of single family homes, duplexes, townhouses, small multi-unit buildings, and neighborhood businesses where appropriate."

Development Standards

The following table shows key zoning requirements of the RM-2 zone in relation to the development. Note that a mini-lot development, which is proposed, must meet the zoning requirements as if it were a single lot.

	Proposed	Required/Allowed	Conforms
Density	7	1 unit per 2,500 sf of lot area is conditionally permitted for a maximum of 7 units.	Yes
Parking Spaces	7	Minimum of 7 spaces (1 space per unit)	Yes
Group Usable Open Space	0	700 ft required (100 sf per unit) with the amount of proposed private open space.	No
Usable Private Open Space	1,216	NA	NA
Maximum Height	30'	30'	Yes
Front Setback	15'	15	NA
Side Setbacks	5'	5'	Yes
Rear Setback	15'	15'	Yes

The variance required for the lack of group open space is discussed in the "Key Issues and Impacts" section of this report. The project does meet Planning Code requirements for buffering (screening of residential parking), bicycle parking, recycling, and landscaping.

Mini-Lot Development and Shared Access Facility

The provision of Section 17.142 of the Planning Code allows mini-lot developments upon the granting of a Conditional Use Permit. A mini-lot is a comprehensively designed development containing lots that do not meet the minimum size or other requirements applying to individual lots. As mentioned, a mini-lot development must meet the zoning requirements as if it were a single lot. Section 17.102.090 of the Planning Code states that a conditional use permit is also required for the construction of the shared access facility between the homes.

A discussion of the shared access facility is contained in the "Key Issues and Impacts" section of this report.

ENVIRONMENTAL DETERMINATION

The California Environmental Quality Act (CEQA) Guidelines categorically exempts specific types of projects from environmental review. Section 15332 of the State CEQA Guidelines exempts "In-Fill Development Projects." The proposal to create additional dwelling units within a structure in a developed urban area meets the conditions described in Section 15332. In addition, CEQA mandates that projects which are consistent with the development density established by existing zoning or general plan policies for which an EIR was certified shall not require additional environmental review (CEQA Guidelines, § 15183(a).)

The project is therefore exempt from further Environmental Review.

KEY ISSUES AND IMPACTS

The following are key issues that staff reviewed in response to the proposal:

Shared Access Facility

The development will be accessed through a private access facility via a proposed 20-foot wide driveway that terminates at the rear most building located at the rear of the property. The proposed shared access facility deviates from the California Fire Code 13208 C.F.C. Appendix D, adopted in 2013, which normally requires a 26-foot wide fire truck access road width and incorporation of a fire truck turn-around on fire access roads greater than 150 feet long. As such, the applicant was granted a waiver from the requirements by the Fire Marshall and Fire Protection Engineer (Attachment C) to not incorporate an emergency vehicle turnaround because the proposal meets the following conditions in OMC Sec. 15.12.010 (C) (Attachment D):

1. The project is not located within the Urban-Wildland Interface, High Fire Hazard Severity Zone, or Wildland Fire Assessment District; and
2. The project contains the required street widths and slopes at the property and surrounding area to provide adequate fire truck access; and
3. The site is located within an area that has an existing built-out street grid and has been previously developed; and

4. The site is in an area with adequate fire flow as determined by the Fire Chief.

Building Design

The proposal requires a Regular Design Review for the construction of new residential units (see Section 17.136.050 of the Planning Code). The proposed project will create a design that is well-related to the surrounding buildings, and would not have significant impacts on the adjacent buildings with respect to views, solar access and privacy.

The buildings have been designed to be compatible with the existing craftsman architecture in the neighborhood by using similar façade articulations, roof forms, exterior materials, vertically hung recessed windows, and prominent entries. The building elevations are appropriately scaled through the use of various architectural features such as gable roofs, bay window projections, and deep window recesses. The main entry to these units would be from the front porches, located adjacent to the shared-driveway.

Open Space Variance

The proposal requires the granting of a minor variance to provide all of the required usable open space through private open space, including private yards, decks and balconies. Staff believes this is appropriate for the proposal because each unit will have an ample amount of its own private open space, which is appropriate in a single-family home subdivision. Further, each unit will have convenient access to the proposed private decks and balconies.

CONCLUSION

For the reasons described above and in the attached findings, staff recommends approval of the mini-lot development proposal.

RECOMMENDATIONS:

1. Affirm staff's environmental determination.
2. Approve the Major Conditional Use Permit, Tentative Tract Map, Regular Design Review and Minor Variance subject to the attached Findings and Conditions.

Prepared by:

Jose M. Herrera-Preza
Planner II

Reviewed by:

Scott Miller
Zoning Manager

Approved for forwarding to the
City Planning Commission:

Darin Ranelletti, Interim Director
Bureau of Planning and Building

ATTACHMENTS:

A. Project Plans
B. Context Photos
C. O.F.D. Approval dated September 27, 2016
D. City Policy Bulletin dated April 15, 2016

Findings for Approval

This proposal meets all the required findings under the General Use Permit Criteria (OMC Sec. 17.134.050; Section 17.102.320, Conditional Use Permit for waiver of certain requirements in mini-lot developments, Section 17.102.090, Conditional Use Permit for Shared Access Facilities, Regular Design Review Criteria (OMC Sec. 17.136.050(A)(C) of the Oakland Planning Code (Title 17); Minor Variance Permit Criteria (OMC Sec. 17.148.050 of the Oakland Planning Code of the Oakland Planning Code, and Section 16.04.010, Purpose, Section 16.24.040, Lot Design Standards, and Section 16.08.030 Tentative Tract Maps, of the Oakland Subdivision Regulations, as set forth below;. Required findings are shown in bold type; explanations as to why these findings can be made are in normal type.

SECTION 17.134.050 – GENERAL USE PERMIT CRITERIA:

A. That the location, size, design, and operating characteristics of the proposed development will be compatible with and will not adversely affect the livability or appropriate development of abutting properties and the surrounding neighborhood, with consideration to be given to harmony in scale, bulk, coverage, and density; to the availability of civic facilities and utilities; to harmful effect, if any, upon desirable neighborhood character; to the generation of traffic and the capacity of surrounding streets; and to any other relevant impact of the development.

The proposal requires two Conditional Use Permits: 1.) To allow a mini-lot development and 2.) To allow a Shared Access Facility to provide vehicular access to five of the seven proposed mini lots. The project will improve an existing underutilized residential lot with the construction and rehabilitation of a total of 7 residential buildings and associated site improvements that include new landscape and site design configuration. The mini-lot development allows the site to be improved as seven residential units located on seven separate lots (one residential units per lot). The proposed development is intended to be compatible with the streetscape along Howe Street, which is predominately detached two to three story Single Family and Duplex buildings.

B. That the location, design, and site planning of the proposed development will provide a convenient and functional living, working, shopping, or civic environment, and will be as attractive as the nature of the use and its location and setting warrant.

The location, design, and site plan of the proposed development will provide a convenient and functional living environment for a multi-family development. The proposed development allows the site to be developed within the prescribed RM-2 density and allows for the opportunity for each residence to have its own fee simple parcel. The project will enhance an existing underutilized parcel with substantial site improvements that include five three-story residential craftsman style buildings with a design aesthetic that a complement surrounding buildings and that is compatible with the neighborhood character. The project will be served by shared access facilities for vehicular access to six parking spaces within five parcels. The Private Access Easement will be required to incorporate pavers and landscape strips to enhance the shared space and contribute to the visual appeal of the proposed development.

C. That the proposed development will enhance the successful operation of the surrounding area in its basic community functions, or will provide an essential service to the community or region.

The project will enhance the existing site with attractive improvements. The project will provide much needed housing units near public transit, which is important to the community and the region. Providing

needed housing units near public transit, which is important to the community and the region. Providing additional housing on Howe Street will also provide additional customers for the nearby the Piedmont Avenue Commercial District.

D. That the proposal conforms to all applicable design review criteria set forth in the design review procedure at Section 17.136.070.

The proposal conforms to all significant aspects of the Design Review criteria set forth in Chapter 17.136 of the Oakland Planning Code, as outlined below.

E. That the proposal conforms in all significant respects with the Oakland Comprehensive Plan and with any other applicable plan or development control map which has been adopted by the City Council.

The property is in the Mixed Housing Type Residential area of the General Plan. The intent of the area is: "is to create, maintain, and enhance residential areas typically located near the City's major arterials and characterized by a mix of single family homes, townhouses, small multi-unit buildings, and neighborhood businesses where appropriate." Desired Character and Uses is: "Future development within this classification should be primarily residential in character." The proposed design for a multi-family facility and site is, therefore, consistent with the intent and desired character and uses of the General Plan and the following Policies:

Policy N3.2 Encouraging Infill Development.
In order to facilitate the construction of needed housing units, infill development that is consistent with the General Plan should take place throughout the City of Oakland.

Policy N3.8 Required High-Quality Design.
High-quality design standards should be required of all new residential construction. Design requirements and permitting procedures should be developed and implemented in a manner that is sensitive to the added costs of those requirements and procedures.

Policy N6.1 Mixing Housing Types.
The City will generally be supportive of a mix of projects that provide a variety of housing types, unit sizes, and lot sizes which are available to households with a range of incomes.

Policy N6.2- Increase Home Ownership.
Housing development that increase home ownership opportunities for households of all incomes are desirable. The proposal provides home ownership opportunities for a range of potential home buyers. The mini-lot development approach will make the sixteen residential dwelling units more affordable due to the smaller lot sizes.

Policy N7.1 Ensuring Compatible Development.
New residential development in Mixed Housing Type areas should be compatible with the density, scale, design, and existing or desired character of surrounding development.

The proposal is a residential in-fill development project that enhances an urban residential district near a major city street surrounded with a mix of urban housing types in a residential area.

Section 17.102.320 Conditional Use Permit for waiver of certain requirements in Mini-lot Developments

FINDINGS

A. Basic Provisions. Subject to the provisions of subsections B and C of this section, the maximum height and minimum yard, lot area, width, and frontage requirements otherwise applying to individual lots may be waived or modified within a mini-lot development, and floor area, parking, and other facilities may be located within said development without reference to lot lines, upon the granting of a conditional use permit pursuant to the conditional use permit procedure in Chapter 17.134 and upon determination:

1. That there is adequate provision for maintenance of the open space and other facilities within the development; and

A private access easement is proposed to serve five of the newly created parcels that will serve as a shared access facility for vehicular ingress and egress and a utility easement. A condition of approval has been added that requires a maintenance agreement to ensure adequate maintenance for all common areas. The owners of each of the lots will be responsible for their own private open space.

2. That the total development meets all the requirements that would apply to it if it were a single lot.

The proposed development conforms to the permitted density for the RM-2 zone, which would have allowed seven units on the subject lot. The project meets all front, side and rear setback requirements. The proposed buildings will be below the 30-foot height limit and the requirement for one parking space per unit.. As mentioned above, the project meets the findings to approve the variance required due to a lack of group open space.

B. Zones in Which Requirements May Be Waived. A conditional use permit pursuant to subsection A of this section may be granted only in the S-1 or S-2 zone or in any residential or commercial zone other than RH zones or the RD-1 zone.

The subject site is zoned RM-2 Zone and therefore complies with above criterion.

C. Maximum Size for Which Requirements May Be Waived. A conditional use permit pursuant to subsection A of this section may be granted only if the total land area of the mini-lot development is less than sixty thousand (60,000) square feet.

The subject site is 18,750 square feet and therefore complies with the above criterion.

Section 17.102.090 Conditional Use Permit for Shared Access Facilities

A. Use Permit Required. A shared access facility shall be allowed only upon the granting of a conditional use permit pursuant to the conditional use permit procedure in Chapter 17.134.

The proposed application involves a Minor Conditional Use Permit pursuant to Section 17.134. See findings above.

B. Use Permit Criteria. A conditional use permit under this section may be granted only upon determination that the proposal conforms to the general use permit criteria set forth in the conditional use permit procedure in Chapter 17.134 and to all of the following additional use permit criteria:

1. **Compliance with Guidelines. Each shared access facility proposal shall be in compliance with the City Planning Commission guidelines for development and evaluation of shared access facilities.**

   The proposed shared access facility is consistent with the applicable planning guidelines for development and evaluation of the easement. The facility will maintain a width of ten feet throughout the length of the easement and will allow for reasonable modifications where appropriate.

2. **Public Safety. The width of a shared access facility shall be adequate to ensure unimpeded emergency and nonemergency ingress and egress at all times. Additionally, the shared access facility shall conform to city standards for roadway layout and design.**

   The width of the shared access easement will be 20 feet for the length of the facility from Howe Street. Typically, a 26-foot wide access easement would be required to satisfy emergency and non-emergency ingress and egress pursuant to O.M.C. Sec. 15.12.010C. However, the proposal is adequate because the width of Howe Street provides adequate access to the site, the site is not located in a High Fire Hazard Zone, the property has adequate fire flow, the site is within an existing built-out street network, and the shared access facility is only 150' long and 230' away from the existing street.

C. Aesthetics. A shared access facility shall be designed to provide the environmentally superior alternative to other approaches for the development of the property and shall be designed to be visually compatible with its surroundings, as set forth in the City Planning Commission guidelines; necessary retaining walls shall not be of excessive height and shall not be visibly obtrusive, as such are defined in the City Planning Commission guidelines.

The proposed shared access facility is located on a relatively flat parcel (18' elevation change from Howe Street) in an area of the property that currently serves as a driveway for the existing residence. Any new retaining walls will be less than six feet in height and non-street facing, therefore preserving the aesthetics of the neighborhood. The surface of the facility is required to be finished with permeable decorative pavers for visual appeal to provide an environmentally superior alternative that will minimize storm water run-off. Landscape strips shall be provided at appropriate areas to soften the edges of the easement.

D. On-Going Owner Responsibility. Applicants for a shared access facility shall submit, for approval, an agreement for access facility maintenance, parking restrictions, and landscape maintenance. Upon staff approval, the proposed agreement shall be recorded by the applicant within thirty (30) days with the Alameda County Recorder. In addition, applicants for a shared access facility shall provide documentation of continuing liability insurance coverage. Documentation of insurance coverage shall include the written undertaking of each insurer to give the city thirty (30) days' prior written notice of cancellation, termination, or material change of such insurance coverage.

As a condition of approval, the applicant is required to prepare and submit a maintenance agreement for the proposed development to the Bureau of Planning for review and approval prior to issuance of a certificate of occupancy for the first unit.

E. Certification. Prior to construction, applicants for a shared access facility shall retain a California registered professional civil engineer to certify, upon completion, that the access facility was constructed in accordance with the approved plans and construction standards. This requirement may be modified or waived at the discretion of the Director of Public Works, based on the topography or geotechnical considerations. An applicant may also be required to show assurance of performance bonding for grading and other associated improvements. In addition, prior to the installation of landscaping, an applicant shall retain a landscape architect or other qualified individual to certify, upon completion, that landscaping was installed in accordance with the approved landscape plan.

Staff has added a condition of approval to this report for the project to meet this criterion.

Section 16.04.010, Purpose:
"...ensure that the development of subdivisions is consistent with the goals and policies of the Oakland General Plan."

The proposed project involves the division of land from one parcel into seven parcels. The site is located in the RM-2 Mixed Housing Type Residential 2 zoning district and the Mixed Housing Type Residential General Plan Land Use classification, which is intended *"to create, maintain, and enhance residential areas typically located near the City's major arterials and characterized by a mix of single family homes, townhouses, small multi-unit buildings, and neighborhood businesses where appropriate."* The proposed land subdivision maintains the character of an urban developed area and is intended to be improved with detached craftsman style residences, therefore, it is consistent with the intended character, land uses, and densities of the General Plan and Zoning regulations.

Section 16.24.040 Lot design standards.
Lot design shall be consistent with the provisions of Section 16.04.010, Purpose, and the following provisions:

A. No lot shall be created without frontage on a public street, as defined by Section 16.04.030, except:

1. Lots created in conjunction with approved private access easements;

The subject property is an interior lot surrounded by multi-unit residential buildings. The proposal will create four new lots without frontage onto a public street but will be served by a private access easement from Howe Street, which has been reviewed and approved by the Fire Marshall.

2. A single lot with frontage on a public street by means of a vehicular access corridor provided that in all cases the corridor shall have a minimum width of twenty (20) feet and shall not exceed three hundred (300) feet in length. Provided further, the corridor shall be a portion of the lot it serves, except that its area (square footage) shall not be included in computing the minimum lot area requirements of the zoning district.

Of the proposed seven mini-lots, three lots will have frontage onto Howe Street. The remaining four lots that do not have frontage onto a public street are being created in conjunction with a proposed Shared Access Facility, which has been reviewed and granted a waiver by the Fire Chief to allow a 20' access easement that leads to 10' private driveways with conditions of

approval. As part of the mini-lot development the newly created lots will have the required minimum lot size required by the zone waived through a Conditional Use Permit (see findings above).

3. **The side lines of lots shall run at right angles or radially to the street upon which the lot fronts, except where impractical by reason of unusual topography.**

   All seven of the proposed lots have side lot lines that run at right angles to the street upon which they front. The proposed project maintains interior lot lines that run at right angles from Howe Street. Specifically, the newly created interior lot lines will run at approximately a right angle for 125' from Howe Street then alters orientation due to existing site condition of the existing residences on the property. The project will divide three existing parcels, containing detached residences, into seven mini-lots. The proposed project therefore meets the above criteria.

4. **All applicable requirements of the zoning regulations shall be met.**

   See "Zoning Analysis" above.

SECTION 17.136.050.A - REGULAR DESIGN REVIEW CRITERIA:

1. **That the proposed design will create a building or set of buildings that are well related to the surrounding area in their setting, scale, bulk, height, materials, and textures:**

   The proposed design applies a combination of materials including stucco, horizontal siding, clad frame windows, metal screens and railings and a variation of colors consistent neighboring structures. To minimize perceived bulk, the design applies a series of projections to articulate the building elevations. This design approach achieves a hierarchy of volumes and proportions that relate well to the neighborhood. The proposed craftsman style features, such as exposed rafters, horizontal siding, and recessed, horizontally hung windows relates to the homes in the neighborhood.

2. **That the proposed design will protect, preserve, or enhance desirable neighborhood characteristics;**

   The proposal will enhance the surrounding area by adding desirable site improvements to enhance the appearance of the neighborhood. This area of Oakland is an older neighborhood that has a mix of multi-family dwellings down to single family dwelling consisting of two to three stories around Howe Street. The proposed development will create add five well-designed homes to this residential neighborhood.

3. **That the proposed design will be sensitive to the topography and landscape.**

   The subject property is a relatively flat lot located in a built-out urban area and minimize grading to the greatest extent possible. The proposed design incorporates landscaping into the site plan.

4. **That, if situated on a hill, the design and massing of the proposed building relates to the grade of the hill.**

   The site is not situated on a hill or hillside area.

5. **That the proposed design conforms in all significant respects with the Oakland General Plan and with any applicable design review guidelines or criteria, district plan, or development control map which have been adopted by the Planning Commission or City Council.**

   See "General Plan Analysis" section, above.

SECTION 17.148.050A MINOR VARIANCE FINDINGS REQUIRED:

1. **That strict compliance with the specified regulation would result in practical difficulty or unnecessary hardship inconsistent with the purposes of the Zoning Regulations, due to unique physical or topographical circumstances or conditions of design; or, as an alternative in the case of a Minor Variance, that such strict compliance would preclude an effective design solution improving the livability, operational efficiency, or appearance.**

   The variance is required for providing all usable open space as private. Due to conditions of the design, it is impractical to provide group open space at the required 15'x15' minimum because the parcel is only 50 feet wide. When required setbacks and the access easement are taken into consideration, the buildable envelope would be greatly reduced and negatively affect the design of the project. Therefore, it is appropriate that the project satisfies the open space requirement through private yards, decks and balconies.

2. **That strict compliance with the regulations would deprive the applicant of privileges enjoyed by owners of similarly zoned property; or, as an alternative in the case of a Minor Variance, that such strict compliance would preclude an effective design solution fulfilling the basic intent of the applicable regulation.**

   See Finding #1.

3. **That the variance, if granted, will not adversely affect the character, livability, or appropriate development of abutting properties or the surrounding area, and will not be detrimental to the public welfare or contrary to adopted plans or development policy.**

   Allowing all the usable open space to be private will not substantially affect neighboring properties in terms of solar access, traffic, privacy, or other impacts.

4. **That the variance will not constitute a grant of special privilege inconsistent with limitations imposed on similarly zoned properties or inconsistent with the purposes of the Zoning Regulations.**

   The requested variance would not constitute a grant of special privilege and is consistent with the purpose of the zoning regulation. Allowing a subdivision of single family homes to provide only private open space is an appropriate and common development pattern.

5. **That the elements of the proposal requiring the variance (e.g., elements such as buildings, walls, fences, driveways, garages and carports, etc.) conform with the Regular Design Review criteria set forth in the Design Review Procedure at Section 17.136.050;**

   The proposal meets all the Regular Design Review Criteria, as shown above.

6. **That the proposal conforms in all significant respects with the Oakland General Plan and with any other applicable guidelines or criteria, district plan, or development control map which have been adopted by the Planning Commission or City Council.**

   The proposal conforms to all significant aspects of the Mixed Housing Type Residential General Plan Land Use classification including Objective N3 which encourages the construction, conservation, and enhancement of housing resources to meet the current and future needs of the Oakland community.

   Policy N3.5
   Encouraging Housing Development
   The City should actively encourage development of housing in designated mixed housing type and urban housing areas through regulatory and fiscal incentives, assistance in identifying parcels that are appropriate for new development, and other measures.

7. **For proposals involving one or two residential dwelling units on a lot: That, if the variance would relax a regulation governing maximum height, minimum yards, maximum lot coverage or maximum floor area ratio, the proposal also conforms with at least one of the following additional criteria:**

   a. **The proposal when viewed in its entirety will not adversely impact abutting residences to the side, rear, or directly across the street with respect to solar access, view blockage and privacy to a degree greater than that which would be possible if the residence were built according to the applicable regulation and, for height variances, the proposal provides detailing, articulation or other design treatments that mitigate any bulk created by the additional height; or**

   b. **Over sixty (60) percent of the lots in the immediate vicinity are already developed and the proposal does not exceed the corresponding as-built condition on these lots and, for height variances, the proposal provides detailing, articulation or other design treatments that mitigate any bulk created by the additional height. The immediate context shall consist of the five closest lots on each side of the project site plus the ten closest lots on the opposite side of the street (see illustration I-4b); however, the Director of City Planning may make an alternative determination of immediate context based on specific site conditions. Such determination shall be in writing and included as part of any decision on any variance.**

      The proposal involves seven units.

IN-FILL DEVELOPMENT PROJECTS (CALIFORNIA ENVIRONMENTAL QUALITY ACT, GUIDELINES SECTION 15332)

(a) The project is consistent with the applicable general plan designation and all applicable general plan policies as well as with applicable zoning designation and regulations.

The project conforms to the General Plan and Planning Code as described in the body of this staff report, above. The proposal requires two minor variances. The project meets the required findings to approve the variances as described in the body of this staff report and the variance findings, above.

(b) The proposed development occurs within city limits on a project site of no more than five acres substantially surrounded by urban uses.

The 18,750 square foot site is substantially surrounded by urban uses and is located entirely within the City of Oakland.

(c) The project site has no value as habitat for endangered, rare or threatened species.

The project site has no value as habitat for endangered, rare or threatened species. The site was developed as early as 1920's and contains significant impervious surface.

(d) Approval of the project would not result in any significant effects relating to traffic, noise, air quality, or water quality.

Due to the limited number of units proposed, the project does not require a traffic study or transportation management plan (although a transportation management plan will be voluntarily implemented).

(e) The site can be adequately served by all required utilities and public services.

The site is already developed and is in an urbanized area. New dwelling units will be served by existing utilities and public services.

CONDITIONS OF APPROVAL

Standard Conditions

1. **Approved Use**

   The project shall be constructed and operated in accordance with the authorized use as described in the approved application materials, and the approved plans the plans dated **March 28, 2017** as amended by the following conditions of approval and mitigation measures, if applicable ("Conditions of Approval" or "Conditions").

2. **Effective Date, Expiration, Extensions and Extinguishment**

   This Approval shall become effective immediately, unless the Approval is appealable, in which case the Approval shall become effective in ten calendar days unless an appeal is filed. Unless a different termination date is prescribed, this Approval shall expire **two years** from the Approval date, or from the date of the final decision in the event of an appeal, unless within such period all necessary permits for construction or alteration have been issued, or the authorized activities have commenced in the case of a permit not involving construction or alteration. Upon written request and payment of appropriate fees submitted no later than the expiration date of this Approval, the Director of City Planning or designee may grant a one-year extension of this date, with additional extensions subject to approval by the approving body. Expiration of any necessary building permit or other construction-related permit for this project may invalidate this Approval if said Approval has also expired. If litigation is filed challenging this Approval, or its implementation, then the time period stated above for obtaining necessary permits for construction or alteration and/or commencement of authorized activities is automatically extended for the duration of the litigation.

3. **Compliance with Other Requirements**

   The project applicant shall comply with all other applicable federal, state, regional, and local laws/codes, requirements, regulations, and guidelines, including but not limited to those imposed by the City's Bureau of Building, Fire Marshal, and Public Works Department. Compliance with other applicable requirements may require changes to the approved use and/or plans. These changes shall be processed in accordance with the procedures contained in Condition #4.

4. **Minor and Major Changes**

   a. Minor changes to the approved project, plans, Conditions, facilities, or use may be approved administratively by the Director of City Planning

   b. Major changes to the approved project, plans, Conditions, facilities, or use shall be reviewed by the Director of City Planning to determine whether such changes require submittal and approval of a revision to the Approval by the original approving body or a new independent permit/approval. Major revisions shall be reviewed in accordance with the procedures required for the original permit/approval. A new independent permit/approval shall be reviewed in accordance with the procedures required for the new permit/approval.

5. **Compliance with Conditions of Approval**

   a. The project applicant and property owner, including successors, (collectively referred to hereafter as the "project applicant" or "applicant") shall be responsible for compliance with all the Conditions of Approval and any recommendations contained in any submitted and approved

technical report at his/her sole cost and expense, subject to review and approval by the City of Oakland.

b. The City of Oakland reserves the right at any time during construction to require certification by a licensed professional at the project applicant's expense that the as-built project conforms to all applicable requirements, including but not limited to, approved maximum heights and minimum setbacks. Failure to construct the project in accordance with the Approval may result in remedial reconstruction, permit revocation, permit modification, stop work, permit suspension, or other corrective action.

c. Violation of any term, Condition, or project description relating to the Approval is unlawful, prohibited, and a violation of the Oakland Municipal Code. The City of Oakland reserves the right to initiate civil and/or criminal enforcement and/or abatement proceedings, or after notice and public hearing, to revoke the Approval or alter these Conditions if it is found that there is violation of any of the Conditions or the provisions of the Planning Code or Municipal Code, or the project operates as or causes a public nuisance. This provision is not intended to, nor does it, limit in any manner whatsoever the ability of the City to take appropriate enforcement actions. The project applicant shall be responsible for paying fees in accordance with the City's Master Fee Schedule for inspections conducted by the City or a City-designated third-party to investigate alleged violations of the Approval or Conditions.

6. Signed Copy of the Approval/Conditions

A copy of the Approval letter and Conditions shall be signed by the project applicant, attached to each set of permit plans submitted to the appropriate City agency for the project, and made available for review at the project job site at all times.

7. Blight/Nuisances

The project site shall be kept in a blight/nuisance-free condition. Any existing blight or nuisance shall be abated within 60 days of approval, unless an earlier date is specified elsewhere.

8. Indemnification

To the maximum extent permitted by law, the project applicant shall defend (with counsel acceptable to the City), indemnify, and hold harmless the City of Oakland, the Oakland City Council, the Oakland Redevelopment Successor Agency, the Oakland City Planning Commission, and their respective agents, officers, employees, and volunteers (hereafter collectively called "City") from any liability, damages, claim, judgment, loss (direct or indirect), action, causes of action, or proceeding (including legal costs, attorneys' fees, expert witness or consultant fees, City Attorney or staff time, expenses or costs) (collectively called "Action") against the City to attack, set aside, void or annul this Approval or implementation of this Approval. The City may elect, in its sole discretion, to participate in the defense of said Action and the project applicant shall reimburse the City for its reasonable legal costs and attorneys' fees.

a. Within ten (10) calendar days of the filing of any Action as specified in subsection (a) above, the project applicant shall execute a Joint Defense Letter of Agreement with the City, acceptable to the Office of the City Attorney, which memorializes the above obligations. These obligations and the Joint Defense Letter of Agreement shall survive termination, extinguishment, or invalidation of the Approval. Failure to timely execute the Letter of Agreement does not relieve the project applicant of any of the obligations contained in this Condition or other requirements or Conditions of Approval that may be imposed by the City.

9. Severability

The Approval would not have been granted but for the applicability and validity of each and every one of the specified Conditions, and if one or more of such Conditions is found to be invalid by a court of competent jurisdiction this Approval would not have been granted without requiring other valid Conditions consistent with achieving the same purpose and intent of such Approval.

10. Special Inspector/Inspections, Independent Technical Review, Project Coordination and Monitoring

The project applicant may be required to cover the full costs of independent third-party technical review and City monitoring and inspection, including without limitation, special inspector(s)/inspection(s) during times of extensive or specialized plan-check review or construction, and inspections of potential violations of the Conditions of Approval. The project applicant shall establish a deposit with the Bureau of Building, if directed by the Building Official, Director of City Planning, or designee, prior to the issuance of a construction-related permit and on an ongoing as-needed basis.

11. Public Improvements

The project applicant shall obtain all necessary permits/approvals, such as encroachment permits, obstruction permits, curb/gutter/sidewalk permits, and public improvement ("p-job") permits from the City for work in the public right-of-way, including but not limited to, streets, curbs, gutters, sidewalks, utilities, and fire hydrants. Prior to any work in the public right-of-way, the applicant shall submit plans for review and approval by the Bureau of Planning, the Bureau of Building, and other City departments as required. Public improvements shall be designed and installed to the satisfaction of the City.

12. Compliance Matrix

The project applicant shall submit a Compliance Matrix, in both written and electronic form, for review and approval by the Bureau of Planning and the Bureau of Building that lists each Condition of Approval (including each mitigation measure if applicable) in a sortable spreadsheet. The Compliance Matrix shall contain, at a minimum, each required Condition of Approval, when compliance with the Condition is required, and the status of compliance with each Condition. For multi-phased projects, the Compliance Matrix shall indicate which Condition applies to each phase. The project applicant shall submit the initial Compliance Matrix prior to the issuance of the first construction-related permit and shall submit an updated matrix upon request by the City.

13. Construction Management Plan

Prior to the issuance of the first construction-related permit, the project applicant and his/her general contractor shall submit a Construction Management Plan (CMP) for review and approval by the Bureau of Planning, Bureau of Building, and other relevant City departments such as the Fire Department and the Public Works Department as directed. The CMP shall contain measures to minimize potential construction impacts including measures to comply with all construction-related Conditions of Approval (and mitigation measures if applicable) such as dust control, construction emissions, hazardous materials, construction days/hours, construction traffic control, waste reduction and recycling, stormwater pollution prevention, noise control, complaint management, and cultural resource management (see applicable Conditions below). The CMP shall provide project-specific information including descriptive procedures, approval documentation, and drawings (such as a site logistics plan, fire safety plan, construction phasing plan, proposed truck

routes, traffic control plan, complaint management plan, construction worker parking plan, and litter/debris clean-up plan) that specify how potential construction impacts will be minimized and how each construction-related requirement will be satisfied throughout construction of the project.

14. Regulatory Permits and Authorizations from Other Agencies

Requirement: The project applicant shall obtain all necessary regulatory permits and authorizations from applicable resource/regulatory agencies including, but not limited to, the Regional Water Quality Control Board, Bay Area Air Quality Management District, Bay Conservation and Development Commission, California Department of Fish and Wildlife, U. S. Fish and Wildlife Service, and Army Corps of Engineers and shall comply with all requirements and conditions of the permits/authorizations. The project applicant shall submit evidence of the approved permits/authorizations to the City, along with evidence demonstrating compliance with any regulatory permit/authorization conditions of approval.

When Required: Prior to activity requiring permit/authorization from regulatory agency

Initial Approval: Approval by applicable regulatory agency with jurisdiction; evidence of approval submitted to Bureau of Planning

Monitoring/Inspection: Applicable regulatory agency with jurisdiction

15. Graffiti Control

Requirement:

a. During construction and operation of the project, the project applicant shall incorporate best management practices reasonably related to the control of graffiti and/or the mitigation of the impacts of graffiti. Such best management practices may include, without limitation:
   i. Installation and maintenance of landscaping to discourage defacement of and/or protect likely graffiti-attracting surfaces.
   ii. Installation and maintenance of lighting to protect likely graffiti-attracting surfaces.
   iii. Use of paint with anti-graffiti coating.
   iv. Incorporation of architectural or design elements or features to discourage graffiti defacement in accordance with the principles of Crime Prevention Through Environmental Design (CPTED).
   v. Other practices approved by the City to deter, protect, or reduce the potential for graffiti defacement.

b. The project applicant shall remove graffiti by appropriate means within seventy-two (72) hours. Appropriate means include the following:
   i. Removal through scrubbing, washing, sanding, and/or scraping (or similar method) without damaging the surface and without discharging wash water or cleaning detergents into the City storm drain system.
   ii. Covering with new paint to match the color of the surrounding surface.
   iii. Replacing with new surfacing (with City permits if required).

When Required: Ongoing

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

16. Landscape Plan

Landscape Plan Required
Requirement: The project applicant shall submit a final Landscape Plan for City review and approval that is consistent with the approved Landscape Plan. The Landscape Plan shall be included with the set of drawings submitted for the construction-related permit and shall comply with the landscape requirements of chapter 17.124 of the Planning Code.

When Required: Prior to approval of construction-related permit

Initial Approval: Bureau of Planning

Monitoring/Inspection: N/A

Landscape Installation
Requirement: The project applicant shall implement the approved Landscape Plan unless a bond, cash deposit, letter of credit, or other equivalent instrument acceptable to the Director of City Planning, is provided. The financial instrument shall equal the greater of $2,500 or the estimated cost of implementing the Landscape Plan based on a licensed contractor's bid.

When Required: Prior to building permit final

Initial Approval: Bureau of Planning

Monitoring/Inspection: Bureau of Building

Landscape Maintenance
Requirement: All required planting shall be permanently maintained in good growing condition and, whenever necessary, replaced with new plant materials to ensure continued compliance with applicable landscaping requirements. The property owner shall be responsible for maintaining planting in adjacent public rights-of-way. All required fences, walls, and irrigation systems shall be permanently maintained in good condition and, whenever necessary, repaired or replaced.

When Required: Ongoing

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

17. Lighting

Requirement: Proposed new exterior lighting fixtures shall be adequately shielded to a point below the light bulb and reflector to prevent unnecessary glare onto adjacent properties.

When Required: Prior to building permit final

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

18. Construction-Related Air Pollution Controls (Dust and Equipment Emissions)

Requirement: The project applicant shall implement all of the following applicable air pollution control measures during construction of the project:

a. Water all exposed surfaces of active construction areas at least twice daily. Watering should be sufficient to prevent airborne dust from leaving the site. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water should be used whenever feasible.

b. Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer).

c. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.

d. Pave all roadways, driveways, sidewalks, etc. within one month of site grading or as soon as feasible. In addition, building pads should be laid within one month of grading or as soon as feasible unless seeding or soil binders are used.

c. Enclose, cover, water twice daily, or apply (non-toxic) soil stabilizers to exposed stockpiles (dirt, sand, etc.).

d. Limit vehicle speeds on unpaved roads to 15 miles per hour.

e. Idling times on all diesel-fueled commercial vehicles over 10,000 lbs. shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485, of the California Code of Regulations). Clear signage to this effect shall be provided for construction workers at all access points.

f. Idling times on all diesel-fueled off-road vehicles over 25 horsepower shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes and fleet operators must develop a written policy as required by Title 23, Section 2449, of the California Code of Regulations ("California Air Resources Board Off-Road Diesel Regulations").

g. All construction equipment shall be maintained and properly tuned in accordance with the manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.

h. Portable equipment shall be powered by electricity if available. If electricity is not available, propane or natural gas shall be used if feasible. Diesel engines shall only be used if electricity is not available and it is not feasible to use propane or natural gas.

19. <u>Exposure to Air Pollution (Toxic Air Contaminants)</u>

Health Risk Reduction Measures

<u>Requirement</u>: The project applicant shall incorporate appropriate measures into the project design in order to reduce the potential health risk due to exposure to toxic air contaminants. The project applicant shall choose <u>one</u> of the following methods:

i. The project applicant shall retain a qualified air quality consultant to prepare a Health Risk Assessment (HRA) in accordance with California Air Resources Board (CARB) and Office of Environmental Health and Hazard Assessment requirements to determine the health risk of exposure of project residents/occupants/users to air pollutants. The HRA shall be submitted to the City for review and approval. If the HRA concludes that the health risk is at or below acceptable levels, then health risk reduction measures are not required. If the HRA concludes that the health risk exceeds acceptable levels, health risk reduction measures shall be identified to reduce the health risk to acceptable levels. Identified risk reduction measures shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City.

- or -

ii. The project applicant shall incorporate the following health risk reduction measures into the project. These features shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City:

a) Installation of air filtration to reduce cancer risks and Particulate Matter (PM) exposure for residents and other sensitive populations in the project that are in close proximity to sources of air pollution. Air filter devices shall be rated MERV-13 or higher. As part of implementing this measure, an ongoing maintenance plan for the building's HVAC air filtration system shall be required.
b) Where appropriate, install passive electrostatic filtering systems, especially those with low air velocities (i.e., 1 mph).
c) Phasing of residential developments when proposed within 500 feet of freeways such that homes nearest the freeway are built last, if feasible.
d) The project shall be designed to locate sensitive receptors as far away as feasible from the source(s) of air pollution. Operable windows, balconies, and building air intakes shall be located as far away from these sources as feasible. If near a distribution center, residents shall be located as far away as feasible from a loading dock or where trucks concentrate to deliver goods.
e) Sensitive receptors shall be located on the upper floors of buildings, if feasible.
f) Planting trees and/or vegetation between sensitive receptors and pollution source, if feasible. Trees that are best suited to trapping PM shall be planted, including one or more of the following: Pine (*Pinus nigra* var. *maritima*), Cypress (*X Cupressocyparis leylandii*), Hybrid popular (*Populus deltoids X trichocarpa*), and Redwood *(Sequoia sempervirens*).
g) Sensitive receptors shall be located as far away from truck activity areas, such as loading docks and delivery areas, as feasible.
h) Existing and new diesel generators shall meet CARB's Tier 4 emission standards, if feasible.
i) Emissions from diesel trucks shall be reduced through implementing the following measures, if feasible:
j) Installing electrical hook-ups for diesel trucks at loading docks.
k) Requiring trucks to use Transportation Refrigeration Units (TRU) that meet Tier 4 emission standards.
l) Requiring truck-intensive projects to use advanced exhaust technology (e.g., hybrid) or alternative fuels.
m) Prohibiting trucks from idling for more than two minutes.
n) Establishing truck routes to avoid sensitive receptors in the project. A truck route program, along with truck calming, parking, and delivery restrictions, shall be implemented.

When Required: Prior to approval of construction-related permit

Initial Approval: Bureau of Planning

Monitoring/Inspection: Bureau of Building

Maintenance of Health Risk Reduction Measures

Requirement: The project applicant shall maintain, repair, and/or replace installed health risk reduction measures, including but not limited to the HVAC system (if applicable), on an ongoing and as-needed basis. Prior to occupancy, the project applicant shall prepare and then distribute to the building manager/operator an operation and maintenance manual for the HVAC system and filter including the maintenance and replacement schedule for the filter.

When Required: Ongoing

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

20. Archaeological and Paleontological Resources – Discovery During Construction

Requirement: Pursuant to CEQA Guidelines section 15064.5(f), in the event that any historic or prehistoric subsurface cultural resources are discovered during ground disturbing activities, all work within 50 feet of the resources shall be halted and the project applicant shall notify the City and consult with a qualified archaeologist or paleontologist, as applicable, to assess the significance of the find. In the case of discovery of paleontological resources, the assessment shall be done in accordance with the Society of Vertebrate Paleontology standards. If any find is determined to be significant, appropriate avoidance measures recommended by the consultant and approved by the City must be followed unless avoidance is determined unnecessary or infeasible by the City. Feasibility of avoidance shall be determined with consideration of factors such as the nature of the find, project design, costs, and other considerations. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery, excavation) shall be instituted. Work may proceed on other parts of the project site while measures for the cultural resources are implemented.

In the event of data recovery of archaeological resources, the project applicant shall submit an Archaeological Research Design and Treatment Plan (ARDTP) prepared by a qualified archaeologist for review and approval by the City. The ARDTP is required to identify how the proposed data recovery program would preserve the significant information the archaeological resource is expected to contain. The ARDTP shall identify the scientific/historic research questions applicable to the expected resource, the data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. The ARDTP shall include the analysis and specify the curation and storage methods. Data recovery, in general, shall be limited to the portions of the archaeological resource that could be impacted by the proposed project. Destructive data recovery methods shall not be applied to portions of the archaeological resources if nondestructive methods are practicable. Because the intent of the ARDTP is to save as much of the archaeological resource as possible, including moving the resource, if feasible, preparation and implementation of the ARDTP would reduce the potential adverse impact to less than significant. The project applicant shall implement the ARDTP at his/her expense.

In the event of excavation of paleontological resources, the project applicant shall submit an excavation plan prepared by a qualified paleontologist to the City for review and approval. All significant cultural materials recovered shall be subject to scientific analysis, professional museum curation, and/or a report prepared by a qualified paleontologist, as appropriate, according to current professional standards and at the expense of the project applicant.

When Required: During construction

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

21. Human Remains – Discovery During Construction

Requirement: Pursuant to CEQA Guidelines section 15064.5(e)(1), in the event that human skeletal remains are uncovered at the project site during construction activities, all work shall immediately halt and the project applicant shall notify the City and the Alameda County Coroner. If the County Coroner determines that an investigation of the cause of death is required or that the remains are Native American, all work shall cease within 50 feet of the remains until appropriate arrangements are made. In the event that the remains are Native American, the City shall contact the California Native American Heritage Commission (NAHC), pursuant to subdivision (c) of section 7050.5 of the California Health and Safety Code. If the agencies determine that avoidance is not feasible, then an alternative plan shall be prepared with specific steps and timeframe required to resume

construction activities. Monitoring, data recovery, determination of significance, and avoidance measures (if applicable) shall be completed expeditiously and at the expense of the project applicant.

When Required: During construction

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

22. Construction-Related Permit(s)

Requirement: The project applicant shall obtain all required construction-related permits/approvals from the City. The project shall comply with all standards, requirements and conditions contained in construction-related codes, including but not limited to the Oakland Building Code and the Oakland Grading Regulations, to ensure structural integrity and safe construction.

When Required: Prior to approval of construction-related permit

Initial Approval: Bureau of Building

Monitoring/Inspection: Bureau of Building

23. Hazardous Materials Related to Construction

Requirement: The project applicant shall ensure that Best Management Practices (BMPs) are implemented by the contractor during construction to minimize potential negative effects on groundwater, soils, and human health. These shall include, at a minimum, the following:

a. Follow manufacture's recommendations for use, storage, and disposal of chemical products used in construction;

b. Avoid overtopping construction equipment fuel gas tanks;

c. During routine maintenance of construction equipment, properly contain and remove grease and oils;

d. Properly dispose of discarded containers of fuels and other chemicals;

e. Implement lead-safe work practices and comply with all local, regional, state, and federal requirements concerning lead (for more information refer to the Alameda County Lead Poisoning Prevention Program); and

f. If soil, groundwater, or other environmental medium with suspected contamination is encountered unexpectedly during construction activities (e.g., identified by odor or visual staining, or if any underground storage tanks, abandoned drums or other hazardous materials or wastes are encountered), the project applicant shall cease work in the vicinity of the suspect material, the area shall be secured as necessary, and the applicant shall take all appropriate measures to protect human health and the environment. Appropriate measures shall include notifying the City and applicable regulatory agency(ies) and implementation of the actions described in the City's Standard Conditions of Approval, as necessary, to identify the nature and extent of contamination. Work shall not resume in the area(s) affected until the measures have been implemented under the oversight of the City or regulatory agency, as appropriate.

When Required: During construction

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

24. Site Design Measures to Reduce Stormwater Runoff

Requirement: Pursuant to Provision C.3 of the Municipal Regional Stormwater Permit issued under the National Pollutant Discharge Elimination System (NPDES), the project applicant is encouraged to incorporate appropriate site design measures into the project to reduce the amount of stormwater runoff. These measures may include, but are not limited to, the following:

a. Minimize impervious surfaces, especially directly connected impervious surfaces and surface parking areas;
b. Utilize permeable paving in place of impervious paving where appropriate;
c. Cluster structures;
d. Direct roof runoff to vegetated areas;
e. Preserve quality open space; and
f. Establish vegetated buffer areas.

When Required: Ongoing

Initial Approval: N/A

Monitoring/Inspection: N/A

25. Architectural Copper

Requirement: The project applicant shall implement Best Management Practices (BMPs) concerning the installation, treatment, and maintenance of exterior architectural copper during and after construction of the project in order to reduce potential water quality impacts in accordance with Provision C.13 of the Municipal Regional Stormwater Permit issued under the National Pollutant Discharge Elimination System (NPDES). The required BMPs include, but are not limited to, the following:

a. If possible, use copper materials that have been pre-patinated at the factory;
b. If patination is done on-site, ensure rinse water is not discharged to the storm drain system by protecting storm drain inlets and implementing one or more of the following:
c. Discharge rinse water to landscaped area;
d. Collect rinse water in a tank and discharge to the sanitary sewer , with approval by the City; or haul off-site for proper disposal;
e. During maintenance activities, protect storm drain inlets to prevent wash water discharge into storm drains; and
f. Consider coating the copper with an impervious coating that prevents further corrosion.

When Required: During construction; ongoing

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

26. Construction Days/Hours

Requirement: The project applicant shall comply with the following restrictions concerning construction days and hours:

a. Construction activities are limited to between 7:00 a.m. and 7:00 p.m. Monday through Friday, except that pier drilling and/or other extreme noise generating activities greater than 90 dBA shall be limited to between 8:00 a.m. and 4:00 p.m.

b. Construction activities are limited to between 9:00 a.m. and 5:00 p.m. on Saturday. In residential zones and within 300 feet of a residential zone, construction activities are allowed from 9:00 a.m. to 5:00 p.m. only within the interior of the building with the doors and windows closed. No pier drilling or other extreme noise generating activities greater than 90 dBA are allowed on Saturday.

c. No construction is allowed on Sunday or federal holidays.

Construction activities include, but are not limited to, truck idling, moving equipment (including trucks, elevators, etc.) or materials, deliveries, and construction meetings held on-site in a non-enclosed area. Any construction activity proposed outside of the above days and hours for special activities (such as concrete pouring which may require more continuous amounts of time) shall be evaluated on a case-by-case basis by the City, with criteria including the urgency/emergency nature of the work, the proximity of residential or other sensitive uses, and a consideration of nearby residents'/occupants' preferences. The project applicant shall notify property owners and occupants located within 300 feet at least 14 calendar days prior to construction activity proposed outside of the above days/hours. When submitting a request to the City to allow construction activity outside of the above days/hours, the project applicant shall submit information concerning the type and duration of proposed construction activity and the draft public notice for City review and approval prior to distribution of the public notice.

When Required: During construction

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

27. Construction Noise

Requirement: The project applicant shall implement noise reduction measures to reduce noise impacts due to construction. Noise reduction measures include, but are not limited to, the following:

a. Equipment and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically-attenuating shields or shrouds) wherever feasible.

b. Except as provided herein, impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for project construction shall be hydraulically or electrically powered to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used, if such jackets are commercially available, and this could achieve a reduction of 5 dBA. Quieter procedures shall be used, such as drills rather than impact equipment, whenever such procedures are available and consistent with construction procedures.

c. Applicant shall use temporary power poles instead of generators where feasible.

d. Stationary noise sources shall be located as far from adjacent properties as possible, and they shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or use other measures as determined by the City to provide equivalent noise reduction.

e. The noisiest phases of construction shall be limited to less than 10 days at a time. Exceptions may be allowed if the City determines an extension is necessary and all available noise reduction controls are implemented.

When Required: During construction

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

28. Extreme Construction Noise

Construction Noise Management Plan Required

Requirement: Prior to any extreme noise generating construction activities (e.g., pier drilling, pile driving and other activities generating greater than 90dBA), the project applicant shall submit a Construction Noise Management Plan prepared by a qualified acoustical consultant for City review and approval that contains a set of site-specific noise attenuation measures to further reduce construction impacts associated with extreme noise generating activities. The project applicant shall implement the approved Plan during construction. Potential attenuation measures include, but are not limited to, the following:

i. Erect temporary plywood noise barriers around the construction site, particularly along on sites adjacent to residential buildings;

ii. Implement "quiet" pile driving technology (such as pre-drilling of piles, the use of more than one pile driver to shorten the total pile driving duration), where feasible, in consideration of geotechnical and structural requirements and conditions;

iii. Utilize noise control blankets on the building structure as the building is erected to reduce noise emission from the site;

iv. Evaluate the feasibility of noise control at the receivers by temporarily improving the noise reduction capability of adjacent buildings by the use of sound blankets for example and implement such measure if such measures are feasible and would noticeably reduce noise impacts; and

v. Monitor the effectiveness of noise attenuation measures by taking noise measurements.

When Required: Prior to approval of construction-related permit

Initial Approval: Bureau of Building

Monitoring/Inspection: Bureau of Building

Public Notification Required

Requirement: The project applicant shall notify property owners and occupants located within 300 feet of the construction activities at least 14 calendar days prior to commencing extreme noise generating activities. Prior to providing the notice, the project applicant shall submit to the City for review and approval the proposed type and duration of extreme noise generating activities and the proposed public notice. The public notice shall provide the estimated start and end dates of the extreme noise generating activities and describe noise attenuation measures to be implemented.

When Required: During construction

Initial Approval: Bureau of Building

Monitoring/Inspection: Bureau of Building

29. Extreme Construction Noise

Construction Noise Management Plan Required

Requirement: Prior to any extreme noise generating construction activities (e.g., pier drilling, pile driving and other activities generating greater than 90dBA), the project applicant shall submit a Construction Noise Management Plan prepared by a qualified acoustical consultant for City review and approval that contains a set of site-specific noise attenuation measures to further reduce

construction impacts associated with extreme noise generating activities. The project applicant shall implement the approved Plan during construction. Potential attenuation measures include, but are not limited to, the following:

i. Erect temporary plywood noise barriers around the construction site, particularly along on sites adjacent to residential buildings;

ii. Implement "quiet" pile driving technology (such as pre-drilling of piles, the use of more than one pile driver to shorten the total pile driving duration), where feasible, in consideration of geotechnical and structural requirements and conditions;

iii. Utilize noise control blankets on the building structure as the building is erected to reduce noise emission from the site;

iv. Evaluate the feasibility of noise control at the receivers by temporarily improving the noise reduction capability of adjacent buildings by the use of sound blankets for example and implement such measure if such measures are feasible and would noticeably reduce noise impacts; and

v. Monitor the effectiveness of noise attenuation measures by taking noise measurements.

When Required: Prior to approval of construction-related permit

Initial Approval: Bureau of Building

Monitoring/Inspection: Bureau of Building

Public Notification Required

Requirement: The project applicant shall notify property owners and occupants located within 300 feet of the construction activities at least 14 calendar days prior to commencing extreme noise generating activities. Prior to providing the notice, the project applicant shall submit to the City for review and approval the proposed type and duration of extreme noise generating activities and the proposed public notice. The public notice shall provide the estimated start and end dates of the extreme noise generating activities and describe noise attenuation measures to be implemented.

When Required: During construction

Initial Approval: Bureau of Building

Monitoring/Inspection: Bureau of Building

30. Construction Noise Complaints

Requirement: The project applicant shall submit to the City for review and approval a set of procedures for responding to and tracking complaints received pertaining to construction noise, and shall implement the procedures during construction. At a minimum, the procedures shall include:

a. Designation of an on-site construction complaint and enforcement manager for the project;

b. A large on-site sign near the public right-of-way containing permitted construction days/hours, complaint procedures, and phone numbers for the project complaint manager and City Code Enforcement unit;

c. Protocols for receiving, responding to, and tracking received complaints; and

d. Maintenance of a complaint log that records received complaints and how complaints were addressed, which shall be submitted to the City for review upon the City's request.

When Required: Prior to approval of construction-related permit

Initial Approval: Bureau of Building

Monitoring/Inspection: Bureau of Building

31. Operational Noise

Requirement: Noise levels from the project site after completion of the project (i.e., during project operation) shall comply with the performance standards of chapter 17.120 of the Oakland Planning Code and chapter 8.18 of the Oakland Municipal Code. If noise levels exceed these standards, the activity causing the noise shall be abated until appropriate noise reduction measures have been installed and compliance verified by the City.

When Required: Ongoing

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

32. Construction Activity in the Public Right-of-Way

Obstruction Permit Required

Requirement: The project applicant shall obtain an obstruction permit from the City prior to placing any temporary construction-related obstruction in the public right-of-way, including City streets and sidewalks.

When Required: Prior to approval of construction-related permit

Initial Approval: Bureau of Building

Monitoring/Inspection: Bureau of Building

Traffic Control Plan Required

Requirement: In the event of obstructions to vehicle or bicycle travel lanes, the project applicant shall submit a Traffic Control Plan to the City for review and approval prior to obtaining an obstruction permit. The project applicant shall submit evidence of City approval of the Traffic Control Plan with the application for an obstruction permit. The Traffic Control Plan shall contain a set of comprehensive traffic control measures for auto, transit, bicycle, and pedestrian detours, including detour signs if required, lane closure procedures, signs, cones for drivers, and designated construction access routes. The project applicant shall implement the approved Plan during construction.

When Required: Prior to approval of construction-related permit

Initial Approval Public Works Department, Transportation Services Division

Monitoring/Inspection: Bureau of Building

Repair of City Streets

Requirement: The project applicant shall repair any damage to the public right-of way, including streets and sidewalks caused by project construction at his/her expense within one week of the occurrence of the damage (or excessive wear), unless further damage/excessive wear may continue; in such case, repair shall occur prior to approval of the final inspection of the construction-related permit. All damage that is a threat to public health or safety shall be repaired immediately.

When Required: Prior to building permit final

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

33. Bicycle Parking

Requirement: The project applicant shall comply with the City of Oakland Bicycle Parking Requirements (chapter 17.118 of the Oakland Planning Code). The project drawings submitted for construction-related permits shall demonstrate compliance with the requirements.

When Required: Prior to approval of construction-related permit

Initial Approval: Bureau of Planning

Monitoring/Inspection: Bureau of Building

34. Construction and Demolition Waste Reduction and Recycling

Requirement: The project applicant shall comply with the City of Oakland Construction and Demolition Waste Reduction and Recycling Ordinance (chapter 15.34 of the Oakland Municipal Code) by submitting a Construction and Demolition Waste Reduction and Recycling Plan (WRRP) for City review and approval, and shall implement the approved WRRP. Projects subject to these requirements include all new construction, renovations/alterations/modifications with construction values of $50,000 or more (except R-3 type construction), and all demolition (including soft demolition) except demolition of type R-3 construction. The WRRP must specify the methods by which the project will divert construction and demolition debris waste from landfill disposal in accordance with current City requirements. The WRRP may be submitted electronically at www.greenhalosystems.com or manually at the City's Green Building Resource Center. Current standards, FAQs, and forms are available on the City's website and in the Green Building Resource Center.

When Required: Prior to approval of construction-related permit

Initial Approval: Public Works Department, Environmental Services Division

Monitoring/Inspection: Public Works Department, Environmental Services Division

35. Underground Utilities

Requirement: The project applicant shall place underground all new utilities serving the project and under the control of the project applicant and the City, including all new gas, electric, cable, and telephone facilities, fire alarm conduits, street light wiring, and other wiring, conduits, and similar facilities. The new facilities shall be placed underground along the project's street frontage and from the project structures to the point of service. Utilities under the control of other agencies, such as PG&E, shall be placed underground if feasible. All utilities shall be installed in accordance with standard specifications of the serving utilities.

When Required: During construction

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

36. Recycling Collection and Storage Space

Requirement: The project applicant shall comply with the City of Oakland Recycling Space Allocation Ordinance (chapter 17.118 of the Oakland Planning Code). The project drawings submitted for construction-related permits shall contain recycling collection and storage areas in compliance with the Ordinance. For residential projects, at least two cubic feet of storage and collection space per residential unit is required, with a minimum of ten cubic feet. For nonresidential projects, at least two cubic feet of storage and collection space per 1,000 square feet of building floor area is required, with a minimum of ten cubic feet.

When Required: Prior to approval of construction-related permit

Initial Approval: Bureau of Planning

Monitoring/Inspection: Bureau of Building

37. Green Building Requirements

Compliance with Green Building Requirements During Plan-Check

Requirement: The project applic ant shall comply with the requirements of the California Green Building Standards (CALGreen) mandatory measures and the applicable requirements of the City of Oakland Green Building Ordinance (chapter 18.02 of the Oakland Municipal Code).

i. The following information shall be submitted to the City for review and approval with the application for a building permit:
   - Documentation showing compliance with Title 24 of the current version of the California Building Energy Efficiency Standards.
   - Completed copy of the final green building checklist approved during the review of the Planning and Zoning permit.
   - Copy of the Unreasonable Hardship Exemption, if granted, during the review of the Planning and Zoning permit.
   - Permit plans that show, in general notes, detailed design drawings, and specifications as necessary, compliance with the items listed in subsection (ii) below.
   - Copy of the signed statement by the Green Building Certifier approved during the review of the Planning and Zoning permit that the project complied with the requirements of the Green Building Ordinance.
   - Signed statement by the Green Building Certifier that the project still complies with the requirements of the Green Building Ordinance, unless an Unreasonable Hardship Exemption was granted during the review of the Planning and Zoning permit.
   - Other documentation as deemed necessary by the City to demonstrate compliance with the Green Building Ordinance.

ii. The set of plans in subsection (i) shall demonstrate compliance with the following: CALGreen mandatory measures.
   - All green building points identified on the checklist approved during review of the Planning and Zoning permit, unless a Request for Revision Plan-check application is submitted and approved by the Bureau of Planning that shows the previously approved points that will be eliminated or substituted.
   - The required green building point minimums in the appropriate credit categories.

When Required: Prior to approval of construction-related permit

Initial Approval: Bureau of Building

Monitoring/Inspection: N/A

Compliance with Green Building Requirements During Construction

Requirement: The project applicant shall comply with the applicable requirements of CALGreen and the Oakland Green Building Ordinance during construction of the project.

The following information shall be submitted to the City for review and approval:

i. Completed copies of the green building checklists approved during the review of the Planning and Zoning permit and during the review of the building permit.

ii. Signed statement(s) by the Green Building Certifier during all relevant phases of construction that the project complies with the requirements of the Green Building Ordinance.

iii. Other documentation as deemed necessary by the City to demonstrate compliance with the Green Building Ordinance.

When Required: During construction

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

Compliance with Green Building Requirements After Construction

Requirement: Prior to the finaling the Building Permit, the Green Building Certifier shall submit the appropriate documentation to City staff and attain the minimum required point level.

When Required: Prior to Final Approval

Initial Approval: Bureau of Planning

Monitoring/Inspection: Bureau of Building

38. Sanitary Sewer System

Requirement: The project applicant shall prepare and submit a Sanitary Sewer Impact Analysis to the City for review and approval in accordance with the City of Oakland Sanitary Sewer Design Guidelines. The Impact Analysis shall include an estimate of pre-project and post-project wastewater flow from the project site. In the event that the Impact Analysis indicates that the net increase in project wastewater flow exceeds City-projected increases in wastewater flow in the sanitary sewer system, the project applicant shall pay the Sanitary Sewer Impact Fee in accordance with the City's Master Fee Schedule for funding improvements to the sanitary sewer system.

When Required: Prior to approval of construction-related permit

Initial Approval: Public Works Department, Department of Engineering and Construction

Monitoring/Inspection: N/A

39. Storm Drain System

Requirement: The project storm drainage system shall be designed in accordance with the City of Oakland's Storm Drainage Design Guidelines. To the maximum extent practicable, peak stormwater runoff from the project site shall be reduced by at least 25 percent compared to the pre-project condition.

When Required: Prior to approval of construction-related permit

Initial Approval: Bureau of Building

Monitoring/Inspection: Bureau of Building

Site Specific Conditions of Approval

40. Encroachment Permit

Prior to issuance of building permit.

The applicant shall obtain any encroachment permits, waiver of damages or other approvals required by the Bureau of Building, for any privately constructed public improvements, or any permanent or temporary elements located in the public right of way.

41. Window and Door Details.

Prior to issuance of building permit.

The applicant shall submit to the Planning and Zoning Division for review and approval, a window and door schedule, including cross-sections and elevations, and final architectural details of the front and side elevations.

42. Meter Shielding.
Prior to issuance of building permits.
The applicant shall submit for review and approval by the Planning and Zoning Division, plans showing the location of any and all utility meters, transformers, and the like located within a box set within the building, located on a non-street facing elevation, or screened from view from any public right of way.

43. Street Trees.
Prior to issuance of building permit.
The applicant shall provide 6 street trees in front of the building with review and approval of species, size at time of planting, and placement in the right-of-way, subject to review and approval by the Planning and Building Department.

44. Front yard fencing
Prior to issuance of building permit
Any proposed front yard fencing, fronting Howe Street, is subject to final review and approval by the Planning Department for appropriates of materials height and opacity of fencing.

APPROVED BY:
City Planning Commission:_____(June 7, 2017)_____(vote)

Howe Street Mini-Lot Development

Existing 4430 & 4440 • New 4428, 4432, 4436, 4438 & 4448 Howe Street

Scope of Work:

4430 • EXISTING FOUR BEDROOM, THREE AND ONE HALF BATH WITH LIVING / DINING / KITCHEN / LAUNDRY AND ONE BEDROOM W/ BATHROOM ON LOWER FLOOR.

4428 & 4432 • TWO, NEW THREE STORY HOMES EACH WITH FOUR BEDROOMS, THREE AND ONE HALF BATHS, FAMILY ROOM ON GRADE WITH REAR YARD, LAUNDRY, LIVING / DINING / KITCHEN AT THIRD FLOOR WITH LARGE ARBOR COVERED ROOF TERRACE. HIGH EFFICIENCY HEATING AND ON-DEMAND WATER HEATER.

4436 & 4438 • TWO, NEW THREE STORY HOMES EACH WITH FOUR BEDROOMS, THREE AND ONE HALF BATHS; FAMILY ROOM & LAUNDRY ON GRADE WITH REAR YARD, LIVING / DINING / KITCHEN AT THIRD FLOOR WITH LARGE ARBOR COVERED ROOF TERRACE. HIGH EFFICIENCY HEATING AND ON-DEMAND WATER HEATER.

4440 • EXISTING FOUR BEDROOM, THREE BATH HOME WITH ALL LIVING AREA ON MAIN FLOOR INCLUDING / FAMILY ROOM / DINING / KITCHEN / LAUNDRY; AND THREE BEDROOMS, TWO BATHROOMS, & STORAGE ROOM ON LOWER FLOOR.

4448 • NEW THREE STORY HOME WITH FOUR BEDROOMS, THREE AND ONE HALF BATHS, ONE BEDROOM & FAMILY ROOM ON GRADE WITH SMALL PATIO, LIVING / BEDROOMS & LAUNDRY AT UPPER FLOOR. HIGH EFFICIENCY HEATING AND ON-DEMAND WATHER HEATER.

PROJECT & LOT INFORMATION

ADDRESSES	Existing 4430 & 4440, New 4428, 4432, 4436, 4438 & 4448 (Formerly 4446)
ASSESSOR'S PARCEL NO.	013-1128-018-00, 013-1128-019-00, & 013-1128-020-00
ZONE	RM-2

UNITS & PARKING	EXISTING	PROPOSED	PERMITTED/ REQUIRED
NUMBER OF DWELLING UNITS	3	7	
PARKING SPACES	3	13	1 Car per unit

YARDS AND HEIGHT		EXISTING	PROPOSED	PERMITTED/ REQUIRED
FRONT YARD SETBACK	4430	10'-0"±	No Change	7'-0"
SIDE YARD SETBACKS				
WEST SIDE YARD SETBACK	4430	18'-4"±	No Change	5'-0"
	4428	N/A	5'-0"	5'-0"
EAST SIDE YARD SETBACK	4430	7'-5"±	No Change	5'-0"
	4432	N/A	10'-0"	5'-0"
REAR YARD SETBACK	4430	N/A	No Change	
	4428	N/A	24'-0"	15'-0"
	4432	N/A	15'-0"	15'-0"
6 FT. PROVIDED BETWEEN HOUSES 4428 & 4432				
FRONT YARD SETBACK	4440	7'-6"±	No Change	10'-0"
SIDE YARD SETBACKS				
WEST SIDE YARD SETBACK	4440	16'-10"	No Change	5'-0"
	4436	N/A	10'-0"	5'-0"
	4438	N/A	No Change	
	4448	N/A	No Change	
EAST SIDE YARD SETBACK	4440	N/A	No Change	
	4436	N/A	No Change	5'-0"
	4438	N/A	5'-0"	5'-0"
	4448	N/A	5'-0"	5'-0"
REAR YARD SETBACK	4440	N/A	No Change	
	4436	N/A	24'-0"	15'-0"
	4438	N/A	15'-0"	15'-0"
	4448	N/A	No Change	
6 FT. PROVIDED BETWEEN HOUSES 4436 & 4438				
11 FT. PROVIDED BETWEEN HOUSES 4440 & 4448				
BUILDING HEIGHT				
NUMBER OF STORIES	4430	2	No Change	3
	4428 & 4432	N/A	3	3
BUILDING HEIGHT	4430	22'-9"±	No Change	25'/30'
	4428	N/A	28'-11"	25'/30'
	4432	N/A	30'-0"	25'/30'
NUMBER OF STORIES	4440	2	No Change	3
	4436 & 4438		3	3
	4448		3	3
BUILDING HEIGHT	4440	29'-10"±	No Change	25'/30'
	4436		29'-10"	25'/30'
	4438		30'-0"	25'/30'
	4448		30'-0"	

AREAS		EXISTING		PROPOSED		PERMITTED/ REQUIRED
LOT AREAS		8,500	SF	_		
		10,500	SF			
		19,000	SF			
FLOOR AREA - RESIDENTIAL						
4430	MAIN FLOOR	1301				
	LOWER FLOOR	1279				
		2580	SF			
4428	FIRST FLOOR			910		
	SECOND FLOOR			945		
	THIRD FLOOR			775		
				2630	SF	
4432	FIRST FLOOR			910		
	SECOND FLOOR			945		
	THIRD FLOOR			822		
				2677	SF	
4440	MAIN FLOOR	991				
	LOWER FLOOR	936				
	TERRACE	181				
		2108	SF			
4436	FIRST FLOOR			910		
	SECOND FLOOR			945		
	THIRD FLOOR			795		
				2650	SF	
4438	FIRST FLOOR			910		
	SECOND FLOOR			945		
	THIRD FLOOR			776		
				2631	SF	
4448	LOWER FLOOR			884		
	MAIN FLOOR	817		827		
	UPPER FLOOR			913		
		817		2624	SF	
Total Footprint		3313		5802		
LOT COVERAGE		17.4%		30.5%		40%

Project Information:

BUILDING CODES:
2016 California Building Code
2016 California Electrical Code
2016 California Plumbing Code
2016 California Mechanical Code
2016 California Fire Code
2016 California Structural Code
2016 California Green Building Standards Code
All codes as further modified by the City of Oakland

BUILDING INFORMATION:
OCCUPANCY: R-3
BUILDING TYPE: VB (non fire-rated construction)
SPRINKLERED: NO - 4430 & 4440
YES - 4428, 4432,4436,4438, 4448

Parties Involved:

OWNER: GC CARB LLC & 4430 HOWE LLC
1480 Moraga Road Ste. 1173
Moraga, CA 94556
(925) 268-8048

ARCHITECT / LANDSCAPE: JARVIS ARCHITECTS
5278 College Avenue
Oakland, CA 94618
Contact: Glen or Lisa
glenjarvis@jarvisarchitects.com
ltrujillo@jarvisarchitects.com
Contact: Cindy - Landscape
cchan@jarvisarchitects.com
(510) 654-6755
(510) 654-3424 fax

CIVIL / SURVEYOR: PACIFIC ENGINEERING & CONSTRUCTION, INC.
35 Stillman Street, Suite 126
San Francisco, CA 94107
Contact: Mark
amwaldman@sbcglobal.net
(415) 974-1853

GREEN POINT RATER: Building Energy Compliance Testing
George Matthews
PO BOX 4633
Walnut Creek, CA 94597
Contact: George
george@bect.us
(510) 520-4443

Sheet Index

Issued For: Design Review

job address
Mini-Lot Development
GC CARB & 4430 Howe St LLC
4428-4448 Howe St.
Oakland, California 94618

date
28 March 2017

drawn by
Lt

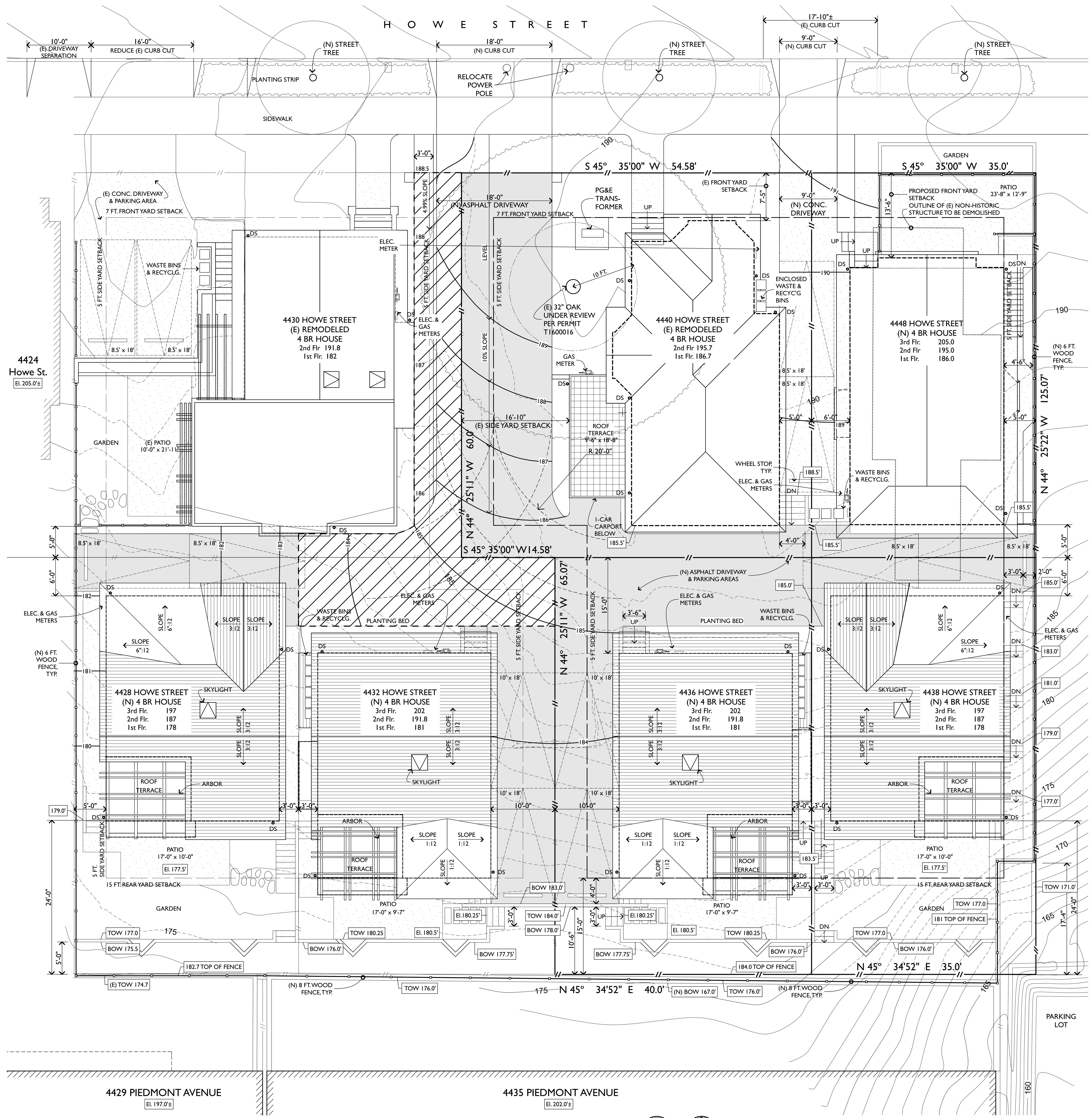
Jarvis architects
5278 College Avenue (510) 654-6755
Oakland, California
94618-1415 fax: 654-3424

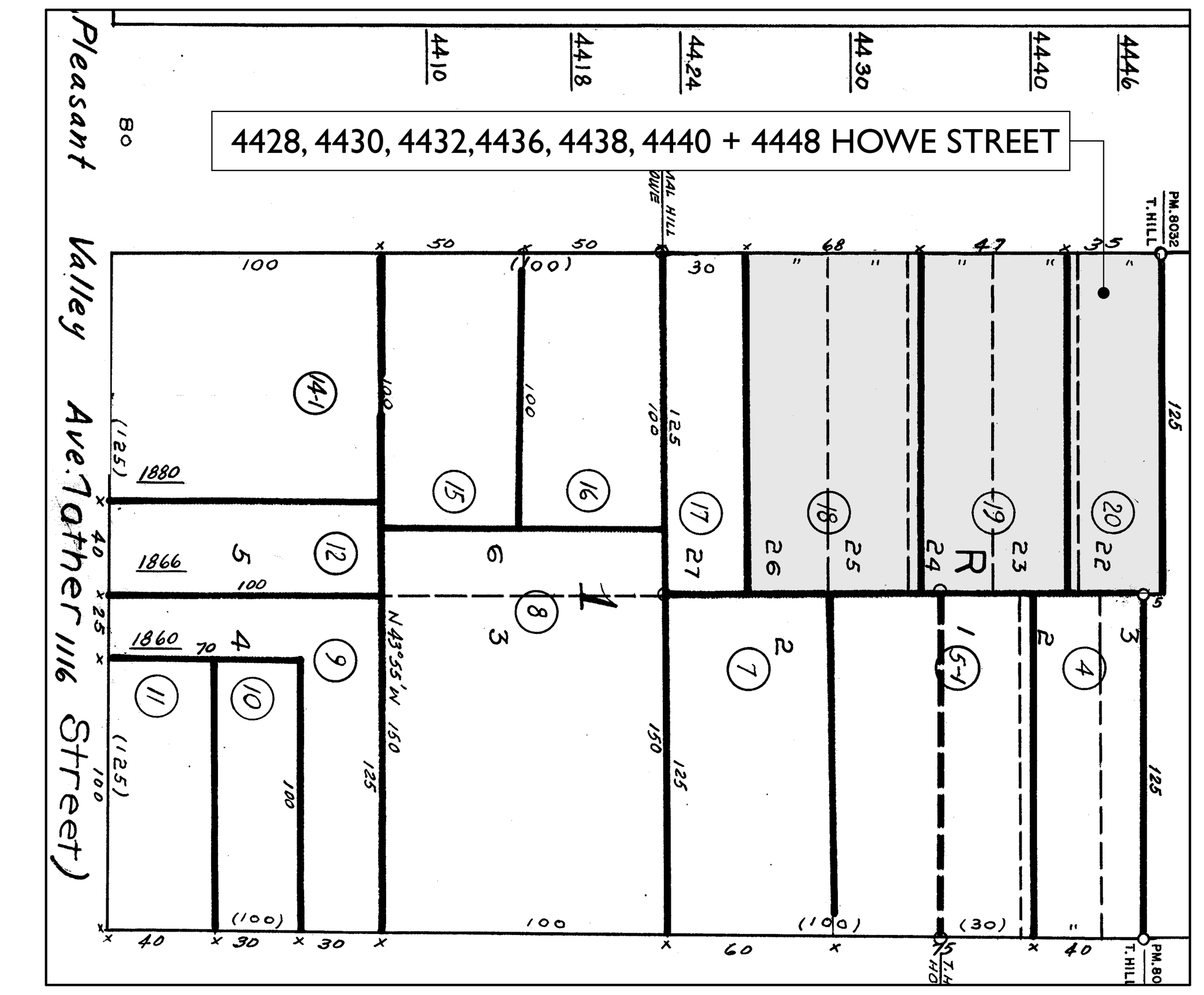
drawing title
Cover

sheet
1

job number
1556

If the bar below measures one inch drawing is to scale
0 1"





Parcel Map

Site / Roof Plan

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

NORTH REF. NORTH

ACCESS EASEMENT ON 4430 & 4432 HOWE ST.

If the bar below measures one inch drawing is to scale
0 1"

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job address
Mini-Lot Development
GC CARB & 4430 Howe St LLC
4428-4448 Howe St.
Oakland, California 94618

date
28 March 2017

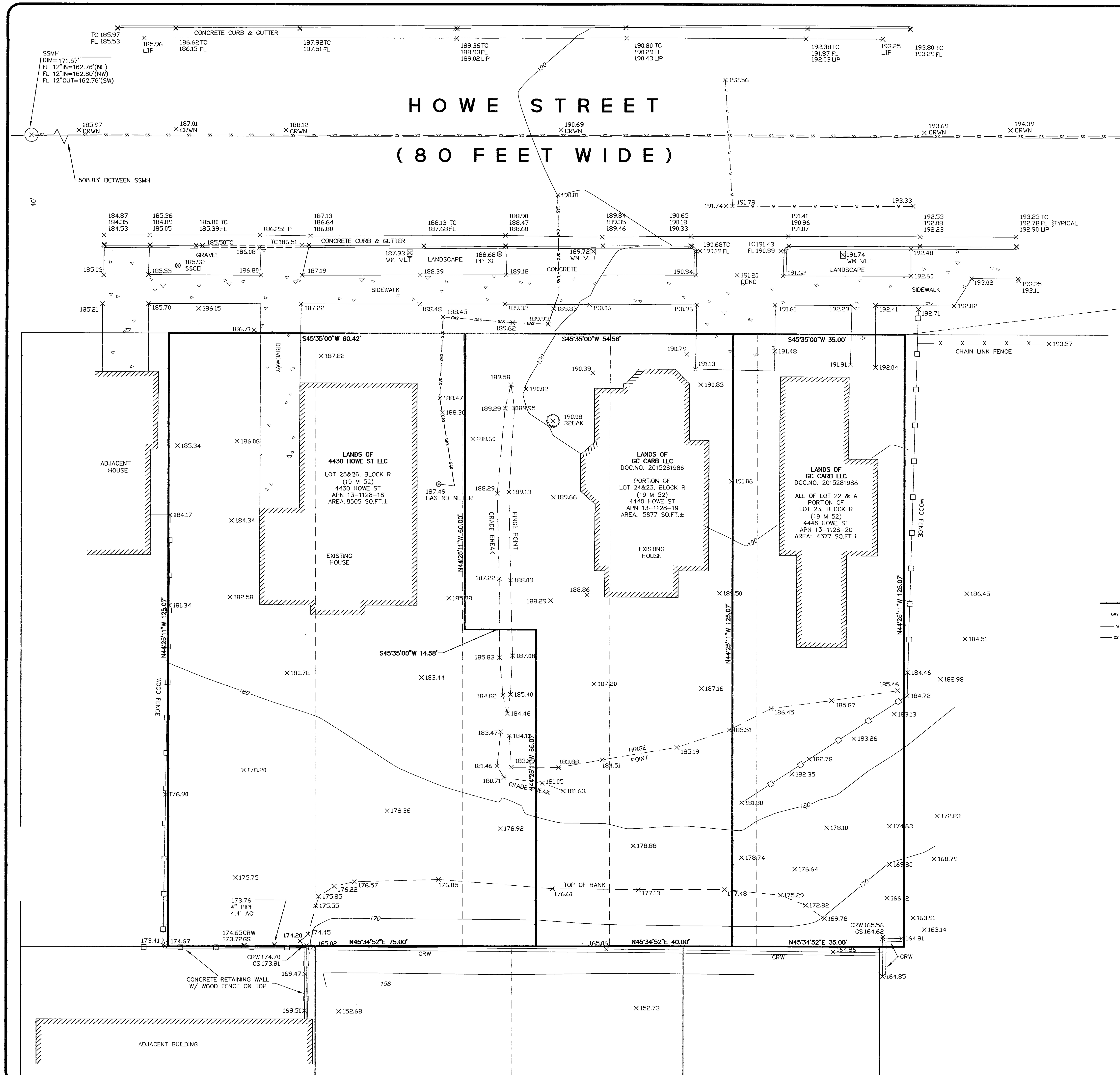
drawn by
Lt

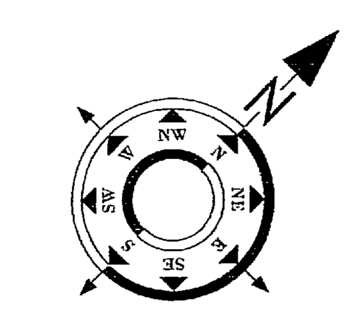
Jarvis architects
5278 College Avenue (510) 654-6755
Oakland, California
94618-1415 fax: 654-3424

drawing title
Site & Roof Plan

sheet
2

job number
1556





GRAPHIC SCALE

(IN FEET)
1 inch = 10 ft.

LEGEND:

AG	ABOVE GROUND
CONC	CONCRETE
CRW	CONCRETE RETAINING WALL
CRWN	CROWN
FL	FLOWLINE
GS	GROUND SHOT
JP	JOINT POLE
SL	STREET LIGHT
SSCO	SANITARY SEWER CLEAN OUT
SSMH	SANITARY SEWER MAN HOLE
TC	TOP OF CURB
WM VLT	WATER METER VAULT

320AK INDICATES TREE SIZE AND TYPE

INDICATES BOUNDARY LINE

INDICATES UNDERGROUND GAS LINE

INDICATES UNDERGROUND WATER LINE

INDICATES UNDERGROUND SANITARY SEWER LINE

NOTES:

1. ALL DISTANCES ARE IN FEET AND DECIMALS THEREOF.
2. THE DATE OF THE FIELD SURVEY WAS AUGUST 08, 2016.
3. ONLY A SIGNATURE IN BLUE INK INDICATES A TRUE AND ORIGINAL COPY.

BENCHMARK:

ELEVATIONS BASED ON SET TBM BY CITY OF OAKLAND, CUT SQUARE PER BOOK 57, PG 10, ON PIEDMONT AVENUE
ELEVATION – 153.06 (NGVD 29)

BASIS OF BEARINGS

THE BEARING NORTH 45°35'00" EAST, BETWEEN THE FOUND BRASS DISCS FOUND IN THE MONUMENT LINE OF HOWE STREET, AS SAID DISCS AND STREET ARE SHOWN ON PARCEL MAP 5027, FILED FOR RECORD ON JANUARY 23, 1987 IN BOOK 165 OF PARCEL MAPS AT PAGES 69 AND 70, IN THE OFFICE OF THE RECORDER OF ALAMEDA COUNTY, WAS TAKEN AS THE BASIS OF ALL BEARINGS SHOWN ON THIS MAP.

UTILITY NOTE:

UTILITIES SHOWN ON THIS SURVEY ARE BASED ON SURFACE OBSERVATIONS. NO WARRANTIES ARE EXPRESSED OR IMPLIED CONCERNING THE EXISTENCE, SIZE, DEPTH, CONDITION, CAPACITY, OR LOCATION OR ANY UTILITY EXISTING ON THE SITE, WHETHER PRIVATE, MUNICIPAL, OR PUBLIC OWNED.

CONTRACTOR SHALL VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION

TREE NOTE:

TREE TYPES, DRIP LINES, AND SIZE ARE FOR INFORMATIONAL PURPOSES ONLY. ACTUAL TYPE OF TREE, TREE SHAPE, AND GROVE CONFIGURATION MAY VARY FROM ACTUAL FIELD CONDITIONS. NO WARRANTIES ARE IMPLIED IN REGARD TO TREE INFORMATION.

SURVEYOR'S STATEMENT

THIS SURVEY WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION.

JACK M. SMITH, P.L.S. #7539
LICENSE EXPIRES: 12-31-2017

LICENSED LAND SURVEYOR JACK M. SMITH L.S. 7539 STATE OF CALIFORNIA

8/29/2016
DATE

Pacific Engineering & Construction, Inc.
Consulting Engineers & Contractors
35 Stillman Street, Suite 126, San Francisco, CA 94107
Phone/Fax: (415) 974-1853 Cell phone: (415) 516-8545
email: amwaldman@sbcglobal.net

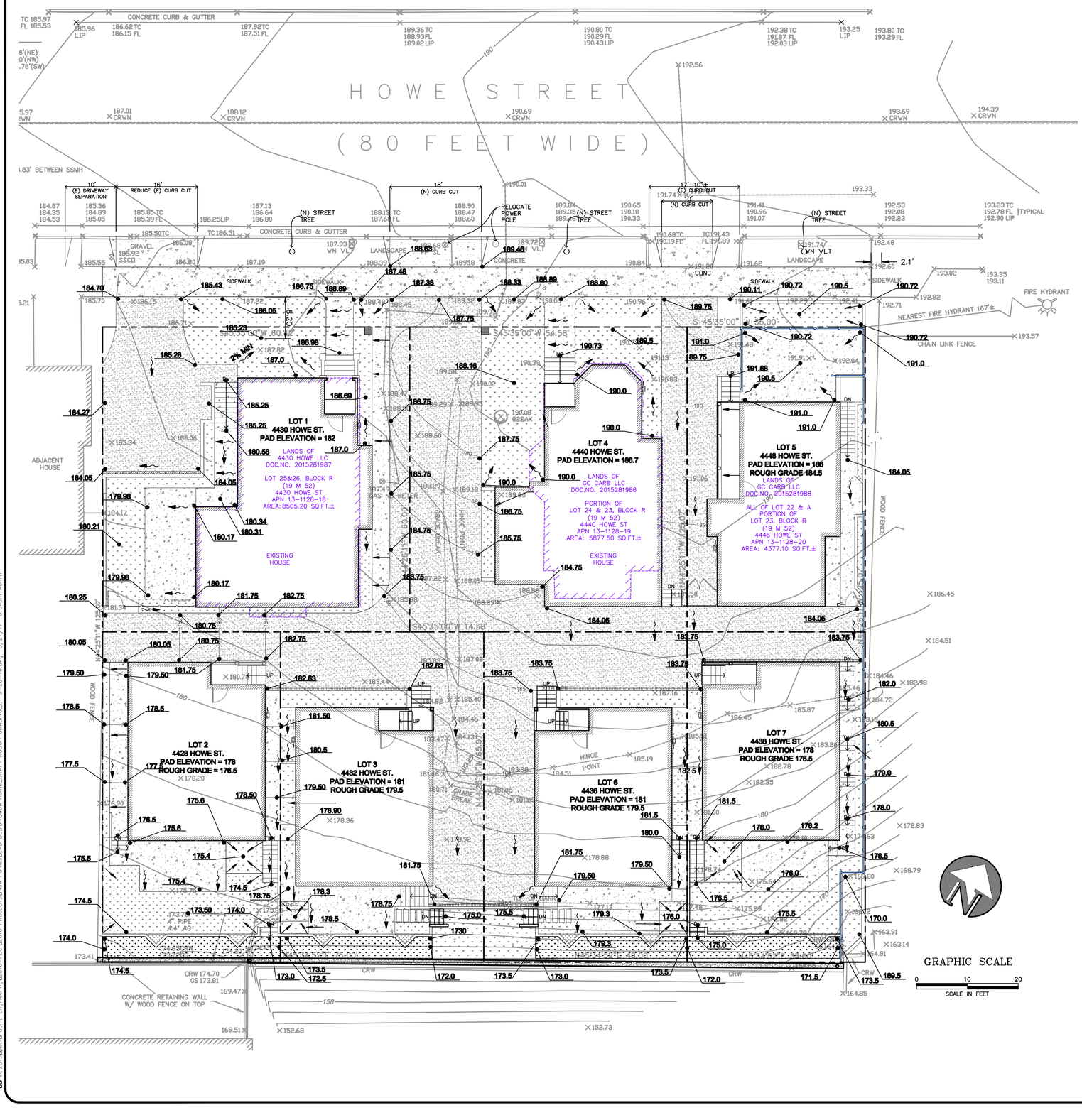
TOPOGRAPHIC SURVEY

4430, 4440 & 4446 HOWE STREET

OAKLAND ALAMEDA COUNTY CALIFORNIA

JOB NUMBER	4761-01
DRAWN BY	PLD
DRAWING NAME	4761-01TOPO
CHECKED BY	JMS
SHEET NO.	1 OF 1
DATE	08/18/2016

REVISIONS



VEGETATED SWALE MAINTENANCE

1. A MAINTENANCE AGREEMENT SHALL BE PROVIDED.

2. THE MAINTENANCE AGREEMENT SHALL STATE THE PARTIES RESPONSIBILITY FOR MAINTENANCE AND UPKEEP.

3. MOW AND IRRIGATE DURING DRY WEATHER TO THE EXTENT NECESSARY TO KEEP VEGETATION ALIVE. WHERE 6-INCH HIGH GRASSES ARE USED, THE GRASS HEIGHT SHALL BE AT LEAST 3 INCHES AFTER MOWING. WHERE MOWED GRASSES ARE SHOWN, THE GRASS HEIGHT SHALL BE MOWED WHEN THE HEIGHT EXCEEDS 3 INCHES.

4. REMOVE OBSTRUCTIONS AND TRASH FROM VEGETATED SWALE.

5. THE USE OF PESTICIDES AND QUICK-RELEASE SYNTHETIC FERTILIZERS SHALL BE MINIMIZED, AND THE PRINCIPLES OF INTEGRATED PEST MANAGEMENT (IPM) FOLLOWED. CHECK WITH THE LOCAL JURISDICTION FOR ANY LOCAL POLICIES REGARDING THE USE OF PESTICIDES AND FERTILIZERS.

6. VEGETATED SWALES SHALL BE INSPECTED AND MAINTAINED MONTHLY TO REVIEW:
   A. OBSTRUCTIONS AND TRASH.
   B. PONDED FLOW IS DRAINED WITHIN FIVE DAYS AFTER A RAINFALL EVENT.
   C. CONDITION OF GRASSES.
   D. IF PONDING IS OBSERVED, GRADING WILL BE REQUIRED TO RESTORE POSITIVE DRAINAGE.
   E. IF SIGNIFICANT SEDIMENTATION OCCURS BLOCKING FLOWS IN THE SWALE, SEDIMENTATION SHALL BE REMOVED AND SWALE SHALL BE REPLANTED.

INFILTRATION PLANTER MAINTENANCE

1. MAINTAIN VEGETATION AND IRRIGATION SYSTEM; INSPECT PERIODICALLY AND AFTER STORMS TO ENSURE STRUCTURAL INTEGRITY AND THAT PLANTER HAS NOT CLOGGED.

2. THE USE OF PESTICIDES AND QUICK-RELEASE SYNTHETIC FERTILIZERS SHALL BE MINIMIZED, AND THE PRINCIPLES OF INTEGRATED PEST MANAGEMENT (IPM) FOLLOWED. CHECK WITH THE LOCAL JURISDICTION FOR ANY LOCAL POLICIES REGARDING THE USE OF PESTICIDES AND FERTILIZERS.

BIORETENTION AREA MAINTENANCE

1. BIORETENTION AREAS SHALL BE INSPECTED MONTHLY FOR:
   A. OBSTRUCTIONS AND TRASH.
   B. PONDED WATER. IF PONDED WATER IS OBSERVED, THE SURFACE SOILS SHALL BE REMOVED AND REPLACED WITH SAND.

2. THE USE OF PESTICIDES AND QUICK-RELEASE SYNTHETIC FERTILIZERS SHALL BE MINIMIZED, AND THE PRINCIPLES OF INTEGRATED PEST MANAGEMENT (IPM) FOLLOWED. CHECK WITH THE LOCAL JURISDICTION FOR ANY LOCAL POLICIES REGARDING THE USE OF PESTICIDES AND FERTILIZERS.

3. SOILS AND PLANTINGS MUST BE MAINTAINED, INCLUDING ROUTINE PRUNING, REPLENISHMENT OF MULCH, AND WEEDING.

4. EROSION AT INFLOW POINTS MUST BE REPAIRED.

5. 18" DEPTH "LOAMY SAND" SOIL MIX WITH MINIMUM LONG-TERM PERCOLATION RATE OF 5"/HOUR.

6. PERFORATED PIPE (PVC SDR 35 OR APPROVED EQUIVALENT) UNDERDRAIN BEDDED IN "CLASS 2 PERM" WITH CONNECTION AND SUFFICIENT HEAD TO STORM DRAIN OR DISCHARGE POINT (EXCEPT IN "A" OR "B" SOILS).

7. WHEN EXCAVATING, AVOID SMEARING OF THE SOILS ON BOTTOM AND SIDE SLOPES. MINIMIZE COMPACTION OF NATIVE SOILS AND "RIP" SOILS IF CLAYEY AND/OR COMPACTED. PROTECT THE AREA FROM CONSTRUCTION SITE RUNOFF.

INITIAL STATEMENT OF THE ENGINEER

I have been retained by Mr. Hector Krauss (Applicant) to be in responsible charge of the grading work at property referenced above. I will assume full responsibility, as responsibility is defined in Section 15.04.660 of the Oakland Municipal Code, for carrying out the following to the best of my knowledge and ability:

a. Assuring that testing and inspection required for the work in progress and the completed work shall be accomplished in a timely and professional manner to determine whether all the work is being/was done in accordance with plans, schedule and specifications approved by the Building Official.

b. Notifying the Applicant, verbally and in writing (with a copy to the Building Official), of any work not being performed in accordance with the approved plans, schedule and specifications.

c. Notifying the Applicant, verbally and in writing (with a copy to the Building Official), of any work not meeting the requirements of the approved plans and specifications.

d. Notifying the Applicant, verbally and in writing, of the modifications(s) required in his performance and the necessary corrective measures to be taken to cure all deficiencies.

e. Submitting an amended grading plan (through the Applicant) to the Building Official for his review and approval for any significant changes caused by unforeseen conditions, along with a report setting forth the reasons for these changes and the recommended changes to the improvement plans necessitated by the amendments to the grading plan.

f. Notifying the Applicant, verbally and in writing (with a copy to the Building Official), of any portion of the grading work affected by the amended plans and shall recommend whether or not the Applicant should proceed with the work before the amended plans are approved by the Building Official.

g. Submitting in a timely manner upon the Applicant's satisfactory completion of the work under the permit, a Statement of Completion with the results of all tests and inspections attached thereto.

h. Stating in writing, along with the Statement of Completion, that the interim erosion control and sediment control measures appear to be adequate if properly maintained until the permanent erosion control measures are fully established, if any are required.

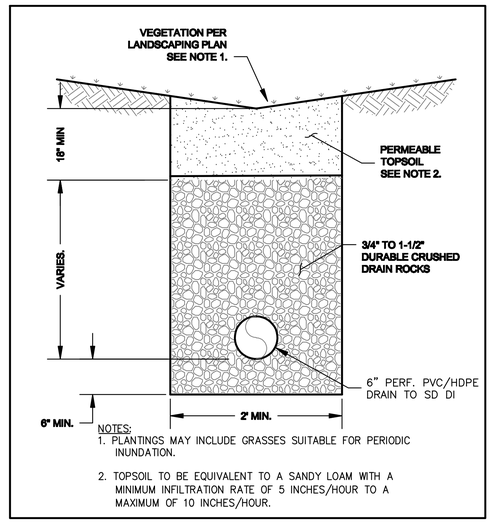
If my services on the job are terminated, I will, at said time of termination, submit to the Building Official a Statement of Partial Completion addressing the progress and conditions of all of the applicable items above and attach thereto the results of such inspections and tests which have been completed.

Signed:

A. Mark Waldman

(Registered Civil Engineer)

License No. 38905 Expiration, 3/31/2019



NOTES:
1. PLANTINGS MAY INCLUDE GRASSES SUITABLE FOR PERIODIC INUNDATION.
2. TOPSOIL TO BE EQUIVALENT TO A SANDY LOAM WITH A MINIMUM INFILTRATION RATE OF 5 INCHES/HOUR TO A MAXIMUM OF 10 INCHES/HOUR.

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REGISTERED PROFESSIONAL ENGINEER ALAN MARK WALDMAN No. 38905 Exp. 3/31/19 CIVIL STATE OF CALIFORNIA

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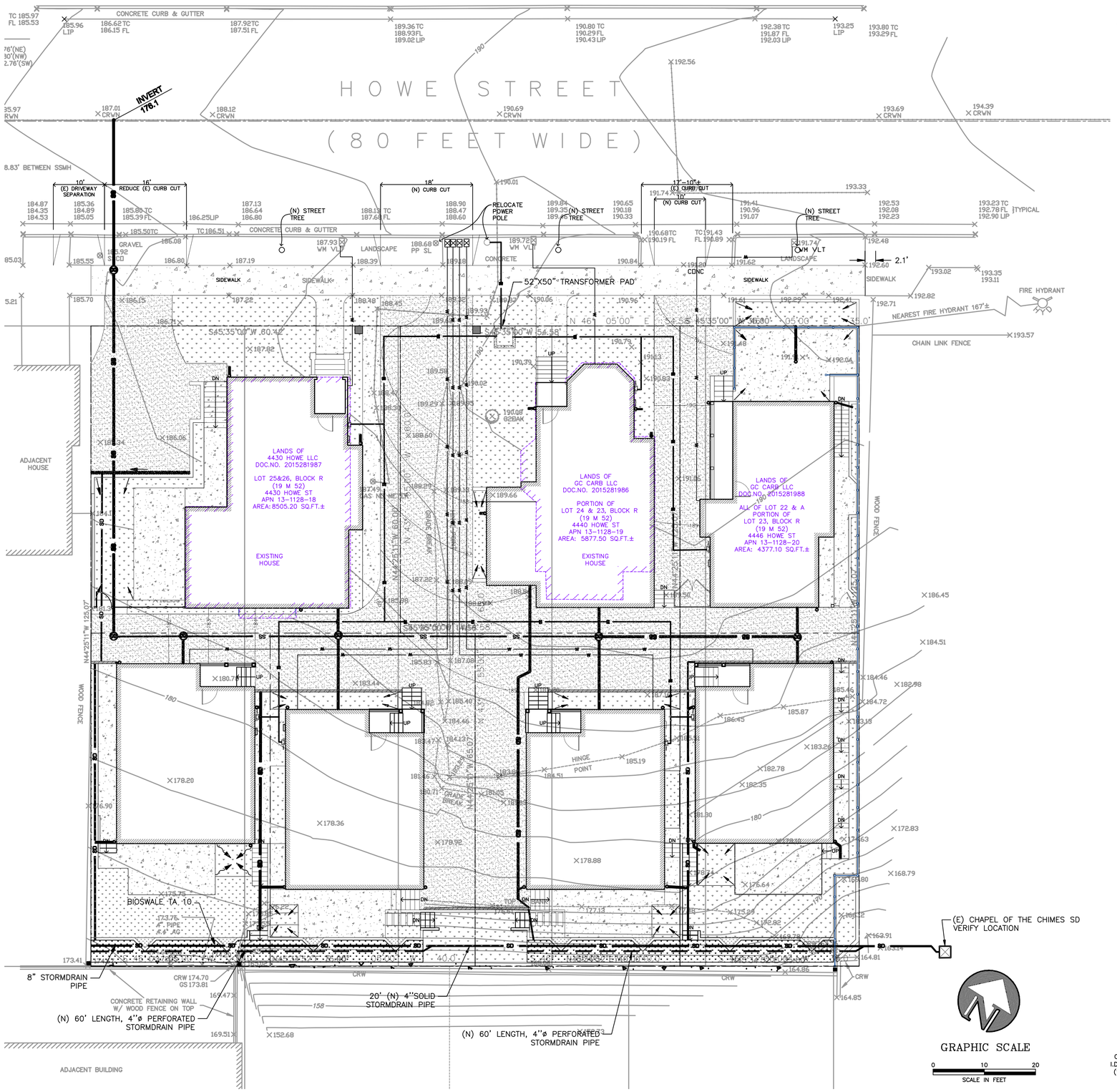
4430 HOWE, LLC & GC CARB, LLC
4428 - 4448 HOWE STREET, OAKLAND, CA 94618
CIVIL GRADING PLAN

REVISIONS	JOB NUMBER	DRAWN BY	DRAWING NAME	SHEET NO.
		AMA	WOW HOME_CIVIL.DWG	C.1
		CHECKED BY	AMW	
		DATE	MARCH 2017	



GENERAL NOTES FOR CONSTRUCTION

1. EXCESS EXCAVATED MATERIAL SHALL BE EXPORTED FROM THE PROJECT SITE VIA HAUL ROUTES ESTABLISHED BY CITY, COUNTY AND STATE RULES AND REGULATIONS.

2. THE CONTRACTOR'S ATTENTION IS DIRECTED TO EXISTING WATER, SANITARY SEWER, GAS, LECTRICAL, AND TELEPHONE FACILITIES WHICH MUST REMAIN FUNCTIONAL THROUGHOUT THE CONSTRUCTION ACTIVITIES. CARE SHOULD BE TAKEN TO PREVENT DAMAGING SUCH UTILITIES DURING TRENCHING OPERATIONS. SHOULD ANY REPAIRS OR RELOCATION OF SAID UTILITIES BE NECESSARY DUE TO CONSTRUCTION ACTIVITY, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE OWNER'S REPRESENTATIVE ON SITE, TAKE ANY NECESSARY SAFETY MEASURES AND COMPLETE REPAIRS IN A TIMELY MANNER.

3. THE CONTRACTOR SHALL FIELD VERIFY ALL FINALL PIPELINE ALIGNMENTS BASED ON POTHOLING INFORMATION DEVELOPED BY THE CONTRACTOR AND ON THE SURFACE MARKING OF ADJACENT AND CROSSING UTILITIES. NO FINAL ALIGNMENT AND INVERT DECISIONS SHALL BE MADE UNTIL ALL UTILITIES HAVE BEEN MARKED AND POTHOLED TO THE ENGINEER'S SATISFACTION.

4. WHEN CONNECTIONS ARE MADE TO ANY EXISTING PIPE OR OTHER APPURTENANCES THE ACTUAL ELEVATION OR POSITION OF THE PIPE CANNOT BE DETERMINED WITHOUT EXCAVATION, THE CONTRACTOR SHALL EXCAVATE AND EXPOSE THE EXISTING FACILITY BEFORE TRENCHING FOR NEW PIPE AND MANHOLE. THE EXISTING FACILITY SHALL BE INSPECTED BEFORE THE CONNECTION IS MADE. AS DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL ALSO POTHOLE ALONG THE PROPOSED ALIGNMENT OF THE NEW PIPELINE. THE LOCATIONS OF ADJACENT AND PROBABLE CONFLICT WITH UTILITIES PRIOR TO FINAL CONSTRUCTION STAKING.

5. EXCAVATED NATIVE SOIL MAY BE USED AS BACKFILL UPON APPROVAL BY ENGINEER.

6. CONTRACTOR SHALL REPLACE ALL DAMAGED TURF PLANTING AND IRRIGATION, ETC. THAT MAY BE DAMAGED DURING TRENCHING AND EXCAVATION WORK.

7. CONTRACTOR SHALL REPLACE ALL ASPHALT AND CONCRETE PAVING DAMAGED DURING PERFORMANCE OF THE WORK.

ADDITIONAL UTILITY NOTES

1. ALL WORK SHALL BE IN CONFORMANCE WITH THE CITY OF OAKLAND UNIFORM CONSTRUCTION STANDARDS.

2. FITTING, PIPE JOINTS, VALVE BOXES, COUPLINGS, AND DETECTOR CHECK VALVES SHALL BE TYPE OF APPROVED BY CITY OF OAKLAND OF PUBLIC WORKS.

3. ALL FERROUS METAL PIPE SHALL BE LINED, AND STEEL PIPE SHALL BE COATED AND WRAPPED WITH JOINTS FIELD-COATED AND WRAPPED AFTER ASSEMBLY.

4. ALL BOLTED JOINT ACCESSORIES SHALL BE CLEANED AND COATED WITH ASPHALT OR OTHER CORROSION -RETARDING MATERIAL AFTER INSTALLATION.

5. AFTER INSTALLATION, RODS, NUTS, BOLTS, WASHERS, CLAMPS, AND OTHER RESTRAINING DEVICES EXCEPT THRUST BLOCKS SHALL BE CLEANED AND COATED WITH A BITUMINOUS OR OTHER ACCEPTABLE CORROSION MATERIAL.

6. UNDERGROUND MAINS SHALL BE COMPLETELY FLUSHED TO REMOVE FOREIGN MATERIALS THAT MIGHT HAVE ENTERED THE MAIN DURING THE COURSE OF INSTALLATION.

7. THE AMOUNT OF LEAKAGE IN BURIED PIPING SHALL BE MEASURED BY THE SPECIFIED TEST PRESSURE BY PUMPING FROM A CALIBRATED CONTAINER. FOR NEW PIPE, THE AMOUNT OF LEAKAGE AT THE JOINTS SHALL NOT EXCEED TWO QUARTS PER HOUR PER 100 GASKETS OR JOINTS IRRESPECTIVE OF THE PIPE DIAMETER. NO VISIBLE LEAKAGE SHALL BE ALLOWED IN ABOVE GROUND PIPING.

8. HYDROSTATIC TESTS SHALL BE MADE BEFORE THE JOINTS ARE COVERED SO THAT ANY LEAKS MAY BE READILY DETECTED.

9. THE INSTALLATION COMPANY SHALL FURNISH A CONTRACTOR'S MATERIAL AND TEST CERTIFICATE TO THE INSPECTOR OF RECORD WHO WILL SUBMIT TO DSA.

10. ALL SANITARY SEWER IMPROVEMENTS SHALL BE PER CITY OF OAKLAND PUBLIC WORKS STANDARDS AND SPECIFICATIONS.

11. ALL STORM DRAINPIPES SHALL BE AS SPECIFICED.

12. STORM DRAINS PIPE 12-INCHES AND LARGER SHALL BE SMOOTH INTERIOR CORRUGATED HDPE.

13. AREA DRAINS SHALL BE 6-INCH DIAMETER NYLOPLAST INLINE DRAINS WITH STANDARD GATE OR APPROVED EQUAL.

14. THE EXISTING UNDERGROUND UTILITIES ARE SHOWN IN THEIR APPROXIMATE LOCATION BASED ON RECORD PLAN AND FIELD SURVEY INFORMATION. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY THE LOCATION AND DEPTH OF THESE UTILITIES AS NEEDED FOR CONNECTIONS PRIOR TO THE START OF UNDERGROUND CONSTRUCTION OR AS NEEDED TO PROTECT UTILITIES DURING CONSTRUCTION.

15. ALL UNDERGROUND SERVICE CONNECTIONS SHALL BE INSTALLED WITH ZINC ANODES.

16. ALL EXISTING UTILITIES AND IMPROVEMENTS TO REMAIN THAT BECOME DAMAGED DURING CONSTRUCTION SHALL BE COMPLETELY RESTORED TO THE SATISFACTION OF THE SOWNER AND AT THE CONTRACTOR'S SOLE EXPENSE.

17. THE CONTRACTOR SHALL TAKE ALL MEANS AND MEASURES NECESSARY TO PROTECT ALL UTILITIES INSTALLED FROM DAMAGE DUE TO HEAVY TRAFFIC LOADING DURING AND FOLLOWING BUILDING CONSTRUCTION ACTIVITIES.

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REGISTERED PROFESSIONAL ENGINEER ALLEN MARK WALDMAN No. 38905 Exp. 3/31/19 CIVIL STATE OF CALIFORNIA

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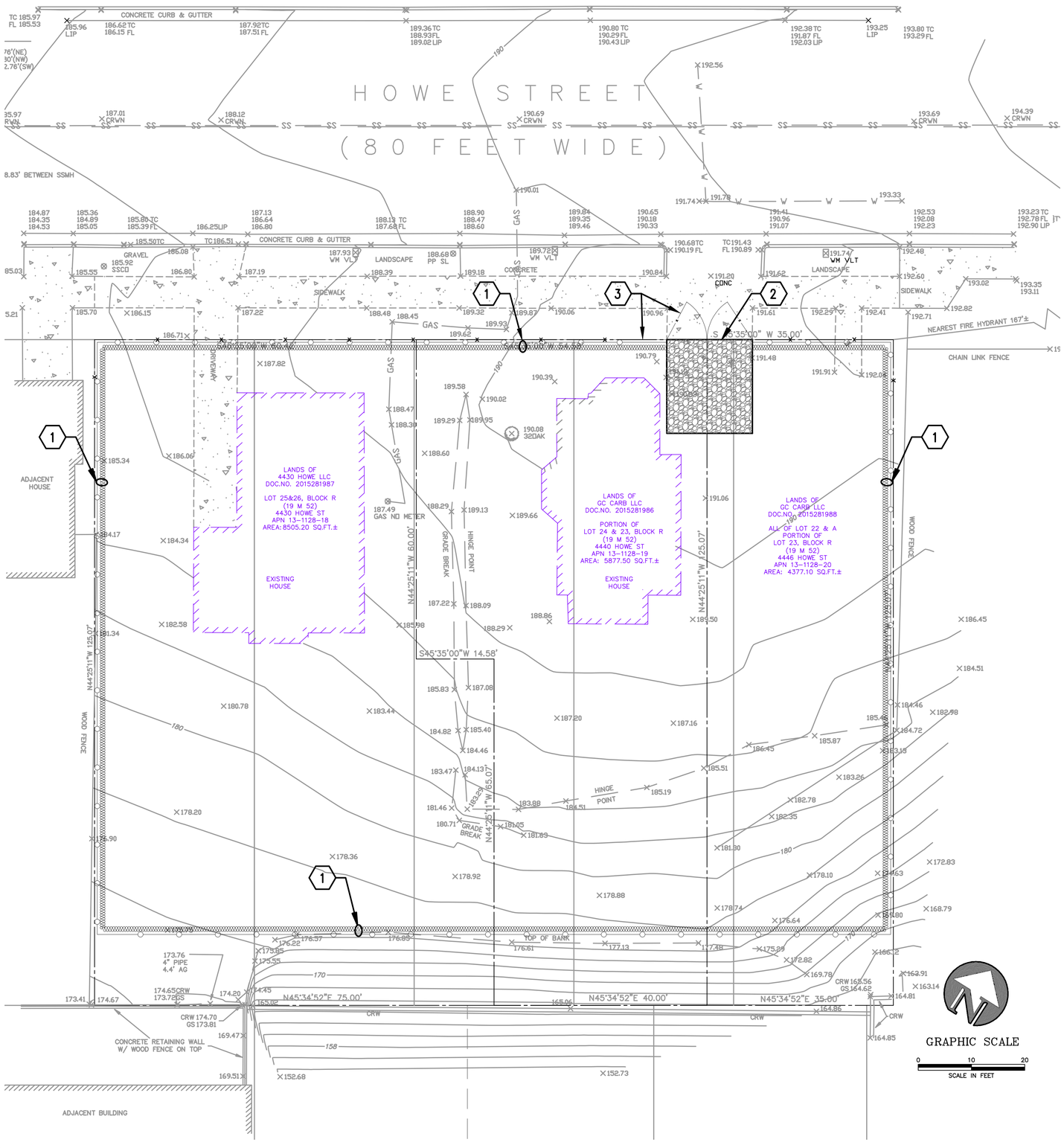
4430 HOWE, LLC & GC CARB, LLC
4428 - 4448 HOWE STREET, OAKLAND, CA 94618
CIVIL UTILITIES PLAN

JOB NUMBER	
DRAWN BY	AMA
CHECKED BY	AMW
DATE	MARCH 2017
DRAWING NAME	WOW HOME_CIVIL.DWG
SHEET NO.	C.2
REVISIONS	



GENERAL NOTES

1. SWEEPING AND/OR VACUUMING SHALL BE PERFORMED ON A DAILY BASIS DURING DEMOLITION ACTIVITIES AND AT OWNER REQUEST.
2. ALL BMP TO BE INSPECTED BY QSP ON WEEKLY BASIS AND BEFORE AND AFTER RAIN EVENTS IN ACCORDANCE WITH SWPPP.
3. WATER SHALL BE APPLIED TO ALL EXPOSED SOIL SURFACES AS NECESSARY TO PREVENT WIND EROSION AND TO CONTROL DUST.
5. DRAINAGE INLET STRUCTURES AND MANHOLES SHALL BE COVERED WITH FILTER FABRIC DURING ALL APPLICATION OF SEAL COAT, TACK COAT, SLURRY SEAL, AND/OR FOG SEAL.
6. ALL VEHICLES THAT REGULARLY ENTER OR LEAVE THE SITE MUST BE CLEANED OFF SITE. NO WASHING OF VEHICLES SHALL BE ALLOWED.

EROSION CONTROL NOTES

1. CONTRACTOR IS RESPONSIBLE FOR ALL ASPECTS OF EROSION CONTROL AND SHALL INSTALL AND MAINTAIN ANY DEVICES AND MEASURES NECESSARY TO THE SATISFACTION OF THE ENGINEER.

2. THE FACILITIES SHOWN ON THIS PLAN ARE DESIGNED TO CONTROL SEDIMENT DURING THE RAINY SEASON AFTER ROUGH GRADING HAS BEEN COMPLETED AND STORM DRAIN LINES CONSTRUCTED.

3. THE EROSION CONTROL MEASURES ARE TO BE OPERABLE DURING ALL MONTHS

4. CHANGES TO THIS EROSION AND SEDIMENT CONTROL PLANS SHALL BE MADE TO MEET FIELD CONDITIONS ONLY WITH THE APPROVAL OF OR AT THE DIRECTION OF THE DISTRICT.

5. MAINTENANCE IS TO BE PERFORMED AS FOLLOWS:
   - A) REPAIR DAMAGES CAUSED BY SOIL EROSION OR CONSTRUCTION AT THE END OF EACH WORKING DAY.
   - B) SWALES SHALL BE INSPECTED PERIODICALLY AND MAINTAINED AS REQUIRED.
   - C) STRAW BALE, DIKE, BERMS AND SWALES ARE TO BE INSPECTED AFTER EACH STORM AND REPAIRS MADE.
   - D) SEDIMENT SHALL BE REMOVED AND SEDIMENT TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT HAS ACCUMULATED TO WITHIN ONE FOOT OR OUTLET ELEVATION.
   - E) SEDIMENT REMOVED FROM TRAP SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT WILL NOT ERODE.

6. THE EROSION CONTROL FACILITIES SHALL BE INSPECTED BY THE CONTRACTOR IMMEDIATELY AFTER MAJOR RAINFALL (OR DAILY IF PROLONGED RAIN STORM) AND REPAIRED AS NECESSARY.

7. DURING THE RAINY SEASON, ALL PAVED AREAS SHALL BE KEPT CLEAR OR EARTH MATERIAL AND DEBRIS. THE SITE SHALL BE MAINTAINED SO AS TO MINIMIZE SEDIMENT LADEN RUNOFF TO ANY STORM DRAINAGE SYSTEM.

8. CONSTRUCTION ENTRANCE SHALL BE INSTALLED BY OCTOBER 1ST OF ANY YEAR IN THE EVENT ROAD IS UNPAVED PRIOR TO COMMENCEMENT OF GRADING. LOCATION OF ENTRANCE MAY BE ADJUSTED BY THE CONTRACTOR TO FACILITATE HIS OPERATION. ALL CONSTRUCTION TRAFFIC ENTERING PAVED ROAD MUST CROSS MINIMUM 50' LONG 8" THICK STABILIZED 1 ½" DIAMETER DRAIN ROCK CONSTRUCTION ENTRANCE. ANY MUD THAT IS TRACKED ONTO PUBLIC STREETS SHALL BE REMOVED THAT SAME DAY AS REQUIRED BY CITY ORDINANCE. THE CONTRACTOR MAY PRESENT TO THE ARCHITECT AN ALTERNATIVE TO THE CONSTRUCTION ENTRANCE DESCRIBED ABOVE.

9. THE CONTRACTOR SHALL COORDINATE WITH THE REPRESENTATIVE OF THE WCCUSD, IN ORDER TO DETERMINE THE REQUIREMENTS FOR STORM WATER CONTROL DURING THE CONSTRUCTION PERIOD. IF REQUIRED BY THE DISTRICT, THE CONTRACTOR SHALL PREPARE AND MAINTAIN ON-SITE WATER POLLUTION PROTECTION PLAN (SWPPP) AND SUBMIT TO THE DISTRICT FOR APPROVAL AS REQUIRED.

KEY NOTES

1. (N) FIBER ROLLS AND SILT FENCE SEE SHEET C.4 DETAILS 4 AND 5
2. (N) CONSTRUCTION ENTRANCE AND EXIT. SEE SHEET C.4 DETAIL 1
3. (N) CONSTRUCTION FENCE AND GATE
4. CONTRACTOR SHALL PERFORM STREET SWEEPING AND VACUUMING TO REMOVE TRACKED SEDIMENT ON AS NEEDED BASIS AND AT OWNER REQUEST
5. PROTECT (E) TREES IF APPLICABLE

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NOT FOR CONSTRUCTION

PRELIMINARY

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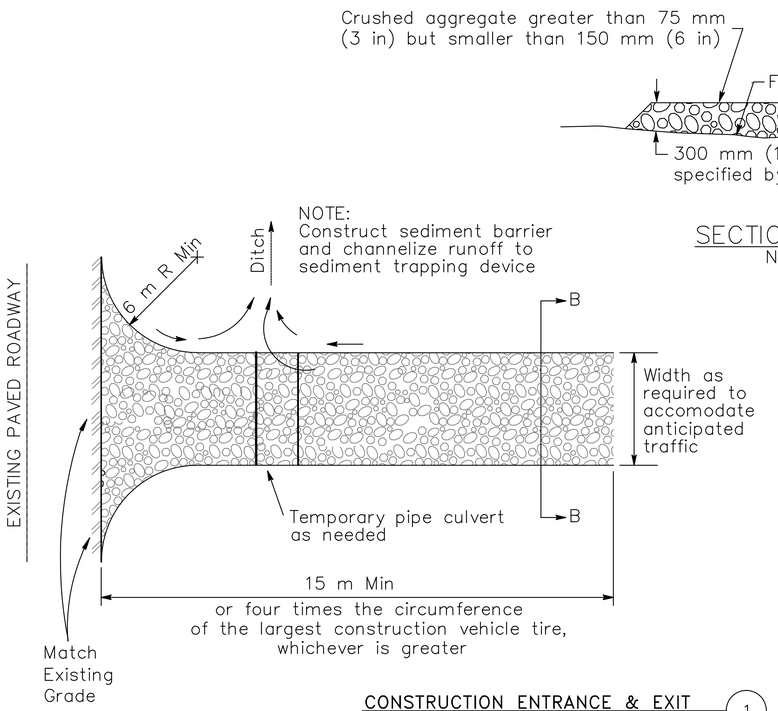
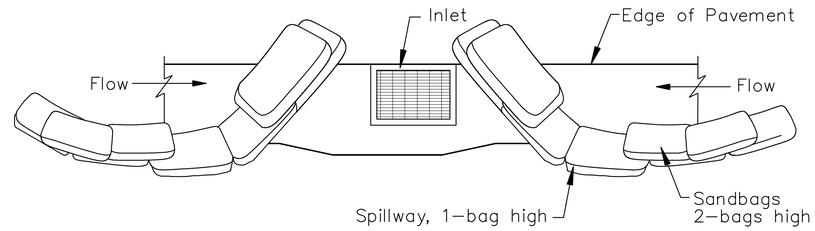
EROSION CONTROL PLAN

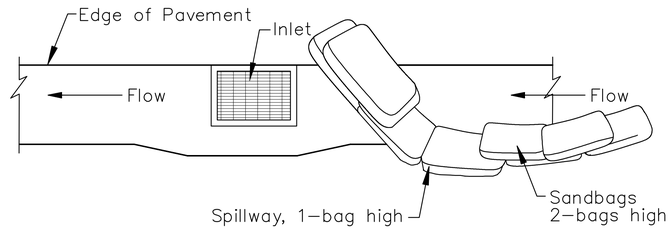
REVISIONS	JOB NUMBER	DRAWING NAME	SHEET NO.
	DRAWN BY AMA		C.3
	CHECKED BY AMW		
	DATE MARCH 2017		



CONSTRUCTION ENTRANCE & EXIT
NOT TO SCALE — 1

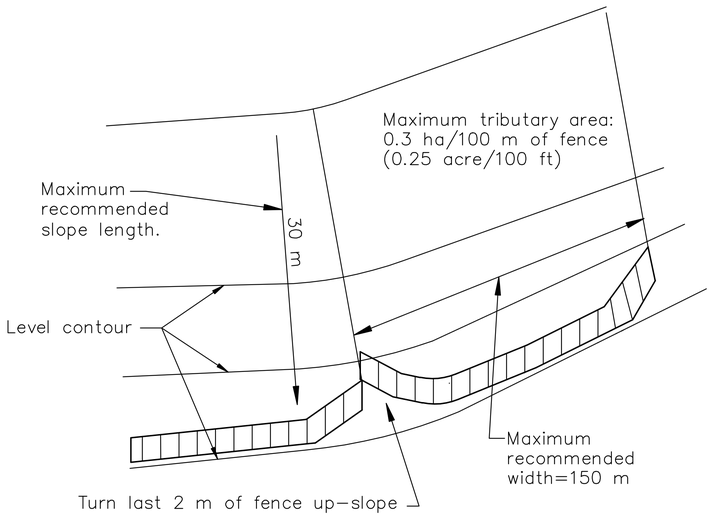


TYPICAL PROTECTION FOR INLET ON SUMP
NOT TO SCALE — 2



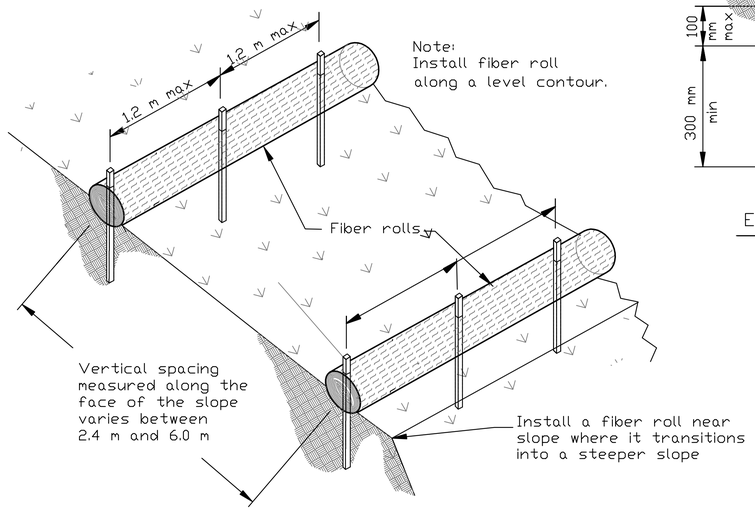
TYPICAL PROTECTION FOR INLET ON GRADE
NOT TO SCALE — 3

NOTES:
1. Intended for short–term use.
2. Use to inhibit non–storm water flow.
3. Allow for proper maintenance and cleanup.
4. Bags must be removed after adjacent operation is completed
5. Not applicable in areas with high silts and clays without filter fabric.

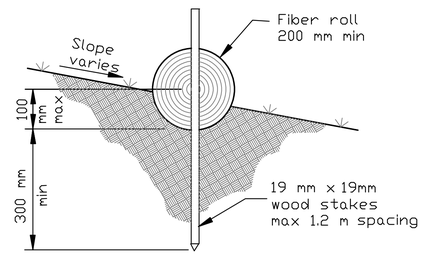


NOTE:
Locate silt fence along a level contour.

TYPICAL SILT FENCE LAYOUT
NOT TO SCALE — 4



TYPICAL FIBER ROLL INSTALLATION
NOT TO SCALE — 5



ENTRENCHMENT DETAIL
N.T.S.

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EROSION CONTROL DETAILS

JOB NUMBER
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SHEET NO. C.4
DATE MARCH 2017
REVISIONS

REGISTERED PROFESSIONAL ENGINEER
ALAN MARK WALDMAN
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Exp. 3/31/17
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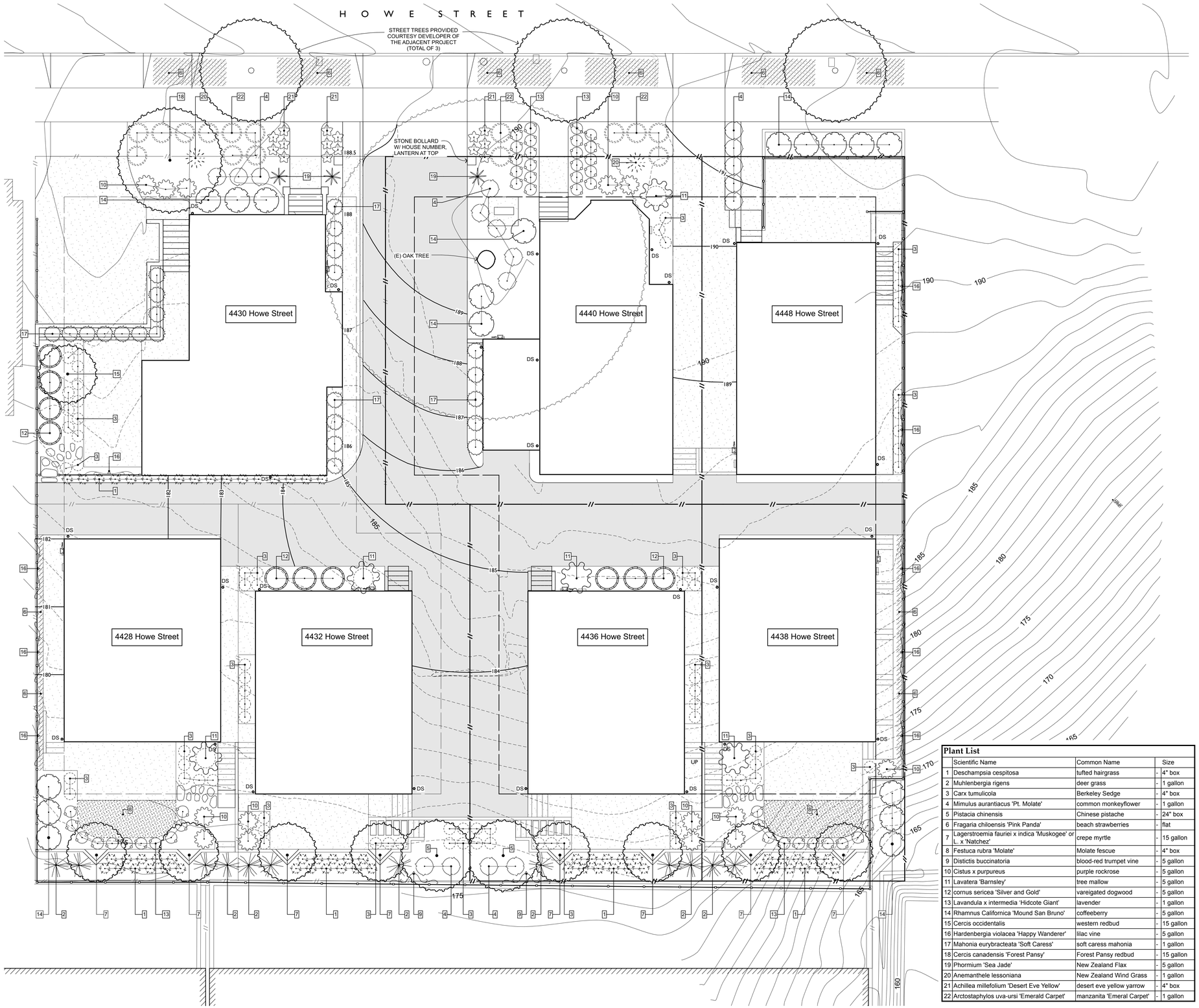

Landscape Plan

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

NORTH

REF. NORTH

Landscape Note

The existing site slopes down from front to back. Plants are grouped by water needs. Provide 3" min. of organic mulch in plating bed. More than 75% of proposed plants are Drought-Tolerant, California Natives, Mediterranean, or other appropriate species listed in 'Plants and Landscapes for Summer Dry Climates' by East Bay Municipal Utility Districts.

For 4438 Howe Street: Drought tolerance, no mow, California native Creeping Red Fescue are provided as lawn substitute. It is installed on slope less than 10%. The turf area is < 33% of landscape area.

For 4440, 4436 and 4448 Howe Street: No Turf in landscape.

Irrigation Note

All landscape areas are irrigated by drip system, except turf area where shown. For the drip system, the maximum emitter flow rate is 1 gpm. The turf area will be irrigated by efficient spray heads (multi-stream rotors) with a maximum flow rate of 1 inch per hour. Turf irrigation design does not exceed 100% head-to-head coverage. No overspray and avoid runoff.

Install Smart (Weather-based) Controller that links with on-site weather station and moisture sensors in the soil.

Underground vale boxes should be use to house the irrigation valves. The irrigation contractor shall verify the water source, water pressure, flow rate, evaluated the location and number of valves, and provide irrigation design for architect to review prior installation.

Planting Notes

1. All planting and related work shall be executed by experienced personal.
2. Contractor shall remove from site any soil unsuitable for planting, including are filled with rubble, debris, trash, concrete residue, or any other material that will obstruct preparation of beds for planting, or is harmful to plants. Before placement of new material, existing soil shall be thoroughly scarified to provide maximum bonding between old soils and new.
3. Prior to planting, all bed shall be ripped to a sufficient depth that allow air infiltration, mitigate any compact soil during construction, from over-watering or simply long-term normal use. Compaction prevents the infiltration of air and water into the soil, and should be correct prior to planting.
4. Contractor shall obtain the highest quality plants for this job. Plan shall be free of circled, kinked, bound root, trunk scars, weakly attached branches, insect damage and other defects. Canopies shall be balanced in form.
5. Architect reserves the right to approve all plants prior to installation. Contractor shall notify architect at least 72 hours prior to delivery of plants to schedule and inspection. In the event contract fail to notify architect, contractor shall be liable for replacing any planting at his or her own cost.
6. Prior to planting, all planting pits shall be amended with one part nitrolized fir bark with three part native soil. All lawn area shall be cultivated to a depth of 12-18" and amended with one part nitrolized fir bark to two part native soil.
7. After planting, all planting area shall be mulched to a depth of 3" with nitrolized fir bark,
8. Contractor shall not install plants or planting during extreme weather condition that will adversely affect the health of the plant. For example, during periods of measurable rainfall when soil is wet enough to puddle, during period of excessive heat, wind, or other environmental conditions.
9. Contractor shall not install plants when it is apparent that actual filed condition (obstructions, differences in dimensions or grade) differs from those shown on the drawing. Contractor shall bring the attention of architect such differences prior proceeding with any work. In the event when such notification is not made, contractor shall re-do any work in question at his or her own cost
10. Contractor shall protect all plants stored on site from wind, heat, vandalism, dehydration, abuse during construction, or any other damage. All plants stored on-site shall be in shaded areas away from surrounding construction.

Plant List

	Scientific Name	Common Name	Size
1	Deschampsia cespitosa	tufted hairgrass	- 4" box
2	Muhlenbergia rigens	deer grass	- 1 gallon
3	Carx tumulicola	Berkeley Sedge	- 4" box
4	Mimulus aurantiacus 'Pt. Molate'	common monkeyflower	- 1 gallon
5	Pistacia chinensis	Chinese pistache	- 24" box
6	Fragaria chiloensis 'Pink Panda'	beach strawberries	- flat
7	Lagerstroemia fauriei x indica 'Muskogee' or L. x 'Natchez'	crepe myrtle	- 15 gallon
8	Festuca rubra 'Molate'	Molate fescue	- 4" box
9	Distictis buccinatoria	blood-red trumpet vine	- 5 gallon
10	Cistus x purpureus	purple rockrose	- 5 gallon
11	Lavatera 'Barnsley'	tree mallow	- 5 gallon
12	cornus sericea 'Silver and Gold'	vareigated dogwood	- 5 gallon
13	Lavandula x intermedia 'Hidcote Giant'	lavender	- 1 gallon
14	Rhamnus California 'Mound San Bruno'	coffeeberry	- 5 gallon
15	Cercis occidentalis	western redbud	- 15 gallon
16	Hardenbergia violacea 'Happy Wanderer'	lilac vine	- 5 gallon
17	Mahonia eurybracteata 'Soft Caress'	soft caress mahonia	- 1 gallon
18	Cercis canadensis 'Forest Pansy'	Forest Pansy redbud	- 15 gallon
19	Phormium 'Sea Jade'	New Zealand Flax	- 5 gallon
20	Anemanthele lessoniana	New Zealand Wind Grass	- 1 gallon
21	Achillea millefolium 'Desert Eve Yellow'	desert eve yellow yarrow	- 4" box
22	Arctostaphylos uva-ursi 'Emerald Carpet'	manzanita 'Emeral Carpet'	- 1 gallon

If the bar below measures one inch drawing is to scale

0 1"

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job address
Mini-Lot Development
GC CARB & 4430 Howe St LLC
4428-4448 Howe St.
Oakland, California 94618

date: 28 March 2017

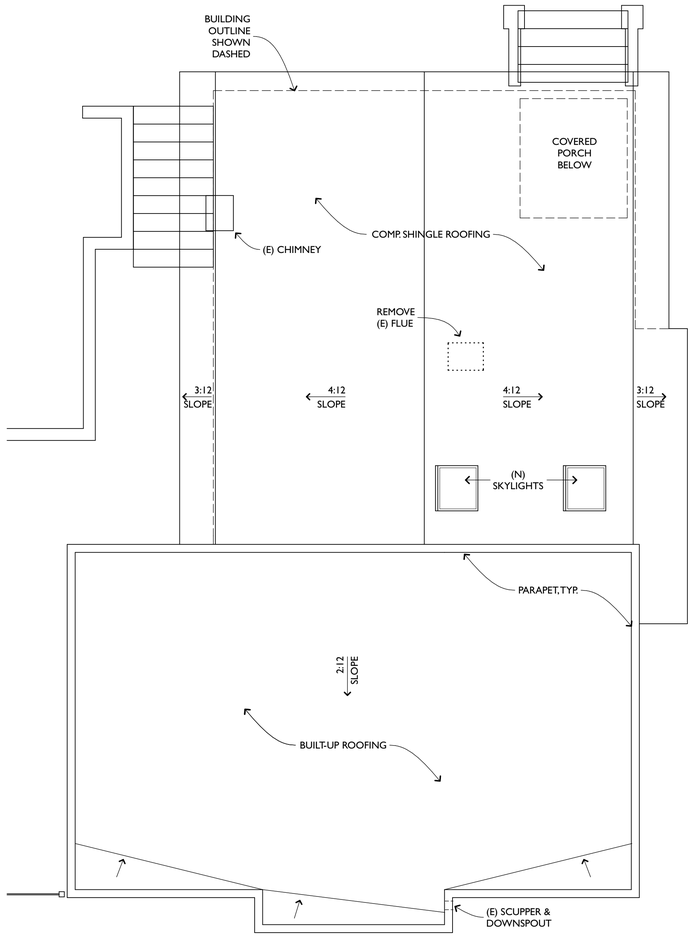
drawn by: Lt

Jarvis architects
5278 College Avenue (510) 654-6755
Oakland, California
94618-1415 fax: 654-3424

drawing title: Landscape Plan

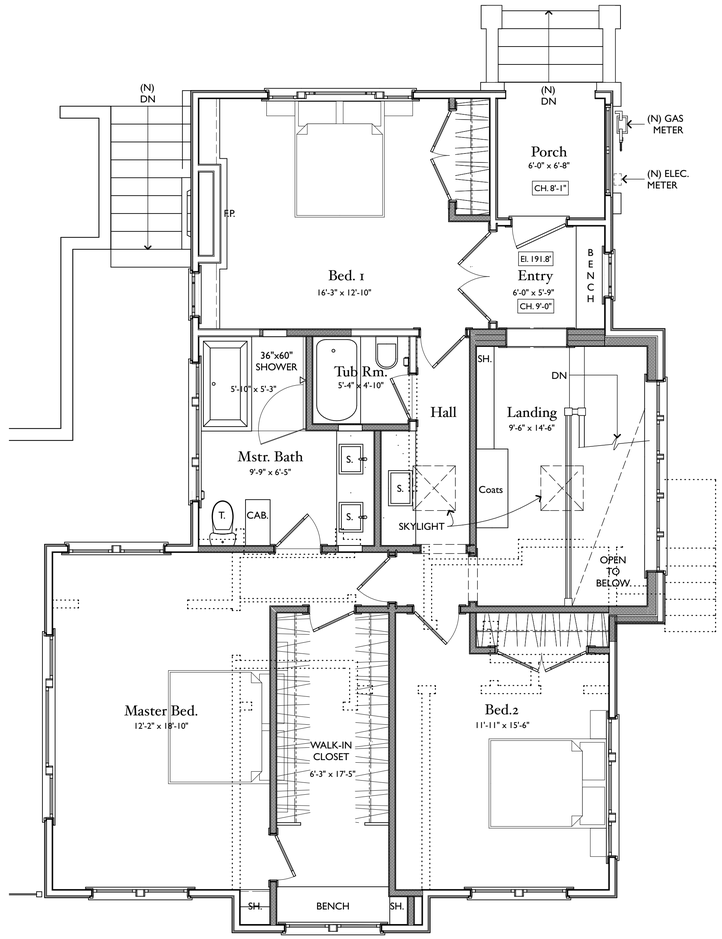
sheet: 3

job number: 1556



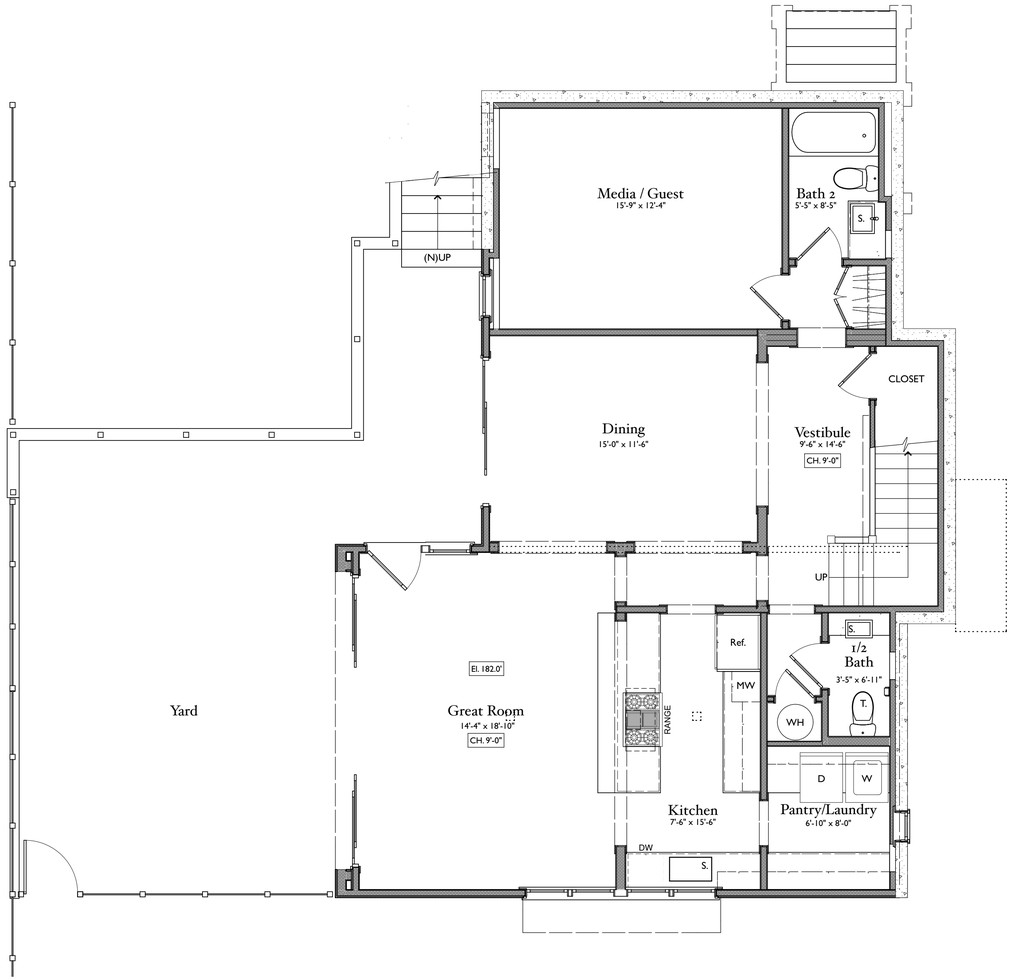
4430 • Roof Plan

SCALE: 1/4" = 1'-0"



4430 • Main Floor Plan

SCALE: 1/4" = 1'-0"



4430 • Lower Floor Plan

SCALE: 1/4" = 1'-0"

Legend

- NEW (N) WALLS
- EXISTING (E) WALLS TO REMAIN
- EXISTING (E) WALLS, REMOVED
- LINE ABOVE
- LINE BELOW OR BEYOND

NORTH NORTH

If the bar below measures one inch drawing is to scale

0 1"

Issued For: Design Review

job address
Mini-Lot Development
GC CARB & 4430 Howe St LLC
4428-4448 Howe St.
Oakland, California 94618

date: 28 March 2017

drawn by: Lt

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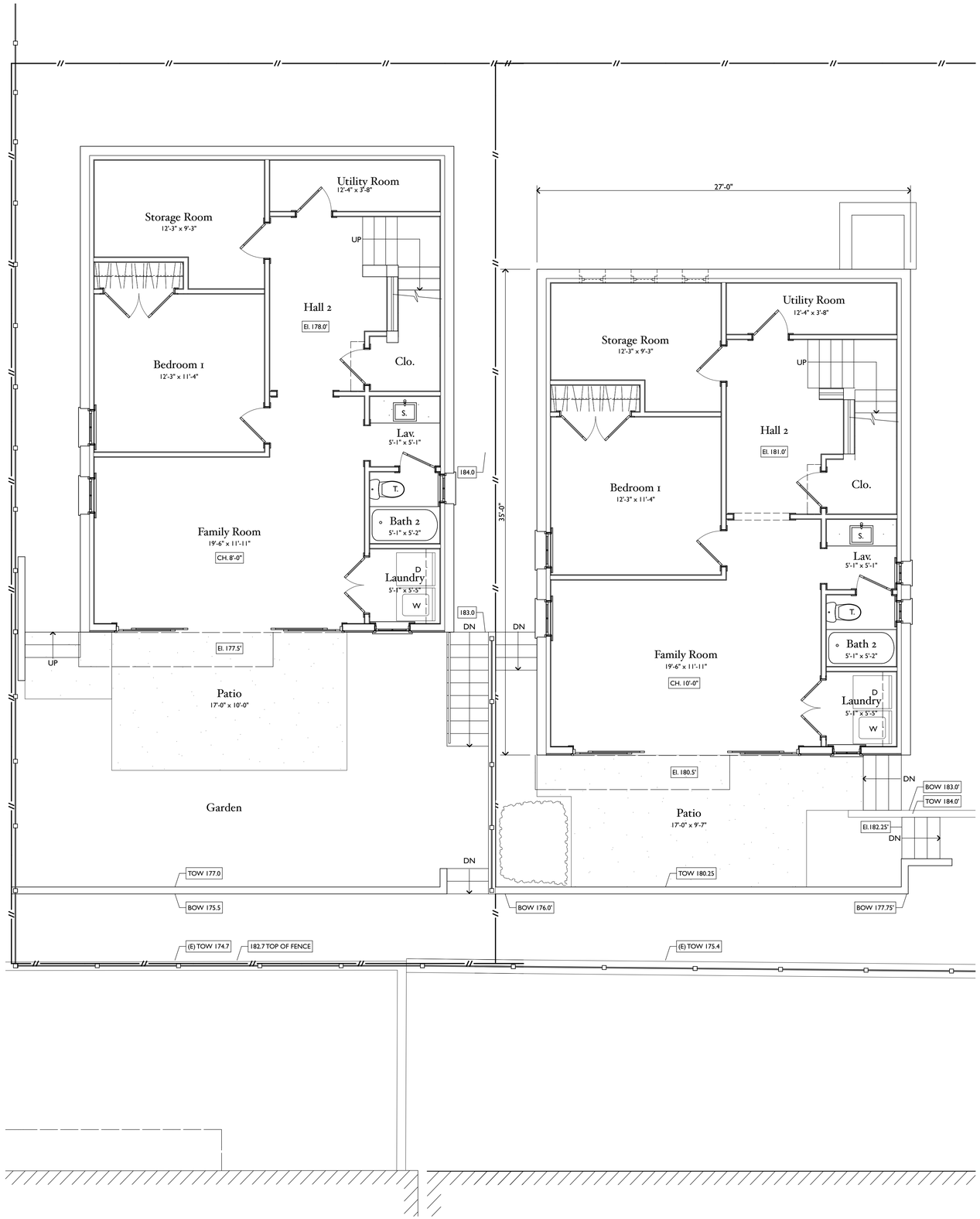
drawing title: 4430 Floor and Roof Plans

sheet: 4

job number: 1556

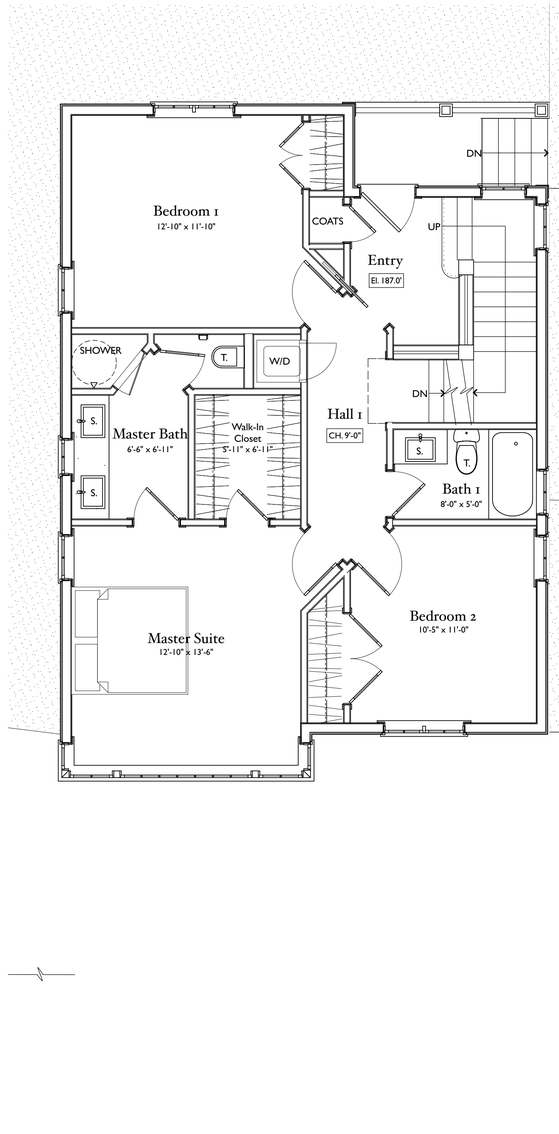


4428 • First Floor Plan

SCALE: 1/4" = 1'-0"

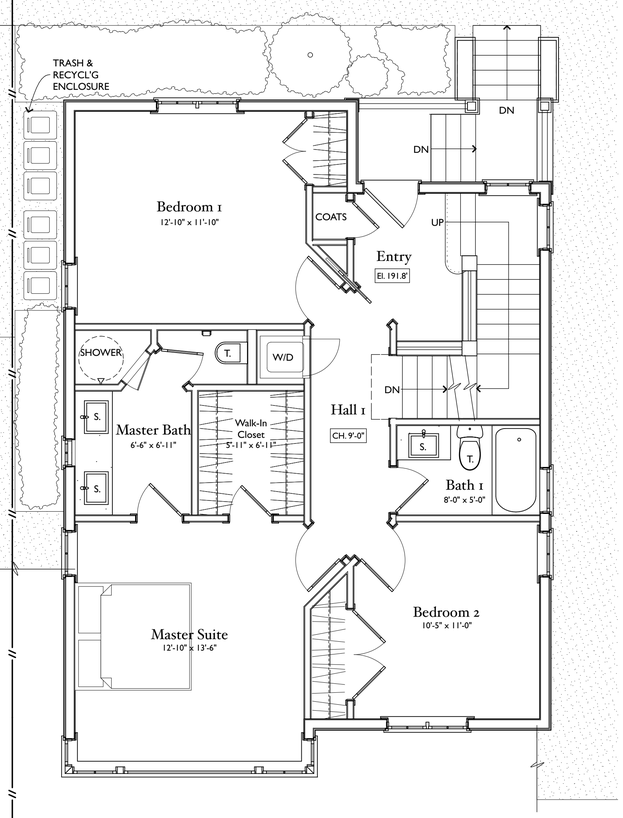
4432 • First Floor Plan

SCALE: 1/4" = 1'-0"



4428 • Second Floor Plan

SCALE: 1/4" = 1'-0"



4432 • Second Floor Plan

SCALE: 1/4" = 1'-0"

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Legend

NEW (N) WALLS

LINE ABOVE

LINE BELOW OR BEYOND

NORTH

NORTH

If the bar below measures one inch drawing is to scale

0 1"

job address
Mini-Lot Development
GC CARB & 4430 Howe St LLC
4428-4448 Howe St.
Oakland, California 94618

date
28 March 2017

drawn by
Lt

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drawing title
4428 & 4432 First & Second Floor Plans

sheet
5

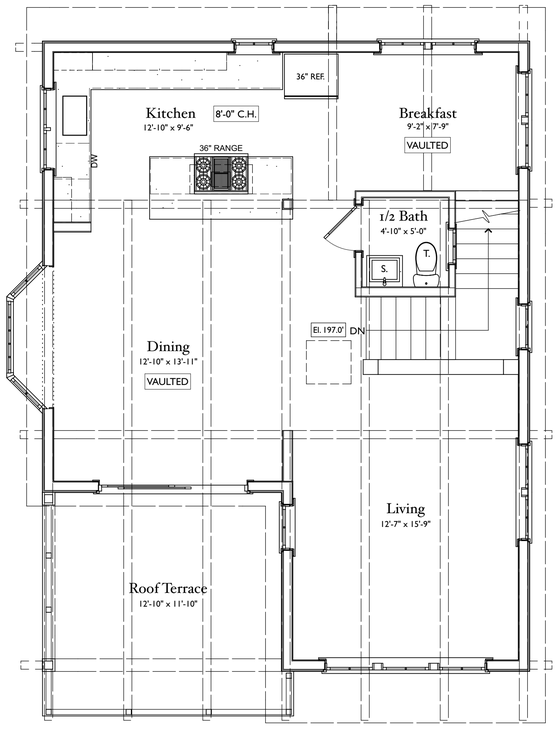
job number
1556

4430 • North (Howe St.) Elevation

SCALE: 1/4" = 1'-0"

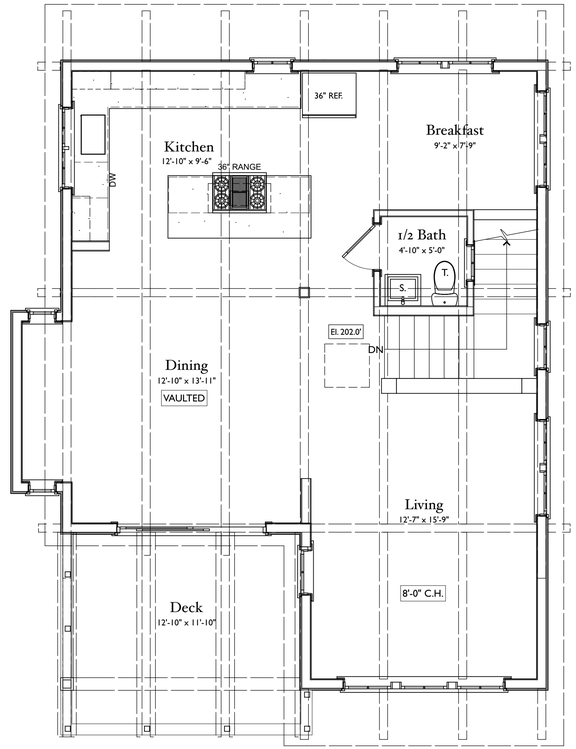
4430 • South (Rear Yard) Elevation

SCALE: 1/4" = 1'-0"



4428 • Third Floor Plan

SCALE: 1/4" = 1'-0"



4432 • Third Floor Plan

SCALE: 1/4" = 1'-0"

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Jarvis architects
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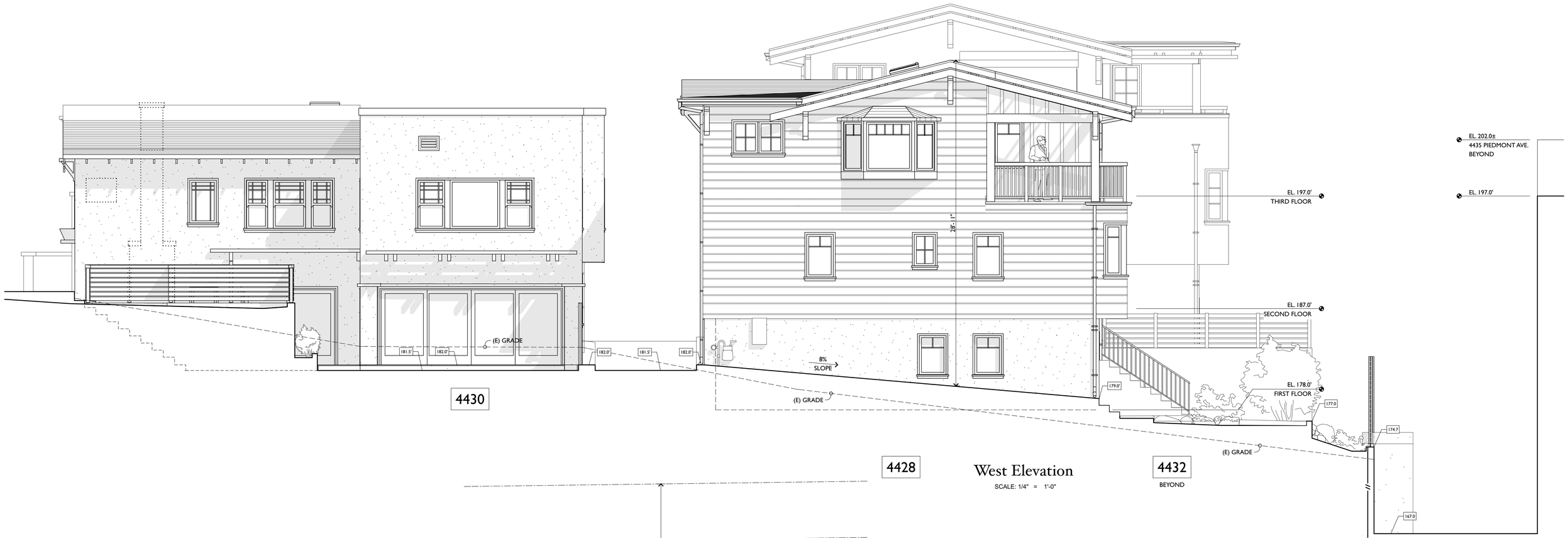
Oakland, California
94618-1415 fax: 654-3424

drawing title 4428 & 4432 Third Floor Plans & 4430 North & South Elevations	sheet 6 job number 1556

NORTH NORTH

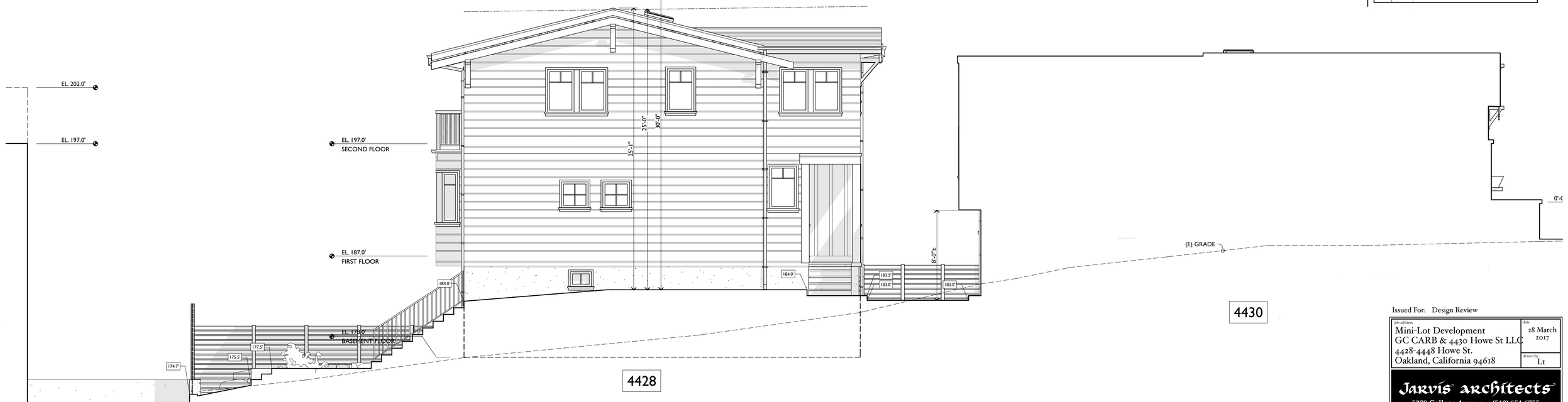
If the bar below measures one inch drawing is to scale

0 1"



West Elevation

SCALE: 1/4" = 1'-0"



East Elevation

SCALE: 1/4" = 1'-0"

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job address
Mini-Lot Development
GC CARB & 4430 Howe St LLC
4428-4448 Howe St.
Oakland, California 94618

date
28 March 2017

drawn by
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Jarvis architects
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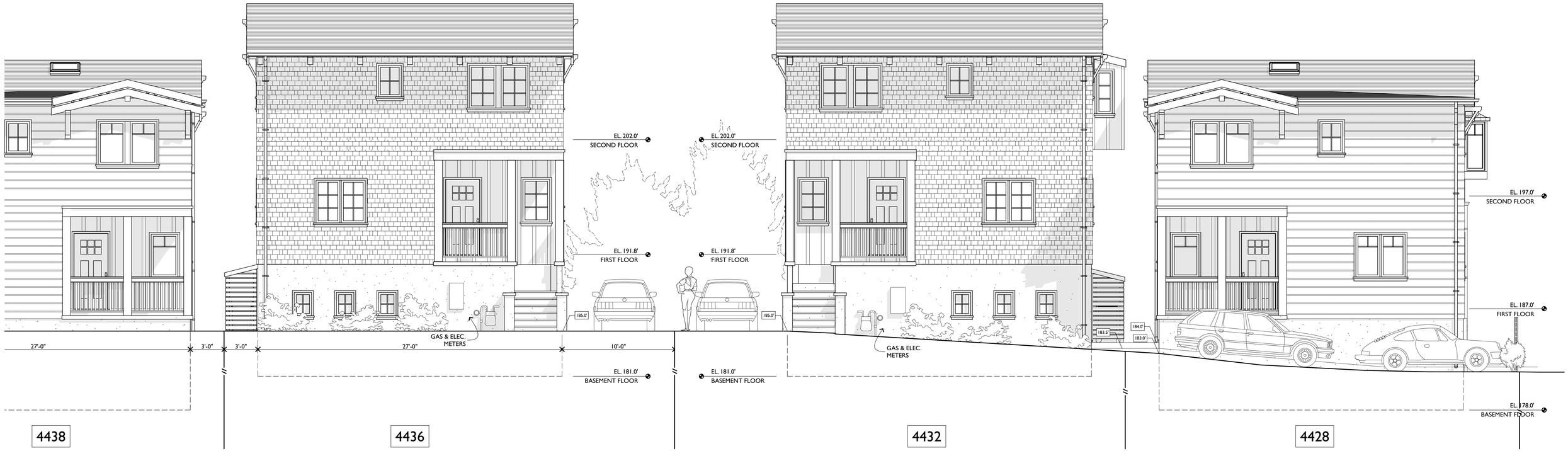
drawing title
4428 & 4430 West & 4428 East Exterior Elevations

sheet
7

job number
1556

If the bar below measures one inch drawing is to scale
0 1"



North Elevation

SCALE: 1/4" = 1'-0"

Typical Exterior Materials

- CLASS 'A', COOL ROOF COMPOSITION SHINGLE ROOF, 40 YEAR RATED AND CLASS 'A' BUILT UP ROOFING W/ COOL ROOF CAP SHEET
- GSM GUTTERS AND DOWNSPOUTS
- 4436 • 8" & 2" EXPOSURE STAINED WOOD SHINGLES W/ VERTICAL BOARD AND BATTEN
- 4438 • 5" EXPOSURE STAINED WOOD SHINGLE W/ VERTICAL BOARD AND BATTEN
- 3 COAT, 7/8" CEMENT PLASTER
- NEW WINDOWS TO BE DOUBLE GLAZED ALUMINUM CLAD WOOD WINDOWS AND DOORS W/ SIMULATED DIVIDED LITES
- STAINED WOOD EAVES, BARGE BOARDS AND PAINTED WOOD TRIMS

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job address
Mini-Lot Development
GC CARB & 4430 Howe St LLC
4428-4448 Howe St.
Oakland, California 94618

date
28 March 2017

drawn by
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Oakland, California
94618-1415 fax: 654-3424

drawing title
4428 / 4432 North Exterior Elevations

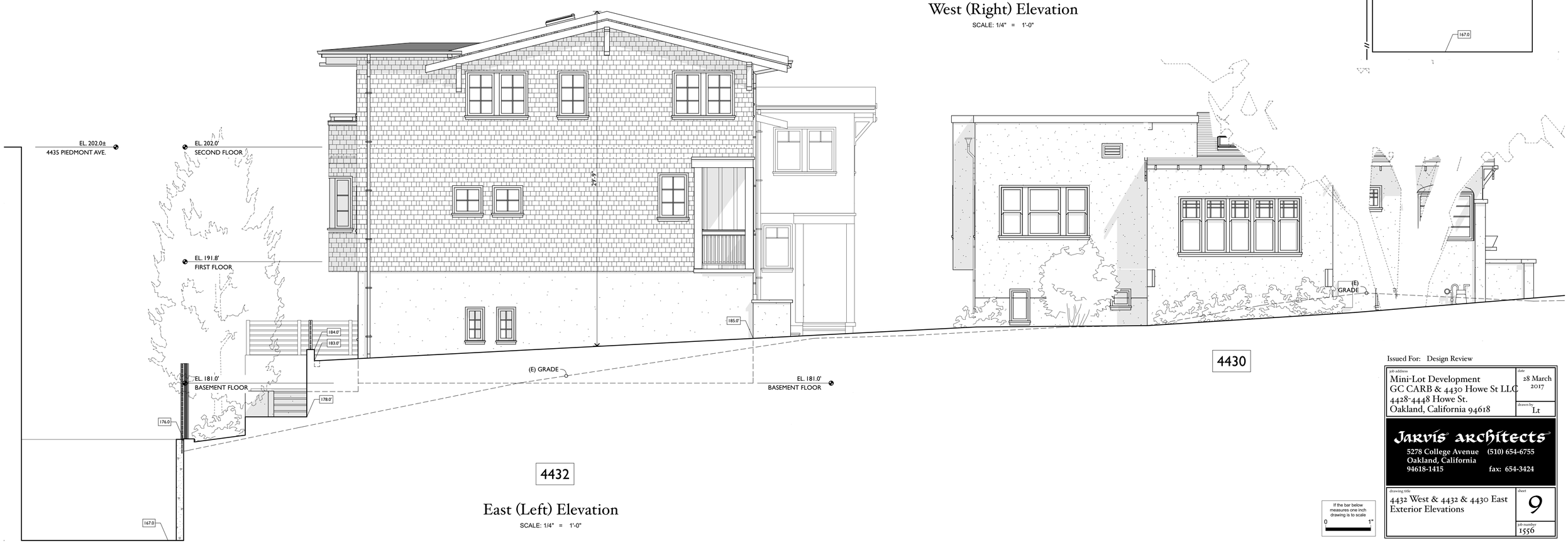
sheet
8

job number
1556

If the bar below measures one inch drawing is to scale
0 1"

West (Right) Elevation

SCALE: 1/4" = 1'-0"



East (Left) Elevation

SCALE: 1/4" = 1'-0"

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job address
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GC CARB & 4430 Howe St LLC
4428-4448 Howe St.
Oakland, California 94618

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28 March 2017

drawn by
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94618-1415 fax: 654-3424

drawing title
4432 West & 4432 & 4430 East Exterior Elevations

sheet
9

job number
1556

If the bar below measures one inch drawing is to scale

0 1"

South (Rear Yard) Elevation

SCALE: 1/4" = 1'-0"

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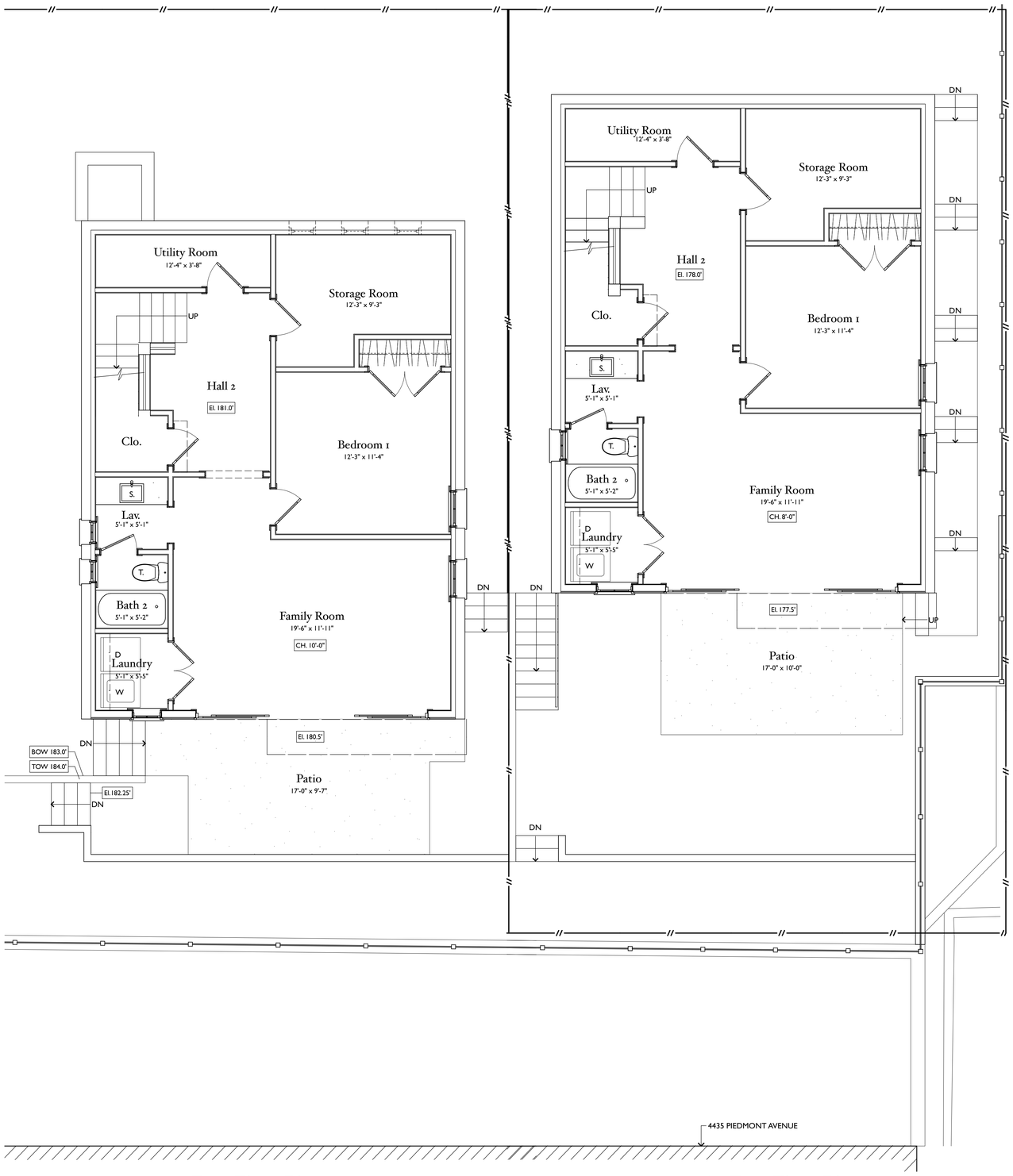
job address Mini-Lot Development GC CARB & 4430 Howe St LLC 4428-4448 Howe St. Oakland, California 94618	date 28 March 2017 drawn by Lt

Jarvis Architects
5278 College Avenue (510) 654-6755
Oakland, California
94618-1415 fax: 654-3424

drawing title 4428 / 4432 South Exterior Elevation	sheet 10 job number 1556

If the bar below measures one inch drawing is to scale

0 1"

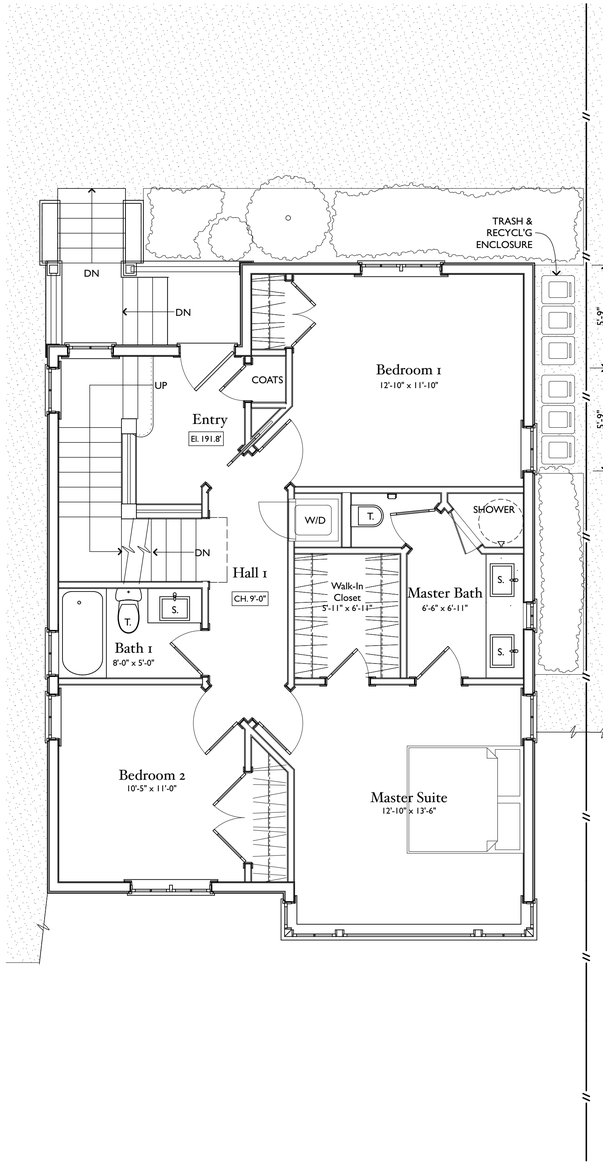


4436 • First Floor Plan

SCALE: 1/4" = 1'-0"

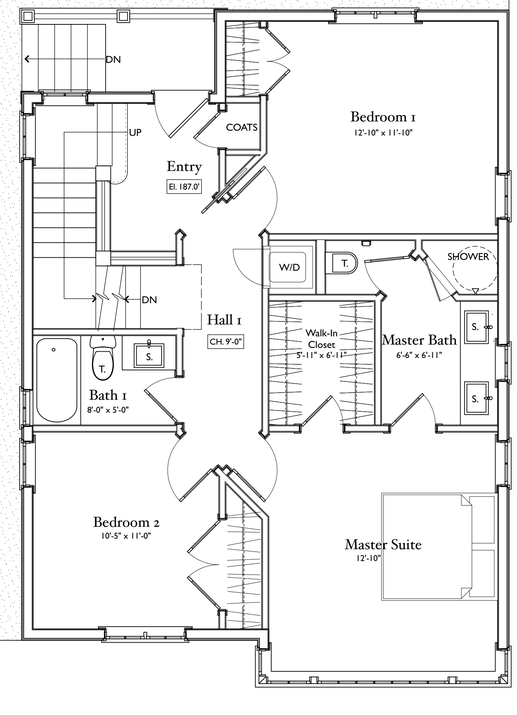
4438 • First Floor Plan

SCALE: 1/4" = 1'-0"



4436 • Second Floor Plan

SCALE: 1/4" = 1'-0"



4438 • Second Floor Plan

SCALE: 1/4" = 1'-0"

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Legend

- NEW (N) WALLS
- LINE ABOVE
- LINE BELOW OR BEYOND

NORTH

REF. NORTH

If the bar below measures one inch drawing is to scale

0 1"

job address
Mini-Lot Development
GC CARB & 4430 Howe St LLC
4428-4448 Howe St.
Oakland, California 94618

date
28 March 2017

drawn by
Lt

Jarvis architects
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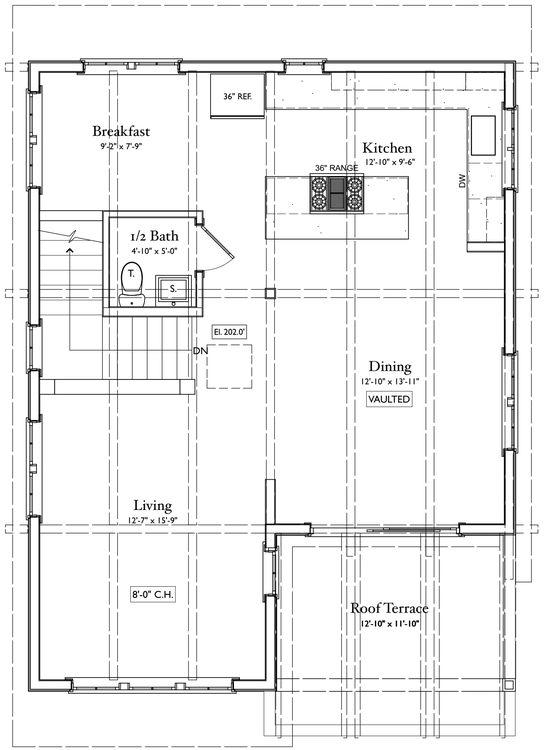
drawing title
4436 & 4438 First & Second Floor Plans

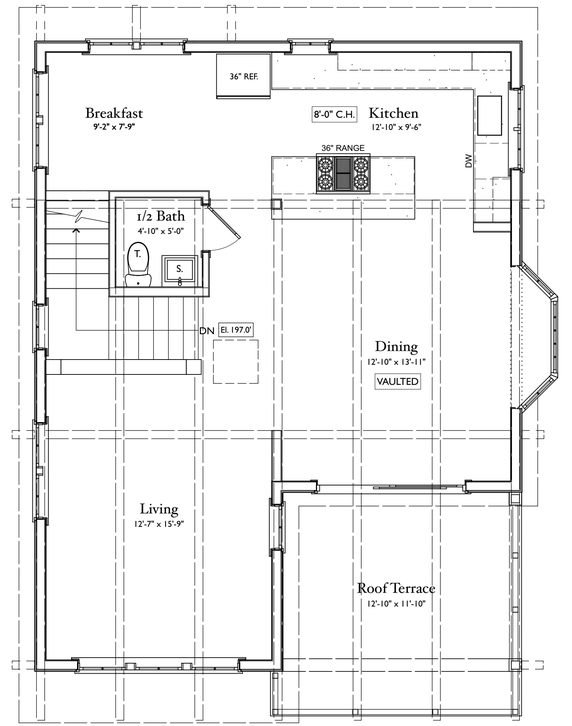
sheet
11

job number
1556



4436 • Third Floor Plan

SCALE: 1/4" = 1'-0"



4438 • Third Floor Plan

SCALE: 1/4" = 1'-0"

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Legend

- NEW (N) WALLS
- LINE ABOVE
- LINE BELOW OR BEYOND

NORTH

REF. NORTH

If the bar below measures one inch drawing is to scale

0 1"

job address
Mini-Lot Development
GC CARB & 4430 Howe St LLC
4428-4448 Howe St.
Oakland, California 94618

date
28 March 2017

drawn by
Lt

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Oakland, California
94618-1415 fax: 654-3424

drawing title
4436 & 4438 Third Floor Plans

sheet
12

job number
1556

North Elevation

SCALE: 1/4" = 1'-0"

Typical Exterior Materials

- CLASS 'A', COOL ROOF COMPOSITION SHINGLE ROOF, 40 YEAR RATED AND CLASS 'A' BUILT UP ROOFING W/ COOL ROOF CAP SHEET
- GSM GUTTERS AND DOWNSPOUTS
- 4436 • 8" & 2" EXPOSURE STAINED WOOD SHINGLES W/ VERTICAL BOARD AND BATTEN
- 4438 • 5" EXPOSURE STAINED WOOD SHINGLE W/ VERTICAL BOARD AND BATTEN
- 3 COAT, 7/8" CEMENT PLASTER
- NEW WINDOWS TO BE DOUBLE GLAZED ALUMINUM CLAD WOOD WINDOWS AND DOORS W/ SIMULATED DIVIDED LITES
- STAINED WOOD EAVES, BARGE BOARDS AND PAINTED WOOD TRIMS

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job address Mini-Lot Development GC CARB & 4430 Howe St LLC 4428-4448 Howe St. Oakland, California 94618	date 28 March 2017 drawn by Lt

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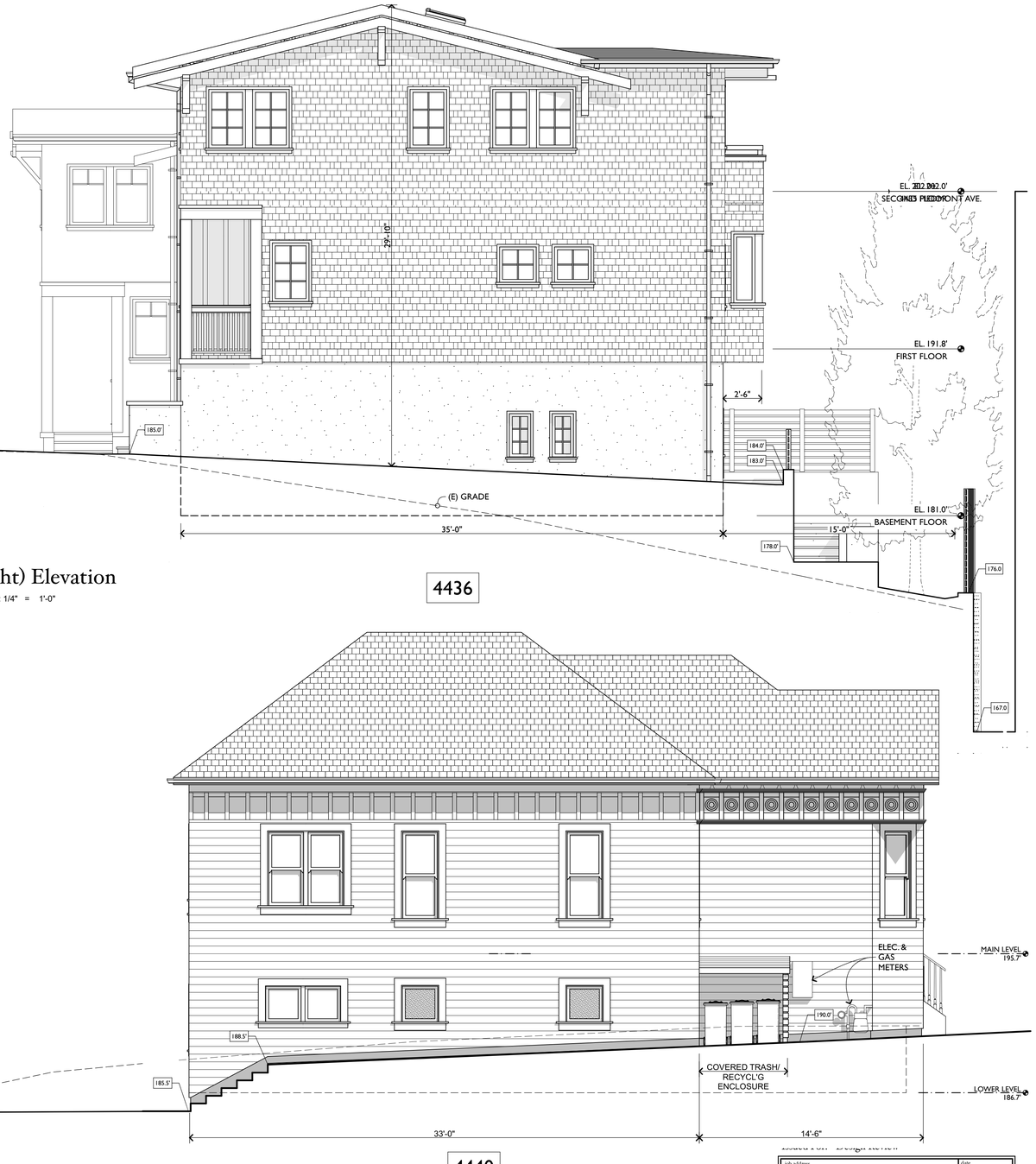
Oakland, California
94618-1415 fax: 654-3424

drawing title 4436 / 4438 North Exterior Elevations	sheet 13 job number 1556

If the bar below measures one inch drawing is to scale

0 1"

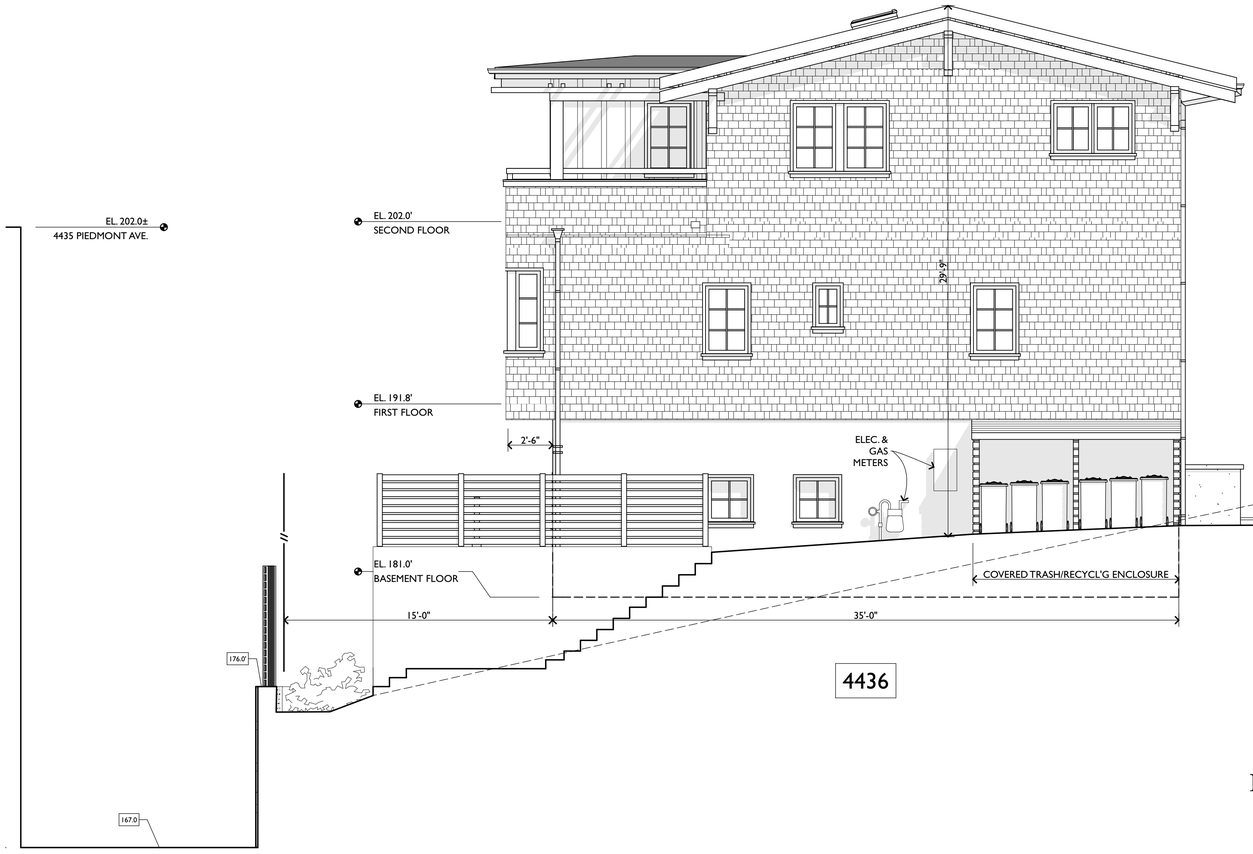
4440



4436

West (Right) Elevation

SCALE: 1/4" = 1'-0"



4436

East (Left) Elevation

SCALE: 1/4" = 1'-0"

4440

job address
Mini-Lot Development
GC CARB & 4430 Howe St LLC
4428-4448 Howe St.
Oakland, California 94618

date
28 March 2017

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Lt

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94618-1415 fax: 654-3424

drawing title
4436 & 4440 West & East Exterior Elevations

sheet
14

job number
1556

If the bar below measures one inch drawing is to scale
0 1"

South (Rear Yard) Elevation

SCALE: 1/4" = 1'-0"

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job address
Mini-Lot Development
GC CARB & 4430 Howe St LLC
4428-4448 Howe St.
Oakland, California 94618

date
28 March 2017

drawn by
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Oakland, California
94618-1415 fax: 654-3424

drawing title
4436 / 4438 South Exterior Elevation

sheet
15

job number
1556

If the bar below measures one inch drawing is to scale
0 1"

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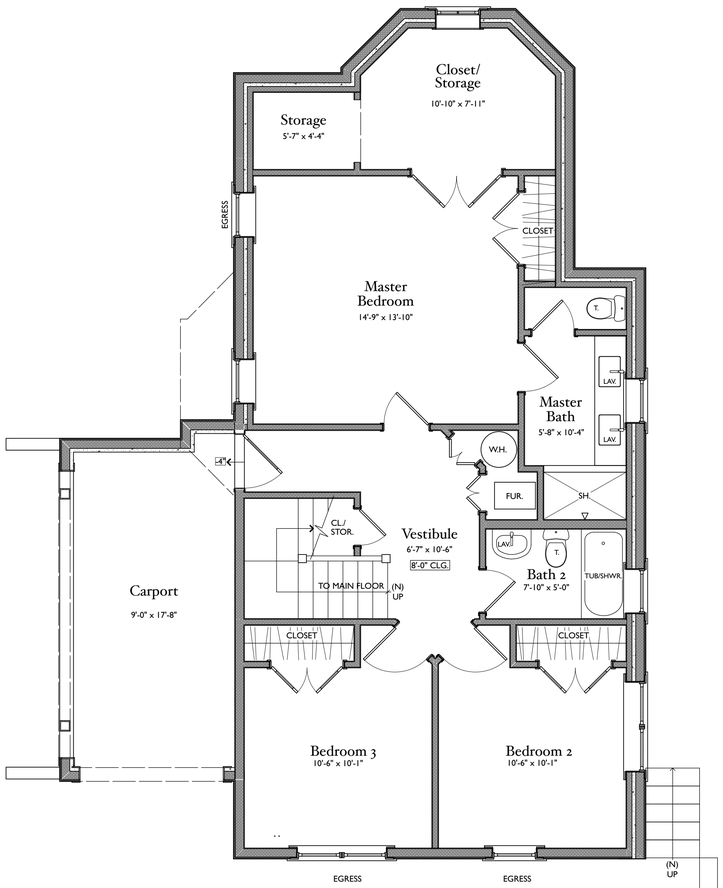
94618-1415 fax: 654-3424

drawing title: 4438 & 4448 West & East Exterior Elevations	sheet: 16 job number: 1556

If the bar below measures one inch drawing is to scale
0 1"



Lower Floor Plan

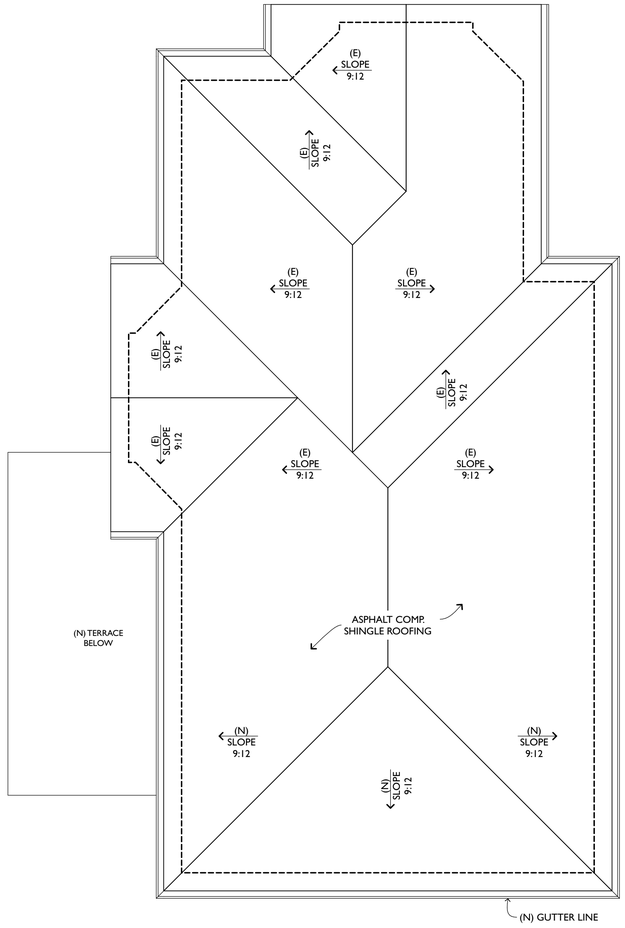
SCALE: 1/4" = 1'-0"

Main Floor Plan

SCALE: 1/4" = 1'-0"

NORTH

REF. NORTH



Roof Plan

SCALE: 1/4" = 1'-0"

Legend

- NEW (N) WALLS
- EXISTING (E) WALLS TO REMAIN
- EXISTING (E) WALLS, REMOVED
- LINE ABOVE
- LINE BELOW OR BEYOND

If the bar below measures one inch drawing is to scale

0 1"

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job address
Mini-Lot Development
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Oakland, California 94618

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28 March 2017

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94618-1415 fax: 654-3424

drawing title
4440 Floor Plans

sheet
17

job number
1556

Typical Exterior Materials

- CLASS 'A', COMPOSITION SHINGLE ROOF, 40 YEAR RATED TO MATCH EXISTING
- PAINTED GSM GUTTERS AND DOWNSPOUTS
- PAINTED HORIZONTAL WOOD SIDING
- DOUBLE GLAZED WOOD WINDOWS AND DOORS SIMULATED DIVIDED LITES
- PAINTED WOOD EAVES, BARGE BOARDS AND TRIMS
- REDWOOD POSTS AND RAILING

North (Howe St.) Elevation

SCALE: 1/4" = 1'-0"

West (Driveway) Elevation

SCALE: 1/4" = 1'-0"

South (Rear) Elevation

SCALE: 1/4" = 1'-0"

East (Side) Elevation

SCALE: 1/4" = 1'-0"

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job address Mini-Lot Development GC CARB & 4430 Howe St LLC 4428-4448 Howe St. Oakland, California 94618	date 28 March 2017 drawn by Lt

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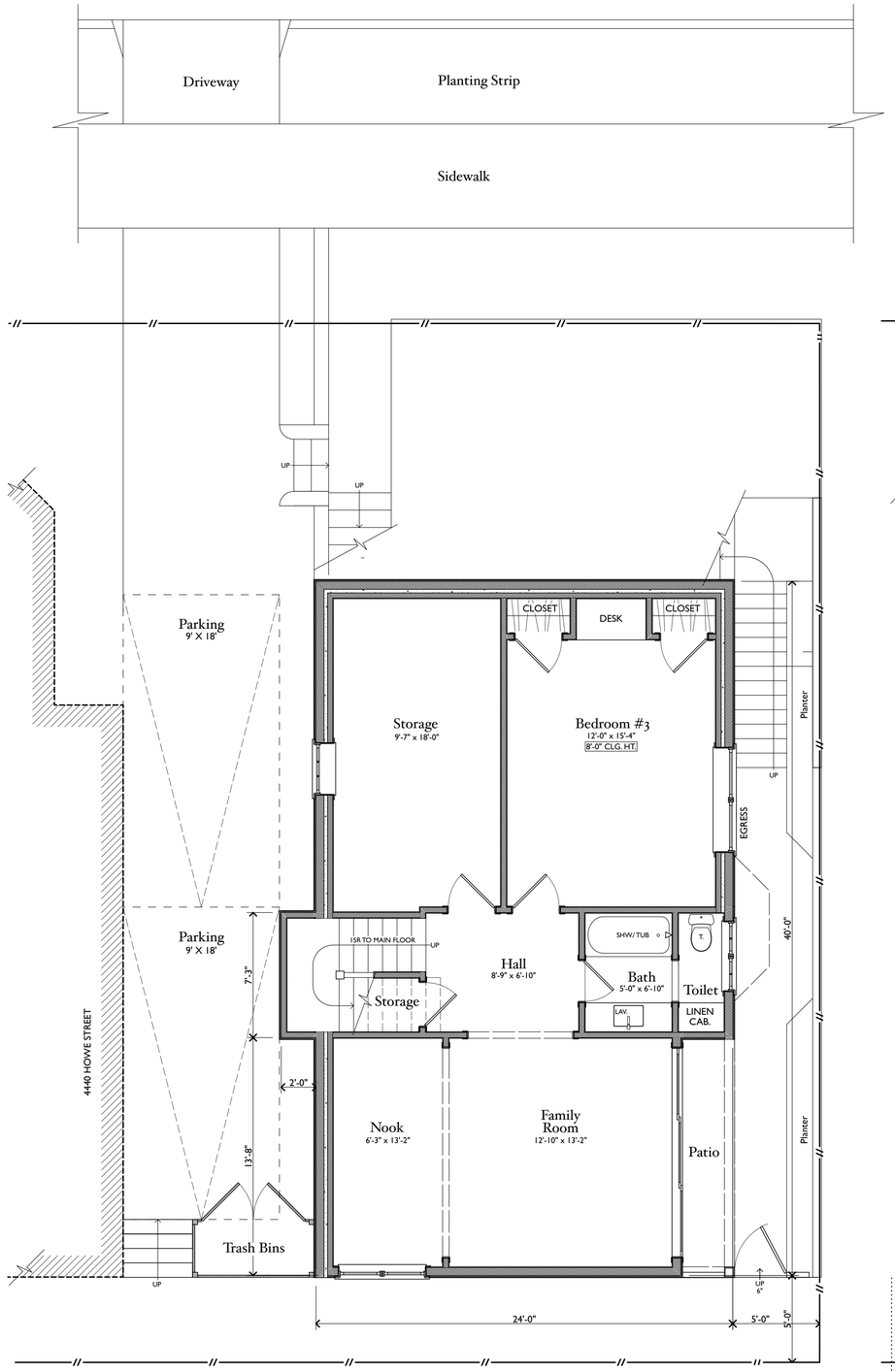
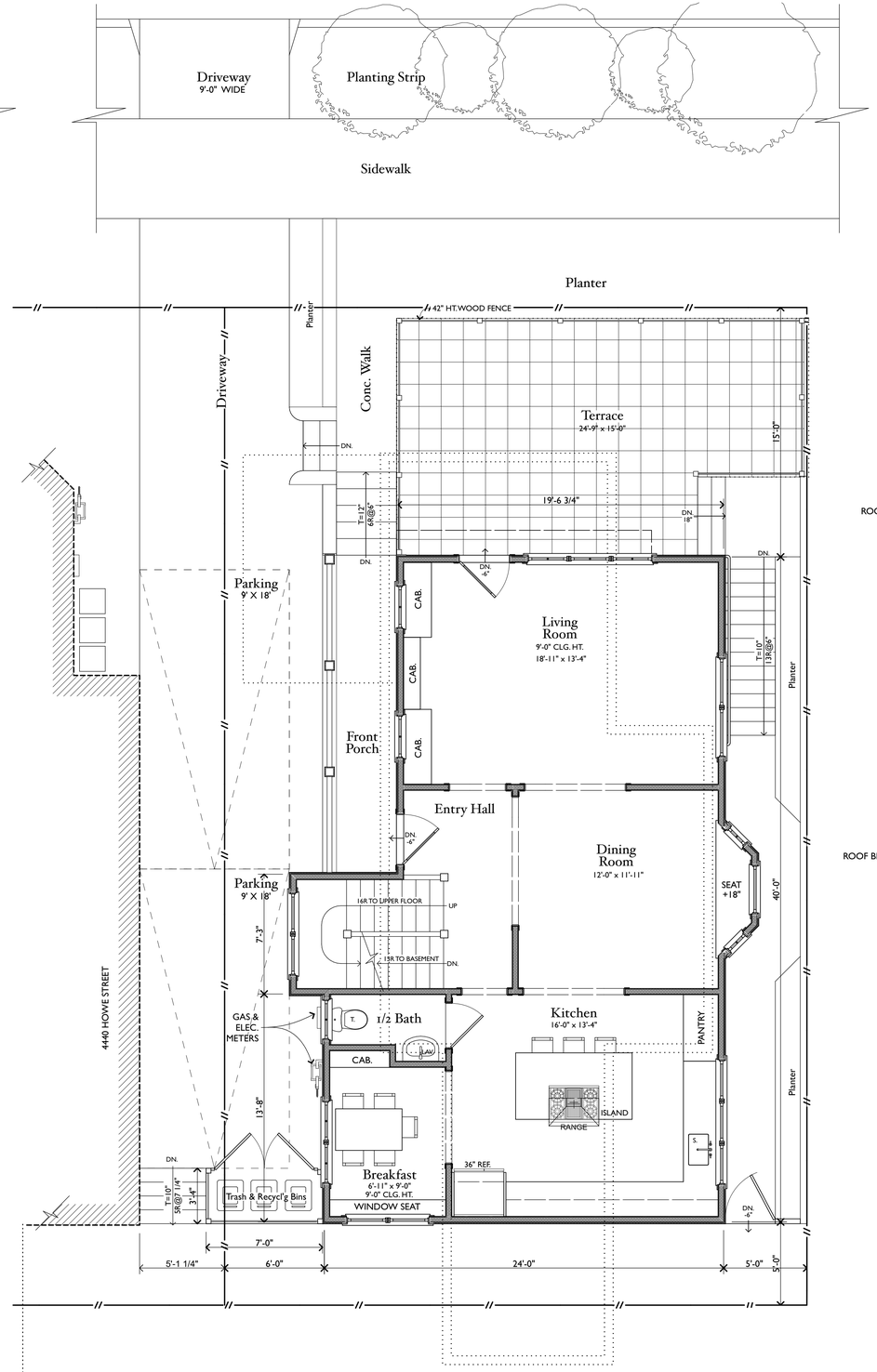
drawing title 4440 Exterior Elevations	sheet 18 job number 1556

If the bar below measures one inch drawing is to scale
0 1"



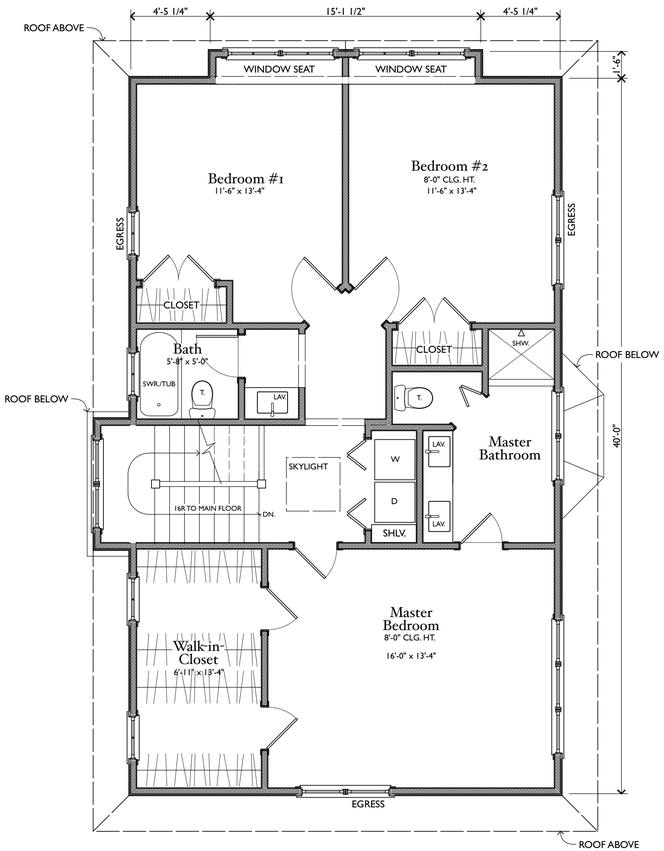
Lower Floor Plan

SCALE: 1/4" = 1'-0"



Main Floor Plan

SCALE: 1/4" = 1'-0"



Upper Floor Plan

SCALE: 1/4" = 1'-0"

Legend

NEW (N) WALLS

LINE ABOVE

LINE BELOW OR BEYOND

NORTH

REF. NORTH

If the bar below measures one inch drawing is to scale

0 1"

Issued For: Design Review

job address
Mini-Lot Development
GC CARB & 4430 Howe St LLC
4428-4448 Howe St.
Oakland, California 94618

date
28 March 2017

drawn by
Lt

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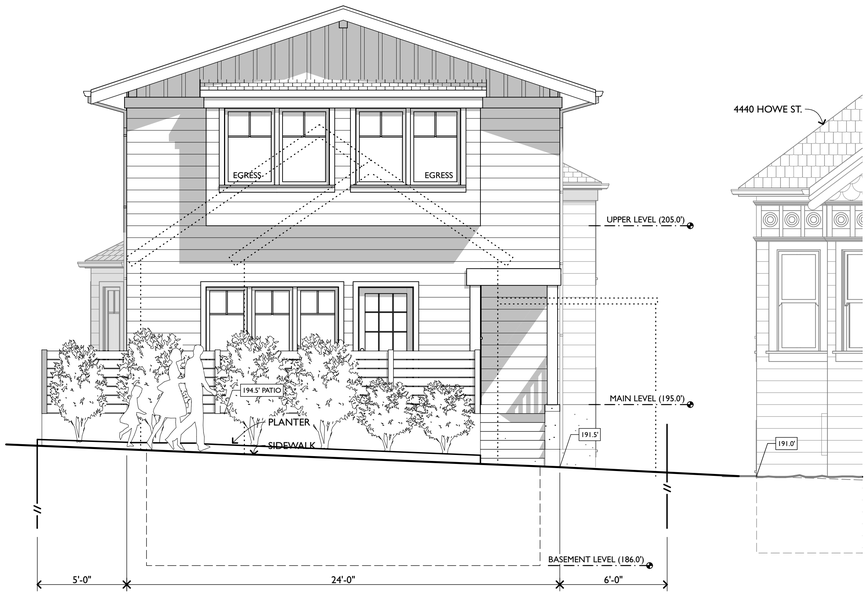
drawing title
4448 Floor Plans

sheet
19

job number
1556

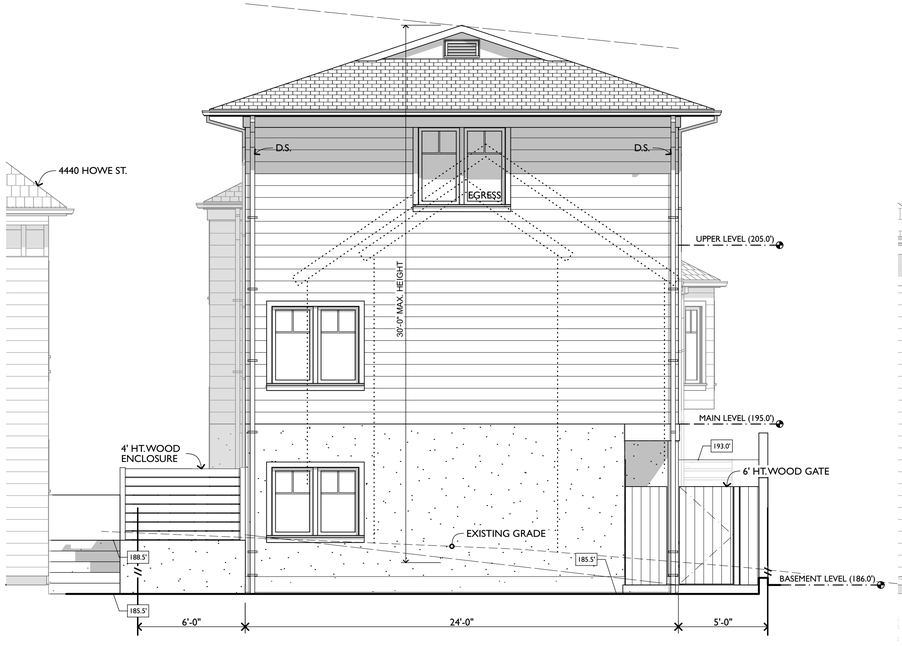


North (Howe St.) Elevation

SCALE: 1/4" = 1'-0"

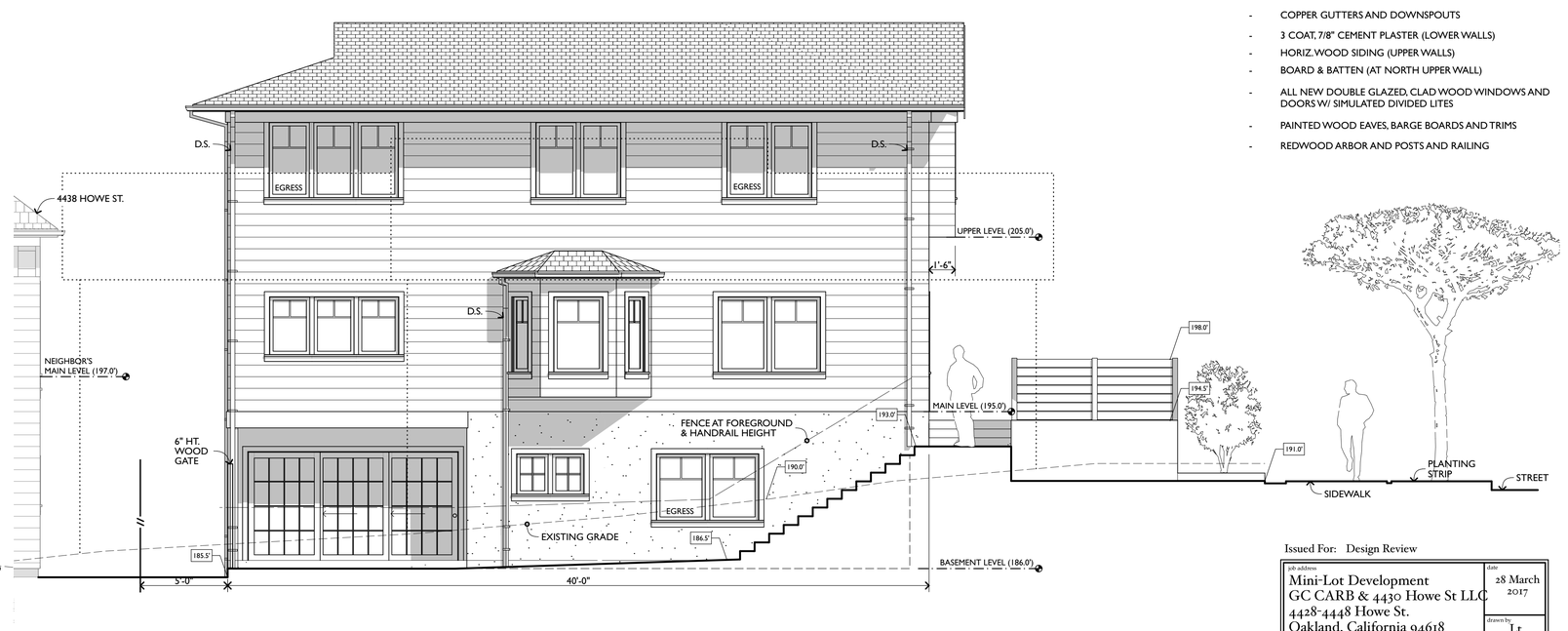
West (Driveway) Elevation

SCALE: 1/4" = 1'-0"



South (Rear) Elevation

SCALE: 1/4" = 1'-0"



East (Side) Elevation

SCALE: 1/4" = 1'-0"

Typical Exterior Materials

- CLASS 'A', COMPOSITION SHINGLE ROOF, 40 YEAR RATED
- COPPER GUTTERS AND DOWNSPOUTS
- 3 COAT, 7/8" CEMENT PLASTER (LOWER WALLS)
- HORIZ. WOOD SIDING (UPPER WALLS)
- BOARD & BATTEN (AT NORTH UPPER WALL)
- ALL NEW DOUBLE GLAZED, CLAD WOOD WINDOWS AND DOORS W/ SIMULATED DIVIDED LITES
- PAINTED WOOD EAVES, BARGE BOARDS AND TRIMS
- REDWOOD ARBOR AND POSTS AND RAILING

Issued For: Design Review

job address
Mini-Lot Development
GC CARB & 4430 Howe St LLC
4428-4448 Howe St.
Oakland, California 94618

date: 28 March 2017

drawn by: Lt

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drawing title: 4448 Exterior Elevations

sheet: 20

job number: 1556

If the bar below measures one inch drawing is to scale
0 1"

4430 • Green Building Check List

GreenPointRATED
A PROGRAM OF BUILD IT GREEN

NEW HOME RATING SYSTEM, VERSION 6.1

SINGLE FAMILY CHECKLIST

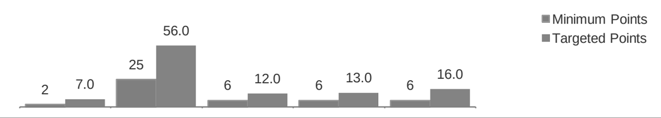
Planning Scoresheet

The GreenPoint Rated checklist tracks green features incorporated into the home. GreenPoint Rated is administered by Build It Green, a non-profit whose mission is to promote healthy, energy and resource efficient buildings in California.
The minimum requirements of GreenPoint Rated are: verification of 50 or more points; Earn the following minimum points per category: Community (2), Energy (25), Indoor Air Quality/Health (6), Resources (6), and Water (6); and meet the prerequisites CALGreen Mandatory, H6.1, J5.1, O1, O7.

The criteria for the green building practices listed below are described in the GreenPoint Rated Single Family Rating Manual. For more information please visit **www.builditgreen.org/greenpointrated**
Build It Green is not a code enforcement agency.

Points Targeted: 104.0

Certification Level: Silver



4430 Howe Street

2430 Howe Street

	Measures	Points Targeted	Community	Energy	IAQ/Health	Resources	Water	Notes
CALGreen								
TBD	**CALGreen Res** (REQUIRED)	0		1	1	1	1	
A. SITE								
TBD	**A1. Construction Footprint**					1		
	A2. Job Site Construction Waste Diversion							
Yes	A2.1 65% C&D Waste Diversion (**Including** Alternative Daily Cover)	2				2		
TBD	A2.2 65% C&D Waste Diversion (**Excluding** Alternative Daily Cover)					2		
TBD	A2.3 Recycling Rates from Third-Party Verified Mixed-Use Waste Facility					1		
TBD	**A3. Recycled Content Base Material**					1		
TBD	**A4. Heat Island Effect Reduction (Non-Roof)**			1				
TBD	**A5. Construction Environmental Quality Management Plan Including Flush-Out**				1			
	A6. Stormwater Control: Prescriptive Path							
Yes	A6.1 Permeable Paving Material	1					1	
TBD	A6.2 Filtration and/or Bio-Retention Features						1	
TBD	A6.3 Non-Leaching Roofing Materials						1	
TBD	A6.4 Smart Stormwater Street Design		1					
TBD	**A7. Stormwater Control: Performance Path**						3	
B. FOUNDATION								
Yes	**B1. Fly Ash and/or Slag in Concrete**	1				1		
TBD	**B2. Radon-Resistant Construction**				2			
TBD	**B3. Foundation Drainage System**					2		
TBD	**B4. Moisture Controlled Crawlspace**				1			
	B5. Structural Pest Controls							
TBD	B5.1 Termite Shields and Separated Exterior Wood-to-Concrete Connections					1		
TBD	B5.2 Plant Trunks, Bases, or Stems at Least 36 Inches from the Foundation					1		
C. LANDSCAPE								
83.55%	Enter the landscape area percentage							figure out the landscaped area of the project(s)
TBD	**C1. Plants Grouped by Water Needs (Hydrozoning)**						1	
TBD	**C2. Three Inches of Mulch in Planting Beds**						1	
	C3. Resource Efficient Landscapes							
Yes	C3.1 No Invasive Species Listed by Cal-IPC	1				1		
TBD	C3.2 Plants Chosen and Located to Grow to Natural Size					1		
Yes	C3.3 Drought Tolerant, California Native, Mediterranean Species, or Other Appropriate Species	3					3	
	C4. Minimal Turf in Landscape							
Yes	C4.1 No Turf on Slopes Exceeding 10% and No Overhead Sprinklers Installed in Areas Less Than Eight Feet Wide	2					2	
TBD	C4.2 Turf on a Small Percentage of Landscaped Area						2	
TBD	**C5. Trees to Moderate Building Temperature**		1	1			1	
Yes	**C6. High-Efficiency Irrigation System**	2					2	Drip irrigation system
Yes	**C7. One Inch of Compost in the Top Six to Twelve Inches of Soil**	2					2	
TBD	**C8. Rainwater Harvesting System**						3	
TBD	**C9. Recycled Wastewater Irrigation System**						1	
TBD	**C10. Submeter or Dedicated Meter for Landscape Irrigation**						2	
TBD	**C11. Landscape Meets Water Budget**						2	
	C12. Environmentally Preferable Materials for Site							
TBD	C12.1 Environmentally Preferable Materials for 70% of Non-Plant Landscape Elements and Fencing					1		
TBD	**C13. Reduced Light Pollution**		1					
TBD	**C14. Large Stature Tree(s)**		1					
TBD	**C15. Third Party Landscape Program Certification**						1	
TBD	**C16. Maintenance Contract with Certified Professional**						1	
D. STRUCTURAL FRAME AND BUILDING ENVELOPE								
	D1. Optimal Value Engineering							
TBD	D1.1 Joists, Rafters, and Studs at 24 Inches on Center			1		2		
TBD	D1.2 Non-Load Bearing Door and Window Headers Sized for Load					1		
TBD	D1.3 Advanced Framing Measures					2		
TBD	**D2. Construction Material Efficiencies**					1		
	D3. Engineered Lumber							
TBD	D3.1 Engineered Beams and Headers					1		
Yes	D3.2 Wood I-Joists or Web Trusses for Floors	1				1		Wood I-joists for floors
TBD	D3.3 Engineered Lumber for Roof Rafters					1		
TBD	D3.4 Engineered or Finger-Jointed Studs for Vertical Applications					1		
Yes	D3.5 OSB for Subfloor	0.5				0.5		
Yes	D3.6 OSB for Wall and Roof Sheathing	0.5				0.5		
TBD	**D4. Insulated Headers**			1				
	D5. FSC-Certified Wood							
TBD	D5.1 Dimensional Lumber, Studs, and Timber					6		Using FSC lumber?
TBD	D5.2 Panel Products					3		
	D6. Solid Wall Systems							
TBD	D6.1 At Least 90% of Floors					1		
TBD	D6.2 At Least 90% of Exterior Walls			1		1		
TBD	D6.3 At Least 90% of Roofs			1		1		
Yes	**D7. Energy Heels on Roof Trusses**	1		1				If trusses: this is great energy measure
16 inches	**D8. Overhangs and Gutters**	1		1		1		How many inches?
	D9. Reduced Pollution Entering the Home from the Garage							
TBD	D9.1 Detached Garage				2			
TBD	D9.2 Mitigation Strategies for Attached Garage				1			
	D10. Structural Pest and Rot Controls							
TBD	D10.1 All Wood Located At Least 12 Inches Above the Soil					1		
TBD	D10.2 Wood Framing Treated With Borates or Factory-Impregnated, or Wall Materials Other Than Wood					1		
Yes	**D11. Moisture-Resistant Materials in Wet Areas (such as Kitchen, Bathrooms, Utility Rooms, and Basements)**	2			1	1		Tile, backer board, etc.
E. EXTERIOR								
TBD	**E1. Environmentally Preferable Decking**					1		
TBD	**E2. Flashing Installation Third-Party Verified**					2		
TBD	**E3. Rain Screen Wall System**					2		
Yes	**E4. Durable and Non-Combustible Cladding Materials**	1				1		Hardy board or stucco or other?
	E5. Durable Roofing Materials							
TBD	E5.1 Durable and Fire Resistant Roofing Materials or Assembly					1		
TBD	**E6. Vegetated Roof**		2	2				
F. INSULATION								
	F1. Insulation with 30% Post-Consumer or 60% Post-Industrial Recycled Content							
TBD	F1.1 Walls and Floors					1		Need some research on insulation
TBD	F1.2 Ceilings					1		
	F2. Insulation that Meets the CDPH Standard Method—Residential for Low Emissions							
TBD	F2.1 Walls and Floors				1			
TBD	F2.2 Ceilings				1			
	F3. Insulation That Does Not Contain Fire Retardants							
TBD	F3.1 Cavity Walls and Floors				1			
TBD	F3.2 Ceilings				1			
TBD	F3.3 Interior and Exterior				1			
G. PLUMBING								
	G1. Efficient Distribution of Domestic Hot Water							
Yes	G1.1 Insulated Hot Water Pipes	1		1				
TBD	G1.2 WaterSense Volume Limit for Hot Water Distribution						1	
TBD	G1.3 Increased Efficiency in Hot Water Distribution						2	
	G2. Install Water-Efficient Fixtures							
Yes	G2.1 WaterSense Showerheads with Matching Compensation Valve	2					2	
Yes	G2.2 WaterSense Bathroom Faucets	1					1	
Yes	G2.3 WaterSense Toilets with a Maximum Performance (MaP) Threshold of No Less Than 500 Grams	1					1	
TBD	**G3. Pre-Plumbing for Graywater System**						1	
TBD	**G4. Operational Graywater System**						3	
H. HEATING, VENTILATION, AND AIR CONDITIONING								
	H1. Sealed Combustion Units							
Yes	H1.1 Sealed Combustion Furnace	1			1			
Yes	H1.2 Sealed Combustion Water Heater	2			2			
TBD	**H2. High Performing Zoned Hydronic Radiant Heating System**			1	1			
	H3. Effective Ductwork							
Yes	H3.1 Duct Mastic on Duct Joints and Seams	1		1				Air duct mastic on every seam
Yes	H3.2 Pressure Balance the Ductwork System	1		1				Goes with #140 ACCA Manual J, S, T and D. HVAC con
Yes	**H4. ENERGY STAR® Bathroom Fans Per HVI Standards with Air Flow Verified**	1			1			
	H5. Advanced Practices for Cooling							
TBD	H5.1 ENERGY STAR Ceiling Fans in Living Areas and Bedrooms			1				Ceiling fans?
	H6. Whole House Mechanical Ventilation Practices to Improve Indoor Air Quality							
Yes	H6.1 Meet ASHRAE 62.2-2010 Ventilation Residential Standards	Y	R	R	R	R	R	
TBD	H6.2 Advanced Ventilation Standards				1			
TBD	H6.3 Outdoor Air Ducted to Bedroom and Living Areas				2			
	H7. Effective Range Hood Design and Installation							
Yes	H7.1 Effective Range Hood Ducting and Design	1			1			I will have to verify this one
TBD	H7.2 Automatic Range Hood Control				1			
Yes	**H8. No Fireplace or Sealed Gas Fireplace**	1			1			
TBD	**H9. Humidity Control Systems**				1			
TBD	**H10. Register Design Per ACCA Manual T**			1				HVAC contractor can do this as part of design and insta
Yes	**H11. High Efficiency HVAC Filter (MERV 8+)**	1			1			
I. RENEWABLE ENERGY								
TBD	**I1. Pre-Plumbing for Solar Water Heating**			1				
TBD	**I2. Preparation for Future Photovoltaic Installation**			1				
	I3. Onsite Renewable Generation (Solar PV, Solar Thermal, and Wind)			25				Want to add solar on the roof? That will get points!
	I4. Net Zero Energy Home							
TBD	I4.1 Near Zero Energy Home			2				
TBD	I4.2 Net Zero Electric			4				
J. BUILDING PERFORMANCE AND TESTING								
Yes	**J1. Third-Party Verification of Quality of Insulation Installation**	1			1			
Yes	**J2. Supply and Return Air Flow Testing**	2		1	1			
Yes	**J3. Mechanical Ventilation Testing and Low Leakage**	1			1			
TBD	**J4. Combustion Appliance Safety Testing**				1			
	J5. Building Performance Exceeds Title 24 Part 6							
0.20	J5.1 Home Outperforms Title 24 Part 6	45		60+				
Yes	**J6. Title 24 Prepared and Signed by a CABEC Certified Energy Analyst**	1		1				
Yes	**J7. Participation in Utility Program with Third-Party Plan Review**	1		1				
TBD	**J8. ENERGY STAR for Homes**			1				
No	**J9. EPA Indoor airPlus Certification**	0			1			
3.5	**J10. Blower Door Testing**	1			2			
K. FINISHES								
	K1. Entryways Designed to Reduce Tracked-In Contaminants							
TBD	K1.1 Individual Entryways				1			
TBD	**K2. Zero-VOC Interior Wall and Ceiling Paints**				2			
TBD	**K3. Low-VOC Caulks and Adhesives**				1			
	K4. Environmentally Preferable Materials for Interior Finish							
TBD	K4.1 Cabinets					2		
TBD	K4.2 Interior Trim					2		
TBD	K4.3 Shelving					2		
TBD	K4.4 Doors					2		
TBD	K4.5 Countertops					1		
	K5. Formaldehyde Emissions in Interior Finish Exceed CARB							
TBD	K5.1 Doors				1			
TBD	K5.2 Cabinets and Countertops				2			
TBD	K5.3 Interior Trim and Shelving				2			
TBD	**K6. Products That Comply With the Health Product Declaration Open Standard**				2			
TBD	**K7. Indoor Air Formaldehyde Level Less Than 27 Parts Per Billion**				2			
No	**K8. Comprehensive Inclusion of Low Emitting Finishes**	0			1			
L. FLOORING								
TBD	**L1. Environmentally Preferable Flooring**					3		
TBD	**L2. Low-Emitting Flooring Meets CDPH 2010 Standard Method—Residential**				3			
Yes	**L3. Durable Flooring**	1				1		
TBD	**L4. Thermal Mass Flooring**			1				

4430 • Green Building Check List • Cont'd

	Measures	Points Targeted	Community	Energy	IAQ/Health	Resources	Water	Notes
M. APPLIANCES AND LIGHTING								
Yes	**M1. ENERGY STAR® Dishwasher**	1					1	
TBD	**M2. CEE-Rated Clothes Washer**			1			2	
TBD	**M3. Size-Efficient ENERGY STAR Refrigerator**			2				
	M4. Permanent Centers for Waste Reduction Strategies							
TBD	M4.1 Built-In Recycling Center					1		
TBD	M4.2 Built-In Composting Center					1		
	M5. Lighting Efficiency							
Yes	M5.1 High-Efficacy Lighting	2		2				
TBD	M5.2 Lighting System Designed to IESNA Footcandle Standards or Designed by Lighting Consultant			2				
N. COMMUNITY								
	N1. Smart Development							
Yes	N1.1 Infill Site	2	1			1		
TBD	N1.2 Designated Brownfield Site		1		1			
>20	N1.3 Conserve Resources by Increasing Density	2		2		2		Do math to figure units per acre.
TBD	N1.4 Cluster Homes for Land Preservation		1			1		
	N1.5 Home Size Efficiency	0				9		
2580	Enter the area of the home, in square feet							
3	Enter the number of bedrooms							
Yes	**N2. Home(s)/Development Located Within 1/2 Mile of a Major Transit Stop**	2	2					
	N3. Pedestrian and Bicycle Access							
	N3.1 Pedestrian Access to Services Within 1/2 Mile of Community Services	1	2					
5	Enter the number of Tier 1 services							
6	Enter the number of Tier 2 services							
TBD	N3.2 Connection to Pedestrian Pathways		1					
TBD	N3.3 Traffic Calming Strategies		2					
	N4. Outdoor Gathering Places							
No	N4.1 Public or Semi-Public Outdoor Gathering Places for Residents	0	1					
No	N4.2 Public Outdoor Gathering Places with Direct Access to Tier 1 Community Services	0	1					
	N5. Social Interaction							
Yes	N5.1 Residence Entries with Views to Callers	1	1					
Yes	N5.2 Entrances Visible from Street and/or Other Front Doors	1	1					
Yes	N5.3 Porches Oriented to Street and Public Space	1	1					Yes
TBD	N5.4 Social Gathering Space		1					
	N6. Passive Solar Design							
TBD	N6.1 Heating Load			2				
TBD	N6.2 Cooling Load			2				
	N7. Adaptable Building							
TBD	N7.1 Universal Design Principles in Units		1		1			
TBD	N7.2 Full-Function Independent Rental Unit		1					
O. OTHER								
Yes	**O1. GreenPoint Rated Checklist in Blueprints**	Y	R	R	R	R	R	This GPR plan must be added to blueprints
Yes	**O2. Pre-Construction Kickoff Meeting with Rater and Subcontractors**	2		0.5		1	0.5	Have HVAC, Insulation, HERS, etc to kickoff meeting
TBD	**O3. Orientation and Training to Occupants—Conduct Educational Walkthroughs**			0.5	0.5	0.5	0.5	
TBD	**O4. Builder's or Developer's Management Staff are Certified Green Building Professionals**			0.5	0.5	0.5	0.5	
TBD	**O5. Home System Monitors**			1			1	
	O6. Green Building Education							
TBD	O6.1 Marketing Green Building		2					
Yes	O6.2 Green Building Signage	1		0.5			0.5	
TBD	**O7. Green Appraisal Addendum**	N	R	R	R	R	R	
TBD	**O8. Detailed Durability Plan and Third-Party Verification of Plan Implementation**					1		
INNOVATIONS								
TBD	**Enter Innovation 1 description here. Enter up to four points at right.**							
TBD	**Enter Innovation 2 description here. Enter up to four points at right.**							
TBD	**Enter Innovation 3 description here. Enter up to four points at right.**							
TBD	**Enter Innovation 4 description here. Enter up to four points at right.**							
	Summary		Community	Energy	IAQ/Health	Resources	Water	
	Total Available Points in Specific Categories	282	26	71	54	83	48	
	Minimum Points Required in Specific Categories	50	2	25	6	6	6	
	Total Points Targeted	104.0	7.0	56.0	12.0	13.0	16.0	

4428 • Green Building Check List

GreenPointRATED
A PROGRAM OF BUILD IT GREEN

NEW HOME RATING SYSTEM, VERSION 6.1

SINGLE FAMILY CHECKLIST

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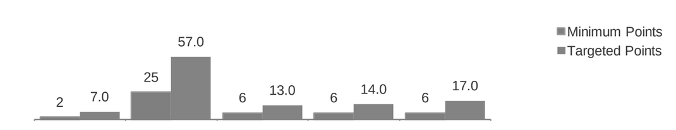
A home is only GreenPoint Rated if all features are verified by a Certified GreenPoint Rater through Build It Green.

New Home Single Family v. 6.1

Points Targeted: 108.0

Certification Level: Silver



4428 Howe Street

	Measures	Points Targeted	Community	Energy	IAQ/Health	Resources	Water	Notes
CALGreen								
Yes	**CALGreen Res** (REQUIRED)	4		1	1	1	1	
A. SITE								
TBD	**A1. Construction Footprint**					1		
	A2. Job Site Construction Waste Diversion							
Yes	A2.1 65% C&D Waste Diversion (**Including** Alternative Daily Cover)	2				2		
TBD	A2.2 65% C&D Waste Diversion (**Excluding** Alternative Daily Cover)					2		
TBD	A2.3 Recycling Rates from Third-Party Verified Mixed-Use Waste Facility					1		
TBD	**A3. Recycled Content Base Material**					1		
TBD	**A4. Heat Island Effect Reduction (Non-Roof)**			1				
TBD	**A5. Construction Environmental Quality Management Plan Including Flush-Out**				1			
	A6. Stormwater Control: Prescriptive Path							
Yes	A6.1 Permeable Paving Material	1					1	
TBD	A6.2 Filtration and/or Bio-Retention Features						1	
TBD	A6.3 Non-Leaching Roofing Materials						1	
TBD	A6.4 Smart Stormwater Street Design		1					
TBD	**A7. Stormwater Control: Performance Path**						3	
B. FOUNDATION								
Yes	**B1. Fly Ash and/or Slag in Concrete**	1				1		
TBD	**B2. Radon-Resistant Construction**				2			
TBD	**B3. Foundation Drainage System**					2		
TBD	**B4. Moisture Controlled Crawlspace**				1			
	B5. Structural Pest Controls							
TBD	B5.1 Termite Shields and Separated Exterior Wood-to-Concrete Connections					1		
TBD	B5.2 Plant Trunks, Bases, or Stems at Least 36 Inches from the Foundation					1		
C. LANDSCAPE								
26.35%	Enter the landscape area percentage							figure out the landscaped area of the project(s)
TBD	**C1. Plants Grouped by Water Needs (Hydrozoning)**						1	
TBD	**C2. Three Inches of Mulch in Planting Beds**						1	
	C3. Resource Efficient Landscapes							
Yes	C3.1 No Invasive Species Listed by Cal-IPC	1				1		
TBD	C3.2 Plants Chosen and Located to Grow to Natural Size					1		
Yes	C3.3 Drought Tolerant, California Native, Mediterranean Species, or Other Appropriate Species	3					3	
	C4. Minimal Turf in Landscape							
Yes	C4.1 No Turf on Slopes Exceeding 10% and No Overhead Sprinklers Installed in Areas Less Than Eight Feet Wide	2					2	
TBD	C4.2 Turf on a Small Percentage of Landscaped Area						2	
TBD	**C5. Trees to Moderate Building Temperature**		1	1			1	
Yes	**C6. High-Efficiency Irrigation System**	2					2	Drip irrigation system
Yes	**C7. One Inch of Compost in the Top Six to Twelve Inches of Soil**	2					2	
TBD	**C8. Rainwater Harvesting System**						3	
TBD	**C9. Recycled Wastewater Irrigation System**						1	
TBD	**C10. Submeter or Dedicated Meter for Landscape Irrigation**						2	
TBD	**C11. Landscape Meets Water Budget**						2	
	C12. Environmentally Preferable Materials for Site							
TBD	C12.1 Environmentally Preferable Materials for 70% of Non-Plant Landscape Elements and Fencing					1		
TBD	**C13. Reduced Light Pollution**		1					
TBD	**C14. Large Stature Tree(s)**		1					
TBD	**C15. Third Party Landscape Program Certification**						1	
TBD	**C16. Maintenance Contract with Certified Professional**						1	
D. STRUCTURAL FRAME AND BUILDING ENVELOPE								
	D1. Optimal Value Engineering							
TBD	D1.1 Joists, Rafters, and Studs at 24 Inches on Center			1		2		
TBD	D1.2 Non-Load Bearing Door and Window Headers Sized for Load					1		
TBD	D1.3 Advanced Framing Measures					2		
TBD	**D2. Construction Material Efficiencies**					1		
	D3. Engineered Lumber							
TBD	D3.1 Engineered Beams and Headers					1		
Yes	D3.2 Wood I-Joists or Web Trusses for Floors	1				1		Wood I-joists for floors
TBD	D3.3 Engineered Lumber for Roof Rafters					1		
TBD	D3.4 Engineered or Finger-Jointed Studs for Vertical Applications					1		
Yes	D3.5 OSB for Subfloor	0.5				0.5		
Yes	D3.6 OSB for Wall and Roof Sheathing	0.5				0.5		
TBD	**D4. Insulated Headers**			1				
	D5. FSC-Certified Wood							
TBD	D5.1 Dimensional Lumber, Studs, and Timber					6		Using FSC lumber?
TBD	D5.2 Panel Products					3		
	D6. Solid Wall Systems							
TBD	D6.1 At Least 90% of Floors					1		
TBD	D6.2 At Least 90% of Exterior Walls			1		1		
TBD	D6.3 At Least 90% of Roofs			1		1		
Yes	**D7. Energy Heels on Roof Trusses**	1		1				If trusses: this is great energy measure
16 inches	**D8. Overhangs and Gutters**	1		1		1		How many inches?
	D9. Reduced Pollution Entering the Home from the Garage							
TBD	D9.1 Detached Garage				2			
TBD	D9.2 Mitigation Strategies for Attached Garage				1			
	D10. Structural Pest and Rot Controls							
TBD	D10.1 All Wood Located At Least 12 Inches Above the Soil					1		
TBD	D10.2 Wood Framing Treated With Borates or Factory-Impregnated, or Wall Materials Other Than Wood					1		
Yes	**D11. Moisture-Resistant Materials in Wet Areas (such as Kitchen, Bathrooms, Utility Rooms, and Basements)**	2			1	1		Tile, backer board, etc.
E. EXTERIOR								
TBD	**E1. Environmentally Preferable Decking**					1		
TBD	**E2. Flashing Installation Third-Party Verified**					2		
TBD	**E3. Rain Screen Wall System**					2		
Yes	**E4. Durable and Non-Combustible Cladding Materials**	1				1		Hardy board or stucco or other?
	E5. Durable Roofing Materials							
TBD	E5.1 Durable and Fire Resistant Roofing Materials or Assembly					1		
TBD	**E6. Vegetated Roof**		2	2				
F. INSULATION								
	F1. Insulation with 30% Post-Consumer or 60% Post-Industrial Recycled Content							
TBD	F1.1 Walls and Floors					1		Need some research on insulation
TBD	F1.2 Ceilings					1		
	F2. Insulation that Meets the CDPH Standard Method—Residential for Low Emissions							
TBD	F2.1 Walls and Floors				1			
TBD	F2.2 Ceilings				1			
	F3. Insulation That Does Not Contain Fire Retardants							
TBD	F3.1 Cavity Walls and Floors				1			
TBD	F3.2 Ceilings				1			
TBD	F3.3 Interior and Exterior				1			

4428 • Green Building Check List • Cont'd

	Measures	Points Targeted	Community	Energy	IAQ/Health	Resources	Water	Notes
G. PLUMBING								
	G1. Efficient Distribution of Domestic Hot Water							
Yes	G1.1 Insulated Hot Water Pipes	1		1				
TBD	G1.2 WaterSense Volume Limit for Hot Water Distribution						1	
TBD	G1.3 Increased Efficiency in Hot Water Distribution						2	
	G2. Install Water-Efficient Fixtures							
Yes	G2.1 WaterSense Showerheads with Matching Compensation Valve	2					2	
Yes	G2.2 WaterSense Bathroom Faucets	1					1	
Yes	G2.3 WaterSense Toilets with a Maximum Performance (MaP) Threshold of No Less Than 500 Grams	1					1	
TBD	**G3. Pre-Plumbing for Graywater System**						1	
TBD	**G4. Operational Graywater System**						3	
H. HEATING, VENTILATION, AND AIR CONDITIONING								
	H1. Sealed Combustion Units							
Yes	H1.1 Sealed Combustion Furnace	1			1			
Yes	H1.2 Sealed Combustion Water Heater	2			2			
TBD	**H2. High Performing Zoned Hydronic Radiant Heating System**			1	1			
	H3. Effective Ductwork							
Yes	H3.1 Duct Mastic on Duct Joints and Seams	1		1				Air duct mastic on every seam
Yes	H3.2 Pressure Balance the Ductwork System	1		1				Goes with #140 ACCA Manual J, S, T and D. HVAC con
Yes	**H4. ENERGY STAR® Bathroom Fans Per HVI Standards with Air Flow Verified**	1			1			
	H5. Advanced Practices for Cooling							
TBD	H5.1 ENERGY STAR Ceiling Fans in Living Areas and Bedrooms			1				Ceiling fans?
	H6. Whole House Mechanical Ventilation Practices to Improve Indoor Air Quality							
Yes	H6.1 Meet ASHRAE 62.2-2010 Ventilation Residential Standards	Y	R	R	R	R	R	
TBD	H6.2 Advanced Ventilation Standards				1			
TBD	H6.3 Outdoor Air Ducted to Bedroom and Living Areas				2			
	H7. Effective Range Hood Design and Installation							
Yes	H7.1 Effective Range Hood Ducting and Design	1			1			I will have to verify this one
TBD	H7.2 Automatic Range Hood Control				1			
Yes	**H8. No Fireplace or Sealed Gas Fireplace**	1			1			
TBD	**H9. Humidity Control Systems**				1			
TBD	**H10. Register Design Per ACCA Manual T**			1				HVAC contractor can do this as part of design and insta
Yes	**H11. High Efficiency HVAC Filter (MERV 8+)**	1			1			
I. RENEWABLE ENERGY								
TBD	**I1. Pre-Plumbing for Solar Water Heating**			1				
TBD	**I2. Preparation for Future Photovoltaic Installation**			1				
	I3. Onsite Renewable Generation (Solar PV, Solar Thermal, and Wind)			25				Want to add solar on the roof? That will get points!
	I4. Net Zero Energy Home							
TBD	I4.1 Near Zero Energy Home			2				
TBD	I4.2 Net Zero Electric			4				
J. BUILDING PERFORMANCE AND TESTING								
Yes	**J1. Third-Party Verification of Quality of Insulation Installation**	1			1			
Yes	**J2. Supply and Return Air Flow Testing**	2		1	1			
Yes	**J3. Mechanical Ventilation Testing and Low Leakage**	1			1			
TBD	**J4. Combustion Appliance Safety Testing**				1			
	J5. Building Performance Exceeds Title 24 Part 6							
0.20	J5.1 Home Outperforms Title 24 Part 6	45		60+				
Yes	**J6. Title 24 Prepared and Signed by a CABEC Certified Energy Analyst**	1		1				
Yes	**J7. Participation in Utility Program with Third-Party Plan Review**	1		1				
TBD	**J8. ENERGY STAR for Homes**			1				
No	**J9. EPA Indoor airPlus Certification**	0			1			
3.5	**J10. Blower Door Testing**	1			2			
K. FINISHES								
	K1. Entryways Designed to Reduce Tracked-In Contaminants							
TBD	K1.1 Individual Entryways				1			
TBD	**K2. Zero-VOC Interior Wall and Ceiling Paints**				2			
TBD	**K3. Low-VOC Caulks and Adhesives**				1			
L. FLOORING								
TBD	**L1. Environmentally Preferable Flooring**					3		
TBD	**L2. Low-Emitting Flooring Meets CDPH 2010 Standard Method—Residential**				3			
Yes	**L3. Durable Flooring**	1				1		
TBD	**L4. Thermal Mass Flooring**			1				
M. APPLIANCES AND LIGHTING								
Yes	**M1. ENERGY STAR® Dishwasher**	1					1	
TBD	**M2. CEE-Rated Clothes Washer**			1			2	
TBD	**M3. Size-Efficient ENERGY STAR Refrigerator**			2				
	M4. Permanent Centers for Waste Reduction Strategies							
TBD	M4.1 Built-In Recycling Center					1		
TBD	M4.2 Built-In Composting Center					1		
	M5. Lighting Efficiency							
Yes	M5.1 High-Efficacy Lighting	2		2				
TBD	M5.2 Lighting System Designed to IESNA Footcandle Standards or Designed by Lighting Consultant			2				
N. COMMUNITY								
	N1. Smart Development							
Yes	N1.1 Infill Site	2	1			1		
TBD	N1.2 Designated Brownfield Site		1		1			
>20	N1.3 Conserve Resources by Increasing Density	2		2		2		Do math to figure units per acre.
TBD	N1.4 Cluster Homes for Land Preservation		1			1		
	N1.5 Home Size Efficiency					9		
	Enter the area of the home, in square feet							
	Enter the number of bedrooms							
Yes	**N2. Home(s)/Development Located Within 1/2 Mile of a Major Transit Stop**	2	2					
	N3. Pedestrian and Bicycle Access							
	N3.1 Pedestrian Access to Services Within 1/2 Mile of Community Services	1	2					I will have to do some research on this one
5	Enter the number of Tier 1 services							I will have to do some research on this one
6	Enter the number of Tier 2 services							
TBD	N3.2 Connection to Pedestrian Pathways		1					
TBD	N3.3 Traffic Calming Strategies		2					
	N4. Outdoor Gathering Places							
TBD	N4.1 Public or Semi-Public Outdoor Gathering Places for Residents		1					
TBD	N4.2 Public Outdoor Gathering Places with Direct Access to Tier 1 Community Services		1					
	N5. Social Interaction							
Yes	N5.1 Residence Entries with Views to Callers	1	1					
Yes	N5.2 Entrances Visible from Street and/or Other Front Doors	1	1					
Yes	N5.3 Porches Oriented to Street and Public Space	1	1					Is this true?
TBD	N5.4 Social Gathering Space		1					
	N6. Passive Solar Design							
TBD	N6.1 Heating Load			2				
TBD	N6.2 Cooling Load			2				
	N7. Adaptable Building							
TBD	N7.1 Universal Design Principles in Units		1		1			
TBD	N7.2 Full-Function Independent Rental Unit		1					
O. OTHER								
Yes	**O1. GreenPoint Rated Checklist in Blueprints**	Y	R	R	R	R	R	This GPR plan must be added to blueprints
Yes	**O2. Pre-Construction Kickoff Meeting with Rater and Subcontractors**	2		0.5		1	0.5	Have HVAC, Insulation, HERS, etc to kickoff meeting
TBD	**O3. Orientation and Training to Occupants—Conduct Educational Walkthroughs**			0.5	0.5	0.5	0.5	
TBD	**O4. Builder's or Developer's Management Staff are Certified Green Building Professionals**			0.5	0.5	0.5	0.5	
TBD	**O5. Home System Monitors**			1			1	
	O6. Green Building Education							
TBD	O6.1 Marketing Green Building		2					
Yes	O6.2 Green Building Signage	1		0.5			0.5	
TBD	**O7. Green Appraisal Addendum**	N	R	R	R	R	R	
TBD	**O8. Detailed Durability Plan and Third-Party Verification of Plan Implementation**					1		
INNOVATIONS								
TBD	**Enter Innovation 1 description here. Enter up to four points at right.**							
TBD	**Enter Innovation 2 description here. Enter up to four points at right.**							
TBD	**Enter Innovation 3 description here. Enter up to four points at right.**							
TBD	**Enter Innovation 4 description here. Enter up to four points at right.**							
	Summary		Community	Energy	IAQ/Health	Resources	Water	
	Total Available Points in Specific Categories	282	26	71	54	83	48	
	Minimum Points Required in Specific Categories	50	2	25	6	6	6	
	Total Points Targeted	108.0	7.0	57.0	13.0	14.0	17.0	

If the bar below measures one inch drawing is to scale
0 1"

Issued For: Design Review

job address
Mini-Lot Development
GC CARB & 4430 Howe St LLC
4428-4448 Howe St.
Oakland, California 94618

date
28 March 2017

drawn by
Lt

Jarvis architects
5278 College Avenue (510) 654-6755
Oakland, California
94618-1415 fax: 654-3424

drawing title
Oakland Green Building Ordinance 4428 & 4430

sheet
21

job number
1556

4432 • Green Building Check List

GreenPointRATED
A PROGRAM OF BUILD IT GREEN

NEW HOME RATING SYSTEM, VERSION 6.1

SINGLE FAMILY CHECKLIST

The GreenPoint Rated checklist tracks green features incorporated into the home. GreenPoint Rated is administered by Build It Green, a non-profit whose mission is to promote healthy, energy and resource efficient buildings in California.
The minimum requirements of GreenPoint Rated are: verification of 50 or more points; Earn the following minimum points per category: Community (2), Energy (25), Indoor Air Quality/Health (6), Resources (6), and Water (6); and meet the prerequisites CALGreen Mandatory, H6.1, J5.1, O1, O7.

The criteria for the green building practices listed below are described in the GreenPoint Rated Single Family Rating Manual. For more information please visit **www.builditgreen.org/greenpointrated**
Build It Green is not a code enforcement agency.

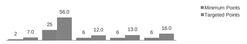
A home is only GreenPoint Rated if all features are verified by a Certified GreenPoint Rater through Build It Green.

New Home Single Family v. 6.1

Planning Scoresheet

Points Targeted: **104.0**

Certification Level: **Silver**



4432 Howe Street Measures	Points Targeted	Possible Points: Community	Energy	IAQ/Health	Resources	Water	Notes
CALGreen							
TBD **CALGreen Res** (REQUIRED)	0		1	1	1	1	
A. SITE							
TBD **A1. Construction Footprint**					1		
A2. Job Site Construction Waste Diversion							
Yes A2.1 65% C&D Waste Diversion **(including** Alternative Daily Cover)	2				2		
TBD A2.2 65% C&D Waste Diversion **(Excluding** Alternative Daily Cover)					2		
TBD A2.3 Recycling Rates from Third-Party Verified Mixed-Use Waste Facility					1		
TBD **A3. Recycled Content Base Material**					1		
TBD **A4. Heat Island Effect Reduction (Non-Roof)**			1				
TBD **A5. Construction Environmental Quality Management Plan Including Flush-Out**				1			
A6. Stormwater Control: Prescriptive Path							
Yes A6.1 Permeable Paving Material	1					1	
TBD A6.2 Filtration and/or Bio-Retention Features						1	
TBD A6.3 Non-Leaching Roofing Materials						1	
TBD A6.4 Smart Stormwater Street Design		1					
TBD **A7. Stormwater Control: Performance Path**						3	
B. FOUNDATION							
Yes **B1. Fly Ash and/or Slag in Concrete**	1				1		
TBD **B2. Radon-Resistant Construction**				2			
TBD **B3. Foundation Drainage System**					2		
TBD **B4. Moisture Controlled Crawlspace**				1			
B5. Structural Pest Controls							
TBD B5.1 Termite Shields and Separated Exterior Wood-to-Concrete Connections					1		
TBD B5.2 Plant Trunks, Bases, or Stems at Least 36 Inches from the Foundation					1		
C. LANDSCAPE							
63.55% Enter the landscape area percentage							figure out the landscaped area of the project(s)
TBD **C1. Plants Grouped by Water Needs (Hydrozoning)**						1	
TBD **C2. Three Inches of Mulch in Planting Beds**						1	
C3. Resource Efficient Landscapes							
Yes C3.1 No Invasive Species Listed by Cal-IPC	1				1		
TBD C3.2 Plants Chosen and Located to Grow to Natural Size					1		
Yes C3.3 Drought Tolerant, California Native, Mediterranean Species, or Other Appropriate Species	3					3	
C4. Minimal Turf in Landscape							
Yes C4.1 No Turf on Slopes Exceeding 10% and No Overhead Sprinklers Installed in Areas Less Than Eight Feet Wide	2					2	
TBD C4.2 Turf on a Small Percentage of Landscaped Area						2	
TBD **C5. Trees to Moderate Building Temperature**		1	1			1	
Yes **C6. High-Efficiency Irrigation System**	2					2	Drip irrigation system
Yes **C7. One inch of Compost in the Top Six to Twelve Inches of Soil**	2					2	
TBD **C8. Rainwater Harvesting System**						3	
TBD **C9. Recycled Wastewater Irrigation System**						1	
TBD **C10. Submeter or Dedicated Meter for Landscape Irrigation**						2	
TBD **C11. Landscape Meets Water Budget**						2	
C12. Environmentally Preferable Materials for Site							
TBD C12.1 Environmentally Preferable Materials for 70% of Non-Plant Landscape Elements and Fencing					1		
TBD **C13. Reduced Light Pollution**		1					
TBD **C14. Large Stature Tree(s)**		1					
TBD **C15. Third Party Landscape Program Certification**						1	
TBD **C16. Maintenance Contract with Certified Professional**						1	
D. STRUCTURAL FRAME AND INSULATED SHELL							
D1. Optimal Value Engineering							
TBD D1.1 Joists, Rafters, and Studs at 24 Inches on Center			1		2		
TBD D1.2 Non-Load Bearing Door and Window Headers Sized for Load					1		
TBD D1.3 Advanced Framing Measures					2		
TBD **D2. Construction Material Efficiencies**					1		
D3. Engineered Lumber							
TBD D3.1 Engineered Beams and Headers					1		
Yes D3.2 Wood I-Joists or Web Trusses for Floors	1				1		Wood I-joists for floors
TBD D3.3 Engineered Lumber for Roof Rafters					1		
TBD D3.4 Engineered or Finger-Jointed Studs for Vertical Applications					1		
Yes D3.5 OSB for Subfloor	0.5				0.5		
Yes D3.6 OSB for Wall and Roof Sheathing	0.5				0.5		
TBD **D4. Insulated Headers**			1				
D5. FSC-Certified Wood							
TBD D5.1 Dimensional Lumber, Studs, and Timber					6		Using FSC lumber?
TBD D5.2 Panel Products					3		
D6. Solid Wall Systems							
TBD D6.1 At Least 90% of Floors					1		
TBD D6.2 At Least 90% of Exterior Walls			1		1		
TBD D6.3 At Least 90% of Roofs			1		1		
Yes **D7. Energy Heels on Roof Trusses**	1		1				If trusses: this is great energy measure
16 inches **D8. Overhangs and Gutters**	1		1		1		How many inches?
D9. Reduced Pollution Entering the Home from the Garage							
TBD D9.1 Detached Garage				2			
TBD D9.2 Mitigation Strategies for Attached Garage				1			
D10. Structural Pest and Rot Controls							
TBD D10.1 All Wood Located At Least 12 Inches Above the Soil					1		
TBD D10.2 Wood Framing Treated With Borates or Factory-Impregnated, or Wall Materials Other Than Wood					1		
Yes **D11. Moisture-Resistant Materials in Wet Areas (such as Kitchen, Bathrooms, Utility Rooms, and Basements)**	2			1	1		Tile, backer board, etc.
E. EXTERIOR							
TBD **E1. Environmentally Preferable Decking**					1		
TBD **E2. Flashing Installation Third-Party Verified**					2		
TBD **E3. Rain Screen Wall System**					2		
Yes **E4. Durable and Non-Combustible Cladding Materials**	1				1		Hardy board or stucco or other?
E5. Durable Roofing Materials							
TBD E5.1 Durable and Fire Resistant Roofing Materials or Assembly					1		
TBD **E6. Vegetated Roof**		2	2				
F. INSULATION							
F1. Insulation with 30% Post-Consumer or 60% Post-Industrial Recycled Content							
TBD F1.1 Walls and Floors					1		Need some research on insulation
TBD F1.2 Ceilings					1		
F2. Insulation that Meets the CDPH Standard Method—Residential for Low Emissions							
TBD F2.1 Walls and Floors				1			
TBD F2.2 Ceilings				1			
F3. Insulation That Does Not Contain Fire Retardants							
TBD F3.1 Cavity Walls and Floors				1			
TBD F3.2 Ceilings				1			
TBD F3.3 Interior and Exterior				1			
G. PLUMBING							
G1. Efficient Distribution of Domestic Hot Water							
Yes G1.1 Insulated Hot Water Pipes	1		1				
TBD G1.2 WaterSense Volume Limit for Hot Water Distribution						1	
TBD G1.3 Increased Efficiency in Hot Water Distribution						2	
G2. Install Water-Efficient Fixtures							
Yes G2.1 WaterSense Showerheads with Matching Compensation Valve	2					2	
Yes G2.2 WaterSense Bathroom Faucets	1					1	
Yes G2.3 WaterSense Toilets with a Maximum Performance (MaP) Threshold of No Less Than 500 Grams	1					1	
TBD **G3. Pre-Plumbing for Graywater System**						1	
TBD **G4. Operational Graywater System**						3	
H. HEATING, VENTILATION, AND AIR CONDITIONING							
H1. Sealed Combustion Units							
Yes H1.1 Sealed Combustion Furnace	1			1			
Yes H1.2 Sealed Combustion Water Heater	2			2			
TBD **H2. High Performing Zoned Hydronic Radiant Heating System**			1	1			
H3. Effective Ductwork							
Yes H3.1 Duct Mastic on Duct Joints and Seams	1		1				Air duct mastic on every seam
Yes H3.2 Pressure Balance the Ductwork System	1		1				Goes with #140 ACCA Manual J, S, T and D. HVAC cor
Yes **H4. ENERGY STAR® Bathroom Fans Per HVI Standards with Air Flow Verified**	1			1			
H5. Advanced Practices for Cooling							
TBD H5.1 ENERGY STAR Ceiling Fans in Living Areas and Bedrooms			1				Ceiling fans?
H6. Whole House Mechanical Ventilation Practices to Improve Indoor Air Quality							
Yes H6.1 Meet ASHRAE 62.2-2010 Ventilation Residential Standards	Y	R	R	R	R	R	
TBD H6.2 Advanced Ventilation Standards				1			
TBD H6.3 Outdoor Air Ducted to Bedroom and Living Areas				2			
H7. Effective Range Hood Design and Installation							
Yes H7.1 Effective Range Hood Ducting and Design	1			1			I will have to verify this one
TBD H7.2 Automatic Range Hood Control				1			
Yes **H8. No Fireplace or Sealed Gas Fireplace**	1			1			
TBD **H9. Humidity Control Systems**				1			
TBD **H10. Register Design Per ACCA Manual T**			1				HVAC contractor can do this as part of design and insta
Yes **H11. High Efficiency HVAC Filter (MERV 8+)**	1			1			
I. RENEWABLE ENERGY							
TBD **I1. Pre-Plumbing for Solar Water Heating**			1				
TBD **I2. Preparation for Future Photovoltaic Installation**			1				
I3. Onsite Renewable Generation (Solar PV, Solar Thermal, and Wind)			25				Want to add solar on the roof? That will get points!
I4. Net Zero Energy Home							
TBD I4.1 Near Zero Energy Home			2				
TBD I4.2 Net Zero Electric			4				
J. BUILDING SYSTEM PERFORMANCE & TESTING							
Yes **J1. Third-Party Verification of Quality of Insulation Installation**	1			1			
Yes **J2. Supply and Return Air Flow Testing**	2		1	1			
Yes **J3. Mechanical Ventilation Testing and Low Leakage**	1			1			
TBD **J4. Combustion Appliance Safety Testing**				1			
J5. Building Performance Exceeds Title 24 Part 6							
0.20 J5.1 Home Outperforms Title 24 Part 6	45		60+				
Yes **J6. Title 24 Prepared and Signed by a CABEC Certified Energy Analyst**	1		1				
Yes **J7. Participation in Utility Program with Third-Party Plan Review**	1		1				
TBD **J8. ENERGY STAR for Homes**			1				
No **J9. EPA Indoor airPlus Certification**	0			1			
3.5 **J10. Blower Door Testing**	1			2			
K. FINISHES							
K1. Entryways Designed to Reduce Tracked-In Contaminants							
TBD K1.1 Individual Entryways				1			
TBD **K2. Zero-VOC Interior Wall and Ceiling Paints**				2			
TBD **K3. Low-VOC Caulks and Adhesives**				1			

4432 Howe Street	Points Targeted	Community	Energy	IAQ/Health	Resources	Water	
K4. Environmentally Preferable Materials for Interior Finish							
TBD K4.1 Cabinets					2		
TBD K4.2 Interior Trim					2		
TBD K4.3 Shelving					2		
TBD K4.4 Doors					2		
TBD K4.5 Countertops					1		
K5. Formaldehyde Emissions in Interior Finish Exceed CARB							
TBD K5.1 Doors				1			
TBD K5.2 Cabinets and Countertops				2			
TBD K5.3 Interior Trim and Shelving				2			
TBD **K6. Products That Comply With the Health Product Declaration Open Standard**							
TBD **K7. Indoor Air Formaldehyde Level Less Than 27 Parts Per Billion**				2			
No **K8. Comprehensive Inclusion of Low Emitting Finishes**	0			1			
L. FLOORING							
TBD **L1. Environmentally Preferable Flooring**						3	
TBD **L2. Low-Emitting Flooring Meets CDPH 2010 Standard Method—Residential**				3			
Yes **L3. Durable Flooring**	1				1		
TBD **L4. Thermal Mass Flooring**				1			
M. APPLIANCES AND LIGHTING							
Yes **M1. ENERGY STAR® Dishwasher**	1					1	
TBD **M2. CEE-Rated Clothes Washer**				1		2	
TBD **M3. Size-Efficient ENERGY STAR Refrigerator**				2			
M4. Permanent Centers for Waste Reduction Strategies							
TBD M4.1 Built-In Recycling Center					1		
TBD M4.2 Built-In Composting Center					1		
M5. Lighting Efficiency							
Yes M5.1 High-Efficacy Lighting	2		2				
TBD M5.2 Lighting System Designed to IESNA Footcandle Standards or Designed by Lighting Consultant			2				
N. COMMUNITY							
N1. Smart Development							
Yes N1.1 Infill Site	2	1			1		
TBD N1.2 Designated Brownfield Site		1		1			
>20 N1.3 Conserve Resources by Increasing Density	2		2		2		Do math to figure units per acre.
TBD N1.4 Cluster Homes for Land Preservation		1			1		
N1.5 Home Size Efficiency					9		
Enter the area of the home, in square feet							
Enter the number of bedrooms							
Yes **N2. Home(s)/Development Located Within 1/2 Mile of a Major Transit Stop**	2	2					
N3. Pedestrian and Bicycle Access							
N3.1 Pedestrian Access to Services Within 1/2 Mile of Community Services	1	2					I will have to do some research on this one
5 Enter the number of Tier 1 services							I will have to do some research on this one
6 Enter the number of Tier 2 services							
TBD N3.2 Connection to Pedestrian Pathways		1					
TBD N3.3 Traffic Calming Strategies		2					
N4. Outdoor Gathering Places							
TBD N4.1 Public or Semi-Public Outdoor Gathering Places for Residents		1					
TBD N4.2 Public Outdoor Gathering Places with Direct Access to Tier 1 Community Services		1					
N5. Social Interaction							
Yes N5.1 Residence Entries with Views to Callers	1	1					
Yes N5.2 Entrances Visible from Street and/or Other Front Doors	1	1					
Yes N5.3 Porches Oriented to Street and Public Space	1	1					Is this true?
TBD N5.4 Social Gathering Space		1					
N6. Passive Solar Design							
TBD N6.1 Heating Load			2				
TBD N6.2 Cooling Load			2				
N7. Adaptable Building							
TBD N7.1 Universal Design Principles in Units		1			1		
TBD N7.2 Full-Function Independent Rental Unit		1					
O. OTHER							
Yes **O1. GreenPoint Rated Checklist in Blueprints**	Y	R	R	R	R	R	This GPR plan must be added to blueprints
Yes **O2. Pre-Construction Kickoff Meeting with Rater and Subcontractors**	2		0.5		1	0.5	Have HVAC, insulation, HERS, etc to kickoff meeting
TBD **O3. Orientation and Training to Occupants—Conduct Educational Walkthroughs**			0.5	0.5		0.5	
TBD **O4. Builder's or Developer's Management Staff are Certified Green Building Professionals**			0.5	0.5	0.5	0.5	
TBD **O5. Home System Monitors**			1			1	
O6. Green Building Education							
TBD O6.1 Marketing Green Building		2					
Yes O6.2 Green Building Signage	1		0.5			0.5	
TBD **O7. Green Appraisal Addendum**	N	R	R	R	R	R	
TBD **O8. Detailed Durability Plan and Third-Party Verification of Plan Implementation**					1		
INNOVATIONS							
TBD **Enter Innovation 1 description here. Enter up to four points at right.**							
TBD **Enter Innovation 2 description here. Enter up to four points at right.**							
TBD **Enter Innovation 3 description here. Enter up to four points at right.**							
TBD **Enter Innovation 4 description here. Enter up to four points at right.**							

Summary

	Points Targeted	Community	Energy	IAQ/Health	Resources	Water
Total Available Points in Specific Categories	202	26	71	54	83	48
Minimum Points Required in Specific Categories	50	2	25	6	6	6
Total Points Targeted	104.0	7.0	56.0	12.0	13.0	16.0

Issued For: Design Review

job address
Mini-Lot Development
GC CARB & 4430 Howe St LLC
4428-4448 Howe St.
Oakland, California 94618

date
28 March 2017

drawn by
Lt

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drawing title
Oakland Green Building Ordinance 4430

sheet
22

job number
1556

If the bar below measures one inch drawing is to scale
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4440 Howe St. • Green Building Check List

NEW HOME RATING SYSTEM, VERSION 6.1

SINGLE FAMILY CHECKLIST

Planning Scoresheet

Points Targeted: 104.0

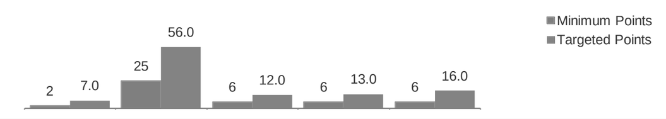
Certification Level: Silver

The GreenPoint Rated checklist tracks green features incorporated into the home. GreenPoint Rated is administered by Build It Green, a non-profit whose mission is to promote healthy, energy and resource efficient buildings in California.
The minimum requirements of GreenPoint Rated are: verification of 50 or more points; Earn the following minimum points per category: Community (2), Energy (25), Indoor Air Quality/Health (6), Resources (6), and Water (6); and meet the prerequisites CALGreen Mandatory, H6.1, J5.1, O1, O7.

The criteria for the green building practices listed below are described in the GreenPoint Rated Single Family Rating Manual. For more information please visit **www.builditgreen.org/greenpointrated**
Build It Green is not a code enforcement agency.

A home is only GreenPoint Rated if all features are verified by a Certified GreenPoint Rater through Build It Green.

New Home Single Family v. 6.1



4440 Howe Street

	Measures	Points Targeted	Community	Energy	IAQ/Health	Resources	Water	Notes
			Possible Points					
CALGreen								
TBD	**CALGreen Res** (REQUIRED)	0		1	1	1	1	
A. SITE								
TBD	**A1. Construction Footprint**					1		
	A2. Job Site Construction Waste Diversion							
Yes	A2.1 65% C&D Waste Diversion (**Including** Alternative Daily Cover)	2				2		
TBD	A2.2 65% C&D Waste Diversion (**Excluding** Alternative Daily Cover)					2		
TBD	A2.3 Recycling Rates from Third-Party Verified Mixed-Use Waste Facility					1		
TBD	**A3. Recycled Content Base Material**					1		
TBD	**A4. Heat Island Effect Reduction (Non-Roof)**			1				
TBD	**A5. Construction Environmental Quality Management Plan Including Flush-Out**				1			
	A6. Stormwater Control: Prescriptive Path							
Yes	A6.1 Permeable Paving Material	1					1	
TBD	A6.2 Filtration and/or Bio-Retention Features						1	
TBD	A6.3 Non-Leaching Roofing Materials						1	
TBD	A6.4 Smart Stormwater Street Design		1					
TBD	**A7. Stormwater Control: Performance Path**						3	
B. FOUNDATION								
Yes	**B1. Fly Ash and/or Slag in Concrete**	1				1		
TBD	**B2. Radon-Resistant Construction**				2			
TBD	**B3. Foundation Drainage System**					2		
TBD	**B4. Moisture Controlled Crawlspace**				1			
	B5. Structural Pest Controls							
TBD	B5.1 Termite Shields and Separated Exterior Wood-to-Concrete Connections					1		
TBD	B5.2 Plant Trunks, Bases, or Stems at Least 36 Inches from the Foundation					1		
C. LANDSCAPE								
83.55%	Enter the landscape area percentage							figure out the landscaped area of the project(s)
TBD	**C1. Plants Grouped by Water Needs (Hydrozoning)**						1	
TBD	**C2. Three Inches of Mulch in Planting Beds**						1	
	C3. Resource Efficient Landscapes							
Yes	C3.1 No Invasive Species Listed by Cal-IPC	1				1		
TBD	C3.2 Plants Chosen and Located to Grow to Natural Size					1		
Yes	C3.3 Drought Tolerant, California Native, Mediterranean Species, or Other Appropriate Species	3					3	
	C4. Minimal Turf in Landscape							
Yes	C4.1 No Turf on Slopes Exceeding 10% and No Overhead Sprinklers Installed in Areas Less Than Eight Feet Wide	2					2	
TBD	C4.2 Turf on a Small Percentage of Landscaped Area						2	
TBD	**C5. Trees to Moderate Building Temperature**		1	1			1	
Yes	**C6. High-Efficiency Irrigation System**	2					2	Drip irrigation system
Yes	**C7. One Inch of Compost in the Top Six to Twelve Inches of Soil**	2					2	
TBD	**C8. Rainwater Harvesting System**						3	
TBD	**C9. Recycled Wastewater Irrigation System**						1	
TBD	**C10. Submeter or Dedicated Meter for Landscape Irrigation**						2	
TBD	**C11. Landscape Meets Water Budget**						2	
	C12. Environmentally Preferable Materials for Site							
TBD	C12.1 Environmentally Preferable Materials for 70% of Non-Plant Landscape Elements and Fencing					1		
TBD	**C13. Reduced Light Pollution**		1					
TBD	**C14. Large Stature Tree(s)**		1					
TBD	**C15. Third Party Landscape Program Certification**						1	
TBD	**C16. Maintenance Contract with Certified Professional**						1	
D. STRUCTURAL FRAME AND BUILDING ENVELOPE								
	D1. Optimal Value Engineering							
TBD	D1.1 Joists, Rafters, and Studs at 24 Inches on Center			1		2		
TBD	D1.2 Non-Load Bearing Door and Window Headers Sized for Load					1		
TBD	D1.3 Advanced Framing Measures					2		
TBD	**D2. Construction Material Efficiencies**					1		
	D3. Engineered Lumber							
TBD	D3.1 Engineered Beams and Headers					1		
Yes	D3.2 Wood I-Joists or Web Trusses for Floors	1				1		Wood I-joists for floors
TBD	D3.3 Engineered Lumber for Roof Rafters					1		
TBD	D3.4 Engineered or Finger-Jointed Studs for Vertical Applications					1		
Yes	D3.5 OSB for Subfloor	0.5				0.5		
Yes	D3.6 OSB for Wall and Roof Sheathing	0.5				0.5		
TBD	**D4. Insulated Headers**			1				
	D5. FSC-Certified Wood							
TBD	D5.1 Dimensional Lumber, Studs, and Timber					6		Using FSC lumber?
TBD	D5.2 Panel Products					3		
	D6. Solid Wall Systems							
TBD	D6.1 At Least 90% of Floors					1		
TBD	D6.2 At Least 90% of Exterior Walls			1		1		
TBD	D6.3 At Least 90% of Roofs			1		1		
Yes	**D7. Energy Heels on Roof Trusses**	1		1				If trusses: this is great energy measure
16 inches	**D8. Overhangs and Gutters**	1		1		1		How many inches?
	D9. Reduced Pollution Entering the Home from the Garage							
TBD	D9.1 Detached Garage				2			
TBD	D9.2 Mitigation Strategies for Attached Garage				1			
	D10. Structural Pest and Rot Controls							
TBD	D10.1 All Wood Located At Least 12 Inches Above the Soil					1		
TBD	D10.2 Wood Framing Treated With Borates or Factory-Impregnated, or Wall Materials Other Than Wood					1		
Yes	**D11. Moisture-Resistant Materials in Wet Areas (such as Kitchen, Bathrooms, Utility Rooms, and Basements)**	2			1	1		Tile, backer board, etc.
E. EXTERIOR								
TBD	**E1. Environmentally Preferable Decking**					1		
TBD	**E2. Flashing Installation Third-Party Verified**					2		
TBD	**E3. Rain Screen Wall System**					2		
Yes	**E4. Durable and Non-Combustible Cladding Materials**	1				1		Hardy board or stucco or other?
	E5. Durable Roofing Materials							
TBD	E5.1 Durable and Fire Resistant Roofing Materials or Assembly					1		
TBD	**E6. Vegetated Roof**		2	2				
F. INSULATION								
	F1. Insulation with 30% Post-Consumer or 60% Post-Industrial Recycled Content							
TBD	F1.1 Walls and Floors					1		Need some research on insulation
TBD	F1.2 Ceilings					1		
	F2. Insulation that Meets the CDPH Standard Method—Residential for Low Emissions							
TBD	F2.1 Walls and Floors				1			
TBD	F2.2 Ceilings				1			
	F3. Insulation That Does Not Contain Fire Retardants							
TBD	F3.1 Cavity Walls and Floors				1			
TBD	F3.2 Ceilings				1			
TBD	F3.3 Interior and Exterior				1			
G. PLUMBING								
	G1. Efficient Distribution of Domestic Hot Water							
Yes	G1.1 Insulated Hot Water Pipes	1		1				
TBD	G1.2 WaterSense Volume Limit for Hot Water Distribution						1	
TBD	G1.3 Increased Efficiency in Hot Water Distribution						2	
	G2. Install Water-Efficient Fixtures							
Yes	G2.1 WaterSense Showerheads with Matching Compensation Valve	2					2	
Yes	G2.2 WaterSense Bathroom Faucets	1					1	
Yes	G2.3 WaterSense Toilets with a Maximum Performance (MaP) Threshold of No Less Than 500 Grams	1					1	
TBD	**G3. Pre-Plumbing for Graywater System**						1	
TBD	**G4. Operational Graywater System**						3	
H. HEATING, VENTILATION, AND AIR CONDITIONING								
	H1. Sealed Combustion Units							
Yes	H1.1 Sealed Combustion Furnace	1			1			
Yes	H1.2 Sealed Combustion Water Heater	2			2			
TBD	**H2. High Performing Zoned Hydronic Radiant Heating System**			1	1			
	H3. Effective Ductwork							
Yes	H3.1 Duct Mastic on Duct Joints and Seams	1		1				Air duct mastic on every seam
Yes	H3.2 Pressure Balance the Ductwork System	1		1				Goes with #140 ACCA Manual J, S, T and D. HVAC con
Yes	**H4. ENERGY STAR® Bathroom Fans Per HVI Standards with Air Flow Verified**	1			1			
	H5. Advanced Practices for Cooling							
TBD	H5.1 ENERGY STAR Ceiling Fans in Living Areas and Bedrooms			1				Ceiling fans?
	H6. Whole House Mechanical Ventilation Practices to Improve Indoor Air Quality							
Yes	H6.1 Meet ASHRAE 62.2-2010 Ventilation Residential Standards	Y	R	R	R	R	R	
TBD	H6.2 Advanced Ventilation Standards				1			
TBD	H6.3 Outdoor Air Ducted to Bedroom and Living Areas				2			
	H7. Effective Range Hood Design and Installation							
Yes	H7.1 Effective Range Hood Ducting and Design	1			1			I will have to verify this one
TBD	H7.2 Automatic Range Hood Control				1			
Yes	**H8. No Fireplace or Sealed Gas Fireplace**	1			1			
TBD	**H9. Humidity Control Systems**				1			
TBD	**H10. Register Design Per ACCA Manual T**			1				HVAC contractor can do this as part of design and insta
Yes	**H11. High Efficiency HVAC Filter (MERV 8+)**	1			1			
I. RENEWABLE ENERGY								
TBD	**I1. Pre-Plumbing for Solar Water Heating**			1				
TBD	**I2. Preparation for Future Photovoltaic Installation**			1				
	I3. Onsite Renewable Generation (Solar PV, Solar Thermal, and Wind)			25				Want to add solar on the roof? That will get points!
	I4. Net Zero Energy Home							
TBD	I4.1 Near Zero Energy Home			2				
TBD	I4.2 Net Zero Electric			4				
J. BUILDING PERFORMANCE AND TESTING								
Yes	**J1. Third-Party Verification of Quality of Insulation Installation**	1			1			
Yes	**J2. Supply and Return Air Flow Testing**	2		1	1			
Yes	**J3. Mechanical Ventilation Testing and Low Leakage**	1			1			
TBD	**J4. Combustion Appliance Safety Testing**				1			
	J5. Building Performance Exceeds Title 24 Part 6							
0.20	J5.1 Home Outperforms Title 24 Part 6	45		60+				
Yes	**J6. Title 24 Prepared and Signed by a CABEC Certified Energy Analyst**	1		1				
Yes	**J7. Participation in Utility Program with Third-Party Plan Review**	1		1				
TBD	**J8. ENERGY STAR for Homes**			1				
No	**J9. EPA Indoor airPlus Certification**	0			1			
3.5	**J10. Blower Door Testing**	1			2			
K. FINISHES								
	K1. Entryways Designed to Reduce Tracked-In Contaminants							
TBD	K1.1 Individual Entryways				1			
TBD	**K2. Zero-VOC Interior Wall and Ceiling Paints**				2			
TBD	**K3. Low-VOC Caulks and Adhesives**				1			
	K4. Environmentally Preferable Materials for Interior Finish							
TBD	K4.1 Cabinets					2		
TBD	K4.2 Interior Trim					2		
TBD	K4.3 Shelving					2		
TBD	K4.4 Doors					2		
TBD	K4.5 Countertops					1		
	K5. Formaldehyde Emissions in Interior Finish Exceed CARB							
TBD	K5.1 Doors				1			
TBD	K5.2 Cabinets and Countertops				2			
TBD	K5.3 Interior Trim and Shelving				2			
TBD	**K6. Products That Comply With the Health Product Declaration Open Standard**				2			
TBD	**K7. Indoor Air Formaldehyde Level Less Than 27 Parts Per Billion**				2			
No	**K8. Comprehensive Inclusion of Low Emitting Finishes**	0			1			
L. FLOORING								
TBD	**L1. Environmentally Preferable Flooring**					3		
TBD	**L2. Low-Emitting Flooring Meets CDPH 2010 Standard Method—Residential**				3			
Yes	**L3. Durable Flooring**	1				1		
TBD	**L4. Thermal Mass Flooring**			1				

4440 • Green Building Check List • Cont'd

	Measures	Points Targeted	Community	Energy	IAQ/Health	Resources	Water	Notes
M. APPLIANCES AND LIGHTING								
Yes	**M1. ENERGY STAR® Dishwasher**	1					1	
TBD	**M2. CEE-Rated Clothes Washer**			1			2	
TBD	**M3. Size-Efficient ENERGY STAR Refrigerator**			2				
	M4. Permanent Centers for Waste Reduction Strategies							
TBD	M4.1 Built-In Recycling Center					1		
TBD	M4.2 Built-In Composting Center					1		
	M5. Lighting Efficiency							
Yes	M5.1 High-Efficacy Lighting	2		2				
TBD	M5.2 Lighting System Designed to IESNA Footcandle Standards or Designed by Lighting Consultant			2				
N. COMMUNITY								
	N1. Smart Development							
Yes	N1.1 Infill Site	2	1			1		
TBD	N1.2 Designated Brownfield Site		1		1			
>20	N1.3 Conserve Resources by Increasing Density	2		2		2		Do math to figure units per acre.
TBD	N1.4 Cluster Homes for Land Preservation		1			1		
	N1.5 Home Size Efficiency	0				9		
2580	Enter the area of the home, in square feet							
3	Enter the number of bedrooms							
Yes	**N2. Home(s)/Development Located Within 1/2 Mile of a Major Transit Stop**	2	2					
	N3. Pedestrian and Bicycle Access							
	N3.1 Pedestrian Access to Services Within 1/2 Mile of Community Services	1	2					
5	Enter the number of Tier 1 services							
6	Enter the number of Tier 2 services							
TBD	N3.2 Connection to Pedestrian Pathways		1					
TBD	N3.3 Traffic Calming Strategies		2					
	N4. Outdoor Gathering Places							
No	N4.1 Public or Semi-Public Outdoor Gathering Places for Residents	0	1					
No	N4.2 Public Outdoor Gathering Places with Direct Access to Tier 1 Community Services	0	1					
	N5. Social Interaction							
Yes	N5.1 Residence Entries with Views to Callers	1	1					
Yes	N5.2 Entrances Visible from Street and/or Other Front Doors	1	1					
Yes	N5.3 Porches Oriented to Street and Public Space	1	1					Yes
TBD	N5.4 Social Gathering Space		1					
	N6. Passive Solar Design							
TBD	N6.1 Heating Load			2				
TBD	N6.2 Cooling Load			2				
	N7. Adaptable Building							
TBD	N7.1 Universal Design Principles in Units		1		1			
TBD	N7.2 Full-Function Independent Rental Unit		1					
O. OTHER								
Yes	**O1. GreenPoint Rated Checklist in Blueprints**	Y	R	R	R	R	R	This GPR plan must be added to blueprints
Yes	**O2. Pre-Construction Kickoff Meeting with Rater and Subcontractors**	2		0.5		1	0.5	Have HVAC, Insulation, HERS, etc to kickoff meeting
TBD	**O3. Orientation and Training to Occupants—Conduct Educational Walkthroughs**			0.5	0.5	0.5	0.5	
TBD	**O4. Builder's or Developer's Management Staff are Certified Green Building Professionals**			0.5	0.5	0.5	0.5	
TBD	**O5. Home System Monitors**			1			1	
	O6. Green Building Education							
TBD	O6.1 Marketing Green Building		2					
Yes	O6.2 Green Building Signage	1		0.5			0.5	
TBD	**O7. Green Appraisal Addendum**	N	R	R	R	R	R	
TBD	**O8. Detailed Durability Plan and Third-Party Verification of Plan Implementation**					1		
INNOVATIONS								
TBD	**Enter Innovation 1 description here. Enter up to four points at right.**							
TBD	**Enter Innovation 2 description here. Enter up to four points at right.**							
TBD	**Enter Innovation 3 description here. Enter up to four points at right.**							
TBD	**Enter Innovation 4 description here. Enter up to four points at right.**							
	Summary		Community	Energy	IAQ/Health	Resources	Water	
	Total Available Points in Specific Categories	282	26	71	54	83	48	
	Minimum Points Required in Specific Categories	50	2	25	6	6	6	
	Total Points Targeted	104.0	7.0	56.0	12.0	13.0	16.0	

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NEW HOME RATING SYSTEM, VERSION 6.1

SINGLE FAMILY CHECKLIST

Planning Scoresheet

Points Targeted: 104.0

Certification Level: Silver

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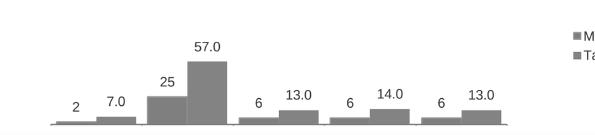
New Home Single Family v. 6.1



4448 Howe Street

	Measures	Points Targeted	Community	Energy	IAQ/Health	Resources	Water	Notes
			Possible Points					
CALGreen								
Yes	**CALGreen Res** (REQUIRED)	4		1	1	1	1	
A. SITE								
TBD	**A1. Construction Footprint**					1		
	A2. Job Site Construction Waste Diversion							
Yes	A2.1 65% C&D Waste Diversion (**Including** Alternative Daily Cover)	2				2		
TBD	A2.2 65% C&D Waste Diversion (**Excluding** Alternative Daily Cover)					2		
TBD	A2.3 Recycling Rates from Third-Party Verified Mixed-Use Waste Facility					1		
TBD	**A3. Recycled Content Base Material**					1		
TBD	**A4. Heat Island Effect Reduction (Non-Roof)**			1				
TBD	**A5. Construction Environmental Quality Management Plan Including Flush-Out**				1			
	A6. Stormwater Control: Prescriptive Path							
Yes	A6.1 Permeable Paving Material	1					1	
TBD	A6.2 Filtration and/or Bio-Retention Features						1	
TBD	A6.3 Non-Leaching Roofing Materials						1	
TBD	A6.4 Smart Stormwater Street Design		1					
TBD	**A7. Stormwater Control: Performance Path**						3	
B. FOUNDATION								
Yes	**B1. Fly Ash and/or Slag in Concrete**	1				1		
TBD	**B2. Radon-Resistant Construction**				2			
TBD	**B3. Foundation Drainage System**					2		
TBD	**B4. Moisture Controlled Crawlspace**				1			
	B5. Structural Pest Controls							
TBD	B5.1 Termite Shields and Separated Exterior Wood-to-Concrete Connections					1		
TBD	B5.2 Plant Trunks, Bases, or Stems at Least 36 Inches from the Foundation					1		
C. LANDSCAPE								
3.40%	Enter the landscape area percentage							figure out the landscaped area of the project(s)
TBD	**C1. Plants Grouped by Water Needs (Hydrozoning)**						1	
TBD	**C2. Three Inches of Mulch in Planting Beds**						1	
	C3. Resource Efficient Landscapes							
Yes	C3.1 No Invasive Species Listed by Cal-IPC	1				1		
TBD	C3.2 Plants Chosen and Located to Grow to Natural Size					1		
Yes	C3.3 Drought Tolerant, California Native, Mediterranean Species, or Other Appropriate Species	3					3	
	C4. Minimal Turf in Landscape							
Yes	C4.1 No Turf on Slopes Exceeding 10% and No Overhead Sprinklers Installed in Areas Less Than Eight Feet Wide	2					2	
TBD	C4.2 Turf on a Small Percentage of Landscaped Area						2	
TBD	**C5. Trees to Moderate Building Temperature**		1	1			1	
Yes	**C6. High-Efficiency Irrigation System**	0					2	Drip irrigation system
Yes	**C7. One Inch of Compost in the Top Six to Twelve Inches of Soil**	0					2	
TBD	**C8. Rainwater Harvesting System**						3	
TBD	**C9. Recycled Wastewater Irrigation System**						1	
TBD	**C10. Submeter or Dedicated Meter for Landscape Irrigation**						2	
TBD	**C11. Landscape Meets Water Budget**						2	
	C12. Environmentally Preferable Materials for Site							
TBD	C12.1 Environmentally Preferable Materials for 70% of Non-Plant Landscape Elements and Fencing					1		
TBD	**C13. Reduced Light Pollution**		1					
TBD	**C14. Large Stature Tree(s)**		1					
TBD	**C15. Third Party Landscape Program Certification**						1	
TBD	**C16. Maintenance Contract with Certified Professional**						1	
D. STRUCTURAL FRAME AND BUILDING ENVELOPE								
	D1. Optimal Value Engineering							
TBD	D1.1 Joists, Rafters, and Studs at 24 Inches on Center			1		2		
TBD	D1.2 Non-Load Bearing Door and Window Headers Sized for Load					1		
TBD	D1.3 Advanced Framing Measures					2		
TBD	**D2. Construction Material Efficiencies**					1		
	D3. Engineered Lumber							
TBD	D3.1 Engineered Beams and Headers					1		
Yes	D3.2 Wood I-Joists or Web Trusses for Floors	1				1		Wood I-joists for floors
TBD	D3.3 Engineered Lumber for Roof Rafters					1		
TBD	D3.4 Engineered or Finger-Jointed Studs for Vertical Applications					1		
Yes	D3.5 OSB for Subfloor	0.5				0.5		
Yes	D3.6 OSB for Wall and Roof Sheathing	0.5				0.5		
TBD	**D4. Insulated Headers**			1				
	D5. FSC-Certified Wood							
TBD	D5.1 Dimensional Lumber, Studs, and Timber					6		Using FSC lumber?
TBD	D5.2 Panel Products					3		
	D6. Solid Wall Systems							
TBD	D6.1 At Least 90% of Floors					1		
TBD	D6.2 At Least 90% of Exterior Walls			1		1		
TBD	D6.3 At Least 90% of Roofs			1		1		
Yes	**D7. Energy Heels on Roof Trusses**	1		1				If trusses: this is great energy measure
16 inches	**D8. Overhangs and Gutters**	1		1		1		How many inches?
	D9. Reduced Pollution Entering the Home from the Garage							
TBD	D9.1 Detached Garage				2			
TBD	D9.2 Mitigation Strategies for Attached Garage				1			
	D10. Structural Pest and Rot Controls							
TBD	D10.1 All Wood Located At Least 12 Inches Above the Soil					1		
TBD	D10.2 Wood Framing Treated With Borates or Factory-Impregnated, or Wall Materials Other Than Wood					1		
Yes	**D11. Moisture-Resistant Materials in Wet Areas (such as Kitchen, Bathrooms, Utility Rooms, and Basements)**	2			1	1		Tile, backer board, etc.
E. EXTERIOR								
TBD	**E1. Environmentally Preferable Decking**					1		
TBD	**E2. Flashing Installation Third-Party Verified**					2		
TBD	**E3. Rain Screen Wall System**					2		
Yes	**E4. Durable and Non-Combustible Cladding Materials**	1				1		Hardy board or stucco or other?
	E5. Durable Roofing Materials							
TBD	E5.1 Durable and Fire Resistant Roofing Materials or Assembly					1		
TBD	**E6. Vegetated Roof**		2	2				
F. INSULATION								
	F1. Insulation with 30% Post-Consumer or 60% Post-Industrial Recycled Content							
TBD	F1.1 Walls and Floors					1		Need some research on insulation
TBD	F1.2 Ceilings					1		
	F2. Insulation that Meets the CDPH Standard Method—Residential for Low Emissions							
TBD	F2.1 Walls and Floors				1			
TBD	F2.2 Ceilings				1			
	F3. Insulation That Does Not Contain Fire Retardants							
TBD	F3.1 Cavity Walls and Floors				1			
TBD	F3.2 Ceilings				1			
TBD	F3.3 Interior and Exterior				1			

4448 • Green Building Check List • Cont'd

	Measures	Points Targeted	Community	Energy	IAQ/Health	Resources	Water	Notes
G. PLUMBING								
	G1. Efficient Distribution of Domestic Hot Water							
Yes	G1.1 Insulated Hot Water Pipes	1		1				
TBD	G1.2 WaterSense Volume Limit for Hot Water Distribution						1	
TBD	G1.3 Increased Efficiency in Hot Water Distribution						2	
	G2. Install Water-Efficient Fixtures							
Yes	G2.1 WaterSense Showerheads with Matching Compensation Valve	2					2	
Yes	G2.2 WaterSense Bathroom Faucets	1					1	
Yes	G2.3 WaterSense Toilets with a Maximum Performance (MaP) Threshold of No Less Than 500 Grams	1					1	
TBD	**G3. Pre-Plumbing for Graywater System**						1	
TBD	**G4. Operational Graywater System**						3	
H. HEATING, VENTILATION, AND AIR CONDITIONING								
	H1. Sealed Combustion Units							
Yes	H1.1 Sealed Combustion Furnace	1			1			
Yes	H1.2 Sealed Combustion Water Heater	2			2			
TBD	**H2. High Performing Zoned Hydronic Radiant Heating System**			1	1			
	H3. Effective Ductwork							
Yes	H3.1 Duct Mastic on Duct Joints and Seams	1		1				Air duct mastic on every seam
Yes	H3.2 Pressure Balance the Ductwork System	1		1				Goes with #140 ACCA Manual J, S, T and D. HVAC con
Yes	**H4. ENERGY STAR® Bathroom Fans Per HVI Standards with Air Flow Verified**	1			1			
	H5. Advanced Practices for Cooling							
TBD	H5.1 ENERGY STAR Ceiling Fans in Living Areas and Bedrooms			1				Ceiling fans?
	H6. Whole House Mechanical Ventilation Practices to Improve Indoor Air Quality							
Yes	H6.1 Meet ASHRAE 62.2-2010 Ventilation Residential Standards	Y	R	R	R	R	R	
TBD	H6.2 Advanced Ventilation Standards				1			
TBD	H6.3 Outdoor Air Ducted to Bedroom and Living Areas				2			
	H7. Effective Range Hood Design and Installation							
Yes	H7.1 Effective Range Hood Ducting and Design	1			1			I will have to verify this one
TBD	H7.2 Automatic Range Hood Control				1			
Yes	**H8. No Fireplace or Sealed Gas Fireplace**	1			1			
TBD	**H9. Humidity Control Systems**				1			
TBD	**H10. Register Design Per ACCA Manual T**			1				HVAC contractor can do this as part of design and insta
Yes	**H11. High Efficiency HVAC Filter (MERV 8+)**	1			1			
I. RENEWABLE ENERGY								
TBD	**I1. Pre-Plumbing for Solar Water Heating**			1				
TBD	**I2. Preparation for Future Photovoltaic Installation**			1				
	I3. Onsite Renewable Generation (Solar PV, Solar Thermal, and Wind)			25				Want to add solar on the roof? That will get points!
	I4. Net Zero Energy Home							
TBD	I4.1 Near Zero Energy Home			2				
TBD	I4.2 Net Zero Electric			4				
J. BUILDING PERFORMANCE AND TESTING								
Yes	**J1. Third-Party Verification of Quality of Insulation Installation**	1			1			
Yes	**J2. Supply and Return Air Flow Testing**	2		1	1			
Yes	**J3. Mechanical Ventilation Testing and Low Leakage**	1			1			
TBD	**J4. Combustion Appliance Safety Testing**				1			
	J5. Building Performance Exceeds Title 24 Part 6							
0.20	J5.1 Home Outperforms Title 24 Part 6	45		60+				
Yes	**J6. Title 24 Prepared and Signed by a CABEC Certified Energy Analyst**	1		1				
Yes	**J7. Participation in Utility Program with Third-Party Plan Review**	1		1				
TBD	**J8. ENERGY STAR for Homes**			1				
No	**J9. EPA Indoor airPlus Certification**	0			1			
3.5	**J10. Blower Door Testing**	1			2			
K. FINISHES								
	K1. Entryways Designed to Reduce Tracked-In Contaminants							
TBD	K1.1 Individual Entryways				1			
TBD	**K2. Zero-VOC Interior Wall and Ceiling Paints**				2			
TBD	**K3. Low-VOC Caulks and Adhesives**				1			
	K4. Environmentally Preferable Materials for Interior Finish							
TBD	K4.1 Cabinets					2		
TBD	K4.2 Interior Trim					2		
TBD	K4.3 Shelving					2		
TBD	K4.4 Doors					2		
TBD	K4.5 Countertops					1		
	K5. Formaldehyde Emissions in Interior Finish Exceed CARB							
TBD	K5.1 Doors				1			
TBD	K5.2 Cabinets and Countertops				2			
TBD	K5.3 Interior Trim and Shelving				2			
TBD	**K6. Products That Comply With the Health Product Declaration Open Standard**				2			
TBD	**K7. Indoor Air Formaldehyde Level Less Than 27 Parts Per Billion**				2			
No	**K8. Comprehensive Inclusion of Low Emitting Finishes**	0			1			
L. FLOORING								
TBD	**L1. Environmentally Preferable Flooring**					3		
TBD	**L2. Low-Emitting Flooring Meets CDPH 2010 Standard Method—Residential**				3			
Yes	**L3. Durable Flooring**	1				1		
TBD	**L4. Thermal Mass Flooring**			1				
M. APPLIANCES AND LIGHTING								
Yes	**M1. ENERGY STAR® Dishwasher**	1					1	
TBD	**M2. CEE-Rated Clothes Washer**			1			2	
TBD	**M3. Size-Efficient ENERGY STAR Refrigerator**			2				
	M4. Permanent Centers for Waste Reduction Strategies							
TBD	M4.1 Built-In Recycling Center					1		
TBD	M4.2 Built-In Composting Center					1		
	M5. Lighting Efficiency							
Yes	M5.1 High-Efficacy Lighting	2		2				
TBD	M5.2 Lighting System Designed to IESNA Footcandle Standards or Designed by Lighting Consultant			2				
N. COMMUNITY								
	N1. Smart Development							
Yes	N1.1 Infill Site	2	1			1		
TBD	N1.2 Designated Brownfield Site		1		1			
>20	N1.3 Conserve Resources by Increasing Density	2		2		2		Do math to figure units per acre.
TBD	N1.4 Cluster Homes for Land Preservation		1			1		
	N1.5 Home Size Efficiency					9		
	Enter the area of the home, in square feet							
	Enter the number of bedrooms							
Yes	**N2. Home(s)/Development Located Within 1/2 Mile of a Major Transit Stop**	2	2					
	N3. Pedestrian and Bicycle Access							
	N3.1 Pedestrian Access to Services Within 1/2 Mile of Community Services	1	2					I will have to do some research on this one
5	Enter the number of Tier 1 services							I will have to do some research on this one
6	Enter the number of Tier 2 services							
TBD	N3.2 Connection to Pedestrian Pathways		1					
TBD	N3.3 Traffic Calming Strategies		2					
	N4. Outdoor Gathering Places							
TBD	N4.1 Public or Semi-Public Outdoor Gathering Places for Residents		1					
TBD	N4.2 Public Outdoor Gathering Places with Direct Access to Tier 1 Community Services		1					
	N5. Social Interaction							
Yes	N5.1 Residence Entries with Views to Callers	1	1					
Yes	N5.2 Entrances Visible from Street and/or Other Front Doors	1	1					
Yes	N5.3 Porches Oriented to Street and Public Space	1	1					Is this true?
TBD	N5.4 Social Gathering Space		1					
	N6. Passive Solar Design							
TBD	N6.1 Heating Load			2				
TBD	N6.2 Cooling Load			2				
	N7. Adaptable Building							
TBD	N7.1 Universal Design Principles in Units		1		1			
TBD	N7.2 Full-Function Independent Rental Unit		1					
O. OTHER								
Yes	**O1. GreenPoint Rated Checklist in Blueprints**	Y	R	R	R	R	R	This GPR plan must be added to blueprints
Yes	**O2. Pre-Construction Kickoff Meeting with Rater and Subcontractors**	2		0.5		1	0.5	Have HVAC, Insulation, HERS, etc to kickoff meeting
TBD	**O3. Orientation and Training to Occupants—Conduct Educational Walkthroughs**			0.5	0.5	0.5	0.5	
TBD	**O4. Builder's or Developer's Management Staff are Certified Green Building Professionals**			0.5	0.5	0.5	0.5	
TBD	**O5. Home System Monitors**			1			1	
	O6. Green Building Education							
TBD	O6.1 Marketing Green Building		2					
Yes	O6.2 Green Building Signage	1		0.5			0.5	
TBD	**O7. Green Appraisal Addendum**	N	R	R	R	R	R	
TBD	**O8. Detailed Durability Plan and Third-Party Verification of Plan Implementation**					1		
INNOVATIONS								
TBD	**Enter Innovation 1 description here. Enter up to four points at right.**							
TBD	**Enter Innovation 2 description here. Enter up to four points at right.**							
TBD	**Enter Innovation 3 description here. Enter up to four points at right.**							
TBD	**Enter Innovation 4 description here. Enter up to four points at right.**							
	Summary		Community	Energy	IAQ/Health	Resources	Water	
	Total Available Points in Specific Categories	282	26	71	54	83	48	
	Minimum Points Required in Specific Categories	50	2	25	6	6	6	
	Total Points Targeted	104.0	7.0	57.0	13.0	14.0	13.0	

If the bar below measures one inch drawing is to scale
0 1"

Issued For: Design Review

job address
Mini-Lot Development
GC CARB & 4430 Howe St LLC
4428-4448 Howe St.
Oakland, California 94618

date
28 March 2017

drawn by
Lt

Jarvis architects
5278 College Avenue (510) 654-6755
Oakland, California
94618-1415 fax: 654-3424

drawing title
Oakland Green Building Ordinance 4440 & 4448

sheet
23

job number
1556

4436 • Green Building Check List

GreenPointRATED — A PROGRAM OF BUILD IT GREEN

NEW HOME RATING SYSTEM, VERSION 6.1

SINGLE FAMILY CHECKLIST

Planning Scoresheet

Points Targeted: 104.0

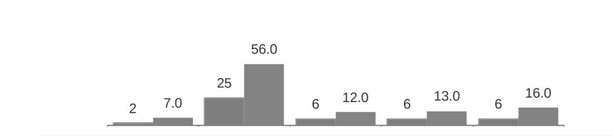
Certification Level: Silver

The GreenPoint Rated checklist tracks green features incorporated into the home. GreenPoint Rated is administered by Build It Green, a non-profit whose mission is to promote healthy, energy and resource efficient buildings in California.
The minimum requirements of GreenPoint Rated are: verification of 50 or more points; Earn the following minimum points per category: Community (2), Energy (25), Indoor Air Quality/Health (6), Resources (6), and Water (6); and meet the prerequisites CALGreen Mandatory, H6.1, J5.1, O1, O7.

The criteria for the green building practices listed below are described in the GreenPoint Rated Single Family Rating Manual. For more information please visit **www.builditgreen.org/greenpointrated**
Build It Green is not a code enforcement agency.

A home is only GreenPoint Rated if all features are verified by a Certified GreenPoint Rater through Build It Green.

New Home Single Family v. 6.1



4436 Howe Street

	Measures	Points Targeted	Community	Energy	IAQ/Health	Resources	Water	Notes
			Possible Points					
CALGreen								
TBD	**CALGreen Res** (REQUIRED)	0		1	1	1	1	
A. SITE								
TBD	**A1. Construction Footprint**					1		
	A2. Job Site Construction Waste Diversion							
Yes	A2.1 65% C&D Waste Diversion (**Including** Alternative Daily Cover)	2				2		
TBD	A2.2 65% C&D Waste Diversion (**Excluding** Alternative Daily Cover)					2		
TBD	A2.3 Recycling Rates from Third-Party Verified Mixed-Use Waste Facility					1		
TBD	**A3. Recycled Content Base Material**					1		
TBD	**A4. Heat Island Effect Reduction (Non-Roof)**			1				
TBD	**A5. Construction Environmental Quality Management Plan Including Flush-Out**				1			
	A6. Stormwater Control: Prescriptive Path							
Yes	A6.1 Permeable Paving Material	1					1	
TBD	A6.2 Filtration and/or Bio-Retention Features						1	
TBD	A6.3 Non-Leaching Roofing Materials						1	
TBD	A6.4 Smart Stormwater Street Design		1					
TBD	**A7. Stormwater Control: Performance Path**						3	
B. FOUNDATION								
Yes	**B1. Fly Ash and/or Slag in Concrete**	1				1		
TBD	**B2. Radon-Resistant Construction**				2			
TBD	**B3. Foundation Drainage System**					2		
TBD	**B4. Moisture Controlled Crawlspace**				1			
	B5. Structural Pest Controls							
TBD	B5.1 Termite Shields and Separated Exterior Wood-to-Concrete Connections					1		
TBD	B5.2 Plant Trunks, Bases, or Stems at Least 36 Inches from the Foundation					1		
C. LANDSCAPE								
43.39%	Enter the landscape area percentage							figure out the landscaped area of the project(s)
TBD	**C1. Plants Grouped by Water Needs (Hydrozoning)**						1	
TBD	**C2. Three Inches of Mulch in Planting Beds**						1	
	C3. Resource Efficient Landscapes							
Yes	C3.1 No Invasive Species Listed by Cal-IPC	1				1		
TBD	C3.2 Plants Chosen and Located to Grow to Natural Size					1		
Yes	C3.3 Drought Tolerant, California Native, Mediterranean Species, or Other Appropriate Species	3					3	
	C4. Minimal Turf in Landscape							
Yes	C4.1 No Turf on Slopes Exceeding 10% and No Overhead Sprinklers Installed in Areas Less Than Eight Feet Wide	2					2	
TBD	C4.2 Turf on a Small Percentage of Landscaped Area						2	
TBD	**C5. Trees to Moderate Building Temperature**		1	1			1	
Yes	**C6. High-Efficiency Irrigation System**	2					2	Drip irrigation system
Yes	**C7. One Inch of Compost in the Top Six to Twelve Inches of Soil**	2					2	
TBD	**C8. Rainwater Harvesting System**						3	
TBD	**C9. Recycled Wastewater Irrigation System**						1	
TBD	**C10. Submeter or Dedicated Meter for Landscape Irrigation**						2	
TBD	**C11. Landscape Meets Water Budget**						2	
	C12. Environmentally Preferable Materials for Site							
TBD	C12.1 Environmentally Preferable Materials for 70% of Non-Plant Landscape Elements and Fencing					1		
TBD	**C13. Reduced Light Pollution**		1					
TBD	**C14. Large Stature Tree(s)**		1					
TBD	**C15. Third Party Landscape Program Certification**						1	
TBD	**C16. Maintenance Contract with Certified Professional**						1	
D. STRUCTURAL FRAME AND BUILDING ENVELOPE								
	D1. Optimal Value Engineering							
TBD	D1.1 Joists, Rafters, and Studs at 24 Inches on Center			1		2		
TBD	D1.2 Non-Load Bearing Door and Window Headers Sized for Load					1		
TBD	D1.3 Advanced Framing Measures					2		
TBD	**D2. Construction Material Efficiencies**					1		
	D3. Engineered Lumber							
TBD	D3.1 Engineered Beams and Headers					1		
Yes	D3.2 Wood I-Joists or Web Trusses for Floors	1				1		Wood I-joists for floors
TBD	D3.3 Engineered Lumber for Roof Rafters					1		
TBD	D3.4 Engineered or Finger-Jointed Studs for Vertical Applications					1		
Yes	D3.5 OSB for Subfloor	0.5				0.5		
Yes	D3.6 OSB for Wall and Roof Sheathing	0.5				0.5		
TBD	**D4. Insulated Headers**			1				
	D5. FSC-Certified Wood							
TBD	D5.1 Dimensional Lumber, Studs, and Timber					6		Using FSC lumber?
TBD	D5.2 Panel Products					3		
	D6. Solid Wall Systems							
TBD	D6.1 At Least 90% of Floors					1		
TBD	D6.2 At Least 90% of Exterior Walls			1		1		
TBD	D6.3 At Least 90% of Roofs			1		1		
Yes	**D7. Energy Heels on Roof Trusses**	1		1				If trusses: this is great energy measure
16 inches	**D8. Overhangs and Gutters**	1		1		1		How many inches?
	D9. Reduced Pollution Entering the Home from the Garage							
TBD	D9.1 Detached Garage				2			
TBD	D9.2 Mitigation Strategies for Attached Garage				1			
	D10. Structural Pest and Rot Controls							
TBD	D10.1 All Wood Located At Least 12 Inches Above the Soil					1		
TBD	D10.2 Wood Framing Treated With Borates or Factory-Impregnated, or Wall Materials Other Than Wood					1		
Yes	**D11. Moisture-Resistant Materials in Wet Areas (such as Kitchen, Bathrooms, Utility Rooms, and Basements)**	2			1	1		Tile, backer board, etc.
E. EXTERIOR								
TBD	**E1. Environmentally Preferable Decking**					1		
TBD	**E2. Flashing Installation Third-Party Verified**					2		
TBD	**E3. Rain Screen Wall System**					2		
Yes	**E4. Durable and Non-Combustible Cladding Materials**	1				1		Hardy board or stucco or other?
	E5. Durable Roofing Materials							
TBD	E5.1 Durable and Fire Resistant Roofing Materials or Assembly					1		
TBD	**E6. Vegetated Roof**		2	2				
F. INSULATION								
	F1. Insulation with 30% Post-Consumer or 60% Post-Industrial Recycled Content							
TBD	F1.1 Walls and Floors					1		Need some research on insulation
TBD	F1.2 Ceilings					1		
	F2. Insulation that Meets the CDPH Standard Method—Residential for Low Emissions							
TBD	F2.1 Walls and Floors				1			
TBD	F2.2 Ceilings				1			
	F3. Insulation That Does Not Contain Fire Retardants							
TBD	F3.1 Cavity Walls and Floors				1			
TBD	F3.2 Ceilings				1			
TBD	F3.3 Interior and Exterior				1			
G. PLUMBING								
	G1. Efficient Distribution of Domestic Hot Water							
Yes	G1.1 Insulated Hot Water Pipes	1		1				
TBD	G1.2 WaterSense Volume Limit for Hot Water Distribution						1	
TBD	G1.3 Increased Efficiency in Hot Water Distribution						2	
	G2. Install Water-Efficient Fixtures							
Yes	G2.1 WaterSense Showerheads with Matching Compensation Valve	2					2	
Yes	G2.2 WaterSense Bathroom Faucets	1					1	
Yes	G2.3 WaterSense Toilets with a Maximum Performance (MaP) Threshold of No Less Than 500 Grams	1					1	
TBD	**G3. Pre-Plumbing for Graywater System**						1	
TBD	**G4. Operational Graywater System**						3	
H. HEATING, VENTILATION, AND AIR CONDITIONING								
	H1. Sealed Combustion Units							
Yes	H1.1 Sealed Combustion Furnace	1			1			
Yes	H1.2 Sealed Combustion Water Heater	2			2			
TBD	**H2. High Performing Zoned Hydronic Radiant Heating System**			1	1			
	H3. Effective Ductwork							
Yes	H3.1 Duct Mastic on Duct Joints and Seams	1		1				Air duct mastic on every seam
Yes	H3.2 Pressure Balance the Ductwork System	1		1				Goes with #140 ACCA Manual J, S, T and D. HVAC con
Yes	**H4. ENERGY STAR® Bathroom Fans Per HVI Standards with Air Flow Verified**	1			1			
	H5. Advanced Practices for Cooling							
TBD	H5.1 ENERGY STAR Ceiling Fans in Living Areas and Bedrooms			1				Ceiling fans?
	H6. Whole House Mechanical Ventilation Practices to Improve Indoor Air Quality							
Yes	H6.1 Meet ASHRAE 62.2-2010 Ventilation Residential Standards	Y	R	R	R	R	R	
TBD	H6.2 Advanced Ventilation Standards				1			
TBD	H6.3 Outdoor Air Ducted to Bedroom and Living Areas				2			
	H7. Effective Range Hood Design and Installation							
Yes	H7.1 Effective Range Hood Ducting and Design	1			1			I will have to verify this one
TBD	H7.2 Automatic Range Hood Control				1			
Yes	**H8. No Fireplace or Sealed Gas Fireplace**	1			1			
TBD	**H9. Humidity Control Systems**				1			
TBD	**H10. Register Design Per ACCA Manual T**			1				HVAC contractor can do this as part of design and insta
Yes	**H11. High Efficiency HVAC Filter (MERV 8+)**	1			1			
I. RENEWABLE ENERGY								
TBD	**I1. Pre-Plumbing for Solar Water Heating**			1				
TBD	**I2. Preparation for Future Photovoltaic Installation**			1				
	I3. Onsite Renewable Generation (Solar PV, Solar Thermal, and Wind)			25				Want to add solar on the roof? That will get points!
	I4. Net Zero Energy Home							
TBD	I4.1 Near Zero Energy Home			2				
TBD	I4.2 Net Zero Electric			4				
J. BUILDING PERFORMANCE AND TESTING								
Yes	**J1. Third-Party Verification of Quality of Insulation Installation**	1			1			
Yes	**J2. Supply and Return Air Flow Testing**	2		1	1			
Yes	**J3. Mechanical Ventilation Testing and Low Leakage**	1			1			
TBD	**J4. Combustion Appliance Safety Testing**				1			
	J5. Building Performance Exceeds Title 24 Part 6							
0.20	J5.1 Home Outperforms Title 24 Part 6	45		60+				
Yes	**J6. Title 24 Prepared and Signed by a CABEC Certified Energy Analyst**	1		1				
Yes	**J7. Participation in Utility Program with Third-Party Plan Review**	1		1				
TBD	**J8. ENERGY STAR for Homes**			1				
No	**J9. EPA Indoor airPlus Certification**	0			1			
3.5	**J10. Blower Door Testing**	1			2			
K. FINISHES								
	K1. Entryways Designed to Reduce Tracked-In Contaminants							
TBD	K1.1 Individual Entryways				1			
TBD	**K2. Zero-VOC Interior Wall and Ceiling Paints**				2			
TBD	**K3. Low-VOC Caulks and Adhesives**				1			
	K4. Environmentally Preferable Materials for Interior Finish							
TBD	K4.1 Cabinets					2		
TBD	K4.2 Interior Trim					2		
TBD	K4.3 Shelving					2		
TBD	K4.4 Doors					2		
TBD	K4.5 Countertops					1		
	K5. Formaldehyde Emissions in Interior Finish Exceed CARB							
TBD	K5.1 Doors				1			
TBD	K5.2 Cabinets and Countertops				2			
TBD	K5.3 Interior Trim and Shelving				2			
TBD	**K6. Products That Comply With the Health Product Declaration Open Standard**				2			
TBD	**K7. Indoor Air Formaldehyde Level Less Than 27 Parts Per Billion**				2			
No	**K8. Comprehensive Inclusion of Low Emitting Finishes**	0			1			
L. FLOORING								
TBD	**L1. Environmentally Preferable Flooring**					3		
TBD	**L2. Low-Emitting Flooring Meets CDPH 2010 Standard Method—Residential**				3			
Yes	**L3. Durable Flooring**	1				1		
TBD	**L4. Thermal Mass Flooring**			1				

4436 • Green Building Check List • Cont'd

	Measures	Points Targeted	Community	Energy	IAQ/Health	Resources	Water	Notes
M. APPLIANCES AND LIGHTING								
Yes	**M1. ENERGY STAR® Dishwasher**	1					1	
TBD	**M2. CEE-Rated Clothes Washer**			1			2	
TBD	**M3. Size-Efficient ENERGY STAR Refrigerator**			2				
	M4. Permanent Centers for Waste Reduction Strategies							
TBD	M4.1 Built-In Recycling Center					1		
TBD	M4.2 Built-In Composting Center					1		
	M5. Lighting Efficiency							
Yes	M5.1 High-Efficacy Lighting	2		2				
TBD	M5.2 Lighting System Designed to IESNA Footcandle Standards or Designed by Lighting Consultant			2				
N. COMMUNITY								
	N1. Smart Development							
Yes	N1.1 Infill Site	2	1			1		
TBD	N1.2 Designated Brownfield Site		1		1			
>20	N1.3 Conserve Resources by Increasing Density	2		2		2		Do math to figure units per acre.
TBD	N1.4 Cluster Homes for Land Preservation		1			1		
	N1.5 Home Size Efficiency					9		
	Enter the area of the home, in square feet							
	Enter the number of bedrooms							
Yes	**N2. Home(s)/Development Located Within 1/2 Mile of a Major Transit Stop**	2	2					
	N3. Pedestrian and Bicycle Access							
	N3.1 Pedestrian Access to Services Within 1/2 Mile of Community Services	1	2					I will have to do some research on this one
5	Enter the number of Tier 1 services							I will have to do some research on this one
6	Enter the number of Tier 2 services							
TBD	N3.2 Connection to Pedestrian Pathways		1					
TBD	N3.3 Traffic Calming Strategies		2					
	N4. Outdoor Gathering Places							
TBD	N4.1 Public or Semi-Public Outdoor Gathering Places for Residents		1					
TBD	N4.2 Public Outdoor Gathering Places with Direct Access to Tier 1 Community Services		1					
	N5. Social Interaction							
Yes	N5.1 Residence Entries with Views to Callers	1	1					
Yes	N5.2 Entrances Visible from Street and/or Other Front Doors	1	1					
Yes	N5.3 Porches Oriented to Street and Public Space	1	1					Is this true?
TBD	N5.4 Social Gathering Space		1					
	N6. Passive Solar Design							
TBD	N6.1 Heating Load			2				
TBD	N6.2 Cooling Load			2				
	N7. Adaptable Building							
TBD	N7.1 Universal Design Principles in Units		1		1			
TBD	N7.2 Full-Function Independent Rental Unit		1					
O. OTHER								
Yes	**O1. GreenPoint Rated Checklist in Blueprints**	Y	R	R	R	R	R	This GPR plan must be added to blueprints
Yes	**O2. Pre-Construction Kickoff Meeting with Rater and Subcontractors**	2		0.5		1	0.5	Have HVAC, Insulation, HERS, etc to kickoff meeting
TBD	**O3. Orientation and Training to Occupants—Conduct Educational Walkthroughs**			0.5	0.5	0.5	0.5	
TBD	**O4. Builder's or Developer's Management Staff are Certified Green Building Professionals**			0.5	0.5	0.5	0.5	
TBD	**O5. Home System Monitors**			1			1	
	O6. Green Building Education							
TBD	O6.1 Marketing Green Building		2					
Yes	O6.2 Green Building Signage	1		0.5			0.5	
TBD	**O7. Green Appraisal Addendum**	N	R	R	R	R	R	
TBD	**O8. Detailed Durability Plan and Third-Party Verification of Plan Implementation**					1		
INNOVATIONS								
TBD	**Enter Innovation 1 description here. Enter up to four points at right.**							
TBD	**Enter Innovation 2 description here. Enter up to four points at right.**							
TBD	**Enter Innovation 3 description here. Enter up to four points at right.**							
TBD	**Enter Innovation 4 description here. Enter up to four points at right.**							
	Summary		Community	Energy	IAQ/Health	Resources	Water	
	Total Available Points in Specific Categories	282	26	71	54	83	48	
	Minimum Points Required in Specific Categories	50	2	25	6	6	6	
	Total Points Targeted	104.0	7.0	56.0	12.0	13.0	16.0	

4438 • Green Building Check List

GreenPointRATED — A PROGRAM OF BUILD IT GREEN

NEW HOME RATING SYSTEM, VERSION 6.1

SINGLE FAMILY CHECKLIST

Planning Scoresheet

Points Targeted: 108.0

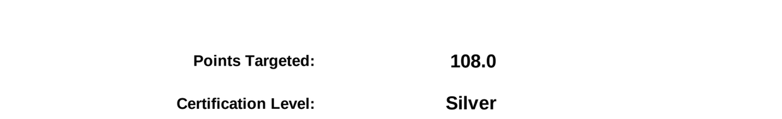
Certification Level: Silver

The GreenPoint Rated checklist tracks green features incorporated into the home. GreenPoint Rated is administered by Build It Green, a non-profit whose mission is to promote healthy, energy and resource efficient buildings in California.
The minimum requirements of GreenPoint Rated are: verification of 50 or more points; Earn the following minimum points per category: Community (2), Energy (25), Indoor Air Quality/Health (6), Resources (6), and Water (6); and meet the prerequisites CALGreen Mandatory, H6.1, J5.1, O1, O7.

The criteria for the green building practices listed below are described in the GreenPoint Rated Single Family Rating Manual. For more information please visit **www.builditgreen.org/greenpointrated**
Build It Green is not a code enforcement agency.

A home is only GreenPoint Rated if all features are verified by a Certified GreenPoint Rater through Build It Green.

New Home Single Family v. 6.1



4438 Howe Street

	Measures	Points Targeted	Community	Energy	IAQ/Health	Resources	Water	Notes
			Possible Points					
CALGreen								
Yes	**CALGreen Res** (REQUIRED)	4		1	1	1	1	
A. SITE								
TBD	**A1. Construction Footprint**					1		
	A2. Job Site Construction Waste Diversion							
Yes	A2.1 65% C&D Waste Diversion (**Including** Alternative Daily Cover)	2				2		
TBD	A2.2 65% C&D Waste Diversion (**Excluding** Alternative Daily Cover)					2		
TBD	A2.3 Recycling Rates from Third-Party Verified Mixed-Use Waste Facility					1		
TBD	**A3. Recycled Content Base Material**					1		
TBD	**A4. Heat Island Effect Reduction (Non-Roof)**			1				
TBD	**A5. Construction Environmental Quality Management Plan Including Flush-Out**				1			
	A6. Stormwater Control: Prescriptive Path							
Yes	A6.1 Permeable Paving Material	1					1	
TBD	A6.2 Filtration and/or Bio-Retention Features						1	
TBD	A6.3 Non-Leaching Roofing Materials						1	
TBD	A6.4 Smart Stormwater Street Design		1					
TBD	**A7. Stormwater Control: Performance Path**						3	
B. FOUNDATION								
Yes	**B1. Fly Ash and/or Slag in Concrete**	1				1		
TBD	**B2. Radon-Resistant Construction**				2			
TBD	**B3. Foundation Drainage System**					2		
TBD	**B4. Moisture Controlled Crawlspace**				1			
	B5. Structural Pest Controls							
TBD	B5.1 Termite Shields and Separated Exterior Wood-to-Concrete Connections					1		
TBD	B5.2 Plant Trunks, Bases, or Stems at Least 36 Inches from the Foundation					1		
C. LANDSCAPE								
18.96%	Enter the landscape area percentage							figure out the landscaped area of the project(s)
TBD	**C1. Plants Grouped by Water Needs (Hydrozoning)**						1	
TBD	**C2. Three Inches of Mulch in Planting Beds**						1	
	C3. Resource Efficient Landscapes							
Yes	C3.1 No Invasive Species Listed by Cal-IPC	1				1		
TBD	C3.2 Plants Chosen and Located to Grow to Natural Size					1		
Yes	C3.3 Drought Tolerant, California Native, Mediterranean Species, or Other Appropriate Species	3					3	
	C4. Minimal Turf in Landscape							
Yes	C4.1 No Turf on Slopes Exceeding 10% and No Overhead Sprinklers Installed in Areas Less Than Eight Feet Wide	2					2	
TBD	C4.2 Turf on a Small Percentage of Landscaped Area						2	
TBD	**C5. Trees to Moderate Building Temperature**		1	1			1	
Yes	**C6. High-Efficiency Irrigation System**	2					2	Drip irrigation system
Yes	**C7. One Inch of Compost in the Top Six to Twelve Inches of Soil**	2					2	
TBD	**C8. Rainwater Harvesting System**						3	
TBD	**C9. Recycled Wastewater Irrigation System**						1	
TBD	**C10. Submeter or Dedicated Meter for Landscape Irrigation**						2	
TBD	**C11. Landscape Meets Water Budget**						2	
	C12. Environmentally Preferable Materials for Site							
TBD	C12.1 Environmentally Preferable Materials for 70% of Non-Plant Landscape Elements and Fencing					1		
TBD	**C13. Reduced Light Pollution**		1					
TBD	**C14. Large Stature Tree(s)**		1					
TBD	**C15. Third Party Landscape Program Certification**						1	
TBD	**C16. Maintenance Contract with Certified Professional**						1	
D. STRUCTURAL FRAME AND BUILDING ENVELOPE								
	D1. Optimal Value Engineering							
TBD	D1.1 Joists, Rafters, and Studs at 24 Inches on Center			1		2		
TBD	D1.2 Non-Load Bearing Door and Window Headers Sized for Load					1		
TBD	D1.3 Advanced Framing Measures					2		
TBD	**D2. Construction Material Efficiencies**					1		
	D3. Engineered Lumber							
TBD	D3.1 Engineered Beams and Headers					1		
Yes	D3.2 Wood I-Joists or Web Trusses for Floors	1				1		Wood I-joists for floors
TBD	D3.3 Engineered Lumber for Roof Rafters					1		
TBD	D3.4 Engineered or Finger-Jointed Studs for Vertical Applications					1		
Yes	D3.5 OSB for Subfloor	0.5				0.5		
Yes	D3.6 OSB for Wall and Roof Sheathing	0.5				0.5		
TBD	**D4. Insulated Headers**			1				
	D5. FSC-Certified Wood							
TBD	D5.1 Dimensional Lumber, Studs, and Timber					6		Using FSC lumber?
TBD	D5.2 Panel Products					3		
	D6. Solid Wall Systems							
TBD	D6.1 At Least 90% of Floors					1		
TBD	D6.2 At Least 90% of Exterior Walls			1		1		
TBD	D6.3 At Least 90% of Roofs			1		1		
Yes	**D7. Energy Heels on Roof Trusses**	1		1				If trusses: this is great energy measure
16 inches	**D8. Overhangs and Gutters**	1		1		1		How many inches?
	D9. Reduced Pollution Entering the Home from the Garage							
TBD	D9.1 Detached Garage				2			
TBD	D9.2 Mitigation Strategies for Attached Garage				1			
	D10. Structural Pest and Rot Controls							
TBD	D10.1 All Wood Located At Least 12 Inches Above the Soil					1		
TBD	D10.2 Wood Framing Treated With Borates or Factory-Impregnated, or Wall Materials Other Than Wood					1		
Yes	**D11. Moisture-Resistant Materials in Wet Areas (such as Kitchen, Bathrooms, Utility Rooms, and Basements)**	2			1	1		Tile, backer board, etc.
E. EXTERIOR								
TBD	**E1. Environmentally Preferable Decking**					1		
TBD	**E2. Flashing Installation Third-Party Verified**					2		
TBD	**E3. Rain Screen Wall System**					2		
Yes	**E4. Durable and Non-Combustible Cladding Materials**	1				1		Hardy board or stucco or other?
	E5. Durable Roofing Materials							
TBD	E5.1 Durable and Fire Resistant Roofing Materials or Assembly					1		
TBD	**E6. Vegetated Roof**		2	2				
F. INSULATION								
	F1. Insulation with 30% Post-Consumer or 60% Post-Industrial Recycled Content							
TBD	F1.1 Walls and Floors					1		Need some research on insulation
TBD	F1.2 Ceilings					1		
	F2. Insulation that Meets the CDPH Standard Method—Residential for Low Emissions							
TBD	F2.1 Walls and Floors				1			
TBD	F2.2 Ceilings				1			
	F3. Insulation That Does Not Contain Fire Retardants							
TBD	F3.1 Cavity Walls and Floors				1			
TBD	F3.2 Ceilings				1			
TBD	F3.3 Interior and Exterior				1			

4438 • Green Building Check List • Cont'd

	Measures	Points Targeted	Community	Energy	IAQ/Health	Resources	Water	Notes
G. PLUMBING								
	G1. Efficient Distribution of Domestic Hot Water							
Yes	G1.1 Insulated Hot Water Pipes	1		1				
TBD	G1.2 WaterSense Volume Limit for Hot Water Distribution						1	
TBD	G1.3 Increased Efficiency in Hot Water Distribution						2	
	G2. Install Water-Efficient Fixtures							
Yes	G2.1 WaterSense Showerheads with Matching Compensation Valve	2					2	
Yes	G2.2 WaterSense Bathroom Faucets	1					1	
Yes	G2.3 WaterSense Toilets with a Maximum Performance (MaP) Threshold of No Less Than 500 Grams	1					1	
TBD	**G3. Pre-Plumbing for Graywater System**						1	
TBD	**G4. Operational Graywater System**						3	
H. HEATING, VENTILATION, AND AIR CONDITIONING								
	H1. Sealed Combustion Units							
Yes	H1.1 Sealed Combustion Furnace	1			1			
Yes	H1.2 Sealed Combustion Water Heater	2			2			
TBD	**H2. High Performing Zoned Hydronic Radiant Heating System**			1	1			
	H3. Effective Ductwork							
Yes	H3.1 Duct Mastic on Duct Joints and Seams	1		1				Air duct mastic on every seam
Yes	H3.2 Pressure Balance the Ductwork System	1		1				Goes with #140 ACCA Manual J, S, T and D. HVAC con
Yes	**H4. ENERGY STAR® Bathroom Fans Per HVI Standards with Air Flow Verified**	1			1			
	H5. Advanced Practices for Cooling							
TBD	H5.1 ENERGY STAR Ceiling Fans in Living Areas and Bedrooms			1				Ceiling fans?
	H6. Whole House Mechanical Ventilation Practices to Improve Indoor Air Quality							
Yes	H6.1 Meet ASHRAE 62.2-2010 Ventilation Residential Standards	Y	R	R	R	R	R	
TBD	H6.2 Advanced Ventilation Standards				1			
TBD	H6.3 Outdoor Air Ducted to Bedroom and Living Areas				2			
	H7. Effective Range Hood Design and Installation							
Yes	H7.1 Effective Range Hood Ducting and Design	1			1			I will have to verify this one
TBD	H7.2 Automatic Range Hood Control				1			
Yes	**H8. No Fireplace or Sealed Gas Fireplace**	1			1			
TBD	**H9. Humidity Control Systems**				1			
TBD	**H10. Register Design Per ACCA Manual T**			1				HVAC contractor can do this as part of design and insta
Yes	**H11. High Efficiency HVAC Filter (MERV 8+)**	1			1			
I. RENEWABLE ENERGY								
TBD	**I1. Pre-Plumbing for Solar Water Heating**			1				
TBD	**I2. Preparation for Future Photovoltaic Installation**			1				
	I3. Onsite Renewable Generation (Solar PV, Solar Thermal, and Wind)			25				Want to add solar on the roof? That will get points!
	I4. Net Zero Energy Home							
TBD	I4.1 Near Zero Energy Home			2				
TBD	I4.2 Net Zero Electric			4				
J. BUILDING PERFORMANCE AND TESTING								
Yes	**J1. Third-Party Verification of Quality of Insulation Installation**	1			1			
Yes	**J2. Supply and Return Air Flow Testing**	2		1	1			
Yes	**J3. Mechanical Ventilation Testing and Low Leakage**	1			1			
TBD	**J4. Combustion Appliance Safety Testing**				1			
	J5. Building Performance Exceeds Title 24 Part 6							
0.20	J5.1 Home Outperforms Title 24 Part 6	45		60+				
Yes	**J6. Title 24 Prepared and Signed by a CABEC Certified Energy Analyst**	1		1				
Yes	**J7. Participation in Utility Program with Third-Party Plan Review**	1		1				
TBD	**J8. ENERGY STAR for Homes**			1				
No	**J9. EPA Indoor airPlus Certification**	0			1			
3.5	**J10. Blower Door Testing**	1			2			
K. FINISHES								
	K1. Entryways Designed to Reduce Tracked-In Contaminants							
TBD	K1.1 Individual Entryways				1			
TBD	**K2. Zero-VOC Interior Wall and Ceiling Paints**				2			
TBD	**K3. Low-VOC Caulks and Adhesives**				1			
	K4. Environmentally Preferable Materials for Interior Finish							
TBD	K4.1 Cabinets					2		
TBD	K4.2 Interior Trim					2		
TBD	K4.3 Shelving					2		
TBD	K4.4 Doors					2		
TBD	K4.5 Countertops					1		
	K5. Formaldehyde Emissions in Interior Finish Exceed CARB							
TBD	K5.1 Doors				1			
TBD	K5.2 Cabinets and Countertops				2			
TBD	K5.3 Interior Trim and Shelving				2			
TBD	**K6. Products That Comply With the Health Product Declaration Open Standard**				2			
TBD	**K7. Indoor Air Formaldehyde Level Less Than 27 Parts Per Billion**				2			
No	**K8. Comprehensive Inclusion of Low Emitting Finishes**	0			1			
L. FLOORING								
TBD	**L1. Environmentally Preferable Flooring**					3		
TBD	**L2. Low-Emitting Flooring Meets CDPH 2010 Standard Method—Residential**				3			
Yes	**L3. Durable Flooring**	1				1		
TBD	**L4. Thermal Mass Flooring**			1				
M. APPLIANCES AND LIGHTING								
Yes	**M1. ENERGY STAR® Dishwasher**	1					1	
TBD	**M2. CEE-Rated Clothes Washer**			1			2	
TBD	**M3. Size-Efficient ENERGY STAR Refrigerator**			2				
	M4. Permanent Centers for Waste Reduction Strategies							
TBD	M4.1 Built-In Recycling Center					1		
TBD	M4.2 Built-In Composting Center					1		
	M5. Lighting Efficiency							
Yes	M5.1 High-Efficacy Lighting	2		2				
TBD	M5.2 Lighting System Designed to IESNA Footcandle Standards or Designed by Lighting Consultant			2				
N. COMMUNITY								
	N1. Smart Development							
Yes	N1.1 Infill Site	2	1			1		
TBD	N1.2 Designated Brownfield Site		1		1			
>20	N1.3 Conserve Resources by Increasing Density	2		2		2		Do math to figure units per acre.
TBD	N1.4 Cluster Homes for Land Preservation		1			1		
	N1.5 Home Size Efficiency					9		
	Enter the area of the home, in square feet							
	Enter the number of bedrooms							
Yes	**N2. Home(s)/Development Located Within 1/2 Mile of a Major Transit Stop**	2	2					
	N3. Pedestrian and Bicycle Access							
	N3.1 Pedestrian Access to Services Within 1/2 Mile of Community Services	1	2					I will have to do some research on this one
5	Enter the number of Tier 1 services							I will have to do some research on this one
6	Enter the number of Tier 2 services							
TBD	N3.2 Connection to Pedestrian Pathways		1					
TBD	N3.3 Traffic Calming Strategies		2					
	N4. Outdoor Gathering Places							
TBD	N4.1 Public or Semi-Public Outdoor Gathering Places for Residents		1					
TBD	N4.2 Public Outdoor Gathering Places with Direct Access to Tier 1 Community Services		1					
	N5. Social Interaction							
Yes	N5.1 Residence Entries with Views to Callers	1	1					
Yes	N5.2 Entrances Visible from Street and/or Other Front Doors	1	1					
Yes	N5.3 Porches Oriented to Street and Public Space	1	1					Is this true?
TBD	N5.4 Social Gathering Space		1					
	N6. Passive Solar Design							
TBD	N6.1 Heating Load			2				
TBD	N6.2 Cooling Load			2				
	N7. Adaptable Building							
TBD	N7.1 Universal Design Principles in Units		1		1			
TBD	N7.2 Full-Function Independent Rental Unit		1					
O. OTHER								
Yes	**O1. GreenPoint Rated Checklist in Blueprints**	Y	R	R	R	R	R	This GPR plan must be added to blueprints
Yes	**O2. Pre-Construction Kickoff Meeting with Rater and Subcontractors**	2		0.5		1	0.5	Have HVAC, Insulation, HERS, etc to kickoff meeting
TBD	**O3. Orientation and Training to Occupants—Conduct Educational Walkthroughs**			0.5	0.5	0.5	0.5	
TBD	**O4. Builder's or Developer's Management Staff are Certified Green Building Professionals**			0.5	0.5	0.5	0.5	
TBD	**O5. Home System Monitors**			1			1	
	O6. Green Building Education							
TBD	O6.1 Marketing Green Building		2					
Yes	O6.2 Green Building Signage	1		0.5			0.5	
TBD	**O7. Green Appraisal Addendum**	N	R	R	R	R	R	
TBD	**O8. Detailed Durability Plan and Third-Party Verification of Plan Implementation**					1		
INNOVATIONS								
TBD	**Enter Innovation 1 description here. Enter up to four points at right.**							
TBD	**Enter Innovation 2 description here. Enter up to four points at right.**							
TBD	**Enter Innovation 3 description here. Enter up to four points at right.**							
TBD	**Enter Innovation 4 description here. Enter up to four points at right.**							
	Summary		Community	Energy	IAQ/Health	Resources	Water	
	Total Available Points in Specific Categories	282	26	71	54	83	48	
	Minimum Points Required in Specific Categories	50	2	25	6	6	6	
	Total Points Targeted	108.0	7.0	57.0	13.0	14.0	17.0	

If the bar below measures one inch drawing is to scale
0 1"

Issued For: Design Review

job address
Mini-Lot Development
GC CARB & 4430 Howe St LLC
4428-4448 Howe St.
Oakland, California 94618

date
28 March 2017

drawn by
Lt

Jarvis architects
5278 College Avenue (510) 654-6755
Oakland, California
94618-1415 fax: 654-3424

drawing title
Oakland Green Building Ordinance 4436 & 4438

sheet
24

job number
1556

North (4430 Howe St.) Elevation

West (Right) Elevation

South (Rear) Elevation

East (Left) Elevation

Jarvis architects

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Oakland, CA 94618-1415

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(510) 654-3424 fax

www.jarvisarchitects.com

Attachment B

Planning Photos I

4430 Howe Street Oakland, California 94618

2/18/16

North (4440 Howe St.) Elevation

West (Right) Elevation

South (Rear) Elevation

East (Left) Elevation

Jarvis architects

5278 College Avenue
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Planning Photos I

4440 Howe Street Oakland, CA 94618

6/13/16

Jarvis architects

5278 College Avenue
Oakland, CA 94618-1415

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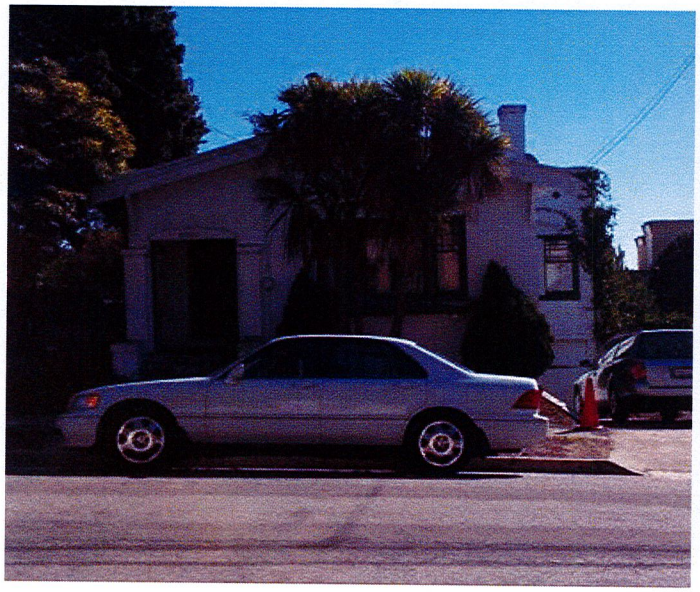
4446 Howe Street Oakland, California 94618
10/17/2016



4430 Howe St.

4424 Howe St.

4418 Howe St.

4410 Howe St.

1880 Pleasant Valley

4384 Howe St.

Jarvis architects

5278 College Avenue (510) 654-6755 ph.
Oakland, CA 94618-1415 (510) 654-3424 fax

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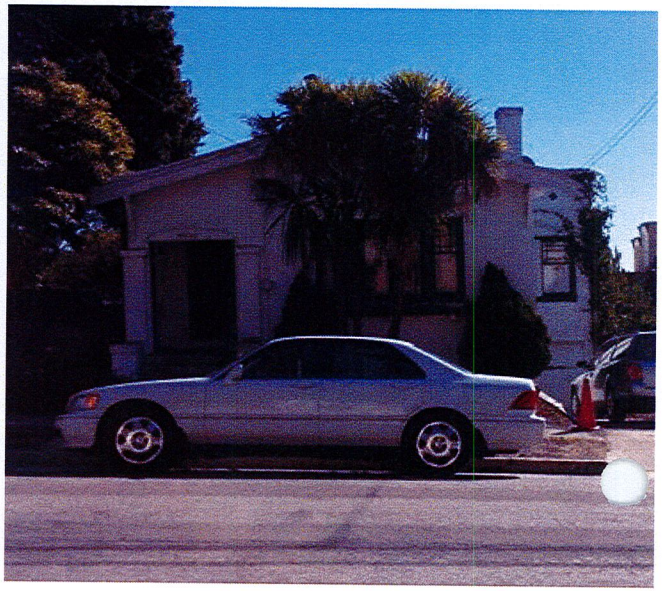
Planning Photos II

4430 Howe Street Oakland, California 94618

2/18/16

4446 Howe St.

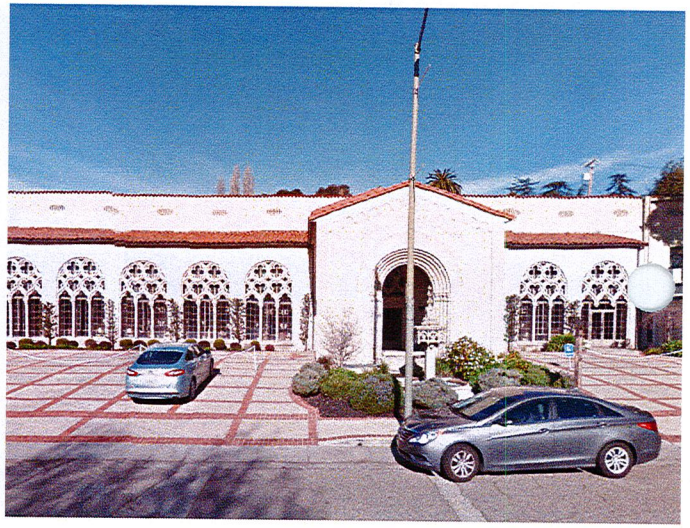
4440 Howe St.



4430 Howe St.

4449 Piedmont Ave.

4455 Piedmont Ave.



4499 Piedmont Ave.

Jarvis architects

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Oakland, CA 94618-1415 (510) 654-3424 fax

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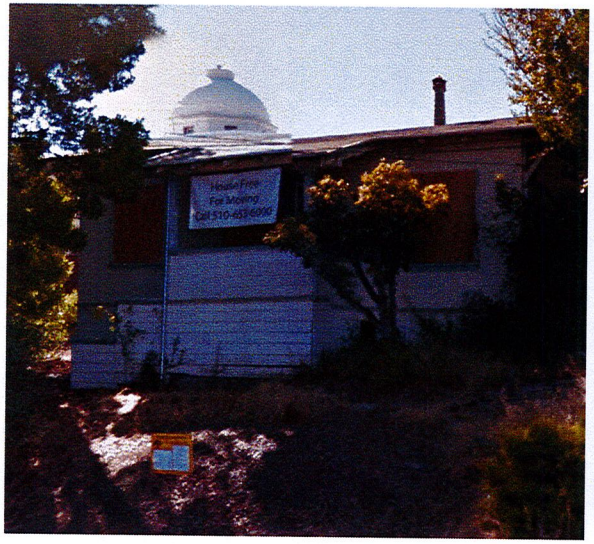
Planning Photos III

4430 Howe Street Oakland, California 94618

2/18/16



4449 Howe St.

4455 Howe St.

4457 & 4459 Howe St.

4479, 4481, 4483, & 4485 Howe St.

4497 Howe St.

4501 Howe St.

Jarvis architects

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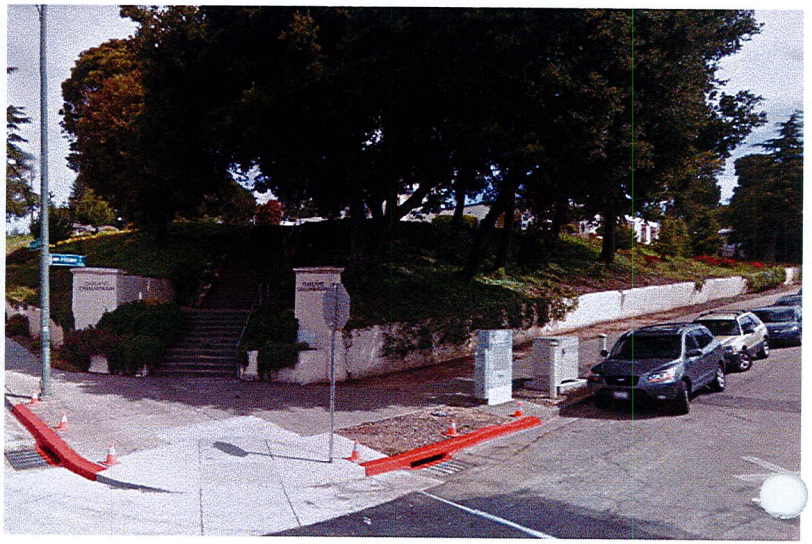
Planning Photos IV

4430 Howe Street Oakland, California 94618

2/18/16

4379 Howe St.

4385 Howe St.



4401 Howe St.

4373 Howe St.

4382 Howe St.

Jarvis architects

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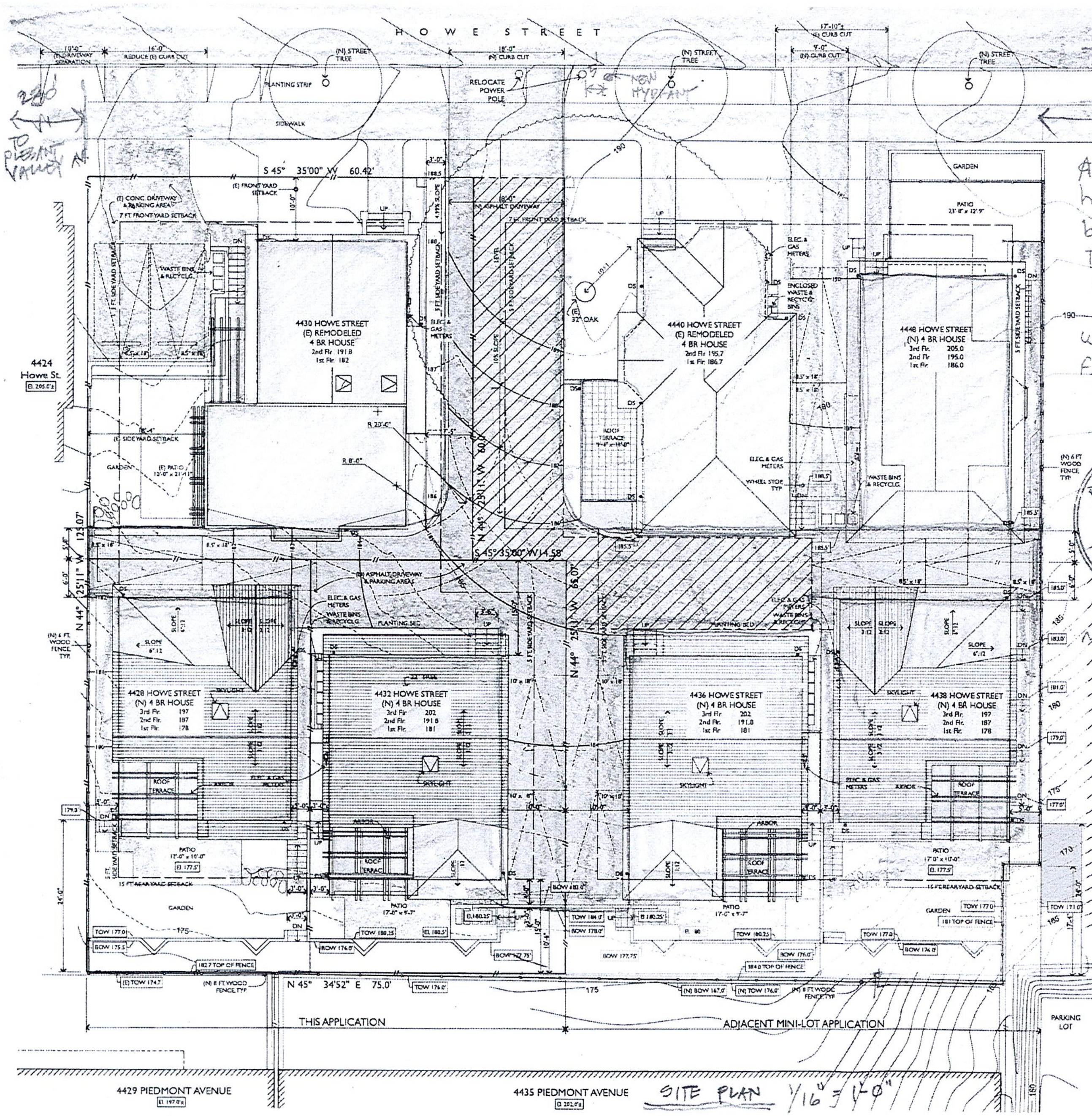
Planning Photos V

4430 Howe Street Oakland, California 94618

2/18/16

Application 2 – Mini Lot Development
Existing 4430 • New 4428 & 4432 Howe Stre



165' → FIRE HYDRANT

Scope of Work:

4430 • EXISTING FOUR BEDROOM, THREE AND ONE HALF BATH WITH LIVING / DINING / KITCHEN / LAUNDRY AND ONE BEDROOM W/ BATHROOM ON LOWER FLOOR.

4428 & 4432 • TWO, NEW THREE STORY HOMES EACH WITH FOUR BEDROOMS, THREE AND ONE HALF BATHS, FAMILY ROOM ON GRADE WITH REAR YARD, LAUNDRY, LIVING / DINING / KITCHEN AT THIRD FLOOR WITH LARGE ARBOR COVERED ROOF TERRACE, HIGH EFFICIENCY HEATING AND ON-DEMAND WATER HEATER.

PROJECT & LOT INFORMATION

ADDRESS	Existing 4430, New 4428 & 4432 Howe Street
ASSESSOR'S PARCEL NO.	013-1128-018-00
ZONE	RM-2

UNITS & PARKING	EXISTING	PROPOSED	PERMITTED/ REQUIRED
NUMBER OF DWELLING UNITS	1	2	
PARKING SPACES	2	4	1 Car per unit

YARDS AND HEIGHT		EXISTING	PROPOSED	PERMITTED/ REQUIRED
FRONT YARD SETBACK	4430	10'-0"±	No Change	7'-0"
SIDEYARD SETBACKS				
WEST SIDEYARD SETBACK	4430	18'-4"±	No Change	5'-0"
	4428	N/A	5'-0"	5'-0"
EAST SIDE YARD SETBACK	4430	7'-5"±	No Change	5'-0"
	4432	N/A	10'-0"	5'-0"
REAR YARD SETBACK	4430	N/A	No Change	
	4428	N/A	24'-0"	15'-0"
	4432	N/A	15'-0"	15'-0"
6 FT. PROVIDED BETWEEN HOUSES 4428 & 4432				
BUILDING HEIGHT				
NUMBER OF STORIES	4430	2	No Change	3
	4428 & 4432	N/A	3	3
BUILDING HEIGHT	4430	21'-2"±	22'-9"±	25'/30'
	4428	N/A	28'-11"	25'/30'
	4432	N/A	30'-0"	25'/30'

AREAS		EXISTING	PROPOSED	PERMITTED/ REQUIRED
LOT AREA		8,500 SF	–	
FLOOR AREA - RESIDENTIAL				
4430	MAIN FLOOR	1301		
	LOWER FLOOR	1279		
		2580 SF		
4428	FIRST FLOOR		910	
	SECOND FLOOR		945	
	THIRD FLOOR		775	
			2630 SF	
4432	FIRST FLOOR		910	
	SECOND FLOOR		945	
	THIRD FLOOR		822	
			2677 SF	
Total Footprint		1301	3121	
LOT COVERAGE		15.3%	36.7%	40%

Add one hydrant will be provide The water required for any opint within 200 ft from The new hydrant.

APPROVED FIRE MARSHAL CITY OF OAKLAND
By: Kanel
Date: 9/27/16
For The New hydrant only

Project Information:

BUILDING CODES:
2013 California Building Code
2013 California Electrical Code
2013 California Plumbing Code
2013 California Mechanical Code
2013 California Fire Code
2013 California Structural Code
2013 California Green Building Standards Code
All codes as further modified by the City of Oak

BUILDING INFORMATION:
OCCUPANCY: R-3
BUILDING TYPE: VB (non fire-rated constr
SPRINKLERED: 4430 NO / 4428 - 4432 Y

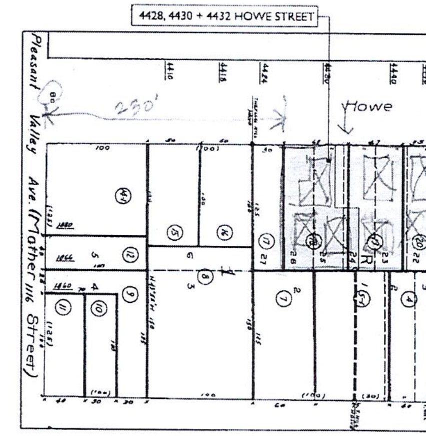
Parties Involved:

OWNER: 4430 Howe St. LLC
1480 Moraga Road Ste. 1173
Moraga, CA 94556
(925) 268-8048

ARCHITECT / LANDSCAPE: JARVIS ARCHITECTS
5278 College Avenue
Oakland, CA 94618
Contact: Glen or Lisa
glenjarvis@jarvisarchitects.con
ltrujillo@jarvisarchitects.com
Contact: Cindy - Landscape
cchan@jarvisarchitects.com
(510) 654-6755
(510) 654-3424 fax

CIVIL / SURVEYOR: PACIFIC ENGINEERING & CONSTRUCTION, INC.
35 Stillman Street, Suite 126
San Francisco, CA 94107
Contact: Mark
amwaldman@sbcglobal.net
(415) 974-1853

GREEN POINT RATER: Building Energy Compliance Te
George Matthews
PO BOX 4633
Walnut Creek, CA 94597
Contact: George
george@bect.us
(510) 520-4443



Sheet Index

Issued For: Design Review

Mini-Lot Development • App. 2
4430 Howe St. LLC
4428-4432 Howe St.
Oakland, California 94618

Jarvis architect
5278 College Avenue (510) 654-675
Oakland, California
94618-1415 fax: 654-342

Attachment C

CITY POLICY BULLETIN

ISSUANCE DATE: April 15, 2016

PERTINENT OMC SECTIONS:
16.16.020D (Width of Streets, Non-Hillside)
16.16.025D (Width of Streets, Hillside)
16.16.150 (600-Foot Maximum Length to a Dead End Street)
16.04.060 (Exceptions to Requirements)
15.12.010C (Fire Chief Discretion to Revise Requirements)
15.12.020 App. D, Table D103.5 (Secondary Access Road required for Dead End Streets in Excess of 600 Feet)

QUESTION/ISSUE: **In what instances would the Planning Director, Fire Chief, and City Engineer potentially revise/modify the requirement for secondary access for deadend streets exceeding 600 feet in length?**

This Bulletin clarifies and memorializes the circumstances under which the City would consider revising/modifying the requirement of a secondary access for subdivisions that result in dead end streets in excess of 600 feet in length.[1,2]

BACKGROUND

The Oakland Subdivision Regulations prohibit streets that result in a dead end in excess of 600 feet (OMC sections 16.16.150, 16.16.020D and 16.16.0225D); however, the Planning Commission and Planning Director have authority to consider exceptions to this requirement and has previously granted exceptions (pursuant to OMC section 16.04.040) to allow for a dead end street length in excess of 600 feet.[3] Likewise, the Oakland Fire Code (OMC section 15.12.020, App. D, Table D103.5) also prohibits streets

[1] This policy bulletin addresses subdivisions. For existing legal lots of record on dead end streets, consult with the Planning Bureau which will consult with the Building Division, Fire Services Bureau, and City Attorney's office to determine adequate requirements for development. However, generally speaking, the City should waive the secondary access requirements if the **applicant demonstrates to the City's satisfaction** that the application of the secondary access requirement to a specific project would create an unconstitutional "taking" of property without just compensation (e.g., there are no feasible alternatives to a secondary access and without City approval of the project the applicant would be deprived of all economically viable use of their property) and that the project, if permitted, would be carried out only to the extent necessary to avoid a "taking."

[2] A "dead end street" is any street or private roadway that contains no additional outlet other than the single entry point; also defined as a "blind street" in OMC Section 16.04.030. The distance measurement for a "dead end street" shall begin at the nearest intersecting "through street." A "through street," while not specifically defined in the OMC, is a street or private roadway that contains multiple outlets to other streets and itself is not a "dead end street."

[3] OMC section 16.04.060 states: "The Advisory Agency may in the exercise of reasonable judgment grant such variances as it determines warranted where the size of the subdivision or topographic or other physical conditions of the property make it impractical to conform to all of the provisions prescribed by this title, provided, however, that no variances may be made to any requirements imposed by the Subdivision Map Act; and provided further, however, that no variances may be made to any requirements imposed by Section 16.20.010." For Tentative Tract Maps, the Advisory Agency is the Planning Commission. For Tentative Parcel Maps, the Advisory Agency is the Planning Director.

that result in a dead end in excess of 600 feet, as did the Draft Access Road Guidelines, which were used prior to their codification into the Municipal Code in 2008; however, the OMC also provides for revisions/modifications to the 600 foot limit on dead end streets (OMC section 15.12.010C).

In addition, the City of Oakland's California Environmental Quality Act (CEQA) Thresholds of Significance Guidelines identify dead end streets in excess of 600 feet without secondary emergency access as a potentially significant environmental impact, unless otherwise determined to be acceptable by the Fire Chief, or designee, in specific instances due to climatic, geographic, or topographic conditions (pursuant to OMC section 15.12.010C).[4]

Given that the above are based upon life-safety factors, the Planning Director has determined that projects containing dead end streets in excess of 600 feet in length without secondary emergency access will **NOT** be recommended for approval by the Bureau of Planning, unless the Fire Chief and City Engineer both agree to modify/revise the secondary access requirement due to specific instances related to climatic, geographic, or topographic conditions, as discussed below.

GROUNDS FOR GRANTING REVISIONS/MODIFICATIONS TO SECONDARY ACCESS REQUIREMENT

Revisions/modifications to the secondary emergency access requirement will be considered by the Fire Chief, City Engineer, and the Planning Director, each of whom maintain their own independent authority, on a case-by-case basis and **may** be granted when a property contains, at a minimum, **all** of the following characteristics:

- Is **not** located within the Urban-Wildland Interface, High Fire Hazard Severity Zone, or Wildland Fire Assessment District; and
- Contains the required street widths and slopes at the property and surrounding area to provide adequate fire truck access; and
- Is located within an area that has an existing built-out street "grid" and has been previously developed; and
- Is located in an area with adequate fire flow as determined by the Fire Chief.

Revisions/modifications may also be considered for re-parcelization of existing property that has been previously developed and is not located within the Urban-Wildland Interface, High Fire Hazard Severity Zone, or Wildland Fire Assessment District, even though it may not meet all the rest of the above criteria.

Revisions/modifications should **not** be considered automatic but should be considered by the City for subdivisions meeting the above criteria because properties that are located in such areas (a) are not likely to be threatened by wildfires; (b) are located on a grid system, which tends to be located in flat areas of the city that typically would allow the Fire Department multiple points of access across other streets and properties, if necessary; and (c) residents would more easily be able to flee a structure fire by multiple points to other streets or across other properties, if necessary.

In contrast, projects in hillside areas generally do not meet one or more of the above criteria. Such properties are more likely to be threatened by rapidly spreading wildfires; have greater Fire Department response times than properties meeting the criteria; have limited ingress for fire fighters; have limited egress due to the nature of the street patterns, roadway widths, and steep topography; and also afford

[4] OMC section 15.12.010 C states: "To the extent permitted by law, the Fire Chief may, at his/her sole discretion, revise requirements set forth in the Oakland Fire Code in specific instances due to climatic, geographic or topographic conditions."

residents little or no opportunity to flee a fire. The devastating Oakland Hills Fire of 1991 and prior, historic conflagrations demonstrate the dangers associated with the features of the types of sites that do not meet the above characteristics. As a result, such sites generally would not qualify for revisions/modifications of the 600 foot secondary access requirement.

APPROVED BY:

DARIN RANELETTI
DEPUTY DIRECTOR
BUREAU OF PLANNING

MICHAEL J. NEARY, P.E.
CITY ENGINEER
OAKLAND PUBLIC WORKS

MIGUEL TRUJILLO
FIRE MARSHAL
FIRE PREVENTION BUREAU

CITY OF OAKLAND

Oakland Public Works Department
Office of the City Surveyor
Bureau of Engineering & Construction

Memorandum

Comments on Review of Tentative Tract Map 8393

This same review format is used for both Vesting and Non- Vesting Maps.

April 24, 2017

I have reviewed the submitted Tentative Parcel Map dated March, 2017, and have the following requirements to be added to the **Conditions of Approval.**

- The final map shall clearly show the process and development of the location of the boundary lines from adjoining streets and boundaries. This includes how the depth of the lot was confirmed.
    - The map shall resolve the boundary lines thru the block from Howe to Piedmont and incorporate the information shown on PM 10223 (Bk 332pg29-30) and PM 10224 (Bk 332pg33&34)
    - The ties shall include the frontage of these lots on Piedmont.
- Tentative maps must comply with the Planning Departments checklist for Parcel Maps and Tentative maps. I note that there is virtually no topographic information on the Tentative map, a standard requirement for such drawings. Please obtain a standard checklist from Planning and add the missing information such as street distances, fire hydrants, intersections, etc.
- Elevations: Are based upon the City of Oakland Datum and must cite the **SPECIFIC** City Benchmark used to establish the elevations. Flow lines of sewers, and curb elevation from 60 year old maps are not acceptable as benchmarks. There are no elevations shown on these two maps that I can find. Please add contour lines based upon the City Datum.
- If the tentative map does not cite a **specific** City Benchmark as the basis for the City of Oakland Datum, then as a Condition of Approval, a Standard City Benchmark shall be installed at the nearest intersection, or as directed by the City Surveyor, the appropriate paperwork submitted to this office for approval, and the resultant elevation used to confirm the Tentative Parcel Map or revise it. This must be done before the submission of the final map.
- It would appear that sewage from the lower lots (I assume it is lower but, as I commented there are no elevations except for street inverts) is to be pumped up to Howe street rather than drain down to Piedmont by gravity. Please show the proposed easements for these lines and obtain approval from the sewer department for the use of pump system(s). Proposed easements should be shown for storm drain systems also

250 Frank Ogawa Plaza, Suite 4344; Oakland, California 94612; 510.283.3697

- All easements shall be shown clearly upon the final map and the individual easements shall be described in the owners statement or in separate documents to be recorded simultaneously with the Tract Map and made a part thereof
- **All** of the property lines of the parcels (new and perimeter) should be shown and dimensioned on the map
- The applicant must investigate and confirm, in writing, that no portion of the project lies with a Seismic Hazard area as shown upon the State Geologist maps (**reference is made to PRC Division 2, Chapter 7.8 section 2696**). If the project does lie within such an area, the appropriate certificate shall be added to the final map. A copy of this certificate is available from the City.
- No portion of the new construction shall extend beyond the property lines without a proper easement or encroachment permit which shall be shown upon the final map.
- References:
    - All references shall have the proper citations of recordation or location filed
    - Include the City of Oakland Monument sheet(s) as references.
- There is some confusion as to the nature of this document, or are there two documents? This map and a parcel map (see notes on lot 5)
- Are the existing V ditch and the Chapel of the Chimes Storm Drain public or private systems? If private you will need permission and an easement to incorporate them for your use. Your map does not say.
- Driveways must meet the approval of fire department and the building department as to size, construction and slope. Again, no elevations to determine this. I do not see any provisions for the capture of the surface runoff of the impervious driveway and I question if a 4" pipe is of adequate capacity.

Respectfully Submitted,

GILBERT E. HAYES, City Surveyor

PW Engineering Services plan review checklist.
If project is to be approved by the Advisory Agency, please attach comments below as Conditions of Approval.

Permit Number & address PLN17095 TTM8393 - 4430, 4440, 4448 Howe Street	*Review comments*
Streets and sidewalk • Developers should be made aware that they need to repair the sidewalk fronting the property to ADA standards (no more than ¼" lift) and no more than 2% cross slope • Resurface one traffic lane, which is no wider than 13 feet, after the completion of work (construction reduce the pavement conditions index) • Sidewalk shall be 5.5 feet min. but no less than 50-inches clear at pinch points for ADA access • replace portions of existing sidewalks, curbs/gutter/driveway approaches damaged or broken or if non-standard • Private improvements in right of way and non-standard features MAY be approved with an encroachment permit.	Prior to recording the Final Map, Tract Map 8393, the Applicant shall enter into a Subdivision Improvement Agreement (SIA) for construction of improvements within the City's right-of-way. Applicant shall apply for a PX Permit and submit the project improvement plans prepared by a registered civil engineer to Engineering Services for review. Improvement plans and Engineers Cost Estimate must be reviewed and approved by Engineering prior to scheduling the date for City Council approval of the Final Map and SIA.
Traffic & street geometry • Review/approval is needed by traffic engineer for new striping, curb painting, bulb-outs, changes to existing dimensions, impact to traffic resulting from development, traffic pattern, circulation, signals, traffic count, street/lane change, and other details. • Any alteration to geometry of roadway/sidewalk, markings, traffic control signs and devices shall be reviewed and approved by the Traffic Engineer	Engineering Services will determine if any of the improvements shown on the plans submitted for the PX permit require the review and approval of the City's Traffic Engineer prior to approval of the Final Map and SIA.
Driveway • Driveway approach, length, width, separation, clearances, thickness, type of curb, angle, and concrete mix shall be approved by Planning and then by Engineering Services. Minimum pavement section at driveways shall be four inches of AC (3/4 to 1/2 inch fine) over 8 inches of Class II AB and two feet in width. Senior inspector may be consulted.	Driveway approaches shall be identified on the improvement plans for the PX permit and proposed locations must be approved by Engineering Services. Existing driveway approaches not necessary for the development shall be removed and replaced with new sidewalk, curb and gutter.
Curb ramps • Refer to latest State of CA standards for all curb ramps. Curb ramps must be Directional unless approved otherwise in writing by City.	No ramps are proposed with this residential subdivision project.
Sanitary Sewer • Commercial, condominium, and similar developments must submit sewer calculations to Public Works for review and assessment of any applicable sewer mitigation fee (sewer flow from development to be calculated/submitted showing existing and proposed flows). • Note ... projects over $100K in construction costs require PSL certificate (sewer lateral permit and EBMUD inspection) • Sewer lateral work (new or rehabilitation of existing) requires sewer lateral (SL) permit. • Sewer lateral abandonment requires separate permit.	Applicant shall submit sewer calculations for review and approval at the time of submitting improvement plans for the PX permit. Applicant shall obtain PSL certificate, a SL permit and lateral abandonment permit(s) as applicable to the proposed development.
Storm Drain • Developers, engineers, and architects are to be familiar with storm water quality requirements, erosion issues, slope protection during and after construction, and Water Board requirements. • Water quality features to reduce the peak flow by 25% or to the extent possible to reduce impact on aged collection system as well as any open or closed water courses along the way. • Utilize parking lots open spaces for storm water quality features to further attenuate (bio swales, pervious pavers, pervious asphalt, tree wells, etc.).	Applicant shall submit the storm drainage calculations for review and approval at the time of submitting the improvement plans for PX permit. No runoff shall cross private property lines without first recording a storm drainage easement for this purpose. New storm drainage easements on private property shall be privately maintained and will not be accepted by the City. The tentative map proposes connecting new storm drainage to adjacent property "Chapel of the Chimes" storm drain. Applicant shall televise existing pipe connections and submit a report to Engineering Services with the PX plans.

PW Engineering Services plan review checklist.
If project is to be approved by the Advisory Agency, please attach comments below as Conditions of Approval.

Trees • All trees are private unless approved and accepted as a public tree. • Tree wells to be 3 feet by 6 feet minimum or four feet square or as approved, install root barriers, irrigation, etc. and encroachment permit is needed. Tree grates and other acceptable covers are required (ADA accessible). Tree wells with approved covers may receive roof drains with an overflow opening into the gutter as approved.	The improvement plans submitted for the PX permit shall include landscape and irrigation plans for any landscaping proposed with the City's right-of-way. Any street trees, tree grates and root barriers shall be reviewed and approved by the City's Arborist as determined by Engineering Services.
Easement & encroachments • Show all easements and right of ways, avoid any construction in the public right of way (major/minor encroachment permit are required). Minor encroachment MAY be approved on case by case basis, Major encroachments must be approved by the Council (generally, features attached to the building encroaching in ROW require major encroachment permits). Approval of the parcel or final map is contingent on recording the agreements. Recordation number must be shown on the map to be recorded.	All emergency access and utility easements for the proposed development shall be clearly identified on the Final Map and the improvement plans submitted for both the PX (off-site) permit and Building PZ (on-site) permit. Applicant shall prepare and submit an Emergency Shared Access Easement Agreement to be reviewed and approved by Engineering Services prior to approval of the Final Map, unless provisions are satisfactorily included in CC&R's.
Site Plan • Site Plan shall depict the site, key elements, property boundaries, topography, vegetation, proposed/existing structures, easements, wells, roadways, monuments, etc.	A site plan shall be submitted with the improvement plans for the PX permit.
PW Maintenance • Development requires photometric analysis of street lights and additional lighting shall be provided by the developer. http://www2.oaklandnet.com/oakca1/groups/pwa/documents/policy/oak026007.pdf.	No new streetlights within the right-of-way are proposed for this residential subdivision project. On-site lighting for the subdivision shall be privately maintained by an HOA (CC&R's). If no HOA will be formed, a shared lighting maintenance agreement must be submitted for review and approval prior to approval of the Final Map.
CDMG Designation (LS/LQ), A-P Zone, Flood Zone, Creek/water course, etc. • Property located in any of the above hazard require soils report, geologic report, creek protection permit, and related documents prepared by a license professional.	The improvement plans shall identify on the cover sheet the flood zone designation and FIRM rate map for the property. The Geotechnical Engineer and reference to soils reports shall also be included on the cover sheet of the improvement plans submitted for review and approval.
OMC All other applicable planning and building code shown below but not limited to: • Survey monuments protection • Set back from the property line, buffer area (separation) or distance required by the building department between buildings • P-job (off-site & on-site improvement) • Sewer lateral (PSL) program for developments exceeding $100K (PW & BLD) • Common sewer lateral and the impact on individuals under the PSL program (PW & BLD) • Fire access • Grading / Soils report / Geologic report • CDMG Designation, potential for liquefaction(LQ) and/or landslide(LS) • Dewatering (BLD & PW) • Shoring (BLD)	Project plans shall meet applicable municipal and building codes prior to issuance of a construction or encroachment permit(s) issued by Public Works Engineering Services. All fees shall be paid, bonds and insurance provided, prior to issuance of PX permit and prior to execution of a P-Job Agreement.

• storm water pollution prevention (BLD).	

PW Engineering Services plan review checklist.
If project is to be approved by the Advisory Agency, please attach comments below as Conditions of Approval.

BASED ON CURRENT CITY RECORDS THE FOLLOWING APPLIES TO THIS PARCEL. (CITY ASSUMES NO RESPONSIBILITY FOR ACCURACY OR COMPLETENESS THEREOF)

_____**QUAD MAP NUMBER**
_____**LOT DIMENSIONS**
_____**FLOOD ZONE**
_____**CREEK / WATER COURSE**
_____**EASEMENTS**
_____**PSAD I MITIGATION**
_____**A-P ZONE**
_____**CDMG DESIGNATION**
_____**LAND STAB ILITY**
_____**FACE OF CURB TO PROPERTY LINE**
_____**ENCROACHMENTS**

RECORD NUMBER PLN17095 TTM8393 - 4430, 4440, 4448 Howe Street **DATE** May 5,2017

EBMUD

REVIEW OF AGENCY PLANNING APPLICATION

THIS IS NOT A PROPOSAL TO PROVIDE WATER SERVICES

The technical data supplied herein is based on preliminary information, is subject to revision and is to be used for planning purpose ONLY

DATE: 04/19/2017	EBMUD MAP(S): 1494B488	EBMUD FILE:S-10338
AGENCY: City of Oakland Planning and Zoning Services Division Attn: Jose M. Herrera-Preza 250 Frank Ogawa Plaza, Suite 2114 OAKLAND, CA 94612	AGENCY FILE: PLN17095, TTM8393	FILE TYPE: Tentative Map
APPLICANT: Jarvis Architects C/O Lis Trujillo 5278 College Ave Oakland, CA 94618		OWNER: 4430 Howe, LLC & GC Carb LLC 1480 Moraga Rd Moraga, CA 94556

DEVELOPMENT DATA

ADDRESS/LOCATION: 4430, 4440, 4448 Howe St City:OAKLAND Zip Code: 94611

ZONING: PREVIOUS LAND USE: Residential

DESCRIPTION: 7 lot mini-lot subdivision with a private access easement | TOTAL ACREAGE:0.43 ac.

TYPE OF DEVELOPMENT:

Single Family Residential:7 Units

WATER SERVICES DATA

PROPERTY: in EBMUD	ELEVATION RANGES OF STREETS: 182-190	ELEVATION RANGE OF PROPERTY TO BE DEVELOPED: 182-190

Part of development may be served from existing main(s)
Location of Main(s):Howe St

PRESSURE ZONE	SERVICE ELEVATION RANGE
G1AA	100-200

Part of development must be served from main extension(s)
Location of Existing Main(s):Howe St

PRESSURE ZONE	SERVICE ELEVATION RANGE
G1AA	100-200

COMMENTS

Once the property is subdivided, separate meters for each lot will be required. A main extension at the project sponsor's expense will be required to serve the proposed development. When the development plans are finalized, the project sponsor should contact EBMUD's New Business Office and request a water service estimate to determine the costs and conditions of providing water service to the development. Engineering and installation of water mains and meters requires substantial lead time, which should be provided for in the project sponsor's development schedule. No water meters are allowed to be located in driveways. The project sponsor should be aware that Section 31 of EBMUD's Water Service Regulations requires that water service shall not be furnished for new or expanded service unless all the applicable water-efficiency measures described in the regulation are installed at the project sponsor's expense. Due to EBMUD's limited water supply, all customers should plan for shortages in time of drought.

NL

CHARGES & OTHER REQUIREMENTS FOR SERVICE:
Contact the EBMUD New Business Office at (510)287-1008.

5/4/17

Jennifer L Mcgregor,Senior Civil Engineer; DATE
WATER SERVICE PLANNING SECTION